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ANNUITIES IN GERMANY BEFORE AND AFTER THE PENSION REFORM OF 2001

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1 Introduction

During the past decades, public pensions used to be the most important source of income during retirement in Germany. Public pensions provide an annuity income indexed to net wages. In addition to old age pensions they also provide survivor and disability pensions. Occupational pensions have – on average – played only a minor role; the majority of firm pensions are still in the form of (indexed) defined benefits. Defined contribution schemes have become more popular, recently. Private savings are a third source of retirement income. However, only a negligible part of the private funds available to retirees have been annuitized in the past. As a consequence, the market for private annuities is still small in Germany compared to other countries. Moreover, average elderly households did not use their private wealth for consumption. The average (mean and median) elderly households consume less than their current pension income (first and second pillar). All this may change during the next decades in the course of population aging and pension reforms that tend to lower the replacement rate of the public pension system and thus the rate of annuitization.

The demand for individual or occupational pension plans is very likely to increase during the next few years. First, inevitable reductions of public pensions may generate a new demand for private pension plans. However, given the traditionally high savings rates in Germany, it is not clear whether this will lead to higher aggregate savings. Second, the pension reform of 2001 has created stronger tax incentives to invest in formal pension plans. Third, all workers are eligible for some kind of firm pension from 2002 on. How much of the accumulated capital will be annuitized is not clear now. However, deferred taxation and regulation of pension plans discourage lump sum withdrawals, thus supporting annuities or other regular withdrawal schemes. The reduction of public pension annuities may also generate a larger demand for private annuities.

This paper starts by studying public and private pension provision during the 1990s. The current situation and challenges due to population aging that motivated the reforms of 1992 and 2001 are presented. Then, the main steps of the recent pension reform are analyzed with respect to their relevance for private retirement provision and private annuities. Finally, first evidence on the impact of the reforms on private pensions is presented. The paper concludes with a tentative outlook on the development of private pensions and annuity markets.

2 Pension provision in the recent past

Public pensions and replacement rates

The pay-as-you-go social security system is by far the most important pension system in Germany. It covers about 85 percent of workers and is based on pay roll contributions. Despite hefty contribution rate increases, the deficit has widened dramatically during the last decade. In the year 2002 one third of expenditures are covered by a federal subsidy.[1] The civil servants are covered by a separate system that is much more generous and is financed directly out of general revenues, federal or state. Since the mid 70s the *net replacement rates* of the social security system have been around 70 percent.[2] Due to the exceptional increases of earnings combined with an increasing generosity of the PAYG-system, the indexation of pensions led to particularly fast rising pensions in the 70s. This in turn led to much higher effective replacement rates. For cohorts born in 1910 who retired around 1970 the effective replacement rate came close to 100 percent of the former net wage after some years in retirement. After 1980, the wage increases were smaller and the pensions stayed more or less constant in real terms. Nevertheless, also the pensions of later cohorts reached relatively high levels compared to *life-cycle earnings* (Schnabel, 2001b). For the cohort born in 1930, the social security pensions are still much higher than their life-cycle wage – provided a working career of 45 years. For younger cohorts the replacement rates relative to lifetime earnings will deteriorate given the low growth rates of the economy. Thus, the annuitization through the social security system will decline, even in the absence of population aging.

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[1] This subsidy to the social security system absorbs 30 percent of the federal budget.

[2] The net replacement rate is based on a fictitious wage earner with 45-years of average gross earnings ("Eckrentner"). The replacement rate is then calculated as the ratio of the net pension in year t over net earnings

Ocupational pensions

According to estimates by Börsch-Supan and Schnabel (1998) using micro data, firm pensions make up for only 5% of average retirement income (see also ABA, 2002). The coverage of workers is distributed very uneven. While in the manufacturing industry two thirds of workers are covered by a pension plan, in the wholesale and retail industries the rates are much lower at 25%. In small business enterprises, firm pension plans are rarely offered. In general, the coverage of workers has at best stagnated during the last twenty years.

