SOME ASPECTS OF WITHDRAWALS IN ORDINARY LIFE BUSINESS
by
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[Submitted to the Faculty on 17th February 1969. A synopsis of the paper will be found on page 93.]

INTRODUCTION

The subject of withdrawals in ordinary life business has been assuming increasing importance in recent years, principally due to the competition from other forms of savings media which emphasize a favourable return on termination. The total amount of surrender values paid by U.K. Offices has been rising steadily and in 1967 it amounted to £84·1m. compared with £49·8m. in 1963. It is surprising, therefore, that for many years only scant attention has been paid to this subject in papers presented to the Faculty.

Our intention in this paper is to examine the level of withdrawal rates, the factors influencing these rates and some of the financial considerations. The expression “withdrawal” is used to denote a policy removed from the live file, due to premature termination of the contract by the policyholder, with or without payment of a surrender value. It does not include a policy which is converted to a paid-up amount or continued with a reduced premium and sum assured.

We have been concerned only with ordinary life assurance business, i.e. we have excluded sponsored pension and life assurance schemes and self-employed pension business. The data investigated relate to the year 1965, but we have no reason to suspect that the experience for that year was materially different from any other year.

SECTION I

RATES OF WITHDRAWAL

Collection of data

In order to investigate rates of withdrawal it would be desirable to collect data from all Life Offices as is currently done for mortality investigations by the Continuous Mortality Investigation Bureau.
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The form of the data would differ from that required by the C.M.I. Bureau, as the factors influencing withdrawal rates are not necessarily the same as those influencing mortality rates. There would be problems of heterogeneity which are likely to be more pronounced for withdrawal than for mortality investigations.

At the present time it is not possible to obtain such data because in general:

(a) offices do not appear to have done much research into withdrawal rates and therefore may not have the requisite data readily available, and
(b) offices have tended to regard their withdrawal experience as confidential and may be reluctant to disclose statistics.

It is possible that the Insurance Companies (Accounts and Forms) Regulations 1968, requiring as they do publication of certain withdrawal information, might alter this attitude and stimulate fuller investigations into this subject.

Although it was not possible for us to obtain full data from all Life Offices, we are indebted to five offices for supplying the undernoted information:

(a) The number of policies terminating by lapse or surrender in 1965, grouped according to the number of complete years' premiums paid, policies terminating with more than ten years' premiums paid being amalgamated.
(b) The total number of new policies written in each year from 1954 to 1965 inclusive.
(c) The number of policies in force at 31st December 1964.

Thus we were able to calculate the probability, at inception of a policy, of withdrawal occurring in 1965 after $t$ complete years' premiums had been paid.

\[ \text{Calculation of probabilities of withdrawal} \]

First it was necessary to make an approximation to the "original population" from which withdrawals in 1965 at curtate duration $t$ could have come. The formula adopted was

\[ 0.4562 E_{65-t} + 0.5396 E_{65-t-1} + 0.0042 E_{65-t-2} \]

where $E_{65-t-a}$ represents the number of new policies effected in the calendar year (1965–$t$–$a$).

A full explanation of the derivation of this formula is contained in Appendix I together with the underlying assumptions.
At inception of a policy the probability of withdrawal occurring in 1965 at curtate duration \( t \) was calculated by dividing the "original population", calculated as explained above, into the number of policies terminating by lapse or surrender in 1965 with \( t \) complete years' premiums paid. The probabilities derived are, in effect, dependent probabilities in that no allowance was made for policies becoming claims by death prior to 1965. In view of the level of deaths relative to withdrawals we decided that the effect of mortality could reasonably be ignored and thus these dependent probabilities were taken as independent probabilities. As a result of this assumption the withdrawal rates produced are slightly understated.

These probabilities of withdrawal were calculated not only for the combined experience of the five offices, but also for each individual office. As anticipated, the experience of the individual offices showed variations due to:

1. differing periods of time allowed to elapse after non-payment of premiums before action taken to remove policies from the live file;
2. differing non-forfeiture conditions;
3. differing practice regarding the minimum number of premiums required to be paid before a surrender value is granted;
4. differing sales techniques and use of the agency system;
5. differing systems for penalizing field staff on early discontinuance of policies.

Despite the variations in the individual offices' experience, it was decided that the data should be amalgamated to produce a combined experience.

Calculation of crude rates of withdrawal

From the probabilities of withdrawal produced by the combined experience, crude rates of withdrawal were calculated as follows:

Assuming \( f(a) \) represents the probability of withdrawal at curtate duration \( a \), the rate of withdrawal for that duration is

\[
\frac{f(a)}{1 - \sum_{b=0}^{b=a-1} f(b)}
\]

This assumes that the probability of withdrawal at curtate duration \( b \) from the 1965 experience also applied in the year \((1965-a+b)\).

The results are given in Table 1.
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Table 1

Crude rates of withdrawal—combined experience

<table>
<thead>
<tr>
<th>Curtate duration</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-0.067</td>
</tr>
<tr>
<td>1</td>
<td>-0.056</td>
</tr>
<tr>
<td>2</td>
<td>-0.053</td>
</tr>
<tr>
<td>3</td>
<td>-0.042</td>
</tr>
<tr>
<td>4</td>
<td>-0.039</td>
</tr>
<tr>
<td>5</td>
<td>-0.033</td>
</tr>
<tr>
<td>6</td>
<td>-0.030</td>
</tr>
<tr>
<td>7</td>
<td>-0.027</td>
</tr>
<tr>
<td>8</td>
<td>-0.023</td>
</tr>
<tr>
<td>9</td>
<td>-0.021</td>
</tr>
<tr>
<td>Ult.</td>
<td>-0.020</td>
</tr>
</tbody>
</table>

This is reproduced below in the form of a graph, which perhaps illustrates the trend more clearly.

When considering the level of these rates, it is interesting to note that effectively 23% of policies written exit by withdrawal in the first 5 years and 33% within 10 years.

The rates of withdrawal fall with duration and appear to level off by duration 8, the effect of duration thereafter having relatively little significance. There is also a marked fall in the rates between durations 0 and 1, and between durations 2 and 3.
In Section II of the paper some of the reasons underlying these features are discussed.

**Variation of withdrawal rates with age**

Whilst the data requested from four of the offices did not permit detailed analysis, we are indebted to one office for allowing us full access to its data in order to analyse the withdrawal rates further.

On commencing the investigation of that office’s withdrawal rates by age, we were immediately faced with the problem of paucity of data. Although this meant that the results obtained must be viewed with reservations, it was felt that it would be worth while to carry out the fuller investigation of the available data as this might still indicate some significant trends.

**Table 2**

**Effect of age on withdrawal rates**

<table>
<thead>
<tr>
<th>Age at entry</th>
<th>Percentage of &quot;all ages&quot; rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>116</td>
</tr>
<tr>
<td>28</td>
<td>110</td>
</tr>
<tr>
<td>33</td>
<td>99</td>
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<tr>
<td>38</td>
<td>90</td>
</tr>
<tr>
<td>43</td>
<td>74</td>
</tr>
</tbody>
</table>

The data were split into quinquennial age groups according to age at entry and were analysed for each curtate duration from 0 to 9 inclusive. As expected, the results of the analysis by age and duration were subject to fluctuations, but on combining the data for durations 0 to 4 inclusive a trend in the withdrawal rates by age was evident. In Table 2 above an indication of this trend is given by showing the withdrawal rates at quinquennial ages at entry for durations 0 to 4 combined, expressed as a percentage of the "all ages" rates for these durations.

The analysis by duration within quinquennial ages revealed, in broad terms, the same trend as that disclosed by the analysis of the combined offices’ experience, the results of which were shown in Table 1.

For the purposes of investigations made in later Sections of the paper, it was necessary to construct a Double Decrement Table allowing for mortality and withdrawal. To this end we first produced a table of independent rates of withdrawal by age and duration ($q_{x_4}$).
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from the data available to us. The paucity of data referred to previously meant that certain of the rates obtained had to be viewed with some reservation. With this in mind, and also for practical reasons, it was decided to restrict the select period of withdrawal to 5 years.

Initially the percentages shown in Table 2 were applied to the combined experience rates of withdrawal by duration given in Table 1 to produce crude values of $q_{[x]+1}$ for durations 0 to 4 inclusive at quinquennial ages. In calculating the rates for individual ages and durations from these crude rates, our primary concern was that the rates should be smooth and that there should be no discontinuity between select and ultimate rates.

The independent rates of withdrawal adopted are shown in Appendix II.

These independent rates of withdrawal were combined with the A1949-52 select mortality rates to produce dependent rates of mortality ($aq_{[x]}^d$) and withdrawal ($aq_{[x]}^w$). These dependent rates, and the resultant Double Decrement Table, are shown in Appendix III. Select functions have been calculated for ages 25, 35, 45 and 55 at entry.

SECTION II

FACTORS INFLUENCING WITHDRAWAL RATES

General reasons for discontinuance

Withdrawal rates are influenced by a number of factors, e.g. circumstances of policyholders, action of field staff and agency connection, decisions by office management, trade recessions, fiscal and economic measures adopted by the government, etc., only some of which are within the direct control of the office. In theory, it should be possible to investigate statistically the reasons for withdrawal on similar lines to the investigations into cause of death at present being carried out by the C.M.I. Bureau. In mortality investigations the cause of death is provided on the Death Certificate exhibited to the office, whereas no such reliable source of information is available on withdrawal. While field staff, in attempting to dissuade policyholders from discontinuing their policies, may obtain some reason for discontinuance, it is unlikely that such information could be obtained in all instances. Furthermore, even if such information were obtained and recorded, there would be serious doubts as to its validity.
Although statistical analysis of the reasons for withdrawal may be impracticable, it is possible to suggest on general grounds a number of factors which must influence withdrawal rates:

1. During the last two decades, with the growing appreciation by the general public of the need for life assurance protection and the value of life assurance as a savings medium, there has been a substantial increase in the volume of business written. In association with this increase, ordinary life assurance has been sold to a much wider cross-section of the population, with the result that certain classes of policyholder who would previously have effected industrial life policies are now effecting ordinary life assurance. It is probably true to say that these new classes of policyholder have not, as yet, been fully educated to the true nature of the financial contract which constitutes a life policy and the rather exacting obligations of contractual saving. This class of policyholder is used to being a consumer rather than a saver, to paying by deferred hire purchase instalments rather than in cash, and may not have the financial resources to cope with fluctuations in personal circumstances occasioned by economic conditions. Such policyholders are likely to regard the discontinuance of their life assurance policies as the easiest solution to their temporary financial difficulties. It has been found necessary to protect such classes when entering into relatively short-term hire purchase contracts and perhaps it is not altogether unreasonable to suggest that they should have some protection when effecting long-term life assurance contracts. This has been done in the past for industrial assurance policyholders in the Industrial Assurance Acts of 1923 and 1929, which lay down minimum conditions as to the granting of and basis for paid-up policies and cash surrender values.

While it may be difficult to estimate the exact effect of such classes of policyholder on withdrawal rates, we believe that they influence these rates materially. Since such classes of policyholder will probably constitute an increasingly important section of the business, it is relevant to consider whether present attitudes to withdrawals and withdrawal benefits will, in the future, be satisfactory to both policyholder and life office.

2. It is a truism to state that a life policy is sold rather than bought, and to this end most life offices maintain a sales organization and an agency connection. In the main a responsible attitude is adopted to the sales techniques employed to ensure that the type and quantity of business effected by the individual policyholder is related to his personal resources and requirements. Nonetheless, it must be
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acknowledged that the remuneration of the sales organization and agency connection is normally related directly to the amount of business sold. It would be pious to hope, therefore, that overselling or incorrect selling does not occur and this must inevitably have an effect on the level of withdrawals.

3. A large proportion of life assurance business is effected in connection with house mortgages. It has been estimated that on average a building society mortgage is altered in some way within seven years. While in many instances the alteration does not result in the complete cancellation of the associated life policy, there is a tendency for policyholders whose resources are strained to feel that one item which is expendable is their life policy. Perhaps it is because they do not appreciate the valuable protection afforded by the policy that they are willing, in the short term at least, to sacrifice the cover which it provides, albeit with the intention to effect further assurance cover when their circumstances permit.

Once again it is impossible to determine the exact effect which this type of business has on withdrawal rates but we suggest that it is a significant contributory factor.

4. Life assurance provides a vehicle for approximately one-third of all personal savings in the United Kingdom. The tax advantages of life assurance as a savings medium have been well publicized and form an important incentive in attracting both the large and the small investor. Thus changes in either economic conditions or the tax structure under which savings are encouraged could have repercussions on life assurance business and would undoubtedly have an associated effect on withdrawals.

Analysis of an office's withdrawal experience

While the foregoing general reasons for withdrawal can be advanced, it is impracticable to analyse statistically all the underlying reasons for withdrawal. In view of the high level of withdrawal rates relative to mortality rates, it seems to us desirable that an office should have reliable data which will enable it to determine:

(a) the actual level of withdrawal rates experienced from year to year, analysed where possible by the principal contributory factors, and

(b) the reasons for fluctuations in the experience from year to year and the effect of measures taken to influence withdrawal rates.

In Section I of this paper a method has been outlined by which an office can calculate crude rates of withdrawal. Comparison of these
crude rates from year to year would be of interest, but if an office is to have a real appreciation of the significance of the factors which influence its experience, we suggest that the data should be analysed in detail by:

1. Duration in force at date of withdrawal.
2. Occupation of proposer.
3. Purpose of assurance.
4. Originating branch office.
5. Agency connection.

We have analysed under several of the above headings the withdrawal data of the office previously referred to, but as office practice may have influenced the results of these investigations, it is necessary before making comment to provide some background information.

Policies acquire a surrender value when two annual premiums have been paid; policies discontinued with less than two annual premiums paid are considered to lapse and no return is normally made to the proposer. In conjunction with this rule, a penalty is imposed on the originating branch and inspector for policies which lapse. For certain classes of assurance, initial commission is spread over two or three years where the basic premium rate per cent of sum assured is below a certain level.

1. **Analysis by duration**

   We analysed the data by duration in force at the date of withdrawal, particular attention being paid to the experience at short durations.

   As in the combined experience, the results show that withdrawal rates fall with increase in duration. More detailed analysis of policies discontinuing during the third year reveals that a significant “hump” occurs when exactly two complete years’ premiums have been paid. This feature is not unexpected since a policy acquires a surrender value only when two annual premiums have been paid; thus policyholders are discouraged from discontinuing with slightly less than two complete years’ premiums paid as by continuing they can obtain a return in the form of a surrender value. In addition, the field staff have a direct financial incentive to encourage the policyholder to maintain the policy until it passes outwith the lapse period.

2. **Analysis by occupation of the proposer**

   As mentioned earlier, the widening of the cross-section of the population to whom ordinary branch life assurance policies are now
sold may have a significant effect on withdrawal rates. An analysis of the withdrawal rates by differing social class, as reflected by the occupation of the proposer, might be of value in confirming this view.

It has been the practice of the office to classify all proposers effecting new policies into eight groups, according to the occupation stated on the proposal form. The groupings adopted may be described in broad terms as follows:

1. No real occupation shown, e.g. housewives, retired persons, etc.
5. Representatives.
6. Clerical workers, students and professional apprentices.
7. Managerial classes, including Police and Forces—commissioned ranks.
8. Professional classes.

