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## POLICY RESEARCH WORKING PAPER

# Pensions in Germany

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Germany's pension system has a multipillar structure and relies increasingly on privately funded plans. Its public pillar is not as generous or redistributive as is often claimed.

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## Summary findings

Germany's pension system was originally designed as a scaled premium system. It formally became a pay-as-you-go system in 1957. Participation in the system is mandatory for all dependent employees and only some groups of self-employed.

The system is greatly fragmented in terms of institutions, coverage, contributions, and benefit levels. In recent years, a big discrepancy has emerged between the system dependency ratio (the relationship between pensions and contributors) and the demographic old-age dependency ratio. This has been caused by the use of early retirement and disability pensions as a means of tackling high unemployment, especially in Germany's five new states.

Except for the high incidence of early retirement and disability pensions — and hence the low average retirement age — the system does not suffer from the problems that have afflicted pension systems in Southern and Eastern Europe and Latin America. Evasion seems not to be a major problem.

The expected demographic aging poses a major challenge. There is little if any room for increasing the contribution rate, so benefits will have to be cut, most

likely through an increase in the normal retirement age and through tighter rules for disability pensions and early retirement.

The pension contribution rate is currently 19.2 percent of wages, shared equally by employers and employees. The government covers about 23 percent of total spending — for benefits not directly related to contributions. The break-even contribution rate of the system would be closer to 25 percent.

Germany's system is not overly generous, compared with other OECD countries. The average replacement rate (calculated as average insured and widows' pension divided by average income) was only 36.3 percent in 1993. This is about the same level as in the U.S. social security system. The difference in contribution rates is explained by Germany's much higher system dependency ratio.

Intragenerational redistribution in the pension system is quite limited. Unlike such other countries as Switzerland and the United States, Germany does not have a tilted benefit formula to redistribute income from higher to lower income groups. Means-tested social assistance is used to support the old poor.

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This paper — a product of the Financial Sector Development Department — is part of a larger effort in the department to study pension systems and contractual savings. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedia Arbi, room G8-149, telephone 202-473-4663, fax 202-522-3198, Internet address [harbi@worldbank.org](mailto:harbi@worldbank.org). October 1996. (23 pages)

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**Financial Sector Development Department  
The World Bank**

**PENSIONS**

**IN**

**GERMANY**

**Monika Queisser**



## **I. Introduction and Summary of Findings**

The German pension system has been receiving increasing attention in recent years, both within and outside of Germany. In Germany, the focus of the pension discussion has been on short term cost containment as well as medium and longer term reforms to ensure the financial viability of the system. At the same time, other countries around the world, particularly in Central and Eastern Europe, have been looking at the German pension system as an example to follow. This paper aims to describe the main features of the pension system and, at the same time, to dispel some myths about the structure, levels and conditions of pension provision in Germany. In particular, the German pension system has a multi-pillar structure, with a growing reliance on private funded plans, while its public pillar is not as generous or redistributive as it is often claimed. However, it is not the intention of this paper to conduct an in-depth investigation of all aspects of the German pension system which, like most social security systems, is very complex in its details.\*

In the second section, the statutory pension insurance schemes, including the pension schemes of professional associations and civil servants are discussed; supplementary pension arrangements are examined in the third section. The fourth section reviews the main problems and policy issues the system is faced with today and describes alternative solutions currently under discussion in Germany. The remainder of this introductory section summarizes the main features of the pension system as well as the main findings.

### **Main Features and Findings**

- \* The German pension system was originally designed as a scaled premium system; it formally became a pay-as-you-go system in 1957.
- \* Participation in the public pension system is mandatory for all dependent employees and only some groups of self-employed.
- \* The German pension system is characterized by strong fragmentation with respect to institutions, coverage, contributions and benefit levels.
- \* In recent years, a large discrepancy has emerged between the system dependency ratio, i.e. the relation between pensioners and contributors, and the demographic old age dependency ratio. This has been caused by the use of early retirement and disability pensions as a means of tackling high levels of unemployment, particularly in the five new states of Germany.

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- \* The pension contribution rate is currently 19.2 percent of wages, shared in equal parts by employers and employees. But the government covers about 23 percent of total expenditure to take account of benefits not directly related to contributions. The break-even contribution rate of the system would be closer to 25 percent.
- \* The cost of the pension system has been contained through the pension reform of 1992. Pensions were linked to net rather than gross wages; as tax and contribution rates increase, net wages are growing less rapidly than gross wages. Further, an automatic adjustment mechanism was introduced linking the government subsidy and the contribution rate.
- \* The German pension system is not overly generous compared to other OECD countries. The average replacement rate (calculated as average insured and widows' pension divided by average income) was only 36.3 percent in 1993. This is about the same level as in the U.S. Social Security System. The difference in contribution rates is explained by the much higher system dependency ratio in Germany.
- \* Intragenerational redistribution in the pension system is quite limited. Redistribution takes place mainly through the award of non-contributory periods for disability and retirement pensions as well as through the fairly low benefit reductions for early retirement. Unlike other countries such as the U.S. or Switzerland, Germany does not have a tilted benefit formula to redistribute income from higher to lower income groups. Means-tested social assistance is used to support the old poor.
- \* Since 1992, pension calculation has been based on a system of personal points which takes account of life-time earnings; but even before the introduction of this formula, there was a very close link between contributions and benefits.
- \* Apart from the high incidence of early retirement and disability pensions - and hence a low average retirement age - the German pension system does not suffer from the problems that have afflicted the pension systems in Southern and Eastern Europe and Latin America. Evasion does not appear to be a major problem.
- \* The anticipated demographic aging poses a major challenge. Since there is little, if any, room for increasing the contribution rate, benefits will have to be cut, most likely through an increase in the normal retirement age and through tighter rules for disability pensions and early retirement.
- \* Occupational pension plans already play a significant role in pension provision. They have traditionally taken the form of book reserves but diversified funds are likely to grow in the future. Personal retirement provision, mostly in form of life insurance, is also large and growing fast.