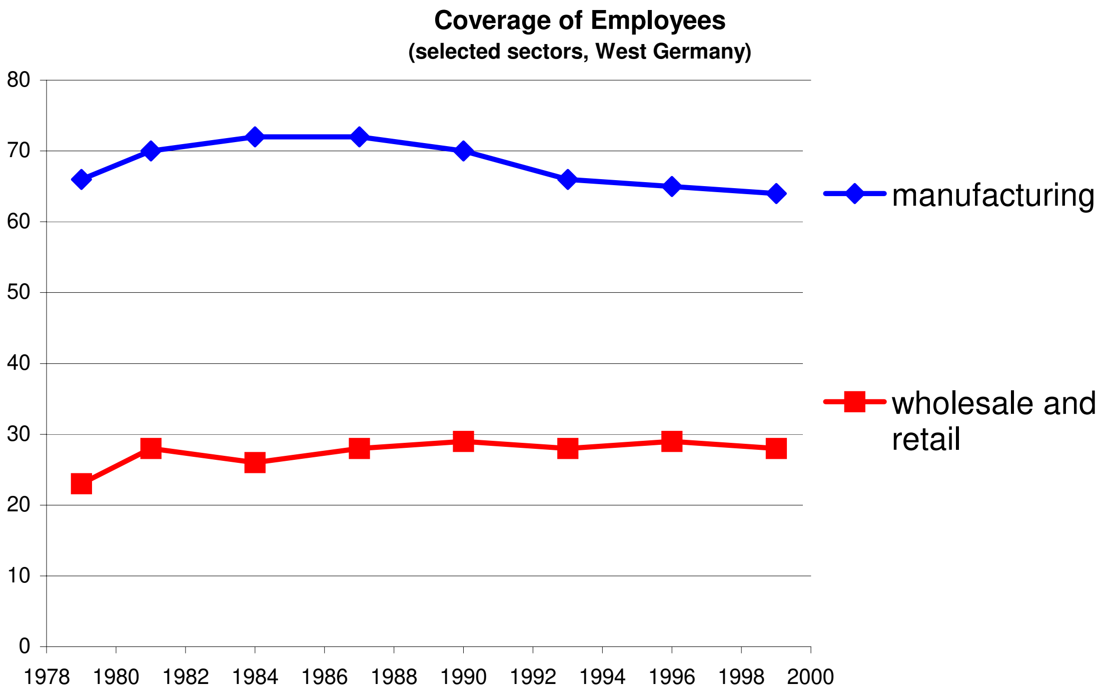

Figure 1: Coverage of Employees in Selected Sectors in West Germany (1979 to 1999).
Source: ABA, 2002.

The capital stock of firm pension plans in the year 2000 is estimated at 331 billion €, exactly one sixth of the GDP of 2 trillion € (ABA, 2002). Note that the public pensions exceeded 250 billion € in the year 2000. Most of the funds are still held in the form of book reserves. Those pension plans are typically defined benefit plans. The default risk is covered by a (mandatory)

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in year t. The net replacement rates of public sector employees are far higher than 70 percent, since their replacement is *75% of previous gross wage* with a full working career.

pension insurance which pays the guaranteed pension. The “Support Funds” are very similar but have a slightly different institutional setting. In Germany the two types of pension plans are called “internal plans”, because the capital is under control of the firm. Consequently, the other types of pension plans are called “external”. The capital stock is held outside the firm in a separate financial institution (insurance company, Pensionskasse). A Pensionskasse is basically also a kind of insurance company and is subject to similar regulations.