There are, of course, difficulties in applying these occupational groupings as the information given in the proposal form indicates only in general terms the occupation of the proposer. In some instances, the descriptive term given could indicate a number of occupations of differing social standing and thus, in determining the appropriate group, attention is also paid to the class of assurance, sum assured and premium. Despite these difficulties, the analysis of new business by occupational group has proved to be a worthwhile practical exercise and the results have been utilized for a number of purposes.

Thus it was possible for us to investigate withdrawal rates for each occupational group and the results show that there are material differences among the various groups; in particular, the rates for groups 2 and 3 are appreciably higher (by approximately 50%) than the rates applicable to groups 7 and 8. This would appear to support the view that social class, as reflected by occupation, does have a significant effect on withdrawal rates.

3. Analysis by purpose of assurance

A proposer’s reason for effecting a particular type of policy may well have an influence on the probability of withdrawal at a later date. From general considerations it is suggested that a large majority of ordinary life assurance policies are effected for one or other of the following reasons:

(a) House mortgage.
(b) Long-term investment.
in Ordinary Life Business

(c) Family protection.
(d) Provision for estate duty.
(e) Provision of convertible life cover (e.g. whole life assurances with guaranteed conversion options).

If it were possible to classify policies into these groups, it would also be possible to calculate the associated withdrawal rates and thus determine whether any significant variations in experience are disclosed. Although it is impracticable to conduct such an investigation, the reasons for effecting a policy will be reflected to some extent in:

(i) Analysis by premium rate per cent. Policies could be analysed in broad groups by the level of the premium rate per cent. Whilst this inevitably must be a very crude attempt to measure the type of business being written, the associated withdrawal rates may reveal a significant difference in the experience of "cheap rated" and "full rated" business.

(ii) Analysis by class of assurance. Policies could be analysed by class of assurance, but once again this must be a relatively crude measurement as the variation to be expected within any one class must be fairly wide.

(iii) Analysis by occupation of proposer. This has been discussed previously.

It is desirable, therefore, that if the volume of data permits, the analyses described above should be combined. From such an investigation it would be possible to determine (a) whether "cheap rated" business has materially different rates of withdrawal from "full rated" business, (b) whether this result is consistently reflected within each class of assurance and each occupation group, and (c) whether the differences in withdrawal rates among occupational groups is maintained within each class of assurance.

We analysed the available data by type of policy, the main categories adopted being:

(a) Whole of life without-profit assurances—premiums limited to age 85.
(b) Whole of life without-profit assurances—premiums limited to age 65.
(c) Whole of life with-profits assurances.
(d) Without-profit endowment assurances.
(e) With-profits endowment assurances.
(f) Mortgage protection combined with maturity benefit.
(g) Miscellaneous policies.
This brought out the following noteworthy features:

(i) The withdrawal rates for the whole of life without-profit tables are considerably higher than the rates produced for any other table. Analysis of the without-profit whole life business indicates that a high proportion is effected at relatively young ages with low premium rates per cent.

(ii) The withdrawal rates for mortgage protection policies also reveal a poorer than average experience, supporting the view that as mortgages are liable to frequent alteration, there is a consequent adverse effect on the withdrawal experience of the associated life policies.

(iii) The withdrawal rates for endowment assurances, particularly with-profits assurances, are measurably lower than for all other classes of assurance, suggesting that policyholders effecting "full rated" business with a sizeable savings element are more likely to maintain their policies because of this savings element. This may also apply where endowment assurance policies are utilized in connection with a mortgage.

It was also possible to analyse the data by class of assurance within each of the occupational groups. While the withdrawal rates for groups 2 and 3 are significantly higher than for other groups, there is no valid evidence to indicate that this is attributable to the type of business effected by such policyholders. In contrast, the low withdrawal rates for the higher occupational groups can be associated with the low withdrawal rates applicable to "full rated" business.

4. Analysis by branch, inspector and agency

The sales organization and agency connection of any office largely determine the type and quality of business obtained which, as has already been indicated, has a considerable influence on withdrawal rates. The method of remunerating the field staff must therefore have a significant effect, especially if a financial penalty is imposed on withdrawal. Thus a full analysis of withdrawals by branch, inspector and agency connection should be available in order to determine the effect of measures adopted to control or influence the withdrawal experience. If any particular source proves to have a withdrawal rate considerably in excess of the norm, it would seem desirable to discover, if possible, the underlying reasons. The poor withdrawal experience may be occasioned by factors outwith the immediate control of the office, e.g. a branch in an area which has been subject to a temporary trade recession with associated high rates of unemploy-
ment. On the other hand, it may be within the power of the office to take any necessary corrective action, as for example where proposers have been sold policies which are not suited to their requirements or are outwith their resources. In such a case it would obviously be useful to analyse the individual inspector's business by average premium rate per cent, class of assurance, occupation group and agency connections.

An office may decide that it is not essential to investigate its withdrawal experience under all of the headings in this Section, and it is acknowledged that there are other features which a particular office may wish to examine. What is important, in our opinion, is that an office should have the facility to examine its experience under a number of headings at any time.

SECTION III

EFFECT OF WITHDRAWAL ON IMMUNIZATION THEORY

In previous papers dealing with the theories of matching and immunization of liabilities and assets it has been customary to ignore the effect of withdrawals on the liability outgo. This has been justified by the assumption that the level of surrender values granted can always be adjusted to ensure that the office does not suffer a loss and that surrender values should be regarded as "privileged" benefits rather than "contractual" benefits.

In present day conditions, however, we doubt whether it is correct to maintain this view as life assurance is now widely regarded and publicized as a savings medium. If the life assurance industry is to maintain its position in the face of competition from other savings media, it would seem essential that in future it should have more regard to the level of return on withdrawal, especially at the shorter durations. In our view, the benefits granted on withdrawal should be regarded as "contractual" benefits even although guaranteed minimum surrender values are not written into the policies.

If the concept of contractual withdrawal benefits is accepted, the approach to immunization must take into account the level and incidence of the withdrawal benefits payable. As a first indication of the likely effect of the introduction of withdrawal rates on immunization theory, it is interesting to note the reduction in the "average
lifetime of a policy when allowance is made for mortality and withdrawal.

We were able to calculate the "average lifetime" for various policies, effected at different ages and for different terms, from the Double Decrement Table shown in Appendix III, the formulae adopted being

\[ \frac{\sum_{t=1}^{\infty} (al)_{x+t}}{(al)_{x}} \]

for whole of life assurances, and

\[ \frac{\sum_{t=1}^{n} (al)_{x+t}}{(al)_{x}} \]

for endowment assurances of term \( n \) years.

The results are shown in Table 3 below and are compared with the "average lifetime" allowing for mortality only.

<table>
<thead>
<tr>
<th>Age at entry</th>
<th>Term of Policy</th>
<th>&quot;Average lifetime&quot; —mortality only</th>
<th>&quot;Average lifetime&quot; —mortality and withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>life</td>
<td>47.4</td>
<td>25.1</td>
</tr>
<tr>
<td>40 years</td>
<td>37.6</td>
<td>21.2</td>
<td></td>
</tr>
<tr>
<td>30 ,</td>
<td>29.2</td>
<td>17.5</td>
<td></td>
</tr>
<tr>
<td>20 ,</td>
<td>19.7</td>
<td>13.1</td>
<td></td>
</tr>
<tr>
<td>10 ,</td>
<td>9.9</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>life</td>
<td>37.9</td>
<td>24.7</td>
</tr>
<tr>
<td>30 years</td>
<td>28.0</td>
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<td>20 ,</td>
<td>19.3</td>
<td>14.1</td>
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<td>9.9</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>life</td>
<td>28.5</td>
<td>22.5</td>
</tr>
<tr>
<td>20 years</td>
<td>18.5</td>
<td>15.2</td>
<td></td>
</tr>
<tr>
<td>10 ,</td>
<td>9.8</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>life</td>
<td>20.1</td>
<td>17.4</td>
</tr>
<tr>
<td>10 years</td>
<td>9.3</td>
<td>8.4</td>
<td></td>
</tr>
</tbody>
</table>

From this table it is apparent that, on the basis of the withdrawal rates adopted, a significant reduction occurs in the "average lifetime" of even the shortest term endowment policies. It is essential to
realize, however, that the above results make no allowance for the differing benefits payable on death and withdrawal.

In his paper to the Institute of Actuaries (Review of the Principles of Life Office Valuations—J.I.A. vol. 78, p. 286) F. M. Redington neatly summarizes the essence of immunization theory in two definitions, two rules and a rider. It is useful at this stage to restate this summary, amended where necessary to incorporate reference to withdrawals.

**Definitions:**

(1) Liability-outgo—$L_t$—expected net outgo of the existing business in calendar year $t$, viz. claims and expenses less premiums.

For our purposes, claims will include payments on death, maturity and withdrawal.

In theory the net liability-outgo should be calculated by including premiums which allow for withdrawal benefits on the scale of the surrender values included in the claims. In practice, however, office premium rates do not make any allowance for withdrawal and thus it is necessary to include in the claims a withdrawal benefit equal to the reserve on the premium basis.

(2) Asset-proceeds—$A_t$—expected proceeds from existing assets in calendar year $t$, viz. interest plus maturing investments.

**Rules:**

(1) The mean term of the value of the asset-proceeds must equal the mean term of the value of the liability-outgo,

\[ \sum t^2 v^t A_t > \sum t^2 v^t L_t. \]

(2) The spread about the mean of the value of the asset-proceeds should be greater than the spread of the value of the liability-outgo,

\[ \sum t^2 v^t A_t \sum t^2 v^t L_t. \]

**Rider:**

The mean term of the asset-maturity dates is considerably greater than that of the value of the asset-proceeds.

Based on these rules, Redington calculated

(a) the mean term of the value of the liability-outgo, and

(b) the immunized asset-maturity term in years if all assets mature on the same date

for specimen whole life and endowment assurances.
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In order to get a clear picture of the effect of withdrawal rates, it was necessary to recalculate (a) and (b)

(i) allowing for mortality only, based on A1949-52 mortality tables and

(ii) on the basis of the Double Decrement Table contained in Appendix III.

The results are shown in Table 4.

We used 3½% as the rate of interest as commutation functions based on the Double Decrement Table had already been constructed on that basis for other purposes. While this was convenient and quite suitable for the above demonstration, it must be appreciated that in practice the solution of the equation

\[ \sum t v^t A_t = \sum t v^t I_t \]

is dependent upon the current rate of interest.

We have assumed in our calculations that the reserve on the premium basis will be released on withdrawal. While the surrender value will probably be less than this, the balance can be regarded, in theory, as available for reinvestment as an addition to the estate of the office.

While there is usually an infinite number of solutions to the equations, it is obvious that in some instances there will be no real solutions for the asset maturity dates. In Redington’s demonstration, which assumed interest at 2½% and which was based on A1924-29 ultimate mortality, it was found that a block of new business considered in isolation could not be immunized for about the first quarter of the term for endowment assurances or for about a third of the expectation of life for whole of life assurances. A comparison of Redington’s results with our demonstration, based on A1949-52 ultimate mortality only and 3½% interest, indicates that while, as expected, the present value of the liabilities is decreased with the switch to the different mortality and interest bases, the effect on the mean term of the value of the liability-outgo does not follow the same consistent pattern. This is due to the interaction at varying durations of the increase in the rate of interest with the different mortality curve.

From Table 4 it is clear that the incorporation of withdrawal benefits reduces substantially the mean term of the value of the liability-outgo, especially at the shorter durations in force. In general it is found that a block of new business considered in isolation can be immunized some years earlier than would have been
### EFFECT ON IMMUNIZED ASSET-MATURITY TERM OF INCORPORATING WITHDRAWAL RATES

**(a) £100 Whole life assurance without profits with continuous premiums, effected at age 25**

<table>
<thead>
<tr>
<th>Duration in force in years</th>
<th>Present value of liabilities on A 1949-52 Ult. 3½%</th>
<th>Mean term (from ( t )) of the value of the liability-outgo (and of asset-income) in years</th>
<th>Immunized asset-maturity term in years if all assets mature on the same date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A 1949-52 Ult. 3½% only</td>
<td>A 1949-52 Ult. 3½% and select withdrawal rates</td>
<td>A 1949-52 Ult. 3½% and select withdrawal rates</td>
</tr>
<tr>
<td>10</td>
<td>10·37</td>
<td>70·63</td>
<td>49·74</td>
</tr>
<tr>
<td>20</td>
<td>24·15</td>
<td>34·01</td>
<td>29·91</td>
</tr>
<tr>
<td>30</td>
<td>40·40</td>
<td>20·14</td>
<td>18·88</td>
</tr>
<tr>
<td>40</td>
<td>57·46</td>
<td>12·14</td>
<td>11·66</td>
</tr>
<tr>
<td>50</td>
<td>73·01</td>
<td>6·97</td>
<td>6·79</td>
</tr>
<tr>
<td>60</td>
<td>84·62</td>
<td>3·77</td>
<td>3·72</td>
</tr>
<tr>
<td>70</td>
<td>91·48</td>
<td>2·05</td>
<td>1·96</td>
</tr>
</tbody>
</table>

**(b) £100 Endowment assurance without profits (term 20 years) with continuous premiums, effected at age 25**

<table>
<thead>
<tr>
<th></th>
<th>Present value of liabilities on A 1949-52 Ult. 3½%</th>
<th>Mean term (from ( t )) of the value of the liability-outgo (and of asset-income) in years</th>
<th>Immunized asset-maturity term in years if all assets mature on the same date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A 1949-52 Ult. 3½% only</td>
<td>A 1949-52 Ult. 3½% and select withdrawal rates</td>
<td>A 1949-52 Ult. 3½% and select withdrawal rates</td>
</tr>
<tr>
<td>3</td>
<td>11·15</td>
<td>55·06</td>
<td>40·28</td>
</tr>
<tr>
<td>5</td>
<td>19·21</td>
<td>32·52</td>
<td>25·63</td>
</tr>
<tr>
<td>10</td>
<td>41·86</td>
<td>13·73</td>
<td>11·99</td>
</tr>
<tr>
<td>15</td>
<td>68·54</td>
<td>5·59</td>
<td>5·28</td>
</tr>
</tbody>
</table>

---

*in Ordinary Life Business*
Some Aspects of Withdrawals

possible if withdrawals had been ignored. As the duration of the block of business advances, the inclusion of withdrawals has a diminishing effect on the asset-maturity term which decreases until finally the assets would all be invested for redemption at maturity.

SECTION IV

WITHDRAWAL BENEFITS

In considering the financial effects of withdrawal, a life office should be concerned to determine:

(a) the level of withdrawal rates, and how they may be influenced, and
(b) the level of benefits paid on withdrawal, and the adequacy of the profit earned.

In Sections I and II we have considered (a), and it is our intention in this Section to discuss the underlying principles and current practice with regard to (b). Detailed discussion of all surrender value bases is outwith the scope of the paper; we are concerned mainly to discuss the principles involved.

General Considerations

The traditional view of the offices has been to regard withdrawal as a necessary evil—something which has to be accepted but which should be discouraged. Thus the view is still held that, on withdrawal, the policyholder is breaking the contract and must be penalized. Is this approach still valid in the context of the functions and purpose of a life office in present day conditions?

With this thought in mind, we were again led to consider whether payments on withdrawal should be regarded as equivalent to contractual benefits. We were not concerned with whether guaranteed surrender values should be written into a policy, but rather with the question of whether the current level of surrender values represents the equitable return to which a policyholder is entitled.

