

DISCOUNTING IN GENERAL INSURANCE

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<u>Contents</u>	<u>Page</u>
1) Objective of the paper	1
2) The context of discounting	1
3) The coverage issue	4
4) The assessment of an undiscounted liability	6
5) Cash flow patterns	8
6) The choice of a discount rate	10
7) Accounting aspects	13
8) The financial effects of discounting	18
9) A way forward	23
 Appendix A: (1) Discounting requirements in other countries (2) US Tax Basis: Choice of Loss Payment Patterns	
 Appendix B: The Taxation Background	
 Appendix C: Annual Solvency Test of Lloyds's Underwriting Members	
 Appendix D: Discounting in the context of the ABI SORP	
 Appendix E: SORP Insurance Plc: Specimen Financial Statements	
 Appendix F: External Reporting in the context of the EEC Insurance Directive	
 Appendix G: Details of the projections	
 Appendix H: Considerations to be taken into account by an actuary when discounting technical reserves on an actuarial basis.	
 Appendix I: Bibliography	

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1. Objective of the paper

1.1. The objective is not to consider the logic, merit or wisdom of discounting technical reserves in general insurance. The starting point is the assumption that if it were to be decided that provisions should be discounted, then there would be practical problems to be resolved. The objective of this paper is to identify and consider the practical issues that arise.

1.2. However it is worth noting that

- it is not beyond the realms of possibility that practical issues will be taken into account in the decision to discount or not.
- practical issues themselves are dependent on the logic employed in saying that there shall be discounting.

1.3. The paper has been written with a background of

- a position paper by the Technical Division of the Inland Revenue of its views on the extent to which the technical reserves of insurance companies are deductible for tax purposes.
- a Statement of Recommended Practice on Accounting for insurance business issued by the Association of British Insurers. This SORP is intended to apply only to the financial statements prepared in accordance with statutory company requirements and not to solvency or fiscal returns. Explicit discounting is permissible under the SORP.
- changes in the US tax basis so that discounting is now compulsory for tax purposes.
- a proposal for an insurance version of the fourth European Community Directive on Accounting.
- The DTI view, as stated at a recent ROA seminar, that it would be hard for them not to allow explicit discounting where this appears to make sense for a company in the light of its business, whilst keeping the practice within reasonable and sensible bounds.

1.4. The word discounting is used in this paper as shorthand for discounting for the time value of money or, more generally, on how to take future investment earnings into account. There is a wider usage of the word "discounting" in that an amount can be discounted for other factors, e.g. the probability that an event will not occur. It will also be shown that there can be negative discounting.

2. The context of discounting

2.1. Discounting is relevant in a number of different contexts. The practicalities of discounting vary from one context to another. Quite often in general insurance, normally on grounds of expediency

and apparent simplicity, estimates appropriate to one set of circumstances are used for another set of circumstances for which they are less than appropriate, or even inappropriate. This fudging and blurring of issues is not of course restricted to discounting.

2.2. It may be instructive by way of background to consider the extent to which discounting is required/allowed/practised in other countries. Appendix A(1) consists of some notes on the position in a number of other countries, in the context of the relevant overall regulatory framework. Appendix A(2) gives more specific details of the discounting methodology to be employed in the US.

2.3. Appendix B has been included to give a general view on the UK taxation background, although it is emphasised that this paper is only concerned with the possible impact of this background on discounting methodologies. Appendix C describes the annual solvency test of Lloyd's underwriting members. Note that discounting of reserves is not permitted for solvency purposes, although time and distance policies seem to give rise to no objection.

2.4. The contexts considered are

- a provision which is sufficient for solvency purposes (e.g. a provision shown in the DTI Returns).
- a provision shown in the financial statements prepared for statutory company requirements, normally based on the view of the enterprise as a going concern.
- a provision considered as deductible for tax purposes.
- an allowance to be taken into account by the ratemaker in the setting of premium rates.
- a provision which is considered appropriate for the distribution of profit to syndicate members participating in the joint venture of one year's underwriting activity.
- the purchase or sale of an insurer or reinsurer or of a portfolio of business.
- a determination of the terms under which a run-off should be bought/sold between a cedant and a reinsurer, particularly under conditions of
 - (i) insolvency of the cedant or reinsurer
 - (ii) currency trading difficulties
(e.g. South American cos.)
 - (iii) settlements between cedant and reinsurer over disputed claims.
- the calculation of commuted values for proportional reinsurance treaties, at the request of either ceding or receiving company, following on from options specified in the contract of reinsurance.
- a basis to judge the performance responsibilities of different managers.

- 2.5. Although the current debate on discounting is most prominent in the consideration of technical reserves for solvency, financial statement or fiscal purposes, the most important consideration for the health of an insurer is in ratemaking. The assessment of the value of future investment earnings leads in to a decision on the price of the insurance product. The financial effects of changing the timing of tax payments or capitalisation requirements, important as they are, are second order. In practice assumptions on the timing of tax payments and capitalisation requirements can be brought into the pricing computation.
- 2.6. Although pricing the insurance product depends on a number of factors, for example market competition, as well as the costs, the starting point should always be based on a costing of a product. It is always instructive, but not always practical, to conjecture the cash flow emanating from a cohort of business written in a given period. This may be equivalent to the "project appraisal" investment decision with capital rationing. For example Brealey & Myers in "Principles of Corporate Finance" state "Forecasting cash flows will never be routine. It will always be a skilled, hazardous occupation, Mistakes can be minimised by following three rules.
1. Concentrate on cash flows after taxes. Be wary of accounting data masquerading as cash flow data.
 2. Always judge investments on an incremental basis. Tirelessly track down all cash flow consequences of your decision.
 3. Treat inflation consistently. Discount nominal cash flows at nominal rates and real forecasts at real rates.

We may add a fourth rule: "Recognise project interactions".

The relevant discount rate is the enterprise's risk adjusted opportunity cost of capital. This subject is not pursued further in this paper, but it may be worthwhile to pursue elsewhere the differences in principle of discounting cash flows which are initially positive compared to cash flows initially negative. There have of course been many developments of projection methodologies by actuaries working in the life and pension field. Some of these methodologies embrace fund flows and liability valuations. One research cum education topic from the future would be to illustrate the different methodologies in one paper, bringing together their common features and rationalising their differences.

- 2.7. To illustrate how aspects of discounting may vary from one context to another, the computation of a provision on a going concern basis (i.e. the financial statements) may be contrasted with that on a break-up (e.g. solvency) basis. The issue arises if there is to be consistency between an asset valuation and the future income anticipated in the liability valuation. On a solvency basis one is concerned about identifying a set of assets which can be "matched" against the liability to provide the investment income anticipated by the discounting. On a going concern basis there is regard to a true and fair view and the source of the cash flow is relevant and the provision should be regarded as generated in the first place out of

premium income. It would follow that as large agent balances and non interest earning assets materialise, these should be regarded as matched against the provision. The higher non-interest earning content would reduce the discount rate on the going concern basis so that a higher rate could be justified for solvency purposes. However this might then lead to discussions as to whether there should be a further requirement in the solvency computation for other margins, either explicit or implicit, which more than offset this reduction.

2.8. Although exceptions exist, it is currently considered normal to set up the same provision for solvency, financial statement and taxation purposes, despite their different objectives. It may be inevitable that the solvency provision goes its own separate way. However the working party believes that the provision in the financial statement should be no more prudent than that allowed for fiscal purposes, provided that such a provision can be construed as "true and fair" (or "as prescribed" if this is the relevant basis in the Lloyds context).

2.9. There are typically 3 stages in the computation of a discounted provision

Stage 1: the assessment of an undiscounted estimate of the outstanding liability (or asset where a premium is being computed).

Stage 2: the choice of a payment pattern associated with that undiscounted amount.

Stage 3: the choice of a suitable rate or rates of interest to apply to the cash flow derived from the first two stages.

Although in practice there may be some amalgamation of these stages, or a possible reversal of stage 1 and stage 2, most of the practical issues relate to the choice offered at each stage. However, the choices are conditioned by the coverage of the underlying provision and there must be consistency of assumptions at each stage.

3. The coverage issue

3.1. In considering the more specific subject of discounting technical provisions one has to make some supposition as to what is meant by the technical provisions. Insurers in the United Kingdom are blessed with two substantially different approaches to technical provisions; one-year accounting and fund accounting, with variations on both themes. In addition to this assumption about coverage by type of liability there is the question of coverage by category (or "line" in American) of insurance. Although in practice the categories of business with the longest tail are more likely to use fund accounting, the coverage issue is first discussed in the context of one year accounting.

3.2. In a UK, (but not an EEC), context, technical provisions in one year accounting consist of

- . outstanding claims, both reported and not yet reported.
- . unexpired risks.

Any proper provision would include all handling expenses within the definition of claims and this is a working assumption for the sake of this note. It is recognised that current taxation practice differs from this assumption where the Revenue view of the expenses which can be included is derived from the principle that deductibility depends on a "going concern" scenario and that indirect expenses are met year by year and are not related in amount to the level of claims settlement. This creates a new set of issues, not covered in this paper, on the consistency of assumptions. It is also assumed that re-opened claims are included in the definition of claims outstanding, although in practice there are valid reasons for establishing a separate provision (or at least estimate) at the undiscounted stage.

- 3.3. In considering a discounted provision for outstanding claims it is observed that there is little observable advantage to be gained in seeking to establish separate discounted provisions for reported and for IBNR (in its pure sense) claims. Undoubtedly the payment patterns for reported and for IBNR are different and this leads on to question whether different discount rates are appropriate given the nature of yield curves, etc. If there are a string of issues which can be avoided by keeping things simple, then this is best done. This paper assumes that there is no need for separate computations of IBNR and considers "outstanding claims" as automatically covering reported and IBNR (although there is a nagging doubt that some logic derived from tax rulings might make this necessary). It is noted that the separate monitoring of reported and IBNR can give a helpful insight into estimating procedures. Discounting implies an extension of the traditional run-off tables for reserves, but this extension need not be applied to the individual reported and IBNR components. The arguments for bringing IBNR in before discounting apply equally to bringing re-opened claims in with IBNR before discounting.
- 3.4. There are always problems in defining unexpired risks and it is unfortunate that the ABI SORP has not taken the opportunity to clarify the issue. This paper assumes that the provision for unexpired risks is the sum of those items described as the provision for unearned premiums and the "additional amount for unexpired risks" in the DTI Returns. Maybe the ABI SORP could be rectified in this respect before it is franked by the ASC.
- 3.5. The provision for unearned premiums is equal to a relevant proportion of premiums written discounted for the deferral of acquisition expenses rather than the time value of money. A theoretical case has been put forward that the principle of bringing the time value of money into account invalidates the normal assumption of an even spread of risk over the policy year and that this leads to a (1% or so) adjustment to the UPR. This may be valid but, given the arbitrary nature of the adjustment for deferred expenses and the supremacy of an unexpired risks provision over an unearned premium provision, this paper makes another working assumption. The paper assumes that discounting issues relate to unexpired risks but not to unearned premiums.
- 3.6. The ABI SORP makes an important statement (35.2 of that document)

"It is permissible to take account of the investment income on assets representing all the technical funds in the calculation of the unexpired risks provision. Where an enterprise discounts some of its

claims outstanding, then the investment income of the assets hypothecated to the discounted claims should be excluded from the calculation of the unexpired risks provision."

If this is the case then there is no reason why there should be any attempt to go through stage 2 and stage 3 of the discounting computation (see 2.7.) in respect of unexpired risks (i.e claims on accepted exposure to risk not yet incurred) alone. There will be a need for stage 2 and 3 in respect of the total provision. In this respect the issues get close to those relevant to funded accounts.

- 3.7. The SORP (in its 11.1) indicates that an estimate of pipeline premiums should be included in the premium accounted for in the accounting period. It would be a theoretical and logical concomitant to introduce discounting into this and similar estimating procedures. However, in practice the adjustments would, other than in exceptional circumstances, be fairly insignificant and out of proportion to the time and trouble involved in properly allowing for the time value of money. This is reinforced when put in the context of the estimating error involved in a projection of the future.
- 3.8. Funded accounts originate from the Lloyd's market where they are designed to enable an assessment of the profits to syndicate members participating in the underwriting activities of a single year. Normally these profits are assessed after three years on the closing of the account. The outstanding liability on the closing of the fund may be reinsured to another syndicate. Any fair commercial evaluation of this reinsurance would take the time value into account. The coverage for these funded accounts embraces outstanding premiums, claims, commission and expenses. The IBNR requirement is also transformed into considering the aggregation of all items not yet reported, including increments of reported items. Appendix 8 again refers.
- 3.9. Although originally designed for the Lloyd's market, the funded accounting system has been carried over into the UK company market, especially in the classes where Lloyd's predominates, i.e marine, aviation and reinsurance. With its perceived delay in profit estimation and distribution, funded accounts are seen as particularly appropriate for long-tail business.
- 3.10. Where discounting principles have been introduced into funded accounts, the discounted provision is that set up on first closing, e.g. after three years. Consideration could be given to the open year position. There is one school of thought which says that there is a logical consequence of discounting after three years: namely, that the funds being accumulated in the open years should include the investment earnings on the funds being accumulated.
- 3.11. In considering coverage by category, it would be logical for a discounting methodology to ensure that the discounted value of the aggregate provision was equal to the aggregate of the discounted values of the provisions for individual categories of business. However the practical methods of introducing discounting are such that this relationship is unlikely to work out in practice if the two computations are done independently. To secure the relationship a "top down" or a "bottom up" approach needs to be adopted. It is unlikely that the two approaches would be coincident.

4. The assessment of an undiscounted liability

- 4.1. It is not the purpose of this note to dwell on the methods for deriving an assessment of the undiscounted provisions. They are considered elsewhere in the literature. Suffice it to say that there are many methods and that quite often the final assessment of the amount may have regard to a number of these methods. Some of these methods may produce a stream of cash flow payments and some may not. Until such time, if ever, that there is a standard method which generates cash flow payments, discounting methodology should regard stages 1 and 2 as distinct, with the choice of a payment pattern not dependent on the method used in deriving the undiscounted amount. There should of course be consistency of assumptions.
- 4.2. The assumptions underlying an undiscounted provision cover a number of factors, including a claim escalation rate with two components, an inflation rate based on earnings (or prices) and a balance item to cover specific inflationary factors relevant to the provision (e.g judicial inflation). Of all the factors which go into the assessment, the inflation rate receives possibly undue prominence as it is the factor most understood by non-experts in the assessment of technical reserves. Although there are a large number of assumptions underlying any estimate of an undiscounted liability, current practice does not always make them explicit. Indeed it is believed that some estimates can only be justified on the basis of implicit discounting.
- 4.3. The acceptance of inwards reinsurance as always produces its own extra set of problems. For instance the reinsurer may not be clear whether the claims that have been notified to it by the ceding insurer are discounted (explicitly or implicitly) or not. In particular the question of discounting gross or net of protections is generally of more significance. There are significant differences in the gross payment patterns and the pattern for payments to the companies providing the protection. Generally speaking it is preferable in such cases to project separately rather than not.
- 4.4. It is quite common for a claim reserving method to be applied to, say, claims on a gross of reinsurance basis. Given the nature of reinsurance the cash flow of the reinsurance stream may be substantially different from the cash flow of the underlying direct writings. Considerable attention must be given to this feature.
- 4.5. The normal provisions considered make no specific allowance for bad debts, such as not being able to make a claim recovery. There are various ways in which provisions could be set up for such bad debts, including an implicit allowance through observing that not discounting provides a margin for other contingencies. The non recovery of a claim payment from a reinsurer has obvious consequences for the cash flow of the outstanding liability. The bad debt problem has recently received considerable publicity in a different context, viz, the lending by banks to less developed countries. There are points emerging on discounting here which may draw some interesting parallels.
- 4.6. There is one type of outstanding liability which will give rise to significant practical problems in the area of discounting. These are the claims where there is a significant problem in the original estimation because of discovery and judicial delays and which

account for a significant proportion of the total liability so that they cannot be subsumed into a statistical aggregate. Typically asbestos and pollution type claim reserves fall in this category. The problem of estimating a single point estimate from what could be quite a wide range, for the full amount payable, makes the value of introducing a discounting adjustment a second or third order point. For example a claim estimator may think that future claim payments of £x and £(x+y) are equally likely ($y > 0$). The estimator might go for £x on the basis that the claims would not be paid for some time and the future investment earnings would provide a contingency margin. If discounting is brought into account then there would be a very arbitrary choice of discounting period so that the discounting factor itself could vary considerably, say by a factor of 2. However the discounted amount itself may be small in comparison to £y. With these uncertainties and with no explicit discounting the estimator may be prepared to go for £x. With explicit discounting it would be imprudent for the estimator to go for the lowest likely value.

- 4.7. The above example probably relates to the majority of reinsurance reserves, especially in the early years and more especially to the longer tail lines. Thus in the context of reserving for a reinsurance portfolio discounting can become a second order process. In introducing a further layer of uncertainty, it could have the effect of increasing rather than reducing estimating error.
- 4.8. In the new US laws for treatment of a loss reserve, discounted unpaid losses as of the end of any taxable year are computed for each accident year and each line of business and are net of reinsurances. Losses include all loss adjustment expenses, both allocated and unallocated. The starting point is the reserves which are set up in their statutory accounts. If the company claims that these are already discounted, then the net reserve has to be grossed up to "the extent which can be determined on the basis of information disclosed on or with the annual statement". Discounted unpaid losses for tax purposes cannot exceed the actual reserves filed in the annual statement. (This might be the case if the company discounted its reserves for statutory purposes at a higher interest rate than was used for tax purposes). This provision applies on a by line, by accident year basis. An equivalent approach in the UK could possibly be to start from the DTI returns, at least where these are available. (N.B this is not appropriate for overseas subsidiaries of a UK company).
- 4.9. Line (class or category) reserves are shown only in the DTI Returns although they must be available in the build up of the financial accounts. The DTI Returns show a gross provision by risk group, although the risk groups vary from one company to another. Net provisions are shown by accounting class for the aggregation of all territories so that the run off statements on a net basis may be distorted through currency fluctuations.

5. Cash Flow Patterns

- 5.1. Having deduced an undiscounted amount for the provision the next stage is to apply a pattern of cash payments to the undiscounted estimate. Either that pattern is independent of the derivation of the undiscounted provision or it can be deduced from the working sheets of the computation of the provision.

- 5.2. An example where the working sheets may contain cash patterns is where a statistical method such as chain ladder has been used. There are a fair number of variants of such methods and it is believed that there are very few companies which rely solely on one such method and have a unique derivation of their undiscounted estimate, even for a single category of business. There may be one or two business classifications for which such a basis exists. If it does exist, then a pattern can be established. There are many other statistical estimating methods, such as Bornhuetter-Ferguson, which do not build the estimates "bottom-up" for projection for each year of account. It is conceivable that all case estimates should include an expected year (or years) of payment, but as yet there is no requirement for 'proper records' to record this fact. Indeed this could lead to further provisions. Just as there is talk of IBNER (not enough) there would have to be talk of DENA (duration estimates needing adjustment).
- 5.3. One can see how payment patterns derived from the worksheets may be considered as suspect with too much judgement attached. In consequence there is a natural desire to use standard patterns. Of course these standard patterns may be inappropriate when applied in practice. Ideally this is an area that a professional can enter and a workable system could start from the basis of standard patterns with deviation from the standard being acceptable where accompanied by a professional report explaining the reasons for the departure and the derivation of the alternative patterns.
- 5.4. Back to the US rules, the standard loss payment patterns are calculated by industry aggregate information for each line and are locked in for five years. As explained in Appendix A(2) a company may elect to use its own pattern if it represents a meaningful portion of the industry's reserves. Few insurers are believed to be wanting to avail themselves of this election. Indeed one would think that a more logical rule for an election would be to cover the cases where an insurer's pattern exhibited the greatest departure from an industry average and that this is more likely to happen when the insurers portion of the industry's reserves is not meaningful.
- 5.5. The problems of defining the coverage for industry average figures has been mentioned in 4.8. In addition in a UK context there is an international context not present in the US. Even if UK aggregates were to be produced for accounting classes, then there would be a problem of interpreting the resultant data. The derived patterns would depend on a number of factors, including the inflation experienced over the period. There should in theory be careful manipulation of the data to remove inflationary effects. There would also be a need to reinsert an inflationary factor consistent with the inflation factor inherent in rate of discount to be used.
- 5.6. As always the identification of cash flow patterns for reinsurance business poses extra problems. In this category one would include international business such as marine and aviation where claims are payable in a number of currencies. A lack of knowledge of the underlying currency can, despite DTI regulations or sometimes because of them, make currency cash flows patterns difficult or impossible to identify.