## **II. Statutory pension schemes**

The German pension system is characterized by strong fragmentation with respect to institutions, coverage, contributions and benefit levels. It consists of three main components:

- (i) the statutory public pension system for workers and employees, including the institutionally separate compulsory pension systems for farmers and artists. Public sector employees are also compulsorily insured but civil servants are not covered by the public pension system; their pensions are paid directly from the budget. The independent pension systems run by the professional associations of doctors, lawyers, and other groups of self-employed are usually also listed in this category since membership is compulsory.
- (ii) the supplementary occupational pension schemes for private and public sector employees, and
- (iii) voluntary private retirement provisions, mostly in form of private life insurance contracts.

The statutory pension schemes provide about 70 percent of all pension benefits while pensions for the civil service account for approximately 10 percent of pension spending. Occupational pension schemes of the private sector provide 5 percent of all pension benefits, supplementary schemes for public sector employees 3 percent, and private retirement provision through life insurance accounts for about 10 percent.<sup>1</sup>

### **Social insurance pension scheme**

The public pension system is the most important pillar of old age security in Germany. In 1995, total expenditures amounted to DM 360 billion or about 10 percent of GDP. All dependent employees, i.e. approximately 85 percent of the economically active population, are compulsorily insured; depending on the type of occupation, they are affiliated either with the Workers' Insurance (ArV), the (white-collar) Employees' Insurance (AnV) or the Miners' Insurance (KnR).

The Workers' Insurance consists of 18 insurance institutions at the state level and separate institutions for the railway workers (now privatized) and sailors; the Employees' Insurance and the Miners' Insurance are administered at the federal level. Some occupational groups are insured in separate public pension institutions. The state heavily subsidizes most of the special schemes, particularly in sectors with a declining number of active workers such as agriculture.

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<sup>1</sup> Figures for 1993; Deutsche Bank Research 1995

Most self-employed, who are not members of professional associations, are exempted from compulsory insurance in the public pension system. They may, however, join the system as voluntary members in which case they have to pay both the employee's and the employer's share of contributions. Since 1985, self-employed artists and journalists are also required to join the public system; they pay only their share of contributions, while all "users" of artistic and journalistic products such as theaters, museums, advertising agencies, and the media are required to pay an earmarked "artists social tax" on their profits.

All statutory pension institutions are administered jointly by the insured and the employers in equal board representation without government involvement. But since benefit levels, contribution rates and all other key parameters are determined by law, the autonomy of these administrative councils is limited and relates mainly to operational administration and management issues.

**Table 1: Coverage of Public Pension System**

Contributors	30.9 million
% of EAP	85.0
% of dependent employees	94.3
Pensioners*	18.9 million
System dependency ratio (%)	61.0

\* insured' and widows' pensions

Source: VDR, Statistisches Bundesamt, 1993

The public pension system was originally designed as a funded system but its reserves were wiped out twice, first during hyperinflation in 1923 and then during World War II and the subsequent currency reform. After World War II, reserves started to build up again; initially the scaled premium method was applied. Due to the high demands on the system after the war, the funding periods were shortened and the official move to a pay-as-you-go system was made in 1957. Today, the system has practically no funding, apart from a liquidity reserve amounting to one month's expenditure.

Contributions to the public system are shared in equal parts by employers and employees. The total contribution rate for 1996 is 19.2 percent, applicable up to a monthly income ceiling of DM 8,000 (corresponding to about twice average earnings). Contributions are deducted from after-tax earnings but some deductions for public and private insurance are allowed. Contributions are collected by approximately 1,200 statutory sickness funds and then transferred to the respective pension insurance institutions; the sickness funds are reimbursed by the pension system for the collection costs. The public pension institutions conduct on-site supervision both of sickness funds and employers to determine whether contributions were collected correctly.

In 1994, about 20 percent of all employers were visited for supervision; about 5 percent were found to have contributed less than the mandated contributions.<sup>2</sup>

Evasion does not appear to be an important problem in the German pension system. There is a tight network and cross-check system between the databases of the Tax Authorities, the Labor Office, and health, unemployment and pension insurance.

Even minor employment contracts which are not subject to social insurance contributions are registered to verify total earnings per person and insurance exemption. Social insurance coverage is also in the interest of employees, particularly in respect of health insurance because family members are covered at no extra charge. Since social insurance coverage is comprehensive, workers are automatically also enrolled in pension and unemployment insurance.

The percentage of foreign workers insured in the public pension system is 9.3 percent with Turkish and former Yugoslav workers accounting for about half of the total. The share of foreigners in the total population was 9.5 in 1992; this indicates that evasion of social security contributions is low among this group of workers, at least with respect to registered legal foreign residents. With the opening of Eastern Europe, however, the number of workers in Germany without social security coverage has increased, particularly in the construction industry. Increasingly, foreign firms and contract workers are hired at wages below the collectively negotiated minimum and without social benefits.

