



COMMISSION OF THE EUROPEAN COMMUNITIES

STUDIES

*Report
on the contribution
of pension funds
to the capital markets
of the EEC*

Report
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of Pension Funds
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REPORT ON THE CONTRIBUTION OF PENSION FUNDS
TO THE CAPITAL MARKETS OF THE
EUROPEAN ECONOMIC COMMUNITY

This study on the means of enhancing the contribution of pension funds to the capital markets of the European Economic Community has been entrusted to l'Union Internationale d'Analyse Economique et Financière EUROFINANCE by the Direction Générale des Affaires Economiques et Financières of the Commission of the European Economic Community. The text of the present report has been drafted by Mr. Anthony de Jasay, Directeur of Eurofinance, and the opinions and recommendations expressed in it do not necessarily reflect the views of the corporate entity he represents.

This study does not reflect the views of the Commission of the European Communities and merely represents a starting point for the work it may undertake in this field.

INTRODUCTION

Previous studies sponsored by the Commission of the EEC and by other official and private bodies on problems of the capital markets in the member countries have already pointed out the important role that contractual saving can play in enlarging these markets and also in improving their stability and general quality. Saving linked to employment contracts was diagnosed as a particularly dynamic and promising form of contractual saving⁽¹⁾. The present report provides more detailed findings on this subject, with the ultimate objective of defining the means and the policies which could promote such saving and its contribution to the capital markets.

The scope of the report is essentially limited to saving in the form of accumulating pension funds from contributions by employers and employees to provide pension benefits over and above the old-age pensions provided by the State social security systems. Reference, however, is also made to the latter because the actual and potential role of private pension plans depends to a large extent on the nature of the State system, especially on how far the benefits it provides are graduated according to the lifetime or immediate pre-retirement earnings of the beneficiary. Private plans for employees purchased with contributions to an insurance company (insured plans) are excluded from explicit consideration, as they do not basically differ from life insurance (a subject which would demand a separate study) and also because data relating to the insurance industry do not as a rule permit the segregation of pension from other insurance.

In delimiting the scope of the study, certain inconsistencies had to be accepted for practical reasons. Although our central subject is funded pension plans, we are also treating the French complementary pension plans which are based on the repartition system, because they have to a certain extent built up reserves and are likely to do so in the future. Moreover, while the pension plans we treat are generally based on the employer-employee relationship which is a voluntary contract, we are also considering the Italian severance payment funds, contributions to which are compulsory by law; certain occupational schemes, adherence to which is compulsory once the majority of employers in an industry has adhered to them, and German provident funds which have no contractual basis at all.

In Chapter I, certain conceptual and theoretical considerations are reviewed in summary fashion to facilitate the subsequent treatment of more specific problems.

Chapter II describes the present status of pension funds, the legal and fiscal environment in which they operate, and their quantitative importance wherever the availability of data permits, in some non-E.E.C. countries (such as the U.K. and the U.S. where the great contribution of pension funds to the capital market may permit some lessons to be drawn) and in Holland, Germany, Italy, Belgium and France. A few brief case studies drawn from the experience of EUROFINANCE are also presented to illustrate certain tendencies or problems, although actual figures have been sufficiently modified to prevent direct identification of a particular employer company.

Chapter III is devoted to an essentially quantitative analysis of the likely future contribution of pension funds to total saving and to capital markets, assuming that the legal and tax framework remains unchanged; forecasts based on demographic factors, on probable future coverage, future benefit levels, wage and other economic trends are presented to 1980.

Chapter IV suggests and discusses the implications of certain reforms in pension fund regulations, tax laws, etc. Some of these would be needed simply to improve the security of this growing mass of savings and avoid certain latent dangers and disequilibria which are tolerable today but may become disturbing as fund totals come to reach larger dimensions. Other reforms would be likely to accelerate the growth of saving through pension funds, channel their resources to the capital market without discrimination against certain sub-markets and against the geographical diversification of investments.

The study has encountered considerable obstacles through having to treat a subject to which little detailed research has so far been devoted in the countries of the E.E.C., whose statistics are incomplete and in some cases non-existent, and where even terminology, concepts and institutions are sufficiently different from country to country to render uniform analysis difficult if not impossible. It is to be hoped that the attention now devoted to pension funds by the Direction Générale des Affaires Economiques et Financières of the Commission of the European Economic Community will promote greater interest in the subject by national governments and will advance quantitative knowledge and understanding of its problems.

(1) Report on The Development of a European Capital Market, Ch. 2, §§ 8 and 27, Ch. 12, § 20.

CHAPTER I

Some Conceptual Considerations

Apart from the timeless practice of saving in one's own working lifetime to have something to fall back on after retirement (i.e. individual provision either through direct accumulation of assets or through an endowment insurance), institutional provision for old-age can take one of two major forms. Although these do not in practice always occur in a pure form, and at the borderline one form may contain certain features of and be commingled with the other, for purposes of conceptual clarification it will prove helpful to draw a fairly sharp distinction between what might be called the system of *current transfers* and of *funding* (capitalization).

1. Current transfers ("repartition" or "pay as you go") imply that the current income of part or all of the working population is reduced and that of the retired population (or of their surviving dependents) is increased, (although not necessarily by an equal amount). The transfer may take place via a voluntarily agreed redistribution of income within a limited set of working and retired people (typically within members of an occupation, an industry or more concretely of a Caisse de Retraite Complémentaire). It may also be organized through the intermediary of the fisc, and financed partly from direct contributions of part or all of the working population and partly from general taxation (most state old-age schemes are of this nature).

This system of current transfers has ancient roots in social history, — it can be regarded as a direct descendant of the principle that sons in the prime of their life should support their aged parents. In the context that interests us, the principle is not applied within the framework of a single family, but in larger collective units such as a firm, a profession, an industry or the whole nation. It is an expression of solidarity between different age groups, and its stability and continuation depend essentially on the continuing strength of this sense of solidarity.

Evidently, provision for old-age via some system of current transfers has no direct effects on saving and the accumulation of capital, nor on the market for capital. There are, however, certain indirect effects on saving, which have been the subject of a great deal of discussion in the literature, and whose effect is difficult if not impossible to measure, although there is fairly wide agreement as to the probable sign (positive or negative) of the effect.

a) A transfer of income from the working to the retired population is in the majority of cases a transfer from a higher to a lower income group. As such, it

is generally presumed to result in lower aggregate personal saving even if the marginal propensity to save of each income group remains the same.

b) A somewhat less widely accepted argument is that the sense of security enjoyed by the working population regarding its maintenance in old-age removes or reduces one of the incentives for saving, namely one's own individual need to provide for old-age. Empirical research has not found conclusive evidence of this effect.

c) To the extent that state old-age pensions are financed from general taxation (i.e. that a state scheme is run at a deficit between contributions and benefit payments) there is an additional negative influence on total aggregate saving over and above the effect noted under *a)*, at least to the extent that taxation is progressive at the margin. Diverting income to pensioners via progressive taxation amounts to reducing the aftertax income of corporations and high-income individuals, who tend to have a higher than average propensity to save.

d) There is however a mitigating influence operating within state old-age pension schemes which may partly offset some of the negative influences referred to above. This influence will have particular force if the state scheme in question is operating in surplus with current contributions exceeding current benefit rates. Since contributions are applied only up to a certain limit of income and no contributions are levied on incomes over and above this ceiling, they operate as a degressive rather than progressive tax, and their effect on saving will tend to be symmetrical with but in an opposite direction to the effect discussed under *c)*.

Extensive theoretical refinements of the above considerations could be pursued without adding very much to our quantitative knowledge. Our best judgment would be that the effect of current transfer pension systems on saving is more likely to be negative than positive, but that the overall effect is probably not substantial.

As will become apparent later, in practice many systems which are essentially intended to operate on the current transfer principle do in effect show mixed characteristics, temporarily or permanently accumulating reserves and thus contributing directly to aggregate saving. To the (usually rather limited) extent that they do, they should be considered as falling under the other major alternative category, namely that of capitalization.

Under the system of capitalization, part or all of the provision for old-age is financed from capital built up over a past period by the same set of people whose retirement it was intended to secure (i.e. employee contributions) or on their behalf (i.e. employer contributions). In short, and in contrast to the current transfer system, this is old people having fended *for themselves* when they were young rather than expecting their sons to do it for them. The system does not depend on any kind of sense of solidarity between age-groups. This distinction is drawn here without any reference to family or social ethics, but rather as a clarification intended to throw light on an argument which is sometimes advanced, namely that from a national accounting point of view there is no difference between the two systems. This latter argument maintains that the method of financing (i.e. whether it is by repartition or by capitalization) leaves the sources and uses of the current national product completely unaffected; whichever way it is financed, institutional provision for old-age involves a transfer of current consumable resources from the young to the old. This diagnostic has some validity with all other things being equal, and has the great merit of shifting the emphasis from methods of financing to the real resources involved. However, as will become apparent presently, it overlooks the effect of the chosen method of financing on the accumulation of capital in the past (and hence on the present level of the national product), as well as on the present rhythm of capital accumulation.

2. Funding (capitalization) in its simplest and purest form consists in a set or subset of working people (employees or their employers or both) paying contributions into a fund, the rate of contributions being calculated in such a way that if continued over their probable *working* life, the fund should build up to a level which, at the time of their retirement, should just be equal to the discounted present value of planned pension payments over the probable *retired* lifetime of each participant concerned (or his survivor). Many variants of this system are being practiced, without the variations affecting the principle, or more than marginally changing the economic effects of its operation.

Since the system revolves around the building up of a capital fund, its *direct* effect on saving is easy to diagnose. In the theoretical borderline case of a static age distribution of an unchanged number of participants in a funded pension scheme, with static earnings over their working life and static pension benefits, the contribution to saving is of a once-and-for-all character. Saving continues while the fund is being built up from nil to its actuarially determined level; at that point, further accumulation of fund reserves ceases. (More precisely, the rate of growth of the fund asymptotically approaches zero). Currently paid pension benefits from that point onwards

fully exhaust current contributions plus the income (interest, dividends, etc.) generated by the fund, and the latter becomes self-perpetuating at an unchanged level. Projecting this situation to the level of an entire economy, the effect of opting for the funding rather than the current transfer system is to increase the total stock of capital in the economy to a level higher than it would otherwise have been. Further secondary direct effects may be *a*) a higher level of the national product (which is supposed to be an increasing function of the stock of capital), *b*) a faster rate of growth of the capital stock (since an addition to the capital stock, i.e. current saving, is supposed to be an increasing function of the national product), *c*) and so forth in an infinite and convergent series of secondary effects.

In reality, neither the working population, nor its age composition, nor its earnings are likely to be constant. Growing earnings and growing pension expectations (and in particular the tendency to link pensions to pre-retirement earnings, especially in uninsured pension schemes) will usually ensure that the majority of pension funds should never reach "maturity" in the above static sense, and that their total should go on growing (albeit at a decelerating rate after a while) as far as one can foresee.

The indirect effects on saving of the funding approach to pensions are potentially more important and more complex to analyse than those of the current transfers approach.

a) As regards *personal saving*, it would be tempting to suppose that any substantial accumulation of assets in pension funds on behalf of future pensioners should appreciably diminish their propensity to accumulate *other* assets in their working lifetime. This tendency should in principle be reinforced by the application of the vesting principle: the greater and clearer the property rights to part of the fund vested in a future pensioner prior to his actual retirement, the stronger should be his subjective sense of actually owning part of the reserves pooled in a pension fund, and hence the weaker his propensity to engage in other forms of saving. The theoretical basis for this hypothesis is that while pension rights are an imperfect substitute for (freely disposable) personal assets, vesting decreases their imperfection, and at the limit one hundred percent vesting of accumulated rights (employer and employee contributions plus past investment income added to reserves) renders them practically freely disposable and an almost perfect substitute for other personal assets. Hence funded pensions, (especially if coupled with early vesting), should reduce all other forms of personal saving.

It is worth special emphasis that empirical research into personal savings has found no correlation which could serve as evidence of the above hypothesis. In

the United States, the annual net accumulation of saving through private pension plans constitutes roughly one third of total personal saving as defined in the National Income Accounts. This high proportion demonstrates that saving through pension plans in the United States has ceased to be a merely marginal contribution to total personal saving. Yet despite its relatively large weight, recent economic research into savings behaviour has concluded that the presence or absence of accumulating pension rights has no significant influence on the personal propensity to save in other forms⁽¹⁾. Putting the findings of this research into a highly simplified form, one might say that contrary to *a priori* reasoning, persons possessing claims on pension funds do, in addition to these claims, save about as much out of current income as persons who possess no such claims. Accumulated contributions can thus be fully or nearly fully regarded as a net addition to aggregate personal saving, — with negative indirect effects being either negligible or small.

b) It remains to examine the possible indirect negative effect on *corporate saving*. It is sometimes argued that if in addition to wages and salaries, the corporate sector must also make a contribution to securing the old-age pensions of its labour force in the widest sense, its costs increase and its profits decrease *pro tanto*. Hence from the apparent and direct increase in savings due to pension fund accumulation, a deduction must be made corresponding to the resulting reduction in corporate profits multiplied by the net savings propensity of the corporate sector; this propensity may be as high as 30-50% of total net corporate profits.

Corporate saving behaviour does not lend itself to the sample survey or interview method of research that can be employed to analyse personal or household saving. Therefore, in examining the above argument, we cannot have recourse to empirical work. Nevertheless, we think we are on relatively safe ground in rejecting the probability of any *major* negative influence of (employer-financed) pension fund accumulation on corporate profits and hence on corporate saving.

The history of employer-financed provision for old-age within an enterprise tends to show that such provision was undertaken as much from enlightened self-interest as from paternalism, altruism or other social motives. The employer took the view that the granting of pension rights will reduce the turnover of his labour force and increase its productivity. (The fact that in the early days of the pension fund movement, vesting was a rarity and the parting employee of an enterprise either lost all his accumulated pension rights, or at least that part which was employer-financed, supports the conclusion that the granting of pension rights was in large measure intended to

discourage labour turnover. To this day, vesting is practiced to only a limited extent even in countries with an old tradition of private pensions. In the United States, vesting is not a requirement for approval of a private pension plan by the US Internal Revenue Service⁽²⁾. In the United Kingdom, proposals to make vesting a condition of approval of a scheme by the Inland Revenue have been under discussion for the last few years⁽³⁾ without any legislative action having been taken to date. In all countries whose legislation we have surveyed, vesting of pension rights in intra-enterprise pension funds remains a matter of voluntary agreement). In more recent times, especially in countries such as the United Kingdom, the United States, Holland and Germany, where the granting of private pension rights by the individual enterprise has become fairly wide-spread, pensions are increasingly regarded by both employer and employee as part of the total wage. Collective bargaining tends to concentrate on total pre- and post-retirement remuneration (wages and fringe benefits) rather than simply on take-home pay. For complex political reasons into which we need not go in this context, it even seems that some United States labour unions have recently been paying *more* attention to pension benefits than to actual wages in their collective bargaining (United Automobile Workers). It is therefore increasingly realistic to consider pensions as deferred wages, and to regard the sum of present and deferred wages as being jointly determined by some market mechanism to which all enterprises, operating in the same industry within the same competitive environment, are subject. The division of the value added by the corporate sector between profit and the remuneration of labour, having been determined by this same market mechanism, cannot be assumed to be further influenced (to the detriment of profits) by part of labour's remuneration taking the form of deferred wages (pensions).

3. The conclusion that financing retirement benefits by capitalization rather than by current transfers (repartition) is a powerful generator of saving does not, in itself, imply any specific conclusion with re-

(1) George Katona, *Private Pensions and Individual Savings*, Monograph 40, Survey Research Center, Ann Arbor, Mich., 1965.

Phillip Cagan, *The Effect of Pension Plans on Aggregate Saving: Evidence from a Sample Survey*, New York, NBER, 1965.

(2) Although the Report of the President's Committee on Corporate Pension Funds recommended that the Internal Revenue Code be amended to require the vesting of one-half of accrued rights after 15 years and full vesting after 20 years of service with the same employer. Cf. President's Committee on Corporate Pension Funds and Other Private Retirement and Welfare Programs, *Public Policy and Private Pension Programs* (Washington, D.C.: US Government Printing Office, January 1965).

(3) Cf. Ministry of Labour White Paper on "Preservation of Pension Rights", April 1966.

gard to effects on the *capital market*. Identifying specific effects calls for further analysis.

Under a regime of repartition, by definition no resources are channeled through the capital market (except to the extent that reserves are being accumulated, i.e. that the system is a mixed one with a certain element of funding). The (probably minor) negative effects of the system on aggregate saving will, *ceteris paribus*, reduce the supply of capital to the market. The adverse impact is likely to be distributed over all the submarkets which are fed by personal saving (housing, savings deposits, investment in unincorporated businesses and, though probably to a small extent only, securities).

If, in a given national economy, an overnight change were conceivable from repartition to capitalization, the total effect would be of almost cataclysmic proportions. In a funded system, the ratio between current pension disbursements and fund assets may be in the range 1 : 10 to 1 : 40. Within this broad range, the actual figure depends on a number of complex factors (the age-distribution of the participants, the choice between advance and terminal funding, the degree to which past-service liabilities have been accepted at the start of the scheme, the interest rate used in the actuarial calculus etc. etc.), and has a tendency to fall as the fund approaches "maturity". Some examples of prevailing ratios will illustrate the orders of magnitude involved.

In Holland in 1965, the current pension disbursements of pension funds of private enterprises and branches of industry were Fl 278 million and their mathematical reserves Fl 10.4 billion, — a ratio of 1 : 37. (Inclusion of death and widow's benefits on the one hand, assets over and above mathematical reserves on the other, would not have significantly changed the ratio). In Germany, the pension disbursements of 199 major private pension funds (Pensionskassen) under Federal supervision in 1966 were DM 437 million backed by assets of DM 9.3 billion, — a ratio of 1 : 21. For nonsupervised pension schemes of private enterprises funded by balancesheet provisions, 1965 disbursements were estimated at DM 950 million and total provisions (Pensionsrückstellungen) at DM 20.1 billion⁽¹⁾, — a ratio of 1 : 21. In the United States, an estimate⁽²⁾ for 1966 found a ratio of 1 : 29 between pension disbursements and fund assets, while the figures projected by the same source for 1981 imply a ratio of 1 : 19. This is still a rather high ratio for such a distant date when existing schemes will be far more "mature" than they are today.

Applying a ratio of only 1 : 15 to the 20 French régimes complémentaires grouped in ARRCO operating on the repartition principle, which had pension disbursements of FF 2153 million in 1966, they

"should have had" reserve assets of FF 32.3 billion, i.e. FF 27.2 billion more than they actually held at end-1966. A higher ratio, more in line with current Dutch or German practice and more appropriate to the relative "youth" of the schemes grouped in ARRCO, would result in the shortfall of FF 27 billion becoming as much as FF 40 billion. This figure is put forward here not so much to demonstrate the practical difficulty of an overnight change from "pay as you go" to a reasonable degree of funding, — there is no way in which additional savings running into tens of billions of francs could be created almost from one day to the next to make up for what has been omitted over many years — but rather to point out the magnitude of the opportunity that is missed when at the outset the option is taken in favour of repartition.

From the point of view of the capital markets, and apart from all other considerations of security, equity as between generations, cost and efficiency, funding is clearly a "higher", more developed form of old-age provision than repartition. However, even within the system of funding, there are from this point of view "lower" and "higher" variants.

The "lowest" form of funding is the constitution of fund reserves by way of provisions in the balance-sheet of the employer enterprise. The major part of pension reserves in Germany (Pensionsrückstellungen) and of severance or retirement benefit reserves in Italy (fondi di licenziamento) are simple balance-sheet entries. Under this method of funding, the employer "lends" each year's contribution to himself, the reserve becoming a liability of the enterprise; there is no segregation of a corresponding amount of the enterprise's assets, nor do pension reserve liabilities enjoy any priority in the event of liquidation of the enterprise (unlike arrears of wages, and unlike secured debts). Transfers to the pension reserve seem to fulfil the same role as other forms of self-financing. This, indeed, is regarded as the main attraction of this method: "the money stays within the company" and, other things being equal, reduces its need to raise costly outside finance. Whether this advantage is quite as real as the partisans of the system believe is debatable and will be discussed elsewhere in this study.

In the context of the present chapter, it is sufficient to point out that with this method of pension funding, both the supply and the demand side of the

⁽¹⁾ Dr. Dr. Ernst Heissmann, Wiesbaden, "Die Aufwendungen für Betriebliche Altersversorgung in der Bundesrepublik", Der Betrieb, 7 October 1966. Estimated by Heissmann, op. cit., based on Statistisches Bundesamt, Fachserie L, Reihe 6: Einkommen- und Vermögensteuern, 1962, 1966.

⁽²⁾ Daniel M. Holland, "Private Pension Funds: Projected Growth", p. 56, National Bureau of Economic Research, Columbia University Press, New York, 1966.

capital market is diminished by a presumably equal amount. Alternatively, we might say that if German and Italian enterprises, instead of practising the balance sheet provision method, set up segregated pension funds as enterprises in the USA, the U.K., Holland and to some extent in Belgium do, they would find outside finance more necessary and at the same time easier to raise, as the whole capital market would become considerably broader. Total saving and investment would not change, but its distribution would, i.e. the allocative mechanism of the capital market would act upon a large part of total saving which at present escapes it.

All the more developed forms of capitalization, whether a fund within a single enterprise, a branch of industry or an occupation, or through life insurance companies, feed their net cash flow into the capital market. Whether the allocative mechanism of the market is allowed to distribute these funds efficiently depends on the restrictions placed upon the investment powers of the type of fund in question.

Private unregulated funds are restricted only by their own statutes and by the investment conceptions of their governing body. (The latter sometimes tends to take a mistaken view of what is prudent, — employee representatives in the government or management of the fund are particularly apt to adopt non-professional and disadvantageous investment rules and policies due to a false understanding of what is conservative, orthodox and prudent).

