

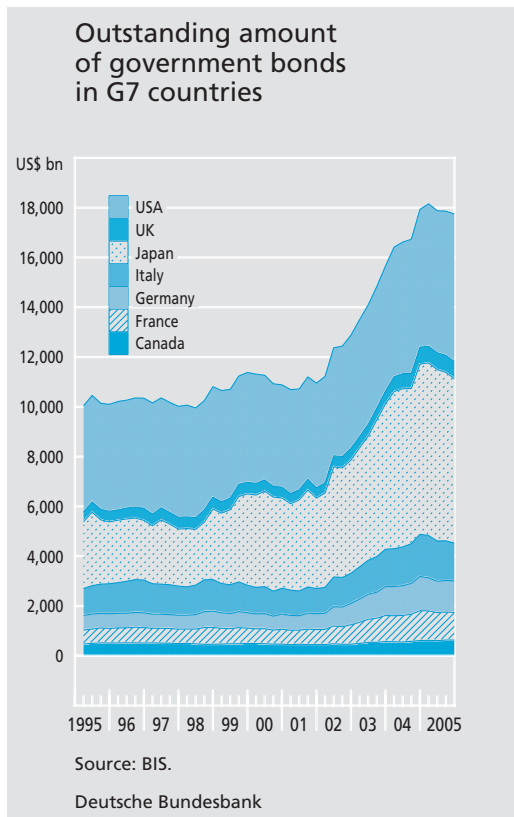
Current trends and structural changes in the public bond market

Government bonds are an important instrument for financing public sector budgets. In the past few years, the market for government debt securities in Germany, as in other major industrial countries, has grown considerably in the wake of increasing securitisation and rising budget deficits. Recently, the government bond market has even outgrown the outstanding amount of private debt instruments. This article identifies fiscal conditions, an improved market infrastructure and the advancing integration of the European bond markets as the driving forces behind this development. The rapid process of structural change is reflected in the progressive shift in investor behaviour towards a more internationally oriented asset allocation. Tradability and liquidity have become important criteria for investors. On the issuer side, public borrowers have contributed to an increased international convergence of issuance standards as they vie to tap into a common investor base. This is reflected in emerging trends towards launching large-scale issues and new financing instruments.

Government bond market has grown sharply

From an international perspective, the government bond market is an important segment of the overall bond market. According to figures published by the Bank for Inter-

*Government
bond market
highly dynamic
worldwide*



national Settlements (BIS), almost 39% of outstanding fixed- and variable-rate debt securities in the seven largest industrial countries (G7) are attributable to public borrowers. This comes second only to debt securities issued by financial institutions.

Looking at the more recent pattern of development, it is evident that the outstanding amount of government bonds in the G7 countries over the last few years – since 2001 in particular – has increased especially rapidly within an overall setting of vigorously growing bond markets. At the end of 2005, the outstanding amount of G7 government bonds totalled US\$17,780 billion and was thus 64% or almost US\$7,000 billion higher than at the end of 1998. At a rate of 7½%, the average annual growth of outstanding

public debt instruments has more than doubled since the period from 1994 to 1998. This sharp rise was due to large fiscal deficits in a number of the countries under review as well as to the greater use of securitised borrowing. The largest government bond markets are in Japan (US\$6,608 billion at the end of 2005) and the USA (US\$5,928 billion). Within the euro area, Italy, France and Germany are the largest issuers of public bonds.

The development of the German market shows a largely similar picture. The outstanding amount of German government bonds has climbed steeply during the past few years to a little over €1,100 billion as at 31 July 2006, which was over 50% higher than the level at the end of 1998. This surge can be explained firstly by the mounting level of government debt as a result of persistent budget deficits. Secondly, the public sector raised its level of securitised debt by more than the average of the previous years. While it financed over two-thirds of its new borrowing between 1991 and 1998 via securitised debt, it has since financed its borrowing exclusively by issuing securities on balance. Hence the outstanding amount of government bonds, expressed in growth rates, has recently grown much more sharply than general government's total indebtedness. State government, in particular, which previously predominantly raised funds by issuing unsecuritised debt instruments, has been financing 90% of new debt since 1998 via the bond market. The fact that interest rates were at an historically low level made issuing longer-dated bonds more attractive to borrowers.

Greater repayments and issues

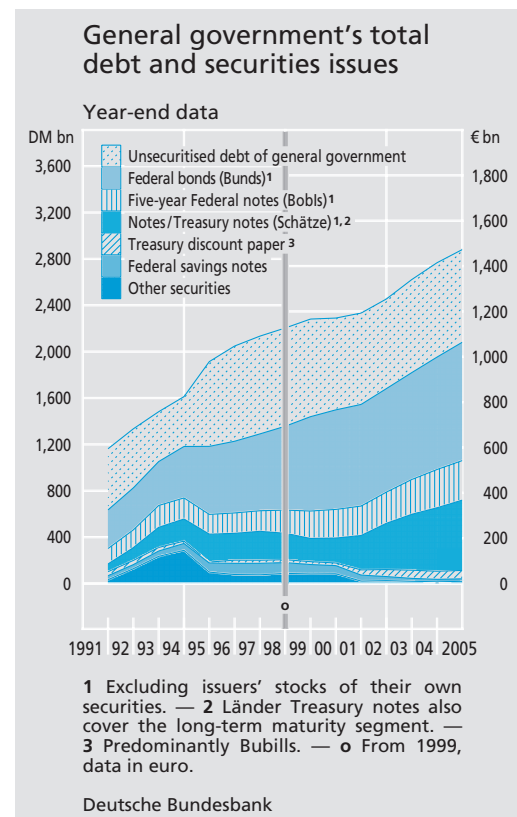
Germany's debt dynamics are also reflected in buoyant activity in the primary market. In 2005, gross sales of public bonds amounted to €273 billion and were thus more than twice as high as in 1998. In addition to the large general government deficits, greater repayment obligations have also considerably stepped up the financing requirement of the public sector.

