

Funded old-age provision and the financial markets

The pay-as-you-go pension insurance scheme in Germany is faced with inevitable demographic challenges. In order to curb the rise in contribution rates, restrictions on benefits were unavoidable. Supplementary private pension plans have therefore become all the more of a priority. The recent pension reform, which initiated a fundamental change in this direction, has also created considerable financial incentives for building up private old-age provision. The associated gradual increase in the funded component of pension financing will potentially contribute to a more equal intergenerational burden sharing and also to a more broadly based funding of old-age provision that will increase security and reliability.

This kind of pension reform may also have an impact on the capital market. Additional national savings as well as reform-induced structural changes are possible in this market. This will be influenced not only by the increasing institutionalisation of the financial markets, in particular, but also by the typically longer-term investment of savings for the purpose of funded pension provision.

Financial markets and old-age provision in an ageing society

In the ongoing debate on old-age provision, it is now widely accepted that there needs to

Advantages of a stronger reliance on capital funding

be a shift of emphasis away from the pay-as-you-go system towards funded old-age provision. Considering the pension claims accumulated under the pay-as-you-go system and the associated problem of making a change-over, no "economic added value" may be expected as a result of changes in financing alone.¹ Instead, attention has been focused on achieving more reliable old-age provision by means of a broader risk diversification as well as the prospect of a more even distribution of burdens between the various age cohorts. Last but not least, non-wage labour costs will also be reduced.

Implications for savings and structure of the financial markets

In this context, the implications that a stronger reliance on capital funding will have for the financial markets are attracting ever greater interest. It is possible to ask about both its influence on national savings and the structural changes in the financial markets. The latter concerns the financial service providers as well as their products. Experience in other countries indicates that a stronger reliance on funded old-age provision leads to a greater institutionalisation of capital investments, for example, in the form of pension funds. With regard to the products, provision for retirement differs from other saving motives mainly on account of its long-term nature. This, too, is also likely to have an effect on how the players behave in the financial markets.

Prospects of an improved outlook for economic growth

An increase in national savings – in the same way as an improved allocation of capital to its most productive uses – could enhance the outlook for growth in the overall economy. For that reason, this article deals initially with those main aspects of the recent pension re-

form which are relevant to the capital market. Their anticipated effects on the financial markets will then be discussed in more detail.

Greater emphasis on funded private pension provision

The pension reform adopted in 2001 comprises two key elements. Firstly, the level of benefits under the statutory pension insurance scheme was significantly reduced by modifying the adjustment formula in order to curb the rise in contributions. Secondly, considerable financial incentives were created to encourage private (individual and company-based) old-age provision.

Mainly in the eight years between 2003 and 2010, the annual pension adjustment will be reduced by just over 0.6 percentage point per year as a result of the reform. The gross benchmark pension level² in 2030 is likely to be some 3 percentage points lower (at around 42½%) than it would have been without the reform. The difference when compared with the present figure of around 48% is larger, in fact, because, even without the reform, the gross benchmark pension level would still have been reduced owing to the "automatic brake" mechanism³ built into

Pension reform 2001

Benefit reductions under the statutory pension insurance scheme

1 See also Deutsche Bundesbank, Prospects for, and obstacles to, a stronger reliance on funding in the statutory system of old-age provision in Germany, *Monthly Report*, December 1999, p 15-31.

2 The ratio of an average earner's gross pension after 45 years of being insured to the current average gross earnings of the contribution payers.

3 Taking account of a long-term increase in contribution rates to the pension insurance scheme and the wage tax ratios led to gross average earnings growing more quickly than the net earnings obtained using the old pension adjustment formula.

the old net-pay-based pension adjustment formula.

Promotion of private old-age provisions

Parliament has linked the promotion of supplementary old-age provision using grants and tax incentives ("Riester pension"), pursuant to the Retirement Pension Act (*Altersvermögensgesetz*), with the promotional criteria laid down in the Certification of the Retirement Pension Contracts Act (*Altersvorsorgeverträge-Zertifizierungsgesetz*), through which an extensive and quite complex regulation of private provision has been established (see the box on p 28). This principally concerns the terms of the contracts but also the choice of prospective supplier. At the same time the underlying conditions of company-based old-age provision have also been extended as a result of the right to claim a direct insurance plan – under which part of an employee's gross pay is deducted by the employer and paid directly into a private pension plan – and the introduction of defined contribution plans.⁴

Grants and tax incentives for private pension plans

The promotion of private pension plans is being introduced in four stages, beginning in 2002 and ending in 2008. This concerns both the amount of non-income-related grant⁵ and the maximum amounts for tax-deductible contributions to private pension plans⁶ pursuant to section 10a of the Income Tax Act. The tax office examines which is more advantageous in an individual case: the non-income-related grant or the tax incentive. The lower the income – and consequently the lower the marginal income-tax rate – and the higher the number of children, the more advantageous the grant option be-

comes. Owing to the progressive tax scale, tax-deductible contributions become more favourable as income increases. Government promotion thus has a u-shaped profile in relation to income, with government promotion being comparatively least generous for average incomes (see the chart on p 29).

