A scheme of pensions to be granted to employees on retirement from service can be effected either by means of a contract with an assurance company or by the establishment of a “private” pension fund. The choice of method is a problem of some difficulty depending to a large extent on the size and stability of the employing concern and on the nature of the benefits desired, but the principles which govern the working of a scheme are the same whether its success is the responsibility of a contracting party or of private trustees. I propose to offer a few comments by way of a general survey of these principles, which, it will be seen, require a close study and a broad outlook for their full appreciation.

**Funded or Unfunded?**

There can scarcely be any difference of opinion as to whether it is better to have a specific fund accumulated or to trust in a simple undertaking by a private employer that pensions will be paid at certain rates. Apart from the important practical consideration that there does not appear to be any other satisfactory way of handling employees’ contributions in a contributory scheme, no private employer is in a position to guarantee that his business—or means—will be able to provide payments, on the scale promised, when they become due, unless he intends to hypothecate a definite—if not specific—portion of his uncovered assets for the purpose; in default of this, his guarantee, however valuable as a personal covenant, or even in factual appearance, must be accepted with the reserve appropriate to its dependance on the future prosperity of his business.

There may be something to be said, however, for regarding the State as an exception, but this is because of its power to collect money by means of taxation, rather than of a pre-eminence in the value of its guarantee. On the other hand, there is much force in the view that the State’s pension liabilities should be removed from the budgetary ambit altogether; although, indeed, it has been advanced as a serious counter-argument in the past that the existence of a large extra-budgetary fund might arouse the cupidity of rulers in times of financial difficulty. It is interesting to reflect that, in a State which has a high proportion of Government employment, the size of such a
fund—perhaps twenty times the annual pension roll—would conceivably, in the course of time, create investment problems of a unique character in their influence on Government financial policy.

No one will deny the relief afforded in having a substantial interest income as a contributor to the annual outlay. Among properly-constituted funds of normal character which have reached full maturity, a remarkably common ratio of about 2 for interest to 1 for contributions has been observed in the total annual income, and the relief obtained by an employer, as compared with an unfunded scheme, might be as much as fifteen or twenty per cent. of the annual salary bill. There are other incidental but material advantages in the case of a fund which is approved by the Revenue Commissioners, such as the freedom of its interest income from tax and concessions to both employer and employees in respect of their annual contributions.

Size of Fund.

Objection is often advanced, however, to the size of these funds which is demanded for solvency, and it sometimes appears plausible when attention is focussed on their rapid growth over a period of years, arising from an income greatly in excess of outgo. This feature can be readily recognised as an essential characteristic when it is remembered that for many years a newly established fund will not be called upon to bear its maximum burden of pensioners. This is true even in cases where existing employees of advanced ages are admitted, because they are not entitled to receive pensions at as high a rate as those who will contribute throughout their whole service, so that the full weight of pension liability will not be felt until those now entering at the youngest ages (say, 18 to 20) provide their quota of pensioners at ages up to 90 or more. A period of not less than, say, 60 or 70 years of growth is, therefore, a necessary feature and is no indication of the existence of funds surplus to requirements. Experience has demonstrated how a fund, which has been unwisely reduced during the period of its natural growth, becomes extinguished with alarming rapidity even before the liabilities have reached their maximum dimensions. Members who feel aggrieved at the size of their contributions should pause at the prospect of such a catastrophe which, in return for paltry immediate gains, would deprive pensioners of any further benefit and themselves of any return whatever for their contributions.

The necessary size of a fund can be demonstrated arithmetically by establishing the identity of its future progress with its actuarial valuation in terms of present values. A simpler—but cruder—method to test the size in a general way would be to remove the pensioners and such a sum as might be considered sufficient to provide them (using age-groups) with annuities for the rest of their lives, leaving a balance which will be required in due course to provide the contributing members with similar annuities at their retirement. It will be found that if a rough allotment appropriate to age be given to each of the existing contributors it will be convincingly meagre in appearance. That this must be so follows naturally from a realisation of the fact that, normally, a fund is, of course, no more than the total value of its several net liabilities in respect of the individual members (active and retired). Any reduction in its size, apart from the inherent ultimate danger, would lend support to the principle that a future generation of members should pay for the pensions of present contri-
butors and would make the receipt of such pensions—for which contributions have been paid in good faith virtually throughout a lifetime—conditional, one might almost say, on the goodwill of succeeding employees, if, indeed, recruitment is maintained at all.

