

The development of bank deposits in Germany

Euro-area investors have recently been showing a marked preference for liquidity in their portfolio decisions. As a result, monetary growth has been distorted sharply upwards for almost two years now. This is due not only to the usual effects of the interest rate cycle but also to the dramatic slump in share prices and uncertainties with regard to future economic developments. In Germany, too, caution as well as speculation about interest rates and prices have guided investors' portfolio decisions. Overnight deposits, in particular, have grown sharply of late, while other bank deposits have expanded only moderately on the whole. This article gives a detailed account of the underlying developments in German credit institutions' deposit business, placing them in the context of longer-term trends.

Introduction

In their liabilities-side business, in line with their role as financial intermediaries, banks accept funds from others either in the form of deposits or against the issuance of their own securities. In their assets-side business, banks grant loans or acquire securities of other issuers. Pursuant to section 1 (1) of the German Banking Act, deposits are "repayable funds from the public unless the claim to repayment is securitised in the form of bearer

*The term
"deposit"*

or order debt certificates, irrespective of whether or not interest is paid".¹

*Dominance
of deposit
business*

The acceptance of deposits is the core area of the credit institutions' traditional liability-side business. At the end of February 2003, non-bank deposits accounted for a share of just over 41½% of total "liabilities to customers",² thus constituting the major source of funding for the German banks.³ Interbank liabilities, ie amounts owed to other banks, are in second place (just under 32%), followed by securitised liabilities (26½%). The percentages vary considerably in some cases, however, depending on the category of bank. Whereas non-bank deposits make up not quite 79% of credit co-operatives' (and more than 70½% of savings banks') liabilities to customers, non-bank deposits account for a significantly lower percentage in the case of institutions which transact business mainly with other banks or on the capital market, such as the regional institutions of the credit cooperatives and the Land banks (just over 16½% and 25½%, respectively). The relevant figure for the commercial banks is just over 42%, which is a level similar to the average across all banks.

*Bank deposits
and monetary
analysis*

From a monetary policy perspective, non-bank deposits are especially interesting since they can provide information on enterprises' and households' investment behaviour and liquidity. A rapid pace of growth in deposits may point to inappropriately generous financing conditions. Excessive liquidity may lead to undesirably high rates of price increase. However, the scale of the inflation risks invariably depends on the causes of the increased liquidity. In this connection, a detailed analysis of the

growth in deposits provides insights into which types of deposit are showing a sharper trend increase than others and how far an excessive increase in deposits is not just the result of short-term special effects that will not be reflected in higher rates of inflation.

In this context, the deposits of "residents" are therefore often the focus of interest. From the point of view of a participating country, however, the concept of "resident" is no longer as clear-cut as it was before the start of stage three of European monetary union. In an analysis of national banking operations that is geared to Germany, the residents are, naturally enough, German depositors. In order to determine the German banking system's contribution to the growth of deposits in the euro area, however, the deposits of residents of other euro-area countries

*Deposits of
Germans with
domestic banks
compared
with...*

*... German
contribution to
deposit
formation in
the euro area*

1 The Directive on the accounting of banks and financial institutions (*Verordnung über die Rechnungslegung der Kreditinstitute und Finanzdienstleistungsinstitute*) mentions only "liabilities to customers" in this connection. All non-securitised liabilities are to be shown as such liabilities (section 21 (2)). In Regulation ECB/2001/13 of the European Central Bank of 22 November 2001 concerning the consolidated balance sheet of the monetary financial institutions sector, the balance sheet item "deposits" is defined as "Amounts owed to creditors by reporting agents, other than those arising from the issue of negotiable securities".

2 The items "amounts owed to banks" (liabilities to banks), "amounts owed to non-banks" (liabilities to non-banks), "debts evidenced by certificates" (securitised liabilities) and "subordinated liabilities" listed in table I.2 of the "Banking Statistics" Statistical Supplement to the Monthly Report are combined below under "liabilities to customers", with non-negotiable bearer debt securities (included in securitised liabilities) and subordinated liabilities being regrouped.

3 The deposits of non-banks include savings bonds, which are either registered paper or non-negotiable bearer debt securities. Savings bonds are recorded as a deposit with agreed maturity in the monthly balance sheet statistics.