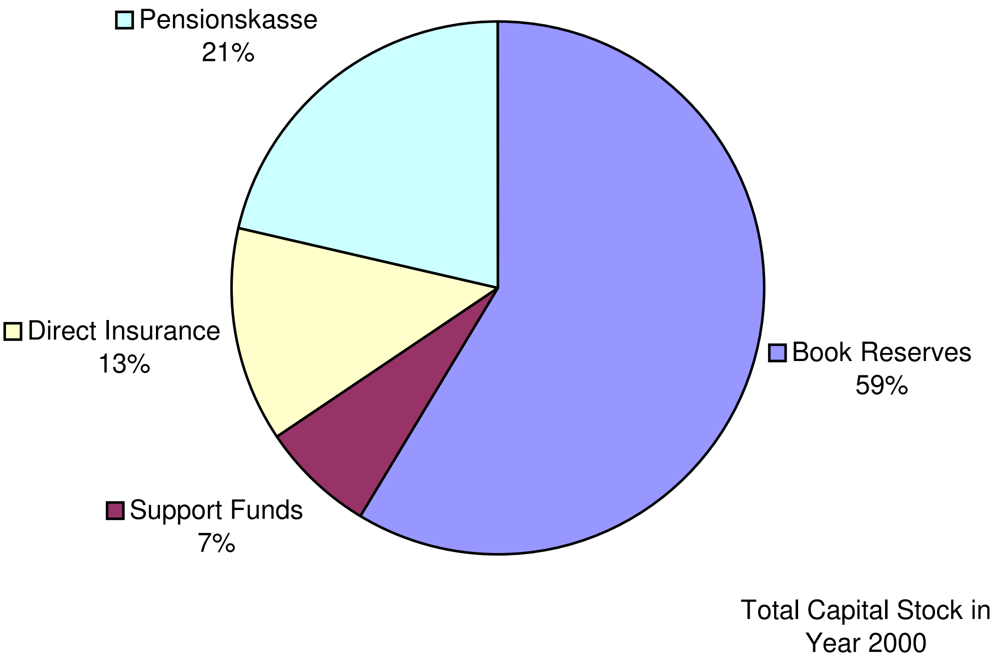

Figure 2: Distribution of Funds across Pension Vehicles in 2000.
Source: ABA, 2002.

Private savings and wealth

Private savings are of the order of magnitude of 10 percent (much more than that in the 80s, slightly less than that very recently) of disposable income. Housing wealth makes up for the lion’s share of the average portfolio of German households. Mean financial wealth is estimated to reach 53,000 € in the year 1998 for households prior to retirement (age 55-59).[3] *Median* financial household wealth for this age group is still estimated at 30,000 €. Most of

[3] However, underreporting by a factor of 50% is likely according to aggregate figures based on the banking statistics. In this case, the figures would have to be inflated by the factor 2.

this financial wealth is kept in bequeathable form (bank accounts, life-insurance, stocks and bonds). In contrast, private annuities are negligible (Schnabel 1999).

It is well-documented that retirees do not spend their private wealth for consumption. Instead mean and median savings remain positive (or zero) after retirement. The households of elderly also "spend" about 7% of disposable income for private transfers. All this seems to indicate that the demand for private annuities used to be low – given the high replacement rates of the public pension systems and the small – though not negligible – firm pensions. The majority of firm pensions are currently of the defined benefit form and thus represent a kind of annuity income. The generosity of the public pension systems is about to change due to the pension reforms of 1992 and 2001. At the same time, the incentives to save in second or third pillar products are increased.

