The longer-term trend in savings deposits and its implications for monetary targeting

Savings deposits are regarded as credit institutions' traditional deposit instrument for households. Although they have decreased somewhat in significance over the long term, they are still an important instrument for the investment of funds and for bank refinancing. Over time, the growth of savings deposits has displayed pronounced fluctuations. Besides interest rate influences, these were caused mainly by the intra-German monetary union and changes in the underlying institutional conditions. Savings deposits at three months' notice, which had largely fallen out of favour with investors during the rising interest rate phase in the late eighties/early nineties, have made a comeback more recently owing to the spread of higher-yielding saving facilities. It cannot be ruled out that, in connection with this trend, short-term savings deposits have acquired a greater "monetary capital nature" in certain interest rate constellations. However, no fundamental change has occurred. The basis for steering the money stock M3, within which short-term savings deposits are a major component, is therefore not undermined from the present perspective.

Savings deposits as an instrument for the investment of funds and for bank refinancing

Investment instrument for broad sections of the population

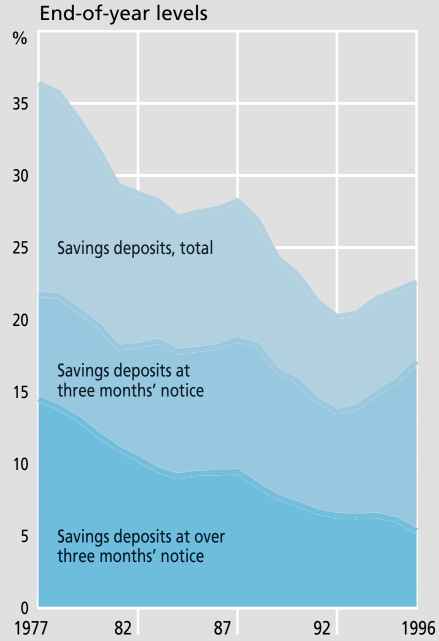
For broad sections of the population savings deposits are the traditional form of investing funds. Historically they were grounded on the principle of offering savers with little financial knowledge and modest incomes a secure and interest-bearing investment vehicle for setting aside reserves and accumulating financial assets. As incomes and assets rose, savers gained greater investment experience and the supply of alternative investment facilities grew, savings deposits decreased in significance over the longer term as a component of households' financial asset acquisition. This is particularly true of western Germany, but a similar trend soon became apparent in the new Länder following German unification. However, savings deposits continue to form one of the main pillars of financial investment. In addition, popular interest in savings deposits has revived recently as a result of numerous product innovations.

"Savings deposits" as a legally protected term

The original objective of providing "small savers" with a straightforward and standardised investment vehicle was reflected *inter alia* by the fact that the term "savings deposits" was regulated until mid-1993 in the Banking Act (sections 21 and 22) and thus protected by law. In the recent past, however, such a far-reaching regulation of savings no longer seemed necessary and appeared to clash with the principle of contractual autonomy. As part of the Fourth Act Amending the Banking Act, saving was therefore deregulated. Since July 1, 1993, the term "savings deposits" is defined in section 21 (4) of the Regulation on the accounting of credit institutions. The comprehensive legal protection of the term and the regulation of contracts were replaced by an accounting rule.[1]

Share of savings deposits in households' financial assets *

End-of-year levels



* Including non-profit organisations.

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Definitional features

Major formal features of savings deposits remained unaffected in principle by this revision. Savings deposits must still, for instance, be distinguished as such by the issue of a document, especially a passbook. They are

1 Since then, credit institutions have been free to offer investment products under the designation of "savings deposits". However, only deposits within the meaning of section 21 (4) of the Regulation on the accounting of credit institutions may be shown in the balance sheet as savings deposits. Such an accounting rule is necessary as both the minimum reserve regulations contained in section 16 of the Bundesbank Act and the prudential Liquidity Principles sometimes refer to the balance sheet item "savings deposits" and these provisions provide, for instance, for a different treatment of time deposits and savings deposits.

usually deposits subject to notice of withdrawal, i.e. funds accepted for an unlimited period. The period of notice is at least three months. The account may also be frozen for an initial period. Savings deposits are not intended for use in payments; they may not be withdrawn by transfer, cheque, direct debit or credit card. Instead they are to be used for the accumulation of funds or the investment of assets. In the case of savings accounts at three months' notice, credit institutions may permit savers to withdraw a limited amount of funds without prior notice (at present up to DM 3,000 per savings account and calendar month). The range of investors from whom banks may accept savings deposits is restricted. These are mainly natural persons or associations of natural persons which serve the public benefit or charitable or church purposes.[2]

Domestic individuals are the dominant depositor group

As a result of their special nature as an investment vehicle for broad groups of savers and the associated restriction of the range of depositors, savings deposits have traditionally been kept virtually exclusively by domestic individuals. At the end of 1996 these held 95½ % of total savings deposits; about 20 years ago – at the end of 1977 – this share had totalled 94 %.[3]

Savings deposits as a means of bank refinancing

From the banks' perspective, savings deposits are an important refinancing instrument. Their attractiveness results, in particular, from their *de facto* longer-term nature and associated "preferential treatment" as regards minimum reserve requirements and the Liquidity Principle II.[4] Savings deposits are therefore suitable for refinancing long-term loans. Mirroring savings deposits' decreasing significance in households' financial assets, their share in the business volume of credit institutions fell from 25 % at the end of 1977 to 14 % at the end of 1996. By contrast, the share of bank bonds and long-term time deposits increased (from 17 % to 21½ % and from just over 6½ % to 10½ %, respectively). Considered in isolation, these structural changes increased the cost of banks' liabilities. In response to the overall increase in competitive pressure and in investors' yield awareness, credit institutions have extended their range of savings deposit products in recent years (see page 51 ff.). As a result, they were thus able to prevent the importance of saving business from declining further, although they had to tolerate a rise in interest expenditure, other things being equal.

2 Unless they serve the public benefit or charitable or church purposes, corporations or partnerships may in principle no longer lodge savings deposits. Pursuant to the old Banking Act provision (section 21 (3)) funds could previously be accepted from these groups of investors as savings deposits if these groups could prove that the money was intended for the investment or accumulation of assets. Savings deposits which were formed as a result of this regulation prior to July 1, 1993 could still be regarded as such after July 1, 1993 according to section 39 (5) of the Regulation on the accounting of credit institutions. As a consequence, no statistical break was recorded in savings deposits series.
3 The period under review of the present article stretches from 1978 to 1996 and thus encompasses in effect the last two interest rate cycles.
4 On the one hand, this "preferential treatment" of savings deposits consists in the fact that their statutory ceiling for minimum reserve requirements (10 %) is lower than for time deposits (20 %) and sight deposits (30 %), and that with the exception of only a few periods, the actual minimum reserve ratio was also lower (at present 1.5 % as against 2 % for sight and time deposits). On the other hand, all savings deposits are recognised as long-term funds with a weight of 60 % for the purposes of Principle II, whereas other liabilities with maturities or a period of notice of less than 4 years have a weighting of 10 % only.