Role of public bonds in German bond market

At more than a third of the overall market volume, public debt instruments make up a significant segment of the German bond market. Although this share has risen slightly of late – in part owing to reduced market activity by private issuers – it was 10 percentage points higher for a time during the mid-1990s. The overall importance of public debt securities – especially Federal German bonds (Bunds) – for the capital markets greatly transcends these quantitative indicators, however.

Thus a benchmark term structure of interest rates has established itself on the basis of Bund yields. This has created a gauge for valuing other assets which has been adopted both in Germany and abroad. Developments in the German government bond market therefore have a considerable influence on European financial markets.

Central government has traditionally been the most prominent of the public issuers in Germany. The latest figures (August 2006) show that central government and its special funds account for just over four-fifths of outstanding public debt instruments. As well as Bunds with an agreed maturity of ten and

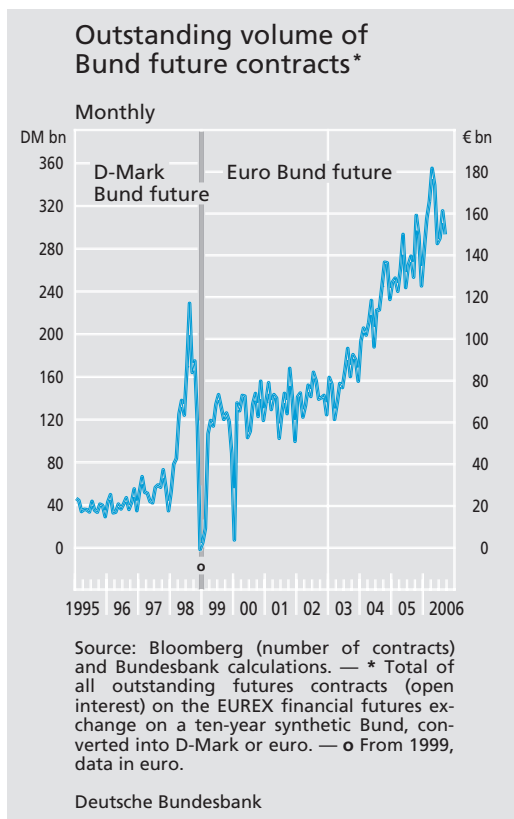


30 years, the most important instruments also include five-year Federal notes (Bobls) and two-year Federal Treasury notes (Schätze). Most recently, issues by state government have gained in importance. They make up almost one-fifth of the outstanding market volume, compared with 8½% at the end of 1998.

Changes in the German government bond market

The growing amount of public bonds outstanding and the shifts in market shares over the last few years were accompanied by considerable "structural" changes in the German bond market. Both the liberalisation of capital markets and European integration were sig-

Reasons behind structural changes



nificant driving forces behind these changes. European monetary union, in particular, fundamentally changed the underlying framework of the international financial centres and further accelerated the pace of integration of the previously fragmented national capital markets. In addition, advances in information technology created new trading possibilities. This has brought about a number of changes and adjustments to market infrastructure on both the supply and the demand side which, as analysed in more detail below, have in turn impacted on one another. As a result, the cross-border integration of government bond markets has intensified, market liquidity has increased and competition has toughened.

Changes in the market environment

Even before European monetary union was launched, legal, economic and structural foundations had already been laid for more closely integrated and harmonised European capital markets. Among the pioneering steps in Germany were the amendments to the Stock Exchange Act in 1986 and 1989, which contributed to a gradual modernisation of German capital market legislation and formed the legal basis for establishing the German financial futures exchange (Deutsche Terminbörse – DTB) at the beginning of 1990. In addition, four Financial Market Promotion Acts have been adopted since 1990 which have strengthened Germany's competitive position as a financial centre and, by implementing the key objectives of market integrity, market transparency and investor protection, have made a significant contribution towards bringing Germany's institutional framework into line with evolving international standards.