Benefits Other Than Pension.

The main purpose of a pension fund is to provide the means to pay pensions. This may seem to be an obvious remark, but the trend of pension fund development is in the direction of adding to the number of additional benefits, such as the return of contributions in certain circumstances, or the grant of options of value. An award from a pension fund in the event of, say, death during service may, indeed, be a desirable thing, and, from some points of view, such as regarding it as deferred salary, may even be an equitable thing. No fault can be found with the incorporation of such a benefit in a scheme, provided, however, it is realised that it requires to be specifically paid for by increasing the contribution rate, or by reducing the scale of pensions which the fund can with safety support. The introduction of such additional benefits should be accompanied by an appropriate review of the state of the fund as a whole, and should not be undertaken light-heartedly without regard to its financial effect, as has been done in the past, apparently in the unjustifiable complacency prompted by the magnitude of the fund. Frequently too, it follows agitation from the members who feel that, unless the fund partakes to some extent of the character of a savings bank, they may not secure value for their contributions in the form of cash. It is admittedly difficult to convince anyone who, say, withdraws voluntarily from a pension fund after contributing for several years, that he has received “insurance” cover in respect of the risk of becoming a pensioner, and that he has no more claim against the fund than a householder has to the return of his fire premium in the event of there being no fire.

Adequacy of Contributions.

It will be gathered that the adequacy of the contribution payable to meet all the benefit charges is a matter of some importance. It may, in fact, be regarded as the foundation principle in connection with pension fund finances. If the contribution is adequate at the inception of a fund and remains, or is adjusted from time to time so as to remain, adequate, there need be no fear of a deficiency unless there is either a change of circumstances affecting the liability in respect of back-service rights (which an altered contribution rate could not be expected to meet), or a serious depreciation in the fund’s investments. It is customary to find employer and employee contributing on a fifty-fifty basis, and it seems reasonable to consider that, in the absence of a clear division of responsibility expressed either in the rules or in some other indisputable manner, there is no substance in the argument that the parties divide the responsibility for a deficiency other than in the ratio of their contractual contributions, which, in such a case, is the only evidence of their respective commitments. On the other hand, a definite undertaking on the part of an employer for a greater share in the responsibility should naturally be reflected in the respective contributions (unless it takes the form of wiping out an ascertained deficiency, if any should arise). If this is not the case, there must be a presumption either that the total contributions are inadequate and
that the fund is inevitably doomed for insolvency, or alternatively, that, contributions being adequate, the guarantee has no reality in fact because the employee is really footing the bill in proportion to his contribution. Neither of these assumptions can be sensibly related to a serious undertaking of the kind mentioned.

**Equity and Pension Basis.**

Of secondary but substantial importance is the question of equity as between one member and another. In practice, considerations of expediency arising out of such features as the combination in a single scheme of different grades of employees, or the admission of members at various ages, render well-nigh impossible the attainment of complete equity between all members in the relation between contributions and benefits. A broad equity is all that can be hoped for and, apart from such possible measures as the institution of different scales of contribution for different classes of members, this is generally assisted, where there is a range of optional retirement ages, by the presence of divergent trends in the experience of different groups, such as the tendency for those with higher salaries to remain longer in service, or for those with lower salaries to be compulsorily superannuated at the earlier ages. Generally, however, it may be said that common insurance provides definite sources of profit which enable contributors to obtain much more in the way of pensions than the accumulation with interest not only of their own but of their employer's contributions as well, and it is hardly going too far to consider this margin as a buffer in which the claims of rival members may be regarded as lost.

Considerations of equity and expediency are also conflictingly involved in the choice of a basis for the grant of pensions. Usually the amount awarded is a proportion of salary for each year's service with or without a minimum period to fix eligibility and a maximum to limit the size of pension. Pensionable salary has such an important bearing on the amount of pension that its definition should receive the most careful attention. The adoption of average salary throughout service makes for stability in the finances of a scheme and is particularly suitable for members who reach their maximum remuneration at an early age. On the other hand, it provides too small a pension, in relation to earnings just before retirement, for the member whose salary increases steadily throughout service. In such a case, a pension based on final salary, or on the average salary of some few years prior to retirement, seems to meet this objection, but, unless some safeguard is introduced, involves the danger of arbitrary action on the part of an employer in the interests of particular members and to the detriment of the fund. The rules, however, can rarely be framed so as to allow different bases for different types of employee and they must be devised to provide the most suitable scheme for all members having regard to all relevant circumstances, among which is the ever-recurring one of cost.