- 5.7. The impact of discounting is greatest in those very areas where it is most difficult to get a standard pattern. For a given category of business various insurers have developed views on typical patterns. Guaschi suggested a pattern for Accident Excess of Loss Business. It may be possible to establish Industry Standards through a bureau equivalent to the Continuous Mortality Investigation for producing mortality rates. Like mortality rates there is a continuing need for monitoring actual against expected experience and changing the standard. From the variability inherent within general insurance business, it would follow that such standard patterns should be adjusted for the experience of the individual insurer or reinsurer.

6. The choice of a discount rate

- 6.1. Given a projected cash flow stream from Stage 1 and Stage 2, the third and final stage is to compute the Net Present Value of that stream. The computation is trivial and normally based on annual flows, with a normal assumption that the cash flow is payable at the half year. This assumption may be invalid for some business, e.g. short-tail weather claims. On the other hand the choice of a discount rate has a fair number of theoretical complexities.
- 6.2. Before discussing all these theoretical issues it is worth noting that most of these issues could be ignored "at a stroke" by taking a conservative discount rate. A nominal 5% in current UK conditions would be conservative if applied to realistic cash flows which have properly analysed reinsurance flows and retentions of deposits. Whether or not such conservatism is appropriate depends on the context of the discounting. Given the degree of estimation involved in the projection of the cash flow, the reduction in a provision consequential to a more "realistic" rate may be small in comparison to the effect on the provision of quite feasible changes in the other parameters of the estimating process.
- 6.3. There has been some theoretical argument over whether the rate of discount should be on a gross or net of tax basis. The working party has concluded, through worked examples, through logic and through parallels with appraised values, that a gross rate is appropriate where discounted provisions are used for tax purposes. Accounts drawn up on this basis would produce a zero profit in each year of a run off situation where claims and interest payments are accurately known and where the asset income matches the claim outgo.
- 6.4. The discount rate could be a set notional rate, possibly having regard to current investment conditions, or a rate based on the investment return on a set of assets considered to be matching the liabilities. The use of a notional rate based on current investment conditions can be justified on the grounds (theoretical) that the asset portfolio could be sold and reinvested in other assets. Modern dedicated bond management techniques are now such that a bond portfolio could be created to match, or nearly match, this cash flow. If the actual investment portfolio is different from a notional dedicated portfolio, then the risks deriving from this situation should be covered by a mismatch reserve. Current mythology in the UK is that such a mismatch reserve, which could take the form of an investment contingency reserve reducing asset values, is not an allowable deduction, that profit is struck in the financial accounts before setting up such a reserve and that one of the functions of the solvency margin is to cover this contingency.

- 6.5. The generation of non interest earning assets causes some modification of the above statement. Typically around 10% of a direct writers technical provisions may be covered by agents balances and similar net current assets. For lines of reinsurance business the percentages are greater. It is quite normal to see levels of 20-30% and there are companies with 80% of their assets non-interest bearing, especially with the retention of deposits by ceding companies or the setting up of letters of credit, both of which usually earn rates of interest lower than those obtainable on investments. This factor should be borne in mind even when a notional rate of interest is used, with the rate reduced by a factor based on the ratio of net current operational assets to the provisions, although great care could be exercised to check the consistency of this assumption with the original cash flow projection. If discounting is undertaken by category or by accident or underwriting year, the problems of the attribution of these net current assets increase.
- 6.6. Even if there is a notional rate based on a matching of mean terms there will probably be a re-investment risk and again this is normally not specifically provided for and regarded as a function of the solvency margin. It could be possible to construct an investment portfolio which matches the cash flow on a year by year basis. This would still leave an investment risk as the actual cash flow diverges from the expected.
- 6.7. Reverting to the US situation for claim provisions, there is a prescribed rate for each accident year. These have reference to the mid-term interest or investment rate, which is calculated each month by the Treasury based on the average yield on secondary market sales of existing Treasury securities with a remaining term to maturity of between three and nine years. The rate to be used is the average such rate over the five years prior to the beginning of the accident year. It is noted that this rate does not have reference to current investment conditions or even to conditions at the time a provision was set up. If the reserve was set up at a time when the five year average was 7% and current rates were 5%, it would appear peculiar to assume the anticipation of future investment income 2 percent points greater than that which could be earned without risk. Similarly if the reserve for that accident year needed strengthening after three years, one would still have to assume 7%. Conversely if there is a release of reserve, one could envisage some fun and games in deciding (where choice is possible) on the appropriate year for the release of reserve. On first sight a prospective rate would appear to be more appropriate than a historic smoothed rate.
- 6.8. The use of a notional rate has its place, when trying to keep things simple. However any logical presentation should always try to introduce an element of consistency between the different elements of the balance sheet. For example the basis for valuation of the assets should be consistent with the basis for the valuation of the liabilities. It is again not the purpose of this paper to stray into the reasons why illogicalities in the various financial and fiscal returns exist, merely to note that they do exist. In particular there is a taxation option against the insurer in that profits produce a tax payment but losses do not necessarily produce a tax recovery (where underwriting losses can only be carried back against profits for two years and are otherwise limited to the extent that the company's

group earns profit in the year). This is true in aggregate but not necessarily by line and there could be a delayed recovery from future profits (if there is a future for the company).

- 6.9. Moving on from notional to actual investment returns, the problems of attribution of net current assets and earnings remain, as does the reinvestment risk. If assets are valued on a market basis, as they are for most UK insurance companies' financial and solvency returns, then the discount rate should be based on current rates of return. Following on from 6.8, it is difficult to suggest articulate solutions whilst profits are reported with no regard to capital appreciation but asset valuations do have regard to such appreciation. On the other hand basing valuations on the book values of investments will lead into its own set of odd results.
- 6.10. A logical investment rate of return would embrace the total investment return, and not just interest, dividends and rents. Even if a set of assets can be identified the total investment return can only be calculated for the year just ended. The potential investment return using current market values is not known. It is possible that bringing in an adjustment for this factor leads back into notional rates. However a Form 45 yield could be computed, although this is a mixture of redemption yields on redeemable bonds and running yields on equities and property. A possibility would be for the discount rate to follow this yield subject to the adjustments, e.g. for the risk of default, set out in Regulation 59 of the Insurance Companies Act. Such a calculation would be very sensitive to the choice of the asset base. For instance if the chosen asset base were the total assets of the insurer, then the results of a rights issue re-invested in equities could well be to strengthen the solvency margin, reduce the discount rate and increase the provision (and thus to some extent offset the increase in the solvency margin). Some stretching of the imagination is required to cover this concept.
- 6.11. A "current market value" rate of discounting implies that the rate would be changed from one accounting year to the next for all underwriting/accident years. This brings in a fresh set of problems on accounting for the changes.
- 6.12. The above discussion has made a number of points highlighting the practical problem of introducing discounted provisions into accounts which are not, as a whole, articulate. It is interesting to note the ABI statement that "the rate used for discounting should not exceed a conservative estimate of the rate of investment income which the enterprise considers is most likely to be earned on its investment portfolio over the term during which the claims are to be settled. The rate is unlikely to exceed the rate then being earned on its existing portfolio and should have regard to future inflation, variability in asset values and the enterprise's investment policy." This raises the issue of how conservative conservative should be as well as not resolving the other problems posed.
- 6.13. The currency factor is significant for many UK insurers, being particularly significant for reinsurers and on funded business generally. For London market companies it is generally, although not always, possible to separate out liabilities for US\$ and Canadian \$ business, but not for other currencies. Direct companies are already subject to the implementation of the EC directive which requires 80% matching of currency assets by currency liabilities.

MAT business and reinsurance has been excluded from the regulations. Many of the reasons why the identification of a currency liability is problematic for the excluded classes are also problems in introducing an identifiable rate of discount based on asset/liability relationships.

6.14. The problems to be taken into account in considering currency aspects include

- . Reinsurances arising from excess loss protections are normally on a pool basis.
- . No statistical analysis may be made of premium and claim development in other currencies settled in £ or US\$ and usually (not always) invested in £ or US\$. In any case, the portfolio of business in each such currency is often small with resultant large fluctuation in claim amounts.
- . There is no certainty that claims will arise in the currency in which the insurance was written, particularly in the case of marine and aviation insurance.
- . Treaty reinsurances may cover a whole amalgam of currencies.
- . Liability claim settlements often depend on court settlements and can involve long delays, the duration of which varies from country to country.
- . The cash flow pattern will vary between currencies, particularly in the case of currencies where exchange control problems exist or there is a dire shortage of hard currency.
- . Recovery of insurance claims placed with offices in other countries may involve long settlement delays.
- . The rates of investment return will vary by the currency in which investment has been made.

In brief, there is a morass of issues which will emerge in the attempt to apply consistent discounting principles to a liability portfolio with a considerable overseas content. Many of these problems already exist in the estimation of the undiscounted amount and the choice of a suitable discount rate is very much a third order issue after the identification and resolution of a suitable cash flow profile.

7. Accounts and Returns

- 7.1. The establishment of a discounted provision has a number of consequences in terms of reporting structures, in particular the financial accounts and the DTI Returns. This section considers some of the consequences. The task is rendered more difficult for the financial accounts by the lack of a generally accepted starting point. These accounting issues are more than mere presentational problems, for the perceptions which arise from the presentation feed back into views on profit and hence rating (both credit and premium) and capitalisation bases.

Financial Statements under SORP

- 7.2. The ABI SORP provides one frame of reference in respect of the financial reporting of insurance companies. It deals with discounting and claims in paragraphs 37.1. to 40.1. which for reference are shown in Appendix D. Following the SORP and having regard to accounting standards, it appears that financial statements should:

- . disclose the discounting adjustments.
- . include a clearly worded accounting policy for claims reserving.
- . deal with changes in accounting policy for providing for outstanding claims from a non-discounted basis to a discounted basis in accordance with Statement of Standard Accounting Practice No. 6 (SSAP 6).
- . adopt a consistent approach to the application of discount rates and attributable investment return.
- . account for deferred tax assets and liabilities arising from differences between the bases used to recognise outstanding claims for tax and accounts purposes in accordance with SSAP15.
- . describe and quantify the effects of any revisions of key assumptions. It should be noted that these do not constitute changes in accounting policy under SSAP6.

The set of accounts shown in Appendix E incorporate one approach which adopts these tenets. It poses a number of problems so that in no way should these accounts be regarded as a recommendation. They are there to illustrate issues.

- 7.3. The SORP recommends that any discounting adjustments should be incorporated in the revenue account, although it permits these adjustments to be dealt with elsewhere in the financial statement. The adjustment is the excess of the undiscounted provision over the discounted provision. The reason that has been put forward for disclosing the adjustment is to permit readers and analysts of the accounts to re-compute the statements on an undiscounted basis, giving the reader the choice. It is also a requirement of the EC Directive. As the accounts have been prepared on a discounted basis, it is not really relevant to disclose the discounting adjustment in the revenue account itself. Notes therefore appear the most suitable form of disclosure.

- . It has been suggested that analysts may wish to make adjustments for comparability purposes and international reinsurers may wish to restate provisions in a form to which they are accustomed. If the comparisons are of trends over years, it is difficult to see why this discounting adjustment should be shown year in year out whilst other basis changes are illustrated in the year of change only. In the case of international reinsurers, some of whom may be implicitly discounting, adding back the reserving adjustment does not necessarily give a like with like adjustment.
- . If discounting has been accepted as valid, it is then difficult to see why this factor should be singled out as a noteworthy item.

The extent to which an undiscounted reserve exceeds the current cost liability is equally valid, as are a lot more assumptions.

- The additional reserve for unexpired risks (DTI definition) may have been computed having had regard to discounting (see 3.6). There has been no suggestion, and it is not suggested now, that there should be a note to show what the additional provision would have been if discounting had not been taken into account. Nor for that matter is there a note to show what the assets would have been if discounting had not been taken into account in the valuation of the assets.

In conclusion there appears to be minimal intellectual backing for singling out this disclosure requirement.

It is not considered necessary to disclose this information on the face of the revenue account because the adjustments have no direct relevance to a set of financial statements which are prepared on a discounted basis.

7.4. The SORP's guidance on accounting policy disclosure stipulates as a minimum:

- the classes or groupings of business involved.
- the methods applied, including the range of discount rates used and the mean term of the liabilities.
- the treatment of the attributable investment income.

In a theoretical sense, an accounting policy should be consistently applied and all classes would be accounted for with discounted reserves. In practice and for the reasons set out already, the approach taken by the SORP may be more practical. Included in the specimen account is a draft accounting policy note setting out the bases used for establishing claims provisions and accounting for the attributable investment return. Brief details of the key assumptions are included in the note which summarises the claims provisions, including comparatives in each case.

7.5. The requirement to show a mean term needs some comment. We presume that the mean term is $\sum n C_n / \sum C_n$ months where C_n is the assumed cash outflow in month n . In terms of informative powers this will have problems. For instance increases in assumed future inflation rates would lead to a lengthening of the mean term. Effective mean terms based on the discounted values may be considered too technical for some readers. Where the provisions relate to the type of claim described in 4.6. - the asbestosis and similar type claims - the mean term becomes a very arbitrary amount. What the reader may not understand is that the mean term is not normally a constituent of the reserving basis but a statistic calculated as a by product. The SORP does not make clear whether it requires the mean term of all liabilities or of the range for the various groupings which are being discounted. Even for a given grouping the mean term could change with the business mix within the grouping.

7.6. The example shows just one rate of discount for MAT and one for liability. Where there are a number of rates, the disclosure of ranges is recommended. Ranges are necessary to prevent the display of a lot of bewildering information. On the other hand they

also conceal, reducing the value of the disclosure.

- 7.7. SSAP6 prescribes how a change in accounting policy should be accounted for. A switch from providing for outstanding claims on a non-discounted basis to a discounted basis would be a change in policy. The change is achieved by expressing the current year revenue and profit and loss accounts under the new policy and restating the comparative figures. The brought forward profit and loss account balance then requires adjustment to reflect the cumulative effect of the new policy. The specimen profit and loss account demonstrates how these adjustments are disclosed under SSAP6. A similar approach is taken to the disclosure of material adjustments to correct a fundamental error in the previous accounts. Adjustments which reflect changes to estimates or assumptions arising from the passage of time, however, should not be accounted for by adjusting comparatives. The effect of the change will instead flow through the current year's results. If material, the change can be disclosed as an exceptional item to highlight its "distorting" effect.
- 7.8. When discounting adjustments are incorporated in the revenue account, a portion of the before tax investment return should be credited to that account. The quantification of the attributable investment return credited to the revenue account should be consistent with the discount rate used to evaluate the claims provisions.
- 7.9. To the extent that the application of a discounting accounting policy may lead to differences in profit for accounts and tax purposes, timing differences will arise. SSAP15 requires that "tax deferred or accelerated by the effect of timing differences should not be accounted for to the extent that it is probable that a liability or asset will not crystallise." Additionally, it requires that the major components of timing differences be disclosed together with the amounts provided and the full potential deferred tax in each case. Deferred tax liabilities arising from, for example, accelerated capital allowances can be offset against deferred tax assets such as tax losses or interest payable.

It is possible that the discounting methods for accounts purposes will give rise to higher provisions for accounts than for tax purposes. As a result, the accounts profit will be lower than the taxable profits and a potential deferred tax asset will arise. Under SSAP15, for prudence reasons, this asset can normally only be recognised to the extent that it is offset by deferred tax liabilities. An overall deferred tax asset is rarely set up and only in circumstances where they are expected to be recoverable without replacement by equivalent debit balances. As with unrealised gains, it appears that the prudent approach may prejudice the presentation of a true and fair view.

- 7.10. A change to a key assumption in a discounting calculation does not constitute a change in accounting policy. The resultant revenue account benefit or charge is not therefore treated as a prior year adjustment. Changes in estimates used for accounts purposes can be disclosed as exceptional items under SSAP6 if they are material. A change in a discounting assumption affects the underwriting result and, as such, could be disclosed as an exceptional item in the revenue account rather than the profit and loss account. The specimen accounts illustrate one suggestion for adjusting the comparatives in note x and reconciling the revised total of the previous year's reserves to the previously reported total.

- . Again there are a number of key assumptions so that the identification of only one particular aspect, the rate of discount, as an exceptional item is somewhat illogical.
- . A key assumption could be the real rate of return assumed. It is strange that this should be unbundled with the effect of inflation on interest rates shown as an exceptional item but not the corresponding effect of inflation on the underlying liability.
- . The link through to the asset is lost. In the case of a matched non-sterling asset and liability, the change in the sterling value of the liability is taken through reserves and not in the revenue account. Where the discount rate is linked to the return on the balance sheet value of assets, and that value changes, then it would appear consistent for such offsetting changes in the discounted claim provisions to be taken through reserves.
- . Only significant movements in the provisions on a change in a key assumption need be shown as an exceptional item. This opens up the debate on what is significant.

On reflection the inclusion of the exceptional item on the face of the balance sheet should be used very sparingly. Regular use might indicate that the exceptions are not exceptional.

- 7.11. The SORP does not appear to address some of the issues which embrace discounting and disclosure in connection with fund accounts. The discounting adjustment may only relate to closed years. Quoting a mean term may relate to the mean term from first closure.

The EC Directive

- 7.12. An alternative structure to the SORP is provided by current proposals for an insurance version of the fourth directive. For those not familiar with these proposals a resume is enclosed as Appendix F. The accounts for SORP Insurance Plc as shown in Appendix E would require presentational modification to comply with the proposed directive but the proposals appear to permit discounting where this is calculated on an actuarial basis, although it does not require the computation to be undertaken by an actuary. It may be possible to construe the line "Other technical income" in the Technical Account as the place where investment income already anticipated by the discounting process can be brought into account.
- 7.13. The proposals do, however, appear defective in their omission of unrealised appreciation as even a possibility from the non-technical account, and the treatment of fund accounting is obscure. There are currently divergent views on the interpretation of the current drafting of the proposed directive. One view is that the "true and fair" requirement will predominate, pointing towards best estimates. The other looks to one clause (52) as having precedent. This requires that the provisions are sufficient to ensure that liabilities can be met.

The DTI Returns

- 7.14. The use of discounted reserves would lead to limitations in the

appropriateness of existing requirements for Accounts and Statements. In particular, non-marine business Form 23, which analyses run-off results for claims outstanding net of reinsurance reserves, could be modified by the incorporation of an additional column recording the unwinding of the discount. The form is already deficient in its treatment of the effect of exchange rate movements on currency liabilities. It would be equally deficient in its treatment of changes in the rate of discount. Modification of forms 22, 27, 29 and 33 would also be necessary for a consistent approach to monitoring the unwinding of the discount.

- 7.15. As regards business accounted for on a three year basis, the approach taken in this paper would require an additional line to be added to Form 24 recording the investment return credited to the fund, with a corresponding modification to Form 20 and 35.
- 7.16. Additionally, both the SORP and the Directive require far greater disclosure of gross and net amounts. If such information becomes generally available, there may be a wish to expand and modify the forms further. Without these modifications, it is not possible to properly present results on a discounted basis. In particular, allocated investment return can currently be recorded only on Form 20. Claims incurred, movement in funds and run-off results recorded on other forms and calculated on a discounted basis give a distorted result if they are not presented alongside this allocated investment return.
- 7.17. Thus a proper treatment of discounting brings a further extension of forms which are already complex. We would encourage any review of alternative methods of reporting and data maintenance aimed at easing the burden on insurers whilst being sufficient to demonstrate the dynamics of the operation.