The federal government provides a subsidy to the public pension system which is meant to cover benefits not directly related to the concept of old age insurance, such as credits for non-contributory periods due to education, military service or child-rearing, the cost of rehabilitation benefits, and health insurance of pensioners. Until 1992, the level of the government subsidy was determined ad hoc. Since the 1992 pension reform, the government subsidy has been tied to the growth of contribution rates and to the increase of gross covered wages in order to achieve an automatic balancing of income and expenditure.

Higher contribution rates will lead to an increase of the government subsidy; at the same time, higher contribution rates result in lower net wage increases (which in turn result in lower pension increases). With this mechanism, it is intended to distribute the burden of an aging population among workers, pensioners, and the government.

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<sup>2</sup> Collection supervision will be changed in the near future. The pension institutions will be responsible for the supervision of correct contribution collection through the sickness funds; in 1995, supervision was extended to cover 30 percent of all employers.

The government subsidy has been declining from 32 percent of pension expenditure in 1957 to 21 percent in 1995<sup>3</sup> (23 percent if government expenses for the miners' pension insurance are included); this means that the pension insurance is forced to pay for some of the expenditure unrelated to entitlements acquired through contributions. As a share of government expenditure, this subsidy amounts to about 9 percent. If the government were to cover all non-insurance payments, its contribution would have to exceed 30 percent of pension expenditure.<sup>4</sup> Further, cross-subsidies are made both between the Workers' and the Employees' Insurance and between the institutions of the Workers' Insurance at the state level to ensure financial equalization. In addition, the government grants interest-free loans to the pension system to temporarily bridge cash flow deficits; these loans are short-term and have to be repaid.

Benefit expenditure of the public pension system consists of old age, disability and survivors' pensions, medical rehabilitation benefits and contribution payments to the public health insurance for pensioners. Pension payments account for almost 90 percent of all expenditure; of this, about half goes to old age pensions, 20 percent to disability and 30 percent to survivors' benefits.

The regular retirement age is 65 years for men and women. To access a regular retirement pension, only 5 years of contributions are necessary. Early retirement with eligibility for a full old age pension is still possible today under the following conditions:

- \* at 63 years for men with at least 35 years of contributions
- \* at 60 years for women with at least 15 years of contributions
- \* at 60 years in case of disability with 35 years of contributions
- \* at 60 years in case of unemployment with 15 years of contributions
- \* at 60 years for miners with 25 years of contributions

Due to the generous early retirement options, the average retirement age in Germany is among the lowest in OECD countries; in 1994, the overall average retirement age was 60 years. Disability pensioners retired at 52.3 years and old age pensioners at 62.8 years.

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<sup>3</sup> As a share of total expenditure, the government subsidy declined from 27.5 to 17 percent over the same period.

<sup>4</sup> In 1993, non-insurance expenditure amounted to 31.6% of total expenditure. The composition was: 8.3% war compensation benefits; 5.2% non-contributory periods; 4.8% early retirement, 2.3% child-rearing credits; 2.4% matching supplements for disability benefits; 1.4% unemployment related occupational and general disability benefits; 1.8% health insurance contributions for pensioners; 5.3% other expenditure

Starting in the year 2001, early retirement under current conditions will be gradually phased out. Between 2001 and 2004, the current limits will be raised by 3 months per cohort, and thereafter until the year 2012 by 6 months per cohort. The full increase to 65 years will become effective for all workers - male and female - born after November 1, 1952, i.e. for those aged 39 and younger at the moment of reform. Early retirement will ultimately be allowed only at age 62 and for every year of anticipated retirement the pension will be reduced by 3.6 percent. The special provisions for miners, however, will be retained. This schedule was decided as part of the pension reform in 1992 and is currently under revision by the government; in order to achieve savings in the system, a more rapid increase of early retirement ages is considered.

German pension law distinguishes two different types of disability: occupational disability and general disability. A person is occupationally disabled if the earning capacity is reduced by more than 50 percent. The pension payable in this case amounts to two thirds of a regular old age pension. A general disability pension is awarded when a person is considered permanently incapable of earning a minimum income in any occupation; the general disability pension is equivalent to a regular old age pension. For the calculation of both types of disability pension, it is assumed that full contributions were made up to age 55, and that one third of remaining possible contributions, i.e. 20 months, were made between 55 and 60 years. At age 65, the disability pension is converted into an old age pension.

Since the pension reform of 1992, the benefit formula has been based on a system of personal points. A worker earning the average wage gets one point per year of contribution. If someone worked from age 20 to age 65 and always earned the average wage he would accumulate 45 points. If he retires at age 65, his points are multiplied by the "pension value" which in 1995 was equal to DM 46.23.<sup>5</sup> His monthly pension would therefore be about DM 2,080. The average monthly salary in 1995 was DM 4,234. Thus, the DM 46.23 pension value corresponded to an accrual rate of about 1.1.

Workers with less or more than average earnings receive points on a pro-rata basis (i.e. 0.5 points when a worker earns 50 percent of the average or 1.5 points if he earns 50 percent more than the average). There is an upper ceiling of nearly 2 points per year of service, i.e. salaries of more than twice the average do not earn any points because they are not subject to contributions. The fewer the years of contributions the smaller the number of points the worker is credited. Various credits are given for non-contributory periods such as child-rearing, military service, or temporary disability. Early or late retirement brings about further adjustments. These, however, are not actuarially calculated; pensions are reduced by only 0.3 percent per month of anticipated retirement.<sup>6</sup> Pensions for occupational disability are multiplied by a factor of 0.66 and those for widows by 0.6.

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<sup>5</sup> Pension value for the former West Germany

<sup>6</sup> In the U.S. Social Security System, retirement at 62 years instead of 65 years results in a benefit reduction of 20 percent compared to only 10.8 percent in Germany.