The tax incentives for company-based pension plans are even more attractive. In particular, from this year onwards there is the possibility of investing up to 4% of the maximum level of earnings subject to contributions to the statutory pension insurance scheme (2002: €2,160 per month) free of tax and social security contributions⁷ in a pension fund or as part of a direct insurance plan. This means that company pension schemes will have a significant advantage, particularly up to 2008, over private pension plans.

Company pension plans more attractive

It is also possible to combine the assistance options of private pension plans, pursuant to section 10a of the Income Tax Act, with those of company pension schemes. Since the maximum level of earnings subject to contributions to the statutory pension insurance scheme is 1.9 times average earnings, an average earner, under the tax incentives could save around 7½% of his gross salary by making full use of the assistance available

Combination of assistance opportunities

⁴ See also Deutsche Bundesbank, Company pension schemes in Germany, *Monthly Report*, March 2001, p 43-58.

⁵ The basic grant increases from €38 to €154 and the grant per child from €46 to €185 per year.

⁶ The ceiling goes up from €525 in 2002 to €2,100 as from 2008. At present, €2,100 is the equivalent of just under 4% of the maximum level of earnings subject to contributions to the statutory pension insurance scheme amounting to €54,000 per year.

⁷ The freedom from social security charges for employee-financed contributions runs out at the end of 2008.

Requirements of government-assisted old-age provision under "The Retirement Pension Act" (*Altersvermögensgesetz*)

The Retirement Pension Act has laid down a series of requirements for assisted old-age provision instruments.

1. Ongoing voluntary contributions are to be paid during the savings phase.
2. The benefit phase will not commence before the age of 60 (earlier only as a disability pension in conjunction with a statutory pension owing to a reduced ability to work).
3. At the commencement of the payout phase, at least the amounts paid in must be available (nominal value guarantee). Up to 15% of contributions may be reserved for insurance against inability to work; however, the nominal value guarantee does not apply in this case.
4. The payout must be in the form of a life-time (at least fixed-level) annuity or in the form of a payout scheme with lifelong part annuitisation.
5. In the case of a fixed payout scheme, the, at least, fixed-level pensions are permitted for a maximum period until the age of 85. These may be split into guaranteed and variable reimbursement elements. Full annuitisation must take place at the age of 85 at the latest. The, at least, fixed-level pension may not, in turn, be lower than the previously guaranteed pension component.
6. The contracts may also include a surviving dependants' insurance.
7. Contributions and proceeds (including capital gains) may be invested only in
 - pension insurance and capitalisation products pursuant to section 1 (4) (2) of the Act on the Supervision of Insurance Enterprises,
 - interest-yielding bank deposits or
 - mutual funds shares.Shares in foreign funds must comply with Council Directive 85/611/EEC of 20 December 1985 (collective investment regulations, particular emphasis on the transferability of securities).
8. Contract and marketing costs are to be spread equally over ten years or defined as a specific share of the contributions.
9. The supplier is obliged to provide information (annually and in writing) on how the contribu-

tions are used, the capital that has accumulated so far, the retained pro rata contract and marketing costs, administrative costs and the earnings gained.

10. There must be a right to suspend or terminate the contract at a three-month period of notice from the end of each quarter and to transfer the accumulated capital to a new contract.
11. There must be no possibility of an assignment or transfer of claims or rights of ownership arising from the contract to a third party.

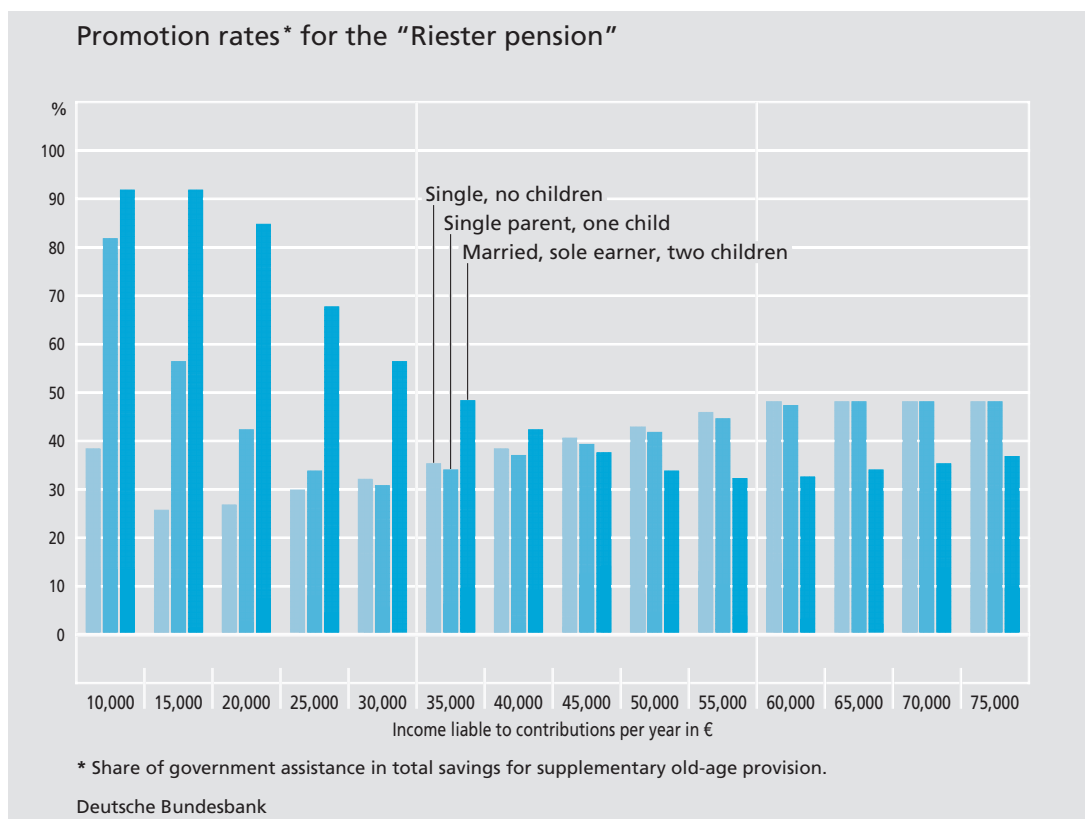
Under the "interim withdrawal model" an amount between a minimum of €10,000 and a maximum of €50,000 may be withdrawn from the old-age provision assets that have been saved, and used – in the manner of an interest-free loan – to finance owner-occupied property. Repayment is made in equal monthly instalments and the amount must be fully repaid by the age of 65. If the property owner is in arrears with remaining instalments, the assistance amounts contained in the unpaid portion of the withdrawal amount are to be paid back. The same applies if the property ceases to be owner-occupied. The repayment obligation can be avoided only if another property is purchased within one year or the outstanding loan is fully redeemed.

