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Pension Funds in Central Europe and Russia

Their Prospects and Potential Role in Corporate Governance

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The severe financial pressures on the social pension systems of transitional countries in Central Europe and Russia could be alleviated by downsizing and restructuring the public pillar of the system and by creating private pension funds. Private pension funds could help modernize capital markets and also help improve corporate governance.



Summary findings

Social pension systems in most countries in Eastern Europe and the former Soviet Union face severe financial pressure. Aging populations are increasing that pressure, which stems mainly from design flaws and incompatible incentives in the systems.

Vittas and Michelitsch describe the features of the pension systems that have led to the current dire predicament: a big discrepancy between system and demographic dependency ratios, unsustainable targeted replacement rates, the high contribution rates needed, growing evasion, and growing deficits.

Radical basic reform is inevitable, they say, but may not be politically feasible or even advisable in the short run.

After reviewing experience in other countries, they conclude that restructuring and downsizing the social pension system will leave adequate but affordable (thus sustainable) benefits and will allow for the creation and growth of private pension funds.

The shortcomings of company-based defined benefit plans (limited portability, restricted vesting, inadequate funding) suggest that transitional economies should opt

in the longer run for nonemployer, defined contribution plans based on individual capitalization accounts with full immediate vesting, full portability, and full funding.

To cope with the need for a targeted replacement rate, such schemes could operate with variable contribution rates, reset each year in accord with the salary growth of each worker, the cumulative investment return on his/her account, and the targeted pension benefit.

Once private pension funds are established, long-term financial resources should accumulate rapidly. They can then play a major role in modernizing securities markets, stimulating innovation, fostering better accounting and auditing standards, and promoting more disclosure of information.

They could also greatly help improve corporate governance and the monitoring of corporate performance. Their "voice" in corporate affairs could be exercised more effectively through collective bodies. They could thus help create more robust structures of corporate governance, lower monitoring costs, and avoid the problems caused by "free riding."

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**Financial Sector Development Department
The World Bank**

**PENSION FUNDS
IN
CENTRAL EUROPE AND RUSSIA**

**THEIR PROSPECTS AND POTENTIAL ROLE
IN
CORPORATE GOVERNANCE**

Dimitri Vittas and Roland Michelitsch

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I. INTRODUCTION AND SUMMARY

A. Pension Funds and Enterprise Restructuring

Writing about the role of pension funds in corporate governance in Central European countries (the Czech Republic, Hungary, and Poland) and Russia is faced with two major difficulties. First, at the time of writing this paper, large funded pension plans are conspicuous by their absence in all these countries (as well as in all other Eastern European countries and former Soviet republics). Second, even in countries that have long had funded pension plans and where pension funds have long become major institutional investors, their role in corporate governance has been renowned for its passivity. Pension fund managers have traditionally been expected to vote with company management or sell their shares if they were unhappy with their performance. It is only in recent years that pension funds have started to be forcefully involved in corporate affairs. But there is considerable uncertainty about the direction, form and impact of their involvement and there are also many unresolved policy and regulatory issues.

The most pressing and challenging task facing transitional economies today is enterprise restructuring. Clearly, or perhaps hopefully, the major part of the first phase of such restructuring will have been completed before pension funds can become large enough to deserve to play a part in the process. Thus, in the short to medium term the burden of enterprise restructuring and the leading role in corporate governance is likely to fall on the state, the banks, the investment funds, the managers and the workers (and in some cases foreign companies and individual investors) who are likely to be the major owners of large corporations.

The social security and pension systems of all four countries are in deep trouble and in need of fundamental reform. This reform should involve the restructuring and downsizing of public pension systems and the establishment of supplementary private pension funds. But even if pension reform were to be implemented immediately, pension funds commanding large financial resources and therefore able to become substantial company shareholders would take several years to develop. Large pension funds with a key role in enterprise restructuring and corporate governance would emerge in the immediate future only in the unlikely event of a massive transfer of equity stakes in privatized enterprises to newly created pension funds. Such a transfer would be inadvisable given the lack of financial expertise and the weakness of capital market institutions, but it appears to be discussed in some countries.

Although pension funds are unlikely to play a major part in enterprise restructuring in the short to medium term, actions that will be taken over the next few years will shape their future role in corporate governance and will also affect the financial health of both the corporate sector and the pension systems of each country. This paper discusses the prospects for pension reform in these four countries and the factors that could influence the behavior of pension funds in the financial system and their role in corporate governance.

The paper is structured as follows. The remainder of this section summarizes the main findings and conclusions of the paper. Section II examines the issues and prospects of pension reform in the four countries under review. Section III offers a brief overview of the role of pension funds in capital markets. Section IV focuses on the factors that determine the role of pension funds in corporate governance and the recent changes that have been taking place in this area, especially in the US and the UK. The last section draws together potential lessons and policy implications for transitional economies.

B. Main Findings and Conclusions

Public Pensions in Central Europe and Russia. The pension systems of the countries of Eastern Europe and Central Asia have many features in common. Perhaps the most important are both their growing financial crisis and their inability to provide adequate incomes to most of their pensioners.

The main factor behind these failures is their very high system dependency ratios, caused by low retirement ages and lax certification of disability pensions. Combined with near universal coverage, this has resulted in high levels of pension expenditures as a fraction of national income. Growing evasion and arrears are compounding the financial problems of public pension systems, which are saved from financial insolvency only by the partial indexation of pensions to inflation. However, in Poland pensions have been indexed to wages and the pension system is suffering from a large and growing deficit.

The pension systems are unable to maintain the high targeted replacement rates promised by the schemes, but even so they require high contribution rates. As a result, the scope for supplementary private pension funds is currently rather limited. As the public pension systems are run on a pay-as-you-go basis, they make no contribution to the accumulation of long-term financial assets.

Supplementary Non-State Pension Funds. The Czech Republic and Hungary have enacted legislation that promotes the creation of supplementary private pension funds. These laws favor the creation of defined contribution schemes, although defined benefit plans are not precluded. In the Czech Republic a tax credit is paid by the state, up to a limit of 120 crowns for a 500 crown contribution. This credit is used in lieu of tax deductibility of contributions and is therefore a less regressive tax incentive. In Hungary, the law allows for the tax deductibility of both employer and employee contributions and also exempts such contributions from social security taxes. In both Hungary and the Czech Republic the law provides for prudential controls on investments to avoid overconcentration of risks and for adequate information disclosure to members. Some pension funds have been created in these two countries but their size is still very small.

No private pension laws have been enacted in Poland and Russia, although a draft act has been prepared in the latter. Very few pension funds have been created in Poland, but Russia has over 300 non-state pension funds. The vast majority of these are little more than savings clubs. Russian pension funds operate in a regulatory vacuum, with little standardization in services and products, charges or investment

practices, but some of these pension funds have the potential to acquire large memberships and become important institutional investors.

The Role of Pension Funds in Capital Markets. Large private pension funds are not likely to emerge and play a big part in the capital market unless the public pension systems of the four countries are restructured and downsized. Lower contribution rates will leave greater scope for the development of private pension funds.

The experience of OECD countries shows that large pension funds that play an important role as financial intermediaries and institutional investors have emerged over the years only in a small number of Anglo-American and Continental European countries, where social security pensions have been rather modest and social security contributions rather low.

Until the creation of nonemployer-based private pension funds in Chile in the early 1980s, most private pension funds were employer-based. They were originally created to further personnel management objectives, such as attracting skilled workers, rewarding loyalty, and facilitating the retirement of older, less productive workers. Their role as pension institutions providing retirement income insurance evolved over time in response to the rise of large corporations and the spread of collective bargaining.

In line with their retirement income insurance function, the majority of private pension funds were set up as defined benefit plans, but in recent years there has been a clear trend toward defined contribution plans. This change has been caused less by outright conversion of plans and more by the underlying change in industrial structure, especially the decline of large manufacturing firms and the growth of smaller firms in the service sector. Tighter regulations on pension funds and the growing instability of employment patterns are likely to increase further the costs of defined benefit plans and reduce their attractiveness for both employers and employees.

Pension funds have accumulated large financial assets (in relation to GNP) in Switzerland and the Netherlands, where they have a wider coverage than pension funds in Anglo-American countries and they also offer inflation indexed pensions. But their role as institutional investors in corporate equities has been limited by their preference for bonds and other debt instruments.

In contrast, pension funds in Anglo-American countries, and especially in South Africa, the UK and the US, have invested heavily in corporate equities. But except for South Africa, pension funds in Anglo-American countries have tended to acquire small, diversified holdings that have limited their role in corporate governance.

The Role of Pension Funds in Corporate Governance. Pension fund regulations and the incentives facing pension fund managers shaped their passive role in corporate governance. Traditionally,

pension funds were expected to vote with management. They were constrained in their criticism of corporate governance by the threat of retaliation and loss of future business in the case of independent fund managers and by their accountability to senior corporate executives in the case of self-administered pension funds. If they were unhappy with corporate performance, they were supposed to exit by selling in the market.

Corporate discipline was exerted by the threat of hostile takeovers, which have been used extensively over the past 30 years to acquire poorly performing companies. But hostile takeovers have also been used to acquire successful firms, strip valuable assets, "greenmail" corporate managements, and "raid" the surplus assets of company pension schemes.

Antitakeover legislation and more effective corporate defenses have weakened the threat of hostile takeovers and therefore created a need for other forms of corporate control. "Exit" by pension funds has also become more difficult. The cost of exit has also increased by the growing domination of equity markets by large institutional investors and the increasing inability of pension funds to sell without disrupting the market and suffering big falls in prices.

Use of the exit option has been further restricted by the growing trend toward passive indexation of equity portfolios, which hinders the disposal of underperforming equities. These developments have underscored the importance of exercising "voice" in corporate affairs.

Public pension funds, which are independent of corporate managers, have been less reticent in their criticisms of underperforming companies. Although they are accountable to politicians and government bureaucrats and are often subject to political pressures, they have been able to attract public attention to the power vacuum that has emerged in corporate affairs. In contrast, private pension funds have continued to be dependent on corporate managers and to be heavily constrained in their ability to take individual action against underperforming companies.

Recent Initiatives in Corporate Governance. New solutions have emerged to fill the power vacuum in corporate affairs and to increase the accountability of corporate managers:

- * first, existing collective bodies have been encouraged, and new ones have been created, to voice public criticism of underperforming corporations, free from the fear of retaliation that has inhibited individual pension fund managers;
- * second, various initiatives have been promoted to strengthen corporate governance structures and increase the effectiveness of corporate boards in supervising executive managers;
- * third, specialized agencies have emerged that scrutinize the governance structures and practices of different corporations and advise pension funds on how to exercise their voting rights; and

- * fourth, various specialized monitors of corporate performance have appeared. Some of these take nonnegotiated stakes in underperforming companies and adopt aggressive tactics with a view to changing corporate policy, improving performance and enhancing value. Others adopt a more patient approach and acquire friendly stakes that provide support and commitment to incumbent managers with a view to achieving long-term growth.

Unresolved Issues. All these initiatives have a very recent origin. Although they were instrumental in changing the top management of some heavily and persistently underperforming corporations, their long-term impact still remains to be seen. The risks of excessive concentration and abuse of economic power and of the potential conflicts of interest between pension funds and their collective agents on the one hand and other shareholders on the other have yet to be properly addressed. Moreover, the new approaches are exposed to capture by corporate managers and their long-term effectiveness has yet to be fully tested. Finally, the question of "who monitors the monitors" and the creation of appropriate checks and balances remain to be answered.

Lessons and Policy Implications. Whatever the unresolved policy issues, the above initiatives represent a forceful response to the power vacuum and lack of managerial accountability that has characterized corporate affairs in the US and the UK following the rise of pension funds and other institutional investors. Whether they are appropriate for the transitional economies of Central Europe and Russia will depend on the model of corporate governance and ownership that will be adopted in these countries. If pension funds are to play an important role as institutional investors and large holders of corporate equities, then some or all of the above measures would appear not only appropriate but also very likely to emerge.

Although radical and fundamental pension reform may not be politically feasible in the short-run and may even be inadvisable in the interest of sustaining broad political support for privatization and enterprise restructuring, there can be little doubt that in the longer run a fundamental pension reform would be unavoidable. The experience of more advanced OECD countries (and some innovating developing countries) suggests that the public pension system should be restructured, its benefits rationalized, and its size significantly reduced both in order to offer adequate but affordable and therefore sustainable benefits and in order to leave greater room for the creation and growth of private pension funds.

Private pension funds could be organized in many different ways, but nonemployer defined contribution plans, based on individual capitalization accounts with full and immediate vesting, full portability, and full funding, would appear to be preferable in the longer run. To cope with the need to achieve a reasonable targeted replacement rate, such schemes could operate with variable contribution rates, that are reset each year in accordance with the salary growth of each worker, the cumulative investment return on his or her individual capitalization account, and the targeted pension benefit.