Private funds regulated and supervised by a state authority (as is the case in Germany, Holland and under certain conditions also in Belgium) are usually subjected to certain rules on their investment power imposed by the authority. These rules and in particular their effect on the role of pension funds in the capital market will be discussed again in Chapter II and IV. In the present chapter, only some very general observations will be made:

a) In the EEC countries where such regulation is important in practice, (i.e. in Germany, Belgium and Holland), what is being regulated is the *fund itself*, (e.g. how much of what type of investment may be put into it). In the United States and the United Kingdom, (except for certain provisions designed to ensure that the fund does not become a captive source of capital for the employer sponsoring the fund), it is the conduct and powers of the *trustee* of the fund that is being regulated (e.g. what he may or may not do in investing trust monies).

b) Regulation circumscribing the type and proportions (structure) of pension fund investments tends simply to take pension funds as analogous in their nature with the technical reserves of insurance companies and to apply the same rules to them ⁽¹⁾. With the notable

exception of Holland where the Verzekeringskamer leaves a wide degree of discretion in the choice of investments, these regulations severely restrict the liberty of uninsured (self-administered) pension funds to choose the investments which they themselves deem the most suitable for their purposes. In the UK and the US, only insured pension funds fall under insurance company regulations, not because they are pension funds (whose liabilities depend on the length of human life) but because reserves held by insurance companies with respect to pension contracts are not segregated from their other reserve assets, and the regulations apply to the totality of their technical reserves. In the UK, this is of no great practical importance, because insurance companies have almost complete liberty in the choice of their investments. In the US, insurance companies are generally prohibited from investing more than a small percentage of their reserves in equities (common stocks). This having proved a serious handicap to the growth of insured pension funds, in recent years more and more States have amended their regulations, conceding to insurance companies the right to segregate pension fund reserve assets from other reserve assets and invest the former partly or wholly in equities if so desired by the employer sponsoring the pension plan ⁽²⁾. (Over 30 States now authorize insurance companies to segregate pension fund assets from other assets). This strong movement reflects a recognition that pension fund assets should not be subjected to the same rules as life insurance companies' other assets.

c) Subjecting pension fund investment to the insurance company investment rules imposes upon the former (regardless of whether the pension fund is insured or uninsured) a strong bias in favour of fixed-interest securities. Future insurance liabilities being expressed in fixed nominal amounts of money, fixed interest securities redeemable at a fixed nominal value are deemed especially suitable for covering these liabilities. Moreover, the author of these regulations is the State whose own recourse to the capital market is facilitated by channeling demand in the direction of state bonds. Again with the laudable exception of Holland, these regulations in our opinion have done and continue to do considerable harm to the situation and development of pension funds in the EEC countries.

⁽¹⁾ The Belgian Law of June 25, 1930, which subjects to its provisions all enterprises "which make undertakings whose performance depends on the length of human life" is a good illustration of the philosophy of regarding a pension fund as falling under the category of life insurance. Belgian pension funds confined to the personnel of a single enterprise and set up in a certain legal form are, however, for the time being, exempt from insurance company regulations.

⁽²⁾ J. C. Bowling, "Separate Accounts - The Quiet Revolution in Pension Funding", The C.L.U. Journal, Summer 1965.

Even if it were admitted that the objectives of life insurance are best met by investment in bonds (and this question is not within the scope of our report), the same argument could not apply to pension funds whose future liabilities are more and more geared to final pre-retirement wages, i.e. are not fixed but variable sums depending on future wage and price changes, i.e. on “real”, non-monetary variables of the economic system. By obliging them to invest all or most of their reserves in monetary assets, not only is their contribution to the capital market *biased* in a particular direction, but it is likely to be *reduced*

overall — for the fixed-interest bias imposed upon pension funds will militate in favour of unfunded schemes (repartition as in France) or of funding *via* balance-sheet provisions (as in Germany where the employer corporation’s real assets provide some indirect cover against future changes in monetary values, though this protection finds no automatic expression in the nominal balance-sheet value of the accumulated pension provision). The result in either eventuality (non-funding, or funding in the form of balance-sheet provisions instead of separate funds) is a weakening and/or narrowing of the capital market.

CHAPTER II

Pension Funds and their Assets - The Present Status

The present status of pension funds in the countries of the EEC is extraordinarily difficult to describe in a uniform way. As interest in the subject has until recently been mainly oriented towards its social policy aspects, the economic and the more narrowly financial aspects are poorly or not at all documented. Statistics on assets held, on income from contributions and on the yield on assets, benefit disbursements, numbers and age structure of contributors, non-contributing members and beneficiaries, etc. are in most countries not fully available, or available only for certain classes of funds, and/or with respect to some time series only and not to others. For two of the EEC countries, namely Belgium and Luxemburg, we have found no statistics whatever on non-insured funds (while insured funds are apparently treated together with all other insurance company assets and are not segregated). In countries where national statistics are systematically collected, the coverage is usually so different as to render international comparisons, if not invalid, at least of only indicative value.

Moreover, the legal and fiscal framework within which pension funds are set up and operate is, as is to be expected, far from homogenous from country to country, and there are profound conceptual differences which hinder comparability as between one EEC country and another as well as with non-EEC countries whose more advanced development in the matter of pension funds would render such comparisons particularly instructive.

The present chapter, which will briefly describe the legal and tax framework and the orders of magnitudes of fund assets prevailing in a number of countries in and outside the EEC in the order of their degree of development, is not intended to be exhaustive. Its purpose is mainly to provide a scheme of reference for the legal and tax policy recommendations of Chapter IV. and a starting point for the quantitative forecasts which are set out in Chapter III. and its Appendix.

1. In terms of assets accumulated to provide complementary pensions (or "superannuation benefits") over and above the State old-age pension, the United Kingdom is probably the most advanced country.

Provided that a given pension plan is approved by the fiscal authority (the Inland Revenue), the employer's contribution to the fund is tax-deductible up to the limit of actuarially certified requirements. The interest rate to be used in the actuarial calculus is not prescribed. The employer's contribution is not deemed to be a part of the taxable income of the

employee. The employee's contribution to pension schemes up to 15% of pensionable salary is under certain conditions deductible from his taxable income⁽¹⁾. The income of the fund and its capital gains are entirely tax-free (provided its "in-and-out trading" and underwriting activities, if any, remain within "reasonable" bounds; in case of regular and large-scale participation in underwriting, the fund's underwriting commissions may be subject to tax) and it can reclaim any withholding tax from UK-source income. Investment of pension fund monies in the securities of or in loans to the employer is highly unusual.

With the introduction of graduated (earnings-related) State pensions with the objective that the State scheme should eventually provide for average pensions equal to 50% of pre-retirement earnings ("half-pay on retirement"), private pension plans now have the option of letting their contribution rates and their pension benefits vary inversely with changes in the State scheme, i.e. the State scheme and the private complementary scheme can be merged in an integrated plan.

Uninsured pension funds in the UK rely heavily on professional investment advice and in many if not the majority of cases let their investments be managed on a discretionary basis by an independent professional trustee or manager. (The manager is not necessarily the trustee). This reliance on professional expertise is reflected in the breakdown of their investments. In the last four year (1963-1966), new (private) pension fund investments averaged £ 255 million p.a., of which only £ 23 million or 9% went into central, local and foreign government securities. An average of £ 196 million a year or 77% went into British and foreign company securities, of which by far the greater part into ordinary shares, and a further £ 20 million or 8% into real estate. Equity-type investments whose yield is not perfectly predictable but is likely (as is their capital value) to more or less keep pace with future price and wage changes, thus constituted over three-quarters of recent British pension fund investment. If any change can be expected in this pattern, it is likely to be in the direction of rising percentage of real estate, (as a result of the 1965 reform of corporate taxation); over the

⁽¹⁾ Based on the recommendation of the Committee on the Taxation Treatment of Provisions for Retirement (Cmd. 9063, 1954), British tax legislation since 1956 allows self-employed persons to deduct from their taxable income up to 10% p.a. of total income to be paid into a trust created to provide pensions for people "engaged in the same occupation".

last year, already several mutual investment funds have been formed in Britain for the sole purpose of investing pension fund money in real estate, spreading the risk and providing knowhow for property development and management.

An instructive case study of successful defence of future pensions against the risk of gradual monetary depreciation is a certain pension fund, sponsored by a major British company and its subsidiaries. The book value of the fund is approx. £ 70 million; of this sum, ca. 80% is in ordinary shares, ca. 16% in real estate, 1.5% in fixed-interest securities and 2.5% in short-term deposits. The average yield of the total fund at book value is as much as 13%, — an astonishingly high figure at first sight, which however shows that the attention paid by some pension funds and their supervisory organs to the (often quite low) *initial* yield of ordinary shares at the time of purchase is almost entirely misplaced; the relevant magnitude to consider for long-term investment to meet long-term pension liabilities is not the initial yield as such, but its relationship to its own probable rate of increase in the future. The principal portfolio manager of the pension fund in question regards (and the composition of his portfolio bears witness to his views) investment in fixed-interest securities on the grounds that “their yield is high and predictable and their capital value is assured in nominal money terms at the time of redemption”, as “gambling with the real value of our pensioners’ money”, and as a sign of avoidance of responsibility.

2. In the United States, the provision of complementary pensions over and above the compulsory Federal Old Age, Survivor and Disability Insurance (OASDI) is nearly as highly developed as in the United Kingdom; however, in numerous cases it takes the form of a pension plan combined with a so-called deferred profit-sharing plan, or may be organized exclusively in the latter form. This allows greater fiscal flexibility for the employer but the distinction for our purposes is not important and in our statistics pension funds will include deferred profit-sharing funds.

At book values at end-1966, total private uninsured (“trusteed” or “self-administered”) pension fund assets were \$ 64.5 billion, private insured pension fund reserves \$ 29.4 billion, while the civil service, state and local government, OASDI and other public funds totalled \$ 80.7 billion. Uninsured private funds, which constitute the area of our special interest in this report, were the fastest-growing component of the total; insured plans, despite the concessions granted them in recent years (tax-exemption of investment income and freedom of investment of segregated reserves) showed relatively less growth.

Assets of uninsured private funds by book value at the end of 1966 were invested as to only 4% in US government securities. A further 52% were invested

in corporate bonds and loans (of which only 1.5% in bonds and loans of the employer), mortgages and other non-equity types of assets exposed to the risk of monetary depreciation. (Insured plans were 80% invested in such assets). 44% of the total were invested in ordinary shares. In terms of new investment, however, the proportion of ordinary shares was higher; 61% in 1966. The justification for the gradual shift in pension fund investment towards equity-type capital is well-illustrated by market value figures. Of the end-1966 assets, the market value of the pension fund’s ordinary shares was \$ 37.7 billion or 133% of book value, while the market value of all other assets was \$ 33 billion or about 91% of book value⁽¹⁾. (Book value normally equals cost).

A pension plan must be “qualified” (approved by the Commissioner of Internal Revenue) to enjoy certain tax privileges. A simple balance-sheet provision or reserve does not qualify, i.e. allocations to it would not be tax-deductible; moreover, the Internal Revenue may prohibit investment of pension fund monies in the employer’s business⁽²⁾. If the plan is qualified, the employer’s contribution to it is deductible up to the limit of 5% of the participants’ annual remuneration plus an appropriately spread portion of unfunded past-service liabilities; in addition, 15% of the participants’ annual remuneration may be contributed by the employer tax-free to a deferred profit-sharing plan. Carry-over is permitted⁽³⁾. Consolidation of a private complementary pension plan with the OASDI system is also specifically permitted; for instance, while the OASDI currently provides average pensions equal to 53.5% of average earnings, if a given company’s pension plan provides for supplementing the OASDI pension with a private pension up to 75% of pre-retirement earnings, a more rapid rise in earnings than in OASDI benefits would authorize and oblige the company to step up its contributions so as to fund its resulting extra pension liabilities, (and vice versa if OASDI benefits rose faster than earnings).

The majority of American uninsured pension funds are managed on a discretionary basis by professional trustees, usually by trust departments of banks. An interesting new trend is the division of the fund among two or more trustees (“split-trusteed funds”) whose competitive performance (in terms of growth of income and market value of the fund) is being constantly compared. One of the largest US corporations splits its pension fund among half-a-dozen trustees, and allocates the new net cash flow among them

⁽¹⁾ Data from US Securities and Exchange Commission, Washington, Release No. 2219, July 1967.

⁽²⁾ This practice is also discouraged by the SEC, see *The Wall Street Journal*, April 21, 1966, p. 6.

⁽³⁾ In Germany, carry-over is specifically prohibited (*Nachholverbot*).

according to a formula whereby the best investment management performance is rewarded by the allocation of a more than proportional share of new money to the successful trustee.

3. The degree of development of pension funds, their freedom of operation and their contribution to the capital market in Holland is second only to Britain among European countries. One of the historical reasons for this, (though by no means the only one) is that like in the U.K. until the recent introduction of the graduated State pension scheme, the State pension scheme in Holland is a flat-rate one, not related to earnings, being designed more to assure some minimum subsistence level in old age than a retirement income geared to the accustomed living standards of a participant.

Apart from the public sector whose pension funds (Fl. 10.1 billion of assets at end-1966) fall outside the scope of this study, there are three types of fund in Holland: private occupational funds for entire branches of industry (59 such funds), private funds confined to one enterprise (about 1600 such funds) and so-called savings funds. The occupational industry-wide funds are set up under an agreement between the employer and employee organizations, and can be declared compulsory for all enterprises in that industry by the Minister of Social Affairs under the relevant Act of 1949. Private single-enterprise funds (often set up in the form of a foundation), savings funds (which are quantitatively not very important) as well as occupational industry-wide funds must be approved under the Pension and Savings Act of 1952 and are subject to the supervision of the Verzekeringskamer. Employer contributions to pension funds are fully tax-deductible up to the limit of actuarial requirements (and under certain circumstances, provided they are paid irrevocably, also in anticipation of such requirements); the employer's contribution is not regarded as taxable income for the employee; the employee contribution is deductible from the latter's personal income tax (up to Fl. 5000 p.a.). The pension fund itself is free from Dutch income and capital gains tax, and may reclaim any Dutch withholding tax. The supervision of pension fund finances by the Verzekeringskamer is carried out in an enlightened manner: the investment must be "sound", but no prior approval is required. The fund may not invest more than 10% of its assets in the securities of or loans to the employer. In all other respects it has virtually complete freedom to invest as it sees fit both in Holland and abroad⁽¹⁾.

At end-1965, single-enterprise pension funds held assets (at book values) of Fl. 6.8 billion, of which 40% was invested in securities⁽²⁾, 34.5% in direct loans, 11% in real estate and 9% in mortgages; the average yield on all assets was 4.86% (after 4.64% in 1964 and 4.59% in 1963). Their new investments in

1965 amounted to Fl. 607 million, of which 40% went into direct loans, 24% into securities, 15% into real property and 11% into mortgages. Pension funds of branches of industry held total assets of Fl. 5.2 billion, the increment in 1965 having been Fl. 557 million. The breakdown of the total investment portfolio and of new investments during the year was slightly different from that of single-enterprise funds, direct loans and real property representing a higher and securities a lower proportion of the total. The average yield on total assets was virtually identical (4.8% vs. 4.86% for single-enterprise funds).

In Holland, it seems less usual than in the UK and the US to hand over the management of a pension fund on a discretionary basis to a professional trustee, the majority of the funds managing their own portfolio though obtaining investment advice from banks or other professional sources.

A case study in the evolution of investment policy is provided by one of the largest Dutch single-enterprise funds. With a book value of over Fl. 1 billion, this fund was until recent years invested as to 25% in real estate, 12% in Dutch and 3% in foreign ordinary shares and 60% in Dutch fixed-interest securities, direct loans and mortgages. As the company's pension plan is related to earnings in the immediate pre-retirement period, each general wage increase caused a shortfall between the present value of future pension liabilities and the value of the investments accumulated from past contributions, and the resulting actuarial deficit had to be made up by the company through massive supplementary contributions (running into tens of millions of guilders in each of the last three years). It was thus realized that protection against such extra liabilities, caused by the general rise of wages and prices, can only be obtained by putting greater emphasis on investments whose value and yield follow the real rather than the monetary variables of the economy. The target composition of the total portfolio is now 30% (instead of 25%) in real estate, 30% (instead of 15%) in ordinary shares and 40% (instead of 60%) in fixed interest. Moreover, within the ordinary share portfolio, the proportion of non-Dutch stocks is being increased from one-fifth to nearly one-half, in pursuit of a policy of rigorous selectivity and of buying the best dividend growth prospects in whichever country they may be found, although all the fund's pension liabilities are or will arise in Holland itself.

⁽¹⁾ Except that direct investment abroad, e.g. in property, direct loans or unquoted securities, is subject to exchange control approval, — but this is a general rule enforced by the Nederlandsche Bank and is not confined to pension funds.

⁽²⁾ No breakdown between government and corporate securities or between fixed-interest securities and ordinary shares appears to be available.

4. The legal and fiscal framework of complementary pension plans in Germany is of considerable complexity. The graduated (earnings-related) State scheme (Soziale Rentenversicherung) is partly capitalized and is partly based on current repartition (Umlageverfahren); it is widely considered to be entering into a period of substantial deficit (disinvestment of existing reserves) as the temporary favourable age-distribution between contributors and pensioners, caused by the large number of premature male deaths in 1939-1945, is restored to normal. At present, the system theoretically provides for a pension of 60% of earnings after 40 years of contributions; in practice, this currently tends to work out at 45-50% of last pre-retirement earnings for lower income and 20-25% for higher-income contributors. The rôle of complementary plans in bringing total pensions to an adequate percentage of last pre-retirement income (75% is considered as the desirable standard, and is the fixed objective of the seven public pension funds [öffentlich-rechtliche Versorgungskassen] set up for the non-staff [Nichtbeamtete] employees of railways, post, municipalities and nationalized enterprises), is thus likely to maintain or increase its importance.

Complementary pension funds may take one of three principal legal forms:

i) Provisions in the balance-sheet of the employer enterprise (Pensionsrückstellungen). An employer is not legally obliged to fund his pension liabilities, but most in fact find it prudent to do so. Dotation to provisions are tax-deductible if the pension is a contractual obligation and if its funding is calculated according to certain rather strictly defined methods; the interest rate to be used in the actuarial calculus is fixed by tax law at 5.5%, and under-provision in a given fiscal year cannot be made good in a subsequent year (Nachholverbot). Funds in the form of balance-sheet provisions must be non-contributory.

Many German enterprises regard balance-sheet provisions for pensions as a tax-privileged form of self-financing which, although non-contributory, is therefore more advantageous for the employer than a separate fund (Pensionskasse or Unterstützungskasse). This view is debatable. The fund constituted in the form of a balance-sheet provision has no investment income properly speaking; in a general sense, however, its income is the yield accruing to the enterprise from the investments on the asset-side of the balance sheet which the pension provisions on the liabilities side have helped to "self-finance". This income is subject to all the various taxes (Ertragsteuer, Körperschaftsteuer, Vermögensteuer) to which the rest of the employer's income and assets are subject. Thus it is only the after-tax income (equal to perhaps 45-50% of pre-tax, depending on the distribution policy of the enterprise and on its capital tax position) generated by the investment of pension fund provisions

which remains available to the employer for paying current pensions or continuing to fund future ones. The alternative to self-financing via balance-sheet provisions ("borrowing the pension fund") is borrowing from some outside source. The interest charge on such borrowing is, of course, fully tax-deductible, i.e. it is offset against the taxable income from the enterprise's assets. Under such circumstances, the pension fund is an independent tax-free entity, whose income is fully available, tax-free, for the payment of current pensions or the continued funding of future ones. This, in turn, diminishes the cost to the employer of providing pensions. If the tax-saving and tax-increasing factors inherent in the two alternative methods are balanced against each other, it is doubtful whether the balance-sheet provision method of funding is cheaper than the separate fund method⁽¹⁾. It is incontestable that a captive internal source of finance (pension provisions) is more convenient than dependence on the capital market or on the banking system (borrowing), particularly when the enterprise in question is already substantially indebted. However, heavy indebtedness to their own future pensioners ("Sozialverschuldung") is also causing concern to certain forward-looking enterprises as well as to neutral observers, particularly since the latter type of debt is unsecured and enjoys no priority upon liquidation or bankruptcy.

Balance-sheet provisions, estimated to amount to about DM 20 billion, have however other substantial advantages in Germany over other methods of pension funding, such as freedom from supervision, no employee representation, no taxation of the employer's contribution as if it was part of the taxable income of the employee, and perhaps above all no necessity to invest pension funds in fixed-interest assets vulnerable to inflation. For these reasons, under present laws and regulations they would very likely continue as the largest pension funding medium; although in certain German financial circles it is believed that as balance-sheet provisions constitute an unorthodox method of pension fund financing, present regulations are not likely to remain in force for ever.

ii) Pension funds (Pensionskassen) set up in the form of a mutual assurance association. There are at present about 250 such funds, some occupational ones for entire branches of industry (building, banking, chemical industry, flour milling industry, consumer co-operatives) and for certain professions, others for

⁽¹⁾ The precise balance of advantage will be determined by the degree of imperfection of the capital market, the marginal rate of interest at which the individual employer can borrow funds from it, the (after-tax) rate of return at which it can invest the borrowed funds in its own enterprise and the (tax-free) yield which can be obtained on the investment of pension fund assets outside the enterprise.

the employees of single enterprises. The 190 largest funds are under Federal, the small ones (with annual contributions of under DM 75 000) under Land supervision. These funds may, but need not be, contributory; in any event, employee representatives must effectively take part in their management. The employer contribution is tax-deductible if made on a (strictly defined) actuarial basis; the rate of interest to be used in calculating funding requirements is prescribed at 3.5%. The employer's contribution in excess of DM 312 p.a. for an employee is added to the taxable income of the employee. On the average, 70-75% of the contributions paid into pension funds come from employers and 25-30% from employees.