It need hardly be said that, other things being equal, a final salary basis is more costly than one which uses average salary because of the customary progression of salary with age; it is, therefore, surprising to recall that on occasions switches were quite casually made in the pension basis without apparent regard to their financial effect. The danger of acting blindly is even greater than a superficial consideration of the matter would suggest, because "other things" are rarely
"equal", and where, for instance, earlier retirement is promoted by larger pensions, the actuarial basis is vitiated and its alteration may perhaps call for an increase in contributions surprisingly greater in proportion than the increase in pension.

**Actuarial Basis.**

It is convenient here to examine what is understood by the actuarial basis of a scheme, how the elements constituting it are subject to variation, and what effect such changes are likely to have on the stability of the fund.

I may be forgiven for repeating that the adequacy of the contribution to be charged is perhaps the first essential in framing a pension scheme. Adequacy is a description applied when the present value of contributions is not less than the present value of benefits, but these present values are necessarily based on certain views as to the future course of mortality, withdrawal, retirement and sometimes promotion and other rates, of the salaries to be paid and of the rate of interest at which it is expected the fund can be invested. The material which is used as a guide in framing such estimates (excluding interest) is naturally the past experience of the particular fund and this is a function which varies not only with the age-constitution of the members, their social circumstances and other "intrinsic" characteristics, but with a variety of factors such as the nature of the industry or business, the district where it is conducted, the policy of the management, the state of the labour market and even the general economic situation. It is only natural to expect—as has been abundantly shown—that the experience of each fund is peculiar to itself, and except by coincidence, is not to be found elsewhere.

It is unnecessary to stress the need for keeping the experience under constant review because its stability is dependent upon the resultant of such a variety of influences—many of which are independent. The need for review is particularly felt after the inception of a new fund, as this usually creates a set of conditions and circumstances which can be expected to alter appreciably the character of whatever experience the members had previously—although it must not be assumed that it is the practice to adopt such experience without adjustment. The instrument for this review is the periodic valuation which measures, as it were, the pulse of a fund and provides an opportunity, even in solvent cases, to apply such corrective measures as may be required to combat unsatisfactory trends in the experience and thus, in an unobtrusive way, to forestall disaster.

**Valuation.**

A valuation is simply a comparison of the assets of a fund with its net liabilities. These liabilities are measured, in all normal circumstances, by the excess of the present value of future benefits over the present value of future contributions in respect only of the membership (active and retired) on the valuation date. As in the assessment of contribution rates, a valuation involves an actuarial basis and where this is identical with that used in the previous valuation or at the inception of a fund any disagreement between the assets and the net liabilities yields either a surplus or a deficiency due to the divergence of experience from that anticipated in the basis, in other words, as has been said rather unkindly, to an "error" in the original calcula-
tions. If an alteration in the basis becomes advisable for the valuation, the result may be due in part to an inequality between contributions and benefits—a matter which may require to be remedied, at least in the case of new entrants.

Rates of mortality both during service and in retirement are usually low. In the former case, this is probably due to the selective effect of withdrawals and ill-health retirements. In the latter it may be ascribed in the main to the proverbial longevity of pensioners. It follows that an improvement in vitality tends to strain the finances of a pension fund, particularly where it is due to the retired members, but also in the case of active members because the gain in additional contributions and the saving in death benefits are unable to compensate for the increase in the number reaching pension age. In these circumstances prudence suggests the incorporation in the basis of mortality rates which at most do not over-estimate the mortality likely to be experienced.

Rates of withdrawal from service present from many points of view a fascinating study. Generally speaking they have the interesting property of varying with year of service rather more than with year of age, while, in the case of women, they are frequently indistinguishable from marriage rates. Withdrawal experience is invariably erratic and rates can rarely be used with confidence, making it somewhat disconcerting to realise that they have a very sensitive effect on the pension liability. Their effect is often partly obscured as their incidence makes them figure largely in the problems of "negative values" in the reserves at the younger ages, but, despite this rather elusive consideration, it is reasonably safe to remark that withdrawals in excess of those provided in the basis are, as a general rule, a source of profit, notwithstanding any increase in the number of withdrawal benefits payable.