Finally, existing pension contracts can also be adapted to conform with the above criteria and qualify for assistance.

Any of the following institutions may supply a pension contract.

- Life insurance companies, credit institutions and investment companies domiciled in Germany.
- Life insurance companies (92/96/EEC) and credit institutions (89/646/EEC) domiciled in another country of the European Economic Area, and management and investment companies within the meaning of the Council Directive 85/611/EEC.
- German branch offices of life insurance companies or credit institutions domiciled outside of the European Economic Area but which are allowed to conduct deposit business in Germany.

In order to ensure subsequent taxation, benefits must be paid out to tax payers resident in Germany.



within the company-based pension plan (4% of the earnings ceiling subject to contributions). In addition, in 2008, an average earner could pay around 3¼% of the maximum level of earnings subject to contributions⁸ – which is the equivalent of around 6¼% of average income – into a supplementary private pension plan. If the average earners were to take full advantage of both these options, in 2008 he/she could use 13½% of his tax-subsidised income for his/her own pension provision. In order to bridge the gap, caused by the most recent reform, between the lower gross pension level and its current level, it would, however, be sufficient, given certain assumptions, for someone who is 20 years old at present to additionally reserve just under 1½% of his/her income for old-

age provision (for details, see the box on p 30).

According to the estimates of the Federal Government, the assistance measures for private old-age provision are likely to result in tax shortfalls of around €12½ billion from 2009 onwards.⁹ Additionally, there will also be temporary shortfalls in contributions to the social security funds. The exact amount will depend on how many contribution payers opt for direct insurance plans in their company pensions. If every employee out of a total of around 35 million contributed 4% of his/her income, this would lead to a short-

Fiscal burdens

⁸ It is assumed here that the ceiling for the assessment of contributions is adjusted annually by 3%, while the maximum deduction amount remains fixed at €2,100.

⁹ Tax shortfalls grow progressively with each stage of the assistance.

Pension benefits gap as a result of the 2001 pension reform

The 2001 pension reform not only reduced the level of benefits under the pay-as-you-go statutory pension insurance scheme but also introduced financial incentives for building up a private pension. This box discusses what supplementary pension contribution is necessary to bridge the gap opened up by the recent pension reform. It should be borne in mind that the younger the person is, the bigger the gap is which needs to be covered. However, the older the person is, ie the closer he/she is to retirement age, the less time there is remaining to close the gap.

The pension benefits gap can be measured by the development of the gross benchmark pension level. Without the pension reform the current pension level of 48% would have fallen to approximately just under 46% by 2030. This is mainly attributable to the assumption of a rise in the pension insurance contribution rate and an increasing wage tax ratio, which was still a factor in the old pension adjustment formula. Under these conditions the pensions would have followed net wages and salaries which increase more slowly than gross wages and salaries. With the pension reform the level of benefits falls to approximately 41½% and is thus around 3 percentage points lower over the long term than would have been the case without the reform. This is due, in particular, to the fact that fictional contributions to old-age provision are taken into account in the new pension adjustment formula. Therefore, over the next eight years the pension increase will be just over 0.6 percentage point lower annually.

This raises the question as to what annual contribution (as a percentage of gross wages and salaries) will have to be saved in order to close the gap opened up by the pension reform. Alternatively it could be asked what savings contribution will be necessary to maintain the current pension level (status quo) in the future. Even without the pension reform there would also have been a supplementary requirement for provision but this would have been lower than with the reform. Below, results will be presented from both points of view.