The Bundesaufsichtsamt für das Versicherungs- und Bausparwesen supervises the investments of pension funds on the same principles as those of life insurance companies. In practice, this prevents pension funds from having more than 10% of their assets at book value (the lower of original cost or market value) in ordinary shares and from investing more than 10% of new money in ordinary shares in any given year. Moreover, only ordinary shares accepted as suitable for inclusion in mathematical reserves (Deckungstockfähigkeit) can be purchased, and the criteria and practice of the supervisory authority in this regard are rather controversial, (a relatively high initial yield is usually required, though the initial yield is of only limited relevance to long-term liabilities). Finally, the 10% rule at book value hinders active and flexible management of the ordinary share portfolio, for a given investment sold at more than book value cannot be fully replaced by a new one within the permitted 10%.

These investment restrictions make this type of pension fund a less than perfect medium for funding pensions related to earnings in the last pre-retirement period. Nevertheless, although in an era of rising prices and wages the trend is undoubtedly towards the granting of such earnings-related pensions, the development of pension funds in the form of mutual insurance associations has been vigorous in the past; at present they hold total assets of DM 9.31 billion and their continued growth seems assured primarily because of the obstacles hindering the adoption of the third type of funding medium, that of the "provident funds" (Unterstützungskassen).

iii) There are over 10 000 "provident funds" (Unterstützungskassen), the great majority of them rather small (although it would be legal for several enterprises to group together and found a group fund, but in practice this is seldom done), set up as separate legal entities on behalf of the employees of an enterprise (and their dependents) to provide pensions (and/or other benefits). There is no supervisory authority for such funds, and they are completely free in their investment policy. No statistics are

available on their investments. Many of the small funds simply lend their assets back to the sponsor enterprise, but some of the larger ones invest in both fixed-interest securities, ordinary shares and property. Like for the funds in category (ii), their investment income is tax-free, nor are they subject to capital gains tax.

These funds would be eminently suitable for capitalizing future pensions and managing the corresponding assets, were it not for a severe fiscal limitation on their size. The employer's contribution to future pensions is a tax-deductible expense only up to 1.5% p.a. (and in certain cases an additional 0.5% p.a.) of the total wages and salaries; and the total size of the fund is limited to the capitalized value of current pension disbursements plus 30% (and an additional 15% for non-pension benefits) of the average annual payroll of the sponsor enterprise in the preceding three years. It is readily apparent that an annual contribution of 1.5% and a fund ceiling of 30% of the payroll can capitalize only the most modest future pensions which could, even with the most brilliantly successful investment of the fund's assets, only finance a small marginal supplement to the basic State old-age pension. Providing pensions through such a medium represents little more than a gesture on the part of the employer towards his employee.

Total assets of such funds in 1965 were estimated at DM 4.5 billion; the growth of their assets has been a little less fast than that of the two other types of fund, but still remarkable. Many enterprises which have only recently adopted a complementary pension plan for their employees have chosen this form, having judged balance-sheet provisions financially too unorthodox and un-conservative, and pension funds in the form of a mutual assurance association too hamstrung in the matter of investment; but within a relatively short span of years, their provident funds will run up against the 30% ceiling, will have to stay frozen at that level and they will have to revert to one of the other funding media or adopt an insured pension plan on top of the one financed by the provident fund.

In discussing the alleged financial attraction of the balance-sheet provision method of funding, we have stressed that separate pension funds (both Pensionskassen and Unterstützungskassen) enjoy complete tax exemption. This is correct in the sense that they are *not liable* to any tax; however, unlike pension funds in Holland (as well as in the UK and the USA), German pension funds do not have the privilege of reclaiming withholding taxes (coupon tax, Kapitalertragsteuer) and as they have no tax liabilities against which withholding taxes could be credited, their investment income from ordinary shares and certain bonds is automatically reduced by 25%. They are thus discouraged from contributing their funds

to this section of the capital market⁽¹⁾; this seems to be an unintended accidental by-product of German tax legislation.

To sum up in a concrete (though rather exceptional) example the various legal and fiscal peculiarities and handicaps afflicting the possible types of German pension fund, we will relate a case history which we found striking and regard as a unique illustration. The fund in question is medium-sized, with a book value of about DM 40 million, an annual net cash flow of about DM 5 million, and is sponsored by an industrial company employing a high proportion of young unskilled female labour. The fund is set up in the form of a balance-sheet provision (*Pensionsrückstellung*), because it is non-contributory, but above all because the management is convinced that the severe restrictions imposed on the investment of the assets of a proper pension fund (*Pensionskasse*) may render the future cost of servicing earnings-related pensions intolerably high. A provident fund (*Unterstützungskasse*) would not serve its purpose because of the low rate of tax-deductible contributions and the low ceiling imposed on its size. However, the management also considers a simple balance-sheet provision (*Pensionsrückstellung*) as an unsolid method of financing which exposes pensioners to an unjustifiable risk. Therefore the assets corresponding to the provision are segregated (*Sondervermögen*), irrevocably handed over to a trustee, and invested by an independent manager (a bank). Nearly 100% of the fund is invested in ordinary shares, of which about 60% in German and 40% in foreign shares. Since the segregated account is, in the legal form of an intra-enterprise balance-sheet provision, the property of the enterprise and not of a separately constituted pension fund, its investment income is fully taxed as if it was the income of the company itself, and in addition a part of foreign withholding taxes which cannot be offset against German tax liabilities, are entirely lost. Despite these complications and serious tax disadvantages, the company considers its chosen funding method as the least bad of the permissible alternatives, and it feels compensated for its fiscal losses by the gradually rising dividend income from the fund's investments.

5) In Italy, the State old-age pension is graduated, i.e. related to a certain extent to the lifetime earnings of the pensioner; the system is relatively advanced and is being further developed following the Act of July 21, 1965, with the ultimate objective of providing employees with a pension equal to 80% of their last three pre-retirement years' average earnings after 40 years of contributions. Consequently, the scope and need for private complementary pensions is more limited than, for instance, in a country with a different and less ambitious State old-age security system like Holland. However, the main State old-age pension plan (the *Istituto Nazionale della Previdenza Sociale*)

operates on a modified repartition principle (its reserve assets at Lit 550 billion in 1962 were less than one-third of the year's current pension disbursements, and its net saving or reserve accumulation was only Lit 121 billion, although this latter rose to Lit 428 billion by 1964). The public funds administered by the *Ministero del Tesoro* (the *IPAMT*) were apparently more adequately, though presumably not fully capitalized, (pension disbursements of Lit 57.2 billion in 1962 being backed by reserve assets of Lit 598 billion; the annual accumulation in 1962 was Lit 69.8 billion and rose to Lit 103 billion by 1964).

The distinguishing feature of the Italian private complementary system is that it is designed in the first place to provide security against dismissal from employment; the fund constituted for this purpose by an employer appears to have a double character and serves as a pension fund upon the retirement of the employee. Moreover, provision of an indemnity against dismissal and upon retirement is compulsory, — this again distinguishes the Italian system from private complementary pension systems in other countries which are either based on private contract or are *ex gratia*.

Italian data on private pension plans do not seem to be complete. Some pioneering statistical research has been done by financial institutions⁽²⁾, by the *Banca d'Italia* and by academic sources⁽³⁾ on which the present report partly relies. Total assets of all private plans included in our data (based on a sample of the Italian corporate sector which covers two-thirds of all companies with a nominal capital of over Lit 50 million), as well as the nationalized electrical industry (*ENEL*), in 1964 (the last year for which details have been worked out) were Lit 1 701 billion, of which Lit 1 130 billion relating to industrial and commercial companies and Lit 571 billion to banks and other financial institutions. In the latter group Lit 178 billion were accounted for by separate autonomous funds, while in the industrial and commercial company sector autonomous funds totalled probably not more than Lit 80 billion, virtually all constituted by Italian

⁽¹⁾ If they wish to invest in securities subject to withholding tax, they can do so without loss of yield by buying German mutual fund units, dividends on which are paid gross. This removes the tax handicap, but also the freedom of the fund to choose; for the securities underlying the mutual fund units are, of course, chosen by the latter. The choice of investments by German mutual funds, and particularly their distribution policy (partial or even full payout of realized capital gains) is not necessarily ideal for a pension fund, for which present income is not more valuable than income in the distant future, its preferences for income at various periods of time depending on the time structure of its liabilities (engagements).

⁽²⁾ Cf.: *La Finanza delle Assicurazioni Sociali in Italia*, (1919-1962), *Mediobanca*, Milano, 1964.

⁽³⁾ Cf.: Prof. A. Confalonieri, "I Fondi di Quiescenza", Milano, 1966.

subsidiaries of foreign companies. The rest, 85% of total assets, took the form of provisions in the balance-sheet of the employer (Fondi di Licenziamento e di Anzianità). The mechanism of these provisions is closely analogous to those of the German Pensionsrückstellungen; they are constituted tax-free on actuarial principles, enjoy no special priority upon liquidation of the enterprise, and provide a source of "self-financing" for it. Their dependence on (and volatility with respect to) changes in wages and salaries, however, is even more marked than that of the German Pensionsrückstellungen, for they are necessarily and compulsorily based on the employee's last salary level (rather than, as is partly the case in other countries, on an average of past and current wages and salaries). All considerations set out earlier in this report with regard to the debatable financial advantages of this type of self-financing, its constricting effect on the capital market and on its ability to allocate capital resources in a competitive manner, and to the contentious nature of heavy corporate indebtedness vis-à-vis future pensioners, apply with equal force to the Italian funds set up in the form of balance-sheet provisions.

6. No global data at all have been found relative to Belgian complementary pension funds, although we understand that the Ministère de la Prévoyance Sociale and the Ministère des Classes Moyennes are studying the possibility of organizing the collection of relevant statistics. We are thus obliged to limit our report to some descriptive comments on the legal and fiscal framework within which private funds might operate.

In principle, any Belgian institution providing for future pension benefits ought to fall under the Act of June 25, 1930 regulating insurance companies; under Article I of this law, however, "institutions established *within* private enterprises and to which only the personnel of such enterprises belong" are exempt. In practice, such institutions for the purpose of collecting employers' and employees' contributions, investing the accumulated funds and paying pensions must, in order for the employer's contribution to be tax-deductible, be independent of the enterprise and are often constituted in the legal form of an independent non-profit making association and hence not *within* the enterprise. For this reason, their exemption from the insurance company regulations has been contested, but the competent Belgian authorities have so far not conceded the arguments of the insurance industry, and pension funds in the form of ASBL's have been tolerated. It is understood, however, that new legislation which might bring them under regulation is being studied by the Ministry of Economic Affairs.

While a pension fund *per se* would not be a recognized tax-free legal entity in Belgium, and might be subjected to full corporate taxation, even an ASBL,

whose exclusive statutory purpose is to provide for the pensions of its members, is not wholly tax-exempt either. In the first place, its investment income from either Belgian or foreign securities is subject to Belgian withholding tax at 20% on dividends and 15% on interest, which cannot be reclaimed; nor can an ASBL reclaim the real estate tax on its real estate investment income. In addition, an ASBL pays a capital tax of 0.17% p.a. on its assets and may be subject to capital gains tax on sales of real property owned by it. Turnover of its securities portfolio (significant and frequent switching from one security into another) may make it liable to full corporation tax. On the other hand, the tax treatment of a pension plan established in the form of an ASBL is liberal in the sense that no restrictions are placed on the method of the actuarial calculus of the employer's contribution; the employee's contribution is deductible from his taxable income and the employer's contribution made on his behalf is not (not even in part as in Germany) considered as an addition to his personal taxable income. An ASBL, moreover, may not lend its funds to the sponsoring enterprise without endangering its legal status. Its investments are otherwise not restricted by law except that real estate owned by it must be "for its own use" (e.g. it must house the office of the ASBL).

This relative freedom of an ASBL to invest as it sees fit (and to delegate investment powers to a third party, e.g. to a professional management company or bank) as long as it escapes the insurance company regulations, is in marked contrast to the situation of a pension plan which does fall under these regulations. Under the latter⁽¹⁾, not more than 15% of its assets may be invested in Belgian ordinary shares and not more than 20% in non-Belgian securities, each of the latter having to be individually approved by the Ministry of Economic Affairs; not less than 15% must be invested in Belgian state or state-guaranteed, provincial or communal obligations. However, as much as 65% may be invested in real estate. These regulations are nearly as severe as the German ones, and are certainly not apt to encourage the flow of contractual savings to the securities market; they also discriminate against one sub-market, that for ordinary shares.

Although the legal and fiscal environment is far from ideal for their development, it seems that in the last decade and especially in the last two or three years a large number of Belgian enterprises (the majority of them subsidiaries of foreign companies) have formed pension funds, usually in the form of an ASBL, their incentive to do so having been the stabilization of their personnel (reduction of labour turnover).

⁽¹⁾ Royal decree of June 17, 1931.

7. Complementary pension funds in the sense used in this report are virtually non-existent in France. The assets of the pre-war "mutuelles", invested in fixed-interest securities, have been practically wiped out by the war- and post-war inflation. Rather than shoulder the task of rebuilding them while also providing the current pensions which they had been supposed to support (i.e. rather than make one active generation pay both the pensions of the previous generation and build up capital to pay for its own), France after the war, through an example-setting decision of the Patronat and the labour unions, opted for the repartition system. This decision was made all the more tempting as there was a widespread though ill-founded belief that it is the capitalization system as such, and not the way the capital was invested, which was vulnerable to inflation; French public opinion was acutely inflation-conscious and consequently regarded the advance funding of pensions as a near-certain method of dissipating their real value.

As pension funds in our sense are now a negligible quantity, the legal and fiscal rules under which they might operate are ill-defined. It seems that such a fund would first have to secure the agreement of the Ministry of Labour, which would probably require that the pension plan be non-contributory, the fund be independent of the sponsor company, be owned and co-managed by the personnel, and its investments be at least 50% in government obligations. The Ministry of Finance would allow the employers's contribution to be tax-deductible expense, but it is doubtful if it would grant tax exemption to the pension fund itself; the latter may be subjected to both corporate income tax on its investment income and to capital gains tax on realized gains. However, these are merely tentative indications, as there seems to be no standard practice and case law in the matter.

It is not intended to imply that because pension funds are not developed in France, there is no contribution to total saving as a result of complementary pension plans. Repartition systems do make a direct contribution to saving as long as the repartition is incomplete, i.e. as long as they continue to add to their reserves⁽¹⁾. In France these reserves are certainly rather modest compared to national income, to the high degree of coverage (the proportion of employed population covered by a complementary system) and to the number of beneficiaries. They bear no comparison with the reserves which would be regarded as normal in a system based on funding (the ARRCO group of schemes in 1966 disbursed pensions of FF 2 153 million and held reserves of FF 5 111 million, a ratio of about 1:2.4). For a repartition system, however, this reserve level is not negligible. It was made possible by the rather favourable ratio currently prevailing between the number of contributors and of pensioners, and the restraint exercised by

the management of the systems in not taking full advantage of the favourable ratio by proceeding to a full distribution of current contributions. Even so, the annual rate of reserve accumulation has been falling since 1963⁽²⁾; critics of the French repartition system assert that the distribution of benefits should have been far more restrained in the past in order to take full account of the foreseeable worsening of the ratio between the number of contributors and the number of pensioners they must support.

The critics of the current and foreseeable financial situation of the French complementary schemes, however, oversimplify the issue. A repartition system does not (and indeed should not, for it is intrinsically incapable to) undertake to provide a certain future pension to present contributors, and cannot by definition get into financial difficulties in trying to meet undertakings it has not really entered into. The contributor in a repartition scheme acquires a right to a certain number of "points". What his future pension will be cannot be foretold today. It will depend on the monetary value assigned to a "point" by the commission managing the system when he will be drawing a pension, and on the average level of the wages and salaries of the future contributors to the system. It may or may not be correct to accuse the commissions that this value has been fixed too generously in the past. It may or may not be just to accuse that by steadily raising the assigned value of a "point" in step with rising wages and salaries, the managing commissions created a deep-rooted illusion among both contributors and pensioners that the level of pensions is forever firmly linked to the level of earnings of the active contributors, (i.e. in the last analysis, that in a repartition system pensioners are automatically protected against inflation and automatically share in the rise of productivity). Maybe such an illusion has in fact been created; and there may be a certain moral pressure on the French complementary system not to deceive the illusion, or at least not too harshly. But it should be clear that no French repartition scheme is under any contractual or other legal obligation to run down its reserves or temporarily get into debt in order to spare an illusion, for it is always free to reduce the value it assigns each year to a pension "point", or at least not to increase it as the earnings of the active participants increase. By doing so, it can avoid any adverse impact upon its reserves of a given demographic change in the population covered by it.

⁽¹⁾ Strictly speaking, a repartition system involving the creation of reserves is not a pure, but a "qualified" or "modified" repartition system.

⁽²⁾ For instance, ARRCO added FF 943 million to reserves in 1963, probably FF 505 million in 1967 and is unlikely to reach FF 300 million in 1968.

The rôle of the repartition system in contributing to saving in France is therefore not necessarily prejudged; by a collective annual decision, it could not only continue to accumulate reserves in the future, but even step up its rate of reserve accumulation. However, it is clear that in practice it is unlikely to

lean too far in this direction and disappoint too gravely its pensioners and its contributors nearing retirement age. This "social" assumption, and the resulting sharp but transitory fall in its rate of reserve accumulation, is implicit in the asset growth forecasts put forward in Chapter III.

CHAPTER III

Scope for Growth of Pension Funds

The present chapter is intended as a compact frame of reference for policy decisions. Its immediate objective is to project the development of private, non-insured pension funds to 1980 in the Common Market, assuming no change in the existing fiscal and regulatory environment. In line with its intended use, however, the analysis stops short of constructing a rigorous model of pension fund growth. It focuses instead on (a) providing a picture of the actual situation in statistical terms in a no doubt poorly documented area, (b) giving an appreciation for trends and long-term growth potential, (c) supplying enough detail on the various determinants of pension fund growth, as well as on the main relationships underlying it, to permit ready calculation of the quantitative effects of given policy changes. Only the highlights of the analysis are presented in the ensuing discussion.

1. *Statistics and Estimates*

As remarked earlier in Chapter II, statistics on pension funds are scarce and suffer from lack of comparability among countries. Except for Holland, no EEC country publishes comprehensive data on the pension fund particulars needed for assessing their growth prospects, i.e., membership, pensioners, fund accounts. Although in consequence, a substantial part of the research effort was spent on assembling facts, the historical series on most types of complementary pension schemes had to be pieced together from estimates based on scattered "benchmark" data, results of small samples or simply the experience of particular companies. While this set of estimates, set out in Appendix B ending the present report, seems consistent and plausible enough for purposes of the task at hand, the figures should not be construed, let alone used as statistical facts. The series shown for Belgium, a country without *any* information relating to private, non-insured pension schemes, are especially prone to error; their inclusion in the ensuing tables serves mainly to permit calculation of EEC totals.

2. *Scope of Analysis*

Aside from the differences just noted in the coverage and reliability of statistics, there is wide variation amongst EEC countries in terms of the relative importance of particular types of pension schemes, as well as in the general development of the (non-insured) pension fund movement. The "target" of this analysis, to be exact, is that segment of private, non-insured, complementary schemes which are set up as

autonomous legal entities and keep on accumulating (and investing) funds to back future pension obligations. Such funds, however, cannot be treated in isolation. To assess their "scope for growth" requires some attention to be paid to other forms of private complementary schemes⁽¹⁾ (insured or non-insured, funded or non-funded). To form an idea of the plausible size of future complementary benefits, trends in (legal) social security systems call for investigation. Finally, as their importance to the capital market is comparable to that of private funds, certain large public pension funds (i.e., in Germany, Italy and the Netherlands) deserve at least token consideration. The relative importance of the main categories of complementary pension schemes at present is illustrated by the figures overleaf (referring to total fund reserves in 1966, expressed in % of GNP for the EEC and a number of "reference" countries).

The figures call for three observations. First, although private complementary schemes are still less important in the Common Market as a whole (about 7% of GNP) than either in the U.S. (12.7%) or in the U.K. (16.8%), the variation within the EEC is striking. The "weight" of pension funds in the Netherlands (19-20%) actually exceeds that of probably any country in the world, while fund reserves in France ("repartition system") are evidently of negligible importance to capital markets. Secondly, self-administered, funded schemes (the term "autonomous" adopted for the tables) are far less popular form of complementary pension plans (again excepting Holland) than in the Anglo-Saxon countries, owing largely to the unfavourable fiscal and restrictive regulatory framework reviewed in some detail in the preceding chapter. Thirdly, since all evidence points to the relatively limited role played by insured schemes in the EEC (albeit considerably larger in terms of membership than in terms of guaranteed benefits), they may be safely excluded from consideration in assessing future growth. In the U.S. and the U.K., by contrast, insured schemes stand in active competition with non-insured pension plans.

3. *Basic Assumptions*

Rather than attempting to predict the most likely course of development, the projections set out in this chapter are based on a network of assumptions, partly

⁽¹⁾ Providing appreciation for the impact of given policy modifications also calls for projections of alternative pension arrangements.

Private non-insured schemes

	Autonomous	Other Funds ⁽¹⁾	Partly Funded	Total	Public Funds	Insured Plans	Social Security
Germany	2.8	4.7	—	7.5	2.1	.4-5 ⁽²⁾	6.3
France	— ⁽⁷⁾	—	2.0	2.0	..	—	.. ⁽⁸⁾
Italy	.9-1.1	6.6	—	7.6	2.6 ⁽³⁾	.2-.3	4.6
Netherlands	17.8	—	—	17.8	13.4	1.5-2	..
Belgium/Luxembourg (*)	3.7	—	—	3.7	2-3	2-3	9.6
EEC, total (by comparison:)	2.6	3.0	.7	6.2	3.8 ⁽⁴⁾	.7 ⁽⁵⁾	..
U.S.	8.5	—	—	8.5	8.1 ⁽⁴⁾	4.2	2.8
U.K.	9.4	—	—	9.4	5.9	7.4	..
Sweden	(11.2) ⁽⁶⁾	—	—	—	11.2 ⁽⁶⁾	—	..