Legal environment

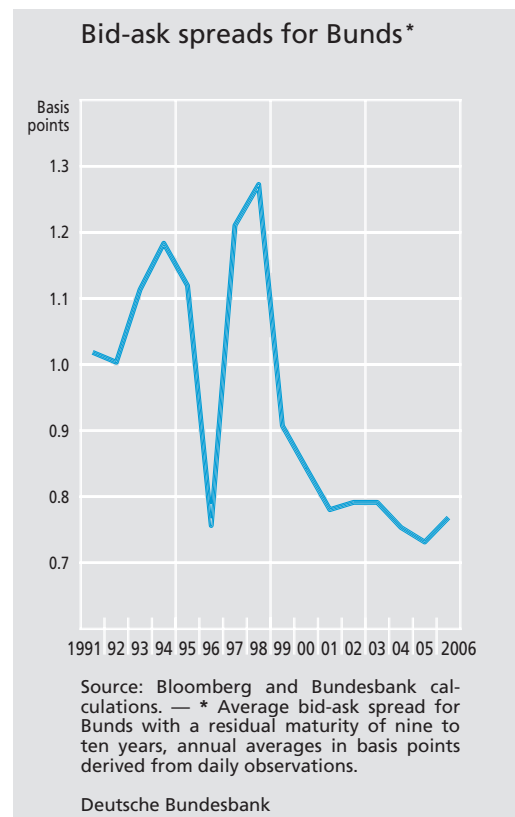
With regard to market infrastructure, the German financial futures exchange, which merged with the Swiss financial futures exchange in 1998 to form Eurex, took on a key function in major futures markets in the 1990s. While other forward contracts on national government bonds in the euro area failed to find the market's favour, the Bund future on ten-year Federal bonds evolved into a highly liquid contract. Its growing success on Eurex was also instrumental in deepening liquidity in the spot markets for Federal securities because it firmly established itself as a means of hedging Bund spot trades. After

German financial futures exchange lays basis for liquid Bund future

the start of monetary union in 1999, the Bund future secured a benchmark role on Eurex vis-à-vis other European financial futures exchanges and, thanks to a further growing trading volume, has secured financing advantages for the Federal government as an issuer in the spot market. In the past twelve months, the outstanding volume of Bund future contracts was, on average, more than twice as high as during the D-Mark era in 1998. This development has probably also acted as a catalyst for the cross-border trading of Bunds by internationally active market participants and has thus boosted the international role of German government bonds.

*Success of
electronic
trading
platforms*

The success of electronic trading platforms within the euro area has been considerably enhanced by advancing integration in the European capital market, and this success has spread to the bond market. While bond transactions were traditionally carried out by telephone with an extremely limited number of counterparties, technological progress at the end of the 1990s meant that it was possible to trade euro-denominated debt instruments on electronic platforms. In the competition for the “best” trading systems and other market infrastructure services, those operators who have been able to successfully implement technological innovations and win and retain market participants have fared best. The transition to electronic trading systems coupled with integration across the euro area, which made government bond markets deeper and wider, has made this market more transparent and more liquid. Since the start of monetary union, the average annual bid-ask spread in trading nine to



ten-year Bunds, which can be taken as a measure of market liquidity, has been below 1 basis point. This figure was generally higher in the 1990s.¹

Overall, European bond markets have probably become more attractive to domestic and international investors as these systems also reduce the search costs of finding a counterparty. As a result, technological changes have made an important contribution to efficient price-setting in the government bond market.

In addition, the growth of related markets has made it more attractive to hold govern-

*Public bond
market buoyed
by growth of
related markets*

¹ As explained in more detail below, another reason for the increased liquidity is the greater bundling of borrowing by public issuers into a small number of large bonds.

ment bonds, a factor which has likewise promoted market development. This applies, for example, to the use of public bonds as collateral for open market transactions or to their saleability on developed repo markets. This provides bondholders with inexpensive and flexible borrowing options by allowing them to temporarily sell and then repurchase public bonds in these markets. In Germany, however, a repo market was slow to develop at first as, in the past, German banks already offered market-based conditions in the highly competitive time deposit business with large customers and therefore had a cost-effective alternative to refinancing using repos.² However, the decision in December 1996 to exempt liabilities arising from repo transactions from the minimum reserve requirement gave the German repo markets a significant boost.

In addition, transactions that are advantageously collateralised in terms of risk increased in importance after the start of monetary union in the context of operations involving a larger number of non-resident counterparties. Even if the euro-area repo market is still not quite as integrated as the uncollateralised money market, a larger pool of government bonds subject to no exchange rate risk has been available to market participants since the start of monetary union than was the case in the past.³

In the last few years, the national government bond markets that were previously segmented have grown together into a more homogeneous and more transparent combined market, predominantly owing to Euro-

pean monetary union. Advancing integration has been accompanied by more efficient price formation in the primary and secondary markets, which ultimately benefits issuers and investors alike. Residual yield differentials between issuers of government bonds in the euro area – in the first nine months of 2006, the yield spread between ten-year Bunds and similar bonds of other euro-area countries averaged 11 basis points – primarily reflect differences in liquidity and creditworthiness and are not an indication of a fragmented capital market. The main reasons for the convergence of interest rates were the elimination of exchange rate risk and the transition to the single monetary policy. This can also be seen in a clear narrowing of the standard deviation of interest rate spreads between ten-year euro-area government bonds and German Bunds with the same maturity. This has largely remained below 10 basis points since 1999 (excluding Greece).⁴ Following the recent downgrading of the rating for Italian government securities, the interest rate spread on long-term Italian government bonds has widened somewhat and latterly amounted to just over 28 basis points. This underscores once again that residual yield differentials do not reflect market imperfections but rather differences in creditworthiness, for example.

² See Deutsche Bundesbank, The integration of the German money market in the single euro money market, Monthly Report, January 2000, p 25.

³ See also European Central Bank, Fiscal policies and financial markets, Monthly Bulletin, February 2006, p 85.

⁴ The so-called beta coefficients, which measure the reaction of bond yields to a common factor, likewise indicate that the capital markets are now more integrated. See European Central Bank (2006), Indicators of financial integration in the euro area, September 2006, p 9.