Liability-side and deposit business of German banks

End-of-month levels in € billion; as of February 2003

| Item | All banks | Commercial banks | Savings banks and Land banks | Credit co-operatives and regional institutions of credit co-operatives |
|--|-----------|------------------|------------------------------|--|
| Number of reporting institutions | 2,355 | 272 | 524 | 1,491 |
| Sum of liability items | 6,460.6 | 1,827.3 | 2,316.3 | 750.6 |
| <i>of which</i> | | | | |
| Liabilities to banks ¹ | 1,841.0 | 689.5 | 686.0 | 188.8 |
| as a percentage of liabilities to customers ² | 31.8 | 43.6 | 32.7 | 27.6 |
| Securitised liabilities ³ | 1,532.1 | 224.5 | 477.4 | 65.8 |
| as a percentage of liabilities to customers ² | 26.5 | 14.2 | 22.7 | 9.6 |
| Liabilities to non-banks ⁴ | 2,415.4 | 667.7 | 937.6 | 428.3 |
| as a percentage of liabilities to customers ² | 41.7 | 42.2 | 44.6 | 62.7 |
| Other liability items | 672.1 | 245.6 | 215.4 | 67.7 |
| Deposits of domestic non-banks ⁴ | 2,084.6 | 523.6 | 840.6 | 419.8 |
| <i>of which</i> | | | | |
| Overnight deposits | 571.6 | 236.5 | 218.9 | 113.7 |
| as a percentage of domestic non-banks' deposits | 27.4 | 45.2 | 26.0 | 27.1 |
| Deposits with an agreed maturity of up to two years | 279.3 | 108.2 | 93.2 | 73.3 |
| as a percentage of domestic non-banks' deposits | 13.4 | 20.7 | 11.1 | 17.5 |
| Deposits with an agreed maturity of over two years | 654.4 | 88.8 | 214.2 | 58.2 |
| as a percentage of domestic non-banks' deposits | 31.4 | 17.0 | 25.5 | 13.9 |
| Deposits redeemable at three months' notice | 479.9 | 77.2 | 254.4 | 148.0 |
| as a percentage of domestic non-banks' deposits | 23.0 | 14.7 | 30.3 | 35.2 |
| Deposits redeemable at notice over three months | 99.3 | 12.9 | 59.8 | 26.5 |
| as a percentage of domestic non-banks' deposits | 4.8 | 2.5 | 7.1 | 6.3 |

¹ Including liabilities arising from non-negotiable bearer debt securities and subordinated liabilities. — ² Sum of liabilities to banks, to non-banks and securitised liabilities. — ³ Excluding liabilities arising from non-negotiable bearer

debt securities, but including subordinated negotiable bearer debt securities. — ⁴ Including liabilities arising from non-negotiable bearer debt securities and subordinated liabilities.

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in the German banking sector are also of relevance.⁴ Nevertheless, the quantitative difference between the two definitions is comparatively small on the whole. With a share of 9½%, only the longer-term time deposits (deposits with an agreed maturity of over two years) of non-banks from other euro-area countries are on a significant scale.⁵ For the other types of the deposit, the share is mostly only around 1 percentage point. At times, transfers of funds by residents of other euro-area countries may well have a more significant impact on the month-to-month change in German contributions to bank deposits in the euro area, however.

Focus on the deposits of German investors in the national banking sector

The following analysis of deposits in Germany will focus on the bank deposits of German non-banks at domestic credit institutions. Not only will this give an idea of the longer-term developments in German banks' deposit business; it will also essentially make it possible to identify special demand-side features in German investors' investment behaviour.

Growth in bank deposits and its determinants

Longer-term developments...

The deposits at domestic banks of customers resident in Germany have grown by an annual average of just over 5½% since the early 1980s. Given an average inflation⁶ of 2½%, this means that the increase in real bank deposits was somewhat more than 1 percentage point greater than the concurrent rise in production potential in Germany of just under 2%. On the whole, the dynamics of this development tended to be quite

varied, however. Although bank deposits continued to grow fairly sharply in the 1980s and changes in them showed a comparatively long cycle, the pace of expansion abated in the 1990s and their development became noticeably more volatile. The average annual growth rate was 6% in the 1980s, 5% in the period from 1990 to 2002 and, in fact, no more than 3% at the end of 2002.

This slower pace of growth may essentially be explained in the context of the concurrent decline in the rate of increase in aggregate expenditure, which was reflected both in the average inflation rate falling from just under 3% in the 1980s to 2% in the years that followed and in slower real GDP growth.⁷ The differential between average nominal income growth and the trend growth in deposits has thus remained comparatively constant throughout the past two decades.

... and growth in spending

The estimate of a simple econometric model for explaining the development in deposits initially produces a fairly similar picture. An analysis was made of the long-term connec-