It is perhaps pertinent at this stage to consider the role of the life office in current conditions. Originally the main function of the offices was the provision of life assurance cover, whereas today the bulk of the funds which the offices control is in respect of liabilities
for "savings-type" contracts. This switch in emphasis has now resulted in the offices being dependent for their stability on these "savings-type" contracts and it is essential, therefore, that they should continue to attract these savings. With the recent growth of other forms of savings media, the offices have been faced with increasing competition, principally from unit trusts. The serious view which is taken of this development can be gauged by the number of offices which have now issued equity-linked contracts in one form or another.

In our view, if ordinary life business is to meet this competition for savings, it is relevant to consider not only the maturity proceeds but also the benefits payable on earlier termination of a contract. The unit trust managements in their sales literature emphasize the relatively favourable returns available on termination, whereas the life offices have to contend with the unfavourable image created by the low returns under life policies. Whilst this may be unavoidable in the first few years due to the relatively high level of initial expenses incurred, there seems to be no reason why the return thereafter should not be more competitive.

Perhaps this competition is the spur which may eventually force the offices to re-examine their attitude to withdrawals and to accept the concept that payments on discontinuance are contractual benefits.

The main argument previously advanced for penalizing a withdrawing policyholder has been that payment of a surrender value may necessitate, in theory at least, premature realization of investments at a time when market conditions are unfavourable. If our view is accepted that withdrawal benefits should be regarded as contractual, allowance could be made for the incidence of withdrawal in determining the investment policy to be adopted by an office.

If withdrawal rates increase due to payment of higher benefits (the profit margin being reduced), the overall effect may be to produce approximately the same proportionate level of profit to be distributed to the reduced number of continuing policyholders. Provided that the office is not faced with mass surrender, the profit earning prospects of the fund for the continuing policyholders should not be adversely affected. It is also reasonable to suggest that if more attractive withdrawal benefits are provided this may well increase the offices' share of the savings market which, in turn, could increase future profits.

It should perhaps be made clear at this stage that we are not suggesting that offices should penalize continuing policyholders; rather, it is suggested that while the first duty of the office is to
Some Aspects of Withdrawals

protect the position of the continuing fund by ensuring that the withdrawing policyholder is correctly debited with all relevant charges, the withdrawal benefit thereafter should be on as equitable a basis as possible.

It appears to us that it is essential to approach the problem of determining an equitable surrender value basis by assessing firstly the maximum amount available after allowing for actual expenses incurred and mortality costs; thereafter consideration should be given to the margin to be retained by the office, the balance of the amount available being returned to the policyholder as the surrender value.

Determination of the maximum amount available

The logical approach in determining the maximum amount available would seem to be to accumulate a retrospective reserve, allowing for the true incidence of expenses. Assuming the experience of the office has been favourable over the duration of the contract, the difference between the actual experience and that inherent in the premium basis can be assumed to have been reflected already in past contributions to surplus. If the experience has been poorer than that assumed in the premium basis, the deficiency will have been provided by the estate of the office, and on withdrawal a suitable deduction should be made from the amount available to ensure that the office does not sustain a loss. Thus the retrospective reserve should be calculated on the same basis as that used for the premium rates and, if necessary, a suitable deduction should be made to cover the deficiency contributions provided by the estate of the office.

It should be noted in passing that from general considerations the amount payable to a withdrawing policyholder must never exceed the retrospective reserve on the premium basis as otherwise the withdrawing policyholder will be placed in an advantageous position relative to the continuing policyholder.

Deduction to cover contingencies and profits

The determination of the maximum amount available on the above basis is relatively straightforward, and the real problem would appear to be to decide the level of the charge for profits and contingencies. Previous publications on this subject have tended to assume automatically, without assessing or justifying the amount, that an office should take a margin for profit and contingencies. In his paper to the Institute of Actuaries (J.I.A. vol. 67, p. 222), W. E. H. Hickox suggests the following principles for determining minimum and
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maximum surrender values which, in effect, include definitions of the maximum and minimum profits to be taken by an office on surrender:

Minimum surrender value: the assurance fund should not take on surrender more profit than it would expect to earn if the contract continued in force.

Maximum surrender value: the assurance fund should not forgo on surrender more than the future profit it would expect to earn if the contract continued in force.

Thus Hickox, by adopting a prospective approach, in effect assumes that the profit margin taken by the office should be assessed on the basis of the estimated future experience had the policy continued in force. In our view, the prospective approach is inadmissible, as the return to the withdrawing policyholder and the profit to the office should have regard to the amount available determined on a retrospective basis.

As previous authors have given little indication as to what they regard as constituting a “fair” margin for an office to take on withdrawal, we decided to examine the current practice of offices. We have restricted our investigation to endowment assurances as this is the class of assurance which will be compared with other forms of saving. The various demonstrations are on a without-profit basis, as we were concerned to discover the profit margins for the basic contracts.

Current margins for contingencies and profits

Premium scales do not normally make any allowance for withdrawals but if withdrawal rates and benefits are incorporated, the consequent reduction in the premium rates gives an indication of the charge inherent in the normal premium scale for anticipated future withdrawal profits, on the basis of the particular withdrawal rates and benefits assumed. It is not our intention to suggest that offices should reduce their premium rates, but rather to obtain an indication of the implicit profit margins for the particular surrender value basis adopted.

Table 5 overleaf shows the reduction in premium rates for various ages and terms consequent on the introduction of withdrawal rates and benefits. The withdrawal rates used are those in Appendix II, and details of the premium and surrender value bases are given in Appendix IV.

Although the reduction in the premium rates per cent (P–P’) may not appear large, it should be remembered that this is the reduction
which could be made for all policies if an office was to anticipate future withdrawal experience. Column (6) gives the value at inception of the estimated future withdrawal profits per £100 of sum assured written. Thus if an office writes sums assured of £1m., under 20-year endowment assurance policies effected on lives aged 35 at entry, the value at inception of the estimated future withdrawal profits on these policies would be £10,560.

**Table 5**

*Comparison of endowment assurance premium rates per cent*

<table>
<thead>
<tr>
<th>Age at entry $x$</th>
<th>Term $n$</th>
<th>$P$</th>
<th>$P'$</th>
<th>$P-P'$</th>
<th>Value at inception of $P-P'$ i.e. $(P-P') a_{x\bar{n}, \bar{m}}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>10</td>
<td>8.905</td>
<td>8.744</td>
<td>.161</td>
<td>1.122</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>3.885</td>
<td>3.753</td>
<td>.132</td>
<td>1.396</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>2.294</td>
<td>2.177</td>
<td>.117</td>
<td>1.482</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>1.590</td>
<td>1.493</td>
<td>.097</td>
<td>1.350</td>
</tr>
<tr>
<td>35</td>
<td>10</td>
<td>8.925</td>
<td>8.794</td>
<td>.131</td>
<td>0.943</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>3.850</td>
<td>3.856</td>
<td>.094</td>
<td>1.056</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>2.438</td>
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<td>.079</td>
<td>1.078</td>
</tr>
<tr>
<td>45</td>
<td>10</td>
<td>9.065</td>
<td>8.979</td>
<td>.086</td>
<td>0.650</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>4.224</td>
<td>4.172</td>
<td>.052</td>
<td>0.622</td>
</tr>
<tr>
<td>55</td>
<td>10</td>
<td>9.473</td>
<td>9.419</td>
<td>.054</td>
<td>0.411</td>
</tr>
</tbody>
</table>

While Table 5 enables comparisons to be made among different contracts, it is also essential to have regard to the incidence of the emergence of the profit margins inherent in the basis adopted. To this end we prepared Table 6. The premium and surrender value bases are the same as those used for Table 5 (for details see Appendix IV). The retrospective reserve shown in column (2) is calculated on the premium basis, allowance being made for the true incidence of the expenses inherent in the premiums.

The margin for contingencies and profits, as represented by the difference between the retrospective reserve and the surrender value, varies widely with duration in force and with the original term of the policy. In column (5) the margin expressed as a percentage of the retrospective reserve also varies with duration and it is extremely
### Table 6

£1,000 endowment assurance without profits

**Age 25 at entry**

<table>
<thead>
<tr>
<th>Duration in force</th>
<th>Total premiums paid</th>
<th>Retrospective reserve</th>
<th>Surrender value</th>
<th>Current margin for contingencies and profit i.e. (2)−(3)</th>
<th>Margin as % of col. (2)</th>
<th>Proportionate paid-up policy</th>
<th>Paid-up policy derived from col. (2)</th>
<th>Suggested maximum margin for contingencies and profits</th>
<th>Resultant surrender value i.e. (2)−(8)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
<td>(9)</td>
</tr>
<tr>
<td><strong>Term 10 years</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1</td>
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<td>69</td>
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<td>69</td>
<td>100</td>
<td>Nil</td>
<td>92</td>
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<td>58</td>
</tr>
<tr>
<td>2</td>
<td>178</td>
<td>160</td>
<td>147</td>
<td>13</td>
<td>8</td>
<td>200</td>
<td>206</td>
<td>17</td>
<td>143</td>
</tr>
<tr>
<td>3</td>
<td>267</td>
<td>255</td>
<td>229</td>
<td>24</td>
<td>10</td>
<td>300</td>
<td>316</td>
<td>21</td>
<td>232</td>
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<td>32</td>
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<td>627</td>
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<td>740</td>
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<td>4</td>
<td>800</td>
<td>819</td>
<td>16</td>
<td>752</td>
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<tr>
<td>9</td>
<td>801</td>
<td>882</td>
<td>865</td>
<td>17</td>
<td>2</td>
<td>900</td>
<td>911</td>
<td>9</td>
<td>873</td>
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<td><strong>Term 20 years</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>39</td>
<td>18</td>
<td>Nil</td>
<td>18</td>
<td>18</td>
<td>100</td>
<td>33</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>78</td>
<td>56</td>
<td>50</td>
<td>6</td>
<td>10</td>
<td>100</td>
<td>99</td>
<td>11</td>
<td>45</td>
</tr>
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<tr>
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<td>285</td>
<td>23</td>
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<td>340</td>
<td>68</td>
<td>17</td>
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<td>659</td>
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</tr>
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<td>801</td>
<td>756</td>
<td>45</td>
<td>6</td>
<td>850</td>
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<td>18</td>
<td>2</td>
<td>950</td>
<td>962</td>
<td>10</td>
<td>922</td>
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</table>

(Table continued on next leaf)
### Table 6 (continued)

**£1,000 endowment assurance without profits**

**Age 25 at entry**

<table>
<thead>
<tr>
<th>Duration in force</th>
<th>Total premiums paid</th>
<th>Retro-spective reserve</th>
<th>Surrender value</th>
<th>Current margin for contingencies and profit i.e. (2)–(6)</th>
<th>Margin as % of col. (2)</th>
<th>Proportionate paid-up policy</th>
<th>Paid-up policy derived from col. (2)</th>
<th>Suggested maximum margin for contingencies and profits</th>
<th>Resultant surrender value i.e. (2)–(8)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
<td>(9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Term 30 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
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<td>5</td>
</tr>
<tr>
<td>10</td>
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<tr>
<td>15</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Term 40 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
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<tr>
<td>25</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>35</td>
</tr>
</tbody>
</table>
difficult to justify both the level and the variations disclosed. The results obtained are a function of the particular surrender value basis adopted which is, however, not untypical at the present time. Offices’ surrender value bases have been designed primarily for simplicity of calculation rather than to achieve equity. Thus in endeavouring to determine from these results what constitutes a “fair” profit margin, regard must first be paid to three particularly unsatisfactory features which cloud the issue:

(i) The surrender value basis adopted in the above demonstration assumes, in common with the practice of many offices, that no return will be made on withdrawal with less than two years’ premiums paid. The application of such a rule results in an inequitable profit to the office on the early discontinuance of policies with a short premium paying period and an inequitable loss for policies with a long premium paying period. While in practice it might be convenient for offices to adopt such a rule, this hardly seems to be sufficient justification for the obvious anomalies. In our view it is more important to have regard to the amount actually available in determining when a withdrawal benefit should be allowed.

(ii) It has been generally agreed in the past that paid-up amounts for endowment assurances are fairly accurately reproduced by the proportionate rule, which is understood by the public and accepted by the offices who frequently include this condition in their policies.

In column (7) of the foregoing Table, paid-up amounts are shown which have been derived by putting the retrospective reserve in column (2) into reversion on the premium basis. For comparison purposes, proportionate paid-up amounts are shown in column (6). From this demonstration it is evident that considerable inequities are introduced by the use of the proportionate rule and thus it appears to us to be incorrect to calculate surrender values from the proportionate paid-up amounts.

It is appreciated that a paid-up amount based on the retrospective reserve may be greater or less than the proportionate amount, but presumably, in practice, difficulties would arise only in those instances where the retrospective amount is the smaller. Offices could decide to take a commercial view and, because of the relatively few occasions on which paid-up amounts are requested, consider it reasonable to finance the
loss incurred by regarding a proportionate paid-up amount as a minimum value. In any event, as Coe and Ogborn state in their textbook, the current practice is very much a case of “the tail wagging the dog”.

(iii) From the policyholder’s point of view the most valid comparison of a surrender value will be against the total premiums paid. In the early years of a policy the amount available from which to pay a surrender value will be considerably less than the premiums paid due to the high level of the initial expenses, the major item in which is the initial commission paid to brokers and agents. This leads us to repeat the suggestion made frequently in the past that instead of paying a relatively high level of initial commission based on the sum assured, it would be preferable to pay a higher flat rate of renewal commission expressed as a percentage of the premium. If the commission paid is intended, at least partially, to reflect the value of a policy to an office, then it does seem difficult to justify paying a broker or agent the same amount of initial commission irrespective of whether a policy continues in force for two years or for twenty years.

For illustration (Table 7), we decided to calculate the flat rate of commission equivalent in value to the present level of initial commission. The rates shown do not include any allowance for the current rates of renewal commission.

It should be noted that the percentages below are based on without-profit premium rates and that the percentages for with-profits contracts will be correspondingly lower. As would be expected, the flat rates of commission in the Table below vary widely, the difficulty being that we are attempting to translate the present commission basis into a different form without first considering whether the present basis is suitable in all circumstances. There are many facets to be considered in deciding the form and level of reward to which brokers and agents are entitled, the detailed discussion of which is outwith the scope of this paper. Our concern has been to point out the effect of the “front end” expenses incurred on the level of withdrawal benefits, and to suggest that if these were spread over the duration of the policy the consequent increase in withdrawal benefits would allow a much more favourable comparison with the premiums paid. In addition, this would alleviate the losses currently incurred by offices on early termination of policies with a long premium paying period.
The distorting effects of the three features referred to in the previous paragraphs on the contingencies and profit margin shown in Table 6 make it impossible to distinguish any pattern which could be said to reflect the views of offices as to what can be considered a "fair"

**Table 7**

*Flat rate of commission expressed as a percentage of P (See Table 5)*

which is equivalent in value to £2% initial commission

(a) on basis of A1949-52 3¼% select
(b) on basis of select Double Decrement Table in Appendix III with interest at 3¼%.

<table>
<thead>
<tr>
<th>Without-profit endowment assurances</th>
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<td>Term</td>
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margin. It is patently obvious that current surrender value bases do not have regard to the level of the profit margin but have gradually evolved from a method which satisfies the criteria of being simple and of erring on the conservative side.

**Suggested method of determining the margin for contingencies and profits**

In considering the margin for contingencies and profits, it is relevant to note that as a policy approaches maturity there would appear to be little justification for deducting any more than a minimal amount, i.e. as the surrender value "runs in" to the maturity amount, so also should the contingencies and profit margin decrease to nil. With this proviso, the margin might be determined as follows:—
Contingencies margin

The principal points to be considered in deciding the size of the margin for contingencies would seem to be:

(a) Compensation for depreciation of asset values. The margin should be small in that an office can make some allowance for withdrawal benefits in its investment policy as previously indicated. In addition, an office would not be prepared to compensate a withdrawing policyholder for appreciation in asset values.