Investor aspects

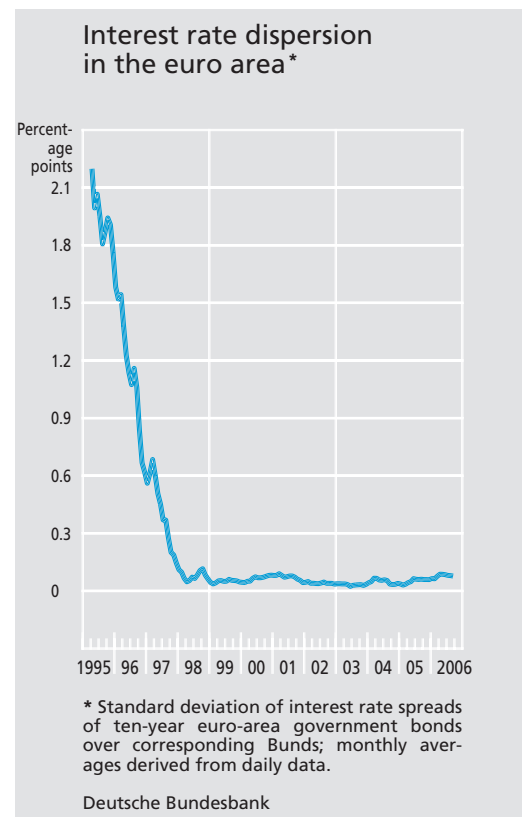
Institutionalisation of asset formation

As stated above, the structural changes in the market environment were at the same time both the cause and the result of developments in supply and demand. On the demand side, a greater institutionalisation of households' asset formation has been observed for some time now. Investment in insurance corporations and mutual funds has increased disproportionately in this context. At the end of 2005, it accounted for 24½% and 12%, respectively, of households' financial assets, compared with 20½% and 7% at the end of 1995.

Households have concurrently reduced their share of direct investment in bonds continuously. Even the importance of Federal savings notes, which central government developed as a savings vehicle especially for individual investors, has diminished over the past few years, whereas they had been an extremely popular investment instrument right up to the second half of the 1990s. Unlike households, German institutional investors⁵ held a stable – albeit small – share of their fast-growing financial assets in German government bonds throughout the 1990s.

Liquidity aspects

The intermediation of professional asset managers has made investors become more aware of liquidity aspects as fungibility and liquidity are usually of greater importance for institutional investors, whose performance is often measured by short-term quantitative indicators, than for retail investors. The elimination of exchange rate risk as a result of monetary union and growing market integra-

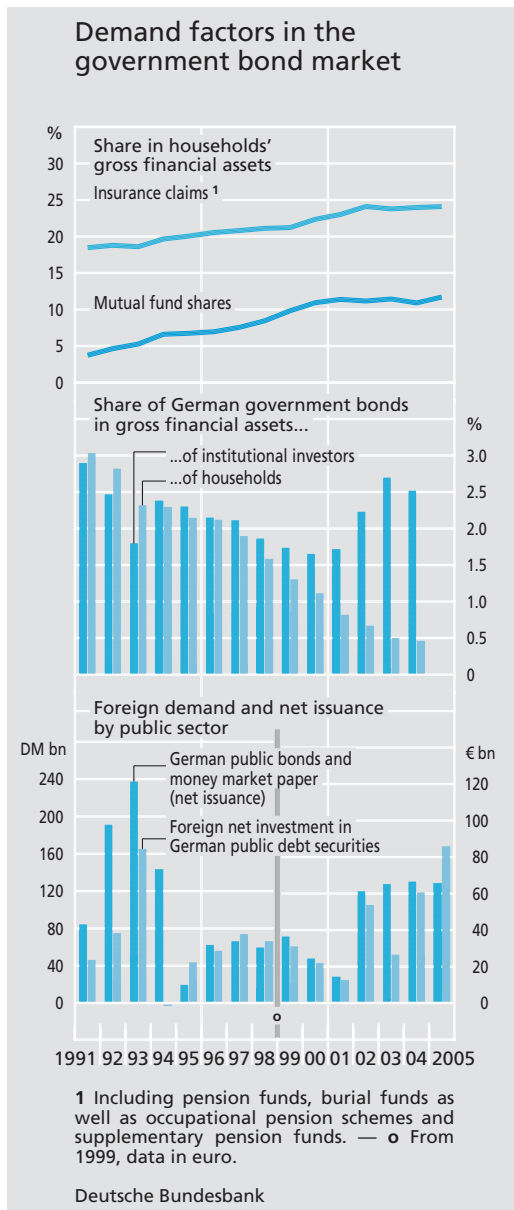


tion have additionally boosted investors' interest in liquid bonds. The increasing focus on liquidity has also played its part in encouraging issuers to securitise their borrowing. In turn, however, the resulting strong growth of public issuers' market debt has probably itself also accelerated further structural changes and the pace of integration in the government bond market.