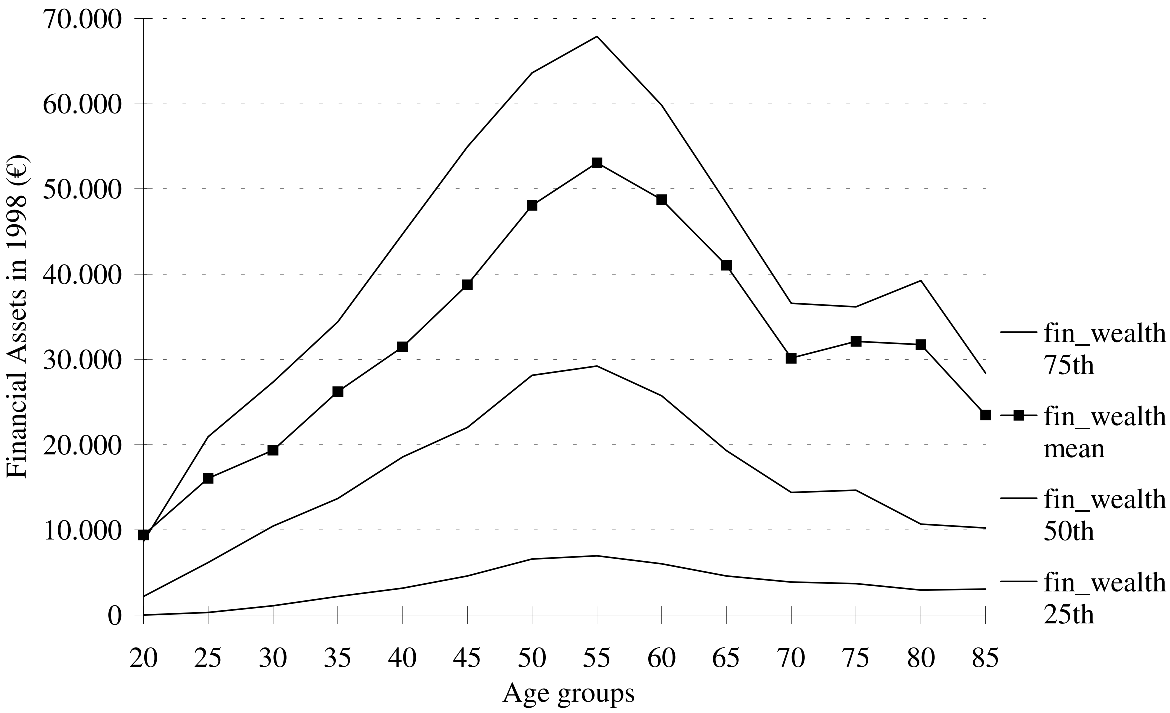

Figure 3: Age distribution of Financial Wealth in West Germany 1998.
Source: Own computations based on the Income and Expenditure Survey 1998 (EVS 98)

3 Public pensions and population aging

The pension reform of 1992 introduced an explicit net wage indexation of public pensions. This effectively conserved the "statutory" replacement rate at 70 percent. The reform also introduced actuarial adjustment for early retirement at a rate of 3.6 % per year. However, this has been phased in slowly and will take full effect after 2002. Together with some other minor measures this will reduce the *effective* replacement rates, if individuals do not postpone retirement.

Despite the reform of 1992, the expenditures of the PAYG-public pension systems reached 265 billion € (13 percent of GDP) in 2001. With 220 billion € the social security pensions are by far the largest part, while the rest is made up by civil servant pensions and other pensions. Social security pensions are financed by a 19.1% payroll contribution (2002) and by *additional* federal subsidies out of general tax revenues. The federal subsidy covers 35% of the social security pension expenditures and is set to grow strongly; it currently absorbs about 30% of the federal budget. A contribution rate of 29 percent would have been required in 2002 in order to finance the social security system exclusively through pay roll contributions. Envisaging a dramatic population aging during the next 40 years, the current system is clearly unsustainable.

Reduction of replacement rates

The pension reform 2001 is going to reduce the net replacement rate of the PAYG social security system from 70 to 64 percentage points during the next two decades.[4] According to government projections based on overly optimistic assumptions, the contribution rates are expected to reach 20% in 2020 and 22% in 2030. Given that the old-age dependency ratio is going to double over the next 30 years[5] these projections are simply wishful thinking.

According to several independent projections the pension cut enacted by the 2001-reform has to be considered as a first step in aligning expenditures and revenues in the long run. However, the government – as all predecessors – maintains that the recent reform will secure the solvency.[6] Moreover, the government conceals the magnitude of the replacement rate cut by redefining the replacement rate. This policy is counterproductive since it weakens the

[4] Similar reductions have been legislated for the pensions of civil servant. They are fully financed out of general taxes.

[5] See Schnabel 2001a on the projection of demographic and economic dependency ratios, and on projections of contribution rates.

[6] It is, of course, possible to stabilize the contribution rate through a reduction of the *average* replacement rate without touching the *official* replacement rate.

willingness of households to save for retirement – either in the form of individual savings or firm pension plans.