* Rough estimates to permit computation of EEC totals.

(1) Balance sheet entry schemes.

(2) 2.1 %, if individually contracted pension schemes are included.

(3) IPAMI only.

(4) State and Local, Civil Service and Railroad Retirement Plans.

(5) National Pension Fund.

(6) Excluding France.

(7) — means 'Nil' or insignificant figure.

(8) .. means 'figures not available'; 'no estimates'.

imposed by the purpose of the exercise itself, partly chosen for convenience.

The foremost assumption, to repeat, concerns the institutional environment of pension funds. It is *explicitly* assumed that all aspects of government policy bearing on pension funds (tax legislation, regulation of funding practices, investment of reserves, supervisory procedure, etc.) will remain as they are today.

Since the approach adopted relies heavily on relationships (ratio analysis), both amongst the major statistical measures of pension fund growth and between pension schemes and socio-economic development, the projections require a number of other *explicit assumptions* with regard to the latter. The principal ones are demographic trends (number and age structure of the population, activity rates, labour force and private non-agricultural employment), general economic trends (GNP, savings, and investment, price increases) and the future development of social security systems (pensioners, average old age and survivor benefits, etc.). These assumptions are set out in tables 1, 5, below, and tables A-3, A-5 of the appendix⁽¹⁾. Again, the main emphasis was placed on securing internal consistency among the variables listed rather than aiming at reliable (supported) projections of economic growth.

In addition to the explicit assumptions taken into consideration, the projections assume *implicitly* that funding practices and other funding variables will

also remain by and large unchanged. Thus we assumed, for instance, that eligibility requirements (age, seniority), actuarial methods, retirement age (65 for men, 60 for women), the proportion of dependants and survivors to pensioners etc., will not be modified appreciably during our projection period.

4. Conceptual Framework

The method of approach represents a departure from previous studies on the subject (notably by D. M. Holland, P. P. Harbrecht, for the U. S.), by virtue of a shift of emphasis among the main statistical determinants of pension fund growth. While the reference works cited tend to "build up" projections of pension fund assets from the relevant accounting flows (contributions, investment earnings, benefits), this paper concentrates directly on the behaviour of the relationship between the size of assets per covered worker (or beneficiary)⁽²⁾. Once the rate

(1) This relationship, which was found to possess a number of stable, hence predictable, characteristics both on theoretical (actuarial) and empirical grounds, will be referred to as the "k-multiple" for short throughout the chapter. The corresponding French expression employed in the Appendix tables is "rapport RPA/PM", standing for "Réserves Par Affilié" / "Prestation Moyenne" (i.e., Assets per Member/Average Benefits). Further comments on p. 32.

(2) Appendix A attached to this report (cf., p. 47 for contents) also presents historical series on the major reference variables (demographic, economic and social security) projected.

of membership penetration is established it suffices to make an assumption on the future growth of the average benefit to yield projections of fund assets for any given scheme.

This concept of the internal "dynamics" of pension funds is based on the prevailing fund management practice of continuous attempts to maintain the fund at a level deemed necessary (or prescribed legally) to cover existing and anticipated benefit flows. Persistent over- or under-capitalization is corrected by passing up or stepping up contributions.

In summary, instead of making separate, and of necessity unrelated assumptions on contributions and benefits, the present analysis relates fund assets directly to membership and to the average benefit. The number of beneficiaries may be estimated as a lagged function of covered workers, derived from past experience.

The *primary* variables, i.e., series and relationships required for the proposed analysis are thus three in number:

— number of workers covered (studied and projected in relation to private non-agricultural employment, hence PNA);

— benefit per pensioner (in relation to average net wage and the movement of old-age benefits under social security); and

— fund assets per covered worker (in relation to average benefits, *growth* of average benefits, and the ratio between beneficiaries and covered workers). The ratio between fund assets per member and average benefits ("the k-multiple") is also dependent on the age composition of membership, discounting rates and return on investments, but these variables may be assumed to change relatively slowly over time.

A number of *secondary* variables will be considered and projected mainly to allow assessment or illustration of the future importance of complementary pension schemes to the various EEC economies (comparisons with GNP, savings, investments) and to the financial markets (investments, assets of self-administered funded plans compared to security issues). Examples of such variables are contributions and net investment earnings. The emphasis of the financial implications of the pension fund movement, furthermore, requires separate treatment of self-administered (autonomous) and balance sheet entry schemes on the one hand, funded and partly funded (repartition) schemes on the other.

The *projections* and their major underlying assumptions are presented in a series of tables, with a minimum of text commentary on them. Each table shows separate estimates for the EEC on the three

major classes of private, non-insured complementary schemes: "autonomous", "total funded" (with balance sheet entry schemes comprising the difference), and "repartition" systems (i.e., France). They also present comparable trend values on U.K. and U.S. funds, albeit the latter includes insured plans. The main public funds (Germany, Italy and Holland) are projected by crude methods omitting several steps of derivation; these funds are consequently not shown in all tables.

5. Projections of Membership

The first set of assumptions, relating to private, non-agricultural employment, is shown in table 1 on page 28. The only comment in order is that, since PNA is defined to exclude all public sector employment, (and derived statistically by subtracting wage and salary earners of transport and communications to yield a reasonable "ceiling" to growth of private fund membership), it understates actual PNA in most EEC countries, especially by comparison to the U.S. and U.K. figures). The retired proportion, i.e., ex-private non-agricultural workers, is even more understated for similar technical reasons. The latter are considered as *reference* series, not as an ultimate limit to the number of pensioners, which are projected in relation to the active membership of their own pension schemes.

Table 2 presents the growth of private non-insured fund membership (except for the U.S.) relative to PNA. While restrictive legislation does not appear to interfere with the growth characteristics (S-curve) of total membership, it *does* tend to act as a brake on the rate of development of self-administered, funded plans, particularly in Germany.

It is assumed that an effective "ceiling" to member penetration is constituted, well under 100%, by the inclusion of young workers in PNA, the existence of eligibility requirements varying by country, temporary and immigrant labour, and to a lesser extent, by existing social security arrangements and the legal framework. As these factors vary considerably by country, our assumptions on ceilings also differ by large margins. In France (cf., table 3 below), Holland and Germany (80 and 75% respectively), the conditions favour membership growth, except for the German "provident funds" which suffer from the limitation of tax deductibility of contributions to 1.5% of the wage bill. In both Italy and Belgium (40% and 45%), the spread of private complementary schemes is compromised by the existence of highly developed, wage related social insurance schemes. The imposition of ceilings on reference incomes, however, still leaves room for expansion of complementary schemes among the higher-income groups. The U.S. projections of this chapter are

taken directly from D.M. Holland⁽¹⁾, whose assumption is a 67% ceiling to member penetration. The obstacle in the U.K. is the popularity of insured schemes, especially for small firms, which tends to limit non-insured private fund membership to around 40% of PNA.

Table 3 below shows the implications of our penetration assumptions for number of workers covered by country and main type of fund.

The number of beneficiaries corresponding to our membership projections (cf., table 4) exceeds the reference series, i.e., the "retired PNA", not only because of the understatement just referred to, but also because "beneficiaries" still include *a*) dependants and survivors of ex-workers entitled to retirement benefits (adjustments notwithstanding), and *b*) ex-workers of limited pension rights owing to short spans of service, which in turn tend to depress the *average* benefit considerably below the pensions stipulated by most complementary schemes at the end of a full career.

The latter phenomenon also leads to a disproportionately large number of pensioners (cf., Appendix table B - 11) in the early stages of fund development in most countries, including the U.S.

6. Projections of Benefits

The main considerations underlying our projections of the average pension amount are the development of wages and salaries per employee (net of employers' contribution to social security) and the likely evolution of retirement benefits under the legal system of social insurance. Our assumptions concerning these factors are set out in tables 5 and 6 respectively. The projections of the average net wage are consistent with our productivity and price rise assumptions (cf., Appendix A), and take into account the (generally rising) share of employers' social insurance costs, implied by stated social policy objectives on the one hand, and the deficitary tendencies of social insurance systems evident in most countries reviewed on the other. One of the reasons for the current difficulties of social security in virtually all countries is of course the commitment of most governments to keep on boosting old-age benefits as a percent of reference salaries, aggravated by the adverse shifts underway in the age composition of populations.

As indicated in table 7, complementary retirement benefits in consequence are expected to drop slightly relative to money wages and salaries in Italy as well as in the States and the U.K. In Germany, we attribute the persistent regressiveness of the average "benefit formula" more to the legislative obstructions facing private pension schemes, in particular provident funds, than to the projected im-

provement of social security plans. In the Benelux countries, the regressive character of social security pension arrangements favours continued augmentation of complementary benefits related to incomes during peak-earning periods. Finally, despite the optimistic objectives of complementary pension schemes in France, which provide the bulk of retirement incomes for cadres for instance, growth of the average benefit formula in that country is restricted by the financial discipline imposed from the flattening out of membership growth and from the reduced possibilities of stepping up contributors' rates without new legislation. Our assumption was that the *average* reserve/benefit ratio of French complementary systems will not be allowed to dip below 1.0 (vs. 2.2 in 1966). That ratio is bound to be reached before 1975.

The results of the foregoing prognostications are summarized in table 8 below. Their outstanding feature is that, despite pressures to the contrary, the rate of increase of average benefits is expected to slow during the projection period in all EEC countries, except Holland, where a marked acceleration seems to be implied by the relevant determinants.

7. Projections of Fund Assets

The derivation of fund assets required by average pensions projected above is the final and certainly the most crucial step of the analysis. It calls for understanding (in the actuarial sense) of a complex relationship: the ratio between average fund reserves and average benefits (our "k-multiple"). For lack of space, we must confine the description to the main findings of our analysis, which included a series of sensitivity tests.

The four main influences operating on the "k-multiple" are 1) the age structure of membership; 2) the discounting rate and/or rate of return on invested assets; 3) the beneficiary: active member ratio; and 4) the *rate* of increase of average benefit payments.

While, as we said earlier, the first two may be neglected over time owing to their relative stability (short-term interest rate fluctuations are not relevant to the problem, owing to the long lags incurred in the adjustment of reserves to benefits) they are, nevertheless, important in explaining international (or inter-fund) differences in the "k-multiple", to

(1) "Private Pension Funds: Projected Growth", NBER, 1966, "assumption A25 C3". We modified only his assumption on average benefit by 1980 (\$ 1,350) to \$ 2,150. This figure was already \$ 1,150 in 1965. In consequence, our projection of fund assets reaches \$ 335 billion, compared to Holland's \$ 205 billion (or "maximum assumption" of \$ 234 billion).

TABLE 1

Trends in private non-agricultural employment (PNA) ⁽¹⁾

(million persons)

	1960	1965	1970	1975	1980
<i>Active</i>					
Germany	16.6	17.8	18.1	18.7	19.7
France	9.0	10.2	12.4	13.8	15.2
Italy	7.9	8.1	9.9	10.7	11.7
Netherlands	2.6	3.1	3.4	3.7	3.8
Belgium-Luxembourg	1.8	2.0	2.25	2.3	2.35
EEC, total	37.9	41.3	46.0	49.2	52.7
U.S.	45.8	50.4	56.0	61.3	67.2
U.K.	18.8	20.2	20.5	20.6	21.4
<i>Retired</i>					
Germany	1.63	2.00	2.3	2.55	2.55
France	1.08	1.22	1.6	1.9	2.0
Italy	.66	.77	1.0	1.2	1.4
Netherlands	.30	.34	.35	.4	.45
Belgium-Luxembourg	.26	.31	.35	.4	.4
EEC, total	3.92	4.63	5.6	6.45	6.7
U.S.	5.21	5.99	6.5	7.1	7.7
U.K.	2.60	2.99	3.1	3.3	3.4

(¹) For the sources of historical data in this and the following tables, the reader is referred to the Appendix (cf., list of Appendix tables, p. 67).

TABLE 2

Projections of membership penetration

(Workers covered by private, non-insured, funded plans as % of private non-agricultural employment)

	1960	1965	1970	1975	1980
Germany					
- autonomous ⁽¹⁾ ⁽²⁾	16	17.5	19.5	21	22
- total	44.5	51.5	57	61	64
Italy					
- autonomous	1.5	2	3	4	5
- total ⁽²⁾	18.5	23.5	28	32	35
Netherlands					
- autonomous ⁽²⁾ ⁽³⁾	53.9	56.1	61	65	69
Belgium-Luxembourg ^(*)	15	20	26	31	35
EEC Countries					
- autonomous	12	13	14	15	16
- total	27.5	32	34	36.5	38.5
U.S.					
- autonomous ⁽⁴⁾	46.5	50.5	58	60.5	61.5
U.K.					
- autonomous	14	18	24	29	33

(*) Rough estimates to permit computation of EEC totals.

(¹) In addition to Pensionskassen, include Unterstützungskassen, the penetration rate of which is limited by existing legislation to the neighbourhood of 9.5 % by 1980, from 7.5 % in 1965.

(²) Including both industry wide and company funds.

(³) Workers of public enterprises included in the data form a negligible portion of the totals.

(⁴) Including insured plans and deferred profit sharing schemes.

TABLE 3
Covered workers by country and main type of fund (1)

	(millions)				
	1960	1965	1970	1975	1980
<i>Private, non-insured, funded schemes</i>					
Germany - autonomous	2.66	3.12	3.52	3.92	4.3
- total	7.4	9.2	10.3	11.4	12.6
Italy - autonomous	.12	.16	.30	.43	.6
- total	1.45	1.9	2.75	3.4	4.1
Netherlands (autonomous)	1.43	1.72	2.05	2.4	2.65
Belgium - Luxembourg (*)	.25	.4	.6	.7	.85
EEC countries - autonomous	4.5	5.4	6.5	7.0	8.4
- total	10.5	13.2	15.7	17.9	20.2
U.S. (autonomous)	21.2	25.6	32.5	37.1	41.4
U.K. (autonomous)	2.6	3.6	4.9	6.0	7.1
<i>All private, non-insured schemes in EEC (2)</i>	16.7	23.4	29.2	34.4	39.7
<i>Partly-funded private and public schemes</i>					
Germany - public	1.5	1.7	1.9	2.1	2.3
France - repartition (2)	6.2	10.1	13.5	16.5	19.5
Netherlands - public	..	.49	.55	.6	.7

(*) Rough estimates to permit computation of EEC totals.

(1) Projections: Table 1 by Table 2 for private funded schemes:

As % of total non-agricultural employment for France (from 74 % in 1965 to 100 % in 1980).

As constant or slowly rising % of public sector employment for public funds.

(2) Covers employees of private and public enterprises and small numbers of self-employed.

(*) Including France (repartition).

TABLE 4
Projections of beneficiaries

	Million persons (1)			As % of retired private non-agricultural population		
	1965	1970	1980	1965	1970	1980
Germany - autonomous	.46	.65	1.05	23	28	41
- total	1.40	2.1	3.0	70	90	120
Italy - autonomous	.04	.09	.16	5	9	11.5
- total	.22	.35	.6	28	35	45
Netherlands (autonomous)	.32	.4	.6	94	110	145
Belgium-Luxembourg (*)	.06	.09	.16	20	27	40
EEC countries (2) - autonomous	.88	1.23	1.97	26	31	42
- total	2.0	2.95	4.4	59	74	94
France (repartition)	1.6	2.7	3.9	69 (2)	100 (2)	125 (2)
U.S.	2.7	3.9	7.5	45	60	97
U.K.	.6	1.1	1.8	20	35	53

(*) Rough estimates to permit computation of EEC totals.

(1) Ideally retired workers only; in practice data suspect of including relatives, survivors, other than old-age pensioners.

(2) % of total "retired" population.

(*) Excluding France from beneficiaries and retired non-agricultural population.

TABLE 5
Projections of net ⁽¹⁾ yearly wages and salaries
per (non-agricultural) employee

	Thousands of National Currency ^(*)				
	1960	1965	1970	1975	1980
Germany	6.04	9.2	12.8	17.8	25
France	8.9	12.9	18	25.2	34.5
Italy	.74	1.29	1.9	2.8	4.15
Netherlands	5.65	8.5	11.3	15	20
Belgium	87.7	121	164	218	295
U.S.	5.25	6.2	7.8	10	12.5
U.K.	.67	0.87	1.11	1.4	1.85

⁽¹⁾ Compensation, excluding social security contributions by employers.
^(*) Except Italy: millions.

TABLE 6
State pension benefits as % of
average non-agricultural wages and salaries ⁽¹⁾

	1960	1965	1970	1975	1980
Germany	46	43	50	55	60
France	20.5	26.5	29	33	37
Italy	45.5	53	60	65	70
Netherlands	41	55	50	55	60
Belgium	68	66	70	70	70
U.S.	26.5	26.5	30	33	37
U.K.	18	21	23	25	30

⁽¹⁾ Net of employers' social insurance contributions.

TABLE 7
Projections of benefit formulae
(Average complementary benefit as % of average money wages and salaries ⁽¹⁾)

	1960	1965	1970	1975	1980
Germany - autonomous	15	13.5	12	11	10
- all funds	13.5	12	12	11	10
Italy - autonomous	54	60	56	52	48
- all funds	28	35	33	30	28
Netherlands (autonomous)	13.4	11.1	11	12	15
Belgium - Luxembourg ^(*)	20	22	24	26	27
France (repartition)	22.5	22	23	24	25
U.S.	19	18.5	18	17.5	17
U.K.	31	29	30	31	32

^(*) Rough estimates to permit computation of EEC totals.
⁽¹⁾ Net of employers' social insurance contributions.

TABLE 8
Projections of complementary benefit flows

	Total benefit payments ⁽¹⁾ (billions of national currency)				Average benefit ⁽²⁾ (thousands of national currency) ⁽³⁾	
	1965	1970	1975	1980	1965	1980
<i>Private funded schemes</i>						
Germany - autonomous	.55	.95	1.7	2.8	1.3	2.7
- total	1.60	3.2	5.0	7.5	1.13	2.5
Italy - autonomous	30	95	180	250	770	2 000
- total	100	230	400	700	450	1 160
Netherlands - autonomous	.30	.50	.90	1.8	.94	3.0
Belgium-Luxembourg (*)	1.6	3.6	7.0	12.8	27	80
U.S.	3.1	5.5	10	16	1.15	2.15
U.K.	.15	.37	.65	1.1	.25	.59
<i>Partly-funded public and private schemes</i>						
France (repartition)	4.5	11	20	33.5	2.81	8.6
Germany - public ⁽⁴⁾	.5	.9	1.4	2.1	.98	3.0
Netherlands - public ⁽⁴⁾	.8	1.2	2.2	3.5	5.2	12.0

(*) Rough estimates to permit computation of EEC totals.

⁽¹⁾ Beneficiaries (from Table 4) times average benefit.

⁽²⁾ Projected by applying average benefit formulae (Table 7) to average wages and salaries (Table 5). For public funds, proportionality assumed between pensions and wages.

⁽³⁾ See Appendix Table B-11 for % growth rates implied by five-year period.

⁽⁴⁾ Beneficiaries (including relatives and survivors), projected on the following percentages of membership:

Germany 30 % (1965) 31 % (1970) 34 % (1975) 36 % (1980)
Netherlands: 33 % (1965) 37 % (1970) 40 % (1975) 42 % (1980)

TABLE 9
Trends in the k-multiple, all funded schemes

	1960	1965	1970	1975	1980
<i>Private, non-insured</i>					
Germany - autonomous	3.3	3.6	4.0	4.3	4.5
- total	2.6	3.2	4.2	4.5	4.8
Italy - autonomous	3.7	3.1	3.5	3.8	4.1
- total	3.7	3.1	3.5	3.8	3.8
Netherlands - autonomous	6.7	7.4	7.5	7.8	8.3
Belgium-Luxembourg (*)	2.0	2.5	2.7	3.0	3.5
U.S. (including insured) ⁽¹⁾	2.4	2.9	3.3	3.6	3.8
U.K.	3.8	3.5	3.6	3.8	4
<i>Public funds</i>					
Germany	4.2	5.7	5.5	6.0	6.5
Netherlands	3	3.4	4	4.5	5
U.S. ⁽²⁾	2.7	2.7	2.7	2.9	2.9
U.K. ⁽³⁾	1.5	1.8	2	2.3	2.5

(*) Rough estimates to permit computation of EEC totals.

⁽¹⁾ See footnote to p. 27.

⁽²⁾ State and local government funds implied by projections of D. M. Holland (cf., *Private Pension Funds*, pp. 131, 135), implied by "assumption A**C" adopted.

⁽³⁾ All public authorities, i.e., including a number of current transfer schemes (hence low multiples).

TABLE 10
Assets of private non-insured pension funds
 (End of Year)

	Billions of National Currency ⁽¹⁾					Assets/Member (Thousands of currency) ⁽²⁾	
	1960	1965	1970	1975	1980	1965	1980
Germany - autonomous	7.6	12.9	20.5	33	51.5	4.15	11.3
- total	15.2	33.0	66.5	101	151	3.60	12.0
Italy - autonomous	.18	.39	1.1	2.4	4.9	2.4	8.2
- total	1.11	2.63	6.5	10.9	18.1	1.40	4.4
Netherlands - autonomous	7.28	12.0	19.3	34	66	7.0	24.9
Belgium-Luxembourg (*)	9.0	26.5	64	119	238	67	280
EEC (\$) - autonomous	4.4	7.75	13.5	23.8	43.8	1.44	5.2
- total (excluding France)	7.8	16.4	33.6	54.2	90.9	1.24	4.5
- total (with France)	8.3	18.2	36.3	58	97.6	—	—
U.S. (including insured)	52.0	85.4	150	234	335	3.33	8.1
U.K.	2.1	3.3	5.9	10	16	.88	2.3

(*) Rough estimates to permit computation of EEC totals.

⁽¹⁾ Thousand billions and millions respectively in Italy.