This is also true of the investment by non-residents in the German bond market. Until the euro was introduced, the traditionally buoyant foreign demand for liquid German

Importance of D-Mark as investment and reserve currency stimulated foreign demand for Bunds

⁵ In the Bundesbank's securities deposit statistics, institutional investors include insurance corporations, mutual funds and other enterprises. The total amount of German government bonds held by these depositors is compared here with the accumulated financial assets of non-monetary financial institutions and non-financial corporations taken from the Bundesbank's financial accounts.



government securities was due to the importance of the D-Mark as an investment and reserve currency. In particular after reunification, when Germany's capital requirements soared and the public bond market gained in depth, the presence of non-resident investors in the German market grew considerably.⁶

With the start of monetary union, the market conditions for German bonds issued by the

public sector changed dramatically, however. Within the euro area, the currency-specific advantage of D-Mark issues vanished with the introduction of the euro. Since then, German issuers in the public sector have been in direct competition with government borrowers in other euro-area partner countries. In addition, German issuing institutions in particular have introduced a range of measures to make their own debt securities more attractive to internationally active investors. This includes improved information about terms and conditions, qualitative features and liquidity-boosting measures. Overall, German public bonds have more than held their own in this more difficult environment.

Since the beginning of 1999, over 90% of net sales of general government debt securities (bonds and money market paper) have been acquired by non-resident investors. In the period from 1990 to 1998, this figure had amounted to not quite two-thirds. This should also be seen in connection with the fact that longer-dated Bunds have constantly set the bond yield floor in the euro-area capital market, although the spread between these and government bonds of other euro-area countries has narrowed over the course of the years.

At times in the past, Bunds also played the role of a "safe haven" for portfolio invest-

Role as a "safe haven"

⁶ See Deutsche Bundesbank, The implications of international influences for capital market rates, Monthly Report, July 1997, and Deutsche Bundesbank, International integration of German securities markets, Monthly Report, December 2001, p 24 ff.

ment by international market players.⁷ The government bonds of the major industrial countries are assigned this function at times of great insecurity thanks to their effectively "non-defaultable" status. Examples of such times of insecurity were the financial market turbulence in the summer and autumn of 1998 following the Russian moratorium and the near-insolvency of the LTCM hedge fund. However, this type of capital investment in the German market generally receded quickly as insecurity faded and therefore made no lasting mark on market development.

Issuer aspects

Growing importance of securitised debt

Growing demand for tradable debt instruments led to a greater securitisation of borrowing by public issuers. This made it more cost-effective for them to use securities to finance borrowing as lenders demand lower yields for forms of investment with a high level of liquidity than for unsecuritised, less liquid investments.

Overall, the public sector increased its share of total debt financed via the securities markets from 64% at the end of 1998 to more than 72% at the end of March 2006. Over the last few years, state government has shown the greatest tendency towards securitisation. It has extended its share of securities in its total indebtedness from 19½% at the end of 1998 to 44% in the second quarter of 2006. In the process, state government established itself in the market by issuing large-volume bonds and combined multi-state bonds – especially in the case of states that

have small borrowing requirements. The outstanding amount of the "combined jumbo bonds" issued jointly by two or more state governments almost quadrupled from approximately €7 billion in 2000 to more than €26 billion in March 2006.

At the end of March 2006, central government held 97½% of its total debt in securitised form, compared with 80% at the beginning of the 1990s.⁸ Accordingly, loans against borrowers' notes and, more recently, also public Pfandbriefe have become less significant as a form of indirect market financing. The Third Financial Market Promotion Act, which came into effect in 1998, also contributed to the decreasing popularity of unsecuritised borrowing. This act stipulated that not only loans against borrowers' notes but also securitised public debt instruments can be used to cover Pfandbriefe. Overall, however, loans against borrowers' notes have remained state government's premier financing instrument – particularly owing to their simple structure and familiar creditors, which include Landesbanks and mortgage banks. As the credit terms of such borrowers' notes are rather favourable, especially for small volumes, this type of financing is likely to remain influential, in particular for state and local governments with low financing requirements. This includes smaller state govern-

⁷ See also C Upper (2000): How Safe was the "Safe Haven"? Financial Market Liquidity during the 1998 Turbulences, Discussion paper of the Deutsche Bundesbank's Economic Research Group, No. 01/00.

⁸ It should be noted in this context that since July 1999 central government has assumed the former debt of the Redemption Fund for Inherited Liabilities, the Federal Railways Fund and the Equalisation Fund for Safeguarding the Use of Coal.

ments and, especially, municipalities that still meet their financing requirements by taking out loans against borrowers' notes from Landesbanks or local savings banks.

Issuers' behaviour influenced by fierce competition due to integration

As a result of competition with one another and also with top-notch private issuers, public borrowers made increasing efforts to render their bond issues attractive. A key competitive parameter was the creation of liquid benchmark bonds. Public borrowers' increased interest in issuing liquid bonds can be seen in the trend towards large-volume issues. To enhance the market liquidity of its debt instruments, central government (as well as other euro-area public borrowers) raised the volume of its issues and topped up existing benchmark bonds. In this process, public issuers were increasingly guided by the minimum bond issuance volume of €5 billion which the Eurex financial futures exchange requires for deliverable Bunds and which the EuroMTS OTC electronic trading platform likewise prescribes as a prerequisite for permission to trade on it.⁹ In addition, more and more public borrowers have taken to launching large-volume bond issues in accordance with an issuance calendar published in advance. The aim of establishing a longer-term issuance calendar was to achieve greater transparency and regular issues, both prerequisites for deeper liquidity.¹⁰ This gave institutional investors a sound basis for planning.