8. The Financial Effects of Discounting

- 8.1. The financial impact of a change to a discounted basis depends on several factors; in particular those discussed earlier relating to the discount rate and payment patterns adopted, and the ultimate claim reserve basis to be discounted. There are also more subtle factors at play, for example, the rate of growth of the portfolio, as instanced in Section 8.4.
- 8.2. Three areas of particular significance are:
- . Whether a move to discounted reserves for fiscal profit calculations is also adopted for company accounts and regulatory purposes.
 - . Whether the move to a discounted basis is immediate, on a "fresh start" basis, as implemented recently in USA, or on some intermediate basis.
 - . Whether offsetting relief will be introduced for provisions for future outstanding claims expenses (OUCE), or for other current tax anomalies.
- 8.3. The Fresh Start provision is described in Appendix A (1). For the purpose of the model insurer, described in Appendix G, Fresh Start

for calculation purposes means that the re-statement of opening prior year provisions on a discounted basis does not give rise to an extra tax charge in the year of change. This is in fact consistent with the approach adopted in SSAP9 in 1975 for changes in stock valuations. There are some interesting aspects of this Fresh Start (or forgiveness of income).

- . It would appear that if a company is in a run down situation the result is that less tax will be paid and the forgiveness is just that. More normally on a growing account, more tax would be paid.
- . On introduction there would be incentive not to under-reserve for claims in the year of accident preceding the change in legislation and less incentive to strengthen prior years. Such incentives could change observed statistical patterns and possibly mislead analysts.

8.4. The model of Appendix G is a straightforward one, intended specifically to follow changes in discounting claims from the revenue account (or first and second technical results in the language of the proposed E.C. insurance accounting directive), through the Profit and Loss Account and into the Balance Sheet. It deliberately simplifies cash flow assumptions, but this is unlikely to affect the reasonable comparison of the various specific alternatives explored.

8.5. The model was set up to illustrate the effects of introducing discounting into the provision for outstanding claims for insurance companies accounting on a one year basis. In particular the results of discounting being introduced only for fiscal purposes, only for accounting purposes, or both are illustrated.

To the extent that the bases for discounting may be different for fiscal and financial purposes there is a question of degree, with a "non-discounted" assumption representing the limit of a range of assumptions. Solvency margins have been shown as in line with the financial accounts, although there are yet further differences in practice between the two. The model does allow for some alternative accounting treatment, in particular, changes in accounting bases and extraordinary items. Extraordinary items, in contrast to exceptional items, are shown in the Profit and Loss Account after the post-tax profits figure has been struck and have the effect of maintaining profits at more "normal" levels in transition, with major tax charges or profit releases being carried to reserves. These are illustrated in terms of effect on the solvency ratio, i.e. published shareholders funds (net assets)/written premiums.

8.6. A specimen portfolio with a medium long tail has been set up on the model and run until mature (Year 0). In Year 1, the discounting alternatives have been imposed, and the resulting effects followed through into the profit and loss and balance sheet areas. The full spreadsheet is available on a Symphony diskette and the Appendix G shows an extract from the spreadsheet. The "appraised value" for the purpose of this model is shown in Year 10 as the net asset value at that time plus the net present value of the future cash flow. Up to Year 10 the model has assumed the same dividend on all the runs so that the year 10 appraised value provides a fair comparison.

- 8.7. The worst impact is where fiscal discounting is imposed, but company accounts and regulatory bases stay as before.

TABLE 1: FISCAL DISCOUNTING ONLY (no change in OUCE treatment)

Condition/ Year	Post-Tax Profits				Appraised Value	Solvency Margin (%)			
	0	1	5	10	Year 10	0	1	5	10
No Change	137	151	222	358	3470	41.3	41.4	41.6	41.9
Discounting:									
Immediate	137	141	198	317	3301	41.3	37.1	36.7	36.1
Fresh Start	137	141	205	326	3464	41.3	41.0	39.9	38.7

In addition there is an extraordinary tax charge of 100 in Year 0 for the scenario where discounting is introduced immediately with no fresh start allowance.

The effective tax rates (that is total tax payable dividend by pre-tax profits + gross adjustments) are dramatically increased:-

TABLE 2: FISCAL DISCOUNTING ONLY (no change in OUCE treatment)

Condition/ Year	Effective Tax Rate (%)				Claims Ratio (%)			
	0	1	5	10	0	1	5	10
No Change	36.8	36.8	36.8	36.8				
Discounting:								
Immediate	36.8	82.6	41.2	41.3	All at 78.5			
Fresh Start	36.8	41.0	41.0	41.1				

This assumes the company is not in a position to create a deferred tax asset through having potential losses elsewhere.

As can be seen, the company position is apparently, and actually worse than before. It has accelerated tax payments and lost cash flow.

In the fresh start alternative, the position is improved somewhat, but results are still worse than before the change. The appraised value for the fresh start appears to be of the same order as that where there is no discounting. The relative net asset values are 2564 and 2370 so that more weight is given to the future cash flows of the fresh start scenario. The extent to which these two factors offset each other is of course dependent on the numbers chosen for the illustration.

- 8.8. A further possibility has been explored, that being a gradual change to a fully discounted basis, i.e. one where there is no permanent forgiveness of income. The model did assume the forgiveness applied to the outstanding claims provision prior to the transition date and ran off with the outstanding claims. While this alternative eases the transition effect in solvency terms, it leaves the overall position little better after the transition period. This version would be complicated to administer and practice.
- 8.9. Where both fiscal and company accounts are discounted, despite the acceleration of tax and loss of consequent cash flow, the position is as follows:

TABLE 3: FISCAL AND COMPANY ACCOUNTS DISCOUNTED
(no change in OUCE treatment)

Condition/ Year	Post-Tax Profits				Appraised Value	Solvency Margin (%)			
	0	1	5	10	Year 10	0	1	5	10
No Change	137	151	222	358	3470	41.3	41.4	41.6	41.9
Discounting:									
Immediate	137	171	242	387	3397	41.3	49.8	49.4	48.8
Fresh Start	137	171	249	397	3560	41.3	53.7	52.6	51.4

TABLE 4: FISCAL AND COMPANY ACCOUNTS DISCOUNTED
(no change in OUCE treatment)

Condition/ Year	Apparent Tax Rates (%)				Claims Ratio (%)			
	0	1	5	10	0	1	5	10
No Change	36.8	36.8	36.8	36.8	78.5	78.5	78.5	78.5
Discounting:								
Immediate	36.8	34.8	36.5	36.5	78.5	77.3	77.3	77.3
Fresh Start	36.8	17.2	36.4	36.5	78.5	77.3	77.3	77.3

The company appears to be more profitable and reports higher solvency than would otherwise be the case after either basis of switching to discounting has been adopted. It has however lost "hidden reserves", which will be significant in a wind-up situation for the ultimate ability to meet claims payments in excess of those expected. If the same level of security for policyholders is to be achieved, this suggests that solvency margins should be maintained at a higher level after discounting than before. However, these reserves are now also available for other solvency purposes and capital efficiency of the insurance entity is improved. The company is receiving a higher return on its capital but with the loss of a hidden reserve it requires a higher return for the higher risk.

- 8.10. The previous conclusion was illustrated at a portfolio rate of growth of 10% per annum. By varying the rate of growth, it is clear that there is a critical point, generally at lower growth levels, below which the change to a discounted basis has a negative effect on the apparent financial profitability of the company in the longer run. This is essentially when earlier recognition of technical profits on a growing portfolio does not offset the loss of interest on accelerated tax payments that have been made in consequence of switching to a discounted basis. This can be illustrated for our model portfolio at zero percent growth, where it will be seen that the post tax profits are just lower than in an undiscounted position by the tenth year, although the solvency margin still remains higher.

TABLE 5: LOWER GROWTH RATE (ALL ACCOUNTS DISCOUNTED)

Condition/ Year	Post-Tax Profits				Appraised Value	Solvency Margin (%)			
	0	1	5	10	Year 10	0	1	5	10
<u>Growth 0%</u>									
No Change	137	153	205	247	2674	41.3	45.6	66.3	93.5
Fresh Start Discounting	137	168	205	245	2775	41.3	58.9	80.3	107.3

- 8.11. All calculations have so far been illustrated using a 7% maximum discount rate. If the rate of discount is varied to 5% or 9% (compared to the 9% assumed earned interest rate), then we have:-

TABLE 6: VARYING DISCOUNT RATE (ALL ACCOUNTS DISCOUNTED)

Condition/ Year	Post-Tax Profits				Appraised Value	Solvency Margin (%)			
	0	1	5	10	Year 10	0	1	5	10
<hr/>									
<u>Fresh Start</u>									
@ 5%	137	166	242	387	3532	41.3	50.5	49.8	49.0
@ 7%	137	171	249	397	3560	41.3	53.7	52.6	51.4
@ 9%	137	176	255	406	3584	41.3	56.6	55.2	53.7

Clearly lower rates of discount and shorter tailed portfolios both diminish the effects outlined above. Conversely higher rates of tax and higher rates of discount magnify the effect.

In particular, the average effect mean term of this portfolio of outstanding claims in a mature state is just under 2 years.

For some companies heavy in short-tail householder and similar classes, the mean term could be closer to 1 year - while long-tailed classes including reinsurance could be 3-5 or more. The discounting

impact relates directly as v to the power (effective mean term), with the mean term tending to be relatively independent of the rate of interest.

- 8.12. We have already indicated that the current lack of relief for anticipated future claims handling expenses (OUCE) is a major tax anomaly in the UK. These are required for supervisory purposes in company accounts. They could typically range from 2.5% to 10% of outstanding claims. We have illustrated the effect of a 5% provision being approved or, as currently, disallowed for tax - giving rise to higher fiscal profits than accounting profits. If 'fresh start' is allowed for tax purposes, then it is assumed similar provisions would apply to any similar allowance of future OUCE relief:-

Condition/ Year	Post-Tax Profits				Appraised Value	Solvency Margin (%)			
	0	1	5	10	Year 10	0	1	5	10
No Change	137	151	222	358	3470	41.3	41.4	41.6	41.9
Discounting for tax only:									
Immediate	137	141	198	317	3301	41.3	37.1	36.7	36.1
+ OUCE Relief	137	145	208	333	3377	41.3	39.0	38.3	38.5

- 8.13. As noted earlier, there are some subtle inter-actions with other company characteristics, including the particular company tax position and some other elements. It is suggested that each portfolio needs to be modelled carefully using parameters especially geared to its actual position in order to estimate the particular overall business effects of switching to a particular discounted basis.
- 8.14. The case for tax relief on equalisation reserves has been successfully made in several European countries. We regard this as yet another linked factor but have not yet extended the model to cover this.
- 8.15. If the statutory solvency basis does not move in line with financial and fiscal accounts to a discounted basis, there are some interesting conceptual issues. Such benefits as may arise to an insurer to recompense for the precipitation of tax payments arise from the more efficient use of capital. There may be constraints on such benefits if the solvency regulators do not accept discounting, or require a further statutory minimum. Some insurers may be living well within their means in terms of cover for their statutory margin as shown by their DTI Returns. Such insurers would be able to live with the benefits of the increased perceived margin in the financial accounts and gear up their operations accordingly. Insurers living close to current minima would not be able to take any benefit and indeed the precipitation of tax payments might prove hard to swallow in statutory solvency terms.
- 8.16. Previous convention papers (e.g. Chester, 1979) illustrated the potential increased stability of claims provisions in a discounting framework. This arises particularly from the potential for interaction of claims inflation and interest rates. Thus if claims

inflation were to increase, it is possible that a corresponding increase in interest rates and therefore in possible discount rates might also materialise.

There are, however, two consequences of such a position. Firstly, if the liabilities are matched by fixed interest securities, these are likely to drop in value through any rise in interest rates. Thus the liabilities may prove more stable than the assets. While the mismatching position is probably improved by discounting, further study of asset matching characteristics in varying circumstances is clearly called for.

A second aspect is the implications in stability terms for published profits, if under the proposed EEC Insurance Accounts Directive, movements in unrealised asset values could only be carried in the balance sheet, whereas any changes in the liability valuation basis would be reflected in the profit and loss account.

9. A Way Forward

9.1. The paper has described a host of difficulties in the derivation of a logical and consistent approach to the production of discounted values. It has been pointed out that even if one method could be advocated for one set of circumstances, that method might not be suitable for another set.

9.2. In terms of setting up a process for discounting liabilities there are two bases:

- . a standard formula basis or
- . an actuarial basis.

The standard formula basis will be a quick and dirty approach and will inevitably produce figures which are inappropriate for some, if not all, insurers. Similar criticism can be and has been aimed at statutory minimum solvency margins. They can be made to work, especially if they are allowed to embrace conservative principles. Actuaries can, upon receipt of a specific brief, advise on setting up such formulae, which would not form "an actuarial basis".

9.3. Discounting on an actuarial basis is a judgemental affair which links the objective of the discounting with the specific circumstances of the insurer. Our interpretation of an actuarial basis is that it is a basis which an actuary would approve and meets professional actuarial standards. These standards would require the actuary to consider a number of points. A checklist of such points for the actuary is enclosed as Appendix H based on the observations made in this paper.

9.4. If the Inland Revenue were to introduce discounting, then it is suggested that this should be done on an actuarial basis, having reference to professional guidelines which would be subject to discussion with the Revenue. However bearing in mind the costs and availability of actuarial advice, companies should be given the option of a standard formula. In practice the standard formula might turn out to be the norm except where it introduces a significant distortion.

9.5. The standard formula could be based on claims payment patterns developed in accordance with the ideas of 5.7. for gross payments. Reinsurance adjustments should be specific to the programme of a

company. The profession could give help in the development of standard patterns on the lines of the CMI. The discount rate to be adopted should have regard to prudence, possibly with $7\frac{1}{2}\%$ as a maximum value under current conditions.

- 9.6. Although fiscal, financial and statutory accounts need not be in line, we would encourage congruence of fiscal and financial accounts with explicit departures where necessary for solvency purposes.

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September 1987

DISCOUNTING IN GENERAL INSURANCE

A P P E N D I C E S

- Appendix A: (1) Discounting requirements in other countries
(2) US Tax Basis: Choice of Loss Payment Patterns
- Appendix B: The Taxation Background
- Appendix C: Annual Solvency Test of Lloyds's Underwriting Members
- Appendix D: Discounting in the context of the ABI SORP
- Appendix E: SORP Insurance Plc: Specimen Financial Statements
- Appendix F: External Reporting in the context of the EEC Insurance Directive
- Appendix G: Details of the projections
- Appendix H: Considerations to be taken into account by an actuary when discounting technical reserves on an actuarial basis.
- Appendix I: Bibliography

DISCOUNTING REQUIREMENTS IN OTHER COUNTRIES

1) Europe

a) The Netherlands

For most classes of business, there is no requirement to discount reserves for tax purposes and undiscounted provisions are acceptable to the authorities. The exception is disability insurance where benefits are often in the form of an annuity, which will be discounted for reserving purposes. Benefits may be in the form of index-linked annuities, but as inflation in the Netherlands is negative at present, these do not present any great problem! For most companies, reserves now have to be certified by an actuary, and the supervisory authorities require the actuary to state whether or not the reserves have been discounted. The actuary can decide to discount for some classes of business and not others, but this must be done consistently from one year to another, and any change in practice is likely to be queried by the supervisory authorities. It appears that the tax authorities are generally willing to accept actuarial reserves in respect of reported claims, but that IBNR provisions are more difficult to justify for tax purposes.

b) Sweden

The Swedish supervisory authorities allow companies to reserve on a generous basis and there is no requirement to discount, apart from cases where an annuity is payable in settlement of a claim. It appears that all companies set up undiscounted reserves, and these are fully allowed for tax purposes. The Swedish authorities appear to be very lenient as to the provisions which are allowable for tax purposes, and within certain limits, safety reserves are allowed in addition to outstanding claims reserves and reserves for outstanding claims settlement expenses.

c) Rest of Europe

It appears that in much of the rest of Europe, the tax authorities are more lenient than in the UK as to the reserves which are allowable for tax purposes. In most other EEC countries, insurance companies are encouraged to make tax-free transfers to catastrophe claims equalisation reserves, and undiscounted provisions for outstanding claims appear to be the norm.

2) Australia

It appears that the discounting of outstanding claims provisions for the longer tail classes (in particular, Workers' Compensation insurance) is almost universal in Australia, both for reporting and tax purposes. For short tail classes, undiscounted reserves, possibly based on case estimates, are generally used. There is no legislation which requires discounting, however, nor is there a relevant accounting standard. The notes on professional practice issued by the Institute of Australia assume that outstanding claim estimates will normally be made on a discounted basis.

Insurance legislation in Australia requires outstanding claim provisions to be "adequate" without offering any definition of adequacy. In the small number of cases where this had been tested, it has been accepted without question that discounted provisions are adequate.

Although discounted provisions are the norm for long-tail business, the tax authorities will apparently accept undiscounted provisions without question. A major court case was needed to establish that IBNR provisions should be allowed for tax purposes, however. Provisions for future catastrophes are not allowable for tax purposes.

The Institute of Actuaries of Australia takes the view that in principle provisions should be set on a discounted basis, so that any safety margin is held explicitly in addition to a "best estimate" discounted reserve. It is possible that a Professional Standard on outstanding claims provisions will be drafted in the near future.

It appears that in Australia it is unlikely that excessive margins will be incorporated in outstanding claims provisions - there is, rather, a danger that such provisions may be barely adequate.

3) USA

Legislation requiring the discounting of provisions for outstanding claims and outstanding claims expenses for tax purposes has recently been introduced in the USA and will take effect from the 1987 year of account. The discounting rules may be summarised as follows:

- i) All types of property and casualty business are to be subject to discounting.
- ii) The interest rate to be used for the loss and loss expense reserves for each accident year will be specified by the tax authorities.
- (iii) Three different groupings of NAIC (National Association of Insurance Commissioners) annual statement lines of business have been established for calculation of the appropriate payment patterns. Separate payment patterns of up to 16 years' duration are to be established for each of the major Schedule P categories (automobile liability, other liability, medical malpractice, workers' compensation and multi-peril). For the international and reinsurance lines of business displayed in Schedule O, a payment pattern is to be calculated based upon industry Schedule P summary data. Each remaining Schedule O

will have its own pattern established based upon a four-year payment duration.

The new law generally allows insurers to choose payment patterns based either on their own data or on industry data. However, industry-derived payment patterns must be used for the international and reinsurance lines of business and for very small companies.

The choice of industry or company-derived payment patterns must be made uniformly for all lines. An insurer cannot, for example, pick the industry pattern for auto liability and its own pattern for workers' compensation. In addition, the choice between industry- or company-derived patterns must be made for a five-year period; no switching will be allowed during that period without the Secretary of the Treasury's permission. Thus, the next decision point will be in 1991 for 1992 and subsequent accident years.

- iv) There are also special rules to cover the transition from the undiscounted annual statement loss reserves at the end of 1986 to the initial discounted reserves for 1987. These rules are known as the Fresh Start provision. They effectively relieve the industry from the obligation of taking into income the difference between the full-valued loss reserves at 31.12.86 and the discounted value of those same reserves at 1.1.87.

The implications of the waiver are significant. Essentially, it allows an insurer to retain the undiscounted loss deduction it received for the accident year 1986 and for prior losses when they were incurred, and to obtain additional future loss deductions for these same claims as paid losses replace the discounted reserves. The amount of these future additional deductions is equal to the previously described difference between the undiscounted and discounted value of the year-end 1986 reserves.