Thus, the system is based on the following factors:

- \* “wage points” that are determined by comparing a person’s income to the average income each year and taking account of the years of contributions
- \* two adjustment factors, for retirement age (1 for regular retirement, lower or higher for early or late retirement) and for type of pension (1 for old age pension and general disability, less for occupational disability and survivors’ pensions)
- \* the “pension value”. This value was calculated in December 1991, immediately before the pension reform, and corresponds to the pension entitlement an average income worker earned by contributing for one year according to the old pension formula. The pension value is adjusted annually to the growth of net wages. Pensions in payment are also adjusted annually by applying the new current pension value; until 1992, pensions were adjusted to gross wages.

The pension for an average income worker with a contribution period of 45 years, net of pensioner’s contributions to the statutory health insurance, replaced 68.6 percent of net earnings in 1993. With respect to gross wages, the replacement rate of gross pensions was 48.9 percent in the same year.

Since these figures relate only to a worker who earns the average income over the entire contribution period, it is interesting to look at the actual replacement rate which is shown in Table 2. This ratio is obtained by dividing the total pension expenditure by the number of pensions awarded (insured’ and widows’ pensions) and relating it to the average income. In 1993, the effective gross replacement rate was 36.3 percent (gross pensions/gross wages) and the net replacement rate (pensions net of health insurance contributions/ net wages) 50.9 percent.

**Table 2: Replacement Rates in Germany 1993**  
(in % of earnings)

	Gross Replacement Rate	Net Replacement Rate
Average income w/ 45 years of contributions	48.9	68.6
Average income w/40 years of contributions	43.4	60.9
Average replacement rate	36.3	50.9

Source: Verband Deutscher Rentenversicherungstraeger, 1994

A closer look at the data for old age and disability pensions shows that male pensioners on average do reach a high net replacement rate. Male pensioners in 1994 on average had 39.3 insured years of service with an average of 1.1 personal points per year. Relating the average pension paid to male pensioners in 1994 to the average wage results in a net replacement rate of 72 percent (gross:50 percent). For female pensioners, however, the net replacement rate was considerably lower at about 40 percent due to an average of only 25 insured years and 0.7 personal points per year.<sup>7</sup>

A pensioner receiving a full pension at or above age 65 may earn unlimited additional income. For cases of early retirement pensions are reduced according to the level of additional income earned.

Pension contributions are subject to income tax. Pension contributions are paid out of after-tax income; but some tax deductions are allowed for insurance contributions. According to German tax laws, only that portion of the pension is taxable which represents the notional capital gain on contributions.

There is no minimum pension in Germany; however, a method is applied to lift very low pensions by increasing the personal points to a maximum of 0.75 points per year, provided that the insured has contributed for 35 years. This increase has benefited predominantly female pensioners of the Workers' Insurance who made very low contributions during their working life. But the most important supplement for low-income pensioners is social assistance. Approximately half of all social assistance is paid to pensioners, and about one third of all social assistance is spent for long term care. Social assistance is financed at the local level, thus the municipalities' budgets are increasingly burdened with the costs of aging. Therefore, in 1995, Germany introduced a new branch of social insurance for long term care.

Pensioners must contribute to the statutory health insurance unless they are covered by a comparable private health insurance contract. The rate is currently 6.7 percent of the pension. This contribution is matched by an equal share payable by the pension insurance.

### Civil servants' pensions

The approximately 2.5 million civil servants in Germany are not insured in the public pension system. Their pension payments are financed out of the budgets of the respective employing authorities, i.e. by the federal government, states, and municipalities.<sup>8</sup> The beneficiaries do not contribute to the financing of benefits.

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<sup>7</sup> Data refers to former West Germany

<sup>8</sup> Only one state so far, Rheinland-Pfalz, has recently decided to set up a separate fund for pension payments in order to move away from a purely budget financed scheme.

Retirement age for civil servants is 65 years with exceptions for some groups such as military and police. The minimum period of service for pension eligibility is 5 years. The pension is calculated according to the last years' salary and the years of service. The accrual rate is 1.875 percent per year of service up to a maximum of a 75 percent replacement rate for 40 years of service. There is a minimum pension which is set as a percentage of a lower level civil service salary grade. In case of disability, the pension is calculated taking into account two thirds of the remaining service until the age of 60 years.

The pensions are adjusted according to the evolution of gross incomes for civil servants and are paid 13 times per year. Civil servants' pensions are fully taxable. The government pays subsidies to cover medical costs of both active and retired civil servants and their dependents; the amount depends on the number of family members. To cover expenditure in excess of this amount, civil servants are required to buy private health insurance.

#### Pension schemes of professional associations

The professional associations of self-employed persons, such as medical doctors, architects, and lawyers run their own pension schemes. For the members of these professional associations, affiliation with the pension schemes is mandatory. The pension funds are independent, they set their own contribution and benefit structures, and typically provide old age, disability and survivors' pensions.

Currently, there are 66 professional pension institutions; unlike the public pension system, they are subject to state not federal law. At the end of 1994, they insured about 446,000 active contributors and provided benefits to approximately 76,000 pensioners. The average old age pension paid by these schemes was about DM 3,300 (approx.US\$ 1,700) in 1994; the average contribution amounted to DM 1,120 per month. Members' contributions are usually fully subject to income tax since the personal income tax deduction allowed for insurance contributions is in most cases already exhausted through premium payments for health and professional liability insurance.