(b) Charge for exercise of withdrawal option. Even if withdrawal benefits are regarded as contractual, the date of payment is not fixed at the commencement of the policy. Thus, as distinct from death and maturity benefits, the policyholder consciously exercises an option as to when the benefits will be payable and a small charge should perhaps be made for this privilege.

(c) Charge for share of security of continuing fund. If the experience had been poorer than that anticipated in the premium basis, the estate of the office would have provided the necessary contributions to ensure that the contractual rights of the policyholder were met. It seems reasonable, therefore, that the withdrawing policyholder should be required to pay a charge to cover the cost of the guarantees provided by the estate.

(d) Charge for mortality option. It can be argued on general grounds that withdrawing policyholders will be in better health than those continuing. Provided that the offices' overall mortality experience is at least as favourable as that assumed in the premium basis, there seems little justification for any significant penalty to be imposed.

(e) Compensation for "unearned" taxation relief. In the calculation of the maximum amount available, the "true net interest method" has been employed. If withdrawal occurs in the early years of a policy, the expenses incurred on behalf of the policyholder will not have been franked by the interest earned on his contributions and it is doubtful whether he should be given the benefit of full tax relief on the expenses attributable to his policy. It can also be argued that the unfranked portion of the expenses is utilized to frank interest earned by the estate of the office which would otherwise have been subject to tax. With this in mind, it seems correct to penalize the withdrawing policyholder to the extent of only part of the "unearned" tax relief on expenses.
in Ordinary Life Business

Items (a) and (b) above can be related to the amount available and it is suggested that a small percentage deduction could be made—something of the order of 5%. The other items are not related directly to the amount available and could perhaps be more adequately covered by a charge based on the sum assured—say ½%.

Profit margin

On the assumption that the gearing of an office will not be affected by the withdrawing policyholders, it seems to us unreasonable for an established office to expect to recoup the whole of the anticipated future profits. It is suggested that a small percentage deduction could be made from the amount available as a disincentive margin, which might be of the order of 5%.

The determination of the exact level of the deductions from the amount available to cover contingencies and profits is dependent on the circumstances of the office and must be a matter for individual offices to decide. We feel, however, that a deduction of 10% of the retrospective reserve plus ½% of the sum assured will normally be at least adequate and should be considered as a maximum.

In order to ensure that the surrender value runs into the maturity proceeds, we have tapered these margins over the last ten years of the term. The effect of the suggested deduction from the amount available has been shown in Table 6 (columns 8 and 9). It should be noted that the surrender values produced can be represented by the formula

\[0.917_t \, V[x]:\bar{a} - 0.022\]

where \(_t \, V[x]:\bar{a}\) is calculated on the premium basis.

With the availability of computers, the need for a simple straightforward method of determining surrender values is no longer essential and an approach on the lines we have suggested is feasible. Our concern has been to point out that if the life offices are to meet the competition from other savings media, the return to be granted on withdrawal must be more realistic. It is our belief that the method suggested is practicable, providing a more equitable return to the policyholder and a "fair" profit to the office.

CONCLUSION

The main aim of this paper has been to focus attention on the current level of withdrawal rates and associated benefits. Inevitably
in a paper of this nature, several important avenues of investigation have had to be ignored, amongst which are the effect of withdrawals on the gearing of an office and consideration of surrender value bases for policies other than without-profit endowment assurances. Thus there is obviously scope for further study and we hope that this paper may stimulate a fresh approach to these and other aspects of the subject.

Although the views expressed in this paper are personal to the authors, we are indebted to various colleagues for their helpful advice and suggestions.
APPENDIX I

CALCULATION OF "ORIGINAL POPULATION" FROM WHICH WITHDRAWALS AROSE IN 1965 AT CURTATE DURATION 't'

The assumptions made were as follow:

1. Policy anniversaries are spread evenly over the calendar year.
2. The distribution of policies by frequency of premium payment is (a) 60% payable monthly, (b) 25% payable quarterly, (c) 5% payable half-yearly, and (d) 10% payable yearly.
3. Policies terminating by withdrawal in 1965 are evenly spread over that year.
4. The probability of withdrawal in 1965 at exact duration \(t+r\) (0 ≤ r < 1) is constant for all values of r and is independent of the frequency of premium payments.
5. Policies terminating by withdrawal are removed from the live file two months after the date of the first unpaid premium.

Consider a policy with premiums payable \(m\) times per annum which becomes an exit by withdrawal in 1965 having paid \(\left(t + \frac{n}{m}\right)\) annual premiums, where \(t\), \(n\) and \(m\) are integers and 0 ≤ \(n\) < \(m\) ≤ 12.

The exact duration in force at date of withdrawal is assumed to be \(\left(t + \frac{n}{m} + \frac{2}{12}\right)\) years and thus the 12-month period during which the policy is likely to have been effected can be expressed as follows:

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<tr>
<th>Value of (\frac{n}{m})</th>
<th>Proportionate period in calendar year</th>
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</tr>
<tr>
<td>(i) (&lt; \frac{10}{12})</td>
<td>(1 - \frac{n}{m} - \frac{2}{12})</td>
</tr>
<tr>
<td>(ii) (= \frac{10}{12})</td>
<td>–</td>
</tr>
<tr>
<td>(iii) (= \frac{11}{12})</td>
<td>–</td>
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</table>
If policies written with premiums payable \( m \) times per annum constitute \( p_m \) per cent of the total policies written, then based on the assumptions in 1, 3 and 4 above, the withdrawing policy can be considered to have come from an original population of:—

\[(i) \left(1 - \frac{n}{m} - \frac{2}{12}\right) \cdot \frac{1}{m} \cdot \frac{p_m}{100} \cdot E_{65-t} + \left(\frac{n}{m} + \frac{2}{12}\right) \cdot \frac{1}{m} \cdot \frac{p_m}{100} \cdot E_{65-t-1}\]

\[(\text{where} \ \frac{n}{m} < \frac{10}{12})\]

\[(ii) \frac{1}{m} \cdot \frac{p_m}{100} \cdot E_{65-t-1}\]

\[(\text{where} \ \frac{n}{m} = \frac{10}{12})\]

\[(iii) \frac{11}{12} \cdot \frac{1}{m} \cdot \frac{p_m}{100} \cdot E_{65-t-1} + \frac{1}{12} \cdot \frac{1}{m} \cdot \frac{p_m}{100} \cdot E_{65-t-2}\]

\[(\text{where} \ \frac{n}{m} = \frac{11}{12})\]

where \( E_{65-t-a} \) represents the total number of policies written in the calendar year \(1965 - t - a\).

The original population from which withdrawals in 1965 at curtate duration \( t \) arose can be calculated by applying the values 1, 2, 4 and 12 to \( m \) and summing for all relevant values of \( n \).

<table>
<thead>
<tr>
<th>Value of ( m )</th>
<th>( E_{65-t} )</th>
<th>( E_{65-t-1} )</th>
<th>( E_{65-t-2} )</th>
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<td>1</td>
<td>( \frac{10}{12} \cdot P_1 )</td>
<td>( \frac{2}{12} \cdot P_1 )</td>
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<td>( \frac{1}{2} \cdot P_2 \cdot \sum_{n=0}^{\frac{n}{2}} \left(\frac{n}{2} + \frac{2}{12}\right) )</td>
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<td>4</td>
<td>( \frac{1}{4} \cdot P_4 \cdot \sum_{n=0}^{\frac{n}{4}} \left(1 - \frac{n}{4} - \frac{2}{12}\right) )</td>
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</tr>
<tr>
<td>12</td>
<td>( \frac{1}{12} \cdot P_{12} \cdot \sum_{n=0}^{\frac{n}{12}} \left(1 - \frac{n}{12} - \frac{2}{12}\right) )</td>
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<td></td>
<td>( \frac{1}{12} \cdot \frac{1}{12} \cdot \frac{11}{12} \cdot P_{12} )</td>
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</table>

By applying the values of \( p_m \) in assumption 2 above, the original population can be defined as

\[.4562E_{65-t} + .5396E_{65-t-1} + .0042E_{65-t-2}.\]
APPENDIX II

INDEPENDENT RATES OF WITHDRAWAL

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### APPENDIX III

**DOUBLE DECREMENT TABLE—ULTIMATE FUNCTIONS**

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FUNCTIONS (ULTIMATE)

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in Ordinary Life Business

DOUBLE DECREMENT TABLE—COMMUTATION
FUNCTIONS (SELECT)

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Some Aspects of Withdrawals

APPENDIX IV

PREMIUM BASIS—WITHOUT-PROFIT ENDOWMENT ASSURANCE

1. Formula

\[ P = \frac{1}{1 - r(1 - t)} \left[ I(1 - t) - c(1 - t) \right] \]

where \( I = 0.03 \)
\( c = 0.0015 \)
\( r = 0.035 \)
\( t = 0.375 \)

2. Basis

Mortality—A1949-52 select
Interest—3¼%
Expenses—as shown above.

3. Note: The particular basis adopted is not intended to reflect current rates of without-profit premiums; rather, it is intended to represent the average level of premiums for policies being surrendered at the present time.

SURRENDER VALUES—WITHOUT-PROFIT ENDOWMENT ASSURANCE

A policy acquires a surrender value after payment of 2 years’ premiums.

1. Formula

Surrender value = (Sum assured) \( \cdot \frac{t}{n} \cdot A_{x + t: n - t} \)

where \( t = \) number of premiums paid at date of surrender
\( n = \) number of premiums payable at inception.

2. Basis

Mortality—A1924-29 ultimate
Interest — 4%
SYNOPSIS

The increasing competition from other forms of savings media which emphasise a favourable return on termination makes it desirable to reconsider the existing attitudes of the Life Offices to withdrawals. The aim of the paper is to discuss the current level of withdrawal rates and associated benefits for ordinary life assurance contracts.

In Section I a method of determining crude withdrawal rates is demonstrated and in Section II some of the factors which influence these rates are discussed.

The effect on immunization theory of the introduction of the concept of "contractual" withdrawal benefits is considered in Section III and in Section IV the current levels of withdrawal benefits and the margin for contingencies and profits are examined.
Mr. F. D. Patrick, introducing the paper, said:—Thank you, Sir, for your kind introduction. There are only a few things which I should like to say at this stage. The title of our paper covers a very wide field indeed and it was therefore impossible to cover all the various aspects within the confines of one paper, and we hope that perhaps someone else may be tempted to take up where we have left off.

As mentioned in the introduction to the paper, this subject has received very little attention in the Transactions and, thus, we decided that we should start by producing withdrawal rates based on the actual experience of some life offices. Naturally there were difficulties due to differing procedures in the various offices but, nevertheless, we felt that it would be worthwhile to produce rates and so we made the numerous assumptions as stated in the text. Whilst we freely admit that these assumptions can easily be challenged, we are of the opinion that the withdrawal rates quoted are a reasonable measure of the actual experience of the offices concerned.

The next logical step seemed to be to analyse the rates and a number of ways are suggested in Section II. We appreciate that there are other headings under which withdrawals could be analysed and we would be very pleased to hear from anyone who has experience of such analyses, especially if they are able to divulge the results. Needless to say, much of the work in this area is hampered by paucity of data and it is only possible to establish results within fairly broad groupings.

No paper on withdrawals would be complete without some reference to withdrawal benefits or surrender values. This one aspect could quite easily form a paper on its own and thus, in restricting it to one section, we had to limit the scope of our investigations. In particular, we have made no reference in Section IV to the surrender of with-profits assurances and it is perhaps in this area that some of the most interesting questions arise today. For example, we have recently seen a move towards terminal bonuses and one wonders whether the offices which use this bonus system make an appropriate allowance in their surrender value basis. Any comments on this subject will, I am sure, be very welcome.

In conclusion, may we thank you, Sir, for the privilege of being allowed to present this paper and say how much we are looking forward to the discussion.

Mr. R. P. Bews, opening the discussion, said:—The traditional attitude to withdrawals has been that they are a nuisance to the office and a liability in both the technical and the generally accepted sense of the word. It is therefore somewhat unusual to find two members of the profession coming forward as champions of withdrawing policyholders to argue their right to higher benefits. The authors admit that their motives in putting this point of view are not altogether altruistic since they feel that offices would also benefit thereby, albeit indirectly. Their argument hinges on two claims. First, that offices could well afford to raise the level of withdrawal benefits and, second, that this would put them into a more competitive position in the market for attracting personal savings. Before considering the justice of these claims, I propose to take a leaf out of the authors' book and make some observations on the current level of withdrawal rates.
in Ordinary Life Business

The data at my disposal were not available in quite the same form as that described in the paper and for this reason any comparison between the two experiences can be made only subject to certain reservations. The main differences are that the data I used were based on sums assured rather than numbers of policies and that the withdrawals were classified according to calendar years of entry and exit. The difference between years of entry and exit has been taken to represent the average exact duration at withdrawal. Data were not available for withdrawals at durations in excess of five years which precludes comparison with the authors' figures at later durations. However, I have been able to examine the experience of business effected since 1954 and to consider the progress of the withdrawal rates over this period. The data were divided into two classes—Whole Life and Endowment Assurances—and I have been able to compare the two experiences. The differences between the two have been fairly consistent over the entire period and indicate that withdrawal rates for whole life policies are significantly higher than those for endowments to start with but, as duration increases, this difference gradually decreases until at duration 5 the rates for the two are substantially the same. It would be interesting to know whether they remain the same thereafter, but unfortunately data were not available to enable me to pursue this point.

I then combined the data for these two classes in order to investigate the experience according to the year in which the business was effected and found that the resulting rates fell into three broad groups.

1. Entrants in the years 1954-1957. The rates for each of these years exhibited very similar features. They started by rising but fell off gradually around duration 2 or 3 and showed signs of settling around the 2% level. The general shape of the curve is similar to that shown in the paper and can probably be accounted for on similar reasoning. Approximately 13% of sums assured had gone off the books by average duration 5.

2. Entrants in the years 1958-1961. The rates began to increase gradually with each year's new business though the general shape of the curve remained the same. Thus, of 1961 business 18% had gone off the books by average duration 5. This represents an increase of 5% over the corresponding figure for 1957.

3. Entrants in the years 1962-1967. The data for the latter years are not, of course, complete yet but indications are that rates are rising rapidly and instead of falling off they show signs of levelling out at 6% or 7% per annum. Of 1963 business, 26% had gone off the books by average duration 5. This was the last year for which full information was available but there is no indication that the limit has now been reached.

These rates must be viewed against a period of rapidly expanding business. In 1967 new sums assured in these classes were six times the corresponding figure in 1954, while the number of new policies written almost trebled over the same period. I do not think it is reading too much into these figures to suggest that there is a connection here. It may well be, for instance, that the desire to sell ever increasing amounts of business results in some degree of over-selling, the effect of which is shown in the increasing withdrawal rates. I shall return to this point later.

How far this experience is typical of other offices I have as yet no way of knowing, though I hope I shall be wiser on this point by the time the discussion is over. Certainly, it is in accordance with the authors' statement that the amount paid out in surrender values has been increasing (though this could, of course, be due to other factors than rising with-
Some Aspects of Withdrawals

drawal rates), and, therefore, I find it curious that in the introduction they
should claim that the withdrawal experience for 1965 was not materially
different from that of any other year.