Old and new provisions governing saving

Old provisions
Section 21 of the Banking Act,
Savings deposits

(1) Savings deposits are deposits which are distinguished as such by the issue of a document, especially a savings book.
(2) Only sums of money intended for the accumulation or investment of assets may be accepted as savings deposits; sums intended for use in business operations or payments do not fulfill these conditions. Sums of money accepted from the outset for a specific period are not deemed to be savings deposits.
(3) Sums of money from corporations and partnerships may be accepted as savings deposits only if the conditions of subsection (2) are shown to be fulfilled. This does not apply to sums of money from institutions which serve the public benefit or charitable or church purposes.
(4) Documents concerning savings accounts may not be issued without a deposit. The document shall be handed to the depositor; only in exceptional cases may it be lodged with the bank. Drawing on savings deposits by credit transfer or cheque may not be permitted; drawing shall be allowed only on presentation of the document. When the deposit has been repaid in full, the document shall be returned.

Section 22 of the Banking Act, Notice of withdrawal and repayment

(1) The period of notice for the withdrawal of savings deposits is three months (statutory period of notice). Up to two thousand Deutsche Mark for each savings account may be withdrawn without notice from savings deposits at statutory notice within thirty interest days.
(2) A period of notice longer than the statutory period may be agreed upon for savings deposits; it shall not be less than six months. In such cases notice of withdrawal may not be given for at least six months after the savings deposit has been paid in.
(3) If in exceptional cases savings deposits are repaid before maturity, interest shall be charged on the amount repaid as on an advance. The debit interest charged shall exceed the deposit rate paid by not less than one-quarter. It is permissible to refrain from charging such early withdrawal penalty if the beneficiary is in financial difficulties.
(4) Current savings deposit rates shall be publicly displayed in the banking hall.

New provisions
Section 21 (4) of the Regulation on
the accounting of credit institutions

Only funds with no fixed notice period and which meet the following four conditions are to be shown as savings deposits:

1. they are shown as savings deposits through the preparation of a document, and specifically a passbook;
2. they are not intended for payment transactions;
3. they are not accepted from incorporated enterprises, cooperatives, financial societies, partnerships or enterprises domiciled abroad with a similar legal form unless these enterprises serve a non-profit, charitable or church purpose or the funds have been accepted from these enterprises as security in accordance with section 550 b of the Civil Code or section 14 (4) of the Hostel Act;
4. they have a notice period of at least three months.

Savings terms which permit the customer to withdraw a certain amount, which may not exceed DM 3,000 per savings account and calendar month, from his deposits at three months' notice without giving prior notice are not to be excluded from classification as savings deposits as defined by this Regulation. Inpayments in connection with Personal Asset Acquisition Acts count as savings deposits. Deposits with building and loan associations shall not be considered savings deposits.

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80 % of all savings deposits held at savings banks and credit cooperatives

In line with the different customer structures, savings deposits' share in the business volume of the individual categories of banks varies widely. They represent an above-average share in the business of savings banks (37 %) and credit cooperatives (36 %). These two categories of banks, which are traditionally geared to business with broad sections of the population and have a tightly-meshed branch network, have the strongest market position in savings business. At the end of 1996, 51% of all savings deposits were held at savings banks (1977: 52 ½ %), while credit cooperatives accounted for 29 % (1977: 24 %). In the nineties, in particular, big banks lost market shares, which presumably also reflects the fact that they have focused on other areas of business.

Collection of data on savings in the banking statistics

As part of the monthly balance sheet statistics the Bundesbank collects data from domestic credit institutions *inter alia* on savings deposits held by non-banks. The definition of savings deposits is based on the concept contained in the Regulation on the accounting of credit institutions. When processing and aggregating these data, the Bundesbank breaks them down by period of notice (three months, more than three months to less than four years, four years and over), by category of banks (big banks, regional banks and other commercial banks, private bankers, branches of foreign banks, savings banks, regional giro institutions, credit cooperatives, regional institutions of credit cooperatives, credit institutions with special functions, mortgage banks), group of savers (domestic individuals, domestic non-profit organisations, domestic enterprises, domestic public authorities, non-residents) and – since June 1986 – by type of savings deposit (special savings scheme, "normal" savings facility). In addition, for aggregate savings deposits the transaction amounts (credits and debits as well as interest credited) are collected.

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Savings deposits at three months' notice

Mixed short and long-term investment vehicle

Savings deposits at three months' notice[5] traditionally form the main pillar of savings business. For savers they combine a basically unlimited investment, a short period of notice and availability of a limited amount of funds without prior notice; therefore, they perform various functions. First of all, they are held in reserve as liquid precautionary holdings ("rainy-day savings"), but they are also used for the interim investment of funds or as savings for a special purpose. For a long time they were regarded as the "giro account of the man in the street" (although savings accounts cannot be debited in the same way that giro accounts can). They have thus acquired a dual nature between short and long-term forms of investment and encompass funds akin both to cash held for consumption purposes and to capital savings. *De facto,* however, most of these savings deposits have always had a largely medium-term character. Owing to their comparatively high potential liquidity and their close substitutability for shorter-term time deposits, they are included in the broadly defined monetary aggregate M3 for the purpose of monetary analysis.

5 Prior to the revision of the provisions governing saving, these were called "savings deposits at statutory notice". For reasons of clarity, the term "savings deposits at three months' notice" is used throughout this article.

Growth of savings deposits through the interest rate cycle *

Seasonally adjusted annual rates

Period	Savings deposits at three months' notice	Savings deposits with a notice of over three months to less than four years	Savings deposits with a notice of four years and over
First phase of rising rates April 1978 to Aug. 1981	2⅔ %	– 3⅔ %	5 %
First phase of falling rates Sept. 1981 to March 1988	7⅓ %	6¾ %	⅔ %
Second phase of rising rates April 1988 to Aug. 1992	– 2 %	4⅔ %	– 7¾ %
Second phase of falling rates Sept. 1992 to end-1996	12¾ %	5 %	– 3¾ %

* The definition of the interest rate cycle phases was based on the time deposit rate.

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"Standard savings rate"

The traditional rate of interest for short-term savings deposits is the "standard savings rate".[6] As savings deposits are readily accessible compared with other bank liabilities – albeit to a limited amount – the "standard savings rate" has always ranked at the bottom end of bank interest rates. Moreover, it usually responded fairly sluggishly to movements of other market rates. As higher-yielding savings deposits increased in significance from the end of the eighties and became widespread from 1993, the "standard savings rate" gradually ceased to be the representative interest rate for short-term savings deposits, however (see page 51 ff.).[7]

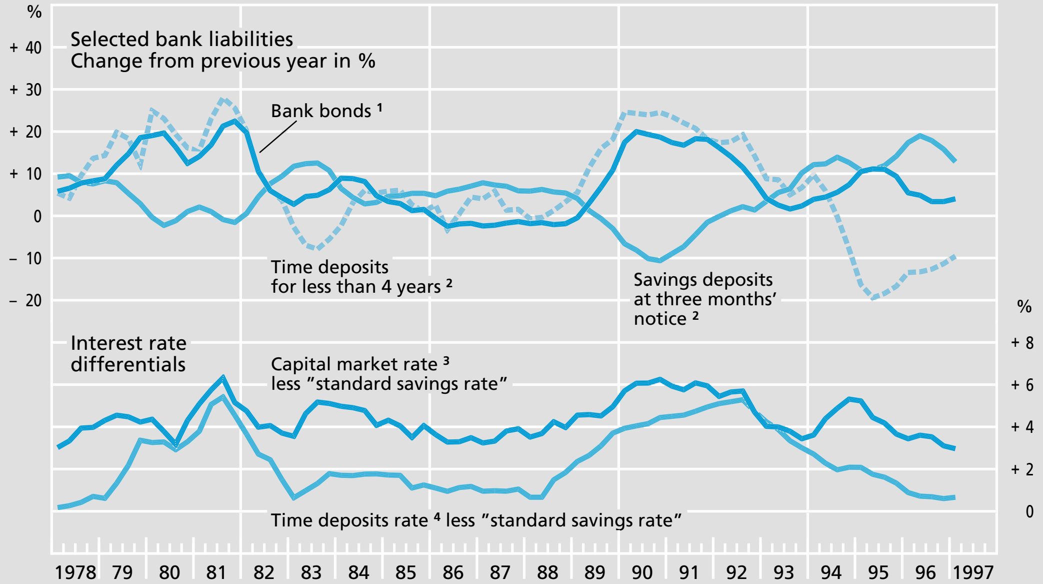
Growth of savings deposits dependent on the phase of the interest rate cycle