The professional associations' schemes are financed exclusively out of contributions of their members without any additional subsidies from the government. The majority of these schemes are funded at different degrees; about 20 percent of all members are enrolled in fully funded schemes. Investment of reserves is subject to the guidelines of the private insurance supervision law.

The total assets were about DM 65.6 billion in 1994 corresponding to about 2 percent of GDP. More than half of the assets were invested in bonds, 12 percent in mortgages, 15 percent in equities and other securities, 9 percent in real estate and 9 percent in term deposits.<sup>9</sup>

### **III. Supplementary Pensions**

Coverage of supplementary pensions in Germany is relatively low compared to other OECD countries; this is a consequence of the design of the public pillar which is meant to replace a significant share of earnings rather than to provide only a modest pension. Supplementary pensions are provided predominantly through occupational pension plans. In 1990, approximately one third of all companies offered occupational pension schemes to their employees; the plans covered 46 percent of all dependent employees. The expenditure for occupational pension plans corresponded to 4.9 percent of total gross wages. Public sector employees who are not civil servants are covered by a mandatory supplementary pension scheme. Of today's pensioners about 40 percent receive supplementary occupational pensions.

A survey conducted in 1993<sup>10</sup> found that participation in occupational pension plans was declining when measured as number of workers covered (but constant in terms of companies offering occupational schemes). Coverage in industry declined from 70 to 66 percent of all workers, and in trade and services from 29 to 28 percent between 1990 and 1993.

The total reserve capital to cover pension promises was estimated to be about DM 460.6 billion in 1993 corresponding to about 15 percent of GDP. This figure, however, is subject to considerable uncertainty because the reserves of life insurance related to occupational pension plans are not separated from the ordinary life business in the statistics and thus are based on an estimate.

There are four different types of occupational schemes: (i) pension plans financed through book reserves, (ii) support funds, (iii) pension funds set up as separate legal entities, and (iv) life insurance contracted by the employer on behalf of the employee ("direct insurance"). Supplementary pension plans can be established through an individual employment contract, company agreements for all employees or through collective employment agreements. All occupational pension plans are subject to the 1974 Occupational Pensions Act which establishes minimum standards of vesting and portability and regulates other areas to protect members' interests.

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<sup>9</sup> Data provided by the Association of Professional Previsional Institutions, 1996

<sup>10</sup> ifo Institut für Wirtschaftsforschung 1993

Under the book reserves scheme, an employer makes a binding commitment to his employees to pay retirement benefits. The company forms pension reserves in form of liabilities in the balance sheet. All commitments made since 1987 must be fully funded and shown on the balance sheet. The tax law regulates the valuation method and assumptions in order to control the level of reserve that can be held on a tax-deductible basis; the discount rate to be applied is currently set at 6 percent. Pension plans financed through book reserves must be insured through the mutual Pension Insurance Association (PSV). The insurance covers all due benefit payments and vested acquired rights of still active workers. In case of an insolvency, the PSV acts as claimant on behalf of the beneficiaries; single premium annuity contracts are taken out with a consortium of insurance companies to cover pension payments. The shortfall resulting from the difference between the funds received in the insolvency process and the costs of the annuity contracts is financed through a levy from all participating companies. The premium payable to the PSV was 0.26 percent of commitments in 1995; over the last 20 years, it has been on average 0.18 percent..

Support funds (*Unterstützungskassen*) are legally independent pension institutions sponsored by a single or several employers. Contributions are paid only by the employer. The employer has a considerable degree of discretion with respect to the timing and volume of contribution payments. Due to this flexibility, companies are still liable for pension promises made to employees; thus, commitments financed through a support fund have to be insured with the PSV in the same way as book reserves.

Pension funds (*Pensionskassen*) in Germany are similar to captive insurers. They are supervised by the Supervisor of Insurance; the provisions of the Insurance Supervision Act apply also to pension funds with respect to minimum capital requirements, investment restrictions and maximum discount rates. They do not exclude the possibility of employees' contributions. As mutual benefit associations, pension funds are not required to contribute to the PSV.

Direct insurance (*Direktversicherung*) can be taken out as individual or group policy by the employer on behalf of the employees. Premiums can be paid both by employers and employees.

For individual pension agreements between employer and employee no formal registration of the plan is required. Regardless of the option chosen, the employer's promise to provide supplementary benefits is legally binding. Once a worker has fulfilled the minimum vesting period, he is entitled to pro-rated benefits upon termination of employment.

**Table 3: Occupational Pension Plans in Germany (1990-93)**  
 (in percent of total)

Type of Pension Plan	Assets	Employees	Companies
Book reserves	56.3	54.1	12.8
Pension funds	22.9	18.9	28.3
Life insurance	12.1	14.0	68.9
Support funds	8.7	13.0	1.6
Total	100.0	100.0	100.0

Sources: Deutsche Bank Research 1996, Statistisches Bundesamt 1994

Note: Data for assets for 1993, for employee and company distribution for 1990

The share of book reserves in total assets of occupational schemes has been declining over the last decade. In 1981, book reserves accounted for 67 percent of all assets. Direct insurance has been growing the fastest with an increase from less than 5 percent in 1981 to 12 percent in 1993.<sup>11</sup> But book reserves still are the most attractive form of pension scheme for sponsoring employers, as can be seen in the share of covered employees in table 3. By setting up book reserves, companies can reduce taxable profits, and the pension reserves can be reinvested in the company. Taxes become payable only when the reserves are released which increases profits; at the same time, pension payments are considered operating expenses which in turn offsets the increase in profits.