To maximize their modernizing impact on securities markets, pension funds should be free to select their investments subject to reasonable prudential and diversification norms. They will be more effective in exercising "voice" in corporate affairs if they operate within robust structures of corporate governance and exert their influence through collective bodies and specialized monitors, although experience with this approach is relatively recent and its long-term effectiveness remains to be seen.

II. THE PROSPECTS OF PENSION REFORM

A. Public Pensions Systems

Common Features. The countries of Eastern Europe and the former Soviet Union have inherited social pension systems that have several features in common¹. Perhaps, the most common feature is that the social pension systems of all these countries are simultaneously faced with a growing financial crisis and a failure to provide adequate incomes to the vast majority of their pensioners. Other common features include: a largely monopillar "pay-as-you-go" structure (but with special regimes that benefit privileged workers); near universal coverage; high levels of expenditure as a fraction of GDP; very high system dependency ratios (caused by low retirement ages and lax certification of disability pensions); high contribution rates; high targeted but unrealized replacement rates; deficient benefit formulas (including actuarially unfair provisions, short assessment periods and falling accrual rates); imperfect inflation indexation; considerable scope for strategic manipulation; limited but growing evasion; and growing arrears.

Demographic Aging. Attention is frequently drawn to the demographic aging, not only of Central and Eastern European countries but also of advanced OECD countries, and the problems that this will create for social security systems. Yet the financial problem of aging is not current but rather a looming one thirty or more years from now if no action is taken to avert a financial crisis. In fact, no country in the world can today be described as old since nowhere do the old, defined as those over 65, account for much more than 20% of the total population. And no country has a demographic old age dependency ratio (as distinct from a system dependency ratio) that is much higher than 35%.

Progressive demographic aging, caused by falling birth and death rates and thus an increase in longevity but without an increase in the normal retirement age, will of course intensify the financial strains of pension systems. But demographic aging will affect funded schemes as much as PAYG ones since what matters more is the proportion of output that will be consumed by retired people and less how this will be financed (Barr 1992, Vitas 1993b).

¹ Fox (1994) discusses some of these common features. See also Holzmann (1994).

System and Demographic Dependency Ratios. The more pressing problems confronting the social pension systems of Central and Eastern European countries stem from faulty design issues and structural factors that are independent of the progressive demographic aging. All four countries have much higher system than demographic old age dependency ratios². In 1992 the system dependency ratios were 46% in Russia, 49% in the Czech Republic and Poland, and 59% in Hungary. In contrast, the respective demographic old age dependency ratios were 31%, 32%, 28% and 36%. Thus, the gap between the two ratios was 15% in Russia, 17% in the Czech Republic, 21% in Poland and 23% in Hungary³.

Table 1
System and Demographic Old Age Dependency Ratios, 1992

	SDR	DDR	Gap
Czech Republic	49	32	17
Hungary	59	36	23
Poland	49	28	21
Russia	46	31	15
USA	31	30	1
Switzerland	43	34	9

SDR: System Dependency Ratio (given by the number of pensioners, including widows, orphans and disability pensioners, divided by the number of contributors).

DDR: Demographic Old Age Dependency Ratio (given by the number of people 60 years and over divided by people aged between 20 and 59 years).

Source: World Bank Staff Estimates

² Summary data on dependency ratios, contribution and replacement rates, future demographic structures and other aspects of the public pension systems of the four countries reviewed in this paper are set out in Table 4.

³ It should be noted that the reported ratios are estimates and are not based on very hard data because the pension systems of the four countries have rather weak record systems. There are also some conceptual and definitional problems with the data, such as the proper treatment of survivors' and disability pensions. Including widows, orphans and disability pensioners in the total number of beneficiaries inflates the system dependency ratio but lowers the average replacement rate. A rise in unemployment and evasion may also increase the system dependency ratio. In fact, system dependency ratios may vary significantly from year to year.

This high discrepancy between the two ratios is caused by the inclusion of surviving spouses and orphans among the beneficiaries, by early retirement provisions for selected occupations or industries (miners, heavy industry, etc.), by special provisions for working women, by lax certification of disability pensions, by unemployment and by evasion. Disability pensions accounted for 32% of the total in Poland and 27% in Hungary. Poland has a normal retirement age of 65 for men and 60 for women, yet the average retirement age is 57.5 years. Argentina and other Latin American countries (e.g. Brazil) also suffer from large discrepancies between their system and demographic dependency ratios.

In some of the more advanced OECD countries, where social security systems are better designed and less exposed to strategic manipulation, the difference between system and demographic dependency ratios is much smaller. Thus, the difference between the two ratios is only 1 percentage point in the US and 9% percentage points in Switzerland. However, the figures for the demographic dependency ratios for the USA and Switzerland are slightly misleading because the normal retirement age in these two countries is higher than 60. The somewhat high discrepancy in Switzerland is caused by the apparent use of disability pensions as a way to tackle unemployment. Disability pensions represent 27% of total pensions, while in the US they are less than 11% of the total. It should also be noted that Austria and Germany, two advanced OECD countries with quite large social pension systems, have a discrepancy between system and demographic dependency ratios that is closer to that observed for Hungary and Poland, though exact figures cannot be easily calculated because of the multitude of programs.

Targeted and Average Replacement Rates. The four systems have very high targeted replacement rates. The statutory rate for workers who contribute for the minimum number of years⁴ varied from 50% in the Czech Republic to 55% in Poland and Russia, and 63% in Hungary. In addition, the maximum replacement rates for workers with longer contribution periods was 75% in Hungary, Poland and Russia, and 78% in the Czech Republic. In practice, however, the average replacement rate, i.e. the average pension as a percentage of the average wage, was much lower, ranging from 34% in Russia to 49% in the Czech Republic and Hungary. Poland had a surprisingly high average replacement rate of 74%⁵.

The lower average replacement rate is caused by early retirement and dependent pensions as well as by the failure to index fully pensions to inflation. In Poland, the high replacement rate is attributed to the large upward adjustment of pensions effected in 1991 and the subsequent indexation of pensions

⁴ 25 years for men and women except for Poland and Russia where the minimum contribution period for women is 20 years.

⁵ These are nominal replacement rates (i.e., they relate the average pension to the average nominal wage). They can be misleading in the same way as nominal contribution rates. Expressing the average pension as a percentage of the average net wage (i.e., net of the pension contribution) shows that while the average net replacement rate remains at 74% in Poland and 34% in Russia, it rises to 52% in Hungary and 53% in the Czech Republic.

to average wages. The average replacement rate is also expected to increase in Hungary in the future, following the recent indexation of pensions to (net) wages. Switzerland and the US report average replacement rates of 27% and 31% respectively.

Nominal and Effective Contribution Rates. Nominal contribution rates for pensions are also very high in all four countries. In 1992 they ranged from 27.2% of nominal wages in the Czech Republic to 30% in Poland, 30.5% in Hungary and 32.6% in Russia. However, the effective contribution rates were much lower because the lion's share of contributions was paid by employers. Employers paid 20.4% of nominal wages in the Czech Republic, 24.5% in Hungary, 30% in Poland (i.e., 100% of pension contributions) and 31.6% in Russia. In the US and Switzerland, the nominal contribution rates, which are divided equally between employers and employees, are 12.4% and 9.6% respectively. In Switzerland, the federal government and the cantons are jointly contributing 3.3% of payroll for the old age and disability pensions, while employers and employees share equally in contributing 8.4% of payroll for old age pensions and another 1.2% for disability pensions. As a matter of policy and system design, 20% of old age pensions and 50% of disability pensions are financed by the state.

Effective contribution rates, which are obtained by dividing total pension contributions by the nominal wage augmented by the employers' contributions, ranged from 23% in the Czech Republic and Poland to 24% in Hungary and 25% in Russia. These are very high by international standards. In the more advanced OECD countries, effective contribution rates are well below 20%.

Required Contribution Rates and Financial Balance. Taking into account the system dependency ratios and average replacement rates, the required nominal contribution rates for break-even amounted in 1992 to 24% in the Czech Republic, 29% in Hungary⁶, 36% in Poland, and to only 16% in Russia. These compare with nominal contribution rates of 27.2% in the Czech Republic, 30.5% in Hungary, 30% in Poland and 32.6% in Russia. On the basis of these numbers, the pension systems of the Czech Republic and Hungary should be breaking even (after allowing for administrative costs and some evasion), that of Poland should be running a large deficit, and that of Russia should be accumulating a large surplus. The US system is currently accumulating a surplus that will be used to finance the pensions of the "baby boom" generation. The Swiss system runs a small surplus but this is wholly due to the state's contribution.

⁶ In Hungary, further deterioration in the finances of the public pension system over the past couple years has implied an increase in the required contribution rate for financial balance to 34%. This has been caused by an increase in the system dependency ratio to 66% and a rise in the average replacement rate to 52%. However, because of a fall in the share of covered wages in GDP (itself caused by the growing evasion that has contributed to the deteriorating dependency ratio), total pension spending has not risen as a proportion of GDP. Nevertheless, the public pension system is now suffering from a growing financial deficit.

The financial position of different systems in transitional economies is affected by the growing problems of evasion and arrears. Evasion is increasing because of the high contribution rates and the growing role of the private sector, especially the emergence of small firms in the service sector. Arrears are caused by the financial difficulties confronting many large enterprises, especially in the state sector. Growing evasion and arrears imply that all four systems are probably suffering from large and growing deficits. In fact, the Polish system runs a large deficit amounting to over 6% of GDP, which is a major drain on fiscal resources. The deficit of the Hungarian system is hidden by opaque accounting and reporting practices, while the Russian system suffers from a growing failure to collect contributions.

Table 2
Required and Nominal Contribution Rates, 1992

	SDR	ARR	RCR	NCR
Czech Republic	49	49	24	27.2
Hungary	59	49	29	30.5
Poland	49	74	36	30
Russia	46	34	16	32.6
USA	31	31	9.6	12.4
Switzerland	43	27	11.6	9.6

SDR: System Dependency Ratio

ARR: Average Replacement Rate

RCR: Required Contribution Rate (for break even)

NCR: Nominal Contribution Rate

Source: World Bank Staff Estimates

High Pension Expenditures and Near Universal Coverage. The financial burden of public pension systems is exacerbated by their largely mono-pillar structure and near universal coverage⁷. These translate into a high share of covered wages as a proportion of GDP and may explain why pension expenditures correspond to a much higher percentage of GDP in Central and Eastern Europe than is generally the case in Latin America and other low income countries. Two of the four countries surveyed in this paper had in 1992 pension expenditure to GDP ratios of slightly over 10%, Poland reached almost 15%, while Russia had a much lower level at 5%. In contrast, most Latin American countries have pension expenditures that are well below the 5% level. In Poland, total pension spending rose from 6.9%

⁷ The coverage of pension systems was historically very high in former socialist economies. But growing evasion is causing a decline in coverage.

of GDP in 1988 to 14.8% in 1992. In the US and Switzerland pension spending amounted respectively to 4.8% and 7.3% of GDP. It should be noted that pension spending absorbs 14.8% of GDP in Austria and 10.8% in Germany.

A comparison between Hungary and Argentina shows that the two countries (prior to the recent Argentine reform) had broadly similar system dependency ratios and average replacement rates, thus implying similar required contribution rates for financial equilibrium of their respective systems (Vittas 1993c). The much higher pension expenditure to GDP ratio in Hungary implies that covered wages are a much higher fraction of GDP in Hungary than in Argentina. This is a result of the wider pension coverage and perhaps also of the smaller relative importance of profits and other nonlabor income in Hungary. Covered wages amounted to 42% of GDP in the Czech Republic, 37% in Hungary, 41% in Poland, and 29% in Russia. In Argentina, the corresponding ratio was estimated at 20% in 1990. In Chile, covered wages in the new reformed pension system amounted to 34% of GDP in the same year. One consequence of this feature is the potentially much higher transition cost of pension reform in Hungary and other Eastern European countries.

Table 3
Pension Expenditures, 1992

	RCR	CWGDP	PEGDP
Czech Republic	24	42	10.2
Hungary	29	37	10.6
Poland	36	41	14.8
Russia	16	29	4.6
USA	9.6	50	4.8
Switzerland	11.6	63	7.3

RCR: Required Contribution Rate
 CWGDP: Share of Covered Wages in GDP
 PEGDP: Share of Pension Expenditures in GDP

Source: World Bank Staff Estimates

Strategic Manipulation and Dispersion of Pensions. The pension systems of the four countries also suffer from strategic manipulation and growing dispersion of pensions. Strategic manipulation is encouraged by using shorter than lifetime career earnings for determining initial pensions. In the Czech Republic pensions are based on the best 5 years of the last 10 years of employment, in Poland on the best

3 of the last 12, and in Russia on the last 2 years of employment. In Hungary pensions used to be based on the best 4 of the last 5 years but they are now based on all years since 1988.

A short assessment period weakens considerably the link between contributions and pensions and may give rise to capricious and even perverse redistributions. Use of the best few last years has also given rise to an increasing dispersion of pensions as a result of the growing decompression of earnings following the change of economic regime and transition to a market economy. This development benefits unfairly high income workers who receive large pensions that bear little relationship to the contributions that were made when wages were more compressed.