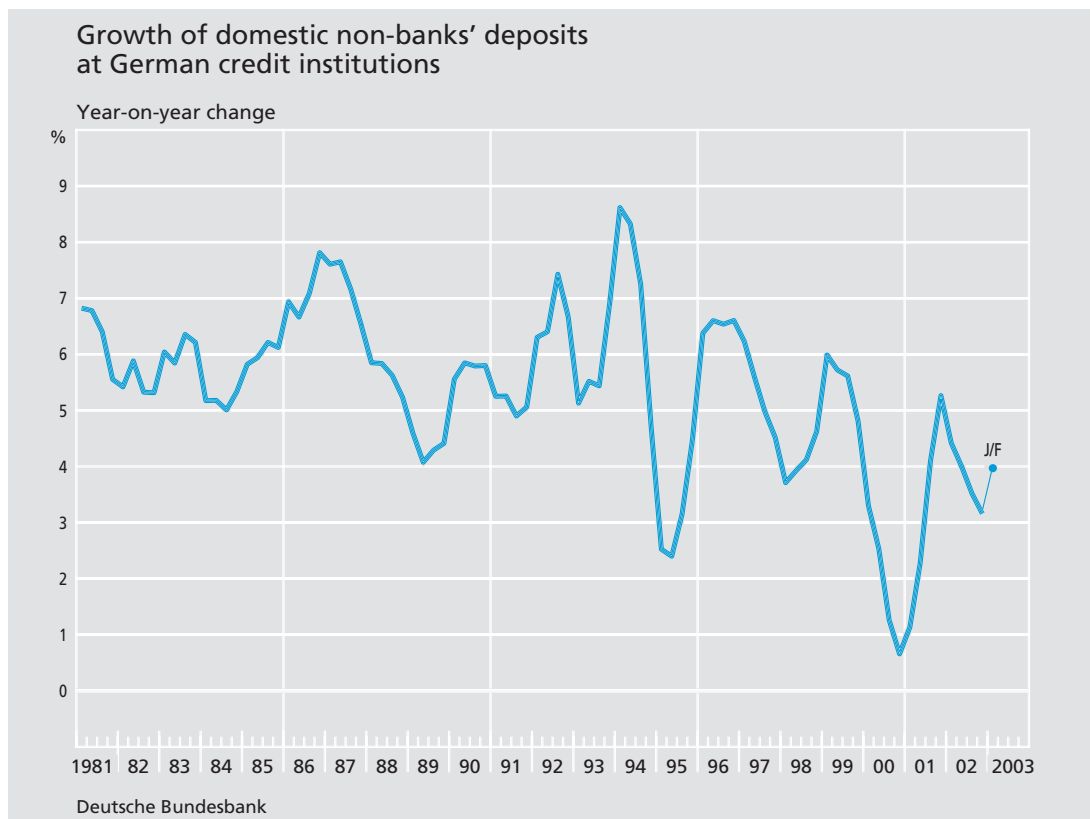
Cointegration analysis...

⁴ In their monthly reports for the consolidated balance sheet of the euro area, German MFIs therefore have to provide data not only on their transactions with residents in Germany but also on those with residents in other euro-area countries. This breakdown is needed to obtain a coherent picture of the monetary situation for the euro area.

⁵ Not only is this share comparatively large, it also fluctuates noticeably over time. The funds invested by residents of other euro-area countries at German banks are placed with German banks' foreign financial subsidiaries. For tax reasons, these subsidiaries issue bank debt securities for their own account and transfer the funds they receive to their German parent institutions as a long-term time deposit.

⁶ Measured using the deflator of gross domestic product.

⁷ Average production potential growth has fallen from over 2% in the 1980s to below 2% for the period since 1990. (See Deutsche Bundesbank, The development of production potential in Germany, *Monthly Report*, March 2003, pp 41-52).



tion (cointegration relationship) between real growth in deposits, on the one hand, and real gross domestic product (GDP) and an interest rate as a measure of the opportunity costs of holding bank deposits, on the other.

For total deposits, the estimated income elasticity is somewhat greater than 1 (1.07). As a simple time series comparison has already shown, this means that real deposits are growing more rapidly than GDP. The (semi-) elasticity of the capital market rate is negative (-0.03), which permits an interpretation of the interest rate as a measure of the opportunity costs.

past few years, other major factors determining the development of deposits have also come into play – determinants which cannot be explained solely in terms of economic activity and the interest rate level. The very sharp increase in overnight deposits since the mid-1990s is responsible for a good part of this (see chart on p 39). Looking at the overall aggregate excluding the overnight deposits, the GDP elasticity of this modified development in deposits is not only nearer to 1; the stability of the entire estimate shows a significant improvement.⁸ The development of the (now excluded) overnight deposits has evidently been driven recently by other

... with stability
problems of
total deposits

However, a more nuanced analysis reveals a certain amount of instability in the relationship, especially in the 1990s. Evidently, in the

⁸ Tests indicate that the equation for total deposits is close to representing no cointegrating relationship. By contrast, cointegration is much better assured for the aggregate excluding the overnight deposits.

Estimate of a long-term deposit equation

The estimates are based on a simple long-term relationship between the real deposits and their main determinants, ie real GDP and the interest rate:

$$E_t = \alpha_0 + \alpha_1 \text{GDP}_t + \alpha_2 \text{INT}_t + \varepsilon_t$$

where E_t is the logarithmic (real) level of deposits deflated with the GDP deflator, GDP_t is the logarithmic real gross domestic product, INT_t is the nominal capital market rate (interest rate for Federal bonds with ten-year maturity) and ε_t is the residual representing the deviations from the estimated relationship that cannot be explained (by changes in the interest rate and GDP). Other interest rate variables, such as the actual intrinsic rate of return on the deposits and various interest rate spreads, were likewise investigated. However, using these interest rate variables either did not give a markedly different picture or else failed to produce empirical models that were more satisfactory. The cointegration relationships were estimated using the dynamic ordinary least squares (DOLS) method. The estimation period generally stretches from Q1 1980 to Q4 2002. Statistical breaks in the time series used were adjusted.

