The Place of Ordinary Stocks and Shares (as distinct from Fixed Interest bearing Securities) in the Investment of Life Assurance Funds. *By* H. E. RAYNES, F.I.A., F.C.I.I., *Secretary of the Legal and General Assurance Society.*

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THE principles of investment were laid down in the formative period in the history of this Institute and they constitute now as important a part of the equipment of an actuary as does his knowledge of the principles of mortality. In fact, the good reputation of actuaries rests perhaps as much upon the caution with which they have administered the investment of Life funds as upon their ability to deduce sound premium rates and reserves. I feel, therefore, that I should at the outset clear away any doubt which there may be as to my intention of setting up principles of investment in opposition to those which have been honoured for so many years in the history of life assurance. Indeed, it is from the angle of security that I have investigated the problem in this paper.

Members of the Institute will remember that at the recent International Congress candid expression of opinion was given by two such eminent economists as Prof. Westergaard and Mr. Hawtrey as to the neglect by actuaries of the very important problem of currency depreciation in its relation to the contract of life assurance. Actuaries were not alone in their neglect of the question. Economists generally, as Mr. Hawtrey said, while recognising the phenomenon of currency depreciation as a factor in long term contracts, had been content to acknowledge its existence and to leave it there. Like the dormouse in Alice in Wonderland, who in reply to Alice's complaint that the dwellers in the treacle well must have been ill, acknowledged, "So they were—very ill", and continued the story. While in this country our sickness has not been unto death, it has been

sufficiently severe to give us profoundly to think. It has upset our notions on some fundamentals and until we have faced the problem courageously and found at least some partial solution, there can for some of us be no permanent peace of mind. This paper does not attempt anything like such an ambitious scheme as that of solving the whole problem, but deals with one side of it—that of maintaining the value of life fund reserves.

Investment of life funds in ordinary stocks and shares is not wholly new. At the present time out of the funds of British Life Offices about 4·3 per-cent is so invested—one office has as much as 16 per-cent. In Canada the practice is resorted to much more than here ; in fact, this paper was partly inspired by the remarks of Mr. T. B. Macaulay, made in discussion at the recent Congress and in conversation afterwards with the writer. Mr. Macaulay then strongly advocated investment of a proportion of funds in common stocks as a measure to combat the trouble of a depreciation of currency. The circumstances, however, of offices, such as some of our home and colonial companies operating in many countries with diverse currencies, are exceptional, and would be too large to deal with here. We will consider the circumstances of an office, issuing policies in the currency of the country in which it has its domicile, wishing to maintain the capital value of its investments, and its net income from its funds, in order to meet the liability under its policies as they mature. It is the old problem of security in a mutable environment to the solution of which the ability of actuaries must be persistently devoted.

Whether greater security to the capital of a fund is given by the investment of a proportion in ordinary stocks and shares might be considered by deductive reasoning from the principles of economics, but while no doubt the result of such a process would lead to the same result, a statistical investigation will, I think, prove more convincing to actuaries. The difficulty, however, is to be quite unbiased in one's illustrations of a hypothetical fund in the past, when one has knowledge of the course of dividends and prices in the interim. I think, however, I have managed to overcome this and have selected examples by a mechanical process which, while it would shock the susceptibilities of any respectable stockbroker, would meet with the approval of a sound statistician.

I have selected various groups of securities the debentures of which would, in pre-war days, have figured in the investment

list of many insurance companies, and have set out to compare the result of an investment in those debentures with that made of a similar sum in the ordinary stocks or shares of the same companies. I have taken a period of 15 years from 31 March 1912 to 31 March 1927—one covering the majority of our tribulations. The following represents the nine groups of investment:

(1) British Railways.
(2) Electricity and Power Companies (British).
(3) Gas Companies (British).
(4) Iron, Coal and Steel.
(5) Land, Finance and Mortgage.
(6) Shipping.
(7) Telegraph.
(8) Financial Trusts.
(9) Textile and Allied Companies.

Included therein are our home railways, public utility companies and our chief trades and industries. Banking and insurance are not included since there is but little capital invested in these at a fixed rate of interest with which we can make a comparison with the share capital. Public utility companies providing service abroad have been excluded, as in so many cases political questions are involved, and selection of a small representative group is difficult.

It will be seen that these, with the exception of textile groups, are roughly the classification made in the official list. The actual companies I selected in each group were the six British with the largest share capital (ordinary and preference) shown in the list printed in the *Investors' Monthly Manual* for 31 March 1912, providing only that at that date they were paying dividends on their ordinary share capital. A number of indifferent companies in this way were included in the list, but the selection is free from a bias due to after knowledge. In the telegraph group only five representative companies were available, and for the sake of uniformity a proportionately larger investment was assumed to be made in each to bring the investment in the group equal to that in the others. In cases where there were more than one class of debenture issue I have taken the prior stock and in some cases where no debenture stock has been issued at all I have taken preference stock or shares to be included in the fixed interest list.

I have assumed that the sum of £54,000 was invested in each of the two classes, fixed interest bearing securities and ordinary shares or stock, £6,000 to each of the nine groups, the individual investments being £1,000 in the debenture or preference stock and £1,000 in the ordinary stock of a company. The date chosen for the investment, 31 March 1912, gives a 15 years' record to the 31 March 1927. In some instances there have been changes during the period: among the industrials bonus shares have been issued, or the stock has been converted as in the case of the railways, but the alterations have been allowed for. The first comparison I have made is that of the actual net income yielded annually by the original investment. Allowance has been made for income tax without any refinements in view of the fact that a dividend year may not coincide with an income tax year. Interest or dividend for, say, 1916, is treated as being subject to the rate of tax 1916–1917. The following table represents the aggregate income per annum from the 53 companies (*a*) from the fixed interest class, and (*b*) from the ordinary participating shares.

TABLE I.

Comparison of Return to Investor of £54,000 *on* 31 *March* 1912, *in Ordinary Stocks or Shares with that of a similar sum invested in the corresponding Debenture issues.*

Year	Ordinary Stocks or Shares		Debenture Issues		Combined yield of an equal sum invested in each class
	Income after deduction of Tax	Yield	Income after deduction of Tax	Yield	
	£		£		
1912	2,964	5·49	2,134	3·95	4·72
1913	3,624	6·71	2,134	3·95	5·33
1914	2,763	5·12	2,076	3·84	4·48
1915	2,946	5·46	1,924	3·56	4·51
1916	2,842	5·26	1,699	3·15	4·20
1917	2,954	5·47	1,698	3·14	4·30
1918	2,890	5·35	1,584	2·93	4·14
1919	3,389	6·28	1,584	2·93	4·60
1920	2,994	5·54	1,584	2·93	4·24
1921	2,891	5·35	1,584	2·93	4·14
1922	3,493	6·47	1,699	3·15	4·81
1923	3,731	6·91	1,754	3·25	5·08
1924	3,817	7·07	1,736	3·21	5·14
1925	3,483	6·45	1,783	3·30	4·88
1926	3,531	6·54	1,783	3·30	4·92

The first point that strikes one is that in no year out of the 15 has the income from the ordinary stocks fallen as low as that

yielded by the fixed interest bearing ones. The yield on the former has always been in excess of 5 per-cent net upon the original investment, while the debenture net income was under 3 per-cent for four successive years. The difference between the yields starts at 1½ per-cent on the original capital and reaches 3·3 in 1919 and from then onwards it remains well over 3 per-cent in excess. The second point to notice is the general upward trend throughout the period of the yield on the ordinary stocks. There are naturally considerable fluctuations. Taking 1913, the large income from ordinary shares for that year is chiefly due to one of the shipping companies allotting a sum of cash to shareholders in connection with an alteration of its capital. The sudden changes in the rate of tax are also responsible for fluctuations from year to year.