The calculations are based on a "model" insured person who at the age of 20 takes on a job which is subject to compulsory insurance (or is credited during non-contributory periods, for example, because of training), retires without deductions at 65 and draws a pension for a further 18 years. 3.0% has been assumed as the real return of a private pension. Real gross wages and salaries increase by 1.5% per year. Under these conditions, a 20-year old today

has to save just under 1% of his gross pay in order to draw (when he retires in 2047) a pension combining private and state elements which would have been offered by the statutory pension system alone without the reform. In order to maintain the current gross pension level, a higher annual private contribution of just under 1½% would be required whereas just over ½% would have been sufficient without the reform.

However, those people who are closer to retirement age would have to save significantly more. For them the compound interest can no longer have a significant effect. A 50-year old today, for example, would have to save just over 2½% extra in order to avoid a loss as a result of the pension reform, or just over 4% in order to maintain the present pension level. A private supplementary pension plan amounting to 4% of gross wages and salaries would therefore be appropriate for older contribution payers. By contrast, younger people paying this percentage would save more than required to fill the reform-related pension benefits gap.

The calculations are obviously dependant on assumptions. There would be a smaller pension provision requirement if the pension were drawn for a shorter period. Conversely, the required private pension provision increases if a surviving dependants' pension also has to be covered.

Finally, the calculations also depend on the assumptions about interest and wage growth rates. Therefore the pension provision requirement changes with the assumed return of the private old-age provision. If an interest rate of 4.5% (or 1.5%) is chosen instead of 3% the pension requirement of the 20-year old would decrease (or increase) by 1% to around ½% (or 1¾%).

Finally, it should be noted that the taxation of the retirement income is not taken into account when calculating the necessary supplementary contributions. Given an effective subsequent taxation of private pensions, a higher savings contribution would be necessary in order to achieve a projected net income after retirement.

On the whole, the calculations indicate that at least for younger insured persons an additional pension contribution of less than 4% of their income is likely to be sufficient not only to bridge the gap opened up by the pension reform but also to maintain the present pension level. These quantitative relationships should be noted in the case of assisted private pension provision.

fall in revenue, at all events, of just over 1½ percentage points.

Slow start for assisted private pensions

The first stage of government assistance began this year. Every entitled person receives a grant of €38 per year when he/she has paid at least 1% of his/her income subject to compulsory insurance (including grant) into a certified pension plan (PPP). The grant increases by €46 per child. Experience has shown that only very hesitant use is being made of this option. This may have been influenced by the beneficiaries' limited experience and the complexity of the products. Associations advising people to wait for the time being or calls for changes to the legislation may also have played a part in this. Furthermore, there is still no detailed information on how far the new options are being implemented in company-based pension plans.

Effects on savings behaviour

Various effects on savings behaviour

Whether there will be a change in savings behaviour as a result of the reduction in benefits under the pay-as-you-go statutory pension insurance scheme and the promotion of private-funded old-age provision depends on various factors. A lowering of the pension level in the pay-as-you-go system may lead, for example, to an increase in private old-age provision. In addition, economic agents may now realise that they need to pursue a longer-term optimisation strategy for their old-age provision. Even if the old-age provision becomes more important as a motive for saving, the volume of savings will not necessarily increase overall – either due to a lack of ability to save or because savings investments

earmarked for other purposes, say for unforeseeable events, have been diverted into PPPs. The decline in the private savings ratio in Germany in the 1990s does not, at first sight, indicate an adjustment reaction to reductions in the statutory pension insurance scheme. In 2001, however, the savings ratio increased again somewhat. In addition to tax relief and economic uncertainty, this may also have been due to the fact that old-age provision has recently been attracting increasing attention from those concerned.

The grants and tax incentives introduced by the Retirement Pension Act result – from an individual investor's point of view – in a yield which is higher than that obtained with less well assisted or non-assisted forms of investment. This is mainly due to the fact that the contributions are paid out of tax-free income and that the interest income remains tax-free for the duration of the contract. However, the subsequent pension benefits will be taxed. In contrast to a conventional bank savings plan, however, there remains the advantage that interest earned on the investment is free of tax. On the other hand, in private pension insurance schemes the contributions are usually paid out of taxed income but the interest during the saving period is also exempt from tax. A pension scheme in which pension benefits are taxed subsequently does, however, have an advantage over this form of saving if the tax burden after retirement is lower than during active working life. However, as a result of extensive regulation there is likely to be a lower gross yield on investment products eligible for assistance, which puts that advantage into perspective.

Better yield as a result of government assistance

*Saver's interest
sensitivity*

Whether assisted saving results in additional private savings depends to a great extent on the interest sensitivity of the potential savers. With a given amount of savings, the higher net yield of provision products eligible for assistance will allow a higher level of consumption in the future. The fact that this makes consumption in the present more expensive does not necessarily mean that more will actually be saved now. Instead, higher interest rates with an unchanged level of consumption in the future might also be used for a higher level of current consumption. In that case, current savings would actually decrease. It is therefore not at all clear what impact an improved yield will have on private savings. This means that its impact on long-term interest rates also remains an open question.