⁽²⁾ At 1968 exchange rates.

both of which the latter is inversely related. The effect of the proportion of retired to active members is also relatively gradual, but it constitutes a persistent upward influence.

By far the most important determinant of the "k-multiple" is the *rate* of growth of average benefits, or if earnings-related, of average money wages. A change in the latter, for example from 5% to 7% p.a. would *ceteris paribus* push up the "k-multiple" from 4 to 5. Under stable growth conditions, age structure, etc., the "k-multiple" should remain constant. It might be of interest to note that if these conditions were to approximate those projected, for say, Germany during the coming decade, with private pension schemes "maturing" at an assumed beneficiary: active member ratio of 30%, the "k-multiple" should "theoretically" level out at around 4.45 ⁽¹⁾. The evolution of the relatively mature, and certainly much better documented U.S. pension fund movement provides ("statistical") confirmation of the foregoing, essentially theoretical, findings.

Table 9, on the preceding page, exposes the recent experience (subject to distortion by estimating errors) of the countries and complementary schemes here reviewed, as well as the implications for "k-multiples" of the relevant developments assumed for each. Table 10 translates these assumptions into projections of

fund assets by main type of private funded scheme. Table 11 shows the parallel evolution of the French repartition system, the major public funds in the EEC, the U.S. and the U.K.

As a rule, assets per insured worker are higher for public than for private pension funds, because of the total or partial substitution by the former for social security benefits paid under the legal system to private employees. The low figure obtained for the funds of British public authorities reflects the fact that many of these schemes operate on the repartition principle.

8. Main Conclusions and Implications

The results of the foregoing analysis are summarized in Table 10. Assuming no change in present fiscal and regulatory conditions (and demographic and economic change along the lines indicated in the text tables), total assets of all private, complementary schemes are, nevertheless, projected to reach almost \$ 100 billion in the Common Market by 1980, some

⁽¹⁾ Under the stated assumptions, this value is equivalent to an asset : benefit ratio of between 13 : 1 and 15 : 1.

TABLE 11

*Assets of partly funded private and public plans
(End of Year)*

	Billions of National Currency ⁽¹⁾					Assets/Member Thousands of Currency ⁽¹⁾	
	1960	1965	1970	1975	1980	1965	1980
	Germany	3.7	8.3	14	25	40	5	15.6
France	2.4	9.1	13	19	33	.9	1.7
Italy	1.1	3	6	12	22	⁽²⁾	⁽²⁾
Netherlands	4.4	8.7	13	25	40	17.7	60
U.S.	19.7	31.1	48.8	74.6	112.5	4.38	9.25
U.K.	1.3	1.9	2.9	4.2	5.5	.5	1.20

⁽¹⁾ Thousand billions and millions respectively in Italy.

⁽²⁾ Assumed to grow by 14 % p.a. over 1965-1980 at declining rates of growth; projected rate based on past relationship of reserve growth to increase in public wages and salaries.

TABLE 12

Growth of private non-insured pension funds in EEC countries

	Average Growth of Fund Assets (% p.a.) ⁽¹⁾				Fund Assets as % of GNP	
	1960/65	1965/70	1970/75	1975/80	1965	1980
<i>Private Funded Plans</i>						
Germany - autonomous	11.2	9.7	10.0	9.3	2.9	3.7
- total	16.8	15	8.8	8.4	7.3	11.3
Italy - autonomous	16.4	23.1	17	15.4	1.1	3.7
- total	18.8	19.5	10.9	10.7	7.6	13.7
Netherlands - autonomous	10.5	9.9	12	14.2	17.3	33.9
Belgium-Luxembourg (*)	24	19.5	14	14	3	10
EEC - autonomous	12	11.8	12.1	13	2.6	4.4
- total	16	15.5	10.2	10.7	5.5	9.2
<i>All Private, Non-Insured Schemes in EEC ⁽²⁾</i>	17.1	14.8	9.9	10.8	6.1	9.9
<i>Partly-Funded Private and Public Plans</i>						
Germany - public	17.5	11	12.4	9.9	2.4	2.9
France - repartition	30.5	7.4	7.9	11.7	2	2
Italy - public	22.3	14.9	14.4	12.9	8.4	16.6
Netherlands - public	14.7	8.4	14	9.9	12.6	20.6
EEC - total	20.5	11.6	13.4	11.7	3.7	6.4

(*) Rough estimates to permit computation of EEC totals.

⁽¹⁾ Small variations in average growth rates (< 1 %) from period to period, arise from rounding of underlying absolute figures; hence not to be taken as indicators of accelerating or slowing growth.

⁽²⁾ Including France (repartition).

5.5 times their 1965 level. Of this total, pension funds in the strict sense of the word, i.e., the reserves of which are a potential source of funds for the capital markets, are expected to account for about \$ 45 billion (up from \$ 8 billion in 1965), a relatively modest quantity if compared to the corresponding U.S. total of some \$ 335 billion or even U.K. private pensions fund assets of \$ 60 billion (including insured plans for both countries), expected by 1980.

As indicated in Table 12 (p. 33), the rate of growth in fund reserves is slowing during the projection period for all countries except Holland. The acceleration for the last mentioned is partly the result of the combination of assumptions adopted, particularly on money wages and (legal) old-age benefits, but it also serves as an indicator of the scope for pension fund growth in a fiscal and legal environment free of obstructions. The last two columns of Table 12 show fund assets as a percent of GNP for all non-insured complementary schemes in the Common Market, in 1965 and 1980. Including the public funds, such schemes should reach about 16% of the combined GNP of EEC countries by 1980, as against 10% in 1965. The corresponding proportions are 23% for the U.S. (from 17.7%), and 41% for the U.K. (from 22%). The sharp divergences within the Common Market are brought out by a comparison of all complementary pension reserves in Holland (projected to reach 54% of GNP) and France (to remain around 2% of GNP).

The importance of pension funds as sources of long-term investment funds is demonstrated in Table 13, which compares the net cash flow of private and public complementary schemes to (actual and projected)⁽¹⁾ fixed investment. The funds of balance sheet arrangements are of course invested directly by the companies generating them, bypassing the capital markets. The net investments of autonomous funds which typically pass through the capital market are set out in Table 14.

Assuming that current composition of reserves by *type* of asset would prevail in 1980^(*), net investments in securities by self-administered schemes would account by 1980 for only 1.2% of new security issues in Germany, 1.9% in Italy, though for as much as 40% in the Netherlands. The current contributions of private pension funds to the securities markets of Germany and Italy are a mere fraction of a percent.

The role of private complementary pension plans in net personal savings is illustrated by the figures set out in Table 15.

The projections appearing in this chapter of course permit any combination of assumptions, should it become of interest what effect a modification in policy might have on the development of pension funds. In executing the present study, we found that the fiscal and other legal restrictions in existence today in most EEC countries exercise a braking influence not so much on the growth of membership, but rather on potential development of benefits, particularly in Germany (and probably in Belgium). The extreme example is clearly that of the German "provident funds", which are legally required to keep reserves under 30% of payroll (somewhat higher in practice) and are denied tax exemption on contributions in excess of 1.5% of the insured worker's salary. It is also true of balance sheet entry funds, which have no fiscal stimulus to raise benefits, nor an "assist" to their contributions (employees are legally forbidden to contribute) from investment earnings.

In our calculations, a change over-night of the existing tax and regulatory environment to, say, Dutch conditions, could potentially lead to an increase of fund assets over our projected figures for 1980: by about 25% in Italy, 50-60% in Germany and Belgium, i.e., potential augmentation by some 33% for the Common Market as a whole. Should the French system be replaced over-night by a funded scheme, it would of course mean a 2.5 fold increase in 1980 fund reserves of EEC countries. The implications of such a move for the capital markets would no doubt be even more staggering. Assuming a liberalization of the legislative set up *and* complete availability of balance sheet entry funds for investment outside the company, the potential flow of funds to the capital market from pension schemes, could exceed our projected amounts 5-6 times for the EEC (some 3 times for Italy, 5-6 times for Germany and 17-20 times for France).

(1) In line with our general approach, we made an attempt to render our projections of fixed investment consistent with our assumptions on productivity growth and price increases. The projections of new issues of securities are obviously even more conjectural, obtained simply through an extrapolation of past relationships to plant and equipment expenditures in money terms.

(*) i.e., if funds continued to invest a constant proportion of their net cash flow in assets (direct loans, property) other than securities.

TABLE 13

Net cash-flow ⁽¹⁾ by funded and partly funded plans

	Billions of National Currency ⁽²⁾					% of fixed Investment	
	1960	1965	1970	1975	1980	1965	1980
<i>Private Funded Plans</i>							
Germany	2.3	3.5	6.5	7	10.5	2.9	2.8
Italy	.2	.3	.8	1	1.4	4.5	4.7
Netherlands	.7	1.2	1.7	3.5	6.4	7.1	12
Belgium-Luxembourg (*)	..	4.5	7.7	11	24	2.5	4.1
EEC ⁽³⁾ - total	1.1	1.8	3.5	4.5	7.1	2.6	2.8
<i>All Private, Non-Insured Schemes in EEC Countries ⁽²⁾⁽³⁾⁽⁴⁾</i>	1.3	2.1	3.6	4.8	7.8	3	3
<i>Partly Funded Private and Public Plans</i>							
Germany - public	.7	1	1.4	2.4	3.3	.8	.9
France - repartition	1.1	1.3	.4	1.6	3.5	1.3	.8
Italy - public	.3	.4	.8	1.4	2.3	6	7.7
Netherlands - public	..	1.1	.9	2.8	3.2	6.5	5.9
EEC ⁽³⁾ - total	.9	1.4	2	4	6.1	2	2.4

(*) Rough estimates to permit computation of EEC totals.

⁽¹⁾ Revenues less disbursements: imputed for balance sheet entries.⁽²⁾ Thousand billions in Italy.⁽³⁾ \$ billion at 1968 exchange rates.⁽⁴⁾ Including France (repartition).

TABLE 14

Net investments by autonomous ⁽¹⁾ plans

	Billions of National Currency ⁽²⁾			% of Fixed Investment		% of New Security Issues	
	1965	1970	1980	1965	1980	1965	1980
Germany	.75	1.7	4	.6	1.1	4.3	6.7
Italy	.04	.17	.55	.4	1.8	1.3	5.5
Netherlands	1.2	1.7	6.4	7.1	12	75	125
Belgium-Luxembourg (*)	4.5	7.7	24	2.5	4.1	8.3	13.7
EEC ⁽³⁾	.69	1.32	4.15	1	1.6	5.8	9
U.S.	8.2	13	22	6.9 ⁽⁴⁾	6.5 ⁽⁴⁾	20.1	19
U.K. ⁽⁵⁾	.31	.90	1.5	5	8.5	12.4	21.5

(*) Rough estimates to permit computation of EEC totals.

⁽¹⁾ Self-administered.⁽²⁾ Thousand billions in Italy.⁽³⁾ \$ billions at 1968 exchange rates.⁽⁴⁾ Private fixed investment only.⁽⁵⁾ Private uninsured plans only.

TABLE 15

Contributions to all private complementary plans

	Billions of National Currency (1)					% of Personal Saving	
	1960	1965	1970	1975	1980	1965	1980
	Germany	2.3	4.4	8.6	11	16.8	10.4	13
France	2.4	6.1	11.7	21.6	37	20.3	26
Italy	.2	.39	.99	1.34	2	11.9	12
Netherlands	..	.67	1.3	2.6	4.9	9.9	26
Belgium-Luxembourg (*)	..	3.6	8.1	12.5	23.4	4.7	8.5
EEC (\$)	..	3.2	6.7	10.3	16.8	12.7	17
U.S.	5.5	7.4	11	15.3	21.3	29.7	29.5
U.K. (2)	.19	.33	.47	.9	1.5	23.3	46

(*) Rough estimates to permit computation of EEC totals.

(1) Except Italy thousand billions.

(2) Non-Insured only.

TABLE 16

Other implications of the projections

	Assets: Benefits			Average Contributions as % average wages and salaries		
	1965	1970	1980	1965	1970	1980
<i>Private Non-Insured Funds</i>						
Germany - autonomous	24:1	22:1	18:1	..	..	..
- total	21:1	21:1	20:1	5.6	6.6	5.3
Italy - autonomous	13:1	14:1	19:1	..	..	..
- total	26:1	28:1	26:1	16.5	18.9	11.8
Netherlands - autonomous	40:1	39:1	37:1	6.6	5.6	9.2
U.S. (including insured)	28:1	27:1	21:1	4.5	4.4	4.2
U.K.	22:1	16:1	15:1	10.5	8.6	11.4
<i>Public Funds</i>						
Germany	19:1	16:1	19:1	7.9	5.6	5
Netherlands	10:1	11:1	11:1	4.1	2.6	3.3

CHAPTER IV

Possible reforms to foster the security and growth of pension funds and their contribution to capital markets

a) Chapter III. has demonstrated the orders of magnitude which pension funds in the various EEC countries are likely to attain in future years under the assumption that laws and regulations pertaining to them remain broadly unchanged. It is only reasonable to point out, however, that certain "rules of the game" which, for all their imperfection, may be tolerable today with the total resources of private complementary uninsured pension funds in EEC countries being of the order of \$ 20 billion and 6.2% of their 1966 gross national product, could become unacceptable and inappropriate once they have reached, as we believe they are likely to do by 1980, almost \$ 100 billion and 10% of the area's gross national product. In the latter situation, certain anomalies (especially the heavy indebtedness of enterprises to their own pension funds, and the large proportion of pension fund saving which bypasses the capital market altogether) which represent no more than latent dangers today may well become serious disadvantages. Certain reforms should be urgently considered before matters go too far in the present direction.

b) Chapter II. has shown that the degree of development of complementary pension funds, their contribution to saving and to capital markets is uneven from country to country, and Chapter III. furnished few grounds for holding that the retard of some countries relative to others is likely to be significantly diminished within the period over which our forecasts extend. Throughout our report, but in particular in Chapter II., it has become apparent that the legal framework, the supervisory regulations and tax rules are also significantly unlike from country to country, and that in some countries they constitute serious obstacles and disincentives to the growth of pension funds and/or to the efficient investment of their resources. Member governments would have every reason critically to examine such of their own rules which may seem to handicap their country relative to other countries, and give consideration to their potential reforms with a view to accelerating pension fund growth and improving their functioning.

The reform proposals put forward in the present chapter, aimed at the broad objectives set out in a) and b) above, are intended to serve as a basis for further consideration by the competent authorities.

1. *The buildup of pension funds in the form of balance-sheet provision (in Germany and Italy) should not be allowed to go much further; fund accumulation should be made to flow to separate funding vehicles.*

It is not intended to propose the compulsory dissolution of the existing balance-sheet provisions of enterprises and their actual disbursement into the hands of autonomous pension funds. This would be a harsh measure, causing a great and perhaps unbearable financial upheaval as resources were suddenly redistributed. But either as from a certain date, or by degrees as from staggered dates, the tax-deductibility of employers' contributions should be removed if these contributions are effected in the form of balance-sheet provisions or reserves⁽¹⁾. They should be tax-deductible only if effectively transferred to the control of an independent fund (preferably a trust fund) set up and operating under the relevant rules of the country concerned or, by reciprocal agreement, under the rules of another country.

Such a reform would have two major effects. The first concerns the security of the monies intended to ensure the fulfilment of pension promises, or promises of indemnity in the event of dismissal (as in Italy). Under present circumstances, *both* the continuity of employment *and* the fulfilment of post-employment promises depends on the continuing prosperity and solvency of the employer enterprise. This constitutes a concentration of two risks, and the double risk is borne by the type of economic agent often least well equipped to cope with it, namely dependent employees (or their survivors). Moreover, a pension provision represents an unsecured debt of the enterprise and in the event of its insolvency, the claims of other classes of creditors (mortgagees, banks, holders of senior securities) may have to be met before those possessing pension or indemnity rights.

This is an unsatisfactory situation; the proposed reform, by stopping the further swelling of balance-sheet provisions, would leave it unchanged in terms of absolute values, but the relative weight of the

⁽¹⁾ The fiscal principle underlying this proposal is clearly set out in the US Internal Revenue Service Code which requires the funds to be outside the employer's control to be tax-deductible. Even more stringent rules are contained in IRC 503 (c). Similar rules apply in the UK, Holland and Belgium, although their interpretation in Belgium is apparently not uniform from one enterprise to another and some funds are set up in the form of balance-sheet provisions.

whole problem would gradually diminish over time as, in addition to their old provisions, enterprises built up new, separate funds outside their own control, and as general economic growth decreased the relative extent of their "social indebtedness" to their employees.

The second major effect would (in a rather loose sense) impinge upon "self-financing". Allocations to pension provisions of enterprises are under present circumstances automatically employed to finance an equivalent increase in their general assets. This would cease to be the case.

In this context, some attention should first be paid to a conceptual confusion. There are widespread complaints that the "self-financing capacity" of enterprises in the EEC is inadequate; anything that would further weaken it would be regarded as highly contentious. But "self-financing capacity" should be properly understood as a concept parallel to earnings capacity, i.e. relating to depreciation and (retained) net profit. It should not comprise the capacity of the enterprise to borrow the deferred wages of its employees. It is not disputed that such a captive source of finance is useful and convenient to the enterprise; but it should not be confused with self-financing *stricto sensu*, for the latter certainly does not mean an increase in liabilities to third parties — which pension provisions indubitably are. Cutting off this captive source of finance would not directly affect the ability of enterprises to maintain or increase their real net asset value, for this depends on their earning capacity; but it should change the manner of financing increases in their gross assets. There are quite strong *a priori* reasons for asserting that such a change, while possibly unwelcome to each enterprise taken in isolation, would in effect have a beneficial effect on the corporate sector as a whole and on economic efficiency in general.

As has been pointed out elsewhere in this report, pension funds set up in the form of balance-sheet provisions *pro tanto* diminish both the need of enterprises to have recourse to the capital market and the ability of the capital market to meet their needs. Dottedations to such funds bypass the market and altogether escape its control. Control by the capital market is part of the resource-allocating mechanism of the latter, where enterprises compete for funds in terms of their credit standing and in terms of the prospective yield they offer. The present report is not the place for entering into controversies about the efficiency of the capital market as a resource-allocating mechanism, suitable for directing the available flow of savings into employment most likely to produce the highest yield to the economy as a whole. No doubt the capital market as it functions in practice can be criticized on several counts, (including those of imperfect information and imperfect

foresight) and the conceivable discrepancy between social and private yield and creditworthiness may have to be borne in mind when judging its role. Suffice it to say here that *if* the policy objective is to broaden the capital market, the diversion of current dotation to internal pension funds from the employer enterprise to the market would be a particularly powerful means of achieving it. (As of 1966, such a measure would have increased the flow of funds from German enterprises to the capital market by DM 2.2 billion and that from Italian ones by Lit 230 billion; by 1980, the corresponding annual flows will probably have reached DM 5.3 billion and Lit 700 billion).

Moreover, since the automatic investment of funds in the enterprise itself (where they arise in the form of deferred wages), is a more nearly *random* method of allocating investible resources than the capital market where *some competition, however imperfect*, does play a redistributive role, broadening the capital market in the way discussed here would certainly represent some improvement in the pattern of investment.

Needless to say, some enterprises would hardly be able to have recourse to the capital market in their own right, however much its supply side may have been broadened, and would have to call in the aid of expert financial intermediaries (which is no different from what is already happening today in these countries on a smaller scale, and what is current practice on a larger scale in Anglo-Saxon countries). Others, while large and sufficiently well-known to command access to the capital market, may not be able to replace borrowing from their captive pension fund by borrowing from the market if their balance-sheet was already heavily geared with debt: they might have to raise the funds they need partly or wholly in the form of new equity capital, which would perhaps not be an altogether unwelcome development to those concerned about the debt-equity ratio in some segments of European industry.

As to the improvement in standards of company information, it is not disputed that despite recent progress in disclosure requirements, e.g. in Germany and France, more should be accomplished to render the capital markets of most EEC countries a really comfortable place for pension funds freely to invest in, without undue discrimination in favour of those sub-markets (government securities, real property) where information is either not needed or readily obtainable. It is, however, equally indisputable that the emergence of professionally managed pension funds as perhaps the most powerful class of potential investors in securities, and the increased need of the corporate sector to rely on them for equity and fixed-interest funds, would constitute a strong stimulus to fuller disclosure of company information

and to the development of investment advisory skills⁽¹⁾; American and British experience is sufficient demonstration of what the forceful presence of institutional investors can accomplish in this respect.

2. The legal form of pension funds should be simplified and their specific status recognized

It seems anomalous that in order to be legally recognized, independent pension funds in various EEC countries should have to adopt the legal form of a foundation, a non-profit association, a limited liability company (GmbH), a mutual assurance society or a registered association. The multitude of alternative legal forms among which a pension fund has to choose, trying to find the one least ill adapted to its particular circumstances and purposes, is proof that (with the possible exception of Holland), legislation in the EEC countries has not yet made a serious attempt at recognizing pension funds as fulfilling a unique and very specific function which is essentially different from that of a charitable foundation, an insurance company, a special sort of investment trust, a philanthropic club or anything else. As long as pension funds have to put on the legal disguise of being something else⁽²⁾, there will be confusion both in the minds of their sponsors and participants and in that of the fiscal authorities; the functioning of pension funds will be, perhaps unintentionally, biased compared to what it would be if they could simply be themselves before the law.

The field research conducted as part of the present study has found that the lack of legal clarity as to the status of pension funds acts as an (albeit minor) deterrent for some employers (notably for subsidiaries of foreign companies in France, Belgium and to a lesser extent in Germany and Italy) to set up independent funded pension plans. An additional deterrent for companies with subsidiaries or branches in several EEC countries is the heterogeneous nature from country to country of such pension fund legislation as exists. This makes multi-country pension plans difficult to operate and hinders the transfer of employees from one subsidiary or branch to another.