Rates of retirement demand the exercise of great care for the act of retiring transforms a member from being a contributor into a "dead-weight" liability. Two types of retirement are normally met with; one due to age and the other to permanent break-down in health. Where there is a range of optional retirement ages, the attainment of maximum pension generally determines the age of voluntary retirement although, as has been mentioned before, a higher average age at retirement is often found among the higher-paid members, due either to the persuasiveness of the management as to their value, or to the inability of the lower-paid members to furnish convincing proof of their further utility. The conditions governing permanent disability should naturally be water-tight to prevent the possibility of abuse, and there is usually a noticeable discrepancy in disability experience between the two sexes. Were it not such an important point, it would scarcely be necessary for me to add that any relaxation in these conditions, or any alteration in the scheme or managerial policy, which promotes earlier retirements re-acts unfavourably on the fund to an extent which has a surprising effect on its stability.

The effect of salary changes in a fund which does not exclude such changes for pension purposes will vary with the nature of the changes (e.g., whether "flat" at all ages, percentage, etc), with the steepness of the salary progression and with the pension basis. In order to get a clear perspective of the matter, the liability should be divided into that part representing back service and that which is discounted in respect of future service. The relation of benefits to contributions in the case of a new entrant should also be considered. There is here a
fruitful field for a discussion of the outcome (both as to type and relative magnitude) of various hypotheses. In illustration, it may be found, for instance, that a large part of a deficiency (or surplus) may be due either to an increase (or decrease) in the back-service liability or in the future service liability depending upon whether the pensions are on a final or average salary basis respectively. Although it will be the case usually, it must not be assumed without investigation that increases or decreases of salary will yield deficiencies or surpluses respectively in an otherwise solvent scheme. Contribution rates for new entrants will rarely require to be increased. In fact, where salaries have been increased by a flat addition at all ages, such rates may frequently be reduced.

The rate of interest to be adopted in the calculations leads to a consideration of the probable yield of the fund which constitutes the assets, and of the likely return from the investment of future contributions. If the fund is approved by the Revenue Commissioners, a gross rate can be assumed because of the freedom from income-tax which the investment income of such funds enjoy, and it may be observed that the problem is frequently solved by a generous stipulation on the part of an employer that he will guarantee the maintenance of a certain rate—a guarantee which, in his own interests, requires careful definition. As serious capital loss cannot be risked, investment policy should be governed by the requirements of safety, bearing in mind the long-term nature of the contracts involved. In the light of experience it is not possible to approve of the practice of investing the fund in the business of the firm, as this would deprive the members of an independent source of consolation in the event of their employer’s misfortune.

The valuation of assets presents no problem peculiar to pension funds and it will suffice to mention the advisability of displaying them at no more than realisable values and of writing-off any definite losses which have occurred.

**Surpluses and Deficiencies.**

The question of further action presents itself on the disclosure of a surplus or deficiency. The regular emergence of surplus of sufficient magnitude to create a problem is such a rarity that there would be an air of unreality in discussing the point at any length. In these rare cases, as in personal experience, the expenditure of surplus money unfortunately presents all-too-little difficulty, but its distribution should be arranged with a view to the attainment of rough equity having regard to its cause, and to the exclusion of any new source of disturbance in the actuarial basis. Where the surplus is of small dimensions, it is customary to retain it as a reserve and, not infrequently, it goes to the employer as a compensation for a guarantee on his part to maintain solvency. The conditions and terms upon which benefits are obtained from a fund should not be so flexible as to render it a matter of simplicity to vary them frequently according to fluctuations of modest dimensions in the experience, and a policy of conservatism in this regard should be maintained in order to preserve respect for the contractual nature of the scheme. At the same time, no obstacle should make it difficult to take drastic action whenever a serious situation calls for it.

Two distinct aspects of a state of deficiency should be recognised,
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namely, the magnitude of the deficiency as actually disclosed and the presence of its cause. The latter may be corrected by various devices such as the deferment of pension age, the reduction of subsidiary benefits, the raising of contribution rates or the reduction of pension rates (either in respect of back-service or generally). The most suitable method will depend upon circumstances, but a natural inclination to substitute an optimistic tinkering with the scheme for an essential change of a major character should be firmly resisted. The removal of the cause will not remove the actual deficiency and this is often met, under the terms of the scheme, by a lump sum payment or by a series of capital payments made by the employer. Sometimes, however, employers have disclaimed any responsibility beyond their annual contributions and, where this is so, the members must shoulder the burden in accordance with the most equitable scheme which can be prepared.