At the end of 1996, holdings of savings deposits at three months' notice in the hands of domestic non-banks came to DM 866 billion, which accounted for three-quarters of total savings deposits. Since the beginning of 1978 they have grown at an annual average rate of 5½ % – with marked fluctuations during the interest rate cycle.[8] Investors' varying readiness to deposit funds in short-term savings accounts mainly reflects the interest rate advantage of alternative forms of investment, which fluctuates in line with the interest rate cycle. As credit institutions did not fully adjust interest rates paid on savings deposits (which are measured, by way of approximation, by the "standard savings rate") to movements of money and capital market rates, and as savings deposit rates were at the same time less sensitive than time deposit rates, for instance, interest rate differentials widened during periods of rising interest rates, whereas conversely they narrowed when interest rates were falling.[9]

6 The term "standard savings rate" originally referred to the relevant interest rate which was regulated by the Deposit rates regulation abolished in 1967. In line with the normal sense of the term, it is applied in this article to the average interest rate paid on savings deposits at three months' notice (in the new interest rate statistics since November 1996: with a minimum/basic rate of interest).
7 See also Deutsche Bundesbank, The response of money market rates and short-term bank interest rates to changes in central bank rates, Monthly Report, October 1996, page 40.
8 In all growth rates and absolute changes mentioned in the article purely statistical changes have – as usual – been eliminated (including the break owing to the intra-German monetary union).
9 Even at the beginning of the period under review, part of short-term savings deposits were probably remunerated at above the "standard savings rate" which was presumably close to the time deposit rate. However, their weight was probably insufficient to prevent a loss in significance of savings deposits during periods of interest rate rises. To what extent this pattern may have changed in the nineties owing to the strong increase in special savings schemes can only be assessed after the termination of the next rising interest rate phase.

Selected bank liabilities and interest rate differentials

Quarterly averages



1 Bearer bonds outstanding, excluding bank holdings, adjusted for the balance of external transactions. — **2** Held by domestic non-banks at domestic credit institutions. — **3** Yield on domestic bank bonds outstanding. — **4** Rate of interest for time deposits of DM 100,000 to less than DM 1 million with an agreed maturity of 1 month up to and including 3 months (from November 1996: of 1 month).

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Substitutability for time deposits, ...

Interest-rate-induced shifts in investment preferences of domestic individuals are mainly recorded between savings deposits at three months' notice and time deposits of less than four years. As the interest rate differential between the two types of deposits widens, investors are obviously increasingly prepared to accept the other drawbacks of time deposits (very limited availability within the fixed period, minimum deposit requirement). The

... bank bonds and savings bonds

fact that movements of bank bonds and savings bonds contrasted with those of savings deposits at three months' notice also indicates fairly close substitutability between these forms of investment. At times when capital market rates are attractive, investors evidently feel that the noticeably higher yields of these long-term investments compared with "normal" deposits on savings accounts represent sufficient compensation for the price risk associated with bonds and the lower liquidity of savings bonds.

Increase in savers' interest rate awareness

The interest rate sensitivity of savings deposits at three months' notice seems to have increased over time. This is suggested by their movements during the period of rising interest rates from 1988 to autumn 1992, when domestic non-banks considerably reduced their holdings of short-term savings deposits in individual years (1989: – 3 %; 1990: – 4 ½ % in western Germany). This period of high interest rates persisted for a fairly long time. In addition, the "standard savings rate" was even more slow to follow movements of capital market rates than in comparable interest rate constellations in the past. On balance, this resulted in a severe interest rate disadvantage for savings deposits over a long period of time compared with capital market investments. On the other hand, the "standard savings rate" fared better than the time deposit rate at that juncture. Apparently the marked weakness of savings deposits during this period was not only a consequence of the interest rate constellation but also of the increase in savers' interest rate awareness. These findings are consistent with a generally observed stronger yield awareness of broad groups of savers in the last two decades. Credit institutions eventually responded to this change in savers' behaviour by expanding their supply of higher-yielding savings deposits at three months' notice.

Non-interest-rate-related influences

Besides interest rate movements and interest rate sensitivity, the trend in savings deposits at three months' notice was influenced by other factors, too. This form of saving, for example, often attracted an above-average volume of funds whenever the economic outlook was rather uncertain. For instance, households increased their holdings of savings deposits at three months' notice by 10 % or more in 1982, 1983 and 1993, in spite of a far below-average growth of disposable income. At such times, savings deposits' comparatively high liquidity obviously gains special importance.[10] Moreover, tax considerations have sometimes influenced the growth of savings deposits at three months' notice. One of the reasons they were augmented so strongly in 1988 compared with longer-term bank liabilities was presumably the fact that they were not subject to the withholding tax that had been announced in that year and which was introduced at the start of 1989. In 1993, they recorded inflows of funds in connection with the entry into force of the tax on interest income, mainly to the detriment of savings bonds and other long-term forms of saving. This may also have owed something to the increase to 35 % in the rate of taxation applied to over-the-counter transactions.

Intra-German monetary union

Following intra-German monetary union, the trend in savings deposits at three months' notice was marked by sizeable portfolio adjustments in eastern Germany. At first, the currency conversion of GDR Mark to Deutsche Mark resulted in an increase of DM 120½ billion in short-term savings deposits; in relation to the stock of savings deposits at three months' notice in western Germany in June 1990, this represented an increase of 27 %. This leap owed much to the fact that, under the previous financial system of the GDR, financial assets could basically be accumulated only in the form of so-called savings accounts and giro accounts with savings banks.[11]

When the east German currency was converted, these deposits were at first uniformly treated as savings deposits at three months' notice. Immediately after the currency conversion, a considerable amount of savings

10 The fact that the years 1982, 1983 and 1993 belonged to phases of falling interest rates, and that 1993 was moreover marked by the dissemination of special savings schemes and that these influences cannot be separated clearly in the analysis, calls for a careful interpretation of this link, however.

11 Deposits in these accounts were payable on demand and were paid a uniform rate of interest of 3.25 % per annum. The main difference between savings accounts and giro accounts with savings banks was that the latter could be used more extensively for payment purposes.

deposits was converted into cash.[12] In the following period they were used among other things to finance purchases of consumer goods. But primarily, east Germans used the now more varied supply of investment facilities to diversify their portfolios more strongly. Funds withdrawn from savings accounts at three months' notice were mainly invested in longer-term savings deposits, savings bonds, bonds and time deposits. At the end of 1990, short-term savings deposits of domestic non-banks at credit institutions in the former GDR, at DM 53.8 billion, came to less than half of their initial holdings.[13] In mid-1992, east German households again started to step up their savings deposits at three months' notice. At the end of 1996, these came to DM 86½ billion (held at credit institutions in eastern Germany, excluding east Berlin) and had thus regained over 80 % of the conversion volume on June 30, 1990.[14]

"Comeback" of the passbook ...