Continuing rise of contributions

Schnabel (2001a) shows that the contribution rates would have to increase to at least 25 percent using a *medium* scenario. Moreover the government projection stops in the year 2030 although the old-age burden will keep on rising, with contribution rates reaching 27 percent in the year 2050.[7] In order to limit the contribution rate to 22 percent, the replacement rate has to be reduced to 56 percent by the year 2030 and to about 52 percent by the year 2050.

Resulting pension gaps

For each percentage-point reduction of the replacement rate the annual pension gap is going to increase by 3,75 billion €. This is the value at constant prices with zero real economic growth. With a real annual growth of 1.5% and a replacement rate of 56 percent in 2030, the annual pension gap relative to the current 70%-replacement rate will reach 75 billion € in 2030. In order to fill that gap, a large capital stock is required. Its size depends on several factors such as the degree of annuitization of private pension wealth. With full annuitization, a capital stock of 750 billion € might suffice. However, if Germans stick to their traditional strategy of holding bequeathable wealth, much more than 1,000 billion € will be required. Given the heavy demographic burden it is important to develop the annuity market in order to make an efficient use of the capital stock of the elderly.

4 The 2001 reform and private pensions

The pension reform of 2001 tries to strengthen the second and the third pillar private retirement provision. The following subsections describe tax incentives, regulations, and other measures that may encourage private pension provision in general and annuitization in particular.

[7] In this scenario, total public PAYG pensions would amount to 17% of GDP in 2030 and to 18.4% in 2050 with a replacement of 64 percent.

4.1 Tax incentives

The pension reform of 2001, also named *Riester-Reform* after the minister of labor and social affairs Walter Riester, has introduced a new tax treatment of individual and occupational pension plans. This subsidy (or tax relief) can be used in three out of five legal types of occupational pension plans. The Riester-subsidy also adds to the already existing three types of tax treatments of private pensions. If contributions to a pension plan (either individual or occupational) are eligible for the Riester subsidy or tax relief, the plan is often called "Riester-Plan", though this is not a specific type of plan.

Four available types of tax advantages

(1) Contributions to individual life insurance or individual pension plans have to be paid out of taxed income. If the maturity of the policy is 12 years or longer, capital gains and interest are tax free. This tax treatment is only available for insurance policies, not for mutual funds. The lump sum withdrawal is tax free, too. If an annuity is chosen, a certain fraction of the annuity is considered as interest income and is counted as taxable income. A table in the German tax code determines the "interest part" of the annuity depending on the age of the annuitant when the annuity starts. In the past, the vast majority of elderly have withdrawn the whole capital as one lump sum. There is also a limited tax allowance for contributions which is usually exhausted by the compulsory social security contributions of dependently employed. The self-employed, however, who usually do not contribute to social security can use this tax allowance to make tax free contributions to life insurance or pension plans.[8]

(2) Contributions of employer or employee to occupational pension plans. Up to 4 percent of the social security ceiling (appr. 50.000 €) can be contributed out of untaxed income; until 2008 contributions are also exempt from pay roll taxes. No taxation of interest and capital gains. Full taxation of withdrawals/pensions (i.e. deferred taxation, EET).

(3) Contributions of employer or employee to occupational pension plans with a flat income tax of 20%. Limited to 1700 €. No pay roll taxes until 2008. No taxation of interest and capital gains. No taxation of lump sum withdrawal; taxation of interest

during retirement depending on the age of the annuitant when the annuity starts as in (1). (A mixture of TEE and EET, depending on the marginal tax rate).

(4) "Riester-plans". Since 2002 up to 2000 € can be contributed out of taxed income. A subsidy (depending on family size) is paid directly into the plan. Contributions are deductible when filing for income tax; if tax deduction is larger than subsidy, the exceeding amount is credited. No taxation of interest and capital gains. Full taxation of withdrawals/pensions as in (2). In the case of middle income earners with many children the Riester-subsidy yields subsidy rates that are above their full marginal tax rate (i.e. including payroll taxes). In 2002/3 only about 500 € are tax deductible. The maximum will be reached in 2008 with about 2.000 €. For full time workers, the tax treatments (2) and (3) will be more profitable until 2009, the year in which the pay roll taxes exemption will expire. (EET)

Eligibility

Type (1) can only be used with insurance policies (life insurance or pension plans). The types (2) and (3) are only applicable to firm pension plans. The new Riester tax treatment (4) is available for individual pension plans and for three out of five occupational pension vehicles.