The unpleasant task of liquidating an initial deficiency has usually to be faced at the inception of a fund if it is desired to bring within its scope any but the most junior members of the staff. As the older members have probably taken an active part in the discussions—or perhaps in the agitation—prior to the establishment of the scheme, it does not seem fair to restrict benefits to new entrants. On the other hand, it would be excessively generous to award those approaching retirement with pensions at full rates and based on total service, and the contributions which would be required to do so on a business basis would be altogether prohibitive. In these circumstances, compromise is frequently reached by the preparation of a scheme involving measures such as the grant of credit at half-rates in respect of all or part of back-service, the release from contributions of those over a certain age (say, 55), allowing in their case only back-service (non-contributory) credit for future years of service, and the immediate retirement of all those over the maximum retirement age (say, 65) without any claim on the fund. Such a course imposes a substantial strain on the fund which may be reduced somewhat by extending the compulsory retirement age temporarily. The liability is frequently met, in a generous manner, by a capital contribution from the employer which may be spread over a period of years, provided the fund has sufficient cash to meet outgoings from time to time. A suitable period for spreading the payments would seem to be 20 years, which is roughly the average length of future active service of those on whose behalf they are made; it should certainly not exceed 40 or 45 years which would correspond roughly with their average future lifetime.

General.

The opportunity afforded at the inauguration of a scheme for the incorporation in the rules of certain safeguarding clauses should not be allowed to pass. In particular the procedure to be observed in the event of a surplus or deficiency should be postulated, and might take the unenlightening but admirable form that action will be taken on the advice of the actuary; and he can then be saddled with all the responsibility and abuse. Periodic valuation should be provided for, and the limits to investment discretion clearly defined, while such mundane points as the source of the expenses of managing the fund and of the remuneration of trustees are likely to lead to subsequent embarrassment, if overlooked.
The obvious advantages of a pension fund to employees do not require to be extolled, but it is not so commonly realised that the starting of a fund frequently brings about a stabilisation of salary, retirement and other service conditions and an increase in the flow of promotions by facilitating retirements. Employers, too, well realise the value of a contented staff and with a fund, can expect to secure some salary advantage in recruitment as well as continuity of service and increased efficiency, while they are released from the awkward recurring problems of granting compassionate allowances and of dealing with old employees who are more of a liability than an asset.

I have only to add that limitations of time have prevented my comments from extending to that other class of pension fund which provides allowances for the widows and orphans of deceased employees. As such funds have many differences in character from those which I have been discussing, my remarks must not be taken as applicable to them.

DISCUSSION ON MR. HONOHAN'S PAPER.

Mr. G. H. Tulloch, proposing a vote of thanks, said that as Mr. Honohan's paper was devoted mainly to the technical problems relating to pension schemes, it might not be amiss to stress the great advantages of such schemes from a social standpoint. He emphasised the importance of protecting the funds in a pension scheme, pointing out that it was not sufficient for a company to place a sum to the credit of a pension fund in its books and balance sheet. Investments must be specifically earmarked in such a way that they could not be made available for any other purpose. Unless the scheme was operated by an Insurance Company the only safe way to protect the fund was to place it in the hands of trustees. The income-tax reliefs in the case of an approved scheme were valuable concessions, but before a scheme could be approved by the Revenue Commissioners it had to be shown that it was a bona fide one established under irrevocable trusts and having for its sole or main purpose the provision of pensions, and the employer must be a contributor to the fund. Mr. Honohan had given a valuable exposition of the points arising on the actuarial valuation of the liabilities of a fund, but it appeared that where so many variable factors entered into the calculations the result of such a valuation should be treated with reserve. It might be useful at short intervals to apply a simple test of an arithmetical kind as well as having actuarial valuations at longer intervals, and in making such simple tests the criterion would seem to be that the funds should at all times be sufficiently large to avoid the necessity of drawing upon any of the contributions of existing contributors to meet the payments to the existing pensioners. On the subject of the respective merits of contributory and non-contributory schemes, the Civil Service and the Irish banks were examples of the latter, but it was probably only in a technical sense that any scheme could be described as non-contributory, and most civil servants and bank officials probably regarded their pension rights as representing deferred pay. It was generally considered that contributory schemes were
to be preferred; they gave the worker a more direct interest and made him realise that he himself had a responsibility in the matter of making provision for his old age.