In order to obtain a more direct comparison with the figures in the paper,
I attempted to re-classify my withdrawals according to curtate duration
and then relate them to the calendar year in which they occurred. Since the
original data were not available for re-grouping, I had to recast the figures
which were available so I cannot claim that the results accurately reflect the
actual experience within each curtate duration. However, the resulting
rates do show broadly the same features as those previously described.
The table below shows selected figures from Table 1 in the paper, with my
rates alongside for comparison.

<table>
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<th>Curtate duration</th>
<th>Rates from Table 1</th>
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<th>Rate B</th>
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</tr>
<tr>
<td>5</td>
<td>0.033</td>
<td>0.034</td>
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Rate A is the withdrawal rate experienced at each duration in 1965 and
is therefore directly comparable with the Table 1 rates, while rate B is the
rate experienced at each duration in 1965 (or rather 1964 and 1965, for I
have followed the paper in taking the mean of the exposures for these
years). The table for the latter is incomplete, since the withdrawal
experience for 1969 and 1970 is as yet unavailable, but the figures available
are sufficient to illustrate the difference between taking the rates at pro-
gressive durations within the same year and those at progressive durations
in successive years. They prompt the observation that in a period of
rising withdrawal rates the authors' would have to consider incorporating
projection factors in their table of rates in Appendix II. Certainly if the
rates which I have produced are generally representative—and I admit that
I have no evidence on this point—then the authors' allowance for with-
drawals is definitely conservative, especially at the later durations.

The form in which the data were available prevented me from analysing
this experience in any of the other groupings suggested in the paper,
though obviously much useful work remains to be done in this field with a
view to isolating the factors which influence withdrawal rates. In consider-
ing these factors, the authors distinguish between the selling of ordinary life
business to the industrial assurance public and over-selling to the traditional
life assurance public. The distinction is a nice one, since the former is just
as much a form of over-selling as the latter, the main difference being the
social status of the policyholder. The suggestion that the policyholder's
interests should be protected by laying down statutory minimum levels for
surrender values and paid-up policies would have little effect in practice
unless the basis fixed by statute gave values higher than the general level
of those granted at present. I think this would be unlikely since, as I hope
to show later, there are reasons for thinking that values above this level
would not be acceptable to the offices. An alternative legal safeguard would be one which provided a period of grace during which the proposer could withdraw from the contract and have his premium refunded. This would give the unwary immediate protection against over-selling and could be quite valuable to people who had been pressurized into parting with the first premium. It could also be to the advantage of the offices in saving them from writing unremunerative business though, of course, they would have to hold back preparation of the policy document and payment of commission until the statutory period had elapsed.

Probably the main factor contributing to the dissatisfaction with the present levels of withdrawal benefits is the incidence of the charge for initial expenses—the so-called "front end" loading. This could be reduced initially by spreading more of the initial expenses over the full term of premium payments, e.g. by replacing initial commission by a higher rate of renewal commission, as suggested by the authors, and, in addition, by similarly spreading that portion of the sales staff's remuneration which is related to the amount of business obtained in each year. These measures would not only enable the office to grant improved surrender values at early durations but also give the agent and sales staff more of an incentive to ensure that existing business remained on the books. However, it is unlikely that they would be popular with these parties and any company which introduced the first of these measures unilaterally would probably find its erstwhile agents transferring their new business to another office if they could continue to obtain initial commission there. To be successful, such a measure would have to be adopted simultaneously by all offices.

The second measure suggested would bear heavily on the sales staff who would face a sharp cut in their remuneration, the more successful man suffering the sharpest cut, until the system had been in force for some years, by which time the cumulative effect of payments in respect of past business would begin to bring their salaries back to normal again. During this period the office might well feel obliged to boost their salaries temporarily to ease the transition to the new scale, which would increase its overheads. Other expenses involved in writing the policy, such as stamp duty, do not lend themselves to re-spreading in this way and would still have to be allowed for in the "front-end" loading.

Increasing surrender values in this way would go some way to meeting popular objections but it would involve radical changes in the terms under which business is written and is not central to the authors' argument, which is that offices can afford higher levels of benefit whether these changes be made or not. They suggest that a fair value for this benefit would be based on the retrospective reserve calculated on the premium basis. This seems to me to put the withdrawing policyholder's interests first and the office's (i.e. the continuing policyholders') interests second, whereas the alternative method based on the prospective reserve, as suggested by Hickox, takes exactly the opposite view. If it is accepted that an office's main duty is to its policyholders and a conflict of interest arises between policyholders, as it does here, then the office must decide which party to favour at the expense of the other. The authors come down firmly in support of the man who withdraws and declare themselves opposed to the alternative method which they claim is over-generous to continuing policyholders. One could with equal justice put the opposing argument that the office's duty is now to those policyholders who continue to rely on it to provide the contractual benefits. However, neither method is altogether one-sided and it is possible
that although it might seem in theory that they should give different results, in practice the values produced, after taking into account the interests of both parties, might well be very similar.

The figures brought out by the authors in Table 6, comparing margins for contingencies and profits under conventional surrender values with those calculated on the basis suggested in the paper, do not bear out this argument, but I would suggest that this is because the margin they recommend is on the low side considering the options it is intended to cover. It is generally accepted that in surrendering his policy the policyholder is exercising an option against the office since he is unlikely to surrender at a time and in conditions which are not to his advantage. The paper lists some of the considerations which the office should weigh when calculating the penalty for withdrawal and the suggested allowance of 10% of the retrospective reserve plus ½% of sum assured seems scarcely adequate to cover all these points. It is of interest to note that this arguably over-generous basis gives surrender values which are lower than the conventional ones at early durations and its employment would certainly not meet popular objections to lower benefits at these durations.

In going on to consider whether offices ought to raise the level of withdrawal benefits, always assuming that they are able to do so in the first place, we must keep one point firmly in view. Benefits should never be raised to such a level that policyholders find it profitable to surrender existing policies and replace them by new ones. In a period of rising interest rates and strongly competitive premium rates, such as we are in at present, it is not inconceivable that such a situation could arise if the additional factor of improved surrender values was introduced. I am not suggesting that offices would necessarily be faced with wholesale surrender and the re-writing of all their business each year—the effect on surrender values of the “front-end” loading would act as a disincentive to this—but they might find that they had a complete turn-over of business every four or five years. Therefore, irrespective of whether the levels of withdrawal are equitable or not, offices would have to consider very carefully whether it would be advisable to raise them. Even without these circumstances, a rise in the level of benefits would almost certainly result in a rise in withdrawal rates and it is shortsighted to argue, as the paper does, that increasing withdrawals would not affect the office adversely if the proportionate level of profit remained the same. It would simply mean that the office would have to work harder while its funds fell, which can hardly be considered a desirable state of affairs.

I now come to consider the main advantage which the authors claim would accrue if the level of benefits were raised, namely that this would enable life assurance to keep its place in the market for personal savings. The statement that offices are competing with other savings media is perfectly true, though I do not think it is right to suggest that they are necessarily in competition for the same type of business. Many of the other forms of saving are on a short-term basis, whereas life assurance policies are normally medium to long-term contracts, and if they are competing anywhere it is surely at the long-term end of the market. It would be unrealistic to expect contracts designed to provide benefits on a long-term basis to give results in the early years which are comparable with those on short-term investments. Similarly there is little to be gained by comparing the guaranteed minimum death or maturity benefits available under endowment policies with the apparently more attractive return
under unit trusts which carry no such guarantee. If offices are concerned at the competition they are facing from unit trusts, then it is surely better for them to meet on the same ground, using contracts of a similar nature, rather than to modify life policies which contain a basically different type of savings element. Presumably, it is some such reasoning as this which has been responsible for the launching of equity-linked contracts in recent years and the amount of such business sold would appear to indicate that life assurance has produced a successful competitor in this field. It would seem, therefore, that the offices can compete in more appropriate ways than by raising the level of withdrawal benefits.

It would be unfortunate if members of the public were left with the impression, as the paper suggests that they are, that the apparently penal level of surrender values is based on the office's self-righteous indignation at contracts being broken. There are many ways in which offices can justify their practice, some of which are mentioned in the paper. I feel that there is one in particular which must not be overlooked. Professional opinion is very much aware of the fact that if an office is writing an increasing amount of business it is holding back from distribution an increasing amount of surplus. In the normal way, the effect is to postpone the date at which the surplus eventually emerges, which may or may not be desirable depending on the policy of the office. However, it is obvious that, irrespective of office policy, if a large proportion (such as, say, 25%) of each year's business becomes a lapse or surrender within the first ten years, then this constitutes a permanent and growing drain on surplus in respect of business which is comparatively unremunerative. This in itself is sufficient to justify offices in discouraging withdrawals and suggests that, if the present level of rates acts as a disincentive to withdrawals, then it would be unwise to raise them.

In conclusion, I should like to thank the authors for giving us an interesting and imaginative paper. A new look at a familiar subject is always of value even if, in the end, it serves only to confirm that the main features are pretty much as we remembered them.

Mr. W. Proudfoot.—For the past nine years I have been closely associated with the development of a new direct-selling agency organization in the Commonwealth of Australia. Conditions in the Australian life assurance market are very different from those applying here in the United Kingdom, but I am very sorry to say that both countries have at least one thing in common and that is a major problem concerning voluntary withdrawals. Conditions are different, nevertheless I feel sure that you will be interested to hear something of the experience of Australian life offices concerning withdrawals and of some of the methods that some of them have used to try to solve the problem, or at least to reduce its effect. Like the authors, I shall confine my remarks to withdrawals in ordinary life assurance business: I shall refer to forfeitures and forfeiture rates, a forfeiture being defined as a policy which goes off the books as a result of non-payment of a premium during the first two years.

I think it would be fair to say that the problem of withdrawals and forfeitures in particular is very much more widely recognized in Australia than it is here and there are probably two main reasons for this. The first is that in the past forfeiture rates have been generally higher in Australia than they have been here and they give therefore much more cause for concern. I suppose this is only to be expected in a market where most of
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the business comes from direct-selling agents. Second, forfeiture rates in
Australia are given a great deal more publicity than they are here and the
authors confirm this with their remarks on the second page of the paper.
The publicity in Australia is a direct result of the fact that since 1945
Australian life offices have had to make very detailed returns to the
Government's Insurance Commissioner. Each year the Commissioner
produces a detailed report which contains a very excellent summary of these
returns and although making the returns can be a bit of a headache—and I
say that from bitter experience—it must be admitted that this report is
an extremely useful document for making meaningful comparisons between
individual offices. It is an absolute mine of information. Not only does
it include all the data in tabular form, it also includes tables of very
useful percentages: for every office we are given, separately for ordinary
and superannuation business, forfeiture rates, surrender rates, interest
rates and new business growth rates. As I said earlier, this is a most
useful document, and it does help considerably in making reliable com-
parisons between offices. Like the authors, I would hope that, as a result
of the new regulations which come into operation here this year, we will
soon see something similar being produced in the United Kingdom.

In Section II of the paper the authors discuss some of the factors which
fluence withdrawal rates and they suggest a number of analyses which
an office might make with a view to indicating the principal sources of
poor quality business. I wish that having established these sources they
had gone on and suggested some tried and true remedies for eliminating
them! I was surprised though to find that they did not suggest one
particular type of analysis which has been used by almost every office in
Australia in recent years and that is to analyse withdrawals according to
mode of payment of premiums. Another very popular analysis there is to
analyse withdrawals according to the amount of the periodic premium.
Both of these reflect to some extent the results we would expect to find
in an analysis according to occupation or, to be more accurate, according
to the degree of affluence or the ability to pay of the proposer, but person-
ally, I think that they would be more valuable than some of the analyses
suggested in the paper. The mode of payment investigations indicated
quite clearly that annual premium business had the best persistency rates,
with half-yearly business not far behind. Monthly and quarterly business
by banker's order came next, and quarterly cash came a miserable last.
As a result, many offices in Australia are now refusing to take new business
on a quarterly cash basis. The worst of this quarterly cash business prob-
ably came from proposers who could not afford to pay the half-yearly or
yearly premium or who could not complete a banker's order for the simple
reason that they had no bank account and this part has now been eliminated.
The remainder, the best part, can be saved by diverting it into half-yearly
or banker's order business.

The analysis of withdrawals according to the amount of the periodic
premium showed that the higher the premium, the lower the withdrawal
rate. This led to the introduction of restrictions regarding the minimum
amount of the premium which can be accepted. Some offices go even
further and in monthly premium cases they will accept the business only
if they get two or three monthly premiums before completing. A shocking
number of cases was found to forfeit after payment of only one monthly
premium or one quarterly premium, usually because the proposer had no
bank account but had been persuaded by the agent concerned to open a
bank account for no other purpose than to pay his life assurance premiums. This feature was eliminated to a large extent by refusing to accept the first monthly premium unless it was paid by cheque drawn on the same bank account as the banker’s order and refusing to complete the case until the cheque was cleared. A bit drastic you might think. I wonder how many offices would be prepared to go to these lengths here in the United Kingdom. In applying such restrictive rules, all that we are really trying to do is to exercise some degree of control over the selection of our new business. There can be no doubt that the imposition of certain restrictions can result in a marked improvement in an office’s withdrawal rates, but I wonder how far life offices should go in exercising this type of control over selection. On the one hand, we are offering a life assurance service to the general public as a whole and we would like to be in a position to accept as many as possible of the proposals which we receive. On the other hand, in order to reduce our withdrawal rates, we must try to limit the issues of our policies to those classes of people who, we feel, are most likely to keep them in force and I suppose we justify this in the ordinary branch by leaving the poorer quality business to the industrial offices. I wonder what the industrial offices do?

Perhaps a more effective way of selecting good quality new business is to make the selection a matter for the office’s agents and this can be done by paying the agents’ commission earnings in such a way that they are given some form of financial incentive to make this selection for themselves. For example, the authors suggest that instead of paying a relatively high rate of initial commission, we should pay a higher flat rate of renewal commission. Unfortunately, in Australia most life assurance is sold by representatives who are remunerated by commission only and who act as agents for one office only and it would be virtually impossible to recruit such men with this method of payment. In fact, to help new agents to become financially established most of the initial commission is credited to them immediately on completion of the business regardless of how the premium is paid and if the policy forfeits within two years, say, the agent’s commission account is debited with a proportion of the initial commission. This is all very well but I am afraid it does not really provide the salesman with a worthwhile incentive to select good quality business or even to try to save business which is in danger of forfeiting. Most salesmen, and especially new ones, would just as soon take a chance and hope that the policy would stay on the books. Their attitude if it forfeits is simply to replace it by selling another.

Some offices have tackled this problem by giving the representative a bonus calculated on his business but making the rate of bonus vary according to his forfeiture rate—say, $5 per $1,000 sum assured when the forfeiture rate is zero, reducing to nil when the forfeiture rate is 15% and over. My own office introduced such a system a couple of years ago but took it a stage further and related the bonuses earned by the supervisors (i.e., the men who recruit and train teams of these salesmen) to the forfeiture rate of the total business produced by their teams. Here we had the salesmen with a financial incentive to select good quality business and, more important, their trainers and controllers had a similar incentive. I am pleased to tell you that this system has been spectacularly successful. I would not have wasted your time telling you about it otherwise. We introduced it for agents at the beginning of 1967 and for supervisors at the beginning of 1968, and the forfeiture rate for 1968 was reduced to only
56% of the level that it had been two years previously. I have a feeling though that since forfeiture rates are based on a two-year retention we may see a "hump" emerging in our third-year withdrawal rates.