Since 1993, a "comeback" of savings deposits at three months' notice has been observed in Germany as a whole; this is reflected by the far above-average growth rates between 1993 and 1996 (1993: 13 %; 1994: 12 %; 1995: 16 %; 1996: 16 %). On the one hand, this strong increase is based on the fall in interest rates which began in autumn 1992. However, a more significant factor was the growing popularity of higher-yielding savings accounts in the form of temporary bonuses or special savings schemes. These are offered 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.) and features, as a one-off deposit or an instalment-based saving scheme, at fixed or variable interest rates, at rising interest rates or with a bonus at the end of the maturity, or with generally higher rates than the standard rate. However, the higher rates of interest are often only paid if the funds, which are shown in the balance sheet as three-month savings deposits, are held over a longer term. Such forms of saving are not an innovation of the nineties, but what is new is their growing importance in the short-term savings deposit segment, in particular.[15] Between the end of 1993 and the end of 1996, special savings schemes grew at an average rate of 34½ % per year.[16] Their share in short-term savings deposits grew from 31% to 53 % in that period. The share of total higher-yielding savings deposits at three months' notice – i.e. including tem-

12 No direct exchange of old banknotes against new ones was possible according to the agreed conversion modalities. Instead, the initial provision of Deutsche Mark currency was effected by means of individual withdrawals from the converted bank accounts into which GDR currency had to be paid beforehand.
13 This reduction in holdings also owed something to purely statistical processes; at the end of 1990, for instance, DM 33 billion of funds held in giro accounts at savings banks (which were initially classified as short-term savings deposits) were converted into regular sight deposits following the transitional period.
14 The data of the regional statistics used above for the first few months after monetary union referred to eastern Germany including east Berlin. However, for the last few years, only data for the former GDR excluding east Berlin are available. In terms of this territorial definition, the amount of savings deposits at three months' notice totalled just under DM 106 billion as at June 30, 1990.
15 Bonus-carrying savings deposits, in particular, were probably offered as early as in the seventies. The special savings contracts as such, the bulk of which were at first presumably included in savings deposits at over three months' notice, became popular in the eighties not least as a response of credit institutions to the abolition of the Savings Bonuses Act.
16 Data on special savings schemes as a whole have been collected by the Bundesbank since June 1986; however, they have been broken down by periods of notice (three months' notice, over three months' notice) only since December 1993.

porary bonus payments – is presumably even higher.[17]

... as a result of attractive interest rates ...

In terms of yields, short-term savings deposits have thus gained perceptibly in attractiveness. In April 1997, the rate of interest paid on higher-yielding savings deposits for amounts of less than DM 10,000 (and without an agreed duration of contract) came to an average of just under 2 ½ %; it was thus ⅔ percentage point higher than the "standard savings rate".[18] At present, higher-yielding savings deposits also earn more than comparable time deposits. For time deposits to yield at least as high a rate of interest as savings deposits of DM 20,000 to less than DM 50,000 (2 ¾ %), an amount of DM 100,000 to less than DM 1 million had to be deposited for three months in April, for example. Savings deposits with an agreed duration of contract yield an even higher rate of interest, depending on the duration of the contract (see the table on page 53).

... and greater flexibility

In addition to a more market-related rate of interest, customers' more flexible scope for withdrawing funds has contributed to the increase in demand for savings deposits at

Higher-yielding savings deposits – definition and determinants

Higher-yielding savings deposits comprise special savings facilities and savings deposits carrying a temporary bonus. In accordance with the guidelines for the monthly balance sheet statistics, special savings facilities are in principle all savings deposits "which are not classifiable as traditional passbook saving, but for which a rising rate of interest or a – not just temporary – bonus or generally a higher interest rate than the normal rate is paid under special contracts. The comparative interest rate is the rate paid by the reporting institution for traditional savings contracts with a corresponding maturity."

The rate of interest depends, in particular, on the following determinants:

- Agreement and, if applicable, length of a **duration of contract**
- **Deposit amount**
  - Minimum saving amount
  - Amount of regular saving (instalment saving)
  - Amount of a one-off deposit
- **Reference** for the interest rate or its definition
  - Fixed rate applying over the whole term
  - Variable rate
    - Geared to the capital market rate
    - Geared to the money market rate
  - Other definition
    - Graduated interest rate scale
    - Premium/bonus payable at the end of the contract
    - A fixed rate for a certain period, thereafter a variable rate

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17 Among the forms of saving with a higher rate of interest, the trend is benefiting special savings deposits to the detriment of bonus-carrying savings deposits. The crucial factor in this is that the administrative costs of special savings contracts are lower, as a result of their high degree of standardisation, than those of bonus-carrying deposits, which are normally concluded on an individual basis.

18 Since the modification of the interest rate statistics as from the reporting month November 1996, the Bundesbank has also collected data on interest rates for savings facilities with a higher rate of interest (bonus-carrying savings deposits, special savings schemes). See Deutsche Bundesbank, The economic scene in Germany around the turn of 1996-7, Monthly Report, February 1997, page 25 ff.

three months' notice. As part of the revision of the provisions governing savings in mid-1993, the amount obtainable without prior notice was raised to DM 3,000 per calendar month; between the last day and the first day of two consecutive months, DM 6,000 can thus be withdrawn within two days and without prior notice. In addition, withdrawals of savings deposits are now also permissible without presentation of the document. Without prejudice to the existing provisions governing savings, some credit institutions have established automated teller machines for withdrawing savings deposits. Transfers of funds from a savings account to another account held at the saver's bank can also be initiated at some credit institutions by telephone. The more flexible scope for withdrawing funds does not, however, necessarily mean that savings deposits are actually held for shorter periods on average. Numerous special savings contracts include incentives to hold funds for a longer period. For example, the higher rate of interest is often subject to the proviso – as mentioned – that no use is made of the formal three-month period of notice and that deposits do not fall below a minimum amount.

Interest rates paid on savings deposits

As of April 1997; in % p. a.

Type of deposit	Average rate of interest 1	Spread 2
Savings deposits with the minimum/basic rate of interest at three months' notice	1.75	1.50 – 2.00
Savings deposits with a higher rate of interest		
at three months' notice		
without a duration of contract		
less than DM 10,000	2.44	2.00 – 3.25
from DM 10,000 to less than DM 20,000	2.58	2.14 – 3.25
from DM 20,000 to less than DM 50,000	2.72	2.25 – 3.25
with a duration of contract		
from DM 20,000 to less than DM 50,000		
up to and including 1 year	2.90	2.50 – 3.25
over 4 years	4.67	3.25 – 6.22
at more than three months' notice		
with a duration of contract		
from DM 20,000 to less than DM 50,000		
up to and including 1 year	3.01	2.70 – 3.50
over 4 years	4.42	3.00 – 5.03
Memo item		
Time deposits from DM 100,000 to less than DM 1 million running for three months	2.72	2.35 – 3.00

1 The average rates are calculated as an unweighted arithmetic mean from the interest rates reported within the spread. — **2** The spread is computed by eliminating the reports in the top 5 % and the bottom 5 % of the interest rate range.