While agreeing that for all large undertakings the adoption of a scheme resting on an actuarial basis and operated either through an Insurance Company or by private trustees appeared to be best, a question undoubtedly arose as to whether such schemes were practicable for small businesses, and Mr. Tulloch suggested that a scheme under which the contributions relating to each worker would be accumulated for the worker's individual benefit might be more suitable. Such schemes were of the nature of assisted compulsory thrift, but after all was not that the nature of most pension schemes? Individual fund schemes had a more attractive aspect to the worker than schemes providing a general fund from which the worker could never feel sure that he would draw out all that he had put in.

In seconding the vote of thanks, Mr. Geo. E. Shanahan referred to the difficulties that in many cases have arisen in a pension fund created on a strictly actuarial basis as visualised by the lecturer. He (Mr. Shanahan) suggested that on a scale it would be preferable to adopt the alternative arrangement of a contract with an Assurance Company. His own experience of pension funds had been confined to the railway and public services. In the case of the former, the original arrangement of basing the pension on the average of the salaries for the last seven years of service had been found to be unworkable, as the fund (statutory) had as a result become actuarially insolvent. The basis of computation was therefore altered, and the average of the salaries for the entire service substituted, with the exception that those whose service commenced anterior to 1906 retained the benefit by the old arrangement. This fund as revised was further safeguarded by a new rule, namely, that the pensions of officers who had to retire at 60 were to be paid by the companies concerned until the person reached 65, and in addition the 5 per cent. of their salaries which before retirement had been paid in equal shares by the companies and the officers. In the public service, of course, there was no contributory fund for pension purposes, but it was understood that salaries were fixed on a slightly lower scale than the positions justified so that indirectly the Exchequer was benefited to an amount corresponding to, if not exceeding the contributions ordinarily paid to the pension funds of private concerns.

Mr. R. F. Browne said that a pension fund involves provision for a future period covering some 70 or 80 years, and an actuarial calculation is essential to ensure that from the outset the arrangements are sound. The measure of all benefits must be clear and must be covered. Actuaries, admittedly, in their calculations, have to deal with a number of probabilities such as rates of withdrawal during service, rates of increase in salary, rates of interest, etc., but nevertheless it has been found, in practice, that individual actuaries, notwithstanding these factors, arrive ultimately at very similar results. For small organisations it is probably better to have the fund carried by an Insurance Company, but in the case of large organisations there are many advantages in having a private fund, although an Insurance Company, by reason of its wide experience, may earn an additional 1½ per cent. on its investments. It will be found that quotations from the companies for immediate or deferred annuities are based on 3½ per cent. gross returns. A private fund has the advantage of income tax exemption
which enables a relatively high net return to be obtained. The private fund also has the advantage of greater flexibility.

The non-contributory fund is steadily giving way to the contributory fund, because it has been found that employees show a great appreciation of a fund into which they pay contributions. Possibly they have a greater sense of security and they participate usually in the administration of the fund through a committee of management.

In starting a fund for an organisation which has been in existence for some years, differences in contributions lead to some difficulty where no reserves have been accumulated by the employer to form the nucleus of the fund for the purpose of covering past service.

Mr. R. B. Walker said that the relative superiority of the life assurance or the privately operated scheme depended entirely on individual circumstances, but he would like to point out that the offices were controlled by men who had had life long experience in the matter of investments and were probably in a better position to invest money to advantage than would be the trustees of a private scheme. Another advantage of the life assurance scheme was that there could be no question as to the solvency of the scheme and pensions contracted for would definitely be granted. An attraction of the private scheme which appealed to the employer, was that he was saved the expenses which must necessarily be charged by the life office, but it must be remembered that the charge for expenses by life offices at the present time was very small, and even in the case of the private fund the employer could not expect to administer the fund without expense. His opinion was that in the case of a large company which was sound and well managed, and which desired something more than a simple scheme, the private scheme was better; otherwise he thought that the advantage lay with a scheme operated through a life assurance company.