Inflation Indexation. Failure to index properly to inflation also causes perverse effects, though such failure acts effectively as a safety valve for the financial viability of these systems. No country appears to have indexed properly the calculation of the reference or base salary for determining initial pensions, although Hungary is moving toward using indexed career earnings. In Hungary, earnings since 1988 are now taken into account and these are indexed to wages up to 2 years before retirement. A current proposal considers indexing past earnings up to 1 year before retirement.

The Czech Republic is the only country of the four that does not use indexation for adjusting pensions in payment. Hungary used to adjust pensions in payment on an ad hoc basis. The adjustments favored lower pensions, and thus partially offset the effect on the dispersion of initial pensions that resulted from the decompression of wages. More recently, Hungary introduced indexation of pensions to net wages. This move has put an end to the narrowing of pensions caused by the policy of differential underindexation but has also exposed the pension system to high future costs.

In Russia, pensions in payment are automatically indexed but because the adjustment is effected on a quarterly basis and Russia has suffered from prolonged hyperinflation, the real value of pensions is substantially eroded before it is restored at the end of each quarter. Poland has readjusted pensions in 1991 and has indexed the readjusted pensions to average wages. This has boosted the real value of pensions and has kept them in line with rising real wages. Attempts to link pensions to average prices have met with political resistance and have been put off repeatedly.

B. The Case for Pension Reform

Although the public pension systems of Eastern European countries are in urgent need of reform, there does not seem to be a strong political appetite for radical and fundamental reform. Even piecemeal reform that pushes the system in the right direction, such as gradually raising the normal retirement age, increasing the assessment period for the calculation of initial pensions, and tightening eligibility conditions for early retirement and especially for disability pensions, is faced with strong political resistance. A decision to increase the retirement age of women in Hungary had to be suspended in early 1994. In fact, the only measures that have received support and have been implemented have included the automatic or

ad hoc indexation of pensions to inflation and the use of early retirement to facilitate the restructuring process. Both of these measures have caused a sharp deterioration in the finances of the public systems.

In this context, a forceful argument can be made for deferring a fundamental reform of the systems until privatization and other more basic economic reforms are completed. Under this view, using the pension system to encourage workers to seek early retirement and thus ease the restructuring process may make more political sense than making people redundant and paying them unemployment benefit. Even though pensioners may continue to work in the informal sector, the same could be true of workers receiving unemployment benefit. The financial cost of early retirement and unemployment could be broadly the same for the public budget, but the political cost of redundancy and unemployment could be much greater and could result in a substantial weakening of electoral support for continuing economic reform and restructuring.

There can be little doubt, however, that in the longer run radical pension reform is unavoidable. Such reform should encompass both a downsizing of the public system and the creation of fully funded private pension funds. The reformed public system should include raising the normal retirement age to 65 or even higher so as to lower substantially the system dependency ratio and also prevent the progressive aging of the population from swamping the system. It should also include strong safeguards against strategic manipulation, such as tightening the eligibility conditions for early and disability pensions, using indexed lifetime career earnings for determining initial pensions, applying linear accrual rates and providing for proportional pensions for workers with shorter careers (and thus eliminating minimum contribution periods that tend to penalize workers with less than full careers), lowering target replacement rates to no more than 40% of average wages and even preferably to no more than 40% of net average wages, and lowering contribution rates.

The reformed public pension system could be based on flat pensions irrespective of career earnings. These could be subject to narrow or broad means tests (under a narrow means test only retired workers with incomes and assets below a certain low level would be eligible for a state pension, while under a broad means test only retired workers with more than a certain high level of income and wealth would be excluded - the broad means test would be less expensive to administer, would be less stigmatizing recipients of state pensions and would avoid subjecting low income retirees to a poverty trap, but it would have a higher fiscal cost and would thus require higher contribution rates).

Alternatively, the reformed public pension systems could be based on a two-part structure, involving a flat minimum pension for every year of contribution and an earnings related component based on indexed lifetime earnings, with the combined pension being subject to clearly stipulated limits. Such a system would be less progressive than a simple flat minimum pension but it would involve a lower fiscal cost (for a given total level of state pensions) and would entail a fairer treatment of middle income workers.

C. **Supplementary Non-State Pension Funds**

The choice of structure for the reformed public pension systems will clearly depend on local economic and political conditions. Whatever the chosen structure, the reformed public pension system should involve substantially lower contribution rates in order to allow room for the creation and expansion of private pension funds. In addition, the successful promotion of private pension funds will require the enactment of enabling legislation, the development of a strong regulatory framework, and the modernization of financial markets. Considerable initiatives are under way in all four countries. Two countries have passed laws authorizing the establishment of private pension funds, while in the other two pension funds have started to emerge under other acts.

Private Pension Funds in the Czech Republic. The Czech Republic introduced legislation permitting the establishment of supplementary pension funds (SPFs) in February 1994⁸. The act became effective in May 1994. These funds are set up as joint stock companies and are clearly separated from the powerful (voucher) investment funds (IFs) in the Czech Republic. Members of the bodies of a SPF (i.e. management or supervisory board) may not at the same time be members of the bodies of an IF. The same restriction applies for persons who are involved in securities trading or members of the custodian institution that acts as depositary for the securities owned by the funds. As in Germany, funds can grant a proxy to the custodian institution -- normally a bank -- to vote their shares. This could potentially make banks very powerful in corporate governance. The regulations are clearly aimed at restricting conflicts of interest. Employees of the SPF may not be members of its supervisory board to insure independence of the latter even though supervisory boards in the Czech Republic are less powerful than for example in Germany (which also has a two-tier board system). Unlike in Germany, the supervisory boards in the Czech Republic do not elect and dismiss the management board. Other regulations (such as for example against self-dealing of SPF-employees) are also intended to limit fraud and conflicts of interest.

The SPFs are required to disclose to participants their general investment strategy as well as their economic results by sending them annual statements and by publishing semi-annual results and the results of their last three business years. SPFs may invest in securities traded on a public stock exchange. They may invest up to 5% of their assets in shares of a single company and may buy up to 20% of an equity issue (the same limits apply for investment funds). SPFs could therefore potentially acquire sizeable stakes in companies, if not individually, then collectively as institutional investors. However, SPFs are required to invest in a 'prudent manner' and to ensure a 'steady yield' on their investments. Whether or not these regulations will limit the equity investments of SPFs more than the limits mentioned above will depend on the interpretation of the law.

⁸ This section is based on an unofficial translation by Arthur Andersen, Prague of the Czech Act on Supplementary Pension Insurance with State Contributions and Amendments Associated with its Introduction.

The voluntary pension schemes are set up as defined-contribution plans, i.e. the contributions are defined and the actual pension payments depend on the yield of the pension fund's portfolio, although defined benefit plans may also be established. SPFs also administer life insurance, survivor pensions ("inheritable pension") and disability pensions. As their name implies, participation in the system is voluntary. The government subsidizes the system to some extent. Depending on the amount a participant contributes, the government adds up to 40% or 120 crowns, on the basis of a specified declining schedule⁹. Participants can transfer their contributions (with their share of the investment income) to another SPF and also terminate the contract at any time. These regulations are very important, could potentially increase competition among funds and serve as a tool for the participants to exert pressure on the funds to perform well. A potential drawback may be high administrative costs, although restricting the possibility to switch between funds to -- for example -- once a year, could mitigate this problem. The portability of pensions is also much better in this system, which will make labor mobility easier -- an important feature in transitional economies with great need for restructuring.

The Czech law on private pension funds contains a number of interesting features. First, it is a voluntary system but uses tax credits (rather than tax exemptions) for encouraging workers to participate. These amount to 24% for a monthly contribution of 500 crowns. As 500 crowns is about 8% of average monthly salary, the system clearly favors low income workers and thus avoids the regressive effect of tax exemptions. However, the tax credits do not appear to be dependent on workers contributing a minimum proportion (say 10%) of their monthly income. Thus, high income workers may subscribe for a contribution of no more than 500 crowns. This will hold back the total size of the funds. Second, the law allows workers to have one account with one pension fund. In this it follows the pattern established in Chile. The main motivation for this restriction in both countries is to increase the transparency of the scheme and facilitate compliance. Third, the law allows workers not only to change funds but also to cancel their contracts and withdraw from the scheme. The law does not seem to prevent workers from cashing in the government tax credits together with their own contributions and the investment income credited to their accounts. Thus, the funds may help provide relief to unemployed workers. But again a large tax expenditure in the form of tax credits may fail to generate funds that would be adequate for reasonably high supplementary pensions. So far 4 groups have applied for authorization under the new law. These include the Harvard investment group, Agrobanka, the Ministry of Defense, and a large insurance company.

Private Pension Funds in Hungary. Hungary has introduced an act on voluntary mutual benefit funds, which came into force in January 1994. There are three types of funds, namely pension funds,

⁹ The maximum state contribution is 120 Czech Crowns (KC). The following schedule applies:

Participant:	State contribution:	Participant:	State contribution:
100-199	40 + 32% of amount above 100	300-399	96 + 16% of amount above 300
200-299	72 + 24% of amount above 200	400-499	112 + 8% of amount above 400

mutual aid funds and health care funds, which shall supplement the public social security system. The mutual aid funds cover risks such as sickness, child raising, unemployment and death and are organized on a pay-as-you-go (PAYG) basis. The health care funds also operate on a PAYG basis and provide health insurance supplementing the public health care system. Pension funds are organized as fully funded defined-contribution plans based on individual capitalization accounts, although defined-benefit plans may also be established.

Funds are to be based on a common employer or on a professional, sectoral or regional basis. Membership fees have to be a uniform amount or a certain proportion of income for all fund members. Employers can also contribute (either in fixed amounts per employee or income-proportionate), in which case they have some control rights in the fund. They have voice, but no voting rights in the general meeting, but if their contributions are 50% or more of the sum of contributions, they also have voting rights in the control committee. Contributions are tax deductible (subject to limits) as is the investment income of the fund. Contributions are also free from the very high social security taxes. Benefits, both in the form of an annuity and as a lump sum payment, are subject to income tax. Contributions are collected in individual accounts. The minimum waiting period to withdraw the accumulated contributions and the investment yield is ten years, unless a member reaches the retirement age earlier.

Every fund member is an owner of the fund and has the right to inspect the books. The bodies of the fund are the General Meeting (GM), the Board of Directors (BD) and the Control Committee (CC). The GM is the supreme decision-making body of the fund and each fund member has one vote. It meets at least once a year¹⁰ and elects both the BD and the CC. No employees of the fund may be elected to the BD and neither employees nor members of the BD may be elected to the CC. The BD is the managing body of the fund but may hire a manager for day-to-day activities. It meets at least once every three months. The CC is chosen from among the members of the fund and supervises the activities of the BD. A further control institution is the Fund Supervision Agency, which is established by the Ministry of Finance and is responsible for licensing and supervision of funds.

The fund's property is to be invested in the sole interest of its members and funds are only allowed to invest their own assets to avoid conflicts of interest. Investments have to be divided among different forms to reduce the risk for the fund and its members. Funds may not acquire more than 10% of an undertaking and may not invest more than 10% of their own assets in an enterprise which is affiliated with an employer member. At most 20% of fund assets may be invested with the same issuer (except for government bonds) and at most 20% of fund deposits may be held in the same financial institution. At most 20% of fund assets may be invested in shares and bonds quoted on a stock exchange and at most 10% may be invested in unlisted shares and bonds, which are not quoted. Furthermore, at least 10% of fund assets must be in liquid instruments. The fund may delegate its asset management to

¹⁰ The CC or 10% of the fund members also have a right to call the GM.

investor organizations, but not more than 45% of its assets may be with one organization. Before funds reach a certain size¹¹, they may not invest in securities (other than government bonds and state guaranteed securities) at all.

What does not appear to be regulated in the law is the transfer of accounts from one pension fund to another and can therefore apparently be restricted by the fund. The funds appear also to have substantial freedom in establishing rules for the termination of membership¹². The possibility for fund members to move their account to another fund might help increase competition among funds and lack of regulation could be seen as a serious shortcoming of the new law.

The tax deductibility of contributions and especially their exemption from the very high social security taxes provide a strong financial incentive for the creation and growth of private pension funds. However, because contributions are locked into long-term savings, the funds will be attractive only to workers above a certain level of income who can more easily afford to save for the long term. Their effect will be highly regressive and will also undermine further the financial position of the public pension system. So far there have been more than 40 applications for the creation of mostly employer-based pension funds. 8 have already been approved at the time of writing this paper, including one for the employees of MATAV, the Hungarian telecoms, and one for employees of the National Bank of Hungary, the central bank.