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Competition the decisive factor for product innovations

The perceptible expansion of banks' range of short-term savings deposit products in the last few years was primarily attributable to a marked increase in competitive pressure. On the one hand, the extension of the product range was probably triggered by the deregulation of savings, which created additional scope for devising new products. On the other hand, competition for investment funds has grown tougher of late owing to the admission of pure money market funds, the general expansion of investment business and the introduction of new sales channels. Finally, many savers have become more discriminating as regards the profitability and flexibility of their financial investments.

Trend in savings deposits at more than three months' notice

Savings motive and rate of interest

From the investor's perspective, savings deposits at more than three months' notice[19] are suited mainly to accumulating or investing assets. As a basic principle, they cannot be

19 Prior to the revision of the provisions governing saving, these deposits were called savings deposits at agreed notice. For better clarity, the term "savings deposits at more than three months' notice" is used throughout this article.

withdrawn without prior notice. They thus have a clearly longer-term nature. For the purpose of monetary analysis, they are therefore classified as monetary capital. Owing to their lower liquidity and the on average longer investment period, their rate of interest has always been above the "standard savings rate"; the rate of interest was mainly dependent on the length of the period of notice. Data on interest rates for savings deposits with an agreed period of notice of 12 months or of 4 years and over, which were collected by the Bundesbank until November 1996, presumably understated interest rates actually paid in the respective maturity categories for a long time, however, as the spread of special savings contracts started earlier among such instruments than in the case of short-term savings deposits.

Savings deposits of domestic non-banks with a period notice of more than three months came to DM 277 billion at the end of 1996; they thus accounted for just under one-quarter of savings deposits held by domestic investors. DM 216 billion of that sum was accounted for by savings deposits with a period of notice of more than three months to less than four years, and DM 61 billion to deposits with a period of notice of four years and over.

Interest rates were the principal factor in the first interest rate cycle, ...

Savings deposits with a period of notice of more than three months to less than four years grew by an annual average of 4 % between early 1978 and end-1996. Up to 1988 the trend was presumably determined mainly by the rising interest rate phase until 1981 and subsequently by the falling level of rates (see table on page 48). As with short-term savings deposits, interest rates for medium-term savings accounts were slower to respond during the interest rate cycle than money market rates and capital market rates.[20] This was primarily attributable to the fact that banks preferred constant add-ons to the "standard savings rate" for longer-term savings deposits. Therefore, during periods of high interest rates, these were relatively unattractive compared with capital market investments and shorter-term time deposits. When interest rates were falling, savers tended to favour medium-term savings deposits again, since these deposits yielded rates ranging over or just a little under the time deposit rate, and fixed-rate bonds were no longer regarded as being sufficiently attractive.

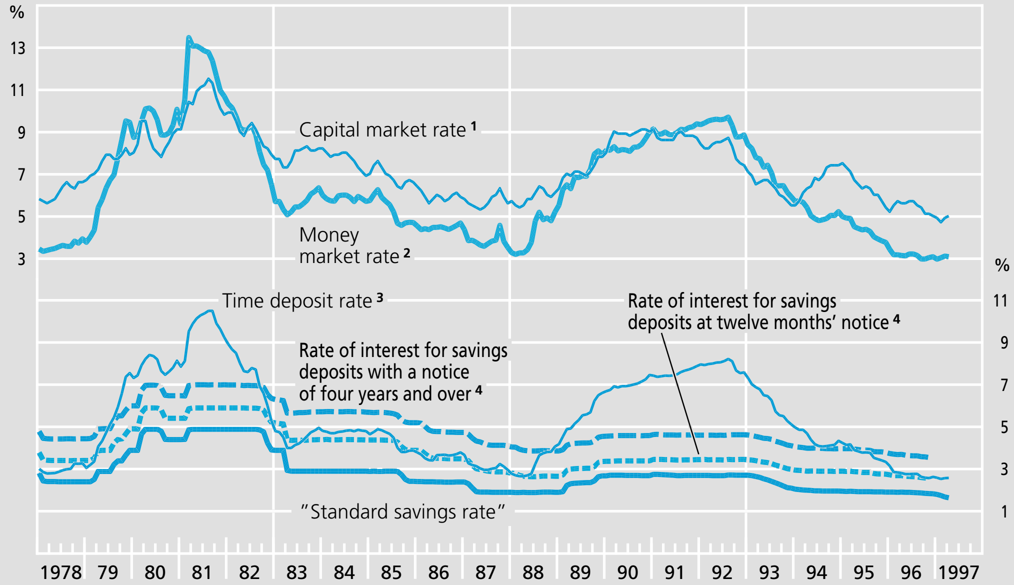
... special influences dominated the second interest rate cycle

Since the end of the eighties, savings deposits with medium-term periods of notice have been fairly volatile. This was chiefly attributable to a number of special factors, whereas interest rate influences receded in importance. At first, the announcement and introduction of the withholding tax in January 1989 triggered a dramatic reduction in such deposits. Following the intra-German monetary union, fairly large amounts of funds were channelled into savings deposits at a period of notice of over three months to less than four years in the context of the portfolio adjustments of east German savers. In the second half of 1990, just over DM 6½ billion was invested in corresponding accounts at

20 Between April 1978 and the respective interest rate peak, the difference between the interest rate for savings deposits with an agreed period of notice of 12 months and the capital market rate and the three-month rate widened from just over 2 to 5½ percentage points (August 1981) and from 0 to 7½ percentage points (March 1981), respectively.

Interest rate movements

Monthly averages



1 Yield on domestic bank bonds outstanding. — **2** Rate for three-month funds reported by Frankfurt banks. — **3** Rate of interest for time deposits of DM 100,000 to less than DM 1 million with an agreed maturity of 1 month up to and including 3 months (from November 1996: of 1 month). — **4** As from December 1996 the data are no longer collected.

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east German credit institutions (excluding east Berlin), and these amounts were stepped up substantially in the following years. This was instrumental in stabilising the overall trend in 1991 and 1992. In western Germany, by contrast, inflows into such deposits were rather low during this period given the growing inversion of the yield curve and a certain reluctance to make longer-term investments in anticipation of the introduction of the tax on interest income at the beginning of 1993.

Volatile trend following the deregulation of saving

Following the revision of the provisions governing saving in mid-1993, savings facilities in the medium-term maturity category, too, initially recorded an upswing; towards the end of the period under review, however, they were reduced perceptibly. The recent fall-off in demand – accompanied by a substantial increase in savings deposits at three months' notice – primarily reflects savers' preference for liquidity, which is not unusual at a time when the economic outlook is uncertain. However, this may in part be ascribable to a structural shift out of savings deposits with a period of notice of over three months into savings deposits at a period of notice of three months. From the saver's perspective, the formally short-term savings deposits – as long as no use is actually made of the period of notice – offer more or less the same rate of interest, given a similar duration of contract and a similar investment amount, as one with a longer period of notice.

The significance of savings deposits with a period of notice of four years and over has

Dwindling significance of long-term savings deposits

dwindled perceptibly during the period under review. Between 1978 and 1996 such deposits decreased by just over 1½ % per year on average.[21] This trend mirrors not least the cuts in government saving incentives in the period under review. The Savings Bonuses Act was abolished in connection with the subsidy reductions in the early eighties.[22] With the abolition of government savings bonuses, long-term contractual saving became less attractive, even though credit institutions took this cut as an occasion to offer similar savings contracts of their own.[23]

The abolition of tax credits on employees' savings for all bank account savings contracts concluded after the end of 1988 led to a rush of contracts prior to the abolition, but after that date to a decline in these deposits. If investments for individual capital formation (excluding government promotional incentives) are disregarded, there are hardly any incentives now to step up savings deposits with a period of notice of four years and over. The fact that banks started offering savings programmes with insurance protection has not changed this situation. For acquiring long-term financial assets, the saver can today choose between a large variety of investment facilities which exceed the attractiveness of long-term saving, in particular with regard to liquidity and profitability.