*Estimates of
additional
private savings
potential*

Rough estimates of the amount of funds likely to be raised in connection with assistance for funded old-age provision are based mainly on the sum of gross wages and salaries in Germany. Therefore, as things stand at present, an average 4% rate of saving would yield savings of just over €36 billion. However, households with an income above the maximum level of earnings subject to contributions are unable to invest the full 4% of their income in old-age pension contracts promoted by the government.¹⁰ On the other hand, households with a lower income have the possibility of saving more than 4% of their earnings under the new assistance measures. It should also be borne in mind that company pensions are likewise tax-subsidised, resulting in another potential for savings.

Whether and, if so, to what extent national savings in Germany will actually increase depends on the assisted person's readiness to participate, the degree to which existing savings are simply rechannelled and the adverse implications of assistance on national savings. The aforementioned saving is based on a participation rate of 100%. According to surveys, however, a considerable number of those entitled to assistance do not wish to take part in a PPP.¹¹ In addition, switching existing savings may limit the additional amount of funds likely to be saved. With a current savings ratio of just over 10% of households' disposable income, a pension-related saving of, for example, 4% of gross wages and salaries – which corresponds to just over 2½% of disposable income – could be met fully out of the "existing" savings. It is also doubtful whether lower income earners would be able to make savings which go beyond the government assistance. Even the financing of the share of government assistance amounting to some €12½ billion (in the final stage) is likely to partially depress the current level of saving. Either the tax payer must pay more to cover this amount, which would reduce their own saving capacity, or central government must lower its spending. A smaller crowding-out effect can be expected in the latter case. Studies on the situation in the United States suggest that tax assistance for private old-age provision has not (or

*Impact of
assistance
measures on
national savings
is uncertain, ...*

¹⁰ For the terms and conditions regarding the amount of the assistance, see p 27.

¹¹ This applies to 20% of those questioned according to a survey by the Institut für Demoskopie Allensbach. Another survey by NFO Infratest indicates that 48% of those questioned do not wish to enter into an assisted pension scheme.

only marginally) raised the national savings ratio.¹²

... but benefit cuts create the need for additional provision

Even if the impact of the additional assistance on savings behaviour is still uncertain, the benefit cuts adopted in the statutory pension insurance system in Germany do increase the need for supplementary private provision. This is likely to have a positive effect on the private savings ratio depending on the extent to which individuals have not already factored the reduction of the pension level into their own financial planning.

Effects in the financial markets

Various possible influences

The effects of an increased reliance on private pension schemes on the capital market relate to both changes in national savings and investors preferences. This has implications for the savings pool and the structure of the capital market – for example, for the role of institutional investors and the time horizon of risk transformation.

Implications of changes in the savings pool

Ageing of the population influences savings behaviour

In addition to the recent pension reform's influence on the savings behaviour, the increasing ageing of the population may mean that, generally, saving will, first of all, become important for the purpose of safeguarding an adequate income after retirement. However, the additionally mobilised capital may fall well short of the pension entitlements accumulated under the pay-as-you-go system. Even in countries with a high proportion of funded old-age income, around half of the

income is covered by the social security systems.¹³

In the literature, fears have been expressed¹⁴ that, given a continuation of current demographic trends over the next 20 years, a sharply increased savings volume is to be expected initially but that this will be followed by considerable dissaving and a fall in asset prices when the "baby boomer" generation retires. However, as yet there is no empirical evidence either for Germany or any other country with a high proportion of funded old-age income of a large-scale liquidation of assets by retired persons. The savings ratios, in actual fact, remain positive even after retirement. This is due to the inheritance motive and an evidently pronounced aversion to the risk of having insufficient financial resources available when reaching a very old age or of being in need of intensive nursing care. Nonetheless, owing to the falling savings ratios after retirement, a decrease in the average private savings ratio can be expected over the longer term. The age-related savings profile in countries where there is already a

Demographically induced fall in asset prices

¹² See G A Mackenzie, P Gerson and A Cuevas (1997), Pension regimes and saving, *International Monetary Fund Occasional Paper 153*, Washington DC, p 17.

¹³ For example, A Brugiavini (2002), Ageing and saving in Europe, in A J Auerbach und H Herrmann: Ageing, financial markets, and monetary policy, Berlin, *inter alia* p 9-48, p 18, calculates a contribution to the first pillar of the old-age provision amounting to 45%, 50% and 65% for the United States, the Netherlands and the UK, respectively.

¹⁴ See, for example, S J Schieber und J Shoven (1994), The consequences of population ageing on private pension fund saving and asset markets, *NBER Working Paper*, No 4665. New studies containing, in some cases, differing opinions on the complex subject of "asset price meltdowns" are J M Poterba (2001), Demographic structure and asset returns, *The Review of Economics and Statistics*, 83(4), p 565-584, and A H Boersch-Supan and J K Winter (2001), Population Ageing, savings behaviour and capital markets, *NBER Working Paper*, No 8561.

smaller proportion of post-retirement income from the pay-as-you-go systems means that Germany, too, can expect the savings ratio after reaching retirement to decline more sharply than before. The lower associated demand from pensioners for securities and other financial investments will not necessarily generate a major price collapse, however. In the internationally linked capital markets, the impact of this loss of demand is unlikely to be enough to bring about a significant fall in prices.¹⁵ It should be borne in mind, however, that many other countries are also faced with a similar demographic ageing process.