Residual maturities distributed more evenly

Particularly central government in Germany has been gearing its borrowing quite heavily to the capital market for a long time now and has reinforced the dominant role and com-

petitiveness of ten-year Bunds as a financing instrument by issuing a steady stream of such bonds. One effect of this over time is that the volume of outstanding bonds with maturities of up to ten years has become more evenly spread along the maturity range.

Between mid-1999 and mid-2006, central government also issued a number of 30-year Bunds. The outstanding volume of bonds with an interest fixation period of between ten and 30 years consequently more than doubled in this period to over €116 billion. The share of this maturity segment in all government bonds thus increased from 9½% to 12½%. At the same time, the average residual maturity of outstanding Federal securities rose from 6½ years to 6¾ years.¹¹ By placing more long-term debt instruments, central government has accommodated the interest of various groups of investors in hedging their positions at the long end of the maturity spectrum.¹² In line with this and coinciding with the resumed issuance of 30-year US government bonds, the Eurex

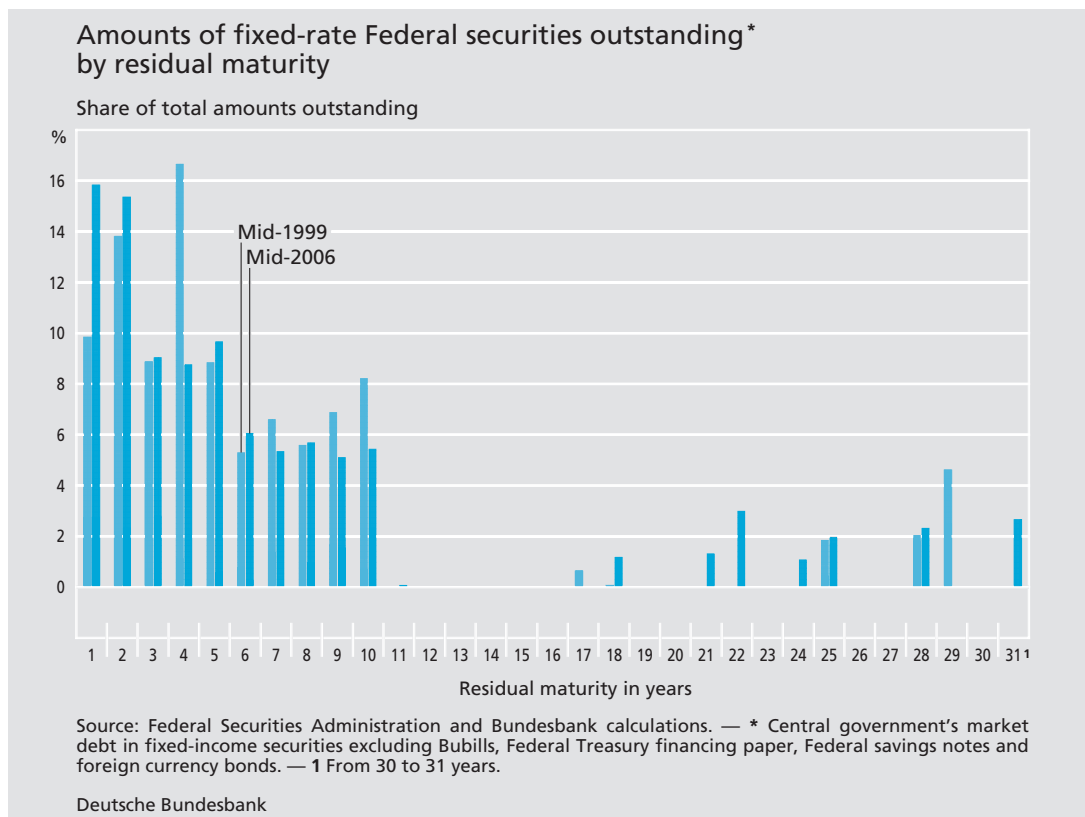
Greater importance of long-dated bonds

⁹ Eurex prescribes a minimum issuance volume of no less than €10 billion for the 30-year EURO BUXL future.

¹⁰ Since the third quarter of 1993, the major central government issuers have published their intentions to issue for a period of three months; since 1999 they have provided an issuance preview for the entire calendar year showing the probable issue volume, month of issue, annual interest payments and repayment in addition to the quarterly issuance calendar.

¹¹ Excluding securities with variable coupon payments.

¹² Institutions with a potentially high demand for government bonds include private pension institutions and life insurance corporations. In previous years, several countries in which private pension funds form a central component of the financial system made particular efforts to ease the transition to the market-based accounting of enterprises' private pension obligations for these institutions. The potentially high demand of private pension institutions for long-dated government bonds was increasingly alluded to in this context.



financials futures exchange reintroduced the futures contract on 30-year Bunds in 2005.

Use of innovative debt instruments

Recently, central government has additionally been using new financing instruments. In 2005, it issued its first US dollar bond in the amount of US\$5 billion. According to information from the German Finance Agency (Bundesrepublik Deutschland Finanzagentur GmbH), the exchange rate risk associated with such foreign currency bonds was hedged using financial derivatives.