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factors, which have been inadequately captured by the simple specification chosen in this instance.

A stable long-term relationship is also obtained for some more narrowly defined sub-aggregates. A GDP elasticity of roughly 1 and a negative dependence on interest rates is produced for the aggregate of short-term time and savings deposits. By contrast, total time deposits show a disproportionately large growth with income and are also positively correlated with the interest rate. The positive interest rate coefficient suggests that, in this instance, the capital market rate represents more of a measure of the intrinsic rate of return than of the opportunity costs.

Other long-term relationships

Moreover, marked shifts among the various types of deposit have occurred in the course of time – not only when viewed over the longer term but also in connection with the shorter-term, cyclical fluctuations in banks' deposit business. Particularly pronounced cyclical movements are shown by the development of the short-term time deposits (deposits with an agreed maturity of up to two years). Especially in periods of rising interest rates, the market rates of interest on this type of bank deposit make it an attractive form of investment for private investors as well as for large enterprises' liquidity management.

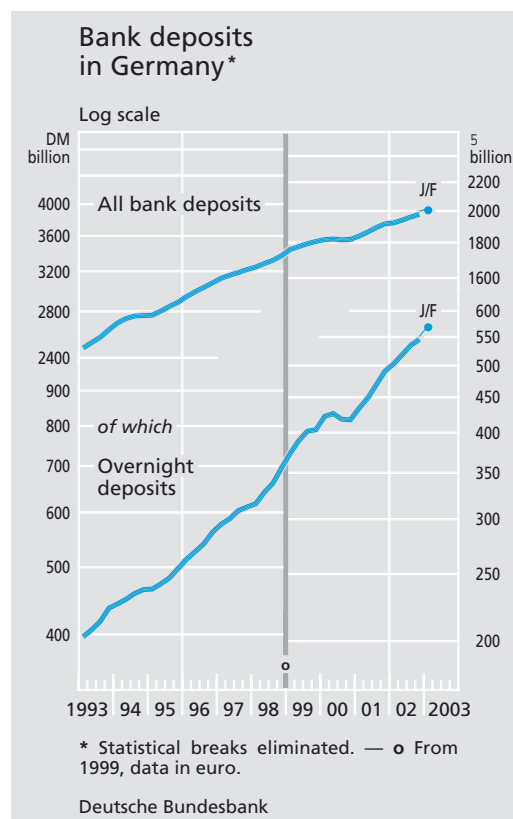
Structural shifts between bank deposits

Particularly in the 1980s and the early 1990s, this development was at the expense of the classical savings deposit (with a statutory period of three months' notice), which up to that time had fulfilled both cash-holding and

Short-term time deposits and savings deposits

investment functions for large sections of the general public. Short-term savings deposits were comparatively easily available, mainly owing to the possibility of withdrawing funds on a limited scale without prior notice, although the deposits were remunerated at a relatively low rate.⁹ Especially in the late 1980s and early 1990s – not least owing to a greater yield awareness on the part of savers – such deposits were increasingly shifted into short-term time deposits remunerated more closely in line with market rates. As a result, classical savings deposits' share in the total bank deposits of domestic non-banks fell from an average of 25% in the 1980s to just over 20% at the end of 1992.¹⁰ Since then, however, the development has gone back into reverse.

The new regulations on saving introduced in 1993 meant that credit institutions were able to provide deposits redeemable at three months' notice with more attractive terms and conditions as a "replacement" for the earlier savings passbook.¹¹ In order to counter the further erosion of their short-term refinancing, the banks made active use of that possibility. Subsequently, therefore, short-term savings deposits – mostly provided with an interest rate above the minimum or basic remuneration – were formed on a large scale (especially in periods of low interest rates), while short-term time deposits were, in some



⁹ Savers were granted the right to withdraw a maximum of DM3,000 per savings account and calendar month from their savings balance without prior notice. The amount is currently €2,000. Pursuant to section 21 of the Directive on the accounting of banks and financial institutions, any right to withdraw a larger amount than this bars the deposit from being classified as a savings deposit.

¹⁰ The sharp decline in short-term savings deposits in the early 1990s was, however, also due in part to portfolio adjustments in eastern Germany in the wake of intra-German monetary union. Immediately after the introduction of the D-Mark in eastern Germany, east Germans converted a considerable amount of their large savings deposits holdings into cash or shifted them into other, more attractively remunerated forms of investment. At the end of 1990, holdings of deposits with a three-month period of notice at credit institutions in eastern Germany were less than half their initial value of June 1990 (see Deutsche Bundesbank, The longer-term trend in savings deposits and its implications for monetary targeting, *Monthly Report*, May 1997, pp 50-51).

¹¹ The new provisions on saving which came into force on 1 July 1993 introduced a wide-ranging deregulation of savings in Germany. The previous statutory contractual regulations were replaced by an accounting rule. This enabled the banks to offer any investment products under the designation of "savings deposits". (See Deutsche Bundesbank, The longer-term trend in savings deposits and its implications for monetary targeting, *Monthly Report*, May 1997, p 44.)