While the figures show an indisputable advantage in favour of ordinary stocks for the aggregate investment, this is not always the case in the separate groups. The fixed income was larger for the year 1926 in the case of the railways, for the years 1918–1920 inclusive for the gas companies, for 1921–1923 and 1925 for the iron, coal and steel group; but these are the only exceptions. The full table is given below.

Owing to the fluctuations from year to year, it is difficult to realize the full significance of the excess income derived from the ordinary stocks above that from the fixed interest ones, and therefore, to bring out the difference more clearly, I have assumed that at the end of each year the excess income from the ordinary stocks received during the year will be accumulated at a net rate of 4 per-cent compound interest till the end of the period and added to the value of the ordinary stocks at 31 March 1927. In every group of securities there was a positive sum available, after adjustment had been made for years when the income from ordinary stocks was less than that from the debentures; and in the aggregate the original £54,000 invested in ordinary stocks had not only yielded an income equivalent to the fixed interest class, but had provided by the excess dividends and interest thereon a sum of £27,662 at the end of the term. Taking the prices current on 31 March 1927 the position was as follows:

Market value of ordinary stocks ...	£80,073
Accumulated excess dividends	27,662
Total Fund	£107,735
Market value of the debenture fund ...	£42,588

TABLE II.

Comparison of the Net Income (i.e., after deduction of tax) yielded by an Investment of £6,000 on 31 March 1912 in the Ordinary Stock or Shares with that derived from an equal Investment in the senior Debenture or Preference Stock of the same Companies. The figures in each group relate to the Investment of an original £6,000 (£1,000 to each Company) among the six Companies with the largest Share Capital on 31 March 1912.

Year	British Railways		Electric Light and Power Companies		Gas Companies		Iron, Coal and Steel		Land Mortgage and Finance		Shipping		Telegraph		Financial Trust		Textile and Allied Industries		Year
	(*a*) Ordy.	(*b*) Deb.	(*a*) Ordy.	(*b*) Deb.	(*a*) Ordy.	(*b*) Deb.	(*a*) Ordy.	(*b*) Deb.	(*a*) Ordy	(*b*) Deb.	(*a*) Ordy.	(*b*) Deb.	(*a*) Ordy.	(*b*) Deb.	(*a*) Ordy.	(*b*) Deb.	(*a*) Ordy.	(*b*) Deb.	
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	
1912	254	213	280	242	282	228	408	246	394	236	441	265	305	245	319	228	291	231	1912
1913	276	213	316	242	263	228	404	246	423	236	945	265	330	245	332	228	235	231	1913
1914	253	207	328	236	231	222	459	239	390	229	258	258	328	238	292	222	224	225	1914
1915	231	192	284	218	242	206	558	222	363	212	369	239	343	221	260	206	296	208	1915
1916	205	170	223	193	213	181	462	196	359	188	484	211	336	194	230	182	330	184	1916
1917	204	169	235	193	194	181	609	196	427	188	489	211	336	194	230	182	330	184	1917
1918	211	158	228	180	138	169	562	183	416	175	419	197	332	181	220	169	364	172	1918
1919	222	158	315	180	139	169	578	183	452	175	507	197	390	181	241	169	545	172	1919
1920	222	158	336	180	151	169	412	183	412	175	431	197	390	181	268	169	372	172	1920
1921	222	158	284	180	178	169	178	183	483	175	431	197	390	181	275	169	450	172	1921
1922	267	170	485	193	237	181	191	196	545	188	409	211	391	194	302	182	666	184	1922
1923	256	175	589	199	264	188	177	202	604	194	454	218	392	200	334	188	661	190	1923
1924	253	175	639	199	262	188	177	174	652	194	357	218	392	200	372	188	713	190	1924
1925	236	181	584	206	270	194	134	179	551	200	353	225	395	208	405	194	555	196	1925
1926	123	181	696	206	269	194	223	179	568	200	358	225	394	208	418	194	482	196	1926

On the market values on 31 March 1927 the income for the preceding year had shown a net return of 4·41 per-cent on the ordinary stocks and 4·19 per-cent on the debenture stocks.

Had two trusts been set up on 31 March 1912 maintaining the original investments derived from the respective sums of £54,000 each, and had a sinking fund been set up for the excess income in the one, 15 years after the fund representing the ordinary stocks would have shown almost 100 per-cent appreciation, and that representing the debenture investments would have shown a depreciation of 21 per-cent. The difference between the two funds on 31 March 1927 would have been £65,187. A similar comparison for each group of investment is given below in Table III.

TABLE III.

Comparative position 31 *March* 1927 *of Investments in Ordinary as compared with that in Debenture or Preference Stocks made* 31 *March* 1912.

Class	Sum Invested in each (1)	Value of Debenture and Preference Stocks 31 Mar. 1927 (2)	Value of Ordinary Stocks 31 Mar. 1927 (3)	Accumulated excess income from Ordinary Shares over Debenture (4)	Excess of Cols. (3)+(4) over Col. (2) (5)
	£	£	£	£	£
British Railways ...	6,000	4,413	3,884	981	452
Electric Light and Power ...	6,000	5,390	14,741	3,247	12,598
Gas	6,000	4,558	5,304	580	1,326
Iron, Coal and Steel ...	6,000	4,287	4,547	3,680	3,940
Land, Mortgage and Finance	6,000	4,698	12,500	5,144	12,946
Shipping ...	6,000	5,105	8,629	4,643	8,167
Trust Companies ...	6,000	4,594	10,395	2,031	7,832
Textile ...	6,000	4,690	12,822	4,333	12,465
Telegraph ...	6,000	4,853	7,251	3,023	5,421
	54,000	42,588	80,073	27,662	65,147

In this table it will be noticed that the market value of the several fixed interest bearing groups in 1927 is in every case less than the original cost in 1912. This one would anticipate. Among the ordinary stocks only three groups, railways, gas companies and the iron, steel and coal show depreciations, whereas three have more than doubled in value. These latter are the companies

where as a class the profit, instead of being fully distributed as cash dividends, has been accumulated either as additional reserves or allotted as bonus shares.

It is probable that there are many here who, while they have never made an actual investigation, would have anticipated the results shown in the above tables, but there may be with them a lurking suspicion that I have loaded the dice in favour of a desired result by choosing the dates 1912 and 1927 for a comparison. Had I chosen a period within which the market value of fixed interest bearing securities was rising, a different result would have been shown. Fortunately for our purpose there is such a period falling within the 15 years. At the 31 March 1921 the market value of the fixed interest bearing securities comprised in our list was £35,051, as against £42,588 in 1927, an appreciation of over 21 per-cent. In 1921 the ordinary stocks had a value of £46,557, as against £80,073 in 1927. Had £100,000 been invested at the former date in each of our classes in proportion to the existing holding, the net income received in successive years, and the value of the funds at the end of the term, would be those shown in the following Table IV.

TABLE IV.

	Value 31 Mar. 1921	NET INCOME						Value 31 Mar. 1927
		1921	1922	1923	1924	1925	1926	
	£	£	£	£	£	£	£	£
Ordinary Stocks...	100,000	6,210	7,532	8,054	8,244	7,510	7,614	172,000
Fixed Interest Stocks...	100,000	4,530	4,859	5,017	4,935	5,095	5,095	121,500

The market value of the ordinary stocks in March 1921 represents 16·1 years' purchase of the 1921 income, and the value in 1927 is 22·6 years' purchase of the 1926 income. On the other hand, the market value in 1921 of the fixed interest stocks is 22·1 years' purchase and in 1927 is 23·85 years' purchase.