Contributions to support funds are tax-deductible up to certain limits depending on the type and average level of benefits promised. Companies who choose this option often take out reinsurance to cover the remaining unfunded liabilities. Support funds are not subject to investment restrictions; the most common forms of investment are loans to the sponsoring enterprise(s) and real estate. Due to the high degree of discretion for the sponsoring employer, support funds also have to be insured with the PSV.

The number of pension funds has been declining; their share of total second pillar assets, however, has been increasing. In 1993, there were 150 pension funds in Germany; their total assets amounted to about 3.5 percent of GDP. Pension funds are subject to the same regulations as insurance companies. The investment rules mandate the following limits as percentage of assets: real estate 25 percent, fixed income securities inside the European Economic Area 100 percent, foreign bonds 5 percent, European equities 30 percent, and foreign equities 6 percent; additional rules apply with respect to the issuers of securities. In 1994, German pension funds invested about 72 percent of their assets in domestic bonds, 4 percent in foreign bonds, 13 percent in real estate and 9 percent in equities.<sup>12</sup>

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<sup>11</sup> Deutsche Bank Research 1995

<sup>12</sup> Deutsche Bank Research 1995

Contributions to pension funds and premiums for direct insurance enjoy limited tax advantages through the application of a flat 20 percent tax instead of the higher corporate tax rate. The preferential tax, however, will only be applied up to a limit. Employers' contributions represent taxable income for the employee. Pension benefits of pension funds and direct insurance are taxed only on the portion that represents interest earned; lump-sum distributions from direct insurance are tax-free. Benefits from book reserve schemes and support funds, however, represent fully taxable income for the beneficiary.

Unfortunately, there is no reliable comprehensive information on the benefits provided by the different occupational pension plans. In a survey for the state of Bavaria, almost all companies with pension schemes offered defined benefit plans, some with fixed benefits and some earnings-related, while defined contribution plans were offered by only 2 percent of the companies. Among the companies with more than 1,000 employees about 12 percent had defined contribution plans.

German companies continue to prefer book reserves due to the tax advantages of this option and, more generally, the easy access to financing without having to provide collateral and savings in transaction costs compared to external financing. A further reason why book reserves are popular is the fact that there are no limits imposed on the level of benefit promises and the formation of corresponding book reserves. The combination of internal financing and pension commitments is seen as the major reason why supplementary pension provision has expanded in Germany despite the voluntary nature of second pillar. The experience with the book reserve schemes has so far been favorable and the PSV has proven to be an effective mechanism of protecting members' interests. For employers using book reserves, however, the risk of being able to finance the pension promises remains if reserve planning and investment is not conducted adequately .

#### Public supplementary pensions

All public sector employees are insured in the supplementary pension institution of the federal and the state governments; in addition there are 22 municipal and 5 church institutions providing supplementary pensions. Participation is quasi-mandatory as it is based on employment negotiations which have been declared valid for all public sector employees; civil servants, however, are excluded. At the end of 1991, approximately 4 million employees were covered.

The public supplementary pension institutions are partially funded and are supervised by the Ministry of Finance. Employees switching from the public to the private sector are eligible for the accrued benefits upon retirement but benefits are not adjusted for inflation during the waiting period.

#### **IV. Pension policy issues in Germany**

Pension financing is currently one of the main themes in the political discourse and various proposals are on the agenda for decision by government and parliament. This section reviews the main pension policy issues currently discussed in Germany. The problem of an increasing demographic burden and its implications for the financial viability of the German pension system are described; related to this problem are the issues of early retirement and the financial requirements imposed on the system through the reunification of the country and the subsequent harmonization of pension rules in the former West and East Germany. Although the current focus is on achieving short term savings in the system in order to meet the fiscal criteria of the Maastricht agreements, some structural changes to the pension system are also proposed. The proposals will be briefly reviewed in this section. Finally, some policy issues related to supplementary pension provision and its impact on capital market development will be discussed.

##### **Increasing demographic burden**

Like many other OECD countries, Germany too is facing increasing pressure on its pension system due to the aging of the population. The birth rate in Germany has fallen below the net reproduction level resulting in a shrinking population. The net reproduction rate is 66 percent, i.e. only two thirds of the rate necessary to maintain a constant population. At the same time, life expectancy at retirement is increasing. Today, a 60 year old woman lives on average for 23 more years and men for 18.5 more years. In 1970, the respective numbers were 19.1 and 15.3 years. The demographic dependency ratio, measured as the population of 60 years and above in relation to those between 20 and 60 years, is 37 percent today. By the year 2030 this ratio is expected to increase to about 70 percent.

The system dependency ratio in the public pension system is 61 percent (excluding survivors' pensions), i.e. 1.6 active workers today have to support 1 pensioner. By 2030, the burden is expected to increase to the point where there will be only one worker per pensioner. The large difference between the demographic and the system dependency ratios is due to several factors: the high number of early retirement and disability pensions, the long education periods in Germany resulting in late entry into the labor market, and the fairly low labor force participation of women. If the system dependency ratio is expressed in terms of standard old age pensions for a full contribution career per 100 contributors and unemployed (for whom the unemployment insurance pays contributions to the pension insurance), the ratio drops to 37 percent in 1994. The projection of the system dependency ratio over the next 35 years, however, is obviously subject to more uncertainty than the demographic projections since it depends on economic development, the labor market situation as well as on political decisions such as EU and German migration policies.

To analyze the implications of alternative economic and political scenarios for pension financing in Germany, the public pension system commissioned a study from the Swiss consulting firm *Prognos AG*. The first study was conducted in 1987. It concluded that the basic structure of the German pension system could be maintained provided that changes were made in the key parameters of the system, such as the retirement age, the benefit formula and the participation of the government in financing. After reunification, which placed a heavy burden on the pension insurance and after the pension reform of 1992, a second study was commissioned from the same firm to determine whether the current structure was still feasible under the new conditions.