Long-term determinants of domestic deposits

| Deposit type | GDP | INT |
|---|------|--------|
| Total deposits | 1.07 | - 0.03 |
| Total deposits excluding overnight deposits | 0.98 | - 0.02 |
| Overnight deposits ¹ | 1.08 | - 0.02 |
| Other short-term deposits ² | 0.95 | - 0.02 |
| Total time deposits ³ | 1.64 | 0.03 |

¹ Estimated with additional time trend from Q4 1994 onwards; the coefficient of the trend variable is 1.8. — ² Deposits with agreed maturity of up to two years plus deposits redeemable at three months' notice. — ³ Deposits with agreed maturity.

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cases, reduced significantly between mid-1994 and mid-1997.¹²

Econometric estimate of the substitution relationship

An econometric study indicates that the shifts in weight between time and savings deposits are indeed largely determined by a substitution relationship between short-term time and savings deposits which depends on the remuneration differential between these two types of deposit. According to the estimates, on an average of the period under review, a 1 percentage point increase in the interest rate advantage of long-term time deposits produced a relative decline in savings deposits of 22 percentage points.¹³

Short and longer-term time deposits

In addition to the switches between short-term time and savings deposits, there have been shifts between short and longer-term

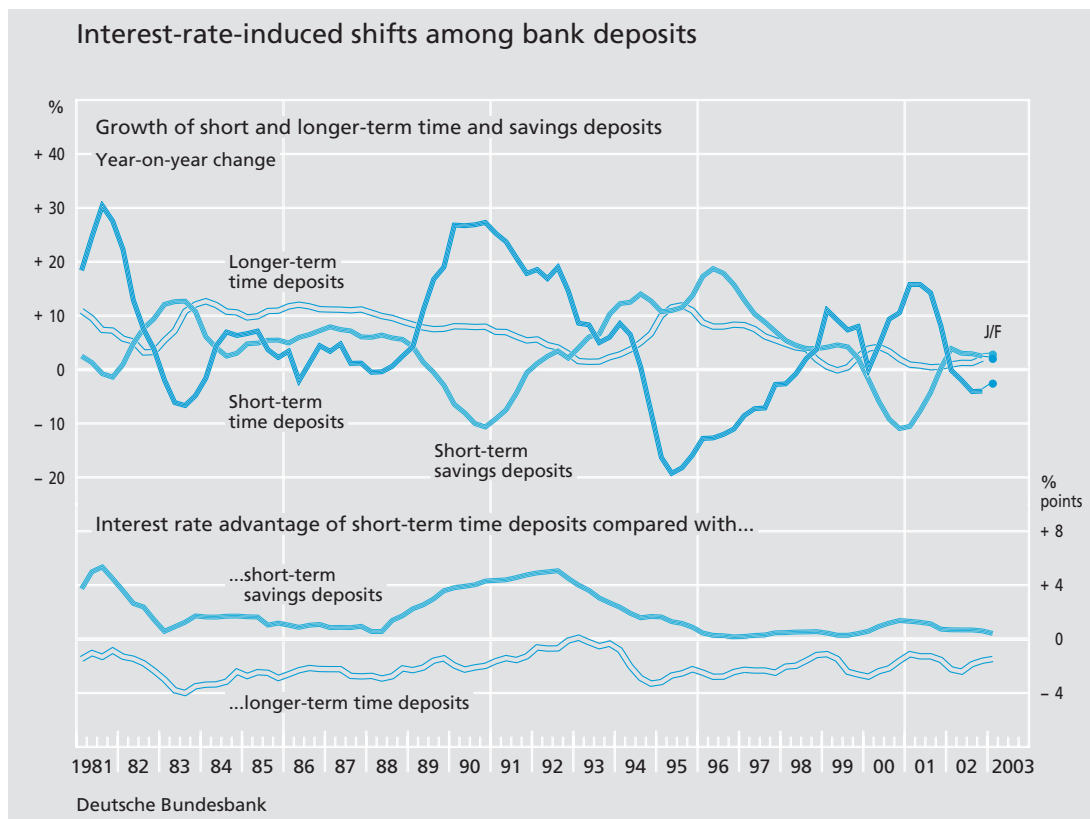
time deposits in recent years due to the interest rate cycle. Particularly in the 1990s, there was an observable divergent development between the expansion rates of deposits with an agreed maturity of up to two years and deposits with an agreed maturity of over two years. At all events, estimates of the ratio of longer-term to short-term time deposits point to a substitution relationship of this kind between the two cited maturity ranges, which likewise is mainly determined by the size of the relevant interest rate spread. Thus, on an average of the observation period, the ratio of longer-term to short-term time deposits – given a 1 percentage point decline in the interest rate disadvantage of the short-term deposits – decreased by 20 percentage points.

The maturity structure of deposits showed a marked change throughout the interest rate cycle in any case. The outcome is that there were pronounced shifts in the maturity structure of deposits at the expense of longer lock-in periods. At the end of the observation period, no more than 35% of deposits were

Increased preference for liquidity...