When one considers the rising nature of the income from our fund invested in ordinary stocks it does seem a little paradoxical that the market should value each unit of that income at a lower figure than a unit of the so-called fixed income from the debenture fund. I think the truth is that if a fraction of the two *funds* could be dealt in on the market, that from the ordinary

stocks would from its past record command a higher price than a similar fraction of the debenture fund. In other words, if two trust companies had been formed in 1912, each with a capital of £54,000 divided into shares of £1 each, and our list of ordinary stocks had been purchased by the one, while the other purchased the debenture stocks, the shares of the first per unit of current dividend would throughout have commanded a higher price than those of the other, in spite of their so-called better security.

I do not think that anything could be more convincing as to the merits of spreading investments over a wide area than the consideration of the actual income which our fund of ordinary shares has earned. But I would go a step further and say that *from the point of view of safety, the figures indicate that a well-spread investment in ordinary shares is a better proposition for the ordinary long term investor than an investment in the debenture issues of the same group of companies.* It should, moreover, be borne in mind that in the actual illustrations the investments have been selected by the purely mechanical process of picking out the six with the largest share capital in each group and no intelligent changing of investments during the 15 years has been permitted. Far better results could have been obtained by selling out the railway, gas, shipping, and coal and steel shares when these were depreciating over a term of years, and reinvesting in other groups such as electrical equipment, insurance or various other commercial and industrial shares. More opportunity for discriminating with financial advantage exists when we are dealing with ordinary shares than when the investments are in debentures.

A factor which has altered materially the relative values of debenture stock and ordinary stock is the great improvement which has taken place during the past generation in company finance. Banks, finance and insurance companies have for a long time set a very high standard in the accumulation of reserves from current profits and have adopted a cautious policy in the payment of dividends, preferring that the latter should be restricted to a moderate figure which could be maintained and that the surplus, a fluctuating sum, be transferred to reserve. This practice has now extended to many commercial and industrial companies, and it is an accepted principle in finance that those in control of companies should in times of prosperity accumulate large reserves which may be used in the service of the company or drawn upon in times of adversity. In their analysis of the net

profits from 237 industrial companies published in the three months ending 30 September last, the *Economist* (22 October 1927) shows that approximately 15 per-cent of such profit was placed to reserve, even after allowance had been made for the large debits to past reserves for debenture interest, &c., among the iron, coal and steel and textile groups. To such an extent has this policy developed in many trust and insurance companies that the yield on their ordinary shares at current market prices is less than that of the debenture issues. A discriminating investor fully appreciates such methods since he knows that while the present dividend may be moderate, it will in future be constantly increasing in virtue of the interest income derived from the accumulating reserve fund. Except for the period of frenzied finance in the post-war boom, the financial organization of public companies moves on a higher plane now than it did 15 or 20 years ago.

It is not, however, on the side of finance alone that there is an improvement. The process of evolution in industrial organization is continuous, and one of the most significant features which marks conditions to-day is the growth in size of the industrial unit and the interlocking of interests. This tends to remove the former extreme fluctuations among small competing interests by spreading them over a wider area. The process has been a marked one since the beginning of the century, but the stress of war and post-war conditions has considerably accelerated it. The ordinary shareholder in a particular company is now more likely to participate only in such fluctuations in his dividends as are due to the vicissitudes of the whole industry and is less dependent upon the blunders or exceptional ability of a personal management.

No development or evolution of industrial organisation, however, can protect one against the fluctuations in the commodity value of the medium of exchange itself. In a period of depreciating currency, assuming a constant rate in the volume production of goods, the debenture holder must necessarily suffer, while the ordinary shareholder benefits at his expense if real costs of production have not increased. If in an industrial unit the sums required to meet the interest on debentures and the dividend on shares represent constant fractions say, r' and r'' respectively of the total money value of the goods produced and marketed (say x), the ratios of the debenture holders' income and that of the shareholders' remain constant while a constant

volume of goods is produced. When, however, the money value of the goods changes through currency depreciation from say x to $x+k$, the money income for service of the debentures and shares increases to :

$$(r'+r'')\ (x+k)$$

and of this

$$r'x$$

is required for the debentures, and the balance

$$r''(x+k)+r'k$$

goes to the shareholders. The latter therefore receive not only the amount due to them to keep the real value of their dividends constant $r''\ (x+k)$ but in addition they receive $r'k$. The increase in the rate of dividend is more than in proportion to the rise in prices.

In an actual period of currency depreciation things are of course not so simple : the rise in prices usually stimulates production for a time and costs of production may or may not represent the same proportion of the value of the commodities produced after depreciation as they did before depreciation.

Exactly the reverse set of circumstances occurs in the case of currency appreciation, *i.e.*, the money income of the debenture holders remains constant, but it makes a larger proportionate call upon commodities produced and there is less for the ordinary shareholders whose dividends are reduced more than in proportion to the fall in commodity prices. In the long run, however, I doubt whether currency appreciation is as important a consideration from our point of view as is currency depreciation. The great landslides in currency value have proved to be propositions too big for governments to tackle and in consequence history shows a tendency over long periods of continuous devaluation of money. Moreover, even if governments could rectify depreciation, they could only carry it out long after the evil has occurred, and when to do so would cause more injustice, in view of current money contracts, than to stabilise currency at its existing level. For myself I cannot believe that we shall ever again see the pound sterling purchasing what it did in those happy days of 1913.

In the face of these perplexing problems of currency changes, the puzzled investor may reasonably ask, what then must he do to be saved from the chances of finding his real income dis-

appearing. It seems to me an answer might be found in investing partly in fixed interest bearing securities and partly in ordinary shares. To go back to the example of our company producing a constant volume of commodities: an investor could keep his real income constant by purchasing both debentures and ordinary stock to an extent that each represents the same fraction of the total stock issued—say, one-thousandth of the total debentures and one thousandth of the total ordinary capital. In actual practice the niceties of each fraction may be ignored, but it does seem to me that an investor who has spread his capital over both fixed interest bearing securities and good ordinary shares is in a safer position than one who has confined his investments to the former category, both as regards income and market value of his capital. In a period of rising prices and consequent fall in the value of fixed interest bearing securities, ordinary shares tend to appreciate with their rising dividends, and conversely in a period of falling prices, slackening trade and decreasing dividends, the fixed interest bearing securities appreciate: thus the gains of one class to some degree compensate for the losses in the other.

In the foregoing theoretical analysis we have considered the changes due to currency appreciation or depreciation alone, ignoring other factors. In the actual figures, however, we have seen that even from 1921 the ordinary shares produced a net income and a market value expanding more rapidly than did the fixed interest class. This may be partly explained by the fact that profits earned in the past were in many cases not distributed to the shareholders till after 1921.

It may be urged that the position of the life office is different from that of the individual. The liability of the latter is for the cost of food, clothing and shelter, while that of the former is for the fulfilment of contracts made in currency. Cannot fixed interest securities, especially redeemable ones, adequately meet the conditions? There is certainly a measure of truth in this argument, but it overlooks various things. In the first place, how far is the income from fixed interest securities really "fixed"? The net income from the fund invested in 1913 we saw varied from £2,134 to £1,584—a fall of over 25 per-cent. If income tax is looked at as an expense in connection with the collection of income, it is analogous in its incidence to that incurred in the collection of premiums. A depreciation of currency is, unfortunately, the cause of an increase in expenses, and the two

factors which tend to fall together might prove a serious menace to the stability of an office which has little new money for investment at improved rates of interest. In those countries where depreciation has been extreme the premiums have proved to be not worth the expense of collection. In any case, however, even if the net income from the investments in terms of money is not materially reduced during the process of depreciation of currency, there will certainly be a considerable fall in the market value, for at these times the tendency is to sell out such investments and to transfer to those which are more directly attached to the soaring prices of commodities themselves. *The value of ordinary shares has for its support the material things in which the capital of a company has been sunk—factories, ships, land, &c.; and for income there is the value of the flow of goods and services which the undertaking produces. These have their worth, no matter what happens to the currency.*

But if the bare fulfilment of contracts may be maintained from fixed interest bearing securities, a life office is not absolved from doing the best it can with its funds, for the benefit of the with-profit policy holders. It appears from a comparison between the incomes from our hypothetical funds in the two classes, that had some of our offices possessed a leavening of ordinary stocks and shares during the war and post-war period, not so many bonus distributions would then have been passed by first class offices.