Implications for monetary targeting

Since 1975 the Bundesbank has followed a strategy of monetary targeting. Since 1988 it has defined the monetary target on the basis of the money stock M3, which includes savings deposits at three months' notice as a major component. Structural changes in the latter's trend could therefore – by influencing the indicative properties and the controllability of the money stock M3 – have an impact on the efficacy of monetary targeting. That raises the question of the implications of the changes in savings business outlined above for the monetary policy strategy.

Changes in savings and the effectiveness of monetary targeting

Possible change in the informative value of the money stock

A change in the informative value of the money stock M3 would arise if – as a result of the spread of short-term special savings contracts – the share of such funds in M3 that serve rather as a store of value than for transaction purposes were to rise significantly over the long term. In such a case, the asset elasticity of the demand for M3 would increase and the income elasticity would decrease, and the trend in the velocity of circulation would fall faster. In fact – as suggested – plausibility analyses do not rule out the possibility that savings deposits at three months' notice may have increasingly acquired the character of monetary capital. This would pose a particular problem for monetary targeting if such a change were to happen abruptly. However, if such a change happens more or less gradually, policy makers can calculate an appropriate add-on, when deriving

21 For the trend during the individual interest rate cycle phases see the table on page 48.
22 Only savings contracts which were concluded prior to November 13, 1980 carried a bonus.
23 These include, for example, instalment savings schemes which usually provide for saving over six years and "a holding period" of one year after the last inpayment, for which a one-off bonus is paid at the end of the contractual period in addition to the basic rate of interest.

the monetary target, allowing for the declining trend in the velocity of circulation.

Following the deregulation of saving, greater inflow of funds to savings deposits ...

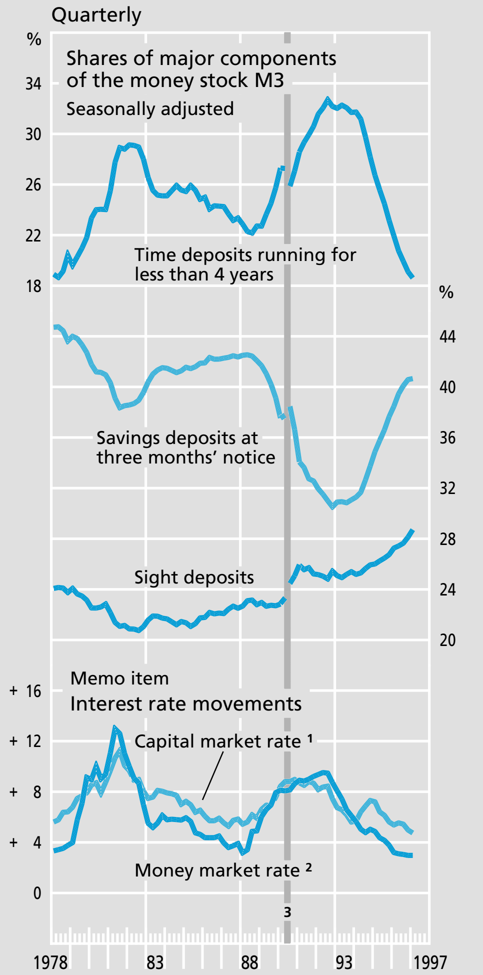
For the time being, it is too early to make a comprehensive empirical assessment.[24] However, so far there are few signs of any lasting change in the demand for savings deposits and resulting long-term distortions in the growth of the money stock M3. In the past three years, special savings schemes have strongly increased, but in 1994 and 1995 this presumably occurred mainly to the detriment of shorter-term time deposits. These shifts – which are fairly usual when interest rates are declining – were reinforced by the growing popularity of higher-yielding savings schemes. As such transactions cancel out within the monetary aggregate M3, they do not affect its overall trend. The share of savings deposits in the money stock M3 at the end of 1996 was rather lower than at the beginning of 1988. The same is true of time deposits' share. This suggests that the increase in savings deposits in the recent past can be interpreted to some extent as a correction of their loss of significance during the rising interest rate phase between 1988 and 1992. The longer-term increase in the share of sight deposits and the lower share of savings deposits and time deposits in the aggregate likewise does not suggest that the "degree of liquidity" of the money stock M3 has declined over the long term.

... initially to the detriment of time deposits ...

... and in 1996 also to the detriment of monetary capital

By contrast, the very moderate demand of domestic non-banks for longer-term investments at banks which in 1996 accompanied the rapid growth in savings deposits suggests that last year short-term savings deposits were stepped up to a fairly large extent to the detriment of monetary capital. It is true that shifts out of monetary capital into the money stock are not unusual at times when interest rates are low and are even an integral part of the transmission of monetary policy impulses.

The structure of the money stock M3



1 Yield on domestic bank bonds outstanding. — **2** Rate for three-month funds reported by Frankfurt banks. — **3** From June 1990 new territorial definition.

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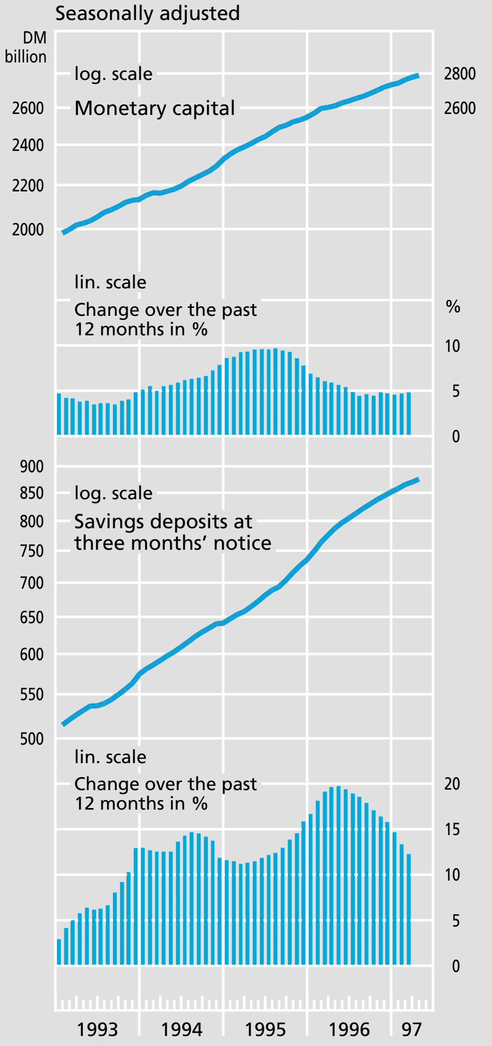
24 Since the beginning of the statistical collection of data on special savings schemes at three months' notice at the end of 1993, which made a detailed analysis possible in the first place, not even one full interest rate cycle has elapsed.