One feature which emerged quite clearly from our investigations was that forfeiture rates were related very closely to the rate of turnover of the numbers in the agency force itself. Orphan policyholders were very much more volatile than those which had been sold by an agent who was on the active list. This led to the introduction of schemes for better servicing of these orphan policyholders but I am afraid this was only scratching the surface. The only really effective way to tackle the problem was to cut down on the turnover rate of these agents. It is difficult enough to recruit commission-only salesmen, but even more difficult to hang on to them during the trials and tribulations of their establishment period, which could be two or three years, but these difficulties are all the more evident in a new organization which is trying to build up a substantial sales force fairly quickly from a standing start. A number of new life offices started up in Australia about ten years ago and most of these found themselves with forfeiture rates well in excess of those of the established companies, but probably not very different from the rates experienced by the new recruits of these established companies in that period. However, over the past few years new methods of selecting, training and financing agents have been introduced to improve the quality of the recruits into the industry and this should help considerably to build up the hard core of quality men, reduce the turnover rate and, in turn, improve the forfeiture rate.

I was very interested to see the figures in Table 1. These produce a two-year forfeiture rate of about 12%. I was indeed very interested too to hear the opener refer to the progress of withdrawal rates over a period of time. You might be interested to know that the forfeiture rate for the whole industry in Australia in 1961 was 18% and this reduced progressively over the next four years till 1965 when it was 14%. In my opinion this is a direct result of some of the controls which I have described, and my feelings are confirmed by the Insurance Commissioner who in referring to this improvement in 1967 said: "A realistic judgment would be that the decline has occurred because the managements of numbers of companies have directed their attention to the problem of forfeitures, leading to changes in practices and improvements in retention levels". Sir, if all that this paper does is to draw more attention to the problem of withdrawals and if this results in any changes in practice which do reduce the forfeiture rate then I think we must be very glad to see it.

Mr. D. D. Fotheringham.—I should like to add my own thanks to those of the previous speakers to the authors of this paper for presenting us with such a clear and readable investigation into a subject which has possibly not received the attention it should have had at Faculty meetings.

While I would not wish to detract in any way from the value of the work done by the authors, I am a little reluctant to accept, as the authors have done, that the experience of one calendar year, 1965, may be taken as typical. As is stated elsewhere in the paper, withdrawals are influenced by many outside forces, not the least of these being Governmental economic measures. Since these are likely to vary from year to year, general reasoning would suggest that no particular year could be taken as typical and several years' experience would be desirable to produce sufficiently reliable results. It would be interesting to know if the total of the surrender values
paid in 1965 was approximately equidistant between the figures quoted in the first paragraph of the paper for 1963 and 1967, that is about £67m.

It seemed to me that the real meat of this paper comes in Section IV dealing with the benefits which might be paid on withdrawal. The authors have put forward their argument for abandoning the traditional life office attitude to the problem of surrender, that the contract has been broken by the person assured and, therefore, only a restricted surrender value should be payable. I personally have always had a lot of sympathy with the view that for a high premium rate contract, like a short or even medium-term endowment assurance, it seems unnecessary and inequitable to pay no surrender value at all until two years’ premiums have been paid. There would, broadly speaking, be two grounds for making a change in the traditional method, these being equity and competition. I think the authors have proved their case on the grounds of equity for making improvements in the present system, most particularly in the early years of a contract. On the question of competition, I think it would be generally agreed that the unit trust movement provides the main source as a target for regular savings. With unit trusts generally, the return on early surrender would amount probably to something over 90% of the sums invested, subject to any movement of course in the value of the particular units in question. If the life offices are going to compete effectively with this return, then virtually the whole of the premiums paid would have to be returnable on early surrender. It would be theoretically possible to allow for this by incorporating rates of withdrawal and the appropriate benefit in the premium calculations, as the authors explain. This would clearly not be acceptable from a practical point of view unless the spread method of paying commission, advocated by the authors, could be applied, but I cannot see this method having any very great appeal to the broker. Quite apart from the commission question, there are of course the other expenses of putting a policy on the books. Should a complete return of premiums be granted on early withdrawal, this would mean that continuing policies are subsidizing the early exits to the extent of the expenses incurred by these policies and the cost of the life cover which has of course been given. It seems to me that this is swinging the pendulum a little too far in favour of the early exit and I rather doubt if this problem of an unfavourable comparison of the return to the early exit can be wholly overcome within the framework of traditional life assurance policies. I agree with the authors, however, that there is a lot that can be done to alleviate the present situation, although far more data about withdrawals than are at present available will be required.

Mr. D. W. A. Donald.—One of the pleasures of growing older is finding the heresies of one’s youth becoming accepted as the canons of one’s senility. Not long ago, if anyone in this hall had suggested distributing unrealized capital profits by way of bonus, it would have been anathema to the actuaries of his time. Now, if one is to judge by the results announced so far this year, that is becoming almost the norm. If one had suggested, even five years ago, that it was a good thing to write investment-linked contracts, many of us here would have been shaking our heads and saying, “It can’t be”, and yet many offices now have such a policy in their armoury. It is strange that to the British actuary one of the heresies of my youth still remains a heresy, and that is that surrender values are a bad thing: they should not be guaranteed: it is very dangerous to do so: and at all
costs they must be avoided. That, at least, has been the position until tonight, and it is refreshing that the authors have taken a definite stand and said that they think contractual surrender values are a good thing.

It happened that I was looking for quite another reason through the Transactions of the Faculty at the corresponding meeting exactly twenty years ago tonight—the February meeting in 1949. It was devoted to a paper on extra risks and various people in the course of the discussion said that knowledge was a good thing, that extra mortality should be investigated and that the offices should use it, and many other people said all knowledge is highly dangerous because if you find out things people might use them wrongly. In summing up the discussion the President of the day made these remarks: “In the United States they have built up a great deal of data on this subject. Some may doubt its practical application, but there is no doubt that the companies in the United States have survived all right and they have used it.” I think one might say the same thing about surrender values and guaranteed surrender values. Subject to anything in which Mr. Webster may correct me, this has been a feature of North American practice for many years and seems to have caused the companies no financial headaches, even though they have guaranteed surrender values on a very much more generous basis than anything we should think likely in this country and certainly more generous even than the bases which the authors have suggested. I have never understood why in this country guaranteed values are a danger in ordinary business and the accepted norm in pension business, even within the same company, and perhaps tonight’s paper will change these ideas.

The authors have given us interesting information on withdrawal rates and, naturally, it raises the question: “Why have we not done this before and why don’t we use withdrawal rates?” The cynic, I think, would say “because it might cost you money. You actuaries are very good at forecasting long-term trends as long as you know they are moving in your direction. You don’t mind guessing mortality rates in the future because you strongly suspect that they are going to be lower than they are now and at least for part of your business that is to your advantage. You don’t mind if you are advising a private employer on his pension fund guessing withdrawal rates, because if you get them wrong, he pays and not you.” I think that would be far too cynical and the actuary could well reply: “Well, look what we do: we have got to guess, whether we like it or not, long-term interest rates and the potential profit or loss to our offices on that side is far greater than it could be in the matter of getting a withdrawal rate wrong.” So I don’t think it is just actuarial caution or old-fashionedness that has led to tonight’s being the first time that we have seen the actual withdrawal experience being discussed in the context of a life office.

The competition with unit trusts has been mentioned and I think that although this is important it is equally important to remember that life assurance companies are not running unit trusts. Their aims are different: they can be complementary: but I think there is a danger of allowing ourselves to be swayed too much by what the unit trusts are doing and this is why I, personally, have some reservations on the retrospective methods discussed in the paper and to the whole concept of any policyholder having a recognizable asset share in an insurance company. He has such a share in a unit trust: he knows the money he has put in: he knows what is being done with it: but a policyholder is not coming to an insurance
company and buying as it were, into that company at the market value of its existing investments, at least not in my view. He is entering into a long-term contract in which the company says "If you do something, we shall do something". I fully accept that if he does not do something, that is to say, if he stops paying his premiums, it would be unfair if the company used that as an excuse to be inequitable to him. At the same time, I don't see why the actuary should not have a chance in these circumstances to correct any errors he may have made. He may have issued the contract at too favourable rates of premium and, if so, although he is stuck with it as long as the policyholder goes on carrying out his bit of the bargain, I don't see why he should be stuck with it if the policyholder does not. In that sort of circumstance, I think the office has a right to pay the withdrawing policyholder less perhaps than the policyholder might expect.

In the paper itself and the suggested scale, it seems to me surprising that the expenses are so low. They seem to me to be less than are currently being experienced. I accept that the authors say they are trying to reproduce the average scale of premiums which are now being paid on policies that have been in force for some time, but I think a good many people would say to that "It is high time that the life offices realized that probably at no time in the last fifteen years have they ever issued an ordinary policy in which the level of expenses that they thought right at the time of issue has proved to be right at the current date", and I personally would have thought that higher expenses were inevitable. I think the level of our expenses can be criticized, but this of course is due to the rates of initial commission and however much we may talk about it I don't see any solution, unless, perhaps, there is some Government intervention. That is not altogether beyond the bounds of possibility. I don't think anyone can be particularly happy at the position on whole of life policies at young ages. The average rate of premium for a whole-life non-profit policy at age 21, charged by seven Scottish offices is £10, 14s. per £1,000. Of that rate expenses must account for something like 25% net, or 40% gross. Those of us who can remember that in 1932 the Cohen Committee Report on Industrial Assurance considered expense ratios of this size to call for highly critical comment would not care to have to justify to a Prices and Incomes Board the level of our expenses on this admittedly small part of our business. At this level comparisons between premiums paid and even a generous surrender value basis are bound to be disappointing.

Although I do not favour the retrospective method, it probably makes little difference on without-profit contracts. The level of surrender values that the authors suggest is broadly a fair enough one. I should argue however that the granting of generous guaranteed surrender values is not necessarily a gain to the policyholders. Again, looking to North American experience, one finds there that the surrender values are frequently geared actually to the reserves which the office maintains. That inevitably means that every time there is a change in conditions, the office has to have a different reserve basis for each year's policies, and if you look at the statement of some of the North American companies valuation bases, you will find that there may be as many as 16 to 17. It also means that if there is any change in investment conditions and changes in asset values, the actuary there can't meet them, as he would do in this country, by altering his valuation basis. Here, if one had a heavy depreciation on fixed interest securities unaccompanied by any appreciation elsewhere, one would probably feel justified in raising the rate of interest in the valuation of one's
liabilities and in meeting part, at least, of the depreciation in that way. If, however, you have got guaranteed surrender values equal to, say, a 2½% reserve, then you can't value that policy at less than 2½% and that leads to the use of notional values of assets, for example amortized values of redeemable securities, rather than market values and I am fairly sure that it has had an inhibiting effect on investment policy (even if there were no statutory limitations, as in some areas there are, on the types of security in which assurance funds may be invested). The greater freedom open to the British actuary, some of which is due to the absence of guaranteed surrender values, has probably resulted in a better bargain for those policyholders, and they are the majority, whose contracts run their normal course.

When it comes to with-profits business, it is a different matter. I don't think there is any hope of a retrospective approach there, the reason being that the bonuses allotted to a policy in its early durations rarely bear much relation to the bonus loadings paid. Nor can changes in asset values be ignored as might on the average be fair in non-profit business, particularly if claims bonuses are being paid.

I started by saying that one of the pleasures of growing older is to have one's heresies turned into canons; the other, and even greater one, is being able to pose problems without having to make any effort to solve them and even suggest that there must be many younger Members here who are very keen to embark on the research, particularly into the problems of with-profits policies, which is clearly needed. The authors are due our thanks for stimulating our thoughts on these lines tonight, and of opening lines for further investigation and perhaps even another paper.

Mr. A. C. Webster.—First of all I should like to congratulate the authors on an excellent paper which discusses a subject, withdrawal rates, or lapse rates as I prefer to call them, which has perhaps been too long neglected. In these days of high expense rates the cost to the company of early withdrawals can be an important item. My comments are obviously based on American experience and in Canada and the United States, lapse rates have been studied for many years and the lapse rate is a factor, along with rates of mortality, interest and expense, now generally included in the calculation of non-participating rates.

The crude rates of withdrawal in Table I seem to be very compared with the rates experienced on the other side of the Atlantic. In T.A.S.A. vol. XII. p. 297 Mr. Richardson gave a table of lapse rates for some 16 companies. The first year rate ranged from 6.4% to 20.7% and only 2 companies had first year rates below 10%. Half of the companies had rates above 15%. For subsequent years the range was relatively as wide. The rate is, as the authors point out, affected by the practices of the individual company and comparisons therefore are not always valid.

I agree with Mr. Proudfoot that to the factors affecting withdrawal listed in Section II there should be added a sixth, "frequency of premium payment". The American experience generally confirms that given by Mr. Proudfoot, that monthly and quarterly premium business shows the highest lapse rates and that annual premium business shows the lowest lapse rates. One exception to the monthly premium experience is business paid by banker's orders where the commitment to pay produces a persistency rate almost as good as annual premium business.
The analysis by branch, inspector, and agency is perhaps the only item within direct control of the company although allowance has to be made for regions of operation. In Canada and the United States the larger companies will make lapse studies by agency and by agent and may try to apply corrective methods in areas where the figures show a wide departure from the company average.

The individual offices will try as far as they can to educate the agent in the value of persisting business. The agent is paid by an initial commission (on the premium) and by renewal commissions running as long as ten years so that it is to his advantage to have the policy stay in force.

Some companies have experimented with a "persistency rating chart" where the agent, and particularly the new agent, completes the chart in respect of certain factors many of which have been mentioned by the authors, occupation, frequency of premium payment, amount of insurance, amount of premium. From the factors a rating is produced and this rating gives some indication of the probable persistency of the individual policy. This is intended to guide the agent in the selection of good business and it is a practice encouraged by the Life Agency Management Association but not always practised by the companies.

Sections III and IV are particularly interesting and have been commented on by Mr. Donald. The guaranteed cash value has been a feature of American life insurance for a great many years and the cash value is tied to the reserve. The reserve basis is fixed by law, and liabilities are valued on a specified mortality with a maximum rate of interest. The many bases published in the American company statements and referred to by Mr. Donald are due to changes in the valuation laws more than to changes in office practice.

The question of contractual withdrawal benefits brings to mind the recent experience, 1966 to be exact, in connection with policy loans. Under the laws of the states of the United States the policy loan provision is part of the policy contract and the rate of interest is specified in the law. In New York for example the legal rate of interest is 5% in advance. When the interest rate on bonds is going to 6½% or 7%, the insurance company is not doing very well lending money at 5%. What happened in 1966 was that businessmen with policies for large amounts found that with the banks charging 6–6½% for prime paper they could borrow on their policies at a lower rate—5% in advance. This they did and for a period in 1966 the policy loans in some companies were so great that the cash flow inward for investment practically ceased. This was a very unhappy state of affairs for the investment people when they had no cash to take advantage of the good market rates.

There is some evidence to the effect that policies with loans have a high lapse rate. If this is the result of the 1966 experience the companies may see a high lapse rate among the policyholders in otherwise favourable occupations. This points to the fact that economic conditions can affect the rate of lapse.

Another point about contractual cash values is that if you start paying high cash values, you may run into competition on cash values, which is not always desirable. There is a tendency to follow the highest cash value irrespective of whether the cash value is justified or not. I am hardly competent to talk about the standard of cash values in Britain, but going back to my own experience, during the First World War the offices were in a position to restrict cash values by changing the bases on which the
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values were given. This is a flexibility which, as Mr. Donald pointed out the British actuary has but the American actuary has not.