It has been suggested in some quarters that life offices should contract to pay a sum assured based upon commodity prices at the time of claim instead of in currency. This, I think, is wholly impracticable. It would involve as a corollary that premiums should fluctuate also with a change in commodity prices. To my mind the maintenance of stable currency conditions is the function of a government, and private contracts, whether long or short, must be made in the medium of exchange. The only contribution which the offices could make towards compensation for depreciation of policy moneys through currency conditions is that of increased bonus distribution. This, however, might prove a very real benefit if funds were available for that purpose, as they well might be if a fair proportion of ordinary shares were consistently held.

Although to be of real benefit it must represent a significant fraction of the whole, I am not prepared to commit myself to any indication of the actual proportion of the funds of an office which

should be invested in ordinary shares—that is a matter of individual opinion—but ordinary shares certainly cannot take the place altogether of fixed interest and redeemable stocks. One of the principles of sound finance enunciated by past actuaries is that there must always be a proportion of funds easily convertible. Ordinary shares would certainly not conform to this condition. A life office is not the same as a trust company, since its funds are accumulated to meet specific liabilities which, in the nature of things, will mature and disappear, unless replaced by others, in the course of little more than a generation. A fluctuation in funds, therefore, with the possible necessity of realising assets must be contemplated by the life offices.

It cannot be overlooked that the investment in ordinary shares will call for a specialised knowledge of industrial conditions, perhaps to a considerably greater degree than at present obtains among actuaries. In my investigations for this paper I have dealt with only nine groups, but in each one the collation of the figures, over 15 years, of capital changes and profits earned, have proved most informative as to the industrial and financial conditions of the group as a whole. In their methods of finance members of each group tend to common practices and to a certain extent to a common experience, and they should be studied historically as an economic group before investment is made therein. The individual merits of particular companies can be compared subsequently with a view to selecting some of the best. Investments in individual companies must indeed be looked at more in the way we look at the underwriting of individual risks for insurance. Profit or loss in respect of a particular risk has no meaning : it is the experience of the group which counts. The result of such specialised investigation would indicate that certain industries are not at the present time attractive as spheres of investment at all, while in others the present may be eminently suitable. Such discrimination calls for more than the usual stockbroker's knowledge : it demands a knowledge of the economic conditions of the various trades and industries of the country. It seems scarcely fair to ask for an addition to the syllabus for the actuarial examinations, but I do feel that the wide subject of investment, if it does not already do so, will call in the very near future for much greater attention of students.

One might enlarge upon the principles which should guide one in allocating the proportion in which funds should be

distributed among the industrial or financial groups. Certainly it should bear some relation to the total amount of profit earning capital already invested therein, but I think that the subject of distribution of risks is sufficiently understood by us to call for nothing further on this point.

I am aware that much of this paper may sound disconcerting to many who have been brought up in an atmosphere inimical to the ordinary share as an investment for life funds, but time brings changes, and as the *Economist* said last month in an interesting article on this very subject, "it is the customary fate of new truths to begin as heresies and end as superstitions." After all the schedule of trustees' investments itself includes an ordinary stock—that of the Bank of England.

ABSTRACT OF THE DISCUSSION.

MR. G. H. RECKNELL said that the rather unexpected line which the author had taken in his paper had robbed him (Mr. Recknell) of the opener's traditional rôle; for with the main contention of the paper—namely, the advantage of ordinary shares as long term investments—he was in complete agreement. So recently as August last the author, however, had read a paper before a provincial Insurance Institute, in which he had contended that considerations of security excluded ordinary shares as investments for life offices. The paper was notable as a sign of the author's conversion and also because it was the first occasion on which ordinary shares had been discussed as investments suitable for life offices. In 1899 Mr. Barrand had read a paper in which he had advocated debentures of trading companies as investments for life offices, and his views had met with somewhat lukewarm enthusiasm; but he imagined that even those gentlemen who then disagreed would not regard such investments as being unsuitable for a life office at the present time. The percentage of assets invested in ordinary shares, which was given as 4.3, rather over-stated the true figure, because ordinary shares of controlled and subsidiary companies were presumably included—which were quite different.

The principal consideration in making a statistical analysis of such a character was to avoid, in the method of selection, any possible charge of "*jobbing backwards*"; and so far as the method of selecting ordinary shares was concerned the author had been successful; but the method of selecting the fixed interest-bearing securities was not so satisfactory. Without a list of the actual securities it was impossible to see how many of them were redeemable and how many were irredeemable. Preference shares included were irredeemable no doubt, but their inclusion was a little unfair to the advocates of fixed interest-bearing securities;

because, even before 1912, depreciation had been so serious as to confine most offices to redeemable securities.

If the results as to income and as to appreciation and depreciation were expressed as percentages per annum on the original cost they could be more clearly visualised. On that basis, in respect of the 15 year period, the net yield in income per annum from ordinary shares was 5.9 per-cent, and from debentures 3.3 per-cent. The net yield in appreciation per annum of ordinary shares was 3.7 per-cent, and of debentures was minus 1.4 per-cent, making a total of 9.6 per-cent on the ordinary shares and leaving a balance of 1.9 per-cent on the fixed interest securities, showing therefore a 5 to 1 superiority in favour of ordinary shares. The results of the second period (1921-27) also were more than twice as favourable, the total yields, expressed in a similar manner, being 19.5 per-cent. and 8.5 per-cent respectively.

In the United States Mr. Smith had made extensive investigations into the subject under discussion spread over a very lengthy period from 1866 to 1922, in the course of which he had carried out 12 tests taken in different periods throughout that 60 years; and in every one of those tests, except one, Mr. Smith had found that ordinary shares had come out better; and even in the one case where debentures had been better there had not been much in it between the two. That exhaustive investigation suggested that the author might with advantage have analysed the results of an index of ordinary shares taken over the period, for instance, from 1870 to 1895, during which period fixed interest securities had been appreciating almost continuously.

One reason for the results shown in this paper was that which the author called the " evolution of industrial organization," which, on the financial side, found expression in the policy followed by industrial corporations of placing each year a proportion of their earnings to reserve. " The Economist " had stated that the average percentage of profits allocated to reserve each year worked out at 15 per-cent; but he ventured to think that that was a serious under-statement of the actual position—for two reasons. First, the figures related to profits published during the third quarter of 1927 and earned consequently during the Coal Strike; secondly, preference dividends had been regarded as part of the earnings available for ordinary shares, whereas in fact they ought to be deducted from the profits. He had taken the figures published in " The Economist " during each quarter of 1926 (and therefore relating to profits earned in a previous period, mostly during 1925) in respect of 1,572 companies, and, making the adjustment for preference share dividend, he had found that the figure, instead of 15 per-cent, worked out at 25 per-cent. Mr. Smith in his investigation had pursued that argument a good deal further and maintained, after statistical analysis, that the policy of reserve fund allocation had an effect on ordinary share values comparable with compound interest at the rate of $2\frac{1}{2}$ per-cent per annum. He (Mr. Recknell)

had endeavoured to find the corresponding figure relating to profits earned in this country, and for that purpose had again taken the figures from "The Economist" of those 1,572 companies during 1926; he had passed from the nominal ordinary capital of those companies, which was just under £1,000,000,000, to the market value on the assumption that the shares were quoted, on the average, on the Stock Exchange on a 6 per-cent basis, and had calculated the percentage of the actual amounts placed to reserve to such market value, and he had arrived at a figure of almost exactly 2 per-cent. That was interesting as confirming Mr. Smith's estimate of 2½ per-cent for the United States arrived at by quite a different method.