Mr. Honohan had stressed the importance of taking proper advice before introducing additional benefits into any scheme and the speaker would like to emphasise this point. He referred to a pension fund with which he was connected: In 1918 there had been a valuation of the fund and a surplus had been disclosed. The actuary at that time recommended that pensions should be increased by one-third but that, in view of the uncertainties existing at the time these increased pensions should be payable for a period of three years only, at the end of which time a further valuation should be made. The actuary’s advice was not taken, and it was not until 1926 that a further valuation was called for. It fell to the speaker’s lot on that occasion to make the valuation, and he regretted to find that pensions had been increased, not by one-third, but by 100 per cent., and that these increased pensions had been paid for a period of eight years, instead of the three years for which it had been recommended the one-third increases should be paid. The result was that on net liabilities of upwards of quarter of a million pounds there was a deficiency of nearly £90,000.

In England most of the municipal employees come under the Local Government Superannuation Act of 1937, which superseded an earlier Act of 1922. He did not propose to give details of the provisions of the 1937 Act, but he thought that members would find two points interesting. Mr. Honohan had referred to one of the dangers of a pension scheme where pensions are based on the average salary of the last five years of service, namely, that there was a “danger of
arbitrary action on the part of an employer in the interests of particular members and to the detriment of the fund.’’ What Mr. Honohan obviously had in mind was that the salaries of certain individuals might be unduly increased in the last five years, but he would remind them that, particularly in the case of workmen, wages might actually fall during the last five years, owing to the inability of a man in his later years to perform heavy manual labour. The 1937 Act provided for this contingency by allowing the workman (or an officer), whose income began to fall, to continue to pay his contributions on what had been his full earnings, and if he did so these full earnings were taken into account in calculating his average earnings for the last five years.

In his remarks on the actuarial basis to be adopted the author had said the actuary would use the past experience of the particular fund but he added, very advisedly, ‘‘as a guide,’’ in framing the estimates. It would be appreciated that the actuary was not concerned with the past but rather with the future and that any past experience which might be available would be very much changed on the introduction of a pension scheme; rates of withdrawal for example, would be lowered on account of the added attraction of the conditions of service and rates of mortality, while in service, would also be lowered because some of the deaths which had in the past occurred while the member was on the pay-roll would take place among the invalidity pensioners. One of the main difficulties with which the actuary was faced was the construction of a suitable salary scale, where pensions were based in some way or other on salaries. The shape of the salary curve had an important bearing on the percentage of salary required to support a given rate of pension, particularly when pensions were based on the average salary of the last few years of service. The steeper the curve the higher the percentage required.

Mr. A. Malcolm expressed himself as convinced that all superannuation schemes had an ‘‘air of benevolence’’ about them which had often a lot to do with unexpected results on re-valuation, both deficiencies and surpluses. The average ‘‘man in the street’’ took an optimistic view of the pension, which his contribution should produce and of the assistance which the reasonable employer should give towards that end. The actuary was also optimistic that the averages, on which his calculations were based, would not be unduly weighted against the scheme. The employer felt that he was doing something for his employees and was optimistic that he would gain by having a more contented permanent staff that the losses on the ‘‘swings’’ (his contributions) would be picked up on the ‘‘roundabouts’’ (savings in gratuitous payments on retirement). Any scheme founded on those bases was liable to give some dissatisfaction to all parties, not because of inequities, but simply because of foundations, which, in fact, tended to be unstable. If, as Mr. Honohan pointed out the ability of the scheme to produce pensions, the risk contingencies, of averages and expectations and the shares of the employer and employee in contributions and deficiencies were understood and clearly set out, no difficulties or dangers should arise.

Mr. Malcolm gave an outline of the scheme in operation on the Great Southern Railways, which he said, was confined to salaried staffs. The principal fund was the Railway Clearing System Superannuation Fund for the provision of superannuation allowances to
male salaried officers and clerks of the various railway companies, which were parties to the Clearing System. Subject to medical examination membership of the Fund by the staffs not over forty-five years is obligatory. The management of the Fund is a Committee composed of an equal number of companies’ and members’ representatives, formally elected. The Fund is divided into the Old Section, i.e., members admitted before 1st July, 1913, and the New Section, whose members were admitted on or after 1st July, 1913. The contributions to the Fund vary according to age when admitted from 2½ per cent to 6½ per cent., the company and member contributing equally. The annuity from the Fund shall not be less than £30, or more than £1,500. A maximum rate of interest of 4 per cent. per annum was secured to the Fund, the contributing companies having guaranteed to supplement the actual interest earnings to this figure if required. The Commissioners of Inland Revenue had approved of the Fund and quite recently a scheme was embodied in the Fund by which a normal pension could be converted into an annuity payable during the joint lives of the member and his wife and the life of the survivor.