¹² Savings accounts with temporary bonuses and special savings schemes became increasingly popular. These were offered in a variety of forms (one-off deposit or an instalment-based saving scheme at fixed or variable rates of interest, at rising interest rates or with a bonus on maturity) and under a great number of designations (growth saving, bonus saving, premium saving, target saving, saving with an add-on element, money market saving, yield saving, multi-rate saving, etc). (See Deutsche Bundesbank, The longer-term trend in savings deposits and its implications for monetary targeting, *Monthly Report*, May 1997, p 51).

¹³ Cyclical developments appear to be irrelevant with regard to this substitution relationship, since changes in GDP have no significant effect on the equation. Remarkably, the explanatory power of this estimate is very high. Just under 60% of the changes in the relationship of the two deposits may be explained by the development of the spread.



in the longer-maturity range, compared with just over 40% since the early 1990s and 46% in the 1980s. The invariably low rates of interest, along with the large degree of uncertainty following the slump in stock prices and disappointing economic growth in recent years, have encouraged domestic investors' preference for liquidity.

... benefits overnight deposits in particular

What is striking in this context is the sharp growth in overnight deposits over the past few years. Up to the mid-1990s, their growth was mostly similar to that of short-term savings deposits. The rate of interest paid on both types of deposit was lower than that on other bank deposits. They were therefore particularly in demand in periods of low interest rates, as in the mid and late 1980s. During such periods, the amount of "forgone inter-

est" associated with holding such deposits was small and their ready availability was an added advantage for potential investors.

Since the mid-1990s, there have been quite diverging developments in overnight deposits and in deposits redeemable at three months' notice. While short-term saving deposits have been growing only at a declining rate, the pace of growth in German investors' overnight deposits at domestic banks has accelerated markedly during the same period. The increased popularity of overnight deposits is likely to have been due not only to the lower alternative costs in the form of forgone interest for longer-term forms of investment (opportunity interest rate), but also (and principally) to the fact that attractively remunerated sight deposits have become more preva-

Substitution relationships between selected types of deposit

Regression approach

$$X_t = \alpha_0 + \alpha_1 \text{SPREAD}_t + \varepsilon_t$$

where X_t is the relationship of two types of deposit, SPREAD_t the differential of two interest rates and ε_t the residual.

| Relationship of ... | SPREAD 1 |
|--|----------|
| ... short-term savings deposits and short-term time deposits | - 0.22 |
| ... longer-term and short-term time deposits | - 0.20 |

1 Differential of the interest rate for short-term time deposits and the interest rate for short-term savings deposits/between the interest rate for short-term and longer-term time deposits.

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lent, ie to a relative increase in the intrinsic rate of return. A lack of relevant data means that a direct empirical verification of this conjecture is not possible, however.¹⁴ In the econometric estimates for the overnight deposits, this was therefore possible only indirectly by including an additional positive time trend from 1994 onwards in order to take account of the described development.¹⁵ This trend variable has proved to be significant, however.

Role of higher intrinsic rate of return

The perceptibly higher percentage of overnight deposits held by individuals at direct banks¹⁶ since the mid-1990s may also be regarded as an indication of the increasing importance of the intrinsic rate of return for the attractiveness of overnight money. Even though the share of these deposits which

largely carry a market rate of remuneration is still small at present, at 6%, their dynamic pace of growth probably has to be seen in the context of the general trend in competition for short-term refinancing among the banks. Direct banks have attracted overnight deposits on a large scale precisely during the past year; domestic individuals' deposits at such institutions accounted for 22% of the rise in German non-banks' overnight deposits at domestic banks.¹⁷

As mentioned above, however, the sharp expansion in highly liquid bank deposits during the past few years is also due to a number of special factors, which might decrease in importance again in the course of time. The

Liquidity holding latterly also due to uncertainty

¹⁴ Rates paid on higher-yielding deposits of individuals are surveyed as part of the Bundesbank's interest rate statistics (*Monthly Report*, table VI.7), for which around 350 selected credit institutions submit reports. However, as there are no available data on the underlying size of these deposits, it is not possible to calculate a weighted average interest rate for sight deposits. It may nevertheless be assumed that their remuneration – contrary to the notion that overnight deposits are non-interest-bearing – is identifiably positive on average. The minimum/basic remuneration of savings deposits redeemable at three months' notice, ie relating to deposits which are subject to little competitive pressure among the banks, potentially provides quite a good lower limit for the average rate of interest on overnight deposits.

¹⁵ Furthermore, account is taken of a significantly negative jump in level in early 1994. In contrast to the positive time trend, it is difficult to interpret this jump in economic terms. It might be the result of the diminishing of increased liquidity holding in the wake of the ERM crises and the debate, conducted in 1992 and 1993, on the introduction and provisions of an interest withholding tax.

¹⁶ "Direct bank" is understood below as referring to credit institutions which do not have a branch structure. The specific marketing structures of such institutions are generally marked by the offering of quite attractive terms and conditions. The Bundesbank does not list a "direct banks" category of banks in its banking statistics; the information stated here is based on the reports of eight well-known direct banks domiciled in Germany.