This year, central government has additionally issued a ten-year inflation-linked bond with a placement volume of €5 billion (see box on pages 40 and 41). This makes Germany the fourth euro-area country, after France, Italy and Greece, to have issued inflation-indexed

debt securities. From a stability policy perspective, however, reservations are warranted concerning the danger of issuing too many index-linked bonds. It gives rise to the fundamental concern that this might also lead to a more widespread acceptance of price and wage indexing, which experience has shown to significantly hamper the anti-inflation mandate of monetary policy. At the end of 2005, the market value of outstanding inflation-indexed government bonds in the entire euro area amounted to €160 billion with an average real yield of 1.3%.¹³ However, such issues account for less than 3½% of the total bonded debt of public borrowers in the euro area.

¹³ See Barclays Capital, Global Inflation-Linked Products, January 2006, p 122.

Rising issuance of inflation-indexed government bonds

The amount of inflation-linked debt instruments outstanding in the public bond market has grown considerably in several countries in recent years.¹ Following the United Kingdom's decision in 1981 to introduce the first post-war inflation-indexed bond in an environment of spiralling price levels, this market long remained a British niche. It was only at the end of the 1990s that the United States and France also began issuing inflation-indexed government bonds. The issuance of such bonds in the major markets has grown substantially since 2003, reaching a placement volume of over US\$140 billion in 2005. Based on the year to date, 2006 is set to break that record. While the United States, through its regular issues, launches the most inflation-linked debt instruments, they are actually used much more in the United Kingdom and Sweden as measured by the government's capital market debt.² Within the euro area, France issues by far the most inflation-indexed bonds.³ Other countries have also been active in this market segment: for example, Italy since 2003, Greece to a limited extent and Germany since March 2006.⁴

While a major motive in launching the British programme was presumably the desire

to lock into lower inflation rates, fiscal and demand-side factors may have increasingly acted as drivers of market growth in the context of today's comparatively moderate inflation and stability-conscious central banks. Investors who buy a nominal bond require, in analytical terms, not only a real return but also compensation for *expected* inflation as well as for the risk of *unexpected* inflation, referred to as the inflation risk premium. The latter can be deducted by issuers of inflation-linked bonds, thus allowing them to reduce their ongoing interest payments, as they fully assume the inflation risk. However, this advantage can only be realised at the expense of a higher liquidity premium compared with conventional bonds. Thus, in the end it remains uncertain whether governments can really reduce their financing cost by issuing inflation-linked bonds.

Given the increasing internationalisation of the investor base, public sector issuers in some countries have also been seeking to widen their range of financing instruments on offer and to devise suitable investment vehicles to meet a potentially large structural demand from providers of retirement products. Such demand has received a fur-

¹ In addition to the inflation-linked government bonds considered here, a market also exists for inflation-related structured notes. Quasi-governmental issuers, such as the European Investment Bank and the KfW banking group in Germany, are also present in this market. — ² Sources: Bank for International Settlements, Wertpapier-

mitteilungen, Thomson Financial Datastream. — ³ The figures for France also include inflation-indexed social security bonds (Cades). — ⁴ France issues bonds on the national consumer index as well as the European Harmonised Index of Consumer Prices (HICP), which other issuers of inflation-linked debt instruments in the euro area also use

ther boost from an amended regulatory framework for insurance corporations. For such financial institutions, the desire to achieve a better match between the risk structures of their long-term pension liabilities and the risk profile of their assets could play an important role in their investment strategy. The extent to which pension liabilities are protected against inflation stimulates the demand for inflation-indexed products on the part of private pension institutions for two reasons. On the one hand, inflation-indexed bonds offer protection against unexpected inflation. On the other hand, particularly longer-dated bonds with inflation-linked repayment of principal have an interest-rate sensitivity (duration) comparable to that of long-term pension liabilities. As a result, inflation-linked instruments foster higher congruence between the duration of liabilities and of securities held on the asset side, in turn leaving the overall balance sheet less vulnerable to changes in the interest rate level. Given that households' existing life insurance pension claims in the five largest euro-area member states alone were over 20 times the market value of available inflation-linked euro-area bonds at the end of 2004, even slight shifts in the investment practices of pension funds

and life insurers could result in a substantial structural demand for inflation-protected securities.⁵

Nevertheless, reservations regarding widespread use of inflation-indexed government debt instruments are warranted from a stability policy perspective. There is a fundamental concern that acceptance of indexation might spill over to price and wage indexing, which experience has shown to significantly hamper the stability function of monetary policy. However, this must be counterweighed against the fact that to date most government debt in all issuing countries remains nominal. In terms of monetary policy, the advantage of inflation-indexed bonds is that the yield differential compared to nominal bonds is a measure of the inflation expected by market participants over the remaining time to maturity of the bonds, known as the break-even inflation rate.⁶ Furthermore, increased issuance of inflation-linked bonds could also be interpreted as the issuers' expectation of sustained low levels of inflation.

as a reference index. According to French tradition, indexing is pegged to the rate of inflation excluding administered tobacco prices. The fact that various issuers use the HICP as the benchmark has probably had a positive effect on the liquidity of this market segment. — 5 Sources: Eurostat, Barclays Capital, Bundesbank

calculations. — 6 It is important to note that this measure of inflation expectations may be distorted by inflation and liquidity premiums, despite the fact that these premiums may cancel one another out to some extent.