An application had been received by the contributing Companies for improved standardised benefits by means of a reorganisation of the existing Fund, which, in fact, would mean the establishment of a new Fund. This scheme, it was asked should apply to contributing members of the Old and New Sections of the Fund and to new entrants.

The basic rate of contributions would be 4 per cent. of the salary with an appropriate graduated scale for late age entrants, the contributing bodies to pay an equal contribution to that of the members employed by them together with an additional amount sufficient to maintain the solvency of the Fund. The improved benefits applied for include a lump sum payment upon retirement and a maximum annuity of two-thirds (one-third of average salary of whole period of membership and one-third of average salary of last 7 years). The minimum annuity upon normal retirement to be £120 per annum. Those proposals, Mr. Malcolm mentioned, were being examined by actuaries.

For the female staff there was a provident fund to which the Company contributed the same amount as the member and the joint contributions accumulated at interest and were paid in one sum when the member left the service for any cause. This fund was not a superannuation fund.

The Railways Acts, 1924 and 1933, required the Company to prepare and submit a scheme for the establishment and maintenance on the basis of equal contributions by the Company and employees of a Fund for providing superannuation allowances for such employees as could with due regard for actuarial considerations be provided with allowances. The Company prepared and submitted the required scheme, which was still under consideration.

Dr. T. J. O'Connell, a visitor, said he greatly appreciated the privilege of being present to hear the paper read by Mr. Honohan. On reading the paper he wondered how far principles and practice were in agreement in the matter of pension schemes. On consideration of the many factors and points one could hardly be blamed for regarding an actuary in the light of a minor prophet. The National Teachers’ Pension Fund, one of the oldest in the country, was es-
established about sixty years ago. There was to be a valuation every five years. The first valuation was made in 1885 and there had been six since that year. In every valuation except the first there was a deficiency shown, so that some person must have erred in his prophecy. At every valuation it was said that if certain things were done, everything would be right. Those things were done but still there was a deficiency. In 1905 the teachers became suspicious and decided to have their own actuary. The two actuaries on the valuation disagreed. Both were in agreement as to a deficiency but disagreed as to its amount. They resumed their valuation work and the actuary engaged by the teachers reported the fund was just solvent while the Government actuary still held there was a deficiency. On the occasion of the last valuation of the Teachers' Pensions Fund there was a peculiar result, which still remained a mystery. The maximum pension payable to a teacher was one half his salary for the last three years of service. In reference to the amount necessary to meet pensions payable at the end of forty years' service, and assuming that the strength of the service remained unaltered, the actuary reported that the sum would be far greater than the salary payable to a big percentage of the teachers. How he arrived at that figure still remained a mystery.

Definite arrangements should be made for the control of a pension fund, in which workers should have equal responsibility with the employers, or, at least, responsibility in proportion to the amount of their contributions. The State had complete control of the Teachers' Pensions Fund, to which the teachers contributed between 5 per cent and 6 per cent. In 1898 after an agitation, it was decided to keep separate accounts, and in 1926 when there was a surplus on the teachers' side and a deficiency on the Government side, the Government told the teachers that they were to be responsible for the deficiency.

The President put the vote of thanks which was carried with acclamation and he called on Mr. Honohan to reply.

Replying to the vote of thanks, Mr. Honohan said that he had been amply repaid for his paper by the interesting discussion. Perhaps the main drawback in the case of pension funds administered by insurance companies was that usually the benefits afforded on breakdown in health were unsatisfactory. On the other hand, they had greater advantages and, as a rule, greater skill in the field of investment, and these were important points in their favour.

In regard to income tax, he understood that, in addition to the relief afforded to employers in respect of their contributions to approved pension funds, the Revenue Commissioners were generous in regard to payments of a lump sum character such as those required for clearing deficiencies or implementing interest guarantees.

Many of the difficulties to be found in pension funds were due to the fact that they were started without actuarial guidance, or, if they had had such guidance, liberties were subsequently taken with regard to the benefits or contributions.

Mr. Honohan also referred to a letter which had recently appeared in the Press from the Chairman and Directors of an insurance company which, he said, was likely to give the public an altogether misleading idea of the meaning and significance of an actuarial deficiency.