Another factor not mentioned by the author, which helped to favour ordinary shares, was the fact that in fixed interest securities there was no chance of improved yield, though in prosperous times, one might suffer by having one's security refunded at a lower rate of interest. Then, too, in any list of fixed interest securities, however well chosen it might be, over a term of years one or two of them were bound to go wrong. The Armstrong-Whitworth débacle was only a recent instance of that. (Mr. Coutts: What about their ordinary shares?) He would say, in reply to Mr. Coutts, that ordinary shares equally went wrong; but the point was that losses on individual ordinary shares were more than compensated for by gains made in other directions on ordinary shares.

Another factor to which Mr. Smith had referred was the human factor. The management of industrial corporations was biased, unconsciously it might be, in favour of the ordinary shareholder. The object was always to improve the equity of the business.

The vital point to be considered, at any rate in the United States, was whether those reasons were likely to persist. There was no reason to suppose that the fundamental causes would not persist, but the gains of past generations could not be expected to repeat themselves on the same scale in a future more restricted.

Economists had discerned far-reaching and fundamental changes in the basis of industry in this country. Industries, hitherto regarded as basic industries, were languishing in the depths of depression. New industries, based on modern science, had sprung up in their place, and the task of selecting investments must be more difficult than in the past. The endeavour to stabilise industry by subduing the fluctuations of the recurrent trade cycles on the other hand would perhaps be effective in the control of production. Another factor, and by no means the least important, was the tendency which had shown itself in recent years for industrial corporations, once they had reached a certain stage in their history, to work not so much for the maximum rate of ordinary dividend as for the public good. The life offices themselves were good examples of that tendency. Whilst the index value of ordinary shares might not exhibit the same fluctuations as in the past, at any rate, he was inclined to think

that the same marked upward tendency could hardly be expected when all those factors were taken into consideration. He must conclude by congratulating the author, not only upon his very interesting paper, but upon being the first to broach a subject of such fundamental importance.

MR. E. H. LEVER said that the author advocated investing an appreciable proportion of life office funds in ordinary stocks and shares on two main grounds—first, that irrespective of fluctuations in the value of the currency unit, a life office could, without departing in any way from the well-established criteria of security of capital and adequacy of interest return, obtain better results by investing in ordinary stocks and shares than in gilt-edged securities or in well-secured fixed interest bearing investments; and secondly, that investment in ordinary stocks and shares secured for policyholders some compensation for fluctuations in the value of the monetary unit.

He gathered from the author's opening remarks that he based his conclusions more on the second ground than on the first, and there he (Mr. Lever) ventured to disagree, or, at any rate, to relegate the second ground to a position of minor importance. From the point of view of the fixation of the monetary unit in which the contract was expressed, there was after all no essential difference between a life assurance policy and any other long term contract; and it could hardly be argued that a company was morally bound to adopt an investment policy which had for its main object the return to the policyholder, in the event of currency depreciation, of a larger number of monetary units than his contract entitled him to expect, unless the policyholder in his turn was prepared to accept the possibility of the converse happening, namely, the receipt of a smaller number of such units if currency appreciated. It was no answer to that to say that investment in ordinary stocks and shares would give good results even if currency appreciated. That merely brought one back to the first ground, namely, that it was an investment policy which possessed decided advantages over others in the way of benefiting policyholders without departing from the well-established canons of investment. It was essential in judging results when dealing with ordinary shares to regard the group as the unit and not the individual investment. The principle was really the same as that which underlay the life assurance side of their business, but in its application to investment there was an advantage in being able, unlike life assurance, to get rid of an unhealthy investment and to substitute a healthy one.

Those who liked to take credit for recommending good investments to companies would perhaps feel that the author's method of selecting stocks was rather mechanical. He agreed so much with the author's general conclusions that he would have liked them to have been built on the strongest possible foundation. Clearly there was much more of the personal factor even in the author's choice than appeared on the surface, and that must necessarily be the case in practice. Unless, therefore, the author

was prepared to go the whole length of saying that his group was a random sample and that any other group mechanically chosen would give similar results, his argument did not gain very much by the unbiased nature of his illustration; in fact rather the opposite, since it might call forth from an opponent the retort that a group chosen by other means might lead to quite different conclusions. He felt that one might just as well admit that great care must be exercised in the selection of the securities and that, given such care, it was possible to produce the results which had been shown.

As the author had pointed out, ordinary stocks and shares must form a significant proportion of life office funds if the policy of investing in them was to be worth while. If the group was to be the unit and not the individual investment, it would be unscientific for a company to restrict its investment to one or two securities of that type. If an appreciable number of ordinary stocks and shares were to be acquired a much more highly developed investment organization was demanded than was likely to be possessed by a company which had not hitherto handled such investments. Quite as important as careful selection of ordinary stocks and shares was the very close and careful supervision of them after purchase. They could not, like certain types of gilt-edged securities, be locked up and forgotten until the annual audit; they required to be watched unceasingly so that, if possible, approaching adverse movements might be anticipated and avoided. Unless, therefore, a company had relatively large funds and was prepared to face the trouble and expense involved, it was questionable whether, in spite of its advantages, it would be wise for such a company to follow the policy advocated. If it desired to obtain part of the benefits of such a policy it would probably do better to purchase the ordinary stock of a well-managed trust company which specialized in ordinary shares, and thus secure the advantages of widespread investments of that class without too heavy a commitment. Alternatively—and perhaps better still—it might be worth while for a group of life offices to form a trust company of their own for the purpose, and to pool the results. If he had ventured upon certain criticisms in order to arrive at an unbiased judgment, he still agreed generally with the conclusions of the author of the paper.

MR. E. WILLIAM PHILLIPS did not think the author was right in saying that in Canada the practice of investing life funds in ordinary stocks and shares was resorted to much more than here. As at the end of 1926, of all the stocks and shares held by Canadian life offices, 92 per-cent were held by one office, and, if that one office were excluded, it would be found that all the other Canadian offices held a little less than 1.5 per-cent of their funds in ordinary stocks and shares.

It was perhaps not possible to speak of the " selection " of ordinary stocks in quite the same sense as of the selection of debenture stocks and bonds. So far as the former were concerned so much appeared to depend upon the quality of the management.

As an example, he would prefer to invest in a company who employed an actuary with somewhat wide powers, whether in a consulting or a whole-time capacity, or which had an actuary upon its Board of Directors. No doubt if the Life Offices showed a preference for such companies and experience ultimately justified this preference, the general investing public would not be slow to follow the lead. Some time ago he had been responsible for the suggestion, not, he understood, a new one, that the actuary and the accountant might be regarded by analogy as possessing a similar relationship to that between barrister and solicitor. He would like, therefore, to be the first to suggest another analogy, namely, that between the doctor and the undertaker. When a company was defunct some eminent chartered accountant was brought in as Receiver to measure up the body and to arrange for the interment, but he would suggest that, had the actuary been called in first in the capacity of business doctor, there might never have been any necessity for a funeral.