Population ageing has non-uniform effect on growth

If the private savings ratio in Germany were to increase – even though it is already high by international standards – as a result of funded old-age provision, effects on economic growth and interest rates are also possible. Depending on the assumption about investment behaviour in an “ageing” society, simulations conducted by various authors using macro models¹⁶ show an initial drop in real interest rates and a positive influence on growth in the economy as a whole. As the “baby boomer” generation enters retirement, the associated adverse savings effects lead to a rise in real interest rates which may, in turn, dampen economic growth. Forecasts on the development of real interest rates and growth are particularly influenced by the ratio between the positive effects caused by increasing savings capital and the negative effects resulting from a declining number of employed persons.

Effects of increasingly institutionalised investment

It is frequently suggested that a partial transition from the pay-as-you-go system to the funded system – irrespective of the question of a larger savings pool – will have positive effects on the capital market in terms of the “maturity of the market”, its “innovative capabilities”, the “efficiency of information processing” and the “handling of control problems”.

Structural changes in the financial markets

Most countries which have placed greater emphasis on a funded pension system have often experienced a shift from private to institutional investors and from shorter to longer-term investment.¹⁷ In turn, the increase in institutionalisation has led to greater investment in equities, thus promoting the development of the market for corporate stocks and shares.¹⁸ However, diversification strategies are also likely to encourage the demand for unsecuritised risk capital or debt securities, say, from smaller enterprises or enterprises with a higher risk of insolvency. In order to

Increasing importance of institutional investors

¹⁵ See also Deutsche Bundesbank, International integration of German securities markets, *Monthly Report*, December 2001, p 15-28.

¹⁶ An overview of various studies is provided by E P Davis (2002) Ageing and financial stability in A J Auerbach and H Hermann: Ageing, financial markets, and monetary policy, Berlin, *inter alia* p 199-227, p 201 ff.

¹⁷ See G A Mackenzie, P Gerson and A Cuevas (1997), *loc cit* p 13. Detailed new studies on the impact of changing to a funded pension scheme are, for example, E P Davis (2000), Pension funds, financial intermediation and the new financial landscape, *The Pensions Institute Discussion Paper* PI-2010, London, and G Impavido and A R Musalem (2000), Contractual savings, stock and asset markets, *The World Bank Working Paper*, No 2490, Washington DC.

¹⁸ The promotion of long-term bank deposits is, however, also envisaged in the German reform concept. This means that, given a major aversion to risk, investment in such instruments may likewise increase.

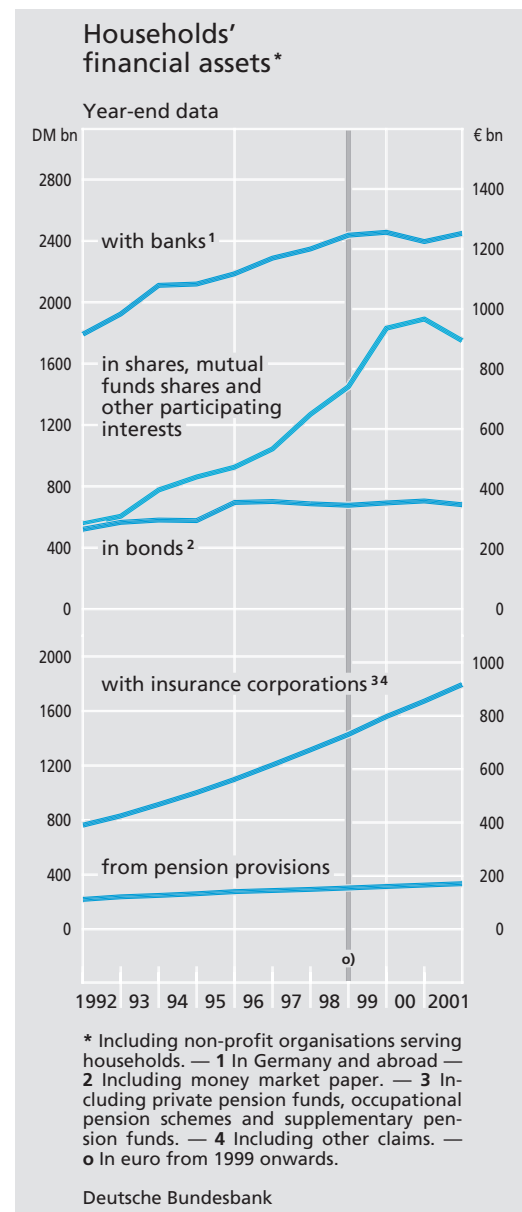
hedge against such risky positions and to optimise the risk/return profile, competition between the individual mutual funds will accelerate the development of new hedging instruments. Thus, a high degree of institutionalisation of investment has been conducive to the development and use of, for example, index options in some countries.

Shift in private financial investment in the 1990s

In Germany during the 1990s, however, there was a discernible trend in private investment towards mutual funds shares and equities, while the scale of investment in bonds and bank deposits was, if anything, below average. Payments into insurance corporations remained high. Even though there has been increased participation in lower-risk investment recently, during the last ten years the proportion of shares in households' financial assets, either through direct investment or investment funds, has risen sharply (see the chart opposite). However, the extent to which this indicates a decision by investors to step up funded old-age provision remains an open question.