To remedy these shortcomings which stand in the way of a free and rapid development of funded pension plans, national governments should give serious consideration to developing their third-party trust laws. The highly developed case law relating to trustees in the UK and the USA has probably been a factor of some importance in establishing confidence in the system of uninsured funded pension plans and allowing their fast growth to date to be accomplished without either illiberally strict regulations or particular abuses and mishaps. This aspect seems important to us not only in view of the need to have

a safe receptacle for funds (whether or not set up as a separate legal entity) which is neither controlled by the employer nor by present employees or pensioners, nor by a joint body of these groups within which conflicts of interest may arise, — but also in view of the great potential power pension funds could wield on capital markets⁽³⁾.

It is clearly useless to expect pension funds to have universal recourse to third party trustees, and abandon the practice of employer, employee or joint control, when the functions, responsibilities and powers of the trustee are either virtually unknown and undefined by practical legal usage, or defined in law in such a way that, for instance, in the event of the trustee's bankruptcy the assets he held in trust may be commingled with his beneficially owned assets, — as may happen under e.g. German trust law.

It would, moreover, be desirable that the development of the trustee function in the EEC countries should take place along convergent and not divergent lines, for any very marked lack of uniformity in this respect could eventually prove to be a built-in obstacle to the unification of capital markets⁽⁴⁾ (over and above the serious obstacles which exist in any case).

3. Where a repartition system is in force, the institutional framework should at least not exclude funded pension plans.

Once the great mass of employers and employees has, as in France, opted for a repartition system for financing complementary pensions, it seems impossible, without doing grave injustice to a whole generation, to change over in any radical way to the system of capitalization. Repartition is and seems

⁽¹⁾ Cf. below, 5 a).

⁽²⁾ Even in a case like that of the German Pensionskassen, where the name is not disguised, the legal form must be: it is that of a mutual assurance society.

⁽³⁾ The not always purely hypothetical case of a pension fund sponsored by an employer engaged in a particular branch of industry exercising, through its share-buying and lending power, an influence over a competitor in the same industry should not be overlooked in this context; although in fairness to European non-trusteed pension funds (i.e. controlled by employer and employee representatives), they often scrupulously refrain from investing in or lending to companies in their own industry so as to avoid any temptation of abuse of influence.

⁽⁴⁾ For instance, if the trust law of one country left the investment powers of pension fund trustees undefined or gave them wide and flexible powers, while that of another severely restricted them, international capital movements for pension fund account could not be expected to be reciprocal or self-compensating in the long run. Under such circumstances, national governments may be inclined to regulate or handicap them by, for instance, illiberal withholding tax or double tax treatment, which would have adverse effects on the mobility of both pension fund and other types of capital.

destined to remain a fait accompli which cannot fail to leave a permanent stamp on the structure of French capital formation and on the capital market of the country; for even if repartition systems can (by not always fully meeting the hopes and expectations of pensioners) continue to accumulate reserves (which we believe will prove to be the case), this cannot possibly attain the dimensions of accumulation under capitalization.

Some minor and marginal progress, however, would probably be possible even in France in the direction of fostering saving through pension funding. Pension "rights" (to use the terminology of capitalized pension plans and rights) are under the repartition system "vested" in the employee in the sense that he does not normally lose any part of them when moving from one employer to another. Contributing to a French régime complémentaire thus completely fails to fulfil one of the employer's objectives, namely to reduce labour turnover and encourage long-service employees. A limited number of employers for whom this is, for one reason or another, an important objective, may choose to introduce some system of deferred fidelity premiums. If such post-employment premium payments were not tax-deductible by the employer while provision for their advance capitalization (funding) were, they would as a matter of course take on the character of pension funds (whatever name came to be given to them).

The legal clarifications and reforms referred to in 2. above and the fiscal ones in 4. below would naturally be a precondition for this development to begin in France; in particular, the authorities should leave it to the free agreement of the employer and his employees whether a capitalized pension plan, introduced in addition to the régime complémentaire, should be contributory or not.

No spectacular results could probably be expected from such a permissive policy, but no matter how modest, it would still be a positive contribution to saving and would marginally strengthen the all too feeble rôle of the institutional investor on the French capital market.

In the very long term, such funds could conceivably prove to have played an educational rôle; if they were able to provide a surer pension, a given pension at lower cost to the employer, or a higher pension at a given cost (this would depend on the success or otherwise of the investment policy they adopted for their funds) than the average repartition scheme, French business and public opinion might be gradually prepared for measures permitting individual enterprises to "contract out" of their régime complémentaire and set up a funded pension plan not to provide, as it were, a supplement to the comple-

mentary pension, but to replace the one based on repartition by one based on capitalization.

Such "contracting out" would be a very touchy matter, as it may weaken the régime complémentaire based on repartition if the age distribution of the employees contracted out and the probable rate of growth of their earnings were more favourable than that of the employees remaining in the repartition régime. The conditions of contracting out would consequently have to be carefully defined and the right to contract out should only be granted if these conditions are met.

4. The tax position of pension funds should be clarified and anomalies removed.

Since employers' contributions to funded pension plans under third-party control are analogous with the payment of (deferred) wages, there is no logical reason why any particular limit should be placed on them from the taxation point of view. The fiscal authorities do not normally contest the debiting of wages to the operating account as a legitimate business expense; it is difficult to see why they should treat employer contributions to pension funds differently. Yet to our knowledge Holland is the sole country in the EEC where the employer's contribution is not limited in some manner as regards its deductibility for tax purposes. (Contributions in excess of the actuarially determined requirements are permitted if they are irrevocable, which they necessarily are if paid over to a fund outside the employer's control). In the other countries, their tax-deductibility is limited to the level of actuarial requirements, and the tax legislation may even prescribe the interest rate (investment yield) the actuary must use in determining the amount of the contribution (e.g. in Germany at present a minimum of 5.5% for pension provision in the balance sheet, a maximum of 3.5% for mutual assurance associations). Even more curious is the limitation of deductibility to a fixed maximum percentage of the pensionable wages and salaries of those covered by the plan (e.g. to 1.5% for German provident funds / Unterstützungskassen /)(¹). In our view, as long as

(¹) The US tax code, which in other respects displays a proper understanding of the nature of pension funds, also places a 5% limit on the employer's contribution, which of course may be inadequate and may lead to the under-capitalization of a given pension plan. In practice, however, this rule need not lead to any harmful consequences, for the employer is free to provide a part of the pension in the form of a "deferred profit-sharing plan", (essentially the same as a pension plan), for which he may make tax-deductible contributions up to an additional 15% of the wages and salaries of those covered by the plan. The combined total of 5% and 15% should normally be adequate to meet the capitalization requirements of any reasonable retirement programme.

the tax rules of a country permit employers to pay wages without limiting tax-deductibility, they should also permit them to pay unlimited contributions to pension funds. Actuarial requirements should be used as a criterion by the supervisory authorities (to ensure the proper capitalization, i.e. the safety of future pensions), but not by the fiscal authorities (to determine whether the contribution is or is not tax-deductible).

A logical corollary of regarding employer contributions to pension funds under third-party control as deferred wages would be to add them to the employee's taxable income only when they pass into his ownership, — i.e. when the accumulated contributions are vested in him or paid out to him in instalments in the form of a pension. Exempting part but not all of the employer's contribution from immediate taxation as income in the hands of the employee, as in Holland and Germany, may to a greater or lesser extent achieve the same objective in practice, but seems to contradict the principle which seems the correct and equitable one to us with regard to deferred accruals of income. A further corollary of the principle advocated here is that pensions should be taxed at ordinary income tax rates. Apart from its logical consistency, the non-taxation of employer's contributions in the hands of the employee and the taxation of pensions, would have the practical merit of enhancing the incentive for this type of contractual saving, i.e. strengthening the propensity of employees to accept a growing proportion of the total wage in a deferred form (as the employer's contribution to a pension plan) and a diminishing proportion in the form of take-home pay. This propensity is, of course, due to progressive income taxation and to the fact that ⁽¹⁾ a person can derive a sometimes considerable tax advantage by causing his wages to be deferred to the post-retirement period.

Some attention should be devoted to clarifying the tax position of the pension fund itself. Apart from some ambiguity in France (where some opinion holds that the income of a pension fund may be subjected to corporation tax), the tax codes of all EEC countries appear explicitly to recognize that a pension fund should be a tax-free entity. Yet despite the evident intention of their tax codes, pension funds in some EEC countries do incur taxes on their investment income. In particular, they pay tax on all income from which tax is withheld at source *and* where such withholding taxes cannot be reclaimed in cash, but only offset against the recipient's tax liability (e.g. the Kapitalertragsteuer in Germany, the précompte mobilier and the précompte immobilier in Belgium, and the crédit d'impôt in France which a pension fund, having in principle no tax liability, cannot benefit from).

The effect of these apparently unintended impositions is not only to penalize pension fund investments in general, but also to distort the pattern of their contribution to the capital market in favour of such investments (e.g. private loans and promissory notes, Luxemburg-issued bonds) from which tax is not withheld at source. There is no apparent reason why such discrimination should be thought to be beneficial to the capital market as a whole and to its efficiency as a resource-allocative mechanism.

The withholding tax has considerable merits as an easy and rapid method of ensuring the *collection* of advances on taxes due. It should not degenerate into an impôt forfaitaire, the use of which absolves the tax authorities from the task of determining the entire tax liability of a taxpayer on the basis of his total income, and from policing the truthfulness of tax declarations and the payment of amounts due. If pension funds have, according to the evident will of the tax legislator, no tax liabilities, they ought to get cash refunds of the withholding taxes deducted at source from their investment income. It is totally inconsistent on the part of the fiscal authorities to say both that pension funds are not to be liable to tax and that they can only offset withholding taxes against their tax liability, but not reclaim them.

The above principle regarding withholding taxes within a country is clear and probably not difficult to accept. A much more controversial problem is that of taxes withheld in another country from interest and dividends originating in that country. To the extent that pension funds can invest tax-free in their own country but must suffer withholding taxes on investment income from abroad, they will naturally discriminate against investment abroad ⁽²⁾. This problem transcends that of pension fund investment and is just as relevant to all portfolio investment by all other classes of investors. Limitations of double tax relief and non-refundability of foreign withholding taxes is one of the crucial obstacles to the unification of the capital markets of the Community. It would, however, fall beyond the terms of reference of this report to do more than draw attention to this problem from the limited and partial point of view of pension fund investment.

⁽¹⁾ Since pensions are usually considerably less than 100% of pre-retirement income and a person thus normally moves into a lower progressive income tax bracket when he retires.

⁽²⁾ Although, as some of our case studies have shown, some pension funds are so convinced of the advantages of international selectivity, risk-spreading and the possibility of achieving superior growth of dividend income by going freely across national frontiers, that they will accept losses of current revenue through irreclaimable foreign withholding taxes.

5. *Pension funds are not insurance companies and should not be regulated as such.*

If an employer chooses to fund his future pension liabilities in uninsured form rather than purchasing a group annuity or some similar future benefit from an insurance company, he will have done so in recognition of the advantages of the former (of which a probably better cost-benefit ratio is only one) in the light of the specific features of his particular pension plan. The principal characteristic (and for certain types of plan the principal advantage) of an insured pension plan is that precisely pre-determined benefits can be guaranteed at a pre-determined cost. In giving such guarantees, insurance companies face no other uncertainty than the actuarially calculable risk relative to life-expectancy, a risk which they are generally very well equipped to bear. In countries where insurance company investment is strictly regulated, the regulation is aimed at making doubly sure that fixed nominal sums of money will always be available when needed to meet engagements also fixed in terms of nominal sums of money.

However, the demand for pensions is essentially not a demand for certain sums of money in the future, but for a certain standard of living upon retirement. Consequently, there is a strong trend towards pension plans under which promised benefits are determined by earnings in the immediate pre-retirement period and possibly also by cost-of-living changes even after retirement. Pension liabilities under such a plan depend on the rate of rise of the general wage level, on the rate of growth of the earnings of the individual participant *relative* to the rise of general wages, and in addition on monetary stability or instability in a broad sense. These factors are not insurable risks in the narrow meaning of the word, and liabilities under them cannot be funded at a fixed rate from the beginning (from the entry of a participant into the plan) as the orthodox insurance approach would demand. Premiums can be adjusted to them after the event, but as under the orthodox regulations all or most previous premiums will have been invested in a form (fixed-interest redeemable securities, e.g. bonds, mortgages) appropriate to a fixed liability, each upward adjustment is likely to be extremely costly, — for the need to be met in earnings-related “inflation-proof” pension plans is basically alien to the type of risk which the strict insurance company regulations were designed to guarantee.

It is for this reason that sensing their insurmountable handicap vis-à-vis uninsured plans, American insurance companies in one State after another emancipated themselves from the prevailing narrow regulation of their investments as regards pension fund insurance, obtaining powers to put as much as 100% of the fund in ordinary shares which have no predetermined value at a given future date. One might almost say

that the most competitive insured pension plans offered by US and British insurance companies today have very little insurance content left in them, and resemble more and more an uninsured pension fund (managed by the investment managers of an insurance company) where the cost-benefit relationship is not predetermined, but is a function of investment performance.

This report is not the place for debating whether regulations which oblige insurance companies to put a high percentage of their technical reserves into bonds and prevent them from putting more than a small percentage into variable-income securities are useful or not to safeguard the fulfilment of insurable risks. We do, however, strongly put forward the view that the funding of pensions is a different type of activity and should be subject to a quite different type of regulation. Below, we will indicate some of the main features which in our view pension fund regulation and supervision should contain:

a) *Investment*

Pension fund regulations should in no way seek to prescribe (except as in (b) below) the type of investment which a pension fund may make (fixed interest, preferred or ordinary shares, real estate, etc. etc.); at most, they should impose certain quality standards⁽¹⁾. They should, however, require that the fund be managed by a professional manager (who may but need not be the same as its trustee), and definite standards should be laid down as to the qualifications of the manager (if the manager were a legal entity such as a bank or a management company, it should be required to have professionally qualified and experienced staff commensurate with the total funds managed by it, etc.). The manager should be required to report at least once a year upon the income and capital value of the fund to the employer sponsoring the fund and to employees' representatives. To encourage competitive efforts on the part of managers, such reports should be accessible to other employers.

b) *Conflict of interest*

Pension funds should be prohibited from investing (or investing more than 5 or 10% of) their resources in the shares of and loans to the sponsor employer

⁽¹⁾ Here, the British Trustee Investment Act of 1961 might serve as a model in certain respects. This Act is applicable to those pension (and other trust) funds whose trust deeds do not specifically give them wider powers. (Most British pension funds do have wider powers, giving them greater investment flexibility than the 1961 Act). Under the Act, one-half or on certain conditions three-quarters of a fund may be invested in ordinary shares of companies with a minimum paid-up nominal capital of £ 1 million, quoted on a recognized stock exchange and having paid a dividend in each of the five years preceding the investment.

company, and to lend to or purchase more than a small percentage of the voting capital of an enterprise with which their sponsor enterprise can be deemed to be in a competitive relationship.

c) *Adequacy of contributions*

The supervisory authority should have the power periodically to ascertain (or require an actuarial certificate to the effect) that the fund is not undercapitalized, having regard to the pension promises contractually made by the employer and the rhythm and method of funding adopted. If undercapitalization is found, it should be reported to the employer and the employee representatives, and employees should have the same rights in law with regard to a shortfall in the pension fund on account of employer's contributions as with regard to arrears of wages due.

d) *Disposition of surpluses*

Since actuaries very properly have a tendency to incorporate a low rate of interest in the funding programme (e.g. underestimate the likely future growth of dividends or other income from the fund's existing investments and underestimate the yield at which future contributions to the fund can be invested), most funds are more likely to be found in actuarial surplus than undercapitalized. The disposition of such even-

tual surpluses may be laid down in the employment contract; if not, regulation would be desirable to determine in advance their division, viz. (i) to be carried forward as a free reserve against contingencies, (ii) to the employer, permitting a temporary or permanent reduction of employer's contributions, (iii) to employees, improving future pensions or reducing employees' contributions (if any), and (iv) to existing pensioners, increasing pensions.

Some of the proposed legal-administrative and tax reforms, supervisory rules and regulations discussed in the present chapter do not, at first sight, seem to fit within the terms of reference of this report, namely the contribution of pension funds to capital markets and the means of enlarging and improving it. They seem to refer more to simplicity of administration, to the safety of pensioners' money or to logic and equity in taxation, than to the flow of funds to capital markets. We believe, however, that all these measures, however indirect or roundabout they may seem, would have their importance and relevance in ensuring the smoother, safer and more rapid development of pension funds, their proper deployment in investment through the capital markets, and safeguarding participants against the repetition of those past disappointments which were in no small measure responsible for the apparently inadequate present flow of savings to capital markets.

APPENDICES TO CHAPTER III

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APPENDIX A

HISTORICAL DATA ON POPULATION, EMPLOYMENT AND INCOMES
DONNEES HISTORIQUES SUR LA POPULATION, EMPLOI ET LES REVENUES

TABLE A-1
Private non agricultural employment - Emploi privé non agricole

	1955	1960	1961	1962	1963	1964	1965
<i>Active/Actif</i> ⁽¹⁾							
Deutschland ⁽²⁾	12.92	16.61	16.96	17.25	17.39	17.57	17.85
France	8.30	9.00	9.13	9.31	9.72	10.03	10.25
Italia	6.18	7.88	8.14	8.28	8.41	8.40	8.06
Nederland	2.35	2.64	2.72	2.76	2.83	2.91	3.20
Belgique	1.70	1.78	1.83	1.89	1.92	1.96	2.00
EEC	31.45	37.91	38.78	39.49	40.27	40.87	41.36
U.S.	43.76	45.85	45.39	46.65	47.44	48.56	50.39
U.K.	17.95	18.80	19.14	19.38	19.35	19.73	20.15
<i>Retired/Retraités</i> ⁽²⁾							
Deutschland ⁽²⁾	1.01	1.63	1.76	1.82	1.89	1.95	1.99
France	0.88	1.08	1.10	1.13	1.17	1.20	1.22
Italia	0.47	0.66	0.70	0.71	0.74	0.76	0.77
Nederland	0.24	0.30	0.31	0.32	0.33	0.34	0.34
Belgique	0.20	0.26	0.27	0.27	0.29	0.29	0.31
EEC	2.80	3.92	4.14	4.25	4.42	4.54	4.63
U.S.	4.03	5.21	5.32	5.50	5.65	5.81	5.99
U.K.	2.36	2.60	2.67	2.74	2.82	2.91	2.99

⁽¹⁾ Labour force employed in private non-agricultural establishments.

⁽²⁾ The sum of estimates of males over 65 and females over 60 retired from private non-agricultural employment; estimated by applying employment participation rates of highest active age group (45-65 for males; 45-60 for females) to population of retirement age, net of workers still active.

⁽³⁾ Excluding West Berlin prior to 1960.

Sources: OECD Manpower Statistics, census data for each country and EEC General Statistical Bulletin.

TABLE A-2
Wages and salaries per employee (non agricultural) - Revenues et traitements par travailleur (non agricole)

	1955	1960	1961	1962	1963	1964	1965
<i>Compensation of Employees per Employee/Rémunération des Salariés et Appointés par Travailleur</i>							
Deutschland (DM '000)	5.29	7.17	7.93	8.61	9.13	9.87	10.73
France (FF '000)	6.87	10.98	12.05	13.22	14.54	15.70	16.47
Italia (Lit '000)	743	912	982	1 117	1 317	1 472	1 596
Nederland (Fl '000)	4.87	6.54	6.96	7.56	8.22	9.54	9.97
Belgique (BF '000)	81.5	102.3	104.6	111.9	121.7	133.5	144.8
U.S. (\$) '000)	4.51	5.45	5.57	5.80	5.97	6.22	6.45
U.K. (£)	537	694	738	768	807	858	906
<i>Wages and Salaries per Employee ⁽¹⁾/Salaires et Traitements par Travailleur</i>							
Deutschland (DM '000)	4.57	6.04	6.72	7.32	7.74	8.42	9.17
France (FF '000)	..	8.89	9.66	10.5	11.5	12.4	12.9
Italia (Lit '000)	626	742	800	902	1 062	1 171	1 288
Nederland (Fl '000)	..	5.66	5.99	6.56	7.02	8.11	8.50
Belgique (BF '000)	71.8	87.7	89.4	95.7	103.7	113.1	121.4
U.S. (\$) '000)	4.39	5.24	5.36	5.56	5.71	5.96	6.18
U.K. (£)	520	674	715	743	780	828	870
<i>Employers' Contributions to Social Security as Percent of Employee Compensation/Contributions des Employeurs à la Sécurité Sociale en Pourcentage de la Rémunération des Salariés et Appointés</i>							
Deutschland	13.6	15.8	15.3	15.0	15.2	14.7	14.5
France	..	19.0	19.8	20.3	20.7	20.9	21.5
Italia	15.7	18.6	18.5	19.2	19.4	20.4	19.3
Nederland	..	13.5	13.9	13.2	14.6	15.0	14.7
Belgique	12.0	14.3	14.5	14.5	14.8	15.2	16.1
U.S.	2.7	3.8	3.8	4.1	4.4	4.2	4.2
U.K.	3.2	2.9	3.1	3.3	3.4	3.5	4.0

⁽¹⁾ Compensation less employers' contributions to Social Security.

Source: EEC General Statistical Bulletin, National Yearbooks, OECD National Accounts Statistics for data on compensation and employers' contributions to Social Security. See Table A-1 for sources on employment, here including government and public enterprise (government only in U. S.).