I should like to express a personal view which partly coincides with that of Mr. Donald. If you try to compete in this market for savings on the basis of the opposition, you are, to put it one way, fighting in his backyard, and I am not sure that this is what the life insurance business should be doing either on this side of the Atlantic or on the other. Our job is fundamentally to provide protection. No insurance company can compete today with the results of the unit trusts, or mutual funds as we call them, even though most of the actuaries know that some of these results are fantastic over a period of six months and may not be fantastic over a period of seven years. On the other side of the Atlantic I might add, I have been preaching to an unresponsive audience to the effect we are in the life insurance business, we are not in the investment business, and if we fight in their backyard we will probably lose.

Mr. K. E. Ayers.—I find myself in general agreement with the paper and my comments are more disagreements with emphasis than disagreements with fact or opinion. I started, as the Opener did, with the Introduction and sorted out a few figures on similar lines, but using slightly different and rather less refined data. We are told by the authors that between 1963 and 1967 the amount paid in surrenders increased by 69%. This figure is not so startling as it may appear in the light of the background of increasing new business premium income and total premium income. Premium income in respect of total assurance business in force increased over the period by 44%, and if we consider an average period in force before surrender and look at the increase in new business premium income over the four-year period prior to the 1963–67 period, we see even greater increases. I have only been able to find figures for new ordinary life assurance premium income for the periods 1961–65 and 1962–66 which show increases of 40% and 41% respectively, but the close similarity between the increase in ordinary life assurance premium income and the total new life and annuity premium income for 1961–65 and 1962–66 which show increases of 40% and 41% respectively, but the close similarity between the increase in ordinary life assurance new business premium income and the total new life and annuity premium income for 1961–65 and 1962–66 suggest that the increases over the early periods are of the order of 71% for 1960–64, 80% for 1959–63 and 77% for 1958–62, and the average in force period for policies surrendered in 1963 and 1967 should be covered by these periods. These calculations could, as I have said, obviously be very much more refined but I feel that they do illustrate the basic point. I appreciate that there has been an increase in withdrawals and withdrawal rates but I feel that we should keep this in perspective. The authors do allude to this in a different context on page 60.

On first reading, I wanted to add a sixth classification to the analysis of withdrawal experience to the five mentioned on page 62, and since I considered it to be rather important, I was surprised that the authors had left it out: that is analysis by type of policy. I was even more surprised when a few pages later I found the authors introducing this classification almost apologetically as an approximation to something else. I do not believe that there is as much correlation as is implied between social class and type of policy, particularly at the younger ages. The authors then discovered, rather as I anticipated, that there was a wide difference in withdrawal rates for different types of policy and I would have felt that this was a most important point, particularly if there is any suggestion that our premium rates are to be adjusted to allow for withdrawals. It would be most
unreasonable to use the same withdrawal rates for all classes of policy in calculating premiums. I consider that the fact that withdrawal rates for whole-life without-profit policies are high is due to the fact that they provide the cheapest form of permanent cover as well as to the fact that a higher proportion of such policies is effected at younger ages and by lower social classes.

On page 64, we are told that a full analysis of withdrawals by branch, inspector and agency connection should be available and I assume that by agency connection the authors mean a classification by agent rather than by type of agent. We all know that there are good and bad agents within each class and it would prove little if it were discovered that withdrawal rates on policies introduced by, say, bank managers in a particular area were higher than for those introduced by, say, accountants, since one bank manager selling a lot of policies but with a higher lapse ratio would have a very damaging effect on the statistics. However, if the data are to be classified by individual agent, the work involved would be enormous. It should be possible to investigate the business of a particular agent but a system which threw up and identified agents with poor withdrawals experience would be far too detailed to be practicable.

Passing on to the part of the paper dealing with benefits on withdrawal, it seems to me that if withdrawal benefits are contractual and realistic values are used and if this results in a substantial improvement in surrender values, as the authors imply, withdrawal rates could be very high in times of adverse economic conditions and this could well defy any earlier calculations or immunization theories. The authors themselves say at the foot of page 19, and I quote, "Provided that the office is not faced with mass surrender, the profit earning prospects of the fund for the continuing Policyholders should not be adversely affected". But by paying what the authors call "contractual" withdrawal benefits, we would be almost inviting mass surrender from time to time, I consider. Again, the authors allude to this on page 80 in the contingency margin (b), but I consider it to be rather more important than they imply.

On page 77, the authors list three unsatisfactory features in the present surrender value bases. Their first argument is with the rule that many offices have of allowing surrender values after two years on endowment assurances. I would certainly agree that this is unreasonable as a general rule for all terms and would suggest that a rule which varies the duration before which a surrender value was allowed would be quite welcome and far more economically sound than the present practice. The authors' second argument is with the calculation of surrender values as the present value of a proportionate paid-up policy. This, again, I would agree is unreasonable, particularly, since, as we have seen, the bulk of surrenders occur at the early durations at which time proportionate paid-up values are too generous anyway, although it is in my experience the shorter duration policyholders who complain the loudest about their surrender values. Whilst in a pure sense I agree with the comments about brokers' commission in the authors' third argument, we must not lose sight of the fact that the broker has virtually all of his expenses at the time the policy is written and if we are to encourage the continued existence of brokers—as I firmly believe we should—it is up to the offices to go as far as possible towards recompensing the broker at the time that he has to meet his expenses.
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Mr. T. M. Springbett.—I, too, am a little concerned about the effect of variations in the rate of interest. The authors have based rates of withdrawal on the experience for 1965, a single year, but in their paper they do say that one can expect that rates of withdrawal will vary with financial circumstances. They would therefore feel, I think, that the rates of withdrawal for 1969 will probably be greater than they were for 1965. Even though offices generally may not guarantee surrender values, their usual practice is to leave scales of surrender values unaltered for very long periods and, if rates of interest do increase, not to reduce the scales of surrender values. To do so would cause great difficulties for institutions such as banks who had lent on security of policies and on the assumption that the scale of surrender values was very unlikely to be altered.

This question of variations in the rate of interest raises points about immunization. Section III of the authors' Paper is very interesting in showing that withdrawals have the effect of reducing quite considerably the mean liability term and even though they have based their figures on their 1965 rates of withdrawal they do produce instructive results. If rates of interest change, as one envisages they do in immunization theory, then it seems to me that rates of withdrawal will change, but that does not really upset the general principles on which the authors have proceeded because in immunization theory one assumes that rates of interest change by small amounts and one assumes that one is constantly reassessing the position and readjusting one's assets to give effect to any change there has been in the position. So as rates of interest rise, in theory—and immunization is all very theoretical—one would assume rather higher rates of withdrawal and so one would be reducing one's liability term more quickly than one would do otherwise. When it comes to the limit, if one is leaving one's surrender values unaltered, one would reach the state, as Mr. Bews suggested, that it would pay people to take the surrender value and effect a single-premium policy with it, assuming offices were quoting single-premium rates which reflected the high rates of interest. By doing that and effecting a new annual premium policy, they could probably obtain higher benefits than under the policy they were giving up. The mean liability term would then be zero.

The other point I would like to mention is the question of with-profits policies which Mr. Patrick dwelt on briefly during his introductory remarks. From what he said, I think the authors would subscribe to the view that, in the case of with-profits policies, in calculating the surrender value or, at any rate, in calculating the portion of the surrender value provided by bonuses, one should, in the case of an office which gives bonuses on the compound basis, make some allowance for the future effect of compounding in valuing those bonuses. Moreover, I think that they would probably be willing to go further and agree that, in the case of an office giving terminal bonuses, it would be reasonable that on a policyholder surrendering his policy he should be given some benefit of the terminal bonuses on an appropriate basis and thus reap to some extent the benefit of any appreciation there had been in the investment of his asset share during the period from when he took out the policy to when he surrendered.

Mr. R. G. Mallett.—At this stage I cannot help wondering really whether there is anything more that can usefully be said on the subject, but I should like to say to the authors that I have enjoyed the paper: I feel that it has come at a very opportune time, and it contains some very
useful thoughts for those of us concerned with the management of a life fund.

The point I wish to make is that this subject of withdrawals, forfeitures or surrenders is a matter of real concern to the image of life assurance. When a person terminates his policy, in the majority of cases he will not continue to have a good impression of the service which we in the industry are trying to offer. Thinking about the paper, I have divided it into two parts. A great deal has been said about forfeitures, the early withdrawals without cash values. As Mr. Proudfoot has already said, I am quite sure that this is a function of the frequency of payment of premium, and also a function of the amount of premium. It is a matter for management to think seriously on these two items and to arrange their affairs so that these forfeitures occur far less frequently. There are measures that can be taken. An analysis of office records can pinpoint the areas where these withdrawals occur, can even pinpoint the particular agents. One has to be particularly careful, as has already been mentioned, with whole-life non-profit policies, but I think there are other classes even much more vulnerable: decreasing temporary assurances for mortgages, level term assurances, and so on, that have to be selected at the outset very much more carefully. One way, of course, is to introduce a minimum amount of premium, accepting no business below that minimum premium. You will get a lot of opposition from the agencies if you do that, but if you take the precaution of giving your field man no credit for getting the business, it is surprising how very little of it you get!

Now, I should like to turn to surrenders. I think the point must be made that a surrender is a conscious action on the part of the insured. It may be forced upon him by financial, economic situations and we are probably in that sort of position now. There is a tremendous credit squeeze now and I would think that there are very few offices which have not at the present time a record amount of work in their surrender value departments. It is very difficult to say what you can do to stop it, but you can make every effort when quoting surrender values to point out that a valuable contract is being given up and what about taking a loan. That is often very successful. The only question I am going to pose now to those of you in the Hall is: "How do you pay bonuses derived from capital appreciation out of investments in policy loans?" I am just wondering whether we are not getting towards the position outlined by Mr. Webster when the investment department will be substantially idle because all the money is going out on policy loans. I would also observe that policies are, in some countries, if not here, occasionally sold on the strength of surrender values. I know of many cases where whole-life with-profits or even whole-life without-profit policies are sold, and the individual is told, "You have your life cover but at the age of 60 you can take the cash value and you have had a good investment." Of course, that is the type of situation which we cannot influence but I do agree with the authors that we have a duty to give a reasonable surrender value, but it is no good going to extremes. After all, the image of life insurance does depend upon the way we treat our policyholders. We can't treat them all as lepers because they are going to surrender. There may be circumstances beyond their control, but let us do our best for the image of the business.

Mr. J. D. Moorhouse.—It is with some diffidence that I rise to add to the discussion because I wish only to pose one interesting question which
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arises out of this excellent paper. When I read the paper I was presented
with a large number of figures and tables and was given only a week in
which to try to understand the full import of them.

I found one interesting tie-in which I should like to put in the form of a
question to the authors. The first half of the tie-in is on the first page, where
the two figures for surrender values paid by U.K. offices in 1963 and 1967
are given. What I did was to compare the L.O.A./A.S.L.O. figures for
these two years and found that in 1963 the £49.8m. represents some 17% of
an assumed yearly premium income taken as an average of the 1962 and
1963 "in force" yearly premiums for total U.K. business. In 1967, the
equivalent figure is 19½% approximately, so that we have over this five-
year period a rise of 2½% in surrender values being paid in terms of premium
income, approximately. For the second half of the tie-in, in Table 5, I
then assumed that the distribution of the premium income to the whole
of the industry on the ordinary side here could be represented by saying
that it was equally distributed across each of the four x ages and, within
each of these, it was equally distributed across each of the n terms, and I
found that the reduction in premium from P to P' represented roughly 1½%
of the gross premium (allowing for mortality only).

I should be very interested to ask the authors what significance attaches
to the fact that, if one introduces their withdrawal-related premium rates,
one gets a reduction in premium which is similar to the rise in with-
drawal surrender values which have been paid out. In other words,
either offices do not reduce the premiums on the basis of this five-year
experience, and pay out increasing withdrawals, or they can reduce the
premiums. In this latter event, presumably a substantial improvement in
withdrawal rates will be required to offset the reduced premium income,
an improvement the extent of which will be very difficult to forecast. This
might mean that the reduction in premium rates would have to be effected
in stages spread over a period of years, and similar remarks apply to
increased surrender values.

Mr. A. T. Haynes.—I would like to add my very warm tribute to our
authors for their paper on a subject of great importance. I think that many
of us can say that we have kept close watch on the problem of "wastage"
in our own particular offices—but this is, I believe, the first time that it has
been the subject of discussion in this hall.

To place the problem in perspective, I feel that the total surrender values
paid are not the best measure. The problem, as I see it, relates mainly not
to those policies which go off the books shortly before maturity (where there
is very heavy weighting in the surrender value paid) but to those policies
which terminate as lapses or very early surrenders—especially in the case of
whole-life assurances at young ages which prove entirely unprofitable and
unproductive. These cases, of course, have very little weighting in the
total surrender values paid.

There is another very troublesome type of wastage—the early paid-up
policy with perhaps three years' premiums paid—which is rather outside
the direct scope of this paper; but it is common to these paid-up policies and
to the lapses and early surrenders that the commission and other expenses
are out of all proportion to the premiums paid, to the surrender value
provided or to the benefits under the paid-up policy. It must surely be the
case that those policyholders who terminate their policies prematurely, and
particularly in the early years, are a bad advertisement for the life offices.
Many of them must regard themselves as dissatisfied customers. To put the matter in balance, however, there is also what I describe as “negative wastage” which can give us much more pleasure. This negative wastage comprises the satisfied customers who come back to us a second time and a third time for further policies. It is comforting to observe how much of the new ordinary business produced by the life offices is of this nature.

There is nothing truer, to my mind, than the point that has already been made in this discussion, that the quality of the business reflects the quality of the sales force—not only the office’s sales force but the agency connection. I am perfectly sure that until one gets a sales force of first-class quality one will never get new business of first-class quality.

Mr. A. D. Shedden, closing the discussion said:—The authors of this stimulating paper must be well-satisfied with the discussion which their topic has provoked. The subject of withdrawals and withdrawal benefits is bound to bring out differences in actuarial philosophy and it is not surprising, therefore, that we have had a fair diversity of views expressed by those entering into the discussion. In closing, I shall not attempt to summarize these views, but shall simply make a few general comments.

The actuary’s interest in withdrawals is, in the first instance, technical. The possibility of withdrawal is a factor he must reckon with in setting premium rates and designing policies. He must not only be able to measure present levels of withdrawal but also have an insight into the factors affecting withdrawals so that he may attempt to predict the likely withdrawal patterns of the future. In this connection, the authors rightly draw attention to the possibility that the pattern of withdrawal may change in the future as a different class of policyholder comes on to the books. Their observations have been confirmed in the discussion tonight. Mr. Bow has given figures which show that the level of withdrawals is increasing in this country, while Mr. Proudfoot and Mr. Webster have given us an insight into what this level might possibly become. We would do well to bear in mind that we may no longer be able to ignore withdrawals as we have done in this country until now.

The actuary is also concerned with withdrawals as an insurance official. A withdrawal represents an unfulfilled contract and involves the possibility of loss both to the policyholder withdrawing and to the company. This engenders bad public relations—anyone who has worked in an actuarial department has seen letters from irate policyholders obviously completely unprepared for the low level of withdrawal value quoted to them. Mr. Haynes and Mr. Mallett have both referred to this aspect of withdrawals, and it is possibly this feature which we must have most clearly in mind in looking at the level of surrender values that we are prepared to give for very early surrenders. Because of the possibility of bad public relations, because of the possibility of a loss on both sides, it is pertinent to try to control withdrawals as far as possible, by using better selling techniques, and by having proper incentives for the sales force to produce better quality business.