Private Pension Funds in Poland. To date, Poland has not introduced regulations for the private provision of pensions, although the need for a supplementary pension pillar has been the subject of extensive debate¹³. Such a pillar could be mandatory or optional, the former case would support a faster development of supplementary pensions, the latter would be more in line with a market-economy approach. Another question is who should oversee the supplementary pension funds. Traditionally, any second tier in Poland had been provided by employers in the form of company, sector and occupation-specific retirement pensions. Whether this should also be the form of the supplementary pension system in the future remains the subject of debate. It is also still not decided whether tax incentives should support the development of an optional system. And, finally, whether the government should mandate benefit and/or contribution levels of an optional system remains an open question.

Despite the lack of specific legislation, a private pension fund under the name the Polish Pension Fund (PFE) Kapital Rodzinny was created in 1993 under the law for cooperatives that has been in force

¹¹ 10, 15, and 20 million HUF for pension funds, mutual aid funds and health care funds, respectively.

¹² § 15 (2): "The legal consequences of the cessation of membership as well as the procedures to be followed are to be regulated in the statutes."

¹³ This section draws primarily from a draft paper by Jean de Fougerolles (1994).

for more than ten years. The operations of the PFE were challenged by both the General Inspectorate of Banking Supervision of the National Bank of Poland (the central bank) and by the Insurance Department of the Ministry of Finance. The two regulatory agencies claimed that the PFE was engaged without license in banking and insurance activities. In response to these challenges the PFE restricted its activities. However, the prosecution authorities were forced to drop their investigations because cooperatives are not subject to supervision by either agency. This underscores the need for enacting a proper pension fund legislation and for clarifying which government agency should have responsibility for licensing and supervising them.

Private Pension Funds in Russia. Following the Presidential Decree No. 1077 of 16 September 1992, it is estimated that about 300 so-called non-state pension funds have been established in Russia¹⁴. Most have been created in 1994 and their number seems to be growing quite rapidly. They are generally very small and operate more like savings banks than long-term pension funds. There appear, however, to be some exceptions involving funds that intend to operate as proper pension funds.

A draft law has been prepared for the authorization and regulation of nonstate pension funds, but it is not clear how soon this law will be enacted. In the meantime, pension funds operate in a regulatory vacuum, which not only allows their founders to engage in misleading advertising campaigns, but also leaves considerable room for variations in practice. The situation is pretty chaotic with little standardization in services and products, charges, or investment practices. Most funds are based on defined contribution plans with individual capitalization accounts for their members, but some offer additional benefits and are more akin to defined benefit plans. Some funds also have rules that allow withdrawals during unemployment spells. Most funds direct their selling efforts toward employers. Even though some funds engage in advertising oriented toward individual workers, the main emphasis is placed on signing up firms.

The small pension funds invest their assets in bank deposits and promise a guaranteed return to members that is no less than the rate offered on SBER savings deposits. Other pension funds diversify their investments into bonds and some equities and adopt internal rules based on international practice, with regard to investment diversification, information disclosure and operating commissions.

Membership in most funds is small, rarely exceeding several thousand. However, some funds (e.g. the fund for electric power workers) have tremendous expansion potential. Assets are generally also quite small, mostly less than 1 billion rubles (half a million dollars), though one of the funds already has 17 billion rubles. Most pension funds invest their assets locally, unless their management company has a foreign currency license in which case they may also invest in overseas assets.

¹⁴ This section draws on the findings of a World Bank mission to Russia in July 1994 and interviews with representatives of several pension funds.

There is considerable debate regarding the need and scope of regulation and supervision. Pension fund promoters urge enactment of a law in order to obtain tax benefits, especially removal of the triple taxation of pension saving (contributions are not deductible, investment income is taxed and pensions are taxed). However, there is little agreement on other possible legal provisions. Some officials favor the separation of pension funds and managing companies but others want to allow pension funds to have their own boards of directors and their own investment management capabilities. There is also less consensus regarding the nature of pension schemes, some favoring defined contribution and others defined benefit plans. The questions of vesting and portability are not properly addressed, while information disclosure is supported if it is limited to an annual statement with the right for members to ask for more frequent statements.

On investment policies, some officials favor diversified portfolios based on the prudent man concept, others prefer freedom to invest in the projects and securities of sponsoring companies. There is support for the enactment of legislation to clarify the status of pension funds but less for the creation of an inspectorate with supervisory responsibilities. There is concern that any investment regulations imposed by government will favor inefficient industries and social projects and will use the resources of pension funds as captive sources for financing the budget deficit. The concept of maximum limits to ensure diversification, but no minimum requirements (to avoid direction of funds) is not yet fully grasped. However, some pension funds want to see restrictions on advertising to curb misleading claims.

The regulatory vacuum is likely to continue, even after the passing of a pension law. An inspectorate for pension funds has been created at the Ministry of Social Protection, but it will be a long time before it is properly staffed and develops an effective system of supervision. In the meantime, there may be greater hope in encouraging a process of self-regulation with the association of pension funds acting as a sponsor of respectable institutions. This could develop a code of ethical conduct and business behavior that would encourage the adoption of sound and prudent practices and instill greater confidence in the pension fund industry.

Despite the problems, pension funds are likely to grow very fast in the future, especially if fiscal incentives are offered, inflation is brought under control, the privatization program is successful, and the financial situation of industrial companies improves. They could play a big part in the development of capital markets and in corporate governance.

III. THE ROLE OF PENSION FUNDS IN THE CAPITAL MARKETS

If private pension funds are authorized in Eastern European countries, should they be established as defined-benefit, employer-based schemes or as defined-contribution, nonemployer-based plans? Whichever form they take, what factors would determine their future growth and their role in the capital markets?

The experience of OECD countries and several developing countries suggests that, whatever their contribution in the past, defined-benefit, employer-based schemes are faced with growing problems of financial sustainability and fair treatment and require for their equitable operation strict and complex regulations that will lower their attractiveness for both employers and employees. Defined contribution plans based on individual capitalization accounts also require robust regulatory frameworks but are less affected by sustainability and equity problems.

The experience of OECD countries and several developing countries also suggests that a major determinant of the size and growth of private pension funds is the size of the public pension systems. Other factors contributing to pension fund growth are their coverage, the nature of their liabilities, and their investment returns. Clearly pension funds can accumulate substantial financial resources in a relatively short period of time but their impact on the capital markets will depend on both regulation and the investment attitudes to risk taking that are likely to emerge. In many European countries investment traditions have been more powerful than binding regulations in shaping the investment portfolios of pension funds. The investment policies of pension funds will also have important policy implications for investment returns, the rate of national saving, the financing of small firms and new ventures and corporate governance.

A. Pension Funds as Pension Institutions.

Historically, company pension schemes tended to take the form of defined benefit plans. This was because such schemes were initially conceived as personnel management tools with the triple objective of attracting skilled workers, rewarding loyalty, and facilitating the retirement of older workers (Hannah 1986, Williamson 1992). Defined benefit plans involved restrictions on vesting and portability that penalized early leavers and discouraged labor mobility. Moreover, by basing pensions on final salaries, they favored management workers (who receive larger salary increases late in their career) against rank and file workers. Defined benefit company pension schemes absorbed the investment risk of accumulated assets, which also covered the inflation risk prior to retirement, and thus provided an insurance for achieving a targeted replacement rate at the time of retirement (Bodie 1990b). But this insurance depended on a worker staying with the sponsoring company until retirement, while it failed to cover pensions in payment. The realization of the pension promises made by employers depended heavily on their integrity and solvency.

To discourage abuse of pension schemes by unscrupulous employers, various countries have enacted legislation that stipulates minimum standards for vesting and portability as well as for more equitable treatment of all types of workers, including early leavers, and for protecting pensioners from the vagaries of inflation. These have increased the costs of pension schemes for sponsoring employers and have stimulated a trend away from defined benefit and toward defined contribution plans. The latter have traditionally been used by smaller firms in industries with more labor mobility and less stable employment patterns. Defined contribution schemes can deal more effectively with the vesting and portability issues

but they transfer to workers the investment, replacement and inflation risks. One way to overcome this problem is to encourage use of variable contribution rates during the active life of workers, linking them to the investment performance of the funds and the targeted replacement rate, and to use indexed annuities when workers retire.

Although defined benefit occupational pension schemes have made a considerable contribution to the retirement income of a substantial minority of privileged workers, the growing instability of employment patterns, the increasing cost of pension regulations, and the increasing robustness of financial and insurance markets suggest that the relative disadvantages of defined contribution schemes will decline further in the future. The arguments for fully-portable and non-employer-based pensions are even stronger in Eastern Europe. The need for substantial restructuring will lead to major changes and large mobility in the labor market, which will in turn create a need for fully portable pensions. Insolvencies will be quite common in Eastern Europe for some time to come, rather than occur at the margin as in mature market economies, and employer-based pensions would have potentially adverse financial effects on displaced workers. The clear implication is that reforming Eastern European countries should veer their private pension funds toward defined contribution plans based on individual capitalization accounts and using variable contribution rates. At the very least, they should allow workers to opt out of company schemes and join non-employment-linked personal pension plans, while any tax benefits should be made equally available to company and noncompany schemes.

B. Pension Funds and Asset Accumulation

Relative Importance of Pension Funds. The organization of the pension system has become a major determinant of differences in the institutional structure of national financial systems. In those countries where unfunded social security systems pay generous pensions to retired workers, both funded pension schemes and to a lesser extent life insurance companies have been slow to develop. In contrast, countries where social security pensions have been more modest or where companies have been allowed to contract out of a major component of state pension systems (as is the case in the UK), employer-sponsored funded pension schemes have accumulated large financial savings. Because the pension schemes of smaller companies are often insured and administered by insurance companies, both pension funds and life insurance companies have experienced considerable growth in these countries. The first group of countries includes Germany, Austria, France, Italy and, to a lesser extent, Japan. The second group comprises all Anglo-American countries (e.g., the US, the UK, Canada, Australia, New Zealand and South Africa) as well as several continental European countries, such as the Netherlands, Switzerland, Sweden, Denmark and Norway.

It is worth noting that, unlike the traditional distinction between bank-based and market-based systems, the dividing line between countries with developed and underdeveloped pension funds (and insurance companies) is no longer a simple one between continental European and Anglo-American

countries. In fact, pension funds in Switzerland and the Netherlands have wider coverage and larger assets (relative to GNP) than most Anglo-American countries.

Switzerland has long had an employer-based second pillar. This became mandatory in 1985, expanding coverage among employees of small firms and reaching over 90% of all workers. In the Netherlands, occupational pension schemes are arranged by collective bargaining and are quasi-mandatory, achieving coverage in excess of 80%. In contrast, most Anglo-American countries have coverage in the region of 45 to 60%. In addition, Switzerland and the Netherlands effectively offer inflation indexed pensions. Inflation indexing implies higher required funding levels, which may explain why pension fund assets in these two countries exceed 70% of GNP. Adding the assets of life insurance companies, which often manage the pension schemes of smaller firms, brings the total assets of contractual savings institutions to well over 100% of GNP (Table 5).

Among Anglo-American countries, only the UK has pension fund and life insurance assets reaching similar levels. Although coverage is smaller in the UK and inflation-indexed pensions are less widespread, the total assets of pension funds are large because companies are allowed to contract out of the state earnings-related pension system. This imposes a greater liability on UK company pension schemes and thus a greater need for accumulating assets than, for instance, in the US where company pensions are generally integrated with social security pensions.

Among developing countries, large funded pension systems exist in a few countries, notably Singapore, Malaysia and Chile, where they are based on defined contribution plans with individual capitalization accounts. The systems of Singapore and Malaysia are centrally managed by national provident funds, while in Chile the government mandated system is privately managed by decentralized competitive firms subject to draconian regulations and supervision. South Africa, Cyprus, Zimbabwe and to a lesser extent Brazil, India and Indonesia, also have funded pension schemes that are mostly based on company plans. There are also some developing countries with partially funded public systems such as Egypt, Jordan, Tunisia and the Philippines¹⁵. In contrast, most countries in Latin America (at least until the recent wave of pension reform), Eastern Europe, Francophone Africa, the Middle East, and East Asia have pay-as-you-go social pension systems that make no or little contribution to the accumulation of financial assets.

Determinants of Pension Fund Growth. The size of pension funds depends on the coverage of the schemes, their length of existence and maturity, and the nature of their pension liability. Schemes that promise a pension based on final salary and indexed to subsequent inflation and have been in operation for a longer time and thus cover a more aged labor force will tend to have higher assets compared to younger schemes that operate defined contribution plans and cover a younger labor force.

¹⁵ Some public pension systems in OECD countries are partially funded (e.g., Canada, Japan, Sweden and the US).

High investment returns also increase the level of assets, although adjustments in contributions may offset the effect of high returns.

A major determinant of funding private pension plans and thus of the level of assets is also the tax treatment of pension saving. In most countries, pension saving benefits from tax deferral, whereby annual contributions and investment income are exempt from tax but pensions are subject to tax like any other source of income. If the total income in retirement is less than income during a worker's active life, then tax deferral will also result in lower lifetime taxes in a country with a progressive income tax system.