Monetary capital and savings deposits at three months' notice



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However, monetary capital grew at a slower rate in 1996 than during comparable interest rate and cyclical constellations, for example in 1987. This was attributable in part to the reduction in longer-term savings deposits, some of which were presumably rerouted into short-term special savings deposits. It may thus be inferred that the amount of "latent" monetary capital included in M3 is higher at present than during previous low interest rate phases. An analysis of the transactions velocity of savings deposits points in the same direction.[25] The transactions velocity has slowed down markedly following a steep increase in the late eighties/early nineties (in connection with the aforementioned fall-off in the growth of savings deposits) since 1993 and is now below its multi-year average. Although it currently ranges above the low points of previous low interest rate phases, it has declined – starting from a very high level – by a much greater margin than in comparable phases in the past.

Temporary distortions largely unproblematic for monetary targeting

Such temporary distortions do not pose any unsolvable problems for monetary targeting, they can rather be identified by means of monetary analysis and included in monetary policy assessment. Thus last year the Bundesbank interpreted the large weight of domestic non-banks' investment behaviour in the strong increase in M3 as an indicator that liquidity affecting expenditure rose less rapidly than M3. Together with other factors, this resulted in the conclusion that, in spite of the failure to meet the monetary target in 1996, no inflationary pressures were to be anticipated on the monetary front.[26]

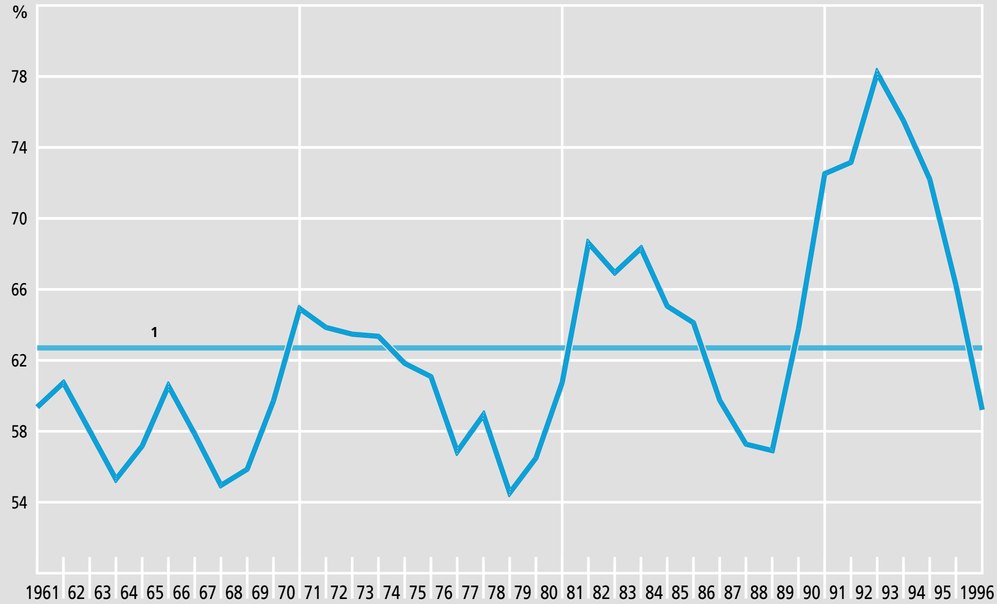
No basic change in the economic nature of savings deposits

It would seem to be mistaken or at least premature to conclude from the trend during the past few years that short-term special savings

25 The transactions velocity is defined here as the quotient of the sum of all withdrawals in a given year and the level of savings deposits at the end of the previous year. Such an analysis is only possible for total savings deposits, as data on withdrawals are collected only for this variable.
26 See Deutsche Bundesbank, Strategy of monetary targeting in 1997-8, Monthly Report, January 1997, pages 17-25.

Long-term trend in the transactions velocity of savings deposits *

End-of-year levels



* The transactions velocity is defined here as the quotient of the sum of all withdrawals in a given year and the level of savings deposits at the end of the previous year. Up to and including 1990 western Germany, thereafter Germany as a whole. — **1** Average transactions velocity from 1960 to 1996.

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schemes no longer have anything in common as regards their economic nature with traditional savings deposits with the same maturity and that they therefore ought to be excluded completely from M3 and included in monetary capital. Firstly, their ongoing substitution for shorter-term time deposits argues against such a step. Secondly, short-term savings deposits have always served as an investment vehicle of risk-averse investors; their significance as an investment alternative to fixed-rate debt securities likewise usually increases at times of growing interest rate uncertainties. Finally, the trend in the transactions velocity has so far not suggested that new investment in (special) savings schemes at three months' notice should be interpreted largely or even exclusively as monetary capital formation.

Retention of the monetary aggregate M3

At present there is therefore no need to alter the definition of the intermediate target variable M3. This is all the more true as most econometric studies continue to find that money demand in Germany is stable over the long term. Even if such analyses may perhaps reveal structural breaks in money demand functions only with a longer time lag, that is no reason to redefine the monetary aggregate *ad hoc,* let alone to abandon the strategy of monetary targeting altogether.

Implications for interest rate elasticity

An increase in the share of higher-yielding savings schemes in savings deposits at three months' notice could affect the interest rate elasticity of money demand. An inverse response of money demand to changes in the money market rates is the crucial lever by means of which the central bank can control the growth of the money stock by influencing terms and conditions in the money market. A higher remuneration of the stock of savings deposits, other things being equal, also raises the average rate of interest, the so-called "own rate of interest", of the overall aggregate M3; this may reduce the (negative) interest rate elasticity and thus the controllabality of this monetary aggregate. Econometric studies have so far indicated no such change in interest rate elasticity, however. Even if the "own rate of interest" of M3 were to increase in the wake of higher-yielding savings deposits, a basically negative interest rate elasticity of M3 should not be jeopardised in the near future, for at the end of 1996 the largely unremunerated or barely remunerated components (currency in circulation, sight deposits, traditional savings deposits) still accounted for the bulk of M3.

Monetary policy conclusion

To date, the rapid growth of special savings deposits has not noticeably weakened the efficacy of monetary targeting. However, the line of demarcation between money and monetary capital has probably become more blurred. The Bundesbank will closely monitor the future trend in savings business so that it can respond appropriately to any resulting distortions in the money stock.