¹⁷ The sharp rise in overnight deposits remunerated at market rates at direct banks in Germany last year was probably due, not least, to a greater awareness of such deposits resulting from an extensive advertising campaign.

sharp growth in overnight deposits in 2001 also has to be seen in the context of the reduction in domestic currency hoarding that occurred in connection with the introduction of euro banknotes and coins. Last year, investors are likely to have added large amounts to their liquid bank deposits mainly on account of the prevailing uncertainty. Besides the repeated setbacks on the stock markets, geopolitical risks were a significant factor – especially in the second half of 2002.¹⁸ In earlier years, overnight deposits invariably reacted sensitively to investor sentiment characterised by uncertainty. Residents built up their liquidity holdings sharply for a time both during the debate on an interest withholding tax in 1992-93 and in connection with the changeover to stage three of European monetary union.

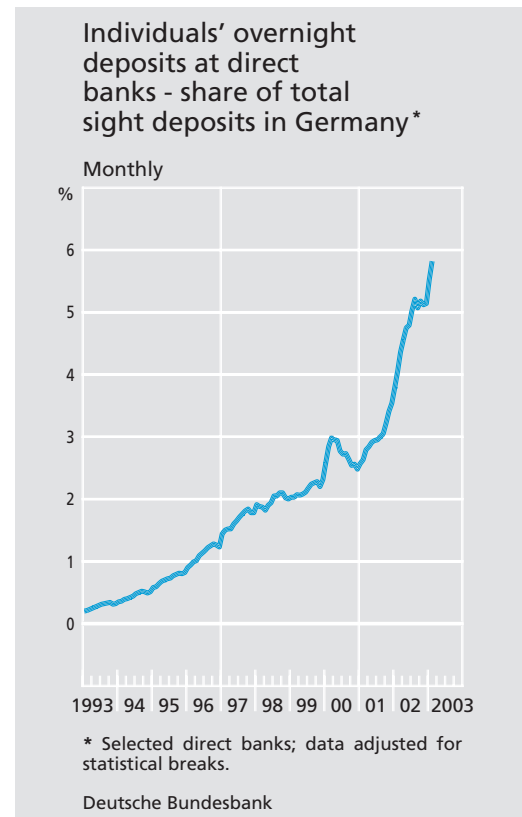
Bank deposits by group of depositor

Individuals...

Among the various groups of depositors, it was mainly domestic individuals that formed sight deposits in 2002. As in 2001, this group accounted for around 70% of the increase in this type of deposit during the course of the year – a fact that can only be partially explained by its likewise accounting for a high percentage of the overnight deposits of the domestic non-bank sector (63% at the end of the period under review).

...and enterprises

In 2002, domestic enterprises gave preference to overnight deposits and, above all, time deposits with an agreed maturity of up to two years. Much as in earlier periods of



relatively low interest rates, growth in time deposits was in double figures in some cases.

In the past, the expansion in short-term corporate deposits in Germany was also constantly being influenced by shifts of funds between Germany and the Euro-market. For a long time, these shifts were due to foreign banks having an interest rate advantage stemming from lower minimum reserve requirements in the international banking centres of Luxembourg and London. As a result of the changeover to monetary union and the uniform minimum reserve requirement throughout the euro area, the institutions based in Luxem-

Repatriation of German enterprises' foreign funds

¹⁸ Measured on the CDAX, stock prices in Germany fell by over 40% last year. In 2002, the DAX volatility index was also, on an annual average, around 40% up on the 2001 figure.

bourg no longer enjoy this competitive edge. Furthermore, the minimum reserve requirement has been set at a very low level, which means that the London centre's competitive advantage has been minimised. This led to a large-scale repatriation of short-term funds even before the start of monetary union. In December 1998 alone, there was a €12½ billion decline in the short-term deposits invested by German non-banks at foreign subsidiaries and branches of German banks. At the same time, the short-term time deposits of German enterprises at domestic banks rose by €11 billion.¹⁹ Funds from the Euro-market were being repatriated to Germany throughout 1999 as well.²⁰

*Longer-term
time deposits of
(insurance)
companies*

Deposits with an agreed maturity of over two years are likewise held predominantly by the corporate sector. That also applies to registered debt certificates issued by the banks. Except in very few periods, it was, above all, registered debt certificates which contributed to the increase in domestic investors' longer-term time deposits. Deposits with an agreed maturity of over two years held by enterprises as a share of total long-term time deposits has increased from 35½% in early 1980 to what is now 62%.²¹ Corporate depositors are almost exclusively insurance companies rather than producing enterprises, however. Insurance companies favour using this form of asset for longer-term investment purposes in order to avoid the risks arising from impending price falls on the securities markets and the accompanying value adjustments on the balance sheet. In many cases, the above-mentioned registered bank debt certificates were used. These are not listed on the stock market and can therefore be shown at their face value on the balance sheet. In periods

of low interest rates, these investments thus long had a particular role to play. Since the mid-1990s, however, insurance companies' interest in this form of investment has waned noticeably. Instead, the bull market which persisted until three years ago meant that insurance companies have temporarily invested more heavily in securities.