The vast accumulation of pension fund assets has led several countries to put limits on the tax privileges of pension funds¹⁶. These include limits on contributions and eligible pension benefits (UK), limits or nondeductibility of contributions in overfunded schemes (US, UK and Germany), taxes on assets in excess of specified overfunding levels (Netherlands) and taxes on investment income above a certain rate of return (Denmark). New Zealand has gone farther than any other country and has removed all tax benefits, subjecting pension saving to a full income tax system. There has been a decline in pension fund assets in New Zealand following this measure, though the fall has been partly caused by the termination of overfunded and fully funded schemes and not just by a decline in the annual flow of saving and in worker participation in pension schemes.

Accumulation of Assets. The creation of funded pension schemes can generate substantial long-term financial savings even in a relatively short period of time. In countries where labor incomes represent 50% of national income, pension schemes, based on defined contribution plans, covering 40% of the labor force and involving an average contribution rate of 10%, would accumulate annually funds equal to 2% of national income. If the nominal rate of return on fund assets is equal to the nominal rate of growth of GNP, and since in the early years of pension funds outlays would be minimal, these pension schemes would accumulate resources equal to 10% of GNP over 5 years and 20% over 10 years. After the first 10 years, the pace of accumulation will be affected by the growing volume of benefit payments. On the other hand, expanded coverage, an increase in the share of labor income in total income, a higher contribution rate, or higher investment returns will all tend to accelerate the pace of accumulation. Defined benefit plans may accumulate even larger funds if the sponsors of the plans take account of projected pension benefits.

The experience of Singapore, Malaysia and, more recently, Chile shows that once a credible and well run system is put in place, it can accumulate long-term resources at a very fast pace. In Singapore, the resources of the Central Provident Fund rose from 28% of GDP in 1976 to 73% in 1986, while in Malaysia they grew from 18% of GDP in 1980 to 41% in 1987 (Vittas 1992). In Chile, the system of

¹⁶ For details, see Davis 1993.

personal pension plans that was introduced in 1981 expanded from a mere 1% of GDP in 1981 to 9% in 1985, 26% in 1990 and to over 30% by 1992 (Vittas and Iglesias 1992, World Bank 1994).

In the US, and especially in the UK, contractual savings experienced a large expansion in the 1980s in relation to GDP as a result of the large rise of stockmarket prices. In the US, the assets of insurance companies and pension funds grew from 43% of GDP in 1970 to 49% in 1980 and 75% in 1990. In the United Kingdom, they rose from 45% in 1970 to 49% in 1980 and nearly 100% in 1988 (Davis 1993, Vittas 1992, World Bank 1994). The much faster rise in the United Kingdom reflects the greater exposure of contractual savings to the equity market and the stronger performance of life insurance policies. Similar increases in the total assets of pension funds and life insurance companies were also observed in Switzerland and the Netherlands although in these cases the increase reflected more an expansion of coverage and less an increase in the value of assets. This is because pensions funds and insurance companies in these two countries invested a much smaller percentage of their assets in equities and real estate (see below).

C. Impact on Securities Markets

Financial Innovation and Modernization. With the accumulation of large financial resources, pension funds can play a very big part in the financial system and especially in the securities markets of different countries. Since they have long-term liabilities they are able to invest in long-term assets. As they do not normally have expertise for appraising individual projects and requests for finance by individual firms, they either rely on commercial banks for investing their funds (e.g., by placing them in bank deposits) or, seeking a higher return than is obtainable on bank deposits, they invest directly in marketable securities, ranging from government and mortgage bonds to corporate bonds and equities. Pension funds may thus provide a large pool of investable resources that can stimulate the development of securities markets and can also encourage financial innovation. In the US, it is claimed that many of the financial innovations of the 1970s and 1980s were in direct response to the needs of pension funds (Bodie 1990a).

Pension funds, in conjunction with other institutional investors, can act as catalysts for the modernization of securities markets, the development of efficient trading and settlement systems, the adoption of modern accounting and auditing standards, and the promotion of information disclosure. But the actual impact on capital markets depends on the behavior of institutions. It is a potential effect that is less likely to happen if institutions hold strategic holdings and trade less and if they are less interested in protecting minority shareholders.

A traditional argument against fully funded pension schemes was concern that in the absence of active securities markets, accumulated funds might be used as captive sources for funding government deficits, or if they were free to invest in nongovernment securities, they would invest in speculative or

unsafe assets. For instance, funds could be channelled into overpriced real estate or into loans to related parties and equity stakes in related firms.

This argument was probably valid in the 1960s and 1970s when few developing countries had organized securities markets. But in the 1980s the large growth of the emerging securities markets shows that most countries have the potential to stimulate the development and modernization of their securities markets if they adopt sound macroeconomic policies, maintain financial stability, and remove obstacles that inhibit the development of markets. Even though most emerging markets suffer from structural and regulatory deficiencies, progress is being made in tackling these deficiencies and in creating more robust and transparent markets. In fact, the traditional argument against funded pension schemes overlooked the dynamic interaction that would evolve between growing pension funds and emerging financial markets and thus underestimated the contribution that pension funds and other institutional investors could make to the development of financial markets.

Asset Allocation. The allocation of pension fund assets varies considerably from country to country, reflecting both historical traditions and differences in regulation. In the United Kingdom, where fund managers have developed an equity cult since the 1960s, mainly in response to the high rates of inflation experienced by the UK economy over the past 30 years or so, pension funds and life insurance companies accounted in 1988 for 55% of corporate equities. In contrast, in the United States they held only 26% of corporate equities. However, American long-term institutional investors also held 56% of corporate bonds.

The equity cult of UK fund managers is also reflected in the composition of their portfolios. UK pension funds invested 72% of their assets in equities and other real assets against 46% for their US counterparts (Table 6). The difference is much greater for life insurance companies: UK companies invested 51% of their assets in equities against less than 10% for US companies.

In continental European countries, contractual savings institutions follow the pattern of American life insurance companies and place the largest part of their funds in government, corporate and mortgage bonds and in long-term loans. This is true of insurance companies and pension funds in Switzerland, the Netherlands and Germany. It is partly the result of investment regulations and partly the result of a traditional emphasis on conservative investment policies. Although pension funds and insurance companies are subject to upper limits on their holdings of equities (as well as on their holdings of overseas securities) and although their managers are seeking either increases in these limits or their complete abolition, their holdings of restricted investments are well below the specified limits.

The pattern in developing countries is similar to that of continental European countries. Except for South Africa, where pension funds and life insurance companies have been free to invest in equities, in most other countries investment rules have favored bonds. In Singapore, the Central Provident Fund invests over 90% of its funds in government securities that earn a modest positive real rate of return.

Despite the enforced captivity of its resources, the government of Singapore has refrained from investing all the funds in local development projects but has accumulated a substantial pool of foreign exchange reserves, that has grown over time to exceed the total balances of the CPF. Thus, the CPF effectively operates as a compulsory national mutual fund, investing indirectly through the Government of Singapore Investment Corporation and the Monetary Authority of Singapore in foreign assets (including equities and direct investments in large mining and other projects) on behalf of Singaporean households.

In Malaysia, the funds of the national provident fund have been used for development purposes. However, the successful implementation of economic growth policies has ensured a modest real rate of return on the balances of the Employees Provident Fund. Other countries were not so efficient. In Egypt, a country where the social security system generates large surpluses (in 1988 accumulated reserves amounted to 40% of GNP), these resources have been placed with the National Investment Bank, the investments of which have suffered from highly negative returns. The provident funds in African countries (Ghana, Nigeria, Kenya and Zambia) and nearly all the partially funded pension systems of developing countries have invested their resources almost exclusively in government bonds and low interest loans to members. Real returns on accumulated funds have been highly negative and in some cases the real value of balances has been completely wiped out.

In Chile, investments in corporate equities for the privately managed pension funds were less than 20% of total assets for most of the 1980s, mainly because of the imposition of tight restrictions on their investment portfolios. As a result, the pension funds were forced to invest heavily in government, mortgage and corporate bonds as well as bank deposits. The gradual relaxation of investment rules has allowed the Chilean pension funds to invest more in equities. More recently, they were also allowed to invest in foreign securities.

Investments in foreign assets have also been affected by regulations, either foreign exchange controls or unnecessarily tight prudential controls. Following the removal of exchange controls and the relaxation of investment rules, pension funds in several countries have built up substantial holdings of foreign equities and bonds. These range from 55% for the typical pension fund in Hong Kong to 26% in the UK, 25% in Australia, 23% in New Zealand, 22% in the Netherlands, 17% in Japan, 13% in Canada and 11% in the US (Wyatt 1993). International diversification may increase portfolio returns, especially if pension fund assets become too big for the local markets, but a more general result is a reduction in investment risk, stemming from the less than perfect covariance of returns in different national markets.

D. Implications of Investment Policies

The investment policies pursued by pension funds and life insurance companies in different countries have important implications for (i) the profitability of their investments, (ii) the required rate of

contribution and thus the rate of national saving, (iii) the financing of small firms and new ventures, (iv) fund management practices, and (v) the role of pension funds in corporate governance.

Profitability and Real Rates of Return. A study (Davis 1993) simulating pension fund returns on the basis of asset allocations and annual asset returns for nine industrial countries over the period 1966-90 shows that average real returns varied from 5.8% in the UK to 0.2% in Sweden. Somewhat surprisingly, pension funds in Germany (5.1%), the Netherlands (4%), Japan (4%) and Denmark (3.6%) showed higher returns than US funds (2%)¹⁷. Among the nine countries, only Canada (1.6%), Switzerland (1.5%) and Sweden earned lower returns (Table 7).

UK pension funds invest a higher proportion of their assets in equities and real property. This results in higher overall returns but also in higher risk. UK funds also have one of the highest standard deviations of return. It is interesting that German and Dutch funds earn relatively high real returns despite focusing on bonds and loans. The explanation for this is the policy of high real interest rates pursued in these two countries by their respective central banks. In contrast, Swiss funds with a broadly similar allocation of assets earn much lower real returns. Again, this seems to reflect the low real interest rate policy of the Swiss authorities, a policy that is motivated by concern about keeping both the nominal and real mortgage rate low and stable.

Among developing countries, most pension funds (especially the provident funds in African countries and the partially funded public pension systems of the Middle East and Latin America) suffered from negative real rates of return. During the 1980s the average yearly real return for the Zambian provident fund was minus 25%, while in Egypt the extensively funded social security system suffered from a minus 12% real return (World Bank 1994). The main exceptions to this pattern among developing countries were the provident funds of Malaysia and Singapore, where positive real returns between 3% and 5% were achieved (Vittas 1993a), and the decentralized private pension funds in Chile, which realized unusually high returns amounting to over 13% on assets before operating expenses and to 9.5% after deducting expenses¹⁸.

The extremely high performance of the Chilean pension funds stemmed less from their investments in equities, which as noted above were highly restricted, and more from two unusual factors that prevailed during the 1980s in the Chilean economy. These were the very high level of real interest rates following

¹⁷ The reported returns are sensitive to the base and end year chosen. For instance, eliminating the 1967-70 period when US pension funds earned negative returns would raise their average real return for the period 1971-90 to 4%.

¹⁸ Operating expenses were unusually high in the early years of operation of the system. They have declined steadily and now amount to less than 2% of total assets (Vittas and Iglesias 1991, World Bank 1994).

the severe financial crisis of the early 1980s and the subsequent large capital gains earned on bonds and other debt instruments that resulted from the large fall in the level of real interest rates when the economy recovered and financial confidence was restored. In the 1990s the Chilean pension funds are likely to benefit from high returns in their equity investments, but in the long run it is very doubtful that they will be able to continue to achieve real returns in excess of 10%.

Impact on the Rate of Saving. The low real investment returns achieved by the Swiss and the Singaporean pension funds imply a high required rate of contribution and thus a high level of pension saving in order to achieve targeted replacement rates. Comparing the real returns and real wage growth in the UK and in Switzerland shows that a 10% contribution rate over a 40-year working life in the UK would pay a 66% inflation-indexed pension over a 20-year retirement life, while a similar scheme would only pay a 22% pension in Switzerland (Davis 1993, Vittas 1993b). To achieve the same target pension rate the Swiss contribution rate would have to be three times as high or 30%. The high rate of saving, which characterizes the Swiss economy in conjunction with the low real rate of return, may at first sight appear economically inefficient. Yet it may well lie behind the high investment rate and the ability of the Swiss economy to operate persistently with both low inflation and low unemployment and with a steady rate of economic growth. Singapore is a high growth economy and this by itself may explain the high rate of saving. Nevertheless, the low returns on provident fund balances and the high rate of forced saving may also contribute to the unusually and persistently high rate of national saving of over 45% of GNP.

The Swiss and Singaporean experience may help explain an apparent paradox in the connection between funded pension schemes and saving rates. In principle, funding pensions ought to increase the rate of saving, but in practice, except for Switzerland, Singapore and Malaysia, most countries with funded pension schemes, from the US and Canada to the UK and the Scandinavian countries and all the way to Australia, New Zealand and South Africa, are characterized by low saving rates. One possible explanation for this is the greater access to household debt available in all these countries, which allows consumers to offset some of the mandatory or nondiscretionary saving effected through pension funds. But another factor may be the higher rates of return achieved by pension funds compared to the rates earned by individual savers in these countries. Given a target pension rate, this would imply a lower required rate of saving. When pension fund returns are high and funds become overfunded, sponsoring companies lower their annual contributions or may even take contribution holidays.