TABLE A - 3

Population and labour force - Population et population active

	1955	1960	1965	1970	1975	1980
	<i>Population</i> ⁽¹⁾ (millions)					
Deutschland	50.19	55.43	59.04	60.22	61.51	62.39
France	43.43	45.58	48.93	50.95	53.52	56.30
Italia	48.20	49.64	51.59	54.32	56.40	58.44
Nederland	10.76	11.49	12.29	13.12	14.20	15.41
Belgique	8.87	9.15	9.46	9.71	9.94	10.00
EEC	161.4	171.4	181.3	188.3	195.6	202.5
	<i>Population of working age - Population d'âge actif</i> ⁽²⁾ (millions)					
Deutschland	33.13	35.79	36.84	36.27	36.44	38.96
France	26.45	27.14	29.16	30.26	31.58	33.59
Italia	30.70	31.68	32.44	33.91	34.50	35.73
Nederland	6.40	6.76	7.36	7.80	8.28	8.83
Belgique	5.65	5.62	5.72	5.79	5.87	5.95
EEC	102.3	107.0	111.5	114.0	116.7	123.1
	<i>Labour force - Population active</i> ⁽³⁾ (millions)					
Deutschland	23.22	26.22	26.90	26.98	27.52	28.42
France	19.01	18.88	19.69	21.33	22.37	23.48
Italia	20.82	20.84	19.73	20.54	20.65	21.25
Nederland	3.85	4.07	4.63	4.84	5.10	5.40
Belgique	3.49	3.50	3.65	3.80	3.92	4.00
EEC	70.4	73.5	74.6	77.5	79.56	82.55
	<i>Participation rates</i> (Labour force as % of population of working age)			<i>Taux de participation</i> (% de la population active dans la population d'âge actif)		
Deutschland	70.1	73.3	73.0	74.4	75.5	72.9
France	71.9	69.6	67.5	70.5	70.8	69.9
Italia	67.8	65.8	60.8	60.6	59.9	59.5
Nederland	60.2	60.2	62.9	62.1	61.6	61.2
Belgique	61.8	62.3	63.8	65.6	66.8	67.2
EEC	68.8	68.7	66.9	68.0	68.2	67.1

⁽¹⁾ Including migration.⁽²⁾ Males between the ages of 15 and 65; females 15 to 60.⁽³⁾ Civilian.

Sources: OECD Manpower Statistics, National Year books (census data and projections) and OECD Demographic Trends 1956-76; 1965-80.

TABLE A - 4

Employed labour and GNP - Population active occupée et PNB

		Deutschland (¹)	France	Italia	Nederland	Belgique
<i>Employed Labour Force/ Population Active Occupée (millions)</i>	1955	22.27	18.73	19.33	3.82	3.35
	1960	25.95	18.64	20.00	4.02	3.38
	1965	26.75	19.42	19.01	4.60	3.59
	1970	26.8	21.1	20.0	4.80	3.74
	1975	27.3	22.1	20.2	5.06	3.86
	1980	28.2	23.3	20.9	5.36	3.94
<i>GNP per Employed Labour Force/ PNB par Personne Occupée (²) (1958 prices/prix de 1958)</i>	1955	8.81	11.45	.818	8.82	149.4
	1960	11.02	14.52	1.041	10.25	167.8
	1965	13.58	18.09	1.426	11.62	202.1
	1970	16.9	22.5	1.86	13.42	240
	1975	21.1	28.1	2.43	15.72	285
	1980	26.3	35.0	3.18	18.41	339
<i>Real GNP/PNB Réel (³) (1958 prices/prix de 1958)</i>	1955	198.6	214.3	15.83	33.70	499.9
	1960	286.3	270.7	20.83	41.16	566.4
	1965	363.2	351.2	27.12	52.80	725.2
	1970	452	474	37.2	64.5	896
	1975	576	621	49.3	79.6	1 100
	1980	741	812	66.5	98.8	1 335
<i>Nominal GNP/PNB aux Prix Courants (³)</i>	1955	180.8	171.9	14.62	29.75	454.5
	1960	296.6	296.2	20.99	42.35	565.8
	1965	449.6	464.7	35.57	68.99	847.4
	1970	641	720	55.9	96.6	1 200
	1975	932	1 082	85.3	136.7	1 690
	1980	1 375	1 630	132.5	194.2	2 360
<i>Average Annual Increase/Taux d'Accroissement (% p.a.)</i>						
<i>Employed Labour Force/ Population Active Occupée</i>	1955/65	1.8	.4	-.2	1.9	.7
	1965/80	.5	1.2	.6	1.0	.6
<i>GNP per Person Employed/ PNB par Personne Occupée</i>	1955/65	4.4	4.7	5.7	2.8	3.1
	1965/80	4.5	4.5	5.5	3.2	3.5
<i>Real GNP/PNB Réel</i>	1955/65	6.2	5.1	5.5	4.6	3.8
	1965/80	4.9	5.7	6.2	4.3	4.1
<i>Nominal GNP/PNB aux Prix Courants</i>	1955/65	9.5	10.4	9.3	8.8	6.4
	1965/80	7.7	8.7	9.2	7.2	7.1

(¹) Excluding W. Berlin prior to 1960.

(²) Thousand units of national currency, except Italy (million).

(³) Billion units of national currency, except Italy (000 billion). The conversion of real GNP to nominal GNP during the projection period is based on the assumption that prices rise on the average by 2.8 % p.a. for all countries.

Sources: Of historical data OECD Manpower Statistics, EEC General Statistical Bulletin; of labour force projections OECD (including migration, see table A-3) with EUROFINANCE projections of unemployment.

TABLE A - 5

Main trends in social security
Tendances principales de sécurité sociale

	1955	1960	1961	1962	1963	1964	1965
<i>DEUTSCHLAND</i> (value figures in billions of national currency)							
Contributing membership (million)	23.0	26.0	26.2	26.3	26.7	25.8	25.7
Pensioners (million)	6.16	7.29	7.40	7.54	7.68	7.89	8.10
(Pensioners excluding survivors)	3.50	4.14	4.27	4.42	4.53	4.69	4.84
Contributions - employer	11.2	22.1	24.1	26.1	28.3	30.1	32.8
- total	22.6	42.6	48.9	51.1	55.3	61.0	68.4
Benefits - retirement	9.74	20.3	22.0	23.6	25.8	30.1	32.8
- total	19.5	40.1	44.1	48.4	52.7	57.9	65.6
Average retirement benefits (000's DM)	1.58	2.78	2.97	3.13	3.36	3.59	3.95
Reserves (year-end)	..	11.4	16.2	18.9	21.5	24.6	27.4
Contributing membership as % of labour force	99.0	99.0	99.0	98.9	100.0	96.7	95.4
Average retirement benefits as % of average wage	34.6	46.0	44.2	42.8	43.4	42.6	43.1
<i>FRANCE</i> (chiffres de valeur en milliards d'unités de monnaie nationale)							
Cotisants (million)	18.7	18.5	18.7	18.9	19.3	19.5	19.7
Retraités (million)	4.95	5.39	5.46	5.53	5.63	5.74	5.82
Retraités à l'exclusion de survie	3.47	3.77	3.82	3.87	3.94	4.02	4.07
Cotisations - des employeurs	..	25.2	29.3	33.6	39.1	43.9	48.3
- totales	..	35.0	40.8	47.0	54.2	61.6	67.8
Prestations - de vieillesse	..	9.75	10.8	12.5	15.0	17.7	20.1
- totales	..	34.8	39.6	46.0	53.8	61.5	68.2
Prestation moyenne de vieillesse (FF 000)	..	1.81	1.98	2.26	2.66	3.08	3.45
Réserves (fin d'année)	..	..	..	..	..	..	..
Cotisants en % de la population active	98.2	98.0	99.0	100.0	100.0	100.0	100.0
Prestation moyenne en % du salaire moyen	..	20.4	20.5	21.5	23.1	24.8	26.7

TABLE A - 5 suite

Main trends in social security
Tendances principales de sécurité sociale

	1955	1960	1961	1962	1963	1964	1965
<i>ITALIA</i> (Valeur exprimé en Lire 000 milliards)							
Contributing membership (million)	20.8	20.8	20.7	20.4	20.0	19.9	19.7
Pensioners (million)	3.85	4.19	4.28	4.48	4.51	4.55	4.63
(Pensioners excluding survivors)	2.89	3.14	3.21	3.36	3.38	3.41	3.47
Contributions - employer	.94	1.69	1.87	2.27	2.81	3.28	3.26
- total	1.46	2.57	2.69	3.22	4.00	4.69	5.43
Benefits - retirement	.78	1.41	1.53	1.82	2.28	2.40	3.18
- total	1.24	2.24	2.47	2.90	3.62	4.04	5.04
Average retirement benefits (000's Lit.)	203	337	357	406	506	527	687
Reserves (year-end)	..	1.32	1.54	1.86	2.24	2.89	3.28
Contributing membership as % of labour force	100	100	100	100	100	100	100
Average retirement benefits as % of average wage	32.4	45.4	44.6	45.0	47.6	45.0	53.3
<i>NEDERLAND</i> (chiffres de valeur en milliards d'unités de monnaie nationale)							
Cotisants (millions)	3.85	4.07	4.12	4.19	4.27	4.35	4.63
Retraités (millions)	.82	.91	.93	.95	.97	1.00	1.03
(Retraités à l'exclusion de survie)	.56	.59	.60	.62	.63	.65	.67
Cotisations - des employeurs	1.18	2.69	3.04	3.18	3.92	4.81	5.35
- totales	2.68	6.03	6.95	7.36	8.84	10.69	12.81
Prestations - de vieillesse	.42	2.11	2.30	2.60	3.01	3.71	4.85
- totales	1.01	4.82	5.18	5.75	7.19	8.65	10.4
Prestation moyenne de vieillesse (000's Fl.)	.51	2.32	2.47	2.74	3.10	3.71	4.71
Réserves (fin d'année)	..	..	..	..	..	..	..
Cotisants en % de la population active	100	100	100	100	100	100	100
Prestation moyenne en % du salaire moyen	..	41.0	41.2	41.8	44.2	45.7	55.4

TABLE A - 5 suite

Main trends in social security
Tendances principales de sécurité sociale

	1955	1960	1961	1962	1963	1964	1965
<i>BELGIQUE</i> (value figures in billion of national currency)							
Contributing membership (million)	1.91	1.94	1.99	2.04	2.08	2.14	2.17
Pensioners (million)	.31	.35	.35	.36	.36	.39	.39
Pensioners excluding survivors	.17	.19	.20	.20	.20	.22	.22
Contributions - employer	23.9	37.3	39.9	43.6	49.2	57.0	66.4
- total	48.9	75.9	80.2	86.8	95.7	112.2	129.8
Benefits - retirement	13.2	20.8	22.6	25.5	26.3	28.7	31.1
- total	47.3	72.9	76.6	83.5	91.8	98.3	120.8
Average retirement benefits (000's BF)	42.6	59.4	64.6	70.8	73.1	73.6	79.7
Reserves (year-end)	63.3	66.3	69.9	73.2	77.1	91.0	100.0
Contributing membership as % of labour force	54.7	55.4	56.5	57.1	57.9	59.1	59.5
Average retirement benefits as % of average wage	59.3	67.7	72.3	74.0	70.5	65.1	65.7
<i>UNITED KINGDOM</i> (chiffres de valeur en milliards d'unités de monnaie nationale)							
Cotisants (millions)	23.8	24.5	24.8	24.9	25.0	25.2	25.4
Retraités (millions)	4.63	5.68	5.79	5.94	6.11	6.29	6.49
Retraités à l'exclusion de survie	..	..	..	..	..	..	..
Cotisations - des employeurs	.27	.39	.46	.51	.57	.64	.78
- totales	.74	1.05	1.18	1.30	1.43	1.58	1.88
Prestations - de vieillesse	.42	.68	.77	.82	.93	1.02	1.20
- totales	.69	1.04	1.18	1.27	1.48	1.56	1.85
Prestation moyenne de vieillesse (£)	90.7	119.7	133.0	138.0	152.2	162.2	184.9
Réserves (fin d'année)	..	..	..	..	..	..	..
Cotisants en % de la population active	100.0	100.0	99.9	99.2	99.1	99.5	98.9
Prestation moyenne en % du salaire moyen	17.5	17.8	18.6	18.6	19.5	19.6	21.3

MAIN TRENDS IN SOCIAL SECURITY SOURCES AND METHODOLOGICAL NOTES

1. *Contributing membership*: Figures for Deutschland, France, Italia and Nederland were derived from data on the labour force on the basis of information on the number of contributions for social security available for one or two years in national sources. For Belgique and the United Kingdom continuous series are published in the Statistical Yearbooks of each country.

2. *Pensioners*: Equals estimated total pensioners (insured and their survivors) receiving national pensions i.e., excluding disablement pensions. Data estimated on the basis of spot year figures obtained from national sources, and the population over retirement age. The number of pensioners is larger than the estimated number of retired owing to the inclusion of *a*) those in receipt of a pension who continue to work, *b*) early retirements and *c*) those in receipt of pensions who have never worked (survivors). "Survivors" in Holland estimated simply as 35% of total pensioners.

3. *Contributions and Benefits*: Principal sources — EEC "General Statistical Bulletin" 1967 N° 11 and

"Social Statistics" 1967 N° 5. Total contributions equal receipts, net of transfers to other schemes. Data on disablement, old age and survival pensions have been adjusted to exclude disablement pensions. Italian retirement benefits refer to pensions paid by the three major public funds operating in Italy.

4. *Average Retirement Benefits and Average Wages*: Average retirement benefits calculated by dividing total retirement benefits by total pensioners (including survivors). The level of retirement pensions is normally dependent on the salary in the final years of employment; therefore, the comparison with average wages and salaries (source Table A - 2), which are normally lower than wages and salaries in the final years of employment, overstates the importance of retirement pensions.

5. *Pensioners as % of Retirement Population*: Obtained by dividing "retired population" (estimated as population no longer active by average participation rate of labour force in 45-60 age bracket) into pensioners without survivors.

APPENDIX B

COMPLEMENTARY PENSION SCHEMES
— HISTORICAL DATA AND ESTIMATES BY COUNTRY —

NOTE OF CAUTION: The larger part of the data presented in the following pages represents estimates based on benchmark information, small samples or simply deduced from theoretical relationships and the experience of particular funds. While the figures have been checked for internal consistency, their reliability is obviously subject to doubt. Tables B - 1, 3, 4, 7, 8, 9, are based largely on published information. The estimates of Tables B - 2, 5, 6 and 10, on the other hand SHOULD BE REGARDED AS BROAD ORDERS OF MAGNITUDE ONLY.

DEFINITION OF TERMS USED IN APPENDIX B

The following terms are employed in a sense comparable from country to country. Specific departures of the statistics shown from the adopted terminology are indicated in footnotes to the tables.

1. Complementary schemes = all plans promising a retirement pension in addition to old age benefits under legal insurance schemes, but excluding *individual* insurance plans. Such plans may be "public" (= set up for civil servants and employees of public enterprises) or "private" (= for private wage and salary earners, as a rule excluding agricultural and family workers).
2. Current transfer schemes = also known as "repartition", "non-funded". "pay-as-you-go" schemes, comprise all plans paying pension benefits out of current contributions, hence not requiring assets to back future benefit commitments. *Reserves* generally cover half to two years of benefit payments.
3. Balance sheet entry schemes = also known as "severance funds" in Italy, comprise all funded plans with legal or contractual obligation to pay pension or severance benefits, with the funding appearing as a liability of the firm, with or without segregation of corresponding *reserves*.
4. Insured schemes = all (funded) group plans administered by an insurance company. *Reserves* as a rule not segregated from total insurance funds.
5. Autonomous funds = all self-administered funded plans, as a rule with separate legal identity. The investment of fund assets may or may not be subject to government regulation ("regulated" or "unregulated"). They include public and private pension funds — the latter being of primary interest to the present study.
6. Reserves = total assets of pension funds, which may or not be available for investment in the capital markets depending on the type of fund. The *reserves* of balance sheet entry plans, with rare exceptions, represent investment in the company's own assets; those of current transfer schemes, in short-term or liquid assets. Long-term investments (real estate, securities, etc.) constitute by distinction, the bulk of (autonomous) pension fund *assets*.
7. Investments = net purchases of assets providing a return on investment (interest, dividends, rent). In practice, investment statistics denote *net cash flow* (= total receipts less total disbursement).
8. Net accumulation = "net investment" + capital gains = net addition to total fund reserves or assets during year.
9. Net investment earnings = earnings on invested assets less administrative costs. For current transfer schemes, administrative costs are shown net of investment earnings.
10. Covered workers = membership of complementary schemes whether contributing or not ("contributory" or "non-contributory" schemes); excluding dependants.
11. Beneficiaries = pension recipients, excluding dependants or (to the extent possible) survivors.
12. Contributions = by employers, employees and, on occasion, the State.
13. Benefits = payment of all pensions under compulsory schemes. *Average benefits* are overstated to the extent of inclusion of other than retirement pensions, or exclusion of survivors from the data.
14. Key ratios:
 Average contribution = contributions per covered worker
 Average benefit = benefits per beneficiary
 Reserve: benefit ratio = reserves per benefit payments
 Average reserves = reserves per covered worker
 The "K-multiple" = average reserves per average benefit

TABLE HEADINGS (FRENCH/ENGLISH)

Since the content and presentation of the following tables is fairly uniform, line and column headings are given in French only. The English translation of the titles appearing in Appendix B Tables are listed for convenience:

Salariés affiliés	= covered workers
Pensionnés	= beneficiaries
Taux d'affiliation	= covered workers as % of private non-agricultural employment (EPN)
Taux de retraite	= beneficiaries as % of EPN
Pensionnés/affiliés	= beneficiaries as % of covered workers
Cotisations	= contributions
Revenues nets des fonds placés	= net investment earnings
Prestations	= benefits
Investissement	= net cash flow
Accroissement net	= net accumulation of reserves
Réserves	= fund assets
Réserves: prestations	= asset: benefit ratio
Réserves par affilié	= reserves per covered worker
Prestation moyenne	= average benefit
Rapport RPA/PM	= ratio of reserves per covered worker to average benefit (the K-multiple)
Cotisation moyenne	= average contribution
Prestation moyenne et	= average benefits and
Cotisation moyenne (en % du salaire moyen non-agricole)	= average contribution as % of net wages and salaries per employee
Fonds autonomes	= self-administered funds
Fonds sous forme d'inscription au bilan	= balance sheet entry schemes
Fonds de licenciement	= severance funds.

TABLE B-1

Fonds de pension capitalisés en Allemagne (1)
(en millions de personnes et milliards de Marks, sauf indication contraire)

	1957	1961	1962	1963	1964	1965	1966
<i>Fonds publics (2)</i>							
Salariés affiliés	..	1.53	1.58	1.66	1.70	1.67	1.80
Pensionnés (survivants compris)	..	.42	.43	.45	.48	.51	.53
Pensionnés/affiliés (%)	..	27.5	27	27	28	30.5	29.5
Cotisations	..	.71	.84	.94	1.02	1.20	1.30
Revenus nets des fonds placés	..	.37	.30	.54	.33	.23	.87
Prestations	..	.28	.34	.38	.42	.45	.52
Accroissement net (3)	..	.80	.80	1.10	.93	.98	1.65
Réserves des fonds (fin d'année)	2.3	4.5	5.3	6.4	7.35	8.33	10.0
Réserves par affilié (DM milliers)	1.8	2.9	3.4	3.9	4.3	5.0	5.6
Prestation moyenne (DM milliers)	.5	.67	.79	.84	.87	.88	.98
Rapport RPA/PM (4)	3.6	4.3	4.3	4.6	4.9	5.7	5.7
<i>Fonds privés (5)</i>							
Salariés affiliés	.73	1.64	1.66	1.99	1.81	1.77	1.81
Pensionnés	.13	.23	.25	.26	.27	.29	.31
Pensionnés/affiliés (%)	18	14	15	12.5	14.5	16	16.5
Cotisations	.22	.55	.60	.65	.67	.72	.80
Revenus nets des fonds placés	.18	.27	.31	.37	.39	.44	.50
Prestations	.12	.25	.28	.34	.37	.39	.44
Investissements (3)	.28	.58	.64	.68	.70	.77	.86
Accroissement net	.36	.69	.59	.89	.73	.75	.86
Réserves des fonds (fin d'année)	3.20	5.49	6.08	6.97	7.70	8.45	9.31
Réserves par affilié (DM milliers)	4.38	3.35	3.66	3.50	4.25	4.77	5.14
Prestation moyenne (DM milliers)	.92	1.09	1.12	1.30	1.37	1.35	1.42
Rapport RPA/PM (4)	4.76	3.07	3.27	2.69	3.10	3.53	3.62
<i>Assurance collective (6) (estimations)</i>							
Salariés affiliés	1.75	2.2	..	..	..	2.7	..
Cotisations	.10	.19	..	..	..	.37	..
Réserves des fonds (fin d'année)	0.4	.8	..	..	..	1.4	..
Réserves par affilié (DM milliers)	.24	.38	..	..	..	.52	..
Prestation moyenne (DM milliers)	.15	.20	..	..	..	.25	..
Rapport RPA/PM	1.6	1.9	..	..	..	2.1	..

(1) Fonds « autonomes » garantissant des prestations complémentaires représentant cette portion de tous les régimes complémentaires allemands (voir tableau B-2) pour laquelle des statistiques relativement suivies sont publiées.

(2) Données pour 7 régimes publics, disponibles avec informations détaillées pour 1964; estimations basées sur des séries historiques se référant aux trois plus grands fonds qui s'élèvent à 70 % du nombre des affiliés, les gouvernements du Bund et Länder; Bundesbank; Bundespost.

(3) Cotisations plus réserves des fonds (le reste) moins les prestations.

(4) Rapport des deux lignes précédentes.

(5) Fonds autonomes sous la tutelle du Gouvernement (244 en 1958; 259 en 1963; 255 en 1966, y compris 7 fonds publiques de petite importance) à l'exclusion des fonds de prévoyance (Unterstützungskassen) n'étant pas sous la tutelle du Gouvernement.

(6) Régimes assurés et assurance sociale supplémentaire assumés par les employeurs.

Source: Bundesaufsichtsamt für Versicherungs- und Bausparwesen; Heubeck.