The combination of (2), (3), and (4) is possible with some exceptions (see table 1 below). If all three ways are exploited, it is possible to save up to 4.500 € per year in 2002/03; this will rise to 6.000 € in 2008. Compared to an average annual social security wage of about 30.000 € this is more than enough to provide funds for retirement for an average household.

4.2 Regulation of individual and firm pension plans

The Riester-Plans (4) have to be certified by an institution that is part of the insurance supervision. Since this is not the case for the other types of tax advantages, the new Riester-Plans are more heavily regulated. This may turn out to be a disadvantage. For instance, lump sum payments are possible with the 20%-flat-rate tax schemes (3). Pension plans that use the tax deduction (2) can use flexible pay-out schemes and are not limited to annuities. The pay-

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[8] In this case, the income is untaxed. This will probably be changed in the near future.

out scheme is usually regulated in the statute of the pension plan and usually allows for several different way of withdrawal.

Important Requirements for Riester-Plans:

- The regulation requires a minimum return guarantee of zero percent (nominal capital guarantee) during the accumulation and decumulation phase.

- If the capital is taken out before the age of 60, the subsidies and tax benefits have to be paid back. The same applies if the capital is withdrawn after retirement as a lump sum.

- The subsidies and tax benefits have to be paid back if Germany is left “permanently”. This is of great importance to foreign workers who return to their home countries and also to Germans who want to move after retirement.

- As a rule, the capital stock has to be annuitized. However, up to 20 % can be taken out as a lump sum upon retirement, provided that the remaining capital stock for annuitization is at least as large as the sum of contributions and state subsidies. Moreover, up to 20 % can be converted to a “flexible pension” before the age of 85.

4.3 Other important reform steps

Introduction of Pension Funds: too much regulation?

The pension reform also introduced pension funds as a fifth vehicle of occupational pensions.

- The pension funds are subject to the same *life-insurance* supervision as the direct insurance and the pensionskassen.

- The employer has to guarantee the invested capital.

- The employer has to pay contributions to the “Pension Insurance Fund”, which will have to pay the guarantee if the pension fund performs badly and the employers goes bankrupt. This is similar to the regulation of the book reserve funds and the support funds. However, those are not regulated by the life-insurance supervision. This additional requirement may make the German pensions funds more expensive than the other four pension vehicles.[9]

[9] The official justification for this “double burden” is that pension funds are more risky than the other vehicles and thus require a tougher protection!

- The pension funds have to annuitize the capital, also if they are not used in combination with the Riester-Subsidy. Thus, pension funds become less flexible than the other pension vehicles in the pension phase. Very recently, a provision has been added that allows for a 20 percent lump sum payment.

- Each pension fund has to report annually whether and how *ethical, social, and ecological* aspects have been considered in the investment of the contributions. The thread still exists that a certain percentage of ethical investment may be mandated by law in the future.

Entitlement to a firm pension plan

From 2002 on, each employee has the right to demand some kind of firm pension vehicle. If the employer does not offer either a pensionskasse or a pension fund, the direct insurance becomes the default option. This provision may turn out to become the most powerful reform step with respect to private pensions. It will force small and medium firms to offer a pension plans. Collective agreements (on the industry of firm level) have been finalized recently that provide new standards. For millions of workers, this opens the opportunity to pay into tax advantaged pension schemes.

Transferability

All contributions of workers in pension vehicles have to be transferable from the beginning.

Discouraging investment in the old DB-plans

The reform tries to discourage the two pension vehicles which usually have been organized as defined benefit: "Direktzusage" (book reserve funds) and "Unterstützungkasse" (support funds). These types will not be eligible for "Riester" subsidies. The government also introduced the possibility to transfer the pension claims to a *pension fund* without loosing the tax advantage embedded in the book reserves or support funds. However, the internal vehicles are still very attractive since employer's contributions are fully deductible and no payroll taxes have to be paid. Also, employees can contribute out of untaxed earnings.