Information is processed more efficiently by institutional investors

Another positive effect of institutionalised financial investment¹⁹ is increased efficiency in processing information available to the general public. Owing to increasing returns to scale, the information-processing costs of a single large institutional investor are lower than those of a larger number of smaller private investors. The experience of the United Kingdom²⁰ shows that initial public offerings (IPOs) which were largely absorbed by institutional investors have shown a more favourable performance in the past than new issues bought primarily by private investors, which



indicates a "better" processing of information.

Another aspect which can be promoted by a greater institutionalisation of asset formation is an improved control of delegation problems

More intensive control and shaping of corporate policy

¹⁹ For the effects of institutionalised financial investment in Germany, see also Deutsche Bundesbank, The role and behaviour of German fund managers on the equity market, *Monthly Report*, April 2001, p 43-57.

²⁰ See also E P Davis, (2000), *loc cit* p 12.

which occur in listed companies as a result of the separation of ownership and management. As a general rule, a small number of large (institutional) investors is easier to organise than a large number of small shareholders, consequently improving the exercising of control and co-determination rights. Also, an increasing proportion of shares held by one investor tends to make it more difficult to sell them on account of negative price reactions. This means that the "voice option" becomes more attractive than the "exit option". In addition, global investors will press for a standardisation of the national accounting rules and encourage the establishment of private rating agencies which can, for example, penalise poor corporate governance by means of downgrading.

Risk as a result of "herding behaviour"?

An increase in institutional asset management is, however, often linked to a greater risk of "herding behaviour" and greater volatility in the financial markets. Parallel behaviour by investors can cause persistent asset price misalignments particularly on the stock markets, such as bubbles. Managers of investment corporations are often paid in relation to the success of other investors. Furthermore, the relative performance assessments are carried out at short intervals. On the one hand, this means that index-tracking strategies reduce the risk of underperforming the competition. On the other hand, long-term risk/return optimisation strategies are often made subservient to short-term profit considerations. There are indications, however, that pension funds with a payout objective pay greater attention to long-term optimisation strategies. Institutional investors also have the opportunity to respond

quickly to each piece of new information in the market because – in addition to being able to process information more efficiently – instruments for adjusting the portfolio are more readily available. This means that fluctuations will increase owing to short-term adjustment reactions in the securities markets but that, over the long term, capital market prices will reflect the disposable information more quickly and thus be more "information efficient".

The increasing institutionalisation of investment raises the question as to the appropriate supervision and regulation of suppliers of investment products for old-age provision. Firstly, all suppliers of assisted old-age pension contracts are subject to national supervision by the newly established German Financial Supervisory Authority (BaFin). A series of further restrictions pertaining to the investment horizon, form of payout and maintenance of value apply to the investment products promoted under the Retirement Pension Act. The suppliers' obligation of disclosure and prudence, which are designed to protect investors without restricting their investment opportunities, are of a more general nature. Disclosure requirements are intended to provide information on the main areas of investment and the use of the funds. A general documentation of the investment decisions taken by the fund or insurance manager is needed to give the investors better insight into and control of the quality of management. This documentation is also assessed by private fund rating agencies as an indication of the quality of the management. It enables the investor to verify whether decisions have

Regulation of institutional investors: disclosure requirements...

been taken in his/her best interests, whether the management has carelessly or negligently ignored market information, or whether there is a conflict of interest.

... and
investment
regulations

In addition to the disclosure requirements for investment, there exist further statutory obligations²¹ based on the principle of risk diversification or, more generally, the principle of commercial prudence. In addition to diversification, the "prudent person rule" in countries which have adopted the Anglo-Saxon model includes a broad matching of assets and liabilities or a hedging against reduced payments.²² However, this is not achieved by means of quantitative regulations but through liability regulations for the funds manager. This is attributable to the fact that suppliers, as market players, are better informed about investment and hedging opportunities than the government and are therefore at liberty to decide on specific forms of investment but must justify their success or failure to the investors. Empirical studies indicate that quantitative investment restrictions may lead to sub-optimal risk/return profiles, thus depressing the risk-adjusted yield of the fund.²³

Effects of long-term investment

Long-term
investment
horizon

In addition to the current minimum-term investment for statutorily assisted savings of up to 12 years,²⁴ the investment horizon for old-age provision investment may be over 40 years depending on the age of the investor. For the capital market, this means that instruments with longer maturities are in increasing

demand²⁵ in order to minimise the reinvestment risk.

It is mainly shares that come into consideration for this purpose since there is no limit of any kind on their maturity. However, in the case of the government-assisted old-age pension contracts, asset fluctuations are especially problematic at the beginning of the payout period. Therefore, it is prudent to deploy longer-term hedging instruments as well. At present, asset fluctuations can be offset only as a whole or downwards by forward contracts and derivatives. While the former can run longer depending on the individual agreement, the latter are mostly limited to a maximum one-year maturity. It is conceivable that players in the financial markets will develop new hedging strategies in order keep the risk reduction as cost-efficient as possible