The study uses two scenarios for the projections which are run first in a macro model and then in the pensions model for the period of 1992-2040. Varying assumptions are made with respect to internationalization of trade and capital flows, technological change and innovation, wage growth and productivity increases and migration to Germany. In both scenarios, the population is shrinking despite migration leading to a decline in the labor force.

**Table 4: Projected pension contribution rates  
(in percent of wages)**

		Optimistic Scenario		Pessimistic Scenario	
	1992	2010	2040	2010	2040
Pension contribution	19.2	22.4	26.3	23.0	28.7
Total payroll tax	41.5	43.4	48.6	44.5	52.7

Source: Prognos AG, 1995

As shown in table 4, pension contribution rates are expected to increase from 19.2 percent today to 26.3 percent in 2040 in the optimistic scenario and to 28.7 percent in the pessimistic scenario. Without the measures of the 1992 pension reform the projected increase of the contribution rate would be twice as high. Total payroll taxes for social insurance, i.e. pensions, health, long term care and unemployment insurance, will grow from 41.5 percent today to 48.6 and 52.7 percent, respectively. This result seems surprising given the expected dramatic increase of the system dependency ratio.

The three reasons for the relatively moderate increase of the contribution rates are the long term evolution of the demographic dependency ratio, the employment situation and well as the measures taken during the 1992 pension reform, particularly the automatic adjustment of the federal subsidy and the adjustment of pensions to net wage increases. The demographic dependency ratio increases in both scenarios to 66.8 and 72.6 percent, respectively, and then falls by 3 about percentage points between 2030 and 2040; these numbers take into account the resident population in Germany.

Secondly, labor force participation in the age group between 20 and 59 years is expected to increase from 64 percent in 1992 to 72.3 percent and 69.1 percent, respectively. In the optimistic scenario this leads to a practically constant contribution rate between 2030 and 2040 but to increasing rates in the pessimistic scenario. Lastly, the automatic mechanism for pension adjustment and federal subsidy stabilizes the system financially. According to the calculations, the reform of 1992 reduced the required increase of contribution rates by 50 percent. As described earlier, higher contribution rates lead to lower pension increases and automatically also to a higher federal subsidy. Thus, the net pension level is maintained by definition. This mechanism, of course, assumes that the government will always be in a position to increase its participation in the pension system as required. The calculations try take account of this by factoring in necessary federal tax increases.

According to the Prognos simulations, the relation between gross and net wages will decline from currently 67.2 percent to 58 percent in 2040 in the optimistic and 54.5 percent in the pessimistic scenario as a result of higher payroll and income taxes. Net wage levels, however, will continue to grow due to productivity increases; in the optimistic scenario, real net wages double by 2040 while the pessimistic scenario finds an increase of 75 percent over the same period. This result is the most frequently used argument to defend the sustainability of the current system in spite of increasing contribution rates.

### Early retirement

Early retirement is a major cost factor for the German pension system. As mentioned earlier, the average age upon retirement in Germany is among the lowest in OECD countries. In the pension reform of 1972, early retirement was allowed for men at age 63 on the condition of 35 years of contributions; as a result, the labor force participation of men aged 63 years plummeted from 67 percent in 1970 to 21 percent in 1989.<sup>13</sup>

In 1994, only 29 percent of all newly awarded pensions were paid at the regular retirement age; in Former East Germany, this share was even lower at 19 percent. Given massive economic restructuring and thus high unemployment rates in Former East Germany, the option of early retirement on the condition of unemployment has been used increasingly during recent years. In 1995, 49.7 percent of all retirement pensions were awarded for unemployment. The eligibility requirements for disability pensions are also generous. A worker who cannot work full-time anymore and does not find suitable employment within a year is entitled to a full disability pension, even if he or she was considered only occupationally disabled before. In 1995, disability pensioners accounted for about 26 percent of all pensioners; their average retirement age was only 52 years.

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<sup>13</sup> Schmähl 1992

In the pension reform law of 1992, the possibility of receiving a partial pension was introduced in order to make the transition from employment to retirement more flexible. The law sets new earnings limits for pensioners who move to a part-time job before reaching the regular retirement age. The pensioner can choose 1/3, 1/2 or 2/3 of the regular retirement pension; depending on which option is chosen, the pensioner is allowed to earn varying amounts of additional income. Persons receiving partial pensions and earning income are still required to contribute to the pension system which in turn increases their benefit entitlement for the full pension when they retire completely.

More recently, attempts at promoting more part time employment for older workers have been made as part of the "Pact for Employment" supported by employers, trade unions and the government. According to this suggestion, workers at the age of 55 would be able to reduce their working hours by 50 percent and still receive 70 percent of the previous income. The employer would pay 50 percent of wages and the unemployment insurance would finance the supplement to reach 70 percent of previous wages plus the necessary funds to reach 90 percent of the previous pension contribution. The condition, however, would be that the employer would hire another worker for the other 50 percent of working hours.

### Reunification

The pension reform law which came into effect in 1992 was passed on November 9, 1989 - on the same day as the opening of the Berlin Wall. All assumptions and model calculations on which the reform law were based took account only of the Western part of Germany. The integration of the five new states into the public pension system placed a heavy financial burden on the system. The pension system of the GDR was practically a flat-rate system with low benefits due to the fact that the ceiling on contributions and benefits had never been raised since 1947; a voluntary additional pension insurance was later added. In addition, there were 63 different occupational schemes.