Savings deposits of domestic non-banks *

DM billion

		By maturity			By group of savers and maturity				
			With a period of notice of		Domestic individuals				
							With a period of notice of		
								4 years and over	
Period	Total	At 3 months' notice	over 3 months to less than 4 years	4 years and over	Total	At 3 months' notice 1	over 3 months to less than 4 years 1	Total 1	of which Under the Personal Asset Acquisition Act 2
	End-of-year levels								
1977	437.1	259.7	96.7	80.7	413.5	249.6	90.2	73.7	40.0
1978	466.4	281.2	100.5	84.7	441.5	270.6	93.6	77.3	38.2
1979	478.4	289.7	97.7	91.0	454.8	280.0	91.2	83.6	42.8
1980	485.8	298.8	91.4	95.5	464.0	289.7	86.0	88.4	48.0
1981	483.0	297.9	89.3	95.8	463.1	288.9	84.9	89.4	51.6
1982	518.2	328.8	93.7	95.7	498.0	318.9	89.5	89.6	51.5
1983	548.4	359.5	100.2	88.7	526.5	348.2	95.8	82.5	41.7
1984	568.8	373.8	110.3	84.7	546.4	362.0	105.7	78.7	34.9
1985	623.6	408.4	124.2	91.1	599.6	395.3	119.5	84.7	33.1
1986	670.3	439.8	135.0	95.6	644.6	425.9	130.1	88.6	30.5
1987	707.1	466.8	140.9	99.4	679.5	452.4	135.6	91.5	26.5
1988	728.0	493.5	133.3	101.1	699.6	478.8	128.0	92.8	29.2
1989	705.6	479.1	137.6	89.0	679.2	464.8	132.9	81.5	22.0
1990	755.2	515.4	159.2	80.6	729.6	501.2	154.6	73.7	18.6
1991	754.1	513.1	165.6	75.4	731.2	500.5	161.5	69.2	17.1
1992	770.7	522.2	177.4	71.2	748.6	509.5	173.6	65.4	16.7
1993	859.4	587.4	202.0	70.0	836.6	574.6	197.7	64.3	17.1
1994	940.5	654.3	217.1	69.1	915.7	640.2	212.2	63.4	18.3
1995	1,046.1	749.7	234.0	62.3	1,018.7	733.2	228.6	56.9	15.3
1996	1,143.0	865.8	216.1	61.0	1,112.1	846.7	210.4	55.0	15.7
	Changes								
1978	29.0	21.3	3.7	4.0	27.6	20.8	3.3	3.6	– 1.8
1979	11.6	8.3	– 2.9	6.2	12.9	9.2	– 2.5	6.2	4.6
1980	6.9	8.8	– 6.3	4.4	8.7	9.4	– 5.4	4.7	5.2
1981	– 3.4	– 1.3	– 2.2	0.1	– 1.4	– 1.1	– 1.2	0.9	3.6
1982	35.0	30.8	4.3	0.0	34.8	29.9	4.6	0.3	– 0.1
1983	30.2	32.2	5.0	– 7.0	28.4	30.8	4.7	– 7.2	– 9.9
1984	20.3	14.3	10.0	– 4.0	19.8	13.7	10.0	– 3.8	– 6.7
1985	32.8	21.6	8.9	2.4	31.8	20.8	8.9	2.1	– 2.8
1986	46.7	31.4	10.8	4.5	45.0	30.6	10.6	3.8	– 2.6
1987	36.8	27.0	5.9	3.8	35.0	26.5	5.6	2.9	– 4.1
1988	20.9	26.5	– 7.3	1.7	20.1	26.2	– 7.4	1.3	2.7
1989	– 22.4	– 14.5	4.2	– 12.1	– 20.4	– 14.0	4.9	– 11.3	– 7.2
1990	– 37.4	– 50.7	21.7	– 8.3	– 36.5	– 50.5	21.7	– 7.8	– 3.4
1991	0.9	0.8	5.4	– 5.4	3.6	2.3	6.0	– 4.6	– 1.5
1992	16.3	7.4	13.1	– 4.1	17.1	7.4	13.4	– 3.7	– 0.4
1993	88.7	65.0	24.8	– 1.2	87.7	64.6	24.2	– 1.1	0.4
1994	81.2	67.5	14.6	– 0.9	79.3	66.2	14.0	– 0.9	1.4
1995	105.6	101.9	10.5	– 6.7	102.9	99.4	10.1	– 6.6	– 3.0
1996	96.9	116.8	– 18.7	– 1.1	93.4	114.2	– 19.1	– 1.7	0.4

* Excluding savings deposits of foreign branches and of building and loan associations. From 1990 including savings deposits of east German credit institutions. Statistical changes have been eliminated in the changes. — **1** For enterprises, individuals and non-profit organisations, full data on maturities were first collected in 1980; the missing data have been estimated. — **2** Up to 1986 including savings deposits as defined by the Savings Bonuses Act. —

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Savings deposits of domestic non-banks * (cont'd)

DM billion

Period	By group of savers and maturity							
	Domestic non-profit organisations		Domestic enterprises		Domestic public authorities		Memo item Special savings facilities 3	
	Total	of which At 3 months' notice 1	Total	of which At 3 months' notice 1	Total	of which At 3 months' notice	Total	of which At 3 months' notice 4
	End-of-year levels							
1977	10.4	4.1	6.0	2.8	7.2	3.2	.	.
1978	11.0	4.4	6.3	2.9	7.6	3.3	.	.
1979	10.8	4.1	6.0	2.7	6.8	2.9	.	.
1980	10.4	3.8	6.0	2.8	5.4	2.5	.	.
1981	9.9	3.9	5.5	2.7	4.4	2.4	.	.
1982	10.2	4.3	5.5	2.8	4.5	2.7	.	.
1983	10.9	4.8	5.7	3.0	5.3	3.4	.	.
1984	11.2	5.1	5.6	3.1	5.6	3.7	.	.
1985	12.1	5.6	6.3	3.6	5.6	3.8	.	.
1986	13.2	6.0	6.7	3.9	5.8	3.9	140.7	.
1987	14.6	6.4	7.2	4.2	5.8	3.8	169.7	.
1988	15.0	6.5	7.4	4.3	5.9	4.0	177.0	.
1989	14.4	6.3	6.2	3.8	5.9	4.2	191.4	.
1990	13.9	6.2	5.7	3.5	6.1	4.4	216.1	.
1991	12.6	5.6	5.3	3.4	5.0	3.6	255.7	.
1992	12.4	5.8	5.3	3.5	4.5	3.4	309.4	.
1993	13.6	6.3	4.8	3.2	4.5	3.3	380.5	180.8
1994	14.8	7.2	4.9	3.2	5.0	3.7	474.4	249.4
1995	15.0	7.8	7.1	4.7	5.3	4.0	583.3	344.7
1996	16.8	9.5	8.6	5.5	5.4	4.1	679.1	459.6
	Changes							
1978	0.6	0.3	0.3	0.2	0.4	0.1	.	.
1979	– 0.2	– 0.3	– 0.3	– 0.2	– 0.8	– 0.4	.	.
1980	– 0.4	– 0.3	0.0	0.1	– 1.5	– 0.4	.	.
1981	– 0.5	0.1	– 0.5	0.0	– 1.0	– 0.2	.	.
1982	0.2	0.4	– 0.1	0.1	0.1	0.3	.	.
1983	0.7	0.5	0.3	0.2	0.8	0.7	.	.
1984	0.3	0.2	– 0.1	0.1	0.3	0.3	.	.
1985	0.7	0.4	0.4	0.4	– 0.1	0.0	.	.
1986	1.1	0.4	0.4	0.3	0.2	0.1	.	.
1987	1.4	0.4	0.4	0.2	0.0	– 0.1	28.7	.
1988	0.4	0.0	0.3	0.2	0.2	0.2	7.4	.
1989	– 0.6	– 0.2	– 1.3	– 0.5	– 0.1	0.2	12.9	.
1990	– 0.6	– 0.2	– 0.5	– 0.3	0.3	0.2	24.7	.
1991	– 1.3	– 0.6	– 0.4	– 0.1	– 1.1	– 0.8	32.9	.
1992	– 0.2	0.2	0.0	0.1	– 0.5	– 0.2	50.6	.
1993	1.2	0.5	– 0.2	0.0	– 0.1	– 0.1	59.6	.
1994	1.2	0.9	0.1	0.0	0.5	0.4	89.0	64.4
1995	0.2	0.7	2.2	1.5	0.3	0.3	104.2	96.4
1996	1.8	1.7	1.5	0.8	0.1	0.0	80.7	100.2

3 Savings deposits for which a rising rate of interest or a – not just temporary – bonus or generally a higher interest rate than the normal rate is paid under special contracts. From 1986 special savings facilities of domestic individuals, from December 1993 of all non-banks, from January 1995 of domestic non-banks. — **4** Collected only from 1993.

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