MR. HARTLEY WITHERS (a visitor) said that a few years ago to have been told that the Institute of Actuaries would discuss ordinary shares as a medium for investment for life funds would have caused extreme surprise. Nevertheless, the revolution had a great deal to commend it, and he was extremely glad to find that the same principles of investigation, more or less, as in Mr. Smith's book, had now been applied to English investments. Nearly all Mr. Smith's tests had ended at the period of 1922, or just after the war. In one of his other tests the " steadiness " of the income earned on the common stocks during the period had been emphasized. It had been " steady " on the average, but the net result had been that at the end of the period the income from the common stocks had been very little more than half what it had been at the beginning. Any investor who had found himself in that position would have been very much justified in feeling uncomfortable. He should like to suggest with all deference that the period adopted in this paper was not suitable for an investigation of the kind. It was an abnormal period owing to the huge creation of fixed interest securities, and by reason of the rise in commodity prices. In the six year period after 1921, during which prices were falling, the companies concerned would have had considerable reserves, both visible and hidden, accumulated during the period of great previous prosperity, on which they could and probably did draw. Nevertheless, it seemed pretty clear that there was more in ordinary shares now than was thought to be the case 30 years ago, and the result when that view gradually percolated through those interested in the subject to the general public, who had always been inclined to prefer the brilliant to the solid investment, had to be contemplated. Was there not great danger of an outburst of ill-considered speculation? The " ordinary long term investor " had been mentioned in the paper as a person affected by the considerations put forward. The present high rate of taxation had to a certain extent clipped the wings of the large

investor, and, if this country was to advance industrially and commercially as in the past, a new class of investor must supply capital. If serious mistakes were made the result might be disastrous. It had been suggested by one speaker that in buying ordinary stocks of trust companies diversification of risks, which was as the keystone of an arch, would be secured; otherwise there was a great danger that, if an ordinary share or two went wrong, the small investor in them might be sickened of the whole business and adopt the simpler method of spending his money instead. But there was one serious difficulty about the securities of trust companies, namely, that one could not buy the shares of the old well-established companies, which had acquired a tradition and a prestige, and which had followed that great principle of large allocations to reserves. It was a sort of " King Charles' head " in his own case, whenever he talked or wrote about investment to point out that what was now wanted was a great new investment trust company to be organized and run by such concerns as the great insurance companies. If he could induce any of those present to consider the possibility of such an organisation as that, by which they would go through the country selling not only life insurance but investments to the small investor he should feel that he had been very well rewarded for attending the meeting.

MR. R. G. HAWTREY (a visitor) remarked that there were two quite distinct questions involved—how to guard against currency depreciation, and how to make profit out of investment in ordinary shares under conditions dissociated from that factor.

With regard to currency depreciation, one speaker had very pertinently pointed out that if the life insured were guarded against currency depreciation he ought also to be willing to make any sacrifices involved in currency appreciation. As a safeguard against monetary changes, no more was required than a merely mechanical selection of investments in ordinary shares. The all-round effect of a monetary change on such a selection was something that could be predicted independently of the merits of the individual shares.

The question how to make the most of investment in ordinary shares independently of monetary movements was obviously quite distinct. There were institutions in whose hands large accumulations of capital arose, which, if fertilized with special skill in the selection of industrial investments, ought to produce a proportionately large profit. An analogous practice, before the war and since, was that of the great Continental banks, especially the German. Banks, like life insurance companies, occupied positions of trust, the former towards their depositors, the latter towards their assured. There were two conditions required to justify the activities of those big Continental banks in the investment in companies. One was capital in proportion to their deposits, larger than in the case of English and American banks, strictly confined to discount business. The large capital was relevant in two respects—first, they had freedom to invest their

own capital in speculative investments, and secondly, a large guarantee fund against possible loss on the depositors' own funds was provided. That analogy applied to some extent to insurance companies, too—that, if they were going to take the risk of investment in ordinary shares, then they ought to have a correspondingly large capital. He took it for granted that ordinary shares must be regarded as a greater risk than fixed interest securities. Apart from the risk of actual failure of the companies, there was always the risk of their going downhill and paying very small dividends, and of the capital falling in proportion to the income. The other condition was that the big Continental banks actually took part in the management of companies in which they invested, and it seemed to him to be absolutely essential. Even if a client asked a stockbroker to recommend a speculative investment the stockbroker did not contemplate an investment lasting more than a year or two. If, therefore, insurance companies started investing in ordinary shares, they should take part in the management. That meant, no doubt, including in their directorate people of special experience in such business. He yielded to no one present in his respect for the capacity of actuaries, but he did not think it could be taken for granted that an entirely new function like the management of a big industrial concern could be taken over by the life offices as they stood.

If the methods of life insurance were going to be changed in that way, the people insured ought to be given a choice. There ought to be a special kind of with-profits insurance with an understanding that it was to be based on ordinary shares. After all, if an investor gave instructions to his stockbroker, he might say: "I want something gilt-edged," or "I want something profitable." He made his choice. If he went to insure his life he was simply an investor. That fact was often lost sight of, but there was no difference in principle between life insurance and investment, and there was no reason why a man effecting a life insurance policy should not be given the same kind of choice.

Finally, if there were to be a sudden change in the investment policy of life insurance companies—a change over from gilt-edged securities to industrial securities—it would have a very marked effect on markets. Whether desirable or undesirable, he thought it would be bound to lead to a relative fall in the prevalent prices of gilt-edged securities and a relative rise in the prices of shares. He did not mean to suggest that that was either a reason for or against the proposal, but it ought to be taken into account, and the tendency would be accentuated if other bodies like big banks adopted the same policy.

MR. WM. PENMAN remarked that if the author had employed anything other than an automatic method of making his selection of stocks 15 years back he would have laid himself open to much severer criticism than he had by the method which he had adopted. It seemed to him that the question was one of degree rather than

one of abstract principle. There could be very few offices which had not some ordinary stocks at present on their books. He thought the author had shown that, given reasonable care, the proportion of life office funds so invested could be increased considerably with advantage to all concerned. Offices would benefit if their general policy in the matter of investments were a little more in harmony with the numerous and (usually successful) trust companies now operating. It might be that, as a matter of machinery, the right way to do it would be through a subsidiary trust company, or perhaps in the case of a company with a small fund, merely by investing in the ordinary shares of suitable trust companies.

The second part of the paper, where the author dealt with the problems of currency and commodity values, was perhaps more interesting and certainly more elusive. He had been disappointed that, at the recent International Congress, papers and discussions had dealt mainly with the position of currency in one country as compared with that in other countries. From that point of view it might be said that we in Great Britain had now no currency problem and that during the last 20 years the United States had never had a currency problem; but notwithstanding that, the purchasing power of the sovereign was not very different now from one-half what it had been in 1904, and was not much more than 60 per-cent of what it had been in 1914. There had been a similar movement in the United States, and, although both countries were blessed with stable currencies, claims were being settled to-day in pounds or dollars having a very different purchasing value from the pound or dollar in which the majority of the premiums had been paid.

Being anxious to measure the effect of that fall in the commodity value of the £, he had made some calculations for his own education. He had taken as fairly typical a 20 year with profit endowment assurance effected in 1904 for £1,000 at an annual premium of £50. He had further assumed that a simple reversionary bonus of 30*s.* per £100 per annum had been declared annually for the first ten years, no bonus for the next five years, and 40*s.* per £100 per annum for the last five years. All payments after the first year had been reduced to a figure representing the commodity value of the payment taking the commodity value of a £ in 1904 as the radix. Thus, in 1909, the index number had risen, from 100 in 1904, to 110, and consequently the commodity value of the £50 premium assumed to be paid in that year was represented by £45—that was to say, the index figure had risen 10 per-cent, so the commodity value of the premium had dropped 10 per-cent. The actual figures were shown in the following table:

An Endowment Assurance for £1,000, with profits, effected in 1904, at an Annual Premium of £50, maturing in 1924.