However, because a company could manipulate its 1986 and prior accident year loss reserves to increase the size of these additional deductions, Congress has placed restrictions on the loss reserves eligible for the Fresh Start Waiver. Reserve increases made during 1986 on 1985 and prior accident year losses are not eligible for the waiver. In addition, if a change in reserving methodology is made in evaluating the required loss reserves for the 1986 accident year, any increase in reserve levels resulting from that change is excluded from the waiver benefits.

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US TAX BASIS:
CHOICE OF LOSS PAYMENT PATTERNS

The loss payment pattern will be promulgated by the Secretary of the Treasury for 1987, and every fifth year thereafter (referred to as determination years). The patterns determined in 1987 will apply to that accident year as well as the next four accident years, at which time a new determination will be made.

The Treasury's payment pattern for each determination year will be based on the latest available published industry aggregate experience at the beginning of the determination year. For 1987, the payment patterns will be based on data from the 1986 issue of Best's Aggregates and Averages, which contains calendar year 1985 data.

In transition, the payment patterns for determination year 1987 will also apply to all prior accident years.

A company may elect to use its own loss payment patterns (based on its most recently filed annual statement at the beginning of the tax year) if it represents a "meaningful portion" of the industry's reserves.

The election to use one's own payment patterns is made in the determination year on an all lines basis, and remains in effect for five years.

Payment patterns are computed differently for each of three groupings of annual statement lines of business:

1. Schedule O lines excluding International and Reinsurance,
2. International and Reinsurance,
3. Schedule P lines.

In all cases losses are assumed to be paid in the middle of the calendar year.

For Schedule O lines excluding International and Reinsurance, loss payment patterns are computed for each line based on the two year development presented in that schedule. Remaining unpaid losses at the end of two years are assumed to be paid equally in the third and fourth years. All losses are assumed to be paid by the fourth year.

For International and Reinsurance reserves reported in Schedule O, the loss payment pattern will be based on a composite industry pattern for all Schedule P lines combined. The pattern will be determined in the same manner as applies to individual Schedule P lines. Companies will not be allowed to use their own data for these lines; the industry pattern must be used.

For Schedule P lines the payment pattern is based on the ten year development presented in that schedule. Remaining losses at the end of ten years are assumed to be paid in the eleventh year, except that if the percentage of losses treated as outstanding at the end of the tenth year is greater than the percentage of payments in the tenth year, then the payment pattern is to be extended up to an additional five years, using the percentage of payments in the tenth year successively in each subsequent year until 100% of the losses have been paid.

THE TAXATION BACKGROUND

- B.1. Companies writing London market business in the UK are treated for tax purposes just as though they were carrying on a trade and the profits of the trade are computed under normal Case 1, Schedule D principles. Thus assessable profits are based on the results shown in the audited accounts as adjusted for certain items where the tax treatment is specified and may not coincide with the accounting treatment. The results shown in the accounts will include movements during the year in technical reserves. In general the legislation indicates which expenses are not deductible for tax purposes rather than those which may be deducted. Broadly a bona-fide trading expense is allowable unless there is a specific prohibition in the legislation.
- B.2. There is no specific legislation as to whether an insurance company is entitled to create a reserve for unearned premiums, or to provide for claims which it expects to pay but has not yet done so. Accordingly we have to turn to the decisions of the courts, and also to Inland Revenue practice, for further guidance. The key items of case law are:

i) Sun Insurance v Clark

In this case the House of Lords recognised the need for an insurance company to make a provision for unearned premium as the provision in its accounts of 40% of net premium income, and it was accepted that in the circumstances the provision was realistic and should be allowed for tax purposes. On a more general basis it was decided that the allowable provision in the case of individual insurance companies was to be decided by reference to the particular facts of each case, although until recently, the Inland Revenue usually accepted that a provision of 40% of net premium income was realistic.

ii) Owen v Southern Railway of Peru

In this case the general premise was established that there is no rule of law preventing a deduction being made for contingent obligations arising from trading. However, it is necessary that the measurement of the contingent obligation be founded on a statistical basis and if there are serious defects in the method used to compute it no deduction will be allowed.

It is of interest that during the course of the leading judgement delivered in the House of Lords, Lord Ratcliffe commented on the necessity, in the case of long durations, of future liabilities being discounted before being included in the accounts.

iii) IRC v Titaghur Jute Factory Company Limited

In 1971 a law was passed in India obliging companies to pay gratuities to former employees in respect of past services. It was common ground that provision created by the company was properly computed. However, the Inland Revenue contended that only the proportion of the provision which

related to service in the year in which it was created was an expense of that period, and therefore allowable. It was held however, that the whole of the provision was allowable in the year in which it was created. As the provision related to the pre-1971 service of employees did not emerge as a liability until that year, it should be allowed in the year when the liability arose.

iv) Southern Pacific Insurance Company v Commissioners of the Inland Revenue.

In this case it was accepted that IBNR claims (properly computed) are part of the expenses of earning the company's profits for the year and are therefore an allowable deduction. It was also noted that there was no need to apply a discount because the business was short tail business, the claims being expected to be paid in the near future.

As a consequence of these cases, provisions for unexpired risk and outstanding claims are only deductible for tax purposes if they satisfy the general criteria which have been developed, namely:

- a) the liability in respect of which the provision was created has fallen due - it is not enough that there is a contingency that it will fall due in the future; and
- b) the provision must be capable of sufficiently accurate statistical calculation.

For the Inspector of Taxes to allow the whole of the provision he must be satisfied that it has been calculated on the statistical best estimate basis without an element of contingency which he would regard as a general provision. There is a fundamental difference between what is acceptable as being a prudent provision for accounting purposes and the provision which will be allowable for tax purposes. The Revenue view is that the provision must represent no more than the current expected measure of future claims.

- B.3. In the 1987 Summer Finance Act, Clause 70 deals with the tax treatment of Lloyd's reinsurance to close arrangements. The Clause provides a free standing test for the tax deductibility of the RIC close premium paid. RIC will be tax deductible to the extent that it is shown not to exceed a "fair and reasonable assessment of the value of the liabilities", where "a fair and reasonable assessment" is one with a view to producing the result that neither a profit nor a loss accrues to the underwriter to whom the premium is payable. There is no specific reference to discounting in this clause, but a view will emerge in the months to come.

ANNUAL SOLVENCY TEST OF LLOYD'S UNDERWRITING MEMBERS

The solvency test procedures require the syndicate's auditor to carry out work on the liabilities additional to the audit of the annual report and to submit returns to Lloyd's. The Lloyd's solvency test is one of the very few places where some details of the valuation bases and method of calculation to be followed in quantifying liabilities are laid down. The full text is to be found under Clause 6 of the "Annual Solvency Test of Lloyd's Underwriting Members".

The Clause:-

- . establishes the minimum reserve;
- . forbids discounting for solvency purposes;
- . states that all costs and expenses are to be included;
- . requires the estimated effect of claims cost escalation and currency exposure to be included; and
- . makes allowance for the probability of failure to collect from reinsurers.

Clause 6

- (i) Basis of reserving - Active Underwriters, Underwriting Agents and Auditors are reminded that:
 - (a) The scales of minimum percentage reserves represent the absolute minimum requirement for any Syndicate.
 - (b) The percentage must be regarded as the base to which additional provision must be made to take cognisance of a Syndicate's own experience, its estimated outstandings (included IBNR), the mix of the Account between the longer and shorter tail elements, changes in portfolio, etc.
 - (c) Some syndicates will be required to reserve sums greatly in excess of the minimum percentage reserves; this will occur particularly where the longer tail types of business represent a substantial proportion of the Account.
 - (d) Discounting of reserves is not permitted for solvency purposes (see (ii) below).
- (ii) Calculation of net reserves - On closing each Year of Account, Syndicates must establish a net reserve for solvency purposes, being the gross reserve less outward reinsurance recoveries, using the following definitions:
 - (a) The gross reserve shall be the monetary amount that is expected ultimately to be payable in order to discharge all liabilities in respect of the Years of Account covered by the reinsurance to close and shall be inclusive of all costs and expenses (legal and other) associated with such payment, and shall take account of anticipated receipts other than reinsurance recoveries. Such amount shall include the estimated effects of inflation, currency exposure and other factors which may influence the final monetary settlement between the date at which the reserve is established and the dates when the final payments will be made, except that no

discount shall be permitted for the time value of money and, therefore, all future investment returns shall be disregarded.

- (b) The outward reinsurance recoveries shall be the net monetary amounts that are expected ultimately to be received from reinsurers in respect of the Years of Account covered by the reinsurance to close. These estimated net recoverable amounts will, therefore, take account of any costs and expenses associated with such recovery and of the probability of failure to collect any part of any reinsurance for whatever reason. Account must also be taken of any additional amounts that may be payable to reinsurers.

The full net reserves for solvency purposes, for any account remaining open after the normal closing date for that account shall be established at each year end in a manner identical to that adopted for a closing account.

In calculating the provisions at the end of the first and second years of each Underwriting Account, the Managing Agents and Auditors should have in mind the reserves that will be required at the end of Year 3 for each Account in accordance with the above.

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EXTRACT ON DISCOUNTING FROM ABI SORP**DISCOUNTING AND CLAIMS****37.1**

The current accounting practice for general business claims outstanding and attributable claims handling expenses is that they are provided for at estimated ultimate settlement cost. Accordingly the provision allows for increases in claims costs between the date at which the financial statements are drawn up and the date of actual settlement but does not anticipate the future return from any investments held. As a result this future investment return provides a margin which is available should the claims development prove to be more adverse than expected. A minority of insurance enterprises employ discounting techniques for some classes of liability business.

37.2

There is a distinction to be drawn between general business claims and long-term business claims. In the case of general business, policies will normally specify the type of risks insured against and the cover provided. The amount of a claim under such a policy will not be certain but will depend upon the circumstances giving rise to the claim. There can be considerable uncertainty therefore as to the actual liability in respect of a claim until all the relevant information has been collated. In the interim period it will be necessary to estimate the amount of the liability based upon available information including the anticipated settlement date.

37.3

By contrast, long-term business insurance policies are more certain in their terms both as regards the risks that are insured against and the amount of cover provided which is often quoted in absolute terms. In some instances the claims settlement date will also be known. In these circumstances the ultimate amount of the liability under a policy can be determined with a reasonable degree of accuracy. It is possible, and appropriate, for the liability to be determined during the course of the policy by discounting the ultimate liability to a present day value by making due allowance for subsequent income flows. Due to the fact that long-term business claims will often be distant future events and future income flows will be significant, it is not possible for the Appointed Actuary to estimate properly for long-term business liabilities without discounting. The Appointed Actuary undertakes this function in his valuation of the long-term business liabilities and in his assessment of the adequacy of the long-term business fund to meet those liabilities.

The arguments which are employed against discounting of general business claims outstanding provisions emanate mainly from SSAP 2 which sets out the basic accounting concepts, one of which is the prudence concept. The prudence concept dictates that the liability to be provided for should be the full amount expected to be paid in the future and that any diminution of this amount would be tantamount to an anticipation of profit, which is contrary to the concept. It is also true that in many cases estimates of the time when payment(s) will be made, as well as the amounts which will be payable, are so uncertain and speculative that discounting of claims is unlikely to produce a more realistic figure. The principal arguments for discounting are that it would be inconsistent to recognise as an expense the anticipated effect of inflation and settlement trends on claims but not to recognise also the offsetting effect of the time value of money and that by not discounting, secret or hidden margins could be created to the detriment of current shareholders. There is a view that discounting is not an anticipation of profit in the terms of SSAP 2 because there is a fundamental difference between the premature inclusion of a source of profit or income in the profit and loss account and the techniques used in establishing the quantum of a liability.

38.2

In practice, the time taken to determine and settle a claim can vary from weeks to, for example, a case of material damage to twenty years or more in, for example, the case of industrial disease. Furthermore, some claims such as those for some classes of liability business give rise to liabilities payable at regular intervals over many years. Where claims are notified, agreed and settled in a comparatively short time period (for example motor claims not involving personal injury) discounting is unlikely to produce any significant financial effect. However, where the notification of claims, their agreement and settlement is spread over a considerable period of time, and there is a soundly based evaluation of the likely amounts and timing of claims, a case can be put for discounting these liabilities to reflect anticipated future investment income, by recording claims outstanding provisions and attributable direct claims handling expenses at the present value of anticipated cash payments.

39

Recommendations

There should be no bar on explicit discounting of general business claims, if a satisfactory estimate of the amount of the liability can be made and there is past experience on which a reasonable model of the timing of the run off of the liability can be constructed. The choice of whether or not to discount is for the enterprise to decide. Implicit discounting, i.e. an accounting practice which places a present day value on an outstanding claims provision without disclosure of that fact, is not acceptable.

39.2

The rate used for discounting liabilities should not exceed a conservative estimate of the rate of investment income which the enterprise considers is most likely to be earned on its investment portfolio over the term during which the claims are to be settled. The rate is unlikely to exceed

the rate then being earned on its existing portfolio and should have regard to future inflation, variability in asset values and the enterprise's investment policy.

39.3 Discounting adjustments should normally be incorporated in the revenue account but it is permissible to deal with these adjustments elsewhere in the financial statements. When the adjustments are incorporated in the revenue account a portion of the before tax investment income should be credited to that account. If there is no credit of investment income the increase in claims and direct claims handling expenses in succeeding accounting periods will impose a strain on revenue arising from the increase in claims liabilities as the anticipated settlement dates approach.

39.4 The accounting policy adopted for any discounting of provisions for claims outstanding and direct claims handling expenses should be disclosed in the financial statements. In particular, disclosure should be made of:

- the classes or groupings of business involved,
- the methods applied, including: (i) the range of discount rates used and (ii) the mean term of the liabilities,
- the treatment of the attributable investment income.

39.5 If an enterprise alters its accounting policy for providing for outstanding claims from a non-discounted basis to a discounted basis or from a discounted basis to a non-discounted basis, this should be dealt with as a prior year adjustment in accordance with SSAP 6 and the fact disclosed.

39.6 In the case of general business reinsurance arrangements which involve the payment by a cedant of a specified lump sum to a reinsurer on a given date in return for the payment to the cedant of specified amounts on given future dates, the lump sum paid in effect represents the present value of the specific future payments. These arrangements should be accounted for having regard to their economic substance.

40 Consequences of discounting

40.1 Where claims provisions are discounted, the related reinsurance recoveries should also be discounted so that the overall effect of discounting on the results reflects the 'net account'. Disclosure should be made in accordance with paragraph 39.4 and can be combined with the claims information.

SPECIMEN FINANCIAL STATEMENTS

REVENUE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1986
 MOTOR, FIRE AND ACCIDENT
 (Annual accounting)

	1986 <u>£'m</u>	1985 <u>£'m</u>
GROSS PREMIUMS WRITTEN	x	x
Less: reinsurance	<u>(x)</u>	<u>(x)</u>
Net premiums written	x	x
Movement in unearned premium provision	<u>x</u>	<u>x</u>
NET PREMIUM EARNED	x	x
Gross claims paid	x	x
Less: reinsurance	<u>(x)</u>	<u>(x)</u>
Net claims paid	x	x
Movement in outstanding claims provision (Note x)	x	x
Exceptional item (Note x)	<u>(x)</u>	<u>-</u>
NET CLAIMS INCURRED	x	x
MOVEMENT IN PROVISION FOR UNEXPIRED RISKS	(x)	(x)
Commissions	x	x
Administrative expenses	x	x
Movement in provision for deferred acquisition costs	x	x
Movement in provision for claims handling expenses	<u>x</u>	<u>x</u>
EXPENSES	<u>x</u>	<u>x</u>
TECHNICAL RESULT BEFORE ALLOCATED INVESTMENT RETURN	x	x
Allocated investment return	<u>x</u>	<u>x</u>
TECHNICAL RESULT AFTER ALLOCATED INVESTMENT RETURN	<u>x</u>	<u>x</u>

SPECIMEN FINANCIAL STATEMENTS (continued)

REVENUE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1986
MARINE, AVIATION AND TRANSPORT
(Fund accounting)

	1986 <u>£'m</u>	1985 <u>£'m</u>
GROSS PREMIUMS WRITTEN	x	x
Less: reinsurance	<u>(x)</u>	<u>(x)</u>
NET PREMIUMS WRITTEN	x	x
FUND BROUGHT FORWARD (Note a)	x	x
Exceptional item	<u>x</u>	<u>-</u>
	x	x
Gross claims paid	x	x
less: reinsurance	<u>(x)</u>	<u>(x)</u>
NET CLAIMS PAID	(x)	(x)
COMMISSIONS	(x)	(x)
EXPENSES	(x)	(x)
FUND CARRIED FORWARD (Note a)	(x)	(x)
	—	—
TECHNICAL RESULT BEFORE ALLOCATED INVESTMENT RETURN	x	x
Allocated investment return	x	x
	—	—
TECHNICAL RESULT AFTER ALLOCATED INVESTMENT RETURN	<u>x</u>	<u>x</u>

SPECIMEN FINANCIAL STATEMENTS (continued)

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1986

	1986 <u>£'m</u>	1985 <u>£'m</u>
Technical result		
- Motor, Fire and Accident	x	x
- Marine, Aviation and Transport	x	x
Investment return allocated to shareholders	x	x
Expenses	<u>x</u>	<u>x</u>
PROFIT BEFORE TAX	x	x
TAXATION	<u>(x)</u>	<u>(x)</u>
PROFIT AFTER TAX	x	x
PROFIT AND LOSS ACCOUNT BROUGHT FORWARD:		
As previously reported	x	x
Prior year adjustment	<u>x</u>	<u>x</u>
	<u>x</u>	<u>x</u>
PROFIT AND LOSS ACCOUNT CARRIED FORWARD	<u>x</u>	<u>x</u>

SPECIMEN FINANCIAL STATEMENTS (continued)

BALANCE SHEET AS AT 31 DECEMBER 1986

	1986 <u>£'m</u>	1985 <u>£'m</u>
INVESTMENTS	x	x
CURRENT ASSETS:		
Short term deposits	x	x
Balances with agents and insurance companies	x	x
Deferred acquisition expenses	<u>x</u>	<u>x</u>
	x	x
	<u> </u>	<u> </u>
CURRENT LIABILITIES		
Overdraft	(x)	(x)
Balances with agents and insurance companies	(x)	(x)
Other creditors and accruals	<u>(x)</u>	<u>(x)</u>
	<u>(x)</u>	<u>(x)</u>
NET CURRENT ASSETS	x	x
INSURANCE FUNDS:		
Motor, Fire and Accident:		
Claims outstanding (note x)	(x)	(x)
Unexpired risks	(x)	(x)
Unearned premiums	(x)	(x)
Marine, Aviation and Transport (Note a)	<u>(x)</u>	<u>(x)</u>
	<u>(x)</u>	<u>(x)</u>
	<u>x</u>	<u>x</u>
SHAREHOLDERS' FUNDS		
Share capital	x	x
Profit and loss account	x	x
Other reserves	<u>x</u>	<u>x</u>
	<u>x</u>	<u>x</u>

SPECIMEN FINANCIAL STATEMENTS (continued)

As a result of discounting, the provisions have been reduced by fxm at the year-end and the profit for the year increased by fxm.

Provisions for all other classes of business, principally UK and US Fire and Accident business are established on an undiscounted basis. The directors do not consider that the time and expense necessary to calculate discounting adjustments for these classes of business are justified in view of negligible impact that such adjustments would have on the results for the year.

Note a - Fund - Marine, Aviation and Transport

	1986 <u>£'m</u>	1985 <u>£'m</u>
Non-discounted gross future claims reinsurance	<u>x</u> <u>(x)</u>	<u>x</u> <u>(x)</u>
	x	x
Less:		
Non-discounted gross future premiums net of commissions reinsurance	<u>x</u> <u>(x)</u>	<u>x</u> <u>(x)</u>
	<u>x</u> x	<u>x</u> x
Discounting adjustment	<u>(x)</u>	<u>(x)</u>
Net discounted provision	x	x
Reserve for open years	<u>x</u>	<u>x</u>
FUND	<u>x</u>	<u>x</u>

Marine, Aviation and Transport business is accounted for on a three year basis under which any underwriting profits are withheld in the fund until the end of the third year.