The role of interest rate swaps

Among the new financing instruments employed by central government, interest rate swaps have gained in importance in recent years. Budget Acts successively expanded the maximum annual contract volume for this kind of derivative from €20 billion in 2002 to €80 billion in 2006¹. In the case of an interest rate swap, the counterparties swap interest payments on a given notional amount – mainly fixed payments for payments linked to a short-term interest rate. For central government the advantage of using such swap contracts is that it can separate the interest risk associated with issuing a bond from the liquidity risk and thus acquire more flexible control. This makes it possible, for example, to convert a ten-year fixed-rate bond into a debt at money market conditions. Assuming that there is a sufficient supply of swap contracts, the benefits of borrowing at money market rates can be combined with the financing advantages of issuing long-term bonds with benchmark status. Through recourse to the money market the issuer can forego the term premium demanded by risk-averse investors for a longer-term investment. This, however, is achieved at the expense of increased volatility in public interest expenditure and therefore less planning certainty for fiscal policy.

Growth in the market for interest rate swaps has fundamentally improved the ability of bond issuers and therefore also of

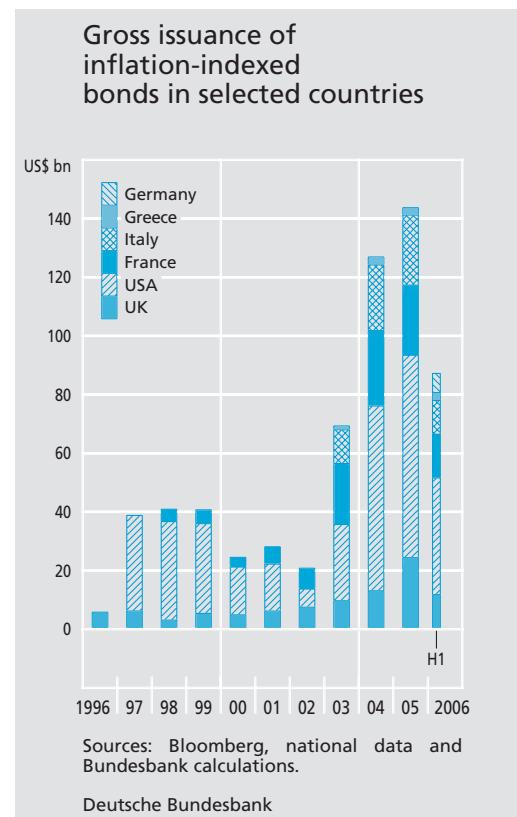
the government to modify the term structure on outstanding debt without having to re-enter the market to issue or repurchase. However, this also means that, within the existing ceilings, swap contracts can also be used to replace longer-term fixed-income debt instruments by floating-rate debt. From a macro-policy perspective, such a shifting of public debt to the short end of the maturity range would be problematic to the extent that it might lead to a clash between fiscal and monetary policy interests. Problems could ensue, for example, if the euro-area countries – given a normal interest rate term structure – were to deploy interest rate swaps in concert and on a large scale in order to transform fixed-rate payments into variable-rate payments. As in this case any restrictive monetary policy measures would impact directly on public sector financing conditions and as such also on the budgetary situation of those countries affected, this would heighten the risk of a conflict with monetary policy. With regard to the benchmark status of the underlying bonds, it should also be borne in mind that when using swaps during periods of high market volatility and greater uncertainty counterparty risks might also become more relevant.² Against this background, a moderate deployment of swap contracts and a prudential setting of the maximum contract volume permitted within the confines of the Budget Act are advisable.

¹ Furthermore, since 2005 there has been an additional authorised volume for derivative transactions to the amount of €30 billion aimed at limiting interest rate and currency

risk arising from the issuance of foreign currency bonds. —
² See Bank for International Settlements (BIS), Quarterly Report, March 2003.

*Growth of
interest rate
swap market*

In addition, the German central government has paved the way to greater use of interest rate swaps in the past few years. This facilitates the swapping of long-term for short-term interest payment obligations (see box on page 43). By using interest rate swaps, central government is, on the one hand, pursuing the fiscal interest of keeping financing costs as low as possible. On the other hand, interest rate swaps serve both liquidity objectives (by issuing benchmark bonds) and the steering of the maturity and interest rate fixation structure of outstanding bond market borrowing. In addition – in view of the increasingly competitive market environment – the investment and asset diversification interests of certain groups of investors have, to a certain degree, also been met. Central government’s permitted contract volume for the current year according to the Budget Act amounts to €80 billion. From an economic perspective, however, it should be borne in mind that if the public sector swaps a large amount of fixed interest rate obligations for variable-rate obligations, it will be far more susceptible to the influence of short-term interest rates, which are largely set by monetary policy. This could increase the likelihood of conflicts between fiscal policy and monetary policy as, in such a case, any restrictive monetary policy measures would have a direct effect on the public sector’s financing conditions and, therefore, the government’s budgetary position.



Summary

The combined effect of changes in the market environment and the changing preferences of both investors and public-sector issuers has helped the German government bond market to mature further over the past few years. General government in Germany – as in other euro-area countries – has therefore contributed towards increased international harmonisation of issuance standards as they vie to tap into a common investor base. In particular, large-scale issues have become a standard feature of the market for public debt instruments. In addition, the public sector has resorted more to new financing instruments to manage its debt over the past few years.

It is probable that the Bund market's high degree of liquidity over many years, coupled with substantial efficiency gains in market infrastructure and investors' increasing refocusing on the euro area as a whole, has also had an impact on the overall market for euro-area

government bonds and has helped to promote the further integration of the individual market segments. This development is to be welcomed also in the light of the single monetary policy.