Implications for Small Firm Finance. The growth of pension funds and other institutional investors may, however, have undesirable implications for the financing of small firms and new ventures. This is because pension funds minimize their transaction costs by dealing in the more liquid securities of large companies. Moreover, pension funds have difficulty researching firms without track record and lack expertise in supplying venture capital, while they also face prudential limits on the proportion of a company's equity they can hold. One solution for this problem is for pension funds to invest in venture capital companies and in mutual funds that specialize in small capitalization companies.

Fund Management Practice. Most studies for the UK and the US show that active investment management consistently underperforms market indices. Lakonishok et al (1992) show that the equity component of US pension funds underperformed the S&P 500 index by an average of 1.3% per annum over 1983-89 or by 2.6% if returns are value weighted. For the UK, Davis (1993) shows that pension funds underperform their home market, but underperformance is particularly severe in foreign markets. Such underperformance may justify a passive policy of investing in the market index, although passive indexation of investment portfolios might weaken the influence of markets on corporate performance and might require a greater and more direct involvement in corporate governance issues.

Implications for Corporate Governance. Finally, regarding corporate governance, it is clear that in those countries where pension funds invest mostly in bonds and other debt instruments, their role in corporate governance would be limited to creditor involvement when firms face financial difficulties and are unable to meet the repayment conditions and other covenants of bond issues. In several of these countries (especially Germany and Japan, and to lesser extent the Netherlands and Switzerland) commercial banks play an important role in corporate governance through varying combinations of stock ownership, exercise of proxy votes, and board representation¹⁹. Insurance companies may also play an active part through limited stock ownership and board representation, but pension funds are rather passive observers. This status is reinforced in those countries (e.g., Germany and to a lesser and declining extent Japan) where pension fund assets are reinvested in the sponsoring company in the form of book reserves.

In Anglo-American countries where pension funds tend to invest more heavily in equities, they can play a potentially influential part in corporate governance. However, except for South Africa, the role of pension funds has historically been passive, although recent trends indicate a changed attitude and a more activist approach by pension funds. In South Africa, pension funds and especially the insurance companies that manage most of these funds and other contractual savings play a dominant role in corporate governance and have controlling stakes in a large number of companies, including other financial institutions, such as commercial banks and even building societies (Gerson 1992, Vittas 1994).

IV. THE ROLE OF PENSION FUNDS IN CORPORATE GOVERNANCE

If pension funds were to become large institutional investors in Eastern European countries, what factors would determine their role in corporate governance? The experience of countries with large pension funds suggests that their investment policies would be a major factor. Investing in bonds and other debt instruments would clearly limit their role in corporate governance to that of passive creditors who are involved in corporate control issues only when firms face financial difficulties. Investing in equities would offer greater potential, especially if strategic stakes were acquired. But if pension funds were to acquire small, diversified holdings, then their direct role in corporate governance would be limited

¹⁹ The role of banks in corporate governance and its relevance for Eastern European countries is discussed in Gray and Hanson (1993).

by the free riding and collective choice problems associated with small holdings and dispersed ownership. The recent experience of the US and UK markets suggests that considerable reliance could then be placed on public criticism and collective bodies (to overcome the disincentives against active involvement of individual pension funds), initiatives to strengthen corporate governance structures, and development of specialized monitors.

A. Historical Evolution

Range of Experience. The role of pension funds (and other institutional investors) in corporate governance differs considerably from country to country. Four types of experiences can be identified. First, there are those countries where pension funds (and other institutional investors) are underdeveloped and thus play a limited role in their financial systems. In these countries, banks may be more heavily involved in both corporate finance and corporate governance (as is the case in Germany and Japan) or industrial and commercial companies may be owned and controlled by dominant family groups (as is generally the case in Latin America and East Asia) or by the state (as is largely the case in Africa, the Arab world and the former socialist countries).

The second group includes those countries where pension funds have become large and control substantial financial resources but tend to invest in government and corporate bonds and other debt instruments. This group includes Switzerland, the Netherlands and the Scandinavian countries in continental Europe as well as several developing countries with funded pension schemes, such as Singapore, Malaysia and even Chile²⁰. In these countries, pensions funds act as passive creditors and are involved in corporate governance issues only when firms face financial difficulties. But even then, they play a passive role and follow the lead set by the commercial and investment banks in organizing rescue and restructuring operations or in liquidating firms. When pension funds invest mostly in government bonds (as is the case in Singapore and Malaysia), their role in corporate governance is obviously nonexistent.

The third group generally includes Anglo-American countries with the notable exception of South Africa. In these countries, pension funds have small, diversified equity holdings in a large number of companies, while banks and other financial institutions have been discouraged, either by regulation or by tradition, from acquiring large controlling stakes in nonfinancial corporations. Ownership of corporations has become diffuse and corporate control has rested with internal managers, often supported by external directors hand-picked by chief executive officers. Institutional investors have traditionally operated as active portfolio investors but passive shareholders and have relied on the threat of takeover for disciplining corporate management.

²⁰ The role of the Chilean pension funds is likely to change over time as their holdings of corporate equities increase. But until now, their equity holdings have been large only in the case of the privatized utilities and their role in corporate governance has effectively been confined only to such companies.

The fourth group consists of South Africa. South Africa provides an interesting paradox in that the structure of its financial system appears to fit the Anglo-American model (where securities markets play a relatively greater role in corporate finance than banking institutions and corporations are characterized by diffuse ownership and internal control by management), while its system of corporate governance seems to be closer to what may be called the Euro-Asian model (where banks have traditionally played a more central role in corporate finance than securities markets and corporations are characterized by more concentrated ownership and stronger external control on management)²¹. One of the more interesting features of South African finance is the large role played by contractual savings institutions in corporate governance. The four largest insurance companies, two of which (Old Mutual and Sanlam) are mutual and two (Liberty and Southern) are joint stock companies, own large stakes in numerous industrial and commercial companies as well as controlling stakes in the major South African banks (Vittas 1994).

Impact of Regulation and Tradition. As in the case of their portfolio investments, the different roles of pension funds in corporate governance reflect both historical traditions and differences in regulation. Outside South Africa, the pattern of corporate governance in Anglo-American systems has its roots in the fear of excessive concentration of economic and financial power in the hands of a few institutions and groups. In the US, pension funds have been discouraged from acquiring large equity holdings by the "prudent man" rule that has emphasized both diversification and compliance with prevailing practice, while commercial banks, insurance companies and mutual funds have been prevented from acquiring large, controlling stakes in nonfinancial corporations by government regulations (Roe 1990 and 1991).

In the UK, tradition has exerted a more important influence than regulation. Although commercial banks have not been subject to prescriptive regulations, they have focused their lending operations on short-term, self-liquidating loans rather than on long-term loans and equity stakes (Kennedy 1987). This policy has enjoyed the tacit support of the authorities and has also been reflected in the "prudent man" rule regulations imposed on insurance companies, mutual funds and pension funds. But UK institutional investors have been more openly critical of corporate policies, not only when corporations are underperforming but also when they adopt low dividend payouts or award excessive remuneration to their senior managers.

The emphasis on small, diversified holdings has forced pension funds in the US and the UK to play a passive role in corporate governance. Small holdings and dispersed ownership have created a collective choice problem since investors have little incentive to incur the high costs of monitoring and are prone to "free ride" on the monitoring efforts of others. In addition, the fiduciary emphasis on

²¹ This combination may have several advantages over the pure Anglo-American and Euro-Asian models, such as greater reliance on equity finance but with more effective monitoring of corporations than has been customary in the US or UK markets (Gerson 1992).

compliance with prevailing practice has implied that no pension fund could deviate significantly from established practice unless such deviation was clearly perceived as beneficial to pension fund members and was not undermining the fiduciary standards of pension fund managers (Roe 1993).

Until the recent decline of the "exit" option, an important tradeoff between liquidity and control had emerged in the US and the UK (Coffee 1991). Pension funds and other institutional investors valued liquidity and their ability to exit from an underperforming company at low cost. Control implied a decline in liquidity and incurrence of potentially large costs in terms of monitoring and bail-outs, while the potential benefits from greater control were shared by all shareholders²². It is worth noting, however, that whereas a combination of both liquidity and control seemed difficult to attain, a situation where pension funds had neither liquidity nor control was gradually emerging. The recent initiatives that are discussed below are a response to this combination of lack of liquidity, lack of control and lack of managerial accountability.

In contrast to the US and the UK, regulation and tradition have encouraged the acquisition of strategic holdings in South Africa. Such stakes have implied greater control but at the expense of reduced liquidity for their holders. In the case of Sanlam (one of the two mutual insurance groups) the strategic holdings, which generally involve investments in excess of 20% of the capital of the investee company, have resulted from the traditional policy objective of encouraging the development of Afrikaner industry. In the mid-1980s, Sanlam set up a special holding company, Sankorp, to monitor actively the performance of its strategic holdings. Old Mutual has adopted a more passive stance, but claims that its strategic holdings broadly earn the same kind of returns as its portfolio holdings. The joint stock insurance companies own fewer strategic holdings and their investment policies follow more closely the less active patterns prevailing in the UK and other Anglo-American companies. Independent self-administered pension funds, although collectively larger than the insurance companies, are individually smaller than the big insurance groups and follow their lead in investing in the equities of listed corporations.

The role of the two mutual insurance groups is overshadowed in South Africa only by the greater involvement in corporate governance of nonfinancial conglomerates, such as the Anglo-American, De Beers and Rembrandt groups. These mainly originate from the mining sector and have acquired their extensive interests in industrial and commercial companies in the process of diversification and as a result of the government policies pursued over the past forty years or so. It is estimated that, together with the two insurance groups, four or five South African conglomerates are in direct or indirect, but effective, control of 80% of corporate assets. This very high concentration of corporate ownership has been

²² Black (1992a) points out, however, that large institutions do make investments in illiquid assets (e.g., in real estate and venture capital), while their liquidity needs may be met by the inflow of new money. Thus, if allowed by legal rules, large institutions could prefer choice over liquidity. Black attributes the limited "voice" exercised by institutional investors in corporate affairs to legal obstacles and promanager conflicts (see below).

bolstered by the imposition of tight exchange controls that has prevented investment in overseas securities. It has also been caused by the purchase by these groups of the stakes of departing foreign investors during the period of international economic sanctions.

Historical Context. It is sometimes argued that private pension funds in the US and the UK have been captured by corporate managers. The argument is that as pension fund managers are appointed by senior corporate executives, they are not expected to monitor closely the performance of other corporations since that would invite retaliation and monitoring of their own operations by the pension funds of other companies. Although there is considerable validity in this argument, the basic premise that pension funds have been captured by corporate managers is misleading. This is because it disregards the historical evolution of pension funds. Company pension schemes were created by corporations and were never independent of company management. If anything, their evolution over time suggests a gradual but steady decline in their dependence on corporate management priorities.

As already noted above, company pension schemes were historically created as personnel management tools to attract skilled workers, reward loyalty and facilitate the retirement of older workers. They imposed onerous vesting and portability restrictions on their members and they were designed so that few workers would qualify for a pension. Their cost was therefore intended to be small and could be easily absorbed from current revenues without any need to fund pension liabilities in advance. There was therefore little, if any, funding. Over time, the rise of large companies in conjunction with the rise of trade unionism and collective bargaining led to a gradual but substantial increase in the coverage of pension schemes and to a relaxation of vesting and portability restrictions, although the schemes were still biased toward rewarding workers with long tenure (Hannah 1986).

This change gave rise to the need for funding and also increased the cost of pension schemes. Tax incentives encouraged the setting of provisions against future pension liabilities, but early funding took the form of book reserves, i.e. reinvesting pension provisions in the assets of the sponsoring companies, a practice that is still prevalent in Germany and other countries. The widespread use of book reserves limited the role of pension funds as financial intermediaries and institutional investors. Their personnel management function and their role as pension institutions continued to predominate.

The big change in the role of pension funds as institutional investors occurred in the 1950s when large US corporations started to invest their growing pension reserves in other companies. To protect their sponsoring corporations from anti-trust actions, pension fund managers acquired small, diversified holdings that precluded the exercise of corporate control and also promoted the safety and soundness of accumulated reserves. Since their assets were small, pension funds acquired small stakes in liquid securities and adopted a "hands-off" approach in corporate management. If they were unhappy with corporate performance, they could sell without suffering a big fall in market price.