The discount rate used is 9% (1985: 11%) and the mean term of liabilities is estimated to be 3 years (1985: 3 years). The effect of the change in assumption has been disclosed in the revenue account as an exceptional item.

As a result of discounting, the fund has been reduced by fxm at the year end and the profit for the year increased by fym.

SPECIMEN FINANCIAL STATEMENTS (continued)

Accounting policy - Claims Reserves

Provisions for claims outstanding and direct handling expenses, less the related reinsurance recoveries, are stated on a discounted basis. The company writes a significant amount of long-tail general insurance business and the directors consider that the results are more fairly presented on a discounted basis which reflects the commercial considerations of the underwriter.

A discount rate has been used which does not exceed a conservative estimate of the rate of investment income which the company considers is most likely to be earned on its investment portfolio over the term during which the claims are to be settled.

An attributable investment return which is consistent with the discount rate has been taken up in the revenue account in arriving at the insurance business result.

Note x - Claims outstanding - Motor, Fire and Accident

	1986 <u>£'m</u>	1985 <u>£'m</u>
Non-discounted gross provisions:		
- Notified claims	x	x
- IBNR	x	x
- Claims handling expenses	<u>x</u>	<u>x</u>
	x	x
Reinsurance	<u>(x)</u>	<u>(x)</u>
	x	x
Discounting adjustment	(x)	(x)
	<u>x</u>	<u>x</u>
Net discounted provisions for closed years	<u>x</u>	<u>x</u>

Provisions for liability business in the UK and USA are calculated on a discounted basis. The discount rate used is 9% (1985: 11%) and the mean term of the liabilities is estimated to be 3 years (1985: 4 years). The effect of these changes in assumptions have been disclosed in the revenue account as an exceptional charge.

EUROPEAN ECONOMIC COMMUNITY PROPOSAL FOR A COUNCIL DIRECTIVE ON THE
ANNUAL ACCOUNTS OF INSURANCE UNDERTAKINGS

Introduction

During December 1986 the EEC Commission issued a proposed Directive (hereafter, for brevity, called "Directive") on the annual accounts of insurance undertakings. This has the objective of harmonising the annual accounts of such undertakings and has a broader scope than the 'ordinary' Fourth Directive in that it applies to all insurance undertakings, regardless of their legal form. It would cover, therefore, for example Friendly Societies, although it is understood that pressure will be brought to bear on the Government to persuade the EEC Commission to allow exclusion of these bodies. 'Small Mutuals' are excluded from the Directive's proposals, although there are otherwise no exemptions or modifications for small or medium sized companies.

Copies of the Directive, together with an explanatory memorandum, are available from the DTI.

Timetable

The Commission's proposed timetable is tight and widely regarded as unrealistic. It is as follows:

- | | |
|--|------------------|
| - Opinion of European Parliament | : September 1987 |
| - Opinion of the Economic and Social Committee | : September 1987 |
| - Decision of the Council | : December 1989 |

Recognising the difficulty of the topic under consideration the Commission will allow a relatively long time for enactment of the final Directive in national law and for its subsequent implementation. The proposal is very controversial, however, and is likely to be held up in the consequent debate for some time.

Format

Note that the Directive will cover matters in the 'ordinary' Seventh Directive as well as those in the 'ordinary' Fourth Directive. The Directive is not a 'stand alone' document, it details the modifications to be made to the 'ordinary' Directives in the case of insurers.

Provision is made for the Directive's requirements to be adapted in the case of Lloyds's.

Proposals

The accounts of insurance undertakings will have to show a true and fair view of state of affairs and profit or loss.

The fundamental accounting concepts of prudence, matching (or accruals), consistency and going concern apply and the historical cost convention will be normal, although investments will be allowed at valuation (see below).

The proposed profit and loss account and balance sheet formats are given at the end of these notes. The profit and loss account is split into three parts:

- * Technical Account - Non-Life Insurance Business
- * Technical Account - Life Insurance Business
- * Non-Technical Account

The first two accounts correspond to the present revenue accounts and the third to the present profit and loss account. An interesting extension of disclosure requirements is that gross premium analysis should be given both by activity and geographically.

The formats are rigid. Only one (horizontal) form of balance sheet and one (vertical) form of profit and loss account will be allowed.

For the balance sheet the accounts will be integrated, i.e. shareholders' and policyholders' assets will be mixed together. The traditional UK view, based on the Insurance Companies Acts, that separate disclosure of assets is necessary is not approached in the Directive. It is to be hoped that the UK Government will, in any event, require separate note disclosure of the assets and liabilities of the long term business.

The Directive is rigid about set-off: none will be allowed. Thus separate disclosure is required of:

- * Gross premiums received and reinsurance premiums paid.
- * Gross claims paid and reinsurance amounts recoverable
- * Gross bonuses and rebates and amounts receivable from reinsurers.
- * Commissions paid and commissions received.
- * Profits and losses on realisation of investments.
- * Unrealised profits and losses on holding investments.
- * Gross amounts and reinsurance amounts of technical provisions i.e. unearned premiums, unexpired risks, outstanding claims (including claims incurred but not reported), provisions for bonuses and rebates.
- * Deposits withheld from reinsurers.
- * Unearned premiums and deferred acquisition costs (including commission, to be separately disclosed).

Disclosure exemptions at present available to insurers will disappear as will hidden reserving, even in the life fund.

A more detailed discussion of provisions, investment valuation and investment return is given below.

Provisions

The Directive contains an important principle: the amount of the technical provisions is to be fixed with regard to what is necessary to enable the insurance undertaking to meet all liabilities arising out of insurance contracts. They are not to be used for other purposes. By implication, deliberate overprovision is as much to be avoided as underprovision. Claims reserves, including unexpired risks provisions, should cover all expenses, including indirect costs, associated with claims settlement.

These basic principles apply to both life and non-life provisions. By implication, therefore, the implicit and explicit reserves often held by actuaries within a life fund will, in the accounts, have to be distinguished from the technical provisions to meet the insurance liabilities. Also, a summary of the principal actuarial assumptions must be disclosed in the notes to the accounts.

Where general business claims reserves are calculated on a discounted basis they must be calculated on an actuarial basis. Discounting must be disclosed in the notes to the accounts together with an explanation of the reasons for it and a statement of its effects on the assets, liabilities, financial position and profit or loss.

Implicit discounting, whether resulting from the placing of a present-day value on a provision for an outstanding claim which is expected to be settled later at a higher figure, or otherwise, is not permissible.

Investment Valuation

The Directive makes no decision as to whether investments should be valued at historical cost or market value but it does provide that whichever is incorporated in the accounts the other shall be disclosed by way of note. The value must, however, be either historical cost or current value; offset of investment reserves will not be allowed.

For unit-linked assets investments must be shown at current value. This is to allow consistency between asset valuation and the amount which must be set aside to cover the asset value-related liability to the policyholder.

Detailed rules are given for the determination of market value. Generally this will relate to stock exchange, or other active market, quoted mid-market prices, the equity method for related undertakings or a directors' valuation which has "prudent regard" to the likely realisable value. Two interesting proposals could reduce the value calculated using mid-market prices:

- * If the price is exceptionally high due to "exceptional circumstances" it should be reduced to the price which would have been obtained in the absence of those circumstances. One can foresee great practical difficulty applying this principle.
- * Where, at the date at which the accounts are drawn up, the investments have been sold or there is an intention to sell them in the short term, the market value should be reduced by the actual or estimated realisation costs.

There are special rules for land and buildings. These must be valued at least every five years, by an approved valuer, on a stated (basically arms-length open market) basis. In inter-valuation periods any perceived reduction in value should be taken up and may not be restored until a proper valuation has taken place. The realisation cost deduction applies as for investments generally.

If market value cannot be determined for an item of land or buildings, its current value shall be taken to be its historical cost.

For all classes of investment the precise method of valuation and the reason for adopting it must be disclosed. For land and buildings the date or dates of proper valuation should also be given.

Investment Return

For general business, the Directive indicates a preference for keeping investment return separate from underwriting results. It does recognise, however, that in some circumstances insurers will wish to include an element of investment return in the technical accounts. This would be especially important if claims reserves were discounted. To allow an element of choice but retain comparability the Directive calls for the disclosure of two technical results: one excluding investment return, the second including it (inter-alia), should the undertaking wish to do so. If an allocation is made, the reason for it and its basis must be disclosed in the notes to the accounts.

For long term business it is accepted that investment return is an integral part of the business and that, often, a substantial portion of it accrues to policyholders not to shareholders. The life insurance technical account, therefore, includes all those elements which are taken into account in the calculation of the participation of policyholders in the surplus and also shows, as a charge, the amount of the surplus allocated to them.

The part of investment return not used or set aside for policyholders may be allocated to the non-technical account. If it is, the reason for the allocation and its basis must be disclosed in the notes to the accounts.

For the purposes of the Directive, investment return normally comprises investment income and realised profits or losses on investment holdings. Unrealised capital gains should be taken direct to revaluation reserve unless:

- * they relate to unit-linked business

- * they relate to with-profits business and form part of an allocation to policyholders which is reflected in the life insurance provisions

in which case they may be reflected in the technical account.

This EEC insistence on an (often artificial) distinction between realised and unrealised investment gains is a serious barrier to insurance company accounts reflecting economic reality.

Conclusion

Adoption of the Directive will have far reaching effects on the accounts of UK Insurance Companies. These include:

- * A rigid format of accounts incorporating the principle of 'no netting-off'.
- * A large volume of information will be required. It is open to doubt whether this will assist the reader in understanding the accounts.
- * Adoption of the unadulterated true and fair principle for insurance company accounts. This will lead to the disappearance of hidden reserves.
- * A requirement for both life and non-life technical provisions to be best estimates of liability. Deliberate over-reserving would not be allowed and the reserves, both implicit and explicit, which at present are common within an actuarial assessment of the life fund could have to come out into the open.
- * A prescribed treatment for investment valuation and investment returns including a ban, subject only to two specific exceptions, on recognising unrealised investment gains in the profit and loss account.

Article 29

Profit and Loss Account

I Technical Account - Non-Life Insurance Business

1 Premiums

- a) Gross premiums written (Article 30)
- b) Outgoing reinsurance premiums (Article 31)
 (-)
- c) Change in provision for unearned premiums,
 net of reinsurance (+ or -) (Article 32)
- d) Earned premiums (result of a), b) and c))

2 Other technical income

3 Claims incurred (Article 33)

- a) Gross claims paid
- b) Amounts recoverable from reinsurers (-)
- c) Change in provision for claims, net of reinsurance (+ or -)
- d) Net claims incurred (result of a), b) and c))

4 Changes in other technical provisions, net of reinsurance.

- a) Change in unexpired risks provision (+ or -)
- b) Changes in other technical provisions
 not shown under other headings) (+ or -)
- c) Result of a) and b) (+ or -)

5 Bonuses and rebates (Article 34)

- a) Gross bonuses and rebates
- b) Amounts receivable from reinsurers (-)
- c) Net bonuses and rebates (a) - b))

- 6 Commissions and other technical charges.
 - a) Commissions (Article 35)
 - b) Administrative expenses (Article 36)
 - c) Commissions and profit participation from other insurance undertakings (-)
 - d) Variations in deferred acquisition costs (+ or -)
 - e) Net amount of commissions and other technical charges (result of a), b), c) and d))
- 7 Other technical charges, net of reinsurance
- 8 Subtotal (first technical result)
- 9 Changes in equalization provisions and reserves
 - a) Changes in legally prescribed equalization provisions (+ or -)
 - b) Changes in other equalization provisions and reserves (+ or -)
 - c) Result of a) and b)
- 10 Allocated investment return (+) (III 10) (Article 37)
- 11 Subtotal (second technical result) (III.1)

- 11 Bonuses and rebates (Article 34)
- a) Gross bonuses and rebates
 - b) Amounts receivable from reinsurers (-)
 - c) Net bonuses and rebates (a) - b))
- 12 Commissions and other technical charges
- a) Commissions (Article 35)
 - b) Administrative expenses (Article 36)
 - c) Commissions and profit participations from other insurance undertakings (-)
 - d) Variations in deferred acquisition costs (+ or -)
 - e) Net amount of commissions and other technical charges (result of a), b), c) and d))
- 13 Investment charges
- a) Charges, including interest, relating to land and buildings.
 - b) Other investment management charges, including interest.
- 14 Losses on the realization of investments
- 15 Value adjustments on investments
- 16 Unrealized losses on investments (Article 39)
- 17 Other technical charges
- 18 Subtotal: total technical charges
- 19 Subtotal (first technical result)
- 20 Allocated investment return (-) (III. 9) (Article 38)
- 21 Subtotal (Second technical result) (III.2)

III Non-technical account

- 1 Result of technical account - non-life insurance business (I.1)
- 2 Result of technical account - life insurance business (II.21)
- 3 Income from participating interests, apart from that shown in the technical account, with a separate indication of that derived from affiliated undertakings.
- 4 Income from other investemnts, with a separate indication of that derived from affiliated undertakings.
 - a) Income from land and buildings
 - b) Income from other investments
- 5 Value adjustments on investments (+ or -)
- 6 Investment charges
 - a) Charges, including interest, related to land and buildings
 - b) Other investment management charges, including interest
- 7 Profits on the realization of investments
- 8 Losses on the realization of investments
- 9 Allocated investment return transferred from life insurance technical account (II.20) (+)
- 10 Allocated investment return transferred to non-life insurance technical account (I.10) (-)
- 11 Non-investment income
- 12 Non-investment charges, including value adjustments
- 13 Tax on profit or loss on ordinary activities
- 14 Profit or loss on ordinary activities after taxation
- 15 Extraordinary income
- 16 Extraordinary charges
- 17 Extraordinary profit or loss
- 18 Tax on extraordinary profit or loss.
- 19 Other taxes not shown under the above items
- 20 Profit or loss for the financial year

BALANCE SHEET

Assets

- A. Subscribed capital unpaid
of which there has been called
(unless national law provides that called-up capital be shown
under "Liabilities". In that case, the part of the capital called
but not yet paid must appear as an asset either under A or under
D4)
- B. Intangible assets as described under assets headings B and C I
of Article 9 of Council Directive 78/660/EEC.
showing separately:
 - formation expenses, as defined by national law and insofar as
national law requires their disclosure in the notes on the
accounts).
 - goodwill, to the extent that it was acquired for valuable
consideration (unless national law requires its disclosure in the
notes on the accounts).
- C. Investments
 - I. Land and buildings
 - showing separately land and buildings occupied by the
insurance undertaking for its own activities
 - II. Investments in affiliated undertakings and participating
interests:
 - 1. Shares in affiliated undertakings
 - 2. Debt securities issued by, and loans to, affiliated under-
takings
 - 3. Participating interests
 - 4. Debt securities issued by, and loans to, undertakings with
which insurance undertaking is linked by virtue of a
participating interest

III. Other financial investments

1. Shares and other variable-yield securities
 2. Debt securities (Article 9)
 3. Loans guaranteed by mortgage (Article 10)
 4. Other loans (Article 10)
 5. Deposits with credit institutions (Article 11)
- IV. Investments for the benefit of life insurance policyholders who bear the investment risk (Article 12)
- V. Own shares (with an indication of their nominal value or, in the absence of a nominal value, their accounting par value) to the extent that national law permits their being shown in the balance sheet
- VI. Deposits with cedant undertakings (Article 13)

D. Debtors

1. Debtors arising out of direct insurance operations, with a separate indication of amounts owed by:
 - a) affiliated undertakings
 - b) undertakings with which the insurance undertaking is linked by virtue of a participating interest
2. Debtors arising out of reinsurance operations, with a separate indication of amounts owed by:
 - a) affiliated undertakings
 - b) undertakings with which the insurance undertaking is linked by virtue of a participating interest
3. Other debtors, with a separated indication of amounts owed by:
 - a) affiliated undertakings
 - b) undertakings with which the insurance undertaking is linked by virtue of a participating interest

4. Subscribed capital called but not paid (unless national law provides that called-up capital be shown as an asset under A)

E. Tangible assets and consumables

1. Tangible assets as listed under assets heading C II of Article 9 of Council Directive 78/660/EEC, other than land and buildings
2. Consumables

F. Cash at bank and in hand (Article 11)

G. Prepayments and accrued income

1. Accrued interest and rent (Article 14)
2. Deferred acquisition costs (Article 15)
(distinguishing those arising in non-life and life insurance business)
3. Other prepayments and accrued income.

H. Loss for the financial year (unless national law provides for it to be shown under A.VI under "Liabilities").

Liabilities

A Capital and reserves

I Subscribed capital (Article 16)

(unless national law provides for called-up capital to be shown under this item. In that case, the amounts of subscribed capital and paid-up capital must be shown separately).

II Share premium account

III Revaluation reserve

IV Reserves (Article 17)

V Profit and loss brought forward

VI Profit or loss for the financial year

(unless national law requires that this item be shown under H under "Assets" or under H under "Liabilities")

B Subordinated Liabilities (Article 18)

C Technical provisions (Articles 19 and 20)

1 Unearned premiums (and unexpired risks) (Articles 21 and 22)

(a) gross amount	.....	.....
(b) reinsurance amount (-)	.....	.....

2 Life insurance provisions (Article 23)

(a) gross amount	.....
(b) reinsurance amount (-)	.....	.....

- showing separately the amounts in respect of contracts under which the policyholder bears the investment risk

3 Claims outstanding (Article 24)

(a) gross amount	.....	.....
(b) reinsurance amount (-)	.....	.....

4. Provision for bonuses (Article 25)
and rebates.

(a) gross amount
(b) reinsurance amount (-)

5. Equalization provisions (Article 26)
required by national law

6. Other technical provisions
(a) gross amount
(b) reinsurance amount (-)

D Provisions for other liabilities and charges

1. Provisions for pensions and similar obligations

2. Provisions for taxation

3. Other provisions

E Deposits withheld from reinsurers (Article 27)

F Creditors

(for each of the following items, a separate indication must be given of amounts owed to:

(a) affiliated undertakings
(b) undertakings with which the insurance undertaking is linked by virtue of a participating interest)

1. Debenture loans, showing convertible loans separately
2. Amounts owed to credit institutions
3. Creditors arising out of direct insurance operations
4. Creditors arising out of reinsurance operations
5. Other creditors, including tax and social security

G Accruals and deferred income

H Profit for the financial year

(unless national law provides for it to be shown under A VI under "Liabilities")

APPENDIX G

DETAILS OF THE DISCOUNTING MODEL

2180 Working Party /PSA : Claims Discounting Model

Note: Cash flows are approximate.