Table 1: Pension Vehicles and Tax Treatments of Employee Contribution

	Up to 2100 € of earnings: - out of untaxed income - no pay roll taxes 1) - Full taxation of withdrawals (lump sum or annuity)	Up to 1700 € - flat income tax 20 percent - no pay roll taxes - No taxation of withdrawal	Up to 525€ (2008: 2100€) - Riester subsidy or tax advantage, whatever is larger. -Full pay roll tay. - Full taxation of withdrawal
Book Reserve Funds	Yes	--	--
Support Funds	Yes	--	--
Direct Insurance	--	Yes	Yes
Pensionskasse	Yes	Yes	Yes
Pension Funds	Yes	--	Yes

Notes: 1) Pay roll taxes for social security are currently about 41.5% of gross wage, and are split between worker and employer. The no payroll tax privilege expires in 2009. 2100 € is 4% of the social security upper ceiling. **The employer can contribute to book reserve and support funds in excess of 2100 €.**

5 First results on savings behavior

The insurance companies were the first to market individual pension plans of the Riester type. Retail banks and mutual funds followed later. About 2 million Riester-products were sold during the first half of 2002. However, demand for individual pension products has been declining after the initial boom. During the summer of 2002, many insurance companies complained that they sold fewer individual pension plans (and at higher costs) than expected. It is also reported that many persons feel that they are not well informed and thus are waiting to gather more information. Since occupational pension plans of the Riester type were certified much later than other products, firms have been late in offering new occupational pension plans.

A survey, published in June 2002, found out that about 84 percent of respondents (age 18 to 65) think that private savings are required to guarantee a sufficient standard of living. First, this does not mean that all persons who think it is necessary will actually save. Second, since the average savings rate is already high in Germany, the result does not mean that the respondents will do additional saving. Third, the notion of "private savings" is not clear: it is very likely excluding contributions to firm pension plans. However, the survey shows that compared to October 2001, the numbers of respondents who think that private savings are necessary have increased. At the same time the confidence in the public pension system has declined. About two thirds of employees in the social security system report that they do not plan to contribute to a private Riester-Plan. However, this does not mean that they refuse to contribute to other occupational pension plans, since the numbers of employees who consider occupational pensions are increasing. 13 percent have already taken out a Riester-Plan. About 40 percent of those have bought an occupational Riester-Plan, most of them very recently. The willingness to buy individual and occupational Riester-Plans has clearly decreased, as people learn about the disadvantages of the Riester products (inflexibility, tax treatment) compared to other occupational pension plans that also offer tax advantages and in addition are usually matched by employer's contributions. With the increasing availability of occupational pension plans, the market share of individual pension plans (with Riester subsidy) is going to shrink.

The degree of annuitization in occupational pension plans depends very much on the products that are offered by the employer. The traditional pension plans usually offer only annuities though this is not compulsory by law. Direct insurance – usually in the form of life-insurance contract – offers the possibility of lump-sum withdrawals without a tax penalty. Depending on their specific charter Pensionskassen may also offer flexible withdrawal schemes. The annuitization of Riester plans and of pension funds is mandatory – with the exception mentioned above. Thus, a wide range of tax advantaged pension vehicles is available in principle. Large firms usually offer a wider range of products such that the employee has some discretion on the degree of annuitization of his or her occupational pension.

At the moment it is too early to speculate about the steady state market share of the different pension vehicles. It is also too early to make quantitative predictions about the future role of annuities. However, the experience during the first year after the 2001 reform shows that there is a considerable market for individual, annuitized pension products (individual Riester plans). Occupational pension plans (be it the Riester type or one of the other varieties) are becoming more important than in the past and probably more important than the individual plans due to cost considerations. It also seems save to project that the annuitization of private wealth will increase during the next decade, while public pensions (i.e. public annuities) are going to decline in importance.

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