Gradual Transformation into Shareholder Activism. But continuing growth in membership and growing pressures to protect the long-term interests of workers led to gradual relaxation of vesting and portability restrictions and to rapid accumulation of reserves to ensure adequate funding of pension liabilities. As pension funds (and other institutional investors) became collectively dominant shareholders of nonfinancial corporations²³, they could no longer exercise the "exit" option without disrupting the market and suffering big falls in market prices. Recent attempts to develop effective means for exercising "voice" in corporate affairs are a response to the decline of the "exit" option.

In addition, pension fund managers have been adopting investment policies based on passive indexation as an effective strategy for achieving diversification with market returns and low transaction costs. Passive indexation policies have limited, however, their ability to divest from poorly performing companies and have increased pressures for more effective monitoring of corporate performance and for increasing the accountability of corporate managers. For instance, the California Public Employees Retirement System (CALPERS) -- a largely passively indexed pension fund -- analyzes companies in its indexed portfolio and targets poorly performing companies for action, including direct negotiations with management, withholding votes from directors, or mobilizing shareholder proposals to improve corporate accountability. Especially a pension fund with a large portfolio (like CALPERS) would have an incentive to target the companies with the poorest management practices and performance. Even if the cost of activism outweighs the benefits from improving the performance of one targeted company, the threat of becoming the next target will generate an external discipline on managers of other companies in the portfolio to improve their performance.

The growing involvement of US and UK pension funds in corporate affairs has also been bolstered by the decline in hostile takeovers and tender offers, following the excesses of the 1980s and the defenses adopted by corporate managers. Hostile takeovers, based on tender offers and proxy contests, have been extensively used since the late 1950s to acquire poorly performing companies, replace managers, dispose surplus capacity, and make more efficient use of corporate assets. But hostile bids have also been used to acquire successful firms by large conglomerates engaging in empire-building and searching for synergies and scope economies, often in unrelated markets. In the 1980s, hostile takeovers through leveraged buy-outs have been used for breaking up large conglomerates and restructuring individual units but they have also been used for stripping valuable assets, for blackmailing corporate managements into paying huge ransoms to corporate raiders ("greenmailing"), and even for "raiding" the surplus assets of company pension schemes.

²³ Among large US corporations, institutional investors owned in 1988 86% of the equity of Amoco, 82% of General Motors, 74% of Mobil Corp., 71% of Eli Lilly & Co., and 70% of Citicorp (Coffee 1991).

Evidence on systematic shortfalls in corporate performance in the US and on the potential influence of monitoring by large shareholders is presented in Black (1992b)²⁴. Black summarizes evidence on deficiencies: in the functioning of corporate boards; in corporate diversification strategies; in value-reducing takeover decisions; in management-entrenching governance structures; in corporate cash retention and squandering; and in excessive managerial compensation. He highlights evidence that shows: that independent directors do a better job than other directors in firing poorly performing managers and in discouraging bad acquisitions; that conglomerates are on average less efficient than more focused companies; that manager-controlled firms are more likely to diversify; that many takeovers cause the bidder, or the bidder and target together, to lose value; that bidders with low efficiency and high cash flow are more likely to make bad acquisitions; that combined bidder and target losses are greater when low efficiency bidders acquire high efficiency targets (in contrast, related takeovers, takeovers by well-run bidders, and takeovers of poorly performing targets are more likely to increase the combined value of bidder and target); that proincumbent governance rules reduce stock prices; that managers hoard cash and then spend it on poor projects; and that managerial compensation is excessive and unrelated to performance. Black suggests that institutional investors could add value by enhancing director independence, discouraging corporate diversification, pressing bidders to abandon suspect takeover bids, pressing targets to consent to value-increasing bids, insisting on more efficient governance rules, making it harder for managers to hoard unneeded cash, and linking managerial compensation to performance.

Anti-takeover legislation and more effective corporate defenses have made hostile bids more difficult to succeed, but they have also underscored the power vacuum and lack of accountability that have emerged in corporate governance (Monks and Minow 1991). Realization of this power vacuum has increased pressure on institutional investors to become more active shareholders. In the US, the Department of Labor has urged pension funds to exercise their voting rights and to treat their proxy votes as plan assets subject to fiduciary standards. Also regulations that discouraged institutional investors from talking to each other have been relaxed. In the UK, such restrictions did not exist but there was nevertheless greater pressure on institutional investors to increase and improve their monitoring of corporate management.

B. Recent Initiatives

The past decade or so has witnessed a gradual, but far from complete, transformation of pension funds (and other institutional investors) from active portfolio investors and passive shareholders into passive investors and active shareholders. The initiatives that have been taken can be classified into three types: measures to exert greater public pressure on nonperforming corporate management; measures to

²⁴ Monks and Minow (1995), in a lucid and comprehensive overview of corporate governance issues, also contain an excellent discussion of case studies of corporations in crisis that includes the recent travails of General Motors, American Express, Time Warner, Sears Roebuck & Co, Ammand Hammer and Occidental Petroleum, Polaroid, Carter Hawley Hale, and Eastman Kodak.

ensure better and more robust corporate governance structures; and measures to influence more directly corporate policy.

Public Criticism and Collective Action. The first type of measures includes greater public criticism of misbehaving and underperforming corporations. This includes criticism of overambitious expansion plans into unrelated areas that smack of empire-building, low dividend payouts, excessive managerial compensation, overgenerous compensation for retiring or redundant managers, and anti-takeover defenses that entrench the position of incumbent managers at the expense of shareholders. Open public criticism has been instrumental in mobilizing collective action by disgruntled shareholders and in raising the threat of regulation and legislation to prohibit the alleged abuse and misbehavior.

But public criticism is not always very effective. First, corporate managers may be able to carry public opinion with them if they can raise the prospect of job and tax revenue losses for the areas where their operations are located. Second, since the managers of private pension funds are effectively beholden to their chief executive officers, any such public criticism can only come from the managers of public pension funds, who are more independent of corporate managers (though they are themselves in turn under the control of politicians). Even professional fund managers, insurance companies, and mutual funds are often constrained in their public criticisms by the fear of loss of business from other corporations.

In the US, the leading role in criticizing the managements of underperforming corporations has been taken by the managers of public pension funds, such as the California Public Employees Retirement System (CALPERS), the New York State Common Retirement Fund, and other public pension funds in Wisconsin and other states (Bishop 1994). Insurance companies and mutual fund management companies have been conspicuous by their silence. Public pension funds have been at the forefront of corporate governance issues, especially in states where they have not been subject to statutory limitations with regard to their equity investments²⁵. In the UK, the lead in criticizing nonperforming companies has been taken by POSTEL (a large previously public pension fund for postal and telecom workers), by Prudential (a large insurance company) and by M&G (a large fund management company)²⁶.

A more effective way of voicing public criticism has been the use of formal associations of pension funds (such as the Association of British Insurers and the National Association of Pension Funds in the UK) or ad hoc groupings of interested institutional investors (such as the Institutional Shareholders Committee in the UK or the Council of Institutional Investors in the US). The last-named group was created ten years ago and is a forum for big shareholders to discuss corporate problems. It regularly

²⁵ Some concerns are, however, expressed about the incentives and constraints facing the managers of public pension funds. For a critical stance, see Romano (1993).

²⁶ The differences and similarities in the role of institutional investors in the UK and the US is reviewed in Black and Coffee (1994).

publishes a list of the 50 least performing companies and thus exerts pressure on the offending corporate managers without exposing any individual shareholder or pension fund manager to the threat of corporate retaliation.

Strengthening Corporate Governance Structures. Public criticism targeted at poor performers fosters corrective action but does little to prevent the mistakes and abuses of corporate managers that have treated their corporations as their personal fiefdoms and have effectively behaved as the feudal lords of modern times. To forestall such abuses, action needs to be taken to strengthen corporate governance structures and especially to increase the accountability of managers. Well functioning corporate governance structures are also essential for protecting the interests of minority shareholders and for ensuring that incumbent managers and/or corporate raiders do not reap large gains at the expense of uncoordinated shareholders with small stakes.

In both the US and the UK various bodies prepared and published reports outlining the reforms that need to be implemented and underscoring the needed change in behavior of both company directors and institutional shareholders. In the US, the National Association of Corporate Directors appointed a Blue Ribbon Commission that studied and reported on the Performance Evaluation of Chief Executive Officers, Boards and Directors, including guidelines for director selection and compensation (NACD 1994). The Conference Board published several reports on corporate governance, including a report on Corporate Boards: Improving and Evaluating Performance that reviewed recent developments in the US and the UK (Conference Board 1994). In the UK, a committee known as the Cadbury Committee published a report entitled the Financial Aspects of Corporate Governance, that also set out a Code of Best Practice (Cadbury Committee 1992). In addition, the Institute of Directors commissioned an extensive survey of directors from the Henley Management College. These reports effectively argued that US and UK corporate boards were not until recently seriously concerned with measures to improve their own effectiveness and did not see a connection between board effectiveness and corporate performance.

The measures that are contemplated to strengthen corporate governance structures and improve the effectiveness of corporate boards include the following: separating the functions of chairman and chief executive officer and appointing nonexecutive chairmen in all companies above a certain size; electing independent external directors; using cumulative voting for board elections; opening the proxy process to allow greater communication among shareholders; using confidential voting at board meetings; expanding the role of board committees that are independent of executive directors; disclosing the amount and rationale of managerial compensation; and opposing anti-takeover defenses that are designed to protect incumbent managers at the expense of shareholders. Of these measures, the use of cumulative voting for board elections seems to be the most powerful tool for allowing institutional shareholders to elect directors

that are truly independent of corporate managers and play an active part in protecting the interests of shareholders²⁷.

Extensive use of board committees to select and appoint chief executive officers (to avert the perpetuation of the business policies of incumbent management), vet managerial compensation (to prevent excessive packages that are unrelated to performance), approve major expansion plans (to check managerial tendencies for empire-building), and evaluate and respond to friendly and hostile bids (to ensure that shareholders receive maximum value from takeovers) creates effectively a two-tier board structure similar to the long-standing German practice, but without the board representation of workers and the limited accountability of incumbent managers.

In addition, to protect minority shareholders, pension funds and other institutional investors have advocated regulations that discourage the use of multi-class shares and pyramidal structures, require adequate information disclosure, ensure that transactions with related-parties are effected on market terms and conditions, and stimulate the creation of liquid and transparent markets.

The efforts exerted by various collective bodies, such as the Council of Institutional Investors, the National Association of Corporate Directors and the Conference Board in the US or the Institute of Directors, the National Association of Pension Funds and the Association of British Insurers in the UK to spell out the duties and responsibilities of board directors and emphasize the benefits of greater accountability of directors have increased awareness of these issues by large corporations.

But in addition, a small number of entities has also emerged in both the US and the UK that specialize in monitoring corporate governance practices by large corporations, not only in the US and the UK but also in several countries around the world. These include the Investor Responsibility Research Center (IRRC) and the Institutional Shareholders Services (ISS) in the US and Promotion of Nonexecutive Directors (PRO NED) and Pensions and Investments Research Consultants (PIRC) in the UK. Some of these entities, and more especially ISS, effectively operate as rating agencies but instead of rating the creditworthiness of different companies, they rate the accountability of managers and their compliance with international standards of corporate governance. They play a crucial and influential role in advising institutional investors on how to exercise their voting rights²⁸.

²⁷ In this context, Gilson and Kraakman (1991) have argued that institutional investors should recruit independent directors to monitor corporate behavior and performance on their behalf.

²⁸ As corporate governance rating agencies, these entities would be subject to the same constraints of cost and effectiveness that affect the operations of credit and bond rating agencies. Coffee (1990) highlights the dissatisfaction with the slow response of bond rating agencies in the 1980s to new information. Often, a rating change followed, rather than preceded, the market's adverse reaction to a deterioration in a corporation's financial condition.

Direct Influence and Specialized Monitors. The final type of measures includes initiatives to exert more direct influence on corporate policy and performance through significant equity stakes and board representation. Because pension funds are constrained by their diversification policies and lack of inhouse managerial expertise from acquiring large equity stakes in individual companies and seeking board representation, they have relied in the past on companies specializing in leveraged buy-outs, such as KKR in the US, or on industrial conglomerates, such as the Hanson and BTR groups in the UK. These groups acquire outright control of targeted companies through tender offers and hostile takeovers. They finance their operations by issuing equity or debt and rely on their reputation as effective industrial managers for raising funds from pension funds and other institutional investors.

More recently, a new technique has been developed in the US that avoids outright control of companies but involves a more incremental approach (Gordon and Pound 1992). Under this approach, specialized companies raise funds from institutional investors in order to acquire substantial equity stakes in individual corporations and seek board representation with a view to influencing corporate policy. One form of this approach, exemplified by the Lens Fund operated by Robert Monks, involves nonnegotiated purchases and aggressive tactics (such as public criticism and voting challenges) to induce change²⁹. An alternative form relies on negotiated purchases that are welcome by incumbent managers and support them in their expansion or restructuring policies. This approach is exemplified by Berkshire Hathaway, a fund operated by Warren Buffett. The first form seeks to act as a catalyst in maximizing company value and adopts a short or at most a medium term horizon. In contrast, the second form operates as patient capital and adopts a longer-term horizon.