Disc21a	Run#1	No discounting for accounts	No discounting for tax without GUCE relief										
Discounted as below		without GUCE relief	0	1	2	3	4	5	6	7	8	9	10
*****		*****											
Accounts	n	Net Premiums Written	2958	2994	2853	3138	3452	3797	4177	4595	5054	5560	6116
Tax	n	less change in UPR Provision	-107	-118	-130	-143	-157	-173	-190	-209	-230	-253	-279
Fresh start	n												
Grad. start	n	Earned Premiums	2251	2476	2723	2996	3295	3625	3987	4386	4825	5307	5836
Switch Yr	1	Net Claims Incurred	1767	1544	2138	2352	2597	2846	3130	3443	3787	4166	4583
+GUCE relief	n	Commissions	354	389	428	471	518	570	627	689	758	834	917
*****		Expenses	281	309	340	374	412	453	496	546	603	663	730
Initial N.V.P	(Yr -9)	Deferred Acqn Costs	-16	-18	-19	-21	-24	-26	-28	-31	-34	-38	-42
100%													
N.V.P Growth		First Technical Result	-135	-149	-163	-180	-198	-217	-239	-263	-289	-318	-350
Yrs 1 to 10	(Yrs -9 to 0)	Allocated investment Return	0	0	0	0	0	0	0	0	0	0	0
10.00%	10.00%												
		Second Technical Result	-135	-149	-163	-180	-198	-217	-239	-263	-289	-318	-350
UPR % MWP	GUCE (% O.S. CLMS)												
30.00%	3.00%	Investment Return	352	388	427	470	517	569	626	689	758	834	917
		less Allocated above	0	0	0	0	0	0	0	0	0	0	0
Ult Loss ratio (incl UCE/GUCE)													
79.50%		Taxation	80	88	97	107	117	129	142	157	172	190	209
Commissions (% MWP)		Profits after Tax	137	151	166	183	202	222	244	269	296	326	358
15.30%													
		Extraordinary tax charge	0	0	0	0	0	0	0	0	0	0	0
Defd Acqn Costs (% UPR)		Net Prior Year Adjustment	9	0	0	0	0	0	0	0	0	0	0
15.00%		Dividends declared	47	52	57	63	69	76	84	92	101	111	122
		Shareholders Funds	973	1073	1182	1302	1435	1581	1742	1919	2113	2328	2564
Expenses (EP%)													
12.50%		Solvency Margin (Year-end)	41.3%	41.4%	41.6%	41.5%	41.6%	41.8%	41.7%	41.6%	41.3%	41.2%	41.2%
Interest Rate		Pre-tax Profits (Co A/Cs)	217	239	263	290	319	351	387	425	468	515	567
9.00%		Pre-tax Profits (Fiscal)	329	352	377	405	436	469	507	548	593	642	697
Discount Rate		Effective Tax Rate	36.9%	36.9%	36.9%	36.9%	36.9%	36.9%	36.9%	36.9%	36.9%	36.9%	36.9%
7.00%													
		Cash Flow: Prems - Cash	1976	2174	2391	2630	2894	3183	3501	3851	4236	4660	5125
Tax Rate		Expenses	-281	-309	-340	-374	-412	-453	-496	-546	-603	-663	-730
35.00%		Claims paid	-1540	-1694	-1864	-2050	-2255	-2481	-2729	-3002	-3302	-3632	-3995
		Tax (prev year)	-73	-80	-89	-97	-107	-117	-129	-142	-157	-172	-190
Initial Dividend (Year -9)		Dividends (prev year)	-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111
20		Subtotal : non-interest items	39	43	47	52	57	63	69	76	83	91	100
		Interest on Investments	351	386	425	467	514	566	623	685	754	830	913
Shareholders Funds		Interest on Cash Flow (1/2 yr)	2	2	2	2	3	3	3	3	4	4	5
500		Total : Cash Flow to Invests	392	431	474	522	574	631	695	764	841	925	1019
Weeks of Credit													
8		Investments at end yr	4289	4719	5193	5714	6288	6919	7614	8378	9219	10144	11162
		O/s claims - undiscounted	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
		- fiscal years 0 - n	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
Appraisal Rate %		- fiscal years n onward	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
10.00%		- normal company a/cs	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
		Paid claims	1540	1694	1864	2050	2255	2481	2729	3002	3302	3632	3995
Appraised Value @ 31.12 Year 10		Incurred Claims (Company A/cs)	1797	1944	2138	2352	2597	2946	3130	3443	3787	4166	4583
= Net Assets + NPV(Future cash)													
3470		Claims Ratio	78.5%	79.3%	78.5%	78.5%	78.5%	78.5%	79.5%	79.5%	79.5%	78.5%	78.5%
Av. o/s term	1.9 years	Cum Claims payments ratio		3.100	0.600	3.750	0.950	0.900	0.940	0.970	0.990	1.000	1.000

Disc21a	Run82	No discounting for accounts	discounting for tax purposes with a switch starting in year 1 without OUCE relief											
Discounted as below			without OUCE relief	0	1	2	3	4	5	6	7	8	9	10
Accounts	n	Net Premiums Written		2358	2594	2853	3138	3432	3797	4177	4595	5054	5560	6115
Tax	y	less change in UPR Provision		-107	-119	-139	-143	-157	-173	-194	-209	-238	-253	-278
Fresh start	n													
Grad. start	n	Earned Premiums		2251	2476	2723	2996	3295	3623	3987	4386	4825	5307	5828
Switch Yr	1	Net Claims Incurred		1787	1944	2138	2352	2587	2844	3120	3443	3797	4166	4559
OUCE relief	n	Commissions		354	389	428	471	518	570	627	689	758	834	917
		Expenses		281	309	340	374	412	453	498	548	603	663	730
Initial N.W.P.	(Yr -9)	Deferred Acqn Costs		-18	-18	-19	-21	-24	-25	-28	-31	-34	-38	-42
	1000													
N.W.P. Growth		First Technical Result		-135	-149	-163	-180	-198	-217	-239	-263	-289	-318	-350
Yrs 1 to 10	(Yrs -9 to 0)	Allocated Investment Return		0	0	0	0	0	0	0	0	0	0	0
10.00%	10.00%													
UPR x NWP	OUCE (x O.S. CLMS)	Second Technical Result		-135	-149	-163	-180	-198	-217	-239	-263	-289	-318	-350
50.00%	5.00%													
		Investment Return		352	388	422	459	504	554	609	670	736	809	890
		less Allocated above		0	0	0	0	0	0	0	0	0	0	0
Ult Loss ratio (incl UCE/OUCE)		Taxation		80	90	106	115	126	139	153	168	184	202	223
78.50%														
Commissions (x WP)		Profits after Tax		137	141	152	164	180	198	218	239	263	289	317
15.00%														
		Extraordinary tax charge		0	100	0	0	0	0	0	0	0	0	0
Defd Acqn Costs (x UPR)		Net Prior Year Adjustment		0	0	0	0	0	0	0	0	0	0	0
15.00%		Dividends declared		47	52	57	63	69	76	84	92	101	111	122
		Shareholders Funds		973	963	1053	1158	1271	1393	1527	1674	1836	2013	2207
Expenses (EPX)		Solvency Margin (Year-end)		41.3%	37.1%	37.1%	37.0%	36.8%	36.7%	36.6%	36.4%	36.3%	36.2%	36.1%
12.50%														
Interest Rate		Pre-tax Profits (Co A/Cs)		217	239	258	279	307	327	370	407	447	491	539
9.00%		Pre-tax Profits (Fiscal)		229	290	303	329	361	397	436	479	526	579	636
		Effective Tax Rate		36.3%	32.5%	41.1%	41.1%	41.1%	41.1%	41.1%	41.1%	41.1%	41.1%	41.1%
Discount Rate														
7.00%		Cash Flow: Preas - Com		1976	2174	2391	2630	2894	3183	3501	3851	4236	4660	5125
Tax Rate		Expenses		-281	-309	-340	-374	-412	-453	-498	-548	-603	-663	-730
35.00%		Claims paid		-1540	-1694	-1864	-2050	-2255	-2481	-2729	-3002	-3302	-3632	-3995
		Tax (prev year)		-73	-80	-196	-106	-115	-126	-139	-153	-168	-184	-202
Initial Dividend (Year -9)		Dividends (prev year)		-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111
20		Subtotal : non-interest items		39	43	-62	43	49	54	59	65	72	79	88
		Interest on Investments		351	386	425	457	502	552	607	667	733	806	886
Shareholders Funds		Interest on Cash Flow (1/2 yr)		2	2	-3	2	2	2	3	3	3	4	4
500		Total : Cash Flow to Invests		392	431	360	502	553	608	669	735	808	889	977
Weeks of Credit		Investments at end yr		4288	4719	5078	5388	6133	6741	7489	8144	8933	9341	10819
3														
		O/s claims - undiscounted		2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
		- fiscal years 0 - n		2492	2412	2654	2919	3211	3532	3895	4274	4701	5171	5688
Appraisal Rate x		- fiscal years n onward		2193	2412	2654	2919	3211	3532	3895	4274	4701	5171	5688
10.00%		- normal company x/cx		2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
		Paid claims		1540	1694	1864	2050	2255	2481	2729	3002	3302	3632	3995
Appraised Value @ 31.12 Year 10		Incurred Claims (Company A/Cs)		1787	1944	2138	2352	2587	2844	3120	3443	3797	4166	4559
= Net Assets + NPV(Future cash)		Claims Ratio		78.3%	78.3%	79.5%	78.5%	78.5%	78.5%	78.5%	79.5%	79.5%	79.5%	79.5%
3301														
Av. o/s term	1.9 years	Cum Claims payments ratio		0.406	0.600	0.750	0.850	0.900	0.940	0.970	0.990	1.000	1.000	1.000

Disc21a		Run#3	No discounting for accounts	discounting for tax purposes with a fresh start in year 1 without OUCE relief										
Discounted as below			without OUCE relief	0	1	2	3	4	5	6	7	8	9	10
Accounts	n		Net Premiums Written	2358	2594	2853	3138	3452	3787	4177	4595	5054	5560	6116
Tax	y		less change in UPR Provision	-107	-118	-130	-143	-157	-173	-190	-209	-230	-253	-278
Fresh start														
Gross start	n		Earned Premiums	2251	2476	2723	2996	3295	3623	3987	4386	4825	5307	5833
Switch Yr	1		Net Claims Incurred	1767	1944	2138	2352	2587	2846	3130	3443	3787	4166	4583
OUCE relief	n		Commissions	354	389	428	471	518	570	627	689	758	834	917
			Expenses	281	309	340	374	412	453	498	548	603	663	730
Initial N.M.P.	(Yr -9)		Deferred Acqn Costs	-16	-18	-19	-21	-24	-26	-28	-31	-34	-38	-42
1000														
N.M.P. Growth			First Technical Result	-135	-149	-163	-180	-198	-217	-239	-263	-289	-318	-350
Yrs 1 to 10	(Yrs -9 to 0)		Allocated Investment Return	0	0	0	0	0	0	0	0	0	0	0
10.00%	10.00%													
			Second Technical Result	-135	-149	-163	-180	-198	-217	-239	-263	-289	-318	-350
UPR % N.M.P.	OUCE (% O.S. CLMS)		Investment Return	352	388	425	468	514	563	620	682	749	823	904
50.00%	5.00%		less Allocated above	0	0	0	0	0	0	0	0	0	0	0
Ult Loss ratio (incl) UCE/OUCE			Taxation	80	98	108	118	130	143	156	172	189	207	227
78.50%														
Commissions (% UPR)			Profits after Tax	137	141	155	170	187	205	225	247	271	297	326
15.00%														
Defd Acqn Costs (% UPR)			Extraordinary tax charge	0	0	0	0	0	0	0	0	0	0	0
15.00%			Gross Prior Year Adjustment	3	0	0	0	0	0	0	0	0	0	0
			Dividends declared	47	52	57	63	69	76	84	92	101	111	122
			Shareholders Funds	973	1063	1161	1268	1386	1515	1656	1811	1980	2166	2378
Expenses (EPS)			Solvency Margin (Year-end)	41.3%	41.0%	40.7%	40.4%	40.1%	39.9%	39.6%	39.4%	39.2%	39.3%	38.7%
12.50%														
Interest Rate			Pre-tax Profits (Co A/Cs)	217	239	263	288	317	347	381	418	459	504	553
9.00%			Pre-tax Profits (Fiscal)	229	280	308	338	371	407	447	491	539	592	650
Discount Rate			Effective Tax Rate	38.9%	41.3%	41.3%	41.0%	41.0%	41.3%	41.3%	41.1%	41.1%	41.1%	41.1%
7.00%														
Tax Rate			Cash Flow: Premis - Comm	1976	2174	2391	2630	2894	3183	3501	3851	4236	4660	5126
35.00%			Expenses	-291	-309	-340	-374	-412	-453	-498	-548	-603	-663	-730
			Claims paid	-1540	-1694	-1864	-2050	-2255	-2481	-2729	-3002	-3302	-3632	-3995
			Tax (prev year)	-73	-80	-98	-108	-118	-130	-143	-156	-172	-189	-207
Initial Dividend (Year -9)			Dividends (prev year)	-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111
20			Subtotal : non-interest items	39	43	37	41	45	50	55	61	68	75	83
			Interest on Investments	351	388	425	468	512	563	618	679	746	819	900
Shareholders Funds			Interest on Cash Flow (1/2 yr)	2	2	2	2	2	2	3	3	3	3	4
500			Total : Cash Flow to Invests	392	431	464	509	560	615	676	743	817	898	987
Weeks of Credit			Investments at end yr	4288	4719	5182	5661	6251	6866	7542	8295	9102	9999	10996
8														
			O/s claims - undiscounted	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
			- fiscal years 0 - n	2492	2412	2654	2919	3211	3532	3885	4274	4701	5171	5688
Appraisal Rate %			- fiscal years n onward	2193	2412	2654	2919	3211	3532	3893	4274	4701	5171	5688
10.00%			- normal company a/cs	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
			Paid claims	1540	1694	1864	2050	2255	2481	2729	3002	3302	3632	3995
Appraised Value @ 31.12 Year 10			Incurred Claims (Company A/cs)	1767	1944	2138	2352	2587	2846	3130	3443	3787	4166	4583
= Net Assets + NPV(Future cash)			Claims Ratio	78.5%	78.3%	78.5%	78.5%	78.5%	78.5%	78.5%	78.5%	78.5%	79.5%	78.5%
3464														
Av. o/s term			Cum Claims payments ratio		0.420	0.600	0.750	0.850	0.920	0.940	0.970	0.990	1.000	1.000

Disc21a	Run#4	Discounting for accounts	discounting for tax purposes with a switch starting in year 1 without OUCE relief										
Discounted as below		without OUCE relief	0	1	2	3	4	5	6	7	8	9	10
-----		-----											
Accounts	y	Net Premiums Written	2358	2594	2853	3128	3452	3797	4177	4595	5054	5560	6118
Tax	y	less change in UPR Provision	-107	-118	-130	-143	-157	-173	-190	-209	-230	-253	-278
Fresh start	n												
Grad. start	n	Earned Premiums	2251	2476	2723	2996	3295	3625	3987	4386	4825	5307	5838
Switch Yr	1	Net Claims Incurred	1767	1914	2105	2315	2547	2802	3082	3390	3729	4102	4512
HOUCE relief	n	Commissions	354	389	426	471	518	578	627	689	758	834	917
-----		Expenses	291	309	340	374	412	453	498	548	603	663	730
Initial N.W.P	(Yr -9)	Deferred Acqn Costs	-16	-18	-19	-21	-24	-26	-29	-31	-34	-38	-42
	1000												
N.W.P Growth		First Technical Result	-135	-119	-138	-144	-159	-174	-191	-210	-231	-254	-280
Yrs 1 to 10	(Yrs -9 to 0)	Allocated Investment Return	0	122	134	148	162	179	198	216	238	261	288
10.00%	10.00%												
		Second Technical Result	-135	3	4	4	4	5	5	6	7	7	8
UPR % NWB	OUCE (% O.S. CLMS)												
50.00%	5.00%	Investment Return	352	338	422	459	504	554	609	670	736	809	890
		less Allocated above	0	-122	-134	-148	-162	-179	-196	-216	-238	-261	-288
Ult Loss ratio (incl UCE/OUCE)													
78.50%		Taxation	80	90	106	115	126	139	153	168	184	202	223
Commissions (% WP)		Profits after Tax	197	171	185	200	220	242	266	292	321	353	387
15.00%													
		Extraordinary tax charge	0	0	0	0	0	0	0	0	0	0	0
Defd Acqn Costs (% UPR)		Net Prior Year Adjustment	0	200	0	0	0	0	0	0	0	0	0
15.00%		Dividends declared	47	52	57	63	69	76	84	92	101	111	122
		Shareholders Funds	373	1292	1421	1538	1709	1875	2057	2257	2477	2713	2994
Expenses (EPX)													
12.50%		Solvency Margin 1Year-end)	41.3%	49.3%	49.8%	49.5%	49.5%	49.4%	49.2%	49.1%	49.0%	48.9%	48.8%
Interest Rate		Pre-tax Profits (Co A/Cs)	217	269	291	315	346	381	418	460	505	555	610
9.00%		Pre-tax Profits (Fiscal)	229	290	303	329	361	397	436	479	526	579	636
Discount Rate													
7.00%		Effective Tax Rate	36.3%	34.3%	36.4%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%
Tax Rate		Cash Flow: Prems - Cash	1976	2174	2391	2630	2894	3183	3501	3851	4236	4660	5126
35.00%		Expenses	-281	-309	-340	-374	-412	-453	-498	-548	-603	-663	-730
		Claims paid	-1340	-1694	-1864	-2050	-2255	-2481	-2729	-3002	-3302	-3632	-3995
		Tax (prev year)	-73	-80	-198	-104	-115	-126	-139	-153	-168	-184	-202
Initial Dividend (Year -3)		Dividends (prev year)	-43	-47	-32	-57	-63	-69	-76	-84	-92	-101	-111
20		Subtotal : non-interest items	39	43	-62	43	49	54	59	65	72	79	98
		.....Interest on Investments	351	386	425	457	502	552	607	667	733	805	886
Shareholders Funds		.....Interest on Cash Flow (1/2 yr)	2	2	-3	2	2	2	3	3	3	4	4
500		Total : Cash Flow to Invests	392	431	360	502	553	608	669	735	808	889	977
Weeks of Credit													
8		Investments at end yr	4289	4719	5078	5580	6133	6741	7409	8144	8953	9841	10819
		O/s claims - undiscounted	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
		- fiscal years 0 - n	2492	2412	2654	2919	3211	3532	3885	4274	4701	5171	5688
Appraisal Rate %		- fiscal years n onward	2193	2412	2654	2919	3211	3532	3885	4274	4701	5171	5688
10.00%		- normal company A/Cs	2492	2412	2654	2919	3211	3532	3885	4274	4701	5171	5688
		Paid claims	1540	1694	1864	2050	2255	2481	2729	3002	3302	3632	3995
Appraised Value @ 31.12 Year 10		Incurred Claims (Company A/Cs)	1767	1914	2105	2315	2547	2802	3082	3390	3729	4102	4512
= Net Assets + NPV(Future cash)													
3597		Claims Ratio	78.5%	77.3%	77.9%	77.3%	77.9%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%
Av. o/s term	1.9 years	Cue Claims payments ratio		0.400	0.500	0.750	0.950	0.900	0.940	0.970	0.990	1.000	1.000