Bonuses—First 10 years—an annual simple reversionary bonus of 30*s.* per-cent.
Next 5 years—no bonus.
Last 5 years—an annual simple reversionary bonus of 40*s.* per-cent.

(*Results expressed in Currency compared with results expressed in terms of Commodity Value.*)

Year of Assurance	Calendar Year	Comparative cost of living Index Figure	CURRENCY				COMMODITY VALUE OF:			
			Current Year's Premium	Total Prems. paid	Amount payable if claim arises	Excess over total prems. paid	Current Year's Premium	Total prems. paid	Amount payable if claim arises	Excess over total prems. paid
1	1904	100	50	50	1015	965	50	50	1009	959
2	1905	101	50	100	1030	930	50	100	988	888
3	1906	104	50	150	1045	895	48	148	950	802
4	1907	110	50	200	1060	860	45	193	887	694
5	1908	117	50	250	1075	825	43	236	1021	785
6	1909	105	50	300	1090	790	48	284	1007	723
7	1910	108	50	350	1105	755	46	330	983	653
8	1911	112	50	400	1120	720	45	375	986	611
9	1912	114	50	450	1135	685	44	419	911	492
10	1913	125	50	500	1150	650	40	459	950	491
11	1914	121	50	550	1150	600	41	500	760	260
12	1915	151	50	600	1150	550	33	533	645	112
13	1916	178	50	650	1150	500	28	561	528	— 33
14	1917	218	50	700	1150	450	23	584	469	—115
15	1918	245	50	750	1150	400	20	604	458	—146
16	1919	251	50	800	1170	370	20	624	384	—240
17	1920	305	50	850	1190	340	16	640	449	—191
18	1921	265	50	900	1210	310	19	659	544	—115
19	1922	223	50	950	1230	280	23	682	601	— 81
20	1923	205	50	1000	1250	250	24	706	608	— 98

All sorts of factors were ignored, including interest, income-tax and mortality cost, but the comparison was fair enough because those factors were omitted in both cases, and this method had the merit of simplicity.

The period dealt with was abnormal, and he was not suggesting that there was any practical remedy available to cope with financial abnormality such as had been caused by the war, but even between 1904 and 1914 there had been a decrease of about 20 per-cent in the real value of the £, and over long periods the general tendency appeared to be for the purchasing power of the currency unit to decrease.

He agreed with the author that it would not be practicable to issue policies under which premiums and sums assured were payable in commodity value but, if only as an ideal, the offices should aim at returning to their policy-holders the commodity value of the premiums they had paid; and it was from that point of view that he had found the author's investment suggestions so valuable and interesting.

MR. J. MAYHEW ALLEN said that, in their early student

days, they all learned that the popular idea of profit or loss on an individual life was fallacious, and that profit or loss from mortality could be gauged only by considering the business as a whole. A similar principle of averaging rises and falls in investment values and returns might be sound, but the laws of average required to be watched within well restricted groups.

The inclusion of preference stocks and shares in the fixed interest list, in cases where no debenture stock had been issued, went against the grain, though he appreciated the author's difficulty. Preference stocks and shares in his opinion constituted a rather unattractive compromise, held out to the investor with a conscience, but were more of the nature of " ordinary " than of " debenture " stock.

Bearing in mind that Life Assurance Companies in their investment policy could not regard changing conditions, he congratulated the author, not only on his courage in considering the subject of investments from a somewhat unorthodox point of view, but also on reading a second paper on practically the first anniversary of his previous appearance.

MR. D. S. SAVORY expressed his sympathy with the idea of including a proportion of ordinary stocks in investments of life insurance companies. At the same time he did not think the problem was quite so simple as might appear at first sight, or that the proof was conclusive. Much importance attached to the economic effects of the war, which went far to explain the phenomena to which the author had drawn attention. In the first place the very large expenditure brought about by the war had had a very marked effect on the price of ordinary shares, and the rise reflected the depreciation in the value of the £ when expressed in terms of commodities. Then, too, the very substantial increase in income-tax and super-tax brought about by the war had a marked effect. The depreciation in capital value of the £54,000 invested in Debenture Stocks, was largely accounted for by the decline in the net return due to the larger deduction on account of income tax. Increase in taxation had tended to a decrease in the demand for gilt-edged securities and to a corresponding increase in the demand for ordinary stocks. The professional man and the man with a fixed income who, in pre-war days, used regularly to save and invest his savings in gilt-edged securities now, as a result of increased taxation and the increased cost of living, found his savings swept away. The very wealthy man, on the other hand, who paid the maximum rate of super-tax, had been driven to put his money into ordinary stocks and shares in the expectation of obtaining capital appreciation which was not subject to income-tax, the net return from any debenture being so small. There had also been a great influx of newcomers who were not so keen upon a safe 5 per-cent investment as upon something more speculative. The price of a great many ordinary stocks and shares had been raised to a level which seemed to discount a good deal and, even if it was a wise thing for insurance companies to invest in ordinary stocks

and shares, he was not at all sure that the present was exactly the best time to start. In that connection he drew attention to the fact that whereas, according to the author, in 1912, the difference in interest return on ordinary stocks and debentures, at their then price, was £1 10*s.* 10*d.* per-cent, the corresponding figure on 31 March 1927 showed that the difference in favour of ordinary stocks had declined from £1 10*s.* 10*d.* to 4*s.* 6*d.* per-cent.

If insurance offices were to invest large sums in ordinary stocks and shares of companies, the next step would be for them to take a substantial share in the control of those companies, and that opened up prospects of some difficulty.

MR. C. R. V. COUTTS, in closing the discussion, said that he had read in a paper last week the following quotation:

"Everything is in question, even the fundamental dogma of modern society that debentures are safer than common stocks."

That had not appeared in the columns of a financial paper, but in rather a high-brow magazine, and was the contribution of a well-known poet, Mr. T. S. Eliot.

He welcomed the paper—first for its intrinsic merit; and secondly, because there could not be too many discussions of investment problems which were of vital importance in connection with life insurance. It was the author's misfortune rather than his fault that the results of the period he had taken were so obviously affected, both by the exceptional events of the war, and by the exceptional conditions which immediately followed. On turning over the Board of Trade returns for over 40 years ago, he had found that one company, which was still large and prosperous, had had 30 per-cent of its funds invested in ordinary stocks and shares, and that another well-known composite office had had a very large investment in the shares of the Suez Canal Company. Therefore the idea of investing in ordinary stocks was not quite so revolutionary as one might be inclined to think. It seemed to him that if some of the debentures which the author had selected were perpetual and some redeemable, Table 3 in the paper might be upset. It certainly upset the comparison between the different groups.

There had undoubtedly been a tendency in the past to regard an investment carrying a fixed rate of interest as necessarily more orthodox than an ordinary stock or share. In security and ultimate interest yield there were many ordinary stocks which were preferable to some of the fixed interest securities. Mr. Hartley Withers had suggested that insurance companies ought to sell investments as well as life insurance, but an endowment assurance policy was just such a combination of life insurance and investment. Mr. Hawtrey seemed to fear that, if all the insurance offices were converted to the idea of investing their funds in ordinary shares, they would at once throw all their gilt-edged securities on to the market, but the directors would certainly prevent any such operation.

He understood Mr. Penman to remark that there was no reason

why a life office should not pursue the same investment policy as a trust company.

MR. PENMAN said what he had stated was that he did not see why a life office should not, to the extent that it did that, be as successful as a trust company.

MR. COUTTS said that it was essential to consider the peculiar nature of life office contracts. They must always keep it before their eyes that they had entered into contracts perhaps for 40 or 50 years, and their investment policy must be directed and controlled by that vital fact. If something went wrong with an investment, a trust company merely reduced its dividend, but a life office with the same investment might be forced to go into liquidation.