C. Unresolved Issues

Strategic Holdings, Long-Term Commitment and Conflicts of Interest. The recent and proposed changes seem to be a response to the mistakes and excesses of the 1980s. Institutional investors and other disgruntled shareholders were forced to take action to remove incumbent managers of heavily underperforming corporations. But except in the cases of leveraged buy-outs and the limited experience with the patient capital approach, they do not appear to have addressed the need to develop strategic investors with large holdings that could provide long-term support and commitment to corporate management. In the Euro-Asian model of corporate governance, such long-term commitment and support has long been provided by banks and other financial institutions, as well as by controlling industrial groups, that have large stakes in different companies. But among countries with funded pension schemes and a large contractual savings industry, only South Africa appears to have developed such an approach.

²⁹ The difficulties of these new approaches is highlighted by the failure of the Lens Fund, which is organized as closed-end mutual fund, to raise capital from CALPERS and other public or private pension funds (Coffee 1994).

Strategic holdings avoid the problems of "free riding" and emphasis on short-term corporate performance that might result from the fragmentation of corporate ownership. They also limit the incidence of excessive managerial compensation since executive remuneration is controlled by the strategic shareholders and can be more objectively linked to performance. But the shortcomings of strategic holdings in the hands of a few institutions are the large concentration of economic power and the potential conflicts of interest that exist between strategic investors and other groups of shareholders (the latter often suffer from reduced voting rights and from limited access to information - Rock 1991). Large strategic stakes may also lead to uncompetitive practices in industrial sectors dominated by companies controlled by the conglomerates, while the orientation of capital markets toward the financing of larger firms may inhibit access to external finance by new companies with dynamic prospects. In the context of South Africa, where strategic holdings by institutional investors are in widespread use, Vittas (1994) recommends a triple burden of proof on proponents of conglomerates. This should show that strategic holdings earn risk-adjusted rates of return that are no lower than those obtained on portfolio holdings, that the industrial sectors remain sufficiently competitive, and that smaller firms are not denied reasonable access to external finance.

Costs and Benefits of Monitoring. Effective monitoring takes time and requires the employment of specialists and experts who understand the law and are able to assess the performance of different corporations. Pension fund managers and trustees often lack the specialist knowledge that would be required to second-guess the decisions and actions of corporate managers. Moreover, even if they did have such knowledge, it would be difficult to quantify the benefits from improved monitoring. For this reason, most pension fund managers react more strongly on general points of principle, such as opposition to any attempt to curtail voting rights or support for proposals to strengthen board structure and independence rather than on more company specific issues, such as disputes over business strategy or the competence of specific corporate managers. The costs of monitoring are reduced when action is coordinated by a collective body, such as an association. Working through a collective body could achieve economies of scale, especially for recurring issues and could more easily overcome the problems caused by free riding. For other initiatives, such as the use of specialized agencies, the cost of monitoring may be an inhibiting factor. Often, the threat of closer oversight may be more effective than reliance on specialized agencies. In this sense, collective bodies that keep corporate performance under general review may be the most effective form of monitoring on a cost/benefit basis.

Long-Term Effectiveness and the Question of "Who Monitors the Monitors". Another concern regards the long-term effectiveness of recent initiatives. Separating the functions of chairman and chief executive officer will increase monitoring and oversight when it is first instituted in response to a need to curtail the entrenched power and influence of executive managers. But there is no guarantee that a nonexecutive chairman may not over time become as identified with the fortunes of the corporation as its executive management. The same could also happen with independent nonexecutive directors who may for instance indulge over time in a similar dispensation of perquisites as the unaccountable corporate managers did in the absence of close monitoring and oversight. Thus, institutional investors as large

shareholders will have to monitor the performance of nonexecutive chairmen and other directors. Similar problems may also arise in the case of independent collective bodies which may lose their independence over time if they are captured by executive managers of large corporations.

Finally, the perennial question of "who monitors the monitors" will apply not only in the case of these specialized monitors but also in the case of the managers of pension funds and other institutional investors. After all, the managers of these institutions act as agents for the large number of dispersed beneficiaries. These are the active and passive workers that are members of pension plans, the policyholders of insurance companies and the small investors who place their savings with mutual funds and other financial institutions. To ensure that recent initiatives retain long-term effectiveness and that the managers of pension funds and other institutions serve the interests of their principals, further collective measures may be necessary such as government regulation and oversight, adequate information disclosure and transparency, and greater involvement of public committees of informed but independent observers and experts (Pound 1992).

The role of pension funds and other institutional investors in corporate governance is still an issue of intense debate. As summarized in Coffee (1994), three different conceptions of the role of institutional investors have been put forward. The first, which is popular within the business community and a large section of the academic community sees institutional investors as short-term oriented, and inclined towards fads and herd behavior. The second view sees institutional investors as prevented by legal rules and promanager conflicts from adopting a more active stance in corporate affairs. This view argues that pension funds and other institutional investors have economic incentives to achieve gains from better monitoring but are regulated into passivity. The third view doubts that institutional investors have strong incentives to monitor and argues that they may have a preference for liquidity and passivity. In the real world, it would seem that all three views have merit in explaining the current role of institutional investors in corporate governance. The increasing reliance on collective bodies, stronger corporate governance structures, and specialized monitors may represent an efficient and economical response to the challenge posed by the decline of "exit" and the need to exercise more effective "voice".

V. LESSONS AND POLICY IMPLICATIONS FOR TRANSITIONAL ECONOMIES

This paper examined the prospects for private pension funds in Central Europe and Russia and their potential long-term role in corporate governance. The following lessons and policy implications are highlighted:

The countries reviewed, like all other transitional economies, have public pension systems that face severe financial pressures and fail to provide adequate pension benefits to the majority of their pensioners.

Although radical and fundamental pension reform may not be politically feasible in the short-run and may even be inadvisable in the interest of sustaining political support for privatization and enterprise restructuring, there can be little doubt that in the longer run a fundamental pension reform is unavoidable.

The experience of more advanced OECD countries (and some innovating developing countries) suggests that the public pension system should be downsized and its benefits rationalized not only in order to offer adequate but affordable and therefore sustainable benefits but also in order to leave greater room for the creation and growth of private pension funds.

Private pension funds could be organized on a voluntary or mandatory basis, could be based on company schemes or nonemployer-related funds, and could be arranged as defined benefit or defined contribution plans. The shortcomings of company-based defined benefit plans suggest that transitional countries should opt in the longer run in favor of nonemployer, defined contribution plans based on individual capitalization accounts with full and immediate vesting, full portability, and full funding.

To cope with the need for a targeted replacement rate, such schemes could operate with variable contribution rates, re-set each year in accordance with the salary growth of each worker, the cumulative investment return on his or her account, and the targeted pension benefit.

Once established, private pension funds will accumulate long-term financial resources at a rapid pace. This will depend on the coverage of the schemes, the rate of contribution, the investment returns, and the rate of growth of real wages. They are also likely to have a major impact on the modernization of securities markets, stimulating innovation, fostering better accounting and auditing standards, and promoting greater information disclosure.

Their role in different securities markets will be shaped by future regulations on their investments and by the traditions that are likely to emerge. In general, given the long-term nature of their obligations, pension funds could become major investors in corporate equities, though marketable debt instruments such as government bonds, corporate bonds and mortgage bonds or securitized mortgage-backed instruments could also benefit from their development.

The experience of the more advanced OECD countries suggests that investments should be governed by prudential concerns, should favor sensible diversification, and should emphasize the pursuit of investment returns commensurate with the risks involved. Rigorous accounting and auditing standards and information disclosure to the regulatory authorities and their members would be essential.

Their role in corporate governance will also depend on regulation and tradition. Pension funds will face conflicting incentives, pressures and constraints. To diversify their risks and protect the value of funds under management, they will be pressured to acquire small equity holdings. But if they come to dominate the equity market, the liquidity of their holdings may become more illusory than real. They

will also be pressured to adopt a policy of passive portfolio indexation in an attempt to keep costs down and improve their investment performance. As a result, a vacuum in corporate governance may emerge, with limited corporate accountability, unless they become more actively involved in exercising "voice" in corporate affairs and monitor more intensively the performance of individual corporations.

The experience of the more advanced OECD countries suggests that pension funds will be more effective in exercising "voice" in corporate affairs through collective bodies, through more robust structures of corporate governance, and through specialized monitors. In this way, they could achieve greater coordination, keep monitoring costs down and avoid the problems of free riding. However, experience with these initiatives is relatively recent and their long-term effectiveness remains to be seen.

Table 4

	Czech Rep.	Hungary	Poland	Russia
Minimum Retirement Age:				
Men	60	60	65	60
Women	53-57	55	60	55
Minimum Contributory Years:				
Men	25	25	25	25
Women	25	25	20	20
Base for pension calculation: Years before retirement	Best 5 of 10	All Years since 1988	Best 3 (10) of 12	Last 2 (4 of 15)
Statutory Replacement Ratio:				
Net	54%	67%	55%	56%
Nominal	50%	63%	55%	55%
Adjustments for longer working periods (% per year):				
Net	1.1%	1.1% (0.5%)	1.3%	1%
Nominal	1%	1% (0.5%)	1.3%	1%
Maximum Replacement Ratio:				
Net	84%	80%	75%	76%
Nominal	78%	75%	75%	75%
Minimum pension (usually in percent of minimum wage):	72%	93%	39% (of average)	100%
Average pension (in percent of average wage): (1991)	49%	49%	74%	34%
Nominal contribution rates for pensions: Total	27.2%	30.5%	30%	32.6%
Employer	20.4%	24.5%	30%	31.6%
Employee	6.8%	6.0%	0%	1.0%
Effective contribution rates for pension: Total	23%	24%	23%	25%
Employer	17%	20%	23%	24%
Employee	6%	5%	0%	1%
System Dependency Ratio:				
1992	49%	59%	49%	46%
2020		62% (2016)	72%	
Old Age Dependency Ratio:				
1992	32%	36%	28%	31%
2020	44%	54%	44%	50%
2050	58%	61%	56%	58%
Pensions in percent of GDP	10.2%	10.6%	14.8%	4.6%
Social Security in % of GDP	21%	27.6%	19.9%	5.2%

Table 5

Pension Fund and Life Insurance Assets
(Percent of GNP)

	1970	1980	1990
Canada	31	31	46(3)
France	6	7	13(2)
Germany	10	14	22
Japan	8	13	41
Netherlands	45	63	107
Sweden	42	51	63
Switzerland	51	70	133(1)
UK	43	46	97
US	43	49	75

(1) 1987; (2) 1988; (3) 1989

Source: Davis (1993), Vittas and Skully (1991)

Table 6
Asset Allocations of Pension Funds
(percent of assets)

	Real Assets	Debt Instruments
Canada		
1970	23	77
1980	23	77
1990	32	68
Germany		
1970	16	84
1980	18	82
1990	24	76
Japan		
1970	33	67
1980	15	85
1990	29	71
Netherlands		
1970	27	73
1980	19	81
1990	31	69
Switzerland		
1970	19	81
1980	27	73
1990	33	67
United Kingdom		
1970	59	41
1980	70	30
1990	72	28
United States		
1970	45	55
1980	41	59
1990	46	54

Note: Real assets include equities and real estate; debt instruments include government, corporate and mortgage bonds, loans and short term assets

Source: Davis (1993)

Table 7

Real Pension Fund Returns
(Standard Deviations in brackets)

	1966- 1970	1971- 1975	1976- 1980	1981- 1985	1986- 1990	1966- 1990
Canada	-3.3 (1.4)	-1.4 (11.7)	-1.2 (4.0)	6.1 (15.1)	7.9 (6.7)	1.6 (9.8)
Denmark	-1.9 (8.7)	-1.3 (12.7)	0.8 (4.4)	17.7 (14.6)	-1.8 (10.3)	3.6 (12.7)
Germany	5.0 (3.3)	3.3 (2.7)	3.3 (4.4)	7.7 (4.9)	6.3 (5.9)	5.1 (4.4)
Japan	0.1 (5.3)	-0.5 (10.9)	-1.2 (5.3)	10.9 (2.1)	13.8 (7.8)	4.0 (9.4)
Netherlands	1.7 (3.3)	-1.4 (5.5)	2.0 (3.0)	10.5 (4.0)	6.3 (5.4)	4.0 (6.0)
Sweden	1.2 (8.2)	-3.5 (6.7)	-5.3 (5.6)	3.9 (4.9)	4.7 (9.3)	0.2 (7.6)
Switzerland	0.8 (0.0)	-0.5 (6.3)	4.0 (8.0)	3.0 (5.4)	-0.2 (7.2)	1.5 (6.4)
UK	4.2 (11.5)	-2.8 (19.4)	4.9 (5.2)	12.4 (7.3)	10.1 (12.7)	5.8 (12.5)
US	-5.4 (6.5)	-0.8 (13.8)	-1.9 (6.9)	8.1 (13.0)	11.2 (12.2)	2.2 (11.9)

Source: Davis (1993)

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