Mr. Proudfoot and Mr. Webster, again, have given us an insight into the efforts being made in the United States and in Australia to control selling techniques. In these countries the methods of selling life assurance are very similar, and ordinary life assurance is sold to a wider range of policyholders than we at present are selling to in this country.

No mention has been made directly of the type of investigation one
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would make in analysing the rates of withdrawal by sales outlet. One method is to develop persistency ratios: e.g. ratios of policies persisting into the first year, second year, or third year. It is not advisable to go further than this because later withdrawals can hardly be put at the door of the agent or inspector. I would say that in this country analysis by branch and inspector are of significance, but analysis by agent would be useful only in a few cases and might be confined to agents of those inspectors having a poor withdrawal experience. (I am not referring here to full-time agents doing direct selling.) Where remuneration is affected by such investigations, it is very important to define carefully what is meant by withdrawal. For example, "the three-year pup" mentioned by Mr. Haynes could well qualify for this category. Policies terminating to be replaced by another policy directly need not be counted for withdrawals for this purpose as long as the replacement is in the same company and for a valid reason.

The authors have noted several factors which influence rates of withdrawal. With these in mind, it ought to be possible to predict which inspectors will have a poor withdrawal experience by analysing the type of business written by them, and so to exercise some control by trying to steer them towards better quality cases. Mr. Webster has given us a description of persistency rating charts in common use in North America. I think it is true to say that the efforts that have been made in America to control lapses have not been terribly effective. It is reassuring, however, to learn from Mr. Proudfoot that it is possible to reduce lapse ratios in certain circumstances.

Returning now to the technical aspects of withdrawal, the authors have developed a double decrement table for purposes of the paper. It is not possible to tell whether this is a good reflection of the data and a number of speakers have commented on the assumptions that have necessarily had to be made in the construction of this table. The authors have chosen to reflect variation by age and duration only but, like Mr. Ayers, I feel that class of policy is particularly important and it would have been very interesting to have had some figures for the variation by class which the authors found. They did mention that there was a variation but they gave us no clue as to its size. However, other speakers have given us some hints and it would seem that this is a very important factor indeed. It may be that part of the variation by age found by the authors may reflect a tendency for younger policyholders to take out cheaper forms of assurance. In order to bring out several of their points the authors have had to construct a fairly elaborate decrement table, but it may not be advisable to use this table in calculations for particular policies. There is an inherent problem in constructing any table of withdrawal rates, I think. We cannot adequately measure rates of withdrawal but they are very important and we cannot ignore them. It would seem, therefore, that in applying rates of withdrawal to actuarial calculations, refinements are out of place.

Section III of the Paper is entitled "Effect of Withdrawal on Immunization Theory". In fact it is the mean term of the liabilities which is affected by withdrawals, and not immunization theory. I think the authors are here demonstrating that if an immunization policy is to be adopted, the mean term of the assets would have to be shortened to take account of withdrawals. If higher premiums resulted, this would have to be accepted as a consequence of allowing for withdrawals in this way. A similar problem arises with guaranteed surrender values. The more generous
guaranteed values are, the more restraints are put on investment policy. The authors in their final section start out by giving an example of the effect on premium rates of introducing withdrawals. It would have been interesting to know what the corresponding figures would have been had the resultant surrender values given in column 9 of Table 6 been used instead of the lower surrender values given in column 3 of the same table. No doubt the effect on the premium rates would have been considerably smaller. Furthermore, initial expenses assumed in the premium basis for purposes of Tables 5 and 6 are somewhat light, as Mr. Donald observed; the use of heavier initial expenses would produce lower retrospective reserves especially at the early durations. Indeed, these reserves might be negative for the first two years for endowments of terms 25 years and over, so that there would have been a loss on first and second year withdrawals.

The authors do not suggest that we can go so far as to reduce premiums by making an allowance for future withdrawal profit. However, where there are minimum guaranteed surrender values or where the premium per £1,000 is low, it is advisable to test in some way the effect of withdrawals on premium rates, but for the opposite reason. That is, to check that rates allowing for withdrawals do not exceed rates allowing for mortality only. For this purpose, it would be conservative to allow fully for withdrawals at the early durations and for zero withdrawals after a period of say, five, or ten years from issue depending on the term. These assumed rates of withdrawal need vary only broadly by class of policy, duration, and possibly age. The premium rates would be developed using an accumulation technique up to the duration at which withdrawals are deemed to cease and would be calculated as test rates for a few terms and ages at issue only. These calculations would provide a check on the level of withdrawal benefits as well as ensuring that the proper charge was made, if required for, loss on withdrawal. It should be remembered, and I think Mr. Mallett referred to this, that the loss on early withdrawal is greatest for the lower premium class of policies, that is, those classes where the probability of early withdrawal is the greatest.

The authors conclude their paper with a discussion of the level of withdrawal benefits and here we had quite a difference of emphasis and opinions, although I think that the discussion tended to favour the general approach of the authors—that we should not unduly penalize the withdrawing policyholder. I am in agreement with the authors' approach to this. I do not think that the office is entitled to deduct the whole of the value of its future profit forgone, but would point out, that if experience is much more favourable than has been anticipated in the premium basis, the profit forgone is much greater than the figures given by the authors in Table 5, showing the premiums allowing for withdrawals. I agree that the margin between the retrospective premium reserve and the surrender value should diminish as the policy tends to maturity and I personally see no great harm in guaranteeing values which are reasonably close to the retrospective reserve at the later durations, say, after twenty years, regardless of term. The authors have suggested possible margins for profits and contingencies and I think that the values which they have suggested could be reproduced fairly accurately by a Zillmer reserve to allow for the initial expense run off and with a rate of interest say 1% higher than they have used in the premium basis.

However much we pare our margins on surrenders we are faced with the problem of high initial expenses. If these are borne in full by the with-
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drawing policyholder, then inevitably the early surrender values are disappointing and compare poorly with termination values under certain unit-linked contracts. The most we can do, I think, is to give the policyholder the benefit of net expenses and, as the authors point out, he is not really entitled to this, and possibly charge less than the full initial overhead expenses which might otherwise have been allocated. Although it is suggested in the paper that we should look upon withdrawals as a measurable fact of life, the authors do not go so far as to suggest that withdrawals, like deaths, should not have deducted from their claim value the unamortized portion of the initial expenses. This, however, is not an unknown practice in some parts, but not in this country as far as I know. As the authors suggest, the spreading of initial commission would go some way towards improving early surrender values and I would say that in present conditions there is a case for this to be done for whole-life policies at young ages. However, the abandonment of £2% except in special cases seems inconceivable at the moment.

Although the bulk of unit-linked policies may in future be sold with £2% initial commission, as more and more of the larger insurance companies enter this field, and so therefore have more or less the same "front-end" loading as the traditional endowment assurance policies, enough of them may continue to be sold with lower initial expenses to prove an embarrassment to those offices paying £2%. In my opinion, it is indefensible for an office writing both types of contract through the same sales media to have substantially different expense deductions from withdrawal benefits under each and I would agree with Mr. Donald and Mr. Webster that we can stretch too far in trying to compete with these types of contract.

It would have been of interest to have heard from the authors on the desirable level of surrender values under with-profits policies and, in particular, to have had their views on whether withdrawing policyholders should share in the profits which are being distributed by so many companies now in the form of claim or terminal bonuses. It is clear from comments made by various speakers that this might have given rise to an even more vigorous discussion than we have heard already this evening. However, we are in the authors' debt for the material which they have presented on without-profit policies and for the opportunity for discussion which it has afforded.

In closing, I have much pleasure in congratulating the authors on a most excellent paper.

Mr. A. Scobbie, replying to the discussion, said:—I am sure, Sir, at this late stage of the evening you would not wish me to make a detailed reply to the many and varied points which have arisen in this discussion, a discussion, which I must say right away, has pleased us by the kind reception afforded to our paper. I think, Sir, if I may be allowed the luxury of addressing myself to one or two of the main points upon which a number of speakers have commented, that would suffice for the moment and we can pay more attention in our written reply to the other points of detail.

More than one speaker has made the point that we used the year 1965 for our experience and we have drawn a number of conclusions from the data for that year. We would certainly agree that it would have been preferable to be able to investigate the withdrawal rates over a number of years and have compared the progress of these rates from year to year. Unfortunately, the data, as far as we were concerned, were not available.
and we had to content ourselves with what in fact we produced. I think, because of that, we would tend to agree that experience rates for 1965 which we produced may well turn out to be somewhat on the low side in comparison with subsequent years.

We are indebted to Mr. Proudfoot and Mr. Webster for their contributions regarding the Australian and American experience and I certainly think that the investigation by mode of frequency of premium payment is a very valid comparison.

One or two of the speakers dealt with the question of why one should analyze the agency connection. I would certainly agree that this will produce negative results in the main, except for one or two cases, but it is these one or two cases that you wish to know about and that, in our opinion, is the value of the particular exercise.

The main bulk of the comment this evening was directed towards Section IV of the paper where we dealt with the question of withdrawal benefits. I think I should re-emphasize that what we were concerned with was the question of whether we could give a fair return to the withdrawing policyholder without penalizing him or penalizing the continuing policyholder. Why, we asked, should one be generous to either party? Why not give exactly that to which you think he is entitled? Now, we did not suggest in the paper, as perhaps one speaker inferred, that we thought surrender values in general should be increased. What we were attempting to point out was that surrender values which are paid should have regard to the amount available to the office to pay the surrender value. For instance, we are quite well aware that the surrender values at the early durations especially, under whole-life non-profit policies, which have been mentioned frequently this evening, may well have negative amounts available. What we are really saying is that at the present time offices pay surrender values at the early durations for whole-life policies and presumably make a loss which they fund against the profits that they make on short-term endowment assurances. One of the questions which we were trying to pose was: on early termination, should the short-term endowment assurance policyholders be penalized to subsidize the whole-life non-profit policyholders?

One further point which was commented upon by a number of speakers was the question of the equity-linked contract and the life offices' role in this field. Unit Trusts and equity-linked contracts are competing for savings over 15, 20 and 25 years, and I would have thought that a large percentage of ordinary life assurance business is written for these terms. Thus, I would suggest, the life offices are quite definitely in competition with Unit Trusts for the same savings market.

Now, I would like to re-emphasize that we would not advocate that the offices go on to the Unit Trusts' ground and fight in their back court. The offices should endeavour to give a fair return on withdrawal in the sense that they should take account of the expenses which have been incurred and they should not attempt to give back more than the amount available after meeting these expenses and allowing for a reasonable profit margin. The offices have several restraints placed upon them—initial commission, etc. (the "front-end" loadings)—which have placed the offices in an awkward competitive situation. I think the offices have got to accept and charge for these initial expenses but having accepted them they should not then go on to penalize the policyholder further, as we feel that the present practice does,
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The other main question which was raised concerned terminal bonuses. The whole area of with-profits contracts and the surrender values made available under these contracts is a complete field in itself and we felt that we could not do justice to this subject in the paper. I don't think Mr. Donald is alone in posing questions without answers, because we also felt that we could well pose some questions, especially with this question of terminal bonuses. The number of offices which are now allowing terminal bonuses is increasing. When these offices receive requests for surrender, do they allow for the amount of the capital appreciation represented by the terminal bonus? Should they make an allowance for it? My own opinion is that I think they should, but having said that, I would then think that a further field of investigation opens up to determine the allowance to be made in the surrender value.

Finally, Gentlemen, I would like to close by saying a few words of thanks to our immediate Past President, Mr. Dow, who when we were starting to prepare the paper, was instrumental in obtaining for us data from a number of offices, which enabled us to proceed with the paper. On behalf of my co-author, Mr. Patrick, and myself I would like to express our thanks and appreciation for the full and varied discussion this evening and hope that we will be able to do more justice to it in our written reply.

The President (Mr. A. E. Bromfield).—One of the most convincing assurances of appreciation that the author of a paper can have is that it should be followed by a prolonged and lively discussion, and I am sure that our authors tonight are in no doubt that they have a success on their hands. This makes it unnecessary for me to go into a long panegyric, but I must say that it has been a most interesting paper, and we are grateful to the authors for reminding us that there are certain questions about surrender values that can bear re-examination from time to time. As a number of speakers have emphasized, we are not just dealing with bald facts and figures; we are dealing with the reputation of the insurance companies amongst quite a section of the population.

Thank you both very much.

The authors subsequently wrote:—While several of the points raised have been covered in our verbal reply to the discussion, we feel, after considering the written text of the various contributors, that some additional comment and emphasis is required on Section IV of our paper dealing with surrender values on which, quite justifiably, many shades of opinion can be held and expressed.

Firstly, we would like to re-emphasize that it was not our intention to suggest, as some speakers inferred, that there should be statutory minimum surrender values. Far from solving the problem, such statutory minimum values would almost certainly lead to other, and perhaps more serious, sources of inequity. Neither did we intend to imply that we felt that guaranteed surrender values were necessary or advisable. In this context we do not feel that Mr. Bews' suggested period of grace at the inception of a policy (during which the policyholder may have the premiums refunded) is altogether reasonable as it seems to us to be a somewhat unrealistic concept in practice. To be effective the period of grace should not be too short but, of course, the longer the period of grace, the greater the problem of making a suitable charge for mortality. In addition, the delay in preparing the policy, particularly where mortgages are concerned, and the
problems associated with initial commission payments, would outweigh any of the advantages to be gained.

The rates of withdrawal produced by Mr. Bews are certainly interesting, as also is his contention that withdrawal rates are increasing. Certainly if his “rate R” is accepted then the problems facing the offices are much more alarming than even we suspected! It may be, however, that his results cannot be taken as typical of all offices, as we have evidence of some reduction in certain withdrawal rates over the latter part of the period which he examined.

A number of speakers suggested that a policyholder is unlikely to surrender at a time and in conditions which are not to his advantage. Whilst this must be partially true, we feel that it is unrealistic to assume that all policyholders are consciously exercising an option against the office which is to their direct advantage. The reasons for surrender are many and varied, but in the main we suspect that they are likely to be associated with the personal circumstances of the individual and that with the element of “loss” involved in the exercising of this option too much can be made of the dangers involved for the offices, and we are still of the opinion that the margins which we suggest in the paper cover this option quite adequately.

The present methods of determining surrender value bases are defended by Mr. Bews but this seems to us to ignore entirely the basic question of equity between withdrawing, present and future participants in the Life Fund. An office should be able to identify and justify the margins inherent in its surrender value basis under current conditions rather than merely produce the same old well-worn cliches which have been used as the first line of defence for so long.

Basically, our assessment of surrender values would be based upon the amount available, which should neither penalize nor favour the withdrawing or continuing policyholders, and thereafter a conscious attempt should be made to justify the margins deducted to cover profit and the various options. No such logic can be advanced to explain the present methods of assessing surrender values.

In answer to Mr. Fotheringham, the amount paid by U.K. offices in 1965 by way of surrender values was approximately £65.2m, which is slightly less than the mean of the amounts paid in 1963 and 1967.

One or two speakers referred to problems which might arise if an office has at any time to reduce its surrender value basis, e.g. surrender values quoted for collateral security purposes. This problem can be exaggerated, as with the continuation of premium payments, surrender values will automatically increase so that even if the revised basis adopted for surrender values produces lower results, this would normally be quickly made up by the increase in the surrender value arising merely from payment of further premiums.