Shares and
hedging
instruments

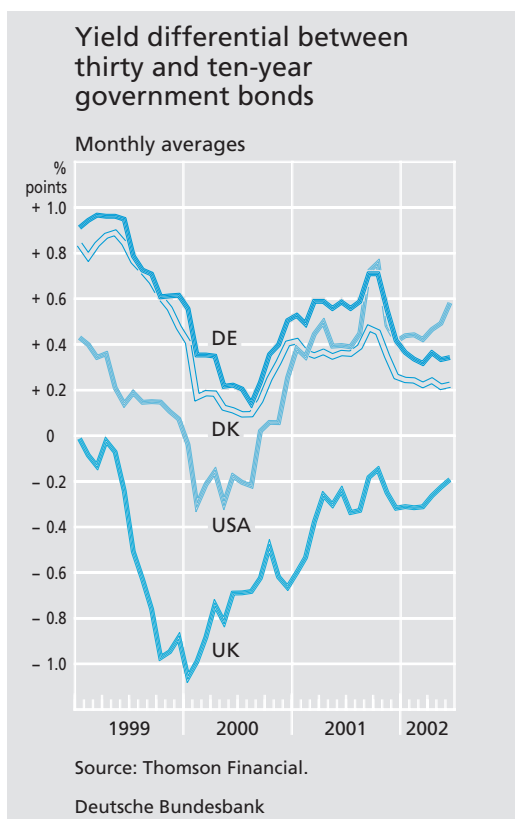
21 For investment funds, see sections 1 and 10 of the Act on Investment Companies. For insurance, see section 54 of the Act on the Supervision of Insurance Enterprises.

22 For "prudent man standard of care", see section 1104 of the Employee Retirement Income Security Acts (ERISA) in the United States, and for the rules in the United Kingdom, for example, E P Davis (2000): Regulation of private pensions – A case study of the UK, *The Pensions Institute Discussion Paper*, PI-0009, London, p 28.

23 See OECD (1998): Maintaining prosperity in an ageing society, Paris, p 67.

24 Under the Personal Asset Acquisition Act, capital investments with a minimum maturity of six or seven years can be assisted. In the case of life insurance, the possibility of reselling the investments tax-free exists after 12 years at the earliest.

25 In contrast to investment funds (61.3%), pension funds in Europe in 1995 held a much higher proportion of long-term securities, namely 97.4%, of which 54.6% was in shares. See K DeRyck (1998): Asset allocation, financial market behaviour and impact of EU pension funds on European capital markets, in: OECD: Institutional investors in the new financial landscape, OECD Proceedings, Paris, p 267-276 and p 269.



over the long term.²⁶ Even so, each risk must be assumed by a counterparty.

Government bonds

Past experience suggests that buying “secure” long-term government bonds is one possibility – albeit with a smaller gross yield – of minimising asset fluctuations over long periods of time. Stripping of debt instruments has the advantage that the principal and the interest coupons can be separated, thus splitting an investment into various components and creating investment opportunities in all maturity categories. The investment method of synchronising the investment period and the residual maturity of the investment instrument, known as “duration matching”, is used, for example, in the UK by pension funds. Consequently, as a result of the strong demand for a limited volume of UK govern-

ment bonds with a 30-year maturity, their prices are relatively high, and the returns low. In other countries with an appreciable volume of company and private pensions, too, such as the United States and Denmark, a smaller spread is observed between government bonds with ten and 30-year maturities (see the chart opposite), which attests to the soundness of the funds’ investment policies but does not guarantee a high yield for the investors.

Concluding remarks

The recent pension reform paves the way for a larger funded component of pension provision. The increase in individual provision for retirement income, which is necessary precisely as a result of demographic developments, broadens the base of retirement provision and is also likely to prove advantageous in terms of risk diversification. The reductions in benefits under the pay-as-you-go system have been linked to a considerable measure of government assistance for private pension provision. An average earner can save a maximum of 13½% of his income in 2008 by using the new assistance resources. Since the increase in the amount of individual saving will depend, however, on the participation

Impact of the pension reform on national savings remains an open question

²⁶ The implementation of the nominal value guarantee required for the assisted old-age provision products permits an offsetting of risk throughout the residual maturity of the investment. Price losses in the case of investment in risk-prone securities, for example, can be offset by subsequent gains from “secure” fixed-rate investment, as long as this is high enough to compensate for the loss in an immediate reallocation. Since, such “hedging” would incur costs only in the event of a reallocation, the yield of the investment is not diminished in most cases. Nevertheless, it is only the paid-in amounts that are hedged.

rate, the channelling of existing savings and the individual's ability to save, the additional volume of savings remains an open question.

Structure of the financial markets is likely to change

Effects on the financial market will not only be produced by the size of the potential additional savings pool and its impact on interest rates and growth. The structure of the capital market could also be influenced by shifts in the composition of the investors and changes in investment behaviour. An increasing shift from private to institutional investment, and from shorter to longer-term investment instruments will provide opportunities for a stronger development of the market for cor-

porate stocks and shares and the introduction of new hedging instruments. Owing to information processing advantages and a more intensive exercising of controlling and co-determination rights, institutional investors, such as newly introduced pension funds in the field of company pensions, are likely to strengthen the bias towards a return-oriented corporate policy. Risks which arise through the institutionalisation of investment, should not be countered by an excessive restriction of investment opportunities and the associated yield opportunities but rather by liability rules and disclosure requirements.