When the monetary, economic and social union between the two German states was established, all pensions in payment were converted to DM at a 1:1 exchange rate and increased by an average of 25 percent in order to reach approximately 70 percent of the net average income of GDR employees after 45 working years. Since reunification, the West German pension system has gradually been established in the five new states. The switch to the personal point system has not only caused administrative problems but also would have led to lower pension entitlements in several cases. In order to avoid social hardship, pensions continued to be supplemented until 1996; now the subsidy will gradually be reduced. While pensions in Eastern Germany were only around 30 percent of the level in Western Germany in 1990, the average income earner in Eastern Germany now receives about 75 percent of the average pension in the Western part.

As there are still substantial income differentials between the two parts of Germany, two different pension values are applied in benefit calculation. In 1995, the pension value for the five new states was DM 37.92 compared to DM 46.23 for the old states. While the pension value for the Western states is adjusted annually to net wage growth of the previous year, the pension value for the new states is still estimated biannually according to expected net wage growth. Ultimately, there will be a uniform pension value for the whole country.

The additional expenditure necessary for the integration of the five new states was financed through cross-subsidies within the pension institution. In 1991, the pension contribution rate was lowered from 18.7 to 17.7 percent and then in 1993 further reduced to 17.5 percent; at the same time, however, the contribution to the unemployment insurance was increased due to the heavy demands on this scheme.

A further cost factor is the full benefit entitlement for all ethnic Germans who move to Germany from Eastern Europe which is granted under the assumption that the pensioner has contributed for the full period of 45 years. It is intended to abolish this provision as part of a public sector savings package which was decided by Cabinet in July 1996.

### The political discussion

The political discussion about the necessity of more fundamental structural reforms of the German pension system has gained momentum in recent years, particularly since unemployment figures have been reaching record highs starting at the end of 1995. Pressure on the government has been increasing from employers to lower wage costs, from the opposition parties to guarantee sustainable pension financing, and from the financial sector to foster private pension funds and life insurance.

One of the reform proposals suggests partial funding of the pension system: The contribution rate to the pay-as-you-go pension system would be reduced by 50 percent and the system would then provide only a basic pension. This benefit would be supplemented by a funded system. The critics of this proposal point out that the reserves necessary to fund half of all pension entitlements amount to DM 5 trillion which is equal to the market value of the entire productive capital stock of Western German companies, including postal services and railways. It is doubted that it would be possible to find sufficient high-yielding investment opportunities and to later dissolve these savings during retirement without causing economic repercussions. Secondly, a 50 percent reduction of the contribution rate would result in 90 percent of all pensions falling below the social assistance level, i.e. the pension would take the form of a poverty alleviation benefit. In that case, it is argued, the pension should be lifted to the social assistance level to perform the function of alleviating poverty instead of passing the burden on to the municipalities. This would require additional budgetary resources. Lastly, the issue of financing the transition is raised which due to the current fiscal constraints and the

benchmarks laid down in the Maastricht treaty is seen as a major obstacle to moving to a partially funded system.

Other reform proposals suggest various forms of tax-financed flat benefits for all pensioners supplemented by mandatory or entirely voluntary earnings-related second pillar solutions. Interestingly, such proposals have been made both by members of the ecological left Green Party and by conservative groups. These proposals have provoked heated political debates and have been officially rejected by the Chancellor. The maintenance of an earnings-related pension is not only an important political issue but also required by the German constitution. According to the law, benefit levels have to correspond to contribution levels, i.e. a person who pays higher contributions than other workers must also receive higher pensions. Therefore, all proposals limiting the statutory public pension to a flat benefit would be unconstitutional under present conditions.

During the last months the debate has intensified. The Minister of Labor announced that the contribution rate would have to exceed 20 percent unless substantial short-term savings could be achieved. Due to high unemployment and higher than projected pension deficits in the five new states, the pension system is rapidly approaching a severe financial crisis. Among the measures discussed are an anticipated increase of early retirement ages before the year 2001, an immediate increase in the early retirement age for women from 60 to 63 years, reduced points award for non-contributory periods, a revision of benefit entitlements for ethnic Germans without previous contributions, cuts in rehabilitation benefits, and sales of real estate owned by the pension system. The pension institutions, on the other hand, maintain that government participation in the pension system should be increased to finance all non-insurance benefits.

### Capital market development

The predominance of book reserves in the provision of supplementary pensions in Germany has attracted increasing criticism, particularly from representatives of the financial sector, as an inefficient and outdated mechanism which presents an obstacle to more rapid capital market development. Book reserves were a valuable source of internal financing for companies in the post-war period and the years of economic recovery when capital markets were still underdeveloped. Increasing globalization of the financial markets and changes in the previously bank-dominated governance structure of companies, however, will require more transparency and accountability vis-à-vis shareholders.

Since large reserves for self-financing cannot be justified by lack of external financing anymore, the book reserves are bound to come under pressure from investors. With more diversified ownership, companies will also have more difficulties in obtaining resources in the event of underfunded pension plans. Pension liabilities have already proven to be a major obstacle in the privatization of German parastatals such as the railways and telecommunications.

Finally, channeling of pension reserves through capital markets would produce efficiency gains in the allocation and use of capital which would benefit the German economy as a whole.

The promotion of increased external financing of pension plans would require a revision of the current legislative and regulatory framework for the various forms of supplementary pension provision. The discriminatory tax treatment for external pension financing would have to be removed and a liberalization of investment restrictions should be considered.

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