There was nothing wrong or revolutionary, provided that the right kind of ordinary stock or share were selected, both from the point of view of yield and of ultimate security, but one thing that must guide all investment policy was what the Greeks called σωφροσυνη, which was sometimes translated "moderation," and sometimes " temperance," but which was much more positive than that: it was a mixture of moderation and commonsense; and that was the essential thing.

The PRESIDENT (SIR JOSEPH BURN), in proposing a vote of thanks to the author for his paper, said he was sure that of the large number of members present, every one recognized that he had rendered a very valuable service. Papers such as this were peculiarly welcome, but he felt that the discussion, valuable as it had been, should be rather carefully analysed. There were many whose very temperament—the temperament of reserve and caution—had not encouraged them to come forward to join in the discussion. The younger men, who had contributed to the discussion, sometimes used a more definite way of speaking than some of the older; but he at least should be sorry if actuaries ever failed to have due regard for all aspects of any problem which was presented for their consideration. There had been a little more said on the one side than on the other merely because of the shortness of time at their disposal for discussion of so big a matter. Members ought carefully to consider whether, in a matter affecting the security of capital and the advisability of investing large sums of money in what were, in effect, commercial ventures, it was not perfectly evident that results should be observed over a much longer period in order to obtain a reliable average. The period during and immediately after the war was insufficient; it would be necessary to make a careful examination over a very considerable period of time.

He had been very glad that Mr. Coutts had mentioned the matter of endowment assurances in reference to what Mr. Hartley Withers had called King Charles' head. He knew Mr. Hartley Withers' strong desire, and sympathised very greatly with it. It was evident that the big insurance companies could do some-

thing, although not in exactly the manner he had suggested. The amount of life insurance carried by the majority of people was much less than it should be, and that question should if possible be taken up. The object which Mr. Hartley Withers had in mind would be attained if there were a large increase in the amount of endowment insurance business. That method of saving was peculiarly suited to the general public, covering also the mortality risk. If some of the funds so created could be properly employed in the encouragement of trade, he thought it was worthy of consideration, whether Mr. Hartley Withers' aim and his own great aspirations as to the usefulness of life insurance could not be fulfilled at the same time.

MR. RAYNES, in reply, said that Mr. Elderton had just handed him the opening address of the President, Mr. Hughes, in 1902, from which the following was an extract:

> "It has always been a cardinal doctrine with the managers "of assurance companies that the absolute safety of the "principal is paramount, and that, although the realiza- "tion of as high a rate of interest as possible is all- "important, it must stand only in the second place. But "as the realizable rate on what are called gilt-edged "securities seems to be permanently diminished, the "question of widening the area of investment can no "longer be disregarded. It would be most interesting and "valuable if we could ascertain or estimate with any "degree of accuracy what would be the effect of investing "a large number of the small amounts in what may be "called speculative securities, and of carrying the amount "of interest realized, in excess of a certain minimum to "a guarantee or insurance fund, itself to be invested in "first-class securities to be used to make good losses of "capital or deficiencies of revenue as they occur. I by "no means advocate a trial of the experiment in actual "practice, but it might be useful if anybody possessed "of the necessary patience and perseverance would make "the experiment on paper by selecting a number of such "securities, and following their fortunes to see what the "result would be."

It had been quite a common practice, as might be remembered, with Insurance Companies 20 or 30 years ago to purchase the ordinary shares of British Railways—much to their own loss. Mr. Recknell had referred to a paper which had been delivered, as he suggested, only three months ago, but as a matter of fact, the lecture had been prepared for students two years ago, last delivered in October 1926, and printed recently much to his own surprise. The papers and discussions at the recent Congress had certainly modified his views, as had also the present statistical investigations.

On the subject of the selection of the 53 particular cases, he could give the names of the Companies to anyone who wished.

They were to be found in the " Investors' Monthly Manual " for March, 1912. Some of the debentures were redeemable, but none of them fell to be redeemed during the period of 15 years. He had selected in every case the senior debenture stock, or, where there was no debenture stock, the premier preference stock on the principle of taking a fixed interest earning security. He knew that the period was abnormal, but for some purposes—that was to say, for currency depreciation and appreciation—he thought it was more instructive on that account.

Mr. Smith's book was very interesting so far as American Corporations were concerned, but the practice as to placing sums to reserve in this country might be very different. The public taste or demand for the two descriptions of investment might also differ. Mr. Smith had investigated a miscellaneous list of companies which was a little unfortunate because the financial practices differed so very materially among different classes or groups of companies. Some continually placed sums to reserve, and in a particular group of companies there emerged common practices and common methods which did not appear in another group of companies. Some of Mr. Smith's conclusions expressed as " laws " were a little fanciful, such as the association of the appreciation of the ordinary stocks with a rate of compound interest of $2\frac{1}{2}$ per-cent. Had Mr. Smith analysed several *groups* of companies, he would probably have found nothing like a general increase of $2\frac{1}{2}$ per-cent. It might be much more in some cases and much less in others. Generalisations expressed as laws should only be reached after examinations of homogeneous material.

Some had inferred, from the fact that the difference in yield between the two classes was larger at the beginning than at the end of the period, that there had been a change in the public estimation of their relative values in the meantime. Too much importance should not be attached to that, since one of the conditions at the beginning of original selection had been that the ordinary stocks should be in the dividend paying class, while at the end a number (*e.g.* in the iron, coal and steel class) were paying no dividends at all. though the shares still had a market value. Other companies had reduced dividends owing to the coal strike, which the market might anticipate was a temporary measure.

MR. F. RUDDLE has since contributed the following:

In a company which has been following an active policy of investing in Ordinary Shares for some years past, certain figures with regard to the results during the last four years may be of interest. The majority of the investments referred to are in Canadian and United States companies.

As at 31 Dec.	Book Value	Market Value	Excess	Appreciation
				%
1923	$13,251,164	$17,025,890	$3,774,726	28·48
1924	30,044,655	36,942,815	6,898,160	22·96
1925	48,566,294	63,107,014	14,540,720	29·94
1926	63,544,159	83,892,994	20,348,835	32·02

The gross yield of these shares for the year 1926 was 7.64 per-cent. During the four years for which figures are given above, the company's holding in Government Stocks and Debentures in industrial companies appreciated in market value by 6 per-cent, and the company's holding in Preference Shares by 7 per-cent. The gross yields for 1926 on these classes of security were 6.46 per-cent and 6.78 per-cent respectively.

The large amounts invested dispose of any suggestion that the results may be due to specially fortunate investments in one or two special securities. Under the Canadian Insurance Law, a company may not invest in Ordinary Shares unless the companies have paid a dividend of at least 4 per-cent per annum for the seven consecutive years immediately preceding the date of the purchase, so that the investments referred to above have all been made in well-established companies. These figures provide some confirmation from actual practice of the results which might be expected to be obtained from carrying out the policy outlined in this paper.

The company has a Statistical Department, and assuming investigation by that Department to be satisfactory, if a security complies with the requirements of the Canadian Law, it is next considered by the chiefs of the Investment Department and the General Manager of the Company, who then submit it to the Finance Committee of the Board of Directors for approval. If approved, an endeavour to arrange a meeting between the senior officials and the directors of the company in which it is proposed to invest is then made, and it is usually possible to do this without much difficulty. The information which is obtained as a result of such a meeting is regarded as very important in deciding whether the management is thoroughly efficient.

With regard to the question of depreciation of currency, it is suggested that the profits on a With Profit Policy taken out with a company which invests a proportion of its funds in Ordinary Shares will compensate in a considerable measure for any depreciation in currency which might occur during the lifetime of the policy.