Disc21a	Run05	Discounting for accounts	discounting for tax purposes with a fresh start in year 1 without OUCE relief	0	1	2	3	4	5	6	7	8	9	10
Discounted as below		without OUCE relief												
Accounts	y	Net Premiums Written		2358	2394	2853	3138	3452	3797	4177	4595	5054	5560	6116
Tax	y	less change in UPR Provision		-107	-118	-130	-143	-157	-173	-190	-209	-230	-253	-279
Fresh start	y													
Grad. start	n	Earned Premiums		2251	2476	2723	2996	3295	3625	3987	4386	4825	5307	5838
Switch Yr	1	Net Claims Incurred		1767	1914	2105	2315	2547	2802	3082	3390	3729	4102	4512
HOUCE relief	n	Commissions		354	389	429	471	518	570	627	689	758	834	917
		Expenses		281	309	340	374	412	453	498	548	603	663	730
Initial N.W.P	(Yr -9)	Deferred Acqn Costs		-18	-18	-19	-21	-24	-26	-28	-31	-34	-38	-42
	1000													
N.W.P Growth		First Technical Result		-135	-119	-130	-144	-159	-176	-191	-210	-231	-254	-280
Yrs 1 to 10	(Yrs -9 to 0)	Allocated Investment Return		0	122	134	148	162	179	196	216	238	261	288
10.00%	10.00%													
		Second Technical Result		-135	3	4	4	4	5	5	6	7	7	8
UPR % NWP	OUCE (% O.S. CLRS)													
50.00%	5.00%	Investment Return		352	388	428	468	514	565	620	682	749	823	904
		less Allocated above		0	-122	-134	-148	-162	-179	-196	-216	-238	-261	-288
Ult Loss ratio (incl OUCE/OUCE)														
78.50%		Taxation		90	98	108	118	130	143	156	172	189	207	227
Commissions (% WP)		Profits after Tax		137	171	188	206	227	249	273	300	329	361	397
15.00%														
		Extraordinary tax charge		0	0	0	0	0	0	0	1	0	0	0
Defd Acqn Costs (% UPR)		Gross Prior Year Adjustment		0	299	3	0	0	0	0	0	0	0	0
15.00%		Dividends declared		47	52	57	63	69	76	84	92	101	111	122
		Shareholders Funds		973	1392	1523	1667	1824	1997	2186	2394	2622	2872	3146
Expenses (EPX)														
12.50%		Solvency Margin (Year-end)		41.3%	53.7%	53.4%	53.1%	52.8%	52.6%	52.3%	52.1%	51.9%	51.7%	51.4%
Interest Rate		Pre-tax Profits (Co A/Cs)		217	259	296	325	359	391	429	471	518	569	624
9.00%		Pre-tax Profits (Fiscal)		229	280	308	338	371	407	447	491	539	592	650
Discount Rate		Effective Tax Rate		38.8%	17.2%	38.4%	36.4%	38.4%	36.4%	38.4%	36.4%	38.4%	36.4%	38.5%
7.00%														
		Cash Flow: Prems - Com		1976	2174	2391	2630	2894	3183	3501	3851	4236	4660	5129
Tax Rate		Expenses		-291	-309	-340	-374	-412	-453	-498	-548	-603	-663	-730
35.00%		Claims paid		-1540	-1694	-1864	-2050	-2255	-2481	-2729	-3002	-3302	-3632	-3995
		Tax (prev year)		-73	-80	-90	-109	-118	-130	-143	-156	-172	-189	-207
Initial Dividend (Year -9)		Dividends (prev year)		-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111
20		Subtotal : non-interest items		39	43	37	41	45	50	56	61	68	75	83
		Interest on Investments		351	386	425	466	512	563	618	679	746	819	900
Shareholders Funds		Interest on Cash Flow (1/2 yr)		2	2	2	2	2	2	3	3	3	3	4
500		Total : Cash Flow to Invest		392	431	464	509	560	615	676	743	817	898	987
Weeks of Credit		Investments at end yr		4298	4719	5182	5691	6251	6866	7542	8285	9102	9999	10936
9														
		O/s claims - undiscounted		2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
		- fiscal years 0 - n		2492	2612	2654	2919	3211	3532	3885	4274	4701	5171	5688
Appraisal Rate X		- fiscal years n onward		2193	2412	2654	2919	3211	3532	3885	4274	4701	5171	5688
10.00%		- normal company a/cs		2492	2612	2654	2919	3211	3532	3885	4274	4701	5171	5688
		Paid claims		1540	1694	1864	2050	2255	2481	2729	3002	3302	3632	3995
Appraised Value @ 31.12 Year 10		Incurred Claims (Company A/cs)		1767	1914	2105	2315	2547	2802	3082	3390	3729	4102	4512
= Net Assets + NPV(Future cash)														
3560		Claims Ratio		78.5%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%
Av. o/s term	1.9 years	Cum Claims payments ratio		0.433	0.500	0.750	0.850	0.900	0.940	0.970	0.990	1.000	1.000	1.000

Disc21a	Run#	Discounting for accounts	discounting for tax purposes with a gradual switch starting in year 1 without OUC relief										
Discounted as below		without OUC relief	0	1	2	3	4	5	6	7	8	9	10
Accounts	y	Net Premiums Written	2358	2394	2853	3130	3452	3797	4177	4595	5054	5560	6116
Tax	y	less change in UPR Provision	-107	-118	-130	-143	-157	-173	-190	-209	-230	-253	-279
Fresh start	n												
Grad. start	y	Earned Premiums	3251	2476	2723	2996	3295	3625	3987	4386	4825	5307	5838
Switch Yr	1	Net Claims Incurred	1767	1792	2028	2269	2519	2786	3074	3387	3729	4102	4512
4OUC relief	n	Commissions	354	389	428	471	518	570	627	689	758	834	917
		Expenses	281	309	340	374	412	453	498	548	603	663	730
Initial M.W.P.	(Yr -9)	Deferred Acqn Costs	-18	-18	-19	-21	-24	-26	-29	-31	-34	-38	-42
	1800												
M.W.P Growth		First Technical Result	-135	3	-54	-97	-130	-158	-183	-207	-231	-254	-280
Yrs 1 to 10	(Yrs -9 to 0)	Allocated Investment Return	0	0	58	161	135	163	189	213	237	251	289
10.00%	10.00%												
		Second Technical Result	-135	3	4	4	4	5	5	6	7	7	8
UPR % MWP	OUC % (X O.S. CLNS)												
50.00%	5.00%	Investment Return	352	388	425	463	507	556	611	671	737	810	891
		less Allocated above	0	0	-58	-101	-135	-163	-189	-213	-237	-251	-289
Ult Loss ratio (incl UCE/OUC)													
78.50%		Taxation	88	139	133	132	137	145	156	169	185	205	223
Commissions (% MWP)		Profits after Tax	137	253	238	224	240	253	272	294	322	353	388
15.00%													
		Extraordinary tax charge	0	0	0	0	0	0	0	0	0	0	0
Defd Acqn Costs (% UPR)		Net Prior Year Adjustment	0	0	0	0	0	0	0	0	0	0	0
15.00%		Dividends declared	47	52	57	63	69	76	84	92	101	111	122
		Shareholders Funds	975	1174	1355	1525	1698	1875	2063	2266	2487	2729	2994
Expenses (EP%)													
12.50%		Solvency Margin (Year-end)	41.3%	45.3%	47.5%	48.6%	49.2%	49.4%	49.4%	49.3%	49.2%	49.1%	49.0%
Interest Rate		Pre-tax Profits (Co A/Cs)	217	391	371	366	377	398	427	463	507	556	611
3.00%		Pre-tax Profits (Fiscal)	229	396	379	377	398	413	444	483	528	579	637
Discount Rate		Effective Tax Rate	36.3%	35.4%	35.2%	36.3%	36.2%	36.3%	36.4%	36.2%	36.5%	36.3%	36.3%
7.00%													
		Cash Flow: Prems - Coms	1976	2174	2391	2530	2694	3183	3501	3851	4236	4650	5126
Tax Rate		..... Expenses	-281	-309	-340	-374	-412	-453	-498	-549	-603	-663	-730
35.00%		..... Claims paid	-1540	-1694	-1864	-2050	-2255	-2481	-2729	-3002	-3302	-3632	-3995
		..... Tax (prev year)	-73	-84	-139	-133	-132	-137	-145	-156	-169	-185	-203
Initial Dividend (Year -9)		..... Dividends (prev year)	-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111
20		Subtotal : non-interest items	39	43	-3	16	32	44	53	62	71	79	97
		.....Interest on Investments	351	386	425	463	506	554	608	668	734	807	887
Shareholders Funds		.....Interest on Cash Flow (1/2 yr)	2	2	0	1	1	2	2	3	3	4	4
500		Total : Cash Flow to Invests	392	431	421	480	539	600	664	733	808	889	978
Years of Credit		Investments at end yr	4280	4719	5148	5619	6158	6758	7422	8155	8963	9852	10830
3													
		O/s claims - undiscounted	2492	2741	3016	3317	3649	4114	4415	4857	5342	5877	6464
		- fiscal years 0 - n	2492	2590	2754	2973	3237	3543	3888	4274	4701	5171	5689
Appraisal Rate %		- fiscal years n onward	2492	2590	2754	2973	3237	3543	3888	4274	4701	5171	5688
10.00%		- normal company 4/cs	2492	2590	2754	2973	3237	3543	3888	4274	4701	5171	5688
		Paid claims	1540	1634	1864	2050	2253	2481	2729	3002	3302	3632	3995
Appraised Value @ 31.12 Year 10		Incurred Claims (Company A/cs)	1767	1792	2029	2269	2519	2786	3074	3387	3729	4102	4512
= Net Assets + NPV(Future cash)													
3405		Claims Ratio	78.5%	72.4%	74.3%	75.7%	76.5%	76.3%	77.1%	77.2%	77.2%	77.3%	77.3%
Av. o/s term	1.9 years	Cum Claims payments ratio		0.400	0.500	0.750	0.350	0.300	0.340	0.370	0.390	1.000	1.000

Disc21a	Run#7	Discounting for accounts	discounting for tax purposes	with a fresh start in year 1	without OUCE relief								
Discounted as below		without OUCE relief	0	1	2	3	4	5	6	7	8	9	10

Accounts	y	Net Premiums Written	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358
Tax	y	Less change in UPR Provision	-107	0	0	0	0	0	0	0	0	0	0
Fresh start	y												
Grad. start	n	Earned Premiums	2231	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358
Switch Yr	1	Net Claims Incurred	1767	1828	1838	1844	1847	1849	1850	1851	1851	1851	1851
OUCE relief	n	Commissions	354	354	354	354	354	354	354	354	354	354	354
		Expenses	281	295	295	295	295	295	295	295	295	295	295
Initial N.W.P.	(Yr -9)	Deferred Acqn Costs	-16	0	0	0	0	0	0	0	0	0	0
	1000												
N.W.P Growth		First Technical Result	-135	-119	-128	-134	-138	-140	-141	-141	-141	-141	-141
Yrs 1 to 10	(Yrs -9 to 0)	Allocated Investment Return	0	122	121	127	141	143	144	144	145	145	145
0.00%	10.00%												
		Second Technical Result	-135	3	3	3	3	3	3	3	3	3	3
UPR % NWP	OUCE (% O.S. CLRS)												
50.00%	5.00%	Investment Return	352	383	406	425	441	456	469	482	494	507	519
		less Allocated above	0	-122	-131	-137	-141	-143	-144	-144	-145	-145	-145
Ult Loss ratio (incl UCE/OUCE)													
79.50%		Taxation	80	95	99	103	107	111	115	119	124	128	132
Commissions (% WP)		Profits after Tax	137	169	179	188	197	205	213	221	229	237	245
15.00%													
		Extraordinary tax charge	0	0	0	0	0	0	0	0	0	0	0
Defd Acqn Costs (% UPR)		Gross Prior Year Adjustment	0	299	0	0	0	0	0	0	0	0	0
15.00%		Dividends declared	47	52	57	63	69	76	84	92	101	111	122
		Shareholders Funds	373	1289	1311	1636	1763	1892	2022	2152	2280	2406	2529
Expenses (EP%)													
12.50%		Solvency Margin (Year-end)	41.3%	59.3%	64.1%	69.4%	74.8%	80.3%	85.8%	91.3%	96.7%	102.0%	107.3%
Interest Rate		Pre-tax Profits (Co A/Cst)	217	264	278	291	303	316	328	341	353	365	377
9.00%		Pre-tax Profits (Fiscal)	229	272	283	294	305	317	329	341	353	365	377
Discount Rate		Effective Tax Rate	36.3%	16.3%	35.7%	35.4%	35.2%	35.1%	35.1%	35.0%	35.0%	35.0%	35.0%
7.00%													
		Cash Flow: Prees + Com	1978	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004
Tax Rate		..... Expenses	-281	-295	-295	-295	-295	-295	-295	-295	-295	-295	-295
35.00%		..... Claims paid	-1540	-1657	-1730	-1779	-1808	-1827	-1840	-1847	-1850	-1851	-1851
		..... Tax (prev year)	-73	-80	-95	-99	-103	-107	-111	-115	-119	-124	-128
Initial Dividend (Year -9)		..... Dividends (prev year)	-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111
20		Subtotal : non-interest items	39	-75	-168	-225	-265	-294	-317	-336	-352	-366	-380
		....Interest on Investments	351	386	414	435	453	469	483	497	510	523	536
Shareholders Funds		....Interest on Cash Flow (1/2 yr)	2	-3	-8	-10	-12	-13	-14	-15	-16	-16	-17
500		Total : Cash Flow to Invests	392	308	238	200	177	162	152	146	143	140	138
Weeks of Credit		Investments at end yr	4288	4595	4839	5083	5209	5371	5529	5689	5812	5952	6091
8													
		G/s claims - undiscounted	2492	2586	2606	2673	2922	2945	2937	2961	2962	2962	2962
		- fiscal years 0 - n	2492	2364	2471	2536	2575	2597	2608	2612	2612	2612	2612
Appraisal Rate %		- fiscal years n onward	2193	2364	2471	2536	2575	2597	2608	2612	2612	2612	2612
10.00%		- normal company a/cs	2492	2364	2471	2536	2575	2597	2608	2612	2612	2612	2612
		Paid claims	1540	1657	1730	1779	1808	1827	1840	1847	1850	1851	1851
Appraised Value @ 31.12 Year 10		Incurred Claims (Company A/Cst)	1767	1828	1838	1844	1847	1849	1850	1851	1851	1851	1851
= Net Assets + NPV(Future cash)													
2775		Claims Ratio	78.5%	77.5%	77.3%	78.2%	78.3%	78.4%	78.5%	78.5%	78.5%	78.5%	78.5%
Av. a/s term	1.9 years	Cum Claims payments ratio		0.400	0.500	0.750	0.850	1.000	0.940	0.970	0.990	1.000	1.000

Disc21a	Run#	No discounting for accounts	no discounting for tax without OUCE relief										
Discounted as below		without OUCE relief	0	1	2	3	4	5	6	7	8	9	10
Accounts	n	Net Premiums Written	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358
Tax	n	less change in UPR Provision	-107	0	0	0	0	0	0	0	0	0	0
Fresh start	n												
Grad. start	n	Earned Premiums	2251	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358
Switch Yr	1	Net Claims Incurred	1767	1851	1851	1851	1851	1851	1851	1851	1851	1851	1851
+OUCE relief	n	Commissions	354	354	354	354	354	354	354	354	354	354	354
		Expenses	281	295	295	295	295	295	295	295	295	295	295
Initial M.W.P	(Yr -9)	Deferred Acqn Costs	-16	0	0	0	0	0	0	0	0	0	0
	1000												
M.W.P Growth		First Technical Result	-135	-141	-141	-141	-141	-141	-141	-141	-141	-141	-141
Yrs 1 to 10	(Yrs -9 to 0)	Allocated Investment Return	0	0	0	0	0	0	0	0	0	0	0
0.00%	10.00%												
		Second Technical Result	-135	-141	-141	-141	-141	-141	-141	-141	-141	-141	-141
UPR % MWP	OUCE (% O.S. CLRS)												
50.00%	5.00%	Investment Return	352	383	406	426	442	457	471	484	496	509	521
		less Allocated above	0	0	0	0	0	0	0	0	0	0	0
Ult Less ratio (incl OCE/OUCE)		Taxation	80	88	95	101	106	111	115	120	124	129	133
79.50%													
Commissions (% WP)		Profits after Tax	137	153	170	184	195	205	214	222	231	239	247
15.00%													
		Extraordinary tax charge	0	0	0	0	0	0	0	0	0	0	0
Defd Acqn Costs (% UPR)		Net Prior Year Adjustment	0	0	0	0	0	0	0	0	0	0	0
15.00%		Dividends declared	47	52	57	63	69	76	84	92	101	111	122
		Shareholders Funds	973	1075	1188	1299	1434	1563	1693	1824	1954	2091	2235
Expenses (EP%)													
12.50%		Solvency Margin (Year-end)	41.3%	45.6%	50.4%	55.5%	60.8%	66.3%	71.8%	77.4%	82.9%	88.3%	93.5%
Interest Rate		Pre-tax Profits (Co A/Cst)	217	241	265	284	301	316	329	342	355	367	379
9.00%		Pre-tax Profits (Fiscal)	229	251	271	290	308	317	330	343	355	367	379
Discount Rate		Effective Tax Rate	36.8%	36.4%	35.9%	35.4%	35.2%	35.1%	35.1%	35.2%	35.3%	35.3%	35.3%
7.00%													
		Cash Flow: Prem - Comm	1978	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004
Tax Rate		Expenses	-281	-295	-295	-295	-295	-295	-295	-295	-295	-295	-295
35.00%		Claims paid	-1540	-1657	-1738	-1779	-1808	-1827	-1840	-1847	-1850	-1851	-1851
		Tax (prev year)	-73	-80	-88	-95	-101	-106	-111	-115	-120	-124	-129
Initial Dividend (Year -9)		Dividends (prev year)	-43	-47	-52	-57	-63	-69	-75	-84	-92	-101	-111
20		Subtotal : non-interest items	39	-75	-161	-221	-262	-293	-317	-336	-352	-367	-381
		Interest on Investments	351	386	414	436	454	470	483	499	512	525	538
Shareholders Funds		Interest on Cash Flow (1/2 yr)	2	-3	-7	-10	-12	-13	-14	-15	-16	-17	-17
500		Total : Cash Flow to Invests	392	308	246	205	180	164	154	147	144	142	140
Weeks of Credit		Investments at end yr	4238	4595	4841	5046	5226	5399	5544	5691	5835	5977	6117
8													
		O/s claims - undiscounted	2492	2586	2686	2879	2922	2945	2957	2961	2962	2962	2962
		- fiscal years 0 - n	2492	2586	2686	2879	2922	2945	2957	2961	2962	2962	2962
Appraisal Rate %		- fiscal years n onward	2492	2586	2686	2879	2922	2945	2957	2961	2962	2962	2962
10.00%		- normal company a/cs	2492	2586	2686	2879	2922	2945	2957	2961	2962	2962	2962
		Paid claims	1540	1657	1730	1779	1808	1827	1840	1847	1850	1851	1851
Appraised Value @ 31.12 Year 10		Incurred Claims (Company A/cs)	1767	1851	1851	1851	1851	1851	1851	1851	1851	1851	1851
= Net Assets + NPV(Future cash)													
2574		Claims Ratio	78.5%	78.5%	78.5%	78.5%	79.5%	78.5%	78.5%	78.5%	78.5%	79.5%	79.5%
Av. o/s term	1.9 years	Cum Claims payments ratio		0.400	0.600	0.750	0.850	0.900	0.940	0.970	0.998	1.000	1.000