At the end of the period under review, the deposits of German government at domestic banks accounted for a relatively small share (5½%) of the total deposits of domestic non-banks. In the past, too, this holder group generally played no more than a comparatively minor role over a number of years. Longer-term investment is, in any case, hardly a significant factor in changes in general government deposits. Instead, the funds which the public sector holds at banks are mainly designed to adjust its ongoing discontinuous revenue and expenditure streams in the short term. The levels of deposits fluctuate heavily from month to month accordingly. For many years, general government – like the corporate sector – used the investment opportunities on the Euro-market for

*Government
deposits*

¹⁹ In December 1998, total deposits with an agreed maturity of up to two years rose by more than 7% on the month in seasonally adjusted terms.

²⁰ In 1999 as a whole, the decline in German non-banks' short-term deposits at German banks' subsidiaries and branches abroad amounted to €33 billion, €16 billion of which was accounted for by subsidiaries and branches in the United Kingdom and €16 billion by subsidiaries and branches in other EU countries (including €13½ billion by institutions in Luxembourg).

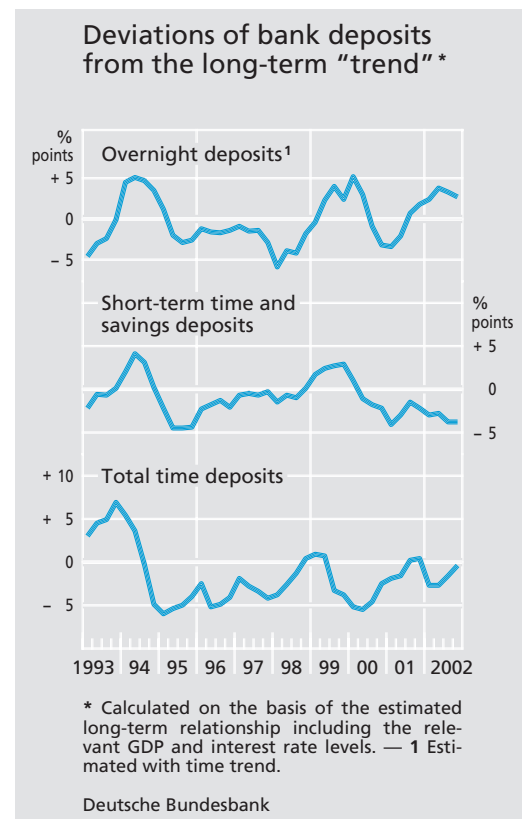
²¹ If anything, this rise underestimates the corporate sector's contribution to the growth of longer-term time deposits; since January 1999, deposits at building and loan associations – which are held almost exclusively by individuals – have been recorded as deposits with an agreed maturity of over two years. Excluding deposits at building and loan associations from a long-term comparison would mean that enterprises' share in longer-term time deposits has more than doubled, ie from 35½% to just on 72½%.

this purpose, since the interest income was invariably somewhat higher. During the past few years, holding deposits at foreign banks (much as in the case of enterprises) has become perceptibly less important.

Summary and conclusions

On a multi-year average, the development of deposits in Germany has been in a relatively stable relationship with overall economic growth. Nevertheless, over the past two decades, notable structural shifts have occurred within those bank deposits. What is particularly striking in this context is the sharp growth in the short-term ranges of deposit business during the second half of the 1990s. This is probably due, in part, to remuneration becoming more and more closely aligned with market rates. Recently, however, uncertainty-induced liquidity holding has been a particular major factor as well.

The fact that the sharp growth in short-term deposits over the past two years is, indeed, an exceptional phenomenon, which cannot be adequately accounted for by traditional explanatory factors and patterns of behaviour, can be demonstrated by the estimates presented here. The major deviations of the actual level of deposits from their relevant long-term explicable values – derived from the long-term relationship which has been estimated using the cointegration analysis – are, at any rate, a clear indication of special factors which are reflected in such “portfolio effects”. These special factors appear to have mainly promoted the sharp growth in over-



night deposits. When estimating them, an additional positive trend was taken into account, which captures the longer-term shifts of weight in the structure of the deposits quite well. Nevertheless, the deviations here are currently between 3% and 4% above the level produced by the longer-term relationships. In 1999 and in the first half of 2000, the deviations were even somewhat higher, in fact. Germany’s entry into stage three of monetary union and return flows from the Euro-market caused an excessively sharp rise in overnight deposits.²² Overall, it

²² In a more far-reaching analysis, where the long-term analysis is embedded in a model that also takes account of short-term adjustment effects, it additionally becomes obvious that the undershooting of the overnight deposits during the period from Q4 2000 to Q2 2001 is exaggerated in the above account. Using an error-correction model, a much smaller underhang of sight deposits in this period is obtained.

may be stated that, according to the findings presented here, much of the sharp expansion in short-term bank deposits during the past four years is, in actual fact, due to the sweep-

ing changes and exceptional environmental conditions which have characterised this period.