TABLE B - 2

Estimations ⁽¹⁾ des fonds de pensions privés, non assurés, en Allemagne

	Pensionskassen Fonds de pension			Unterstützungskassen Fonds de secours			Pensionsrückstellungen Fonds sous forme d'inscription au bilan			Total/Average Moyenne/Total		
	1957	1960	1965	1957	1960	1965	1957	1960	1965	1957	1960	1965
Salariés affiliés (millions)	.73	1.51	1.77	1.05	1.15	1.35	3.97	4.74	6.08	5.75	7.40	9.20
Pensionnés (millions)	.13	.23	.29	.10	.12	.17	.25	.40	.9	.48	.75	1.40
Taux d'affiliation (en % de l'Emploi Privé Non Agricole)	5.0	9.1	9.9	7.2	6.9	7.6	27.4	28.5	34.0	39.5	44.5	51.5
Taux de retraite (en % d'EPN retraités)	10.5	14	14.5	7.8	7.4	8.5	20	24.5	47	38	46	70
Cotisations (DM milliards)	.22	.47	.72	.10	.13	.24	.98	1.68	3.44	1.30	2.28	4.4
Revenues nets des fonds placés (DM milliards)	.18	.24	.44	.20	.30	.26	..	..	..	.38	.54	.7
Prestations (DM milliards)	.12	.23	.39	.05	.08	.16	.18	.32	1.04	.35	.63	1.6
Accroissement net (DM milliards) ⁽²⁾	.36	.64	.75	.25	.35	.34	.80	1.36	2.40	1.41	2.35	3.5
Réserves des fonds (DM milliards, fin d'année)	3.20	4.81	8.45	2.0	2.75	4.48	5.00	8.64	20.1	10.20	15.20	33.0
Réserves: prestations	27 : 1	21 : 1	22 : 1	40 : 1	34 : 1	28 : 1	28 : 1	27 : 1	19 : 1	29 : 1	24 : 1	21 : 1
Réserves par affilié (DM milliers)	4.4	3.2	4.8	1.9	2.4	3.3	1.3	1.8	3.3	1.8	2.1	3.6
Prestation moyenne (DM milliers)	.9	1.0	1.3	.5	.7	.9	.7	.8	1.1	.7	.8	1.1
Rapport RPA/PM ⁽³⁾	4.9	3.2	3.7	3.4	3.4	3.5	1.9	2.2	3.0	2.4	2.6	3.2
Cotisation moyenne (DM milliers)	.30	.31	.41	.10	.11	.18	.25	.35	.57	.23	.31	.48
Prestation moyenne	17	17	14	14	15	13	14	13	12	14.5	13.5	12
Cotisation moyenne } en % du salaire moyen non agricole	6	5	4.5	1.9	1.9	2	5	6	6	4.5	5	5

⁽¹⁾ Par EUROFINANCE: basés sur un grand nombre de sources, y compris des oeuvres publiées (voir tableau précédent, CEE: Régimes Complémentaires, Annuaire Statistique), coupures de presse et opinions professionnelles.

⁽²⁾ Y compris amortissement et variations des valeurs de portefeuille.

⁽³⁾ Réserves par Affilié/Prestation Moyenne.

TABLE B - 3

Régimes de retraites complémentaires en France
(en millions de personnes et milliards de francs, sauf indication contraire)

	1961	1962	1963	1964	1965	1966
<i>Statistiques des fonds de l'ARRCO</i>						
Salariés affiliés (fin d'année)	4.82	6.16	6.77	7.04	7.39	7.54
Pensionnés (fin d'année)	.51	.65	.80	.95	1.17	1.43
Survivants des pensionnés (fin d'année)	.23	.29	.34	.41	.49	.59
Cotisations	1.21	1.47	1.91	2.21	2.57	2.88
Prestations	.57	.78	1.02	1.30	1.70	2.15
Coûts administratifs (moins les intérêts)	.05	.06	.07	.05	.08	.10
Accroissement net	.59	.63	.94	.88	.78	.63
Réserves (fin d'année)	1.23	1.86	2.82	3.70	4.48	5.11
	1960		1963	1964	1965	
<i>Estimations de tous régimes de retraites complémentaires</i>						
Salariés affiliés (fin d'année)	6.2		9.21	9.68	10.1	
Pensionnés (fin d'année)	.6		1.12	1.32	1.6	
Taux d'affiliation en % de l'emploi total non agricole	51.5		71	72.5	74	
Pensionnés en % des retraités	26		48.5	57	69	
Cotisations	2.4		4.50	5.22	6.1	
Prestations	1.2		2.96	3.58	4.5	
Coûts administratifs (moins les intérêts)	.1		.24	.20	.3	
Accroissement net	1.1		1.30	1.44	1.3	
Réserves (fin d'année)	2.4		6.37	7.82	9.1	
Rapport des réserves/prestations	2.0		2.1	2.2	2.0	
Cotisation par affilié (FF 000)	.39		.49	.54	.60	
Prestation par pensionné (FF 000)	2.00		2.64	2.71	2.81	

Sources: ARRCO (Association des Régimes de Retraites Complémentaires), Ministère du Travail, coupures de presse, et estimations d'EUROFINANCE.

TABLE B - 4

Réserves italiennes de fonds de pension et investissements
(billions de lire)

	1958	1959	1960	1961	1962	1963	1964	1965	1966
<i>Fonds publique</i> ⁽¹⁾									
Revenues de cotisation	1.24	1.33	1.81	1.81	2.22	2.87	3.08	3.56	3.40
Total	1.36	1.42	1.91	1.94	2.36	2.99	3.25	3.79	3.58
Dépenses de prestation	1.18	1.31	1.41	1.53	1.82	2.28	2.40	3.18	3.38
Total	1.34	1.49	1.60	1.73	2.11	2.61	2.66	3.41	3.70
Investissements ⁽²⁾	.10	.05	.08	.08	.14	.13	.35	.10	.22
Accroissement net	.02	-.07	.30	.20	.24	.38	.60	.38	-.12
Réserves (fin d'année)									
Valeurs immobilières	.12	.13	.15	.17	.18	.21	.23	.25	.29
Valeurs mobilières	.20	.21	.22	.25	.33	.40	.63	.64	.68
Prêts à long terme	.27	.30	.35	.39	.44	.47	.57	.64	.68
Crédits et en caisse	.23	.12	.33	.44	.53	.80	1.05	1.43	1.09
Total	.82	.76	1.06	1.25	1.49	1.88	2.48	2.96	2.74
<i>Fonds privés</i>									
Réserves de fonds (fin d'année)									
Entreprises industrielles & commerciales ⁽³⁾	.44	.48	.56	.66	.80	.96	1.13	1.28	1.40
Institutions financières	.24	.27	.33	.38	.43	.50	.57	.66	.75
Fonds de licenciement ⁽⁴⁾	.25	.28	.32	.39	.47	.56	.62	.69	.76
Total	.93	1.03	1.21	1.42	1.69	2.03	2.32	2.63	2.92
(dont): sous forme d'inscription au bilan	.79	.87	1.03	1.20	1.43	1.71	1.96	2.24	2.47
Fonds autonomes ⁽⁵⁾	.12	.16	.18	.22	.26	.32	.36	.39	0.45
Accroissement net des réserves									
sous forme d'inscription au bilan		.08	.16	.17	.23	.28	.25	.28	.23
Fonds autonomes		.04	.02	.04	.04	.06	.04	.03	.06

⁽¹⁾ Comptes consolidés des trois grands fonds publics (réserves en 1966): INPS (Lit. 1215 milliards), INAIL (Lit. 553 milliards) et IPAMT (Lit. 975 milliards).

⁽²⁾ Placements à long terme.

⁽³⁾ 350 grandes sociétés, E.N.E.L., et entreprises municipales.

⁽⁴⁾ De 237 sociétés manufacturières.

⁽⁵⁾ Estimés être deux fois les fonds autonomes du secteur financier.

Sources: A. Confalonieri, *I Fondi di Quiescenza*, 1966; F. Cesarini, *I Fondi di Previdenza nel Settore Bancario*, 1965; Banca d'Italia, ISTAT, Mediobanca.

TABLE B - 5

Estimations (1) de tous les fonds de pensions privés en Italie
(en milliards de lire, sauf indication contraire)

	Fonds d'entreprise autonomes			Fonds sous forme d'inscriptions au bilan (y compris les fonds de licenciement)			Total/Moyenne		
	1960	1963	1965	1960	1963	1965	1960	1965	
Salariés affiliés (milliers)	125	155	165	1 325	1 600	1 715	1 450	1 880	
Pensionnés (milliers)	18	28	38	112	132	182	130	220	
Taux d'affiliation (%)	1.5	2	2	17	19	21.5	18.5	23.5	
Taux des retraités (%)	2.5	4	5	17	18	23.5	19.5	28.5	
Cotisations	20	50	60	180	316	328	200	388	
Revenues des fonds placés	8	20	15	..	..	..	8	15
Prestations	7	17	30	20	37	70	27	100	
Accroissement net (2)	24	60	36	157	276	268	181	304	
Réserves des fonds (fin d'année)	185	320	390	928	1 707	2 237	1 113	2 627	
Réserves:prestations	26 : 1	19 : 1	13 : 1	46 : 1	46 : 1	32 : 1	41 : 1	26 : 1	
Réserves par affilié (Lit. millions)	1.48	2.07	2.36	.70	1.07	1.31	.77	1.40	
Prestation moyenne (Lit. millions)	.40	.65	.77	.18	.28	.38	.21	.45	
Rapport RPA/PM (3)	3.7	3.2	3.1	3.9	3.8	3.45	3.7	3.1	
Cotisation moyenne (Lit. millions)	.16	.32	.36	.14	.20	.19	.14	.21	
Prestation moyenne	} (en % du salaire moyen non agricole)	54	61	60	24	26	29.5	28	35
Cotisation moyenne		21.5	30	28	19	19	15	19	16.5

(1) Par EUROFINANCE: basés sur un grand nombre de sources, y compris des oeuvres publiées (voir tableau B-1, CEE: Régimes Complémentaires, Annuaire Statistique), coupures de presse et opinions professionnelles.

(2) Y compris l'amortissement et variations des valeurs de portefeuille.

(3) Réserves par Affilié/Prestation Moyenne.

TABLE B-6

Fonds de pension privés, non assurés, en Hollande

	Bedrijfspensioenfond Fonds professionnels (1)				Ondernemingspensioenfond Fonds d'entreprise (2)				Total/Average Moyenne/Total				
	1960 (*)	1963	1964	1965	1960 (*)	1963	1964	1965	1960 (*)	1963	1964	1965	
Salariés affiliés (millions)	.93	1.07	1.15	1.21	.50	.50	.50	.51	1.43	1.57	1.65	1.72	
Pensionnés (3) (millions)	.15	.19	.20	.22	.07	.08	.10	.09	.22	.27	.29	.32	
Taux d'affiliation EPN	35	37.8	39.5	39.4	18.9	17.5	17.3	16.6	54	55.3	56.9	56.1	
Taux de retraite EPN retraités (4)	49	56	62	66	24	25	26	27	75	81	88	94	
Cotisations - d'employeurs (Fls millions)	..	220	245	256	..	279	362	412	..	499	607	668	
- totales (net, Fls millions)	260	351	422	477	295	350	436	490	550	701	858	967	
Revenues des fonds placés (5) (net, Fls millions)	90	140	94	73	210	290	307	256	300	430	400	330	
Prestations - des retraités assurés (net, Fls millions)	50	68	77	86	75	99	112	124	125	167	189	210	
- totales (net, Fls millions)	65	91	108	123	105	139	169	178	170	230	277	301	
Investissements (net (4) Fls millions)	285	400	488	527	400	500	574	568	680	900	982	1 095	
Accroissement net (Fls milliards)	.30	.44	.52	.56	.40	.49	.58	.61	.70	.94	1.09	1.17	
Actifs totaux (Fls milliards, en fin d'année)	2.98	4.11	4.63	5.19	4.30	5.64	6.22	6.83	7.28	9.75	10.85	12.02	
Réserves : prestations	46 : 1	45 : 1	43 : 1	42 : 1	41 : 1	41 : 1	37 : 1	38 : 1	43 : 1	42 : 1	39 : 1	40 : 1	
Réserves par affilié (Fls '000)	3.20	3.84	4.03	4.29	8.65	11.4	12.3	13.3	5.09	6.21	6.58	6.99	
Prestation moyenne (Fls '000)	.44	.49	.53	.55	1.44	1.65	1.92	1.89	.76	.85	.95	.94	
Rapport RPA/PM	7.3	7.8	7.6	7.8	6.0	6.9	6.4	7.0	6.7	7.3	6.9	7.4	
Cotisation moyenne (Fls '000)	.28	.33	.37	.39	.59	.71	.87	.96	.39	.45	.52	.56	
Prestation moyenne	} (en % du salaire moyen non-agricole)	7.8	7.1	6.5	6.5	25	23.5	23.7	22.3	13.4	12.1	11.7	11.1
Cotisation moyenne		5.1	4.7	4.6	4.6	10.4	10.1	10.8	11.3	6.8	6.4	6.4	6.6

Sources : Centraal Bureau voor de Statistiek, Verzekeringskamer, Ministère d'Affaires Sociales et de Santé Publique.

(*) Estimations partielles.

(1) Fonds établis pour des industries ou branches entières, dont le nombre était 74 en 1963, 82 en 1965.

(2) Fonds de pension (1596 en 1965) et fonds d'épargne (40 en 1965), gérés par des entreprises individuelles.

(3) Y compris des survivants et des invalides; le nombre des retraités en 1963 était d'environ 180,000 (dont 135,000 affiliés des caisses professionnelles); avec une prestation moyenne de Fls 930 (Fls 505) par an

(4) Variation dans les réserves investies (voir tableau B-7).

(5) Déduction faite pour les frais de gestion, soit investissements nets plus prestations, moins cotisations (arrondi).

(6) Les taux de retraite réels se situent aux environs des taux indiqués (EPN = Emploi Privé Non agricole).

TABLE B - 7

Fonds de pension néerlandais: Direction des investissements en 1965

	Réerves investies des fonds privés (fin d'année, Fls milliards)				% du total	Réerves investies des fonds publics	
	Fonds professionnels	Fonds d'entreprise	Fonds d'épargne	Total		(Florins milliards)	(%)
Immobilier	.62	.70	—	1.32	11.6	.16	1.6
Hypothèques	.62	.60	—	1.22	10.8	.04	1.6
Valeurs mobilières	1.03	2.60	.02	3.65	32.2	1.72	17.0
Prêts à long-terme	2.45	2.22	—	4.67	41.3	8.01	79.5
Divers	.12	.32	—	.45	4.0	.15	1.5
Total	4.84	6.44	0.04	11.32	100	10.08	100
	(Investissements net)				Taux d'intérêt par fonds d'entreprise (%)		
Immobilier	.091	.092	—	.183	6.4		
Hypothèques	.091	.065	.002	.158	5.1		
Valeurs mobilières	.016	.144	—	.160	4.6		
Prêts à long-terme	.332	.243	—	.575	4.7		
Divers	-.003	.023	-.001	.019	4.8		
Total	.527	.567	—	1.094	4.8		

TABLE B - 8

Tendances récentes des fonds publics néerlandais

	1963	1964	1965	1966
Salariés affiliés (milliers)	465	496	490	507
Pensionnés (milliers)	148	154	162	167
Cotisations (Fls milliers)	1.24	1.39	1.72	2.07
Prestations (Fls milliers)	.62	.70	.84	.93
Réerves (Fls milliards fin d'année)	6.63	7.55	8.66	10.08
Réerves par affilié (Fls '000)	14.3	15.9	17.7	19.7
Prestation moyenne (Fls '000)	4.2	4.5	5.2	5.5
Rapport RPA/PM	3.4	3.5	3.4	3.6

(*) Estimations partielles d'après les rapports annuels du Pensions Board.

TABLE B - 9

Fonds de pension privés aux Etats-Unis (1)

	1950	1955	1960	1963	1964	1965	1966
Salariés affiliés (millions)	9.8	15.4	21.2	23.8	24.6	25.6	27.0
Pensionnés (millions)	.5	1.0	1.8	2.3	2.5	2.7	3.0
Taux d'affiliation (en % d'Emploi Privé Non-agricole)	25	35	46.5	49.5	50	50.5	51
Taux des retraités (en % de EPN retraités)	17.5	25	34.5	40.5	43	45	47
Cotisations (\$ milliards)	2.1	3.8	5.5	6.2	6.9	7.4	8.1
Revenue net des fonds placés (\$ milliards)	.3	.7	1.7	2.7	3.1	3.9	3.9
Prestations (\$ milliards)	.4	.8	1.8	2.5	2.8	3.1	3.5
Accroissement net (\$ milliards)	1.9	3.7	5.4	6.4	7.3	8.2	8.5
Réserves des fonds (\$ milliards, fin d'année)	12.0	27.4	52.0	69.9	77.2	85.4	93.9
Réserves : prestations	30 : 1	34 : 1	29 : 1	28 : 1	28 : 1	28 : 1	27 : 1
Réserves par affilié (\$ 000)	1.22	1.78	2.45	2.93	3.14	3.33	3.48
Prestation moyenne (\$ 000)	.80	.80	1.00	1.08	1.12	1.15	1.18
Rapport RPA/PM	1.5	2.2	2.4	2.7	2.8	2.9	3.0
Cotisation moyenne (\$ 000)	.21	.25	.26	.26	.28	.29	.30
Prestation moyenne	23	18	19	19	19	18.5	18.5
Cotisation moyenne							
} (en % du salaire moyen non agricole)							
<i>Non Assurés</i>							
Salariés affiliés (millions)	7.2	11.6	16.3	18.4	18.6	19.2	20.3
Taux d'affiliation (%)	18.5	26.5	35.5	38.5	38	38	38
Réserves (\$ milliards)	6.5	16.1	33.1	46.5	51.9	57.2	63.0
Réserves par affilié (\$ 000)	.90	1.39	2.03	2.53	2.79	2.98	3.10

(1) Fonds assurés et non-assurés, y compris plans de répartition différés des bénéfices.

Sources: "Private Pension Funds: Projected Growth" D.M. Holland; Statistical Abstract of the United States; National Industrial Conference Board.

TABLE B - 10

Fonds de pension au Royaume Uni: estimations

	1955	1960	1963	1965	1966
<i>Fonds privés, non-assurés</i>					
Salariés affiliés (millions)	1.9	2.6	3.0	3.6	3.9
Pensionnés (millions)	.16	.28	.43	.60	.65
Taux d'affiliation (% EPN)	10.5	14	15.5	18	19
Cotisations (£ milliards)	.12	.19	.23	.33	.38
Revenues des fonds placés (£ milliards)	.05	.08	.14	.16	.18
Prestations (£ milliards)	.03	.06	.10	.15	.18
Accroissement net (£ milliards)	.13	.20	.25	.31	.34
Réserves (£ milliards)	1.28	2.10	2.88	3.29	3.36
Réserves : prestations	42 : 1	34 : 1	29 : 1	22 : 1	19 : 1
Réserves par affilié (£ '000)	.67	.81	.96	.88	.86
Prestation moyenne (£ '000)	.20	.21	.23	.25	.28
Rapport RPA/PM	3.4	3.8	4.1	3.5	3.1
Cotisation moyenne (£)	63	72	77	92	98
Prestation moyenne	38.5	31	29.5	29	30.5
Cotisation moyenne						12	10.5	10	10.5
<i>Fonds privés, assurés et non-assurés</i>					
Salariés affiliés (millions)	4.0	6.0	7.2	8.4	8.9
Taux d'affiliation (%)	22	32	37	41.5	43.5
Pensionnés (millions)	.20	.44	.55	.62	.65
Réserves (£ milliards)	1.95	3.40	4.88	5.73	6.0
Réserves par affilié (£ '000)	.49	.56	.68	.68	.67
Prestation moyenne (£ '000)	.20	.22	.23	.23	.24
Rapport RPA/PM	2.5	2.6	3.0	2.9	2.9
<i>Fonds publics</i>					
Salariés affiliés (millions)	3.5	3.7	3.9	4.0	4.1
Réserves (£ milliards)	.80	1.27	1.65	1.95	2.11
Réserves par affilié (£)	230	345	420	490	515

Sources: Benchmark data for 1955 and 1963 from "Occupational Pension Schemes" Survey by Government Actuary; reserve and investment data from "Financial Statistics", "National Income and Expenditure"; Central Statistical Office.

TABLE B - 11

Hypothèses sur les déterminants principaux du rapport RPA/PM
(régimes complémentaires privés, non assurés)

	1960/65	1965/70	1970/75	1975/80
<i>Accroissement des prestations moyennes/Growth of average benefits(%p.a.)</i>				
Deutschland - autonomes	6.6	4.5	4.9	5.1
- ensemble des régimes privés	5.9	6.4	4.9	5.1
Italia - autonomes	14.1	6.5	6.5	6.5
- ensemble des régimes privés	16.4	8	4.9	6.7
Nederland	4.7	5.3	7.8	10.7
Belgique	9.1	7.9	7.4	7.2
U.S. (assurés et non-assurés)	2.8	4.3	4.5	4
U.K. (non-assurés)	0.9	5.7	5.6	5.5
<i>Rapport pensionnés salariés affiliés/Retired as % of contributing members (fin de période)</i>				
Deutschland - autonomes	15	18.5	21.5	24.5
- ensemble des régimes privés	15	20	22	24
Italia - autonomes	24	30	29	27
- ensemble des régimes privés	12	13	14	15
Nederland	19	20	21	23
Belgique	15	15	17	19
U.S. (assurés et non-assurés)	10.5	12	15.5	18
U.K. (non-assurés)	16.5	22.5	24	25.5
<i>Taux d'intérêt (pendant la période, %) / Interest rates (during period, %)</i>				
Deutschland	6.6	6.5	5.5	5
Italia	5.3	5.5	5.5	5
Nederland	4.3	5.8	5.5	5
Belgique	4.1	4.3	5	5
U.S.	4.2	5	5	5
U.K.	6.2	6.7	6	5

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