Disc21a	Run09	Discounting for accounts	discounting for tax purposes with a fresh start in year 1 without OUC relief										
Discounted as below		without OUC relief	0	1	2	3	4	5	6	7	8	9	10
-----		-----											
Accounts	y	Net Premiums Written	2358	2594	2859	3138	3452	3797	4177	4595	5054	5560	6116
Tax	y	less change in UPR Provision	-107	-118	-130	-143	-157	-173	-190	-209	-230	-253	-278
Fresh start	y												
Grnd. start	n	Earned Premiums	2251	2476	2723	2994	3295	3625	3987	4386	4825	5307	5838
Switch Yr	f	Net Claims Incurred	1767	1921	2113	2325	2557	2813	3094	3404	3744	4119	4530
+OUC relief	n	Commissions	354	389	428	471	518	570	627	689	758	834	917
-----		Expenses	291	309	340	374	412	453	498	548	603	663	730
Initial M.W.P	1Yr -91	Deferred Acqn Costs	-16	-18	-19	-21	-24	-26	-28	-31	-34	-38	-42
	1000												
M.W.P Growth		First Technical Result	-135	-125	-139	-153	-168	-185	-203	-224	-246	-271	-298
Yrs 1 to 10	(Yrs -9 to 0)	Allocated Investment Return	0	91	100	118	121	123	146	161	177	195	214
10.00%	10.00%												
		Second Technical Result	-135	-35	-39	-43	-47	-52	-57	-63	-69	-76	-94
UPR % MWP	OUC % (O.S. CLNS)												
50.00%	5.00%	Investment Return	352	388	426	469	515	566	622	683	751	825	907
		less Allocated above	0	-91	-100	-118	-121	-123	-146	-161	-177	-195	-214
Ult Loss ratio (incl OUC/OUC)													
78.50%		Taxation	98	95	105	115	127	139	153	169	184	203	223
Commissions (% MWP)		Profits after Tax	137	166	183	200	220	242	266	292	320	352	387
15.00%													
		Extraordinary tax charge	0	0	0	0	0	0	0	0	0	0	0
Defd Acqn Costs (% UPR)		Gross Prior Year Adjustment	0	222	0	0	0	0	0	0	0	0	0
15.00%		Dividends declared	47	52	57	63	69	76	84	92	101	111	122
		Shareholders Funds	973	1310	1435	1573	1724	1890	2072	2272	2491	2732	2996
Expenses (EP%)													
12.50%		Solvency Margin (Year-end)	41.3%	50.5%	58.3%	65.1%	69.9%	74.8%	79.8%	84.9%	89.9%	94.9%	99.9%
Interest Rate		Pre-tax Profits (Co A/Cs)	217	262	287	316	347	381	418	460	505	553	609
9.36%		Pre-tax Profits (Fiscal)	229	273	300	329	362	398	437	480	527	579	636
Discount Rate		Effective Tax Rate	36.9%	19.7%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%
5.00%													
		Cash Flow: Prems - Com	1976	2174	2391	2630	2894	3183	3501	3851	4236	4660	5126
Tax Rate		Expenses	-281	-309	-340	-374	-412	-453	-498	-548	-603	-663	-730
35.00%		Claims paid	-1540	-1694	-1864	-2050	-2255	-2481	-2729	-3002	-3302	-3632	-3995
		Tax (prev year)	-73	-80	-95	-105	-115	-127	-139	-153	-168	-184	-203
Initial Dividend (Year -9)		Dividends (prev year)	-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111
20		Subtotal : non-interest items	39	43	40	44	48	53	59	65	72	79	87
		Interest on Investments	351	386	425	467	513	563	619	680	748	822	903
Shareholders Funds		Interest on Cash Flow (1/2 yr)	2	2	2	2	2	2	3	3	3	4	4
500		Total : Cash Flow to Invests	392	431	466	512	563	619	681	748	823	905	995
Weeks of Credit		Investments at end yr	4288	4719	5185	5697	6261	6880	7561	8309	9132	10037	11031
8													
		O/s claims - undiscounted	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
		- fiscal years 0 - n	2492	2497	2747	3021	3324	3656	4022	4424	4866	5353	5888
Appraisal Rate %		- fiscal years n onward	2270	2437	2747	3021	3324	3656	4022	4424	4866	5353	5888
10.00%		- normal company a/cs	2492	2497	2747	3021	3324	3656	4022	4424	4866	5353	5888
		Paid claims	1540	1694	1864	2050	2255	2481	2729	3002	3302	3632	3995
Appraised Value @ 31.12 Year 10		Incurred Claims (Company A/cs)	1767	1921	2113	2325	2557	2913	3094	3404	3744	4119	4530
= Net Assets + NPV(Future cash)													
3332		Claims Ratio	78.5%	77.6%	77.6%	77.6%	77.6%	77.6%	77.6%	77.6%	77.6%	77.6%	77.6%
Av. o/s term	1.3 years	Cum Claims payments ratio		0.480	0.600	0.750	0.920	0.900	0.940	0.970	0.990	1.000	1.000

Disc21a	Run#10	Discounting for accounts	discounting for tax purposes with a fresh start in year 1 without OUCE relief										
Discounted as below		without OUCE relief	0	1	2	3	4	5	6	7	8	9	10
=====		-----											
Accounts	y	Net Premiums Written	2359	2594	2853	3138	3452	3797	4177	4595	5054	5560	6116
Tax	y	less change in UPR Provision	-187	-118	-130	-143	-157	-173	-190	-209	-228	-253	-279
Fresh start	y												
Grad. start	n	Earned Premiums	2251	2476	2723	2996	3295	3625	3987	4386	4825	5307	5836
Switch Yr	1	Net Claims Incurred	1767	1906	2097	2307	2538	2791	3070	3377	3715	4087	4495
COUCE relief	n	Commissions	354	389	426	471	519	570	627	689	759	834	917
=====		Expenses	281	309	340	374	412	453	498	548	603	663	730
Initial M.W.P	(Yr -9)	Deferred Acqn Costs	-16	-18	-19	-21	-24	-26	-28	-31	-34	-38	-42
1000													
M.W.P Growth		First Technical Result	-135	-111	-123	-135	-148	-163	-180	-198	-217	-239	-263
Yrs 1 to 10	(Yrs -9 to 0)	Allocated Investment Return	0	151	166	182	200	220	243	267	293	323	355
10.00%	10.00%												
		Second Technical Result	-135	39	43	47	52	57	63	69	76	84	92
UPR % MWP	OUCE (% G.S. CLMS)												
50.00%	5.00%	Investment Return	352	388	426	468	514	564	619	680	747	820	900
		less Allocated above	0	-151	-166	-182	-200	-220	-243	-267	-293	-323	-355
Ult Loss ratio (incl OUC/OUCE)													
78.50%		Taxation	90	100	110	121	133	146	160	175	192	211	232
=====		=====											
Commissions (% WP)		Profits after Tax	137	176	193	212	232	255	280	307	337	370	406
13.30%													
=====		=====											
		Extraordinary tax charge	0	0	0	0	0	0	0	0	0	0	0
Defd Acqn Costs (% UPR)		Gross Prior Year Adjustment	0	371	0	0	0	0	0	0	0	0	0
15.00%		Dividends declared	47	52	57	63	69	76	84	92	101	111	122
		Shareholders Funds	973	1468	1804	1753	1917	2096	2292	2507	2743	3001	3285
Expenses (EPS)													
12.50%		Solvency Margin (Year-end)	41.3%	58.6%	56.2%	55.9%	55.5%	55.2%	54.9%	54.6%	54.3%	54.0%	53.7%
=====		=====											
Interest Rate		Pre-tax Profits (Co A/Cs)	217	275	304	333	365	401	440	482	529	581	638
9.00%		Pre-tax Profits (Fiscal)	229	287	315	346	379	416	457	501	550	604	663
=====		=====											
Discount Rate		Effective Tax Rate	36.3%	15.5%	36.3%	36.3%	36.4%	36.4%	36.4%	36.4%	36.4%	36.4%	36.4%
9.00%													
=====		=====											
		Cash Flow: Prems - Coms	1976	2174	2391	2630	2894	3183	3501	3851	4236	4660	5126
Tax Rate		Expenses	-281	-309	-340	-374	-412	-453	-498	-548	-603	-663	-730
35.00%		Claims paid	-1540	-1694	-1884	-2050	-2255	-2481	-2729	-3002	-3302	-3632	-3995
		Tax (prev year)	-73	-80	-100	-110	-121	-133	-146	-160	-175	-192	-211
Initial Dividend (Year -9)		Dividends (prev year)	-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111
20		Subtotal : non-interest items	39	43	53	59	67	77	88	99	111	124	139
		Interest on Investments	351	386	425	466	512	562	617	677	744	817	897
Shareholders Funds		Interest on Cash Flow (1/2 yr)	2	2	2	2	2	2	2	3	3	3	4
500		Total : Cash Flow to Invests	392	431	461	508	556	611	672	739	811	891	979
=====		=====											
Weeks of Credit		Investments at end yr	4288	4719	5100	5686	6242	6854	7525	8263	9074	9965	10944
8													
=====		=====											
		O/s claims - undiscounted	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464
=====		- fiscal years 0 - n	2492	2334	2567	2824	3106	3417	3759	4134	4548	5003	5503
Appraisal Rate %		- fiscal years n onward	2122	2334	2567	2824	3106	3417	3759	4134	4548	5003	5503
10.00%		- normal company a/cs	2492	2334	2567	2824	3106	3417	3759	4134	4548	5003	5503
		Paid claims	1540	1694	1884	2050	2255	2481	2729	3002	3302	3632	3995
Appraised Value @ 31.12 Year 10		Incurred Claims (Company A/cs)	1767	1906	2097	2307	2538	2791	3070	3377	3715	4087	4495
= Net Assets + NPV(Future cash)													
3584		Claims Ratio	78.5%	77.0%	77.0%	77.4%	77.0%	77.4%	77.0%	77.0%	77.0%	77.4%	77.4%
=====		=====											
Av. o/s term	1.9 years	Cum Claims payments ratio		0.400	0.600	0.750	0.850	0.900	0.940	0.970	0.990	1.000	1.000
=====		=====											

Disc21a	Run011	No discounting for accounts	discounting for tax purposes with a switch starting in year 1 but with OUCE relief											
Discounted as below		but with OUCE relief	0	1	2	3	4	5	6	7	8	9	10	
Accounts		Net Premiums Written	2358	2594	2853	3128	3452	3797	4177	4595	5054	5560	6116	
Tax		less change in UPR Provision	-107	-118	-130	-143	-157	-173	-190	-209	-230	-253	-279	
Fresh start														
Grad. start		Earned Premiums	2251	2476	2723	2996	3293	3625	3987	4386	4825	5307	5838	
Switch Yr		Net Claims Incurred	1767	1944	2139	2352	2587	2846	3130	3443	3787	4166	4583	
+OUCE relief		Commissions	354	389	428	471	518	570	627	689	758	834	917	
		Expenses	281	309	340	374	412	453	498	548	603	663	730	
Initial N.W.P. (Yr -9)		Deferred Acqn Costs	-16	-18	-19	-21	-24	-28	-28	-31	-34	-38	-42	
1000														
N.W.P. Growth		First Technical Result	-135	-149	-163	-180	-196	-217	-239	-263	-289	-318	-350	
Yrs 1 to 10 (Yrs -9 to 0)		Allocated Investment Return	0	0	0	0	0	0	0	0	0	0	0	
10.00%		Second Technical Result	-135	-149	-163	-180	-196	-217	-239	-263	-289	-318	-350	
UPR % NWP		Investment Return	352	388	424	464	510	560	616	678	745	819	901	
50.00%		less Allocated above	0	0	0	0	0	0	0	0	0	0	0	
OUCE (% O.S. CLMS)														
5.00%		Taxation	80	94	103	112	123	135	149	164	180	198	217	
Ult Loss ratio (incl OUCE/OUCE)														
79.50%		Profits after Tax	137	145	158	172	189	208	229	251	276	303	333	
Commissions (% WP)		Extraordinary tax charge	0	56	0	0	0	0	0	0	0	0	0	
15.00%		Net Prior Year Adjustment	0	0	0	0	0	0	0	0	0	0	0	
Def Acqn Costs (% UPR)		Dividends declared	47	52	57	63	69	76	84	92	101	111	122	
15.00%		Shareholders Funds	973	1011	1112	1221	1340	1472	1617	1775	1950	2142	2353	
Expenses (EP%)		Solvency Margin (Year-end)	41.3%	39.0%	39.0%	38.9%	38.9%	38.8%	38.7%	38.6%	38.6%	38.5%	38.5%	
12.50%														
Interest Rate		Pre-tax Profits (Co A/Cs)	217	239	261	284	312	343	377	415	456	501	551	
9.00%		Pre-tax Profits (Fiscal)	229	269	294	320	352	387	425	468	514	565	621	
Discount Rate		Effective Tax Rate	38.3%	62.7%	39.4%	39.5%	39.5%	39.5%	39.5%	39.5%	39.5%	39.5%	39.5%	
7.50%														
Tax Rate		Cash Flow: Prees - Costs	1976	2174	2391	2630	2894	3183	3501	3851	4236	4660	5126	
35.00%		Expenses	-281	-309	-340	-374	-412	-453	-498	-548	-603	-663	-730	
Initial Dividend (Year -9)		Claims paid	-1540	-1694	-1864	-2050	-2255	-2481	-2729	-3002	-3302	-3632	-3995	
29		Tax (prev year)	-73	-80	-130	-103	-112	-123	-135	-149	-164	-180	-198	
Shareholders Funds		Dividends (prev year)	-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111	
500		Subtotal : non-interest items	39	43	-15	45	52	57	63	69	76	84	92	
Weeks of Credit		Interest on Investments	351	386	425	461	507	558	613	675	742	816	897	
8		Interest on Cash Flow (1/2 yr)	2	2	-1	2	2	3	3	3	3	4	4	
Appraisal Rate %		Total : Cash Flow to Invests	392	431	409	510	561	617	679	747	821	903	993	
10.00%														
Appraised Value @ 31.12 Year 10		Investments at end yr	4288	4719	5128	5637	6199	6816	7495	8242	9063	9966	10960	
= Net Assets + NPV(Future cash)														
3377		O/s claims - undiscounted	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464	
Av. o/s term		- fiscal years 0 - n	2492	2412	2654	2919	3211	3532	3885	4274	4701	5171	5688	
1.9 years		- fiscal years n onward	2193	2412	2654	2919	3211	3532	3885	4274	4701	5171	5688	
		- normal company a/cs	2492	2741	3016	3317	3649	4014	4415	4857	5342	5877	6464	
		Paid claims	1540	1694	1864	2050	2255	2481	2729	3002	3302	3632	3995	
		Incurred Claims (Company A/Cs)	1767	1944	2138	2352	2587	2846	3130	3443	3787	4166	4583	
		Claims Ratio	78.5%	73.5%	78.5%	78.5%	78.5%	78.5%	78.5%	78.5%	78.5%	78.5%	78.5%	
		Cum Claims payments ratio		0.400	0.600	0.750	0.950	0.900	1.040	0.970	0.990	1.000	1.000	

6120 Working Party /WBA - Claims Outstanding Model

Note: Cash flows are approximate

[illegible]

Discounting for accounts		Discounting for tax purposes with a switch starting in year 1 without DUE relief																					
without DUE relief																							
Accounts	Y	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Net Premiums Written	Y	2350	2194	2053	2130	3052	3797	4177	4338	3854	3568	6116											
Less change in UPR Provision	Y	-107	-110	-130	-143	-157	-173	-189	-200	-238	-253	-276											
Excess Premiums	N	2243	2084	1923	1987	3205	3970	4366	4538	3616	3315	5840											
Net Claims Incurred	Y	1767	1616	1505	1517	2002	2402	2682	2799	2424	2152	4312											
Commissions	N	354	309	426	474	516	570	627	689	758	834	917											
Expenses	N	281	349	346	374	412	453	496	548	643	683	730											
Deferred Acq Costs	(Yr -9)	-16	-10	-10	-21	-21	-26	-20	-30	-34	-36	-42											
First Technical Result	1996	-135	-135	-130	-144	-158	-174	-191	-210	-231	-254	-280											
Allocated Investment Return	Y	6	122	130	148	162	179	196	216	238	261	286											
Second Technical Result	1998	-135	3	4	4	4	5	5	6	7	7	8											
Investment Return	Y	252	262	422	459	584	554	666	678	736	806	898											
Loss Allocated Above	Y	0	-122	-124	-140	-162	-179	-196	-216	-238	-261	-286											
Taxation	Y	88	88	100	115	126	139	153	168	184	202	223											
Profit after Tax	Y	137	171	185	240	228	242	266	282	321	353	387											
Extraordinary tax charge	Y	0	0	0	0	0	0	0	0	0	0	0											
Net Prior Year Adjustment	Y	0	200	0	0	0	0	0	0	0	0	0											
Dividends declared	Y	47	52	57	63	69	76	84	92	101	111	122											
Shareholders Funds	Y	973	1292	1421	1550	1709	1875	2057	2257	2477	2710	2964											
Solvency Margin (Year-end)	Y	41.3%	49.8%	49.8%	49.5%	49.5%	49.4%	49.2%	49.3%	49.8%	49.8%	49.8%											
Pre-tax Profit (Go A/Cs)	Y	217	268	291	315	346	384	410	460	505	555	610											
Pre-tax Profit (Fiscal)	Y	229	280	303	329	361	397	436	478	526	578	636											
Effective Tax Rate	Y	30.0%	34.3%	30.4%	36.5%	36.5%	38.3%	38.3%	38.3%	36.5%	36.5%	36.5%											
Cash Flow: Premiums - Claims	Y	1076	2174	2391	2630	2894	3183	3501	3851	4236	4660	5126											
Expenses	Y	-201	-269	-340	-374	-412	-453	-496	-548	-643	-683	-730											
Claims paid	Y	-1540	-1894	-1965	-2255	-2255	-2481	-2779	-3082	-3382	-3632	-3935											
Net (Pre-tax) Profit	Y	-73	-80	-100	-106	-115	-126	-139	-153	-168	-184	-202											
Dividends (Pre-tax)	Y	-43	-47	-52	-57	-63	-69	-76	-84	-92	-101	-111											
Subtotal : non-interest items	Y	39	43	46	49	51	53	55	57	59	61	63											
Interest on Investments	Y	331	306	425	457	502	552	607	667	733	806	886											
Interest on Cash Flow (1/2 yr)	Y	2	2	2	2	2	2	2	2	2	2	2											
Total : Cash Flow to Invest	Y	308	431	310	342	553	600	669	725	800	889	977											
Investments at end yr	Y	4298	4719	5078	5580	6193	6741	7400	8146	8953	9841	10819											
U/s claims - undiscounted	Y	2492	2741	3016	3317	3649	4011	4415	4857	5342	5877	6464											
- fiscal years 0 - n	Y	2492	2741	2954	2919	3211	3532	3885	4274	4701	5179	5680											
- fiscal years n onward	Y	2193	2412	2654	2918	3211	3532	3885	4274	4701	5179	5680											
- normal company A/Cs	Y	2492	2412	2654	2919	3211	3532	3885	4274	4701	5179	5680											
Paid claims	Y	1548	1694	1804	2450	2255	2481	2729	3002	3282	3632	3995											
Incurred Claims (Company A/Cs)	Y	1767	1815	2105	2315	2547	2802	3082	3390	3729	4102	4512											
Claims Ratio	Y	76.5%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%	77.3%											
Cum Claims payments ratio	Y	0.100	0.600	0.750	0.850	0.900	0.940	0.970	0.990	1.000	1.000	1.000											
Appraised Value X	Y	18.80%																					
Appraised Value 0-31.12 Year 10	Y	3397																					
- Net Assets & MUI (future cash)	Y																						
Appr of term	Y	1.9 years																					

CONSIDERATIONS TO BE TAKEN INTO ACCOUNT BY AN ACTUARY WHEN
DISCOUNTING TECHNICAL RESERVES ON AN ACTUARIAL BASIS

The following is a checklist (not necessarily exhaustive) of factors which should be taken into account by the actuary:-

- . The context and purpose of the investigation, including the degree of prudence required.
- . The framework of the other elements of the reserving basis.
- . The nature and term of the liabilities and the associated cash flow patterns.
- . The nature of the underlying claims portfolio and any changes that have occurred over time.
- . The currency of denomination of the liability and any underlying currencies.
- . The extent and security of the reinsurance programme.

The actuarial basis should be chosen having regard to the following principles (again, the list is not exhaustive):-

- . Claims estimation in general insurance is an inexact process and discounting may introduce further uncertainties.
- . In many contexts discounting is of second order importance when compared with the initial determination of the size of the liability and the dates on which settlement is likely to be made.
- . Consideration should be given to whether claim payments should be projected net of reinsurance, or gross of reinsurance with reinsurance projected separately. The EEC directive requires reinsurance to be considered separately.
- . Projected claim payments before discounting should be fully adequate, including allowance for future claims escalation and inflation.
- . Settlement patterns should be appropriate to the class of business concerned and should normally be consistent with the past experience of that class unless there are good reasons for any deviation. If "industry patterns" are available they may be used where they are appropriate to the particular portfolio. Such patterns could be particularly useful for small portfolios.
- . If the provision is allowable for tax then discounting should generally be at gross rates of interest.
- . The rate or rates of discount should take account of the assets held or notionally allocated and the method and approach used for asset valuation.
- . Historic rates of interest are not normally a reliable guide to rates of interest to be earned in the future. The rate of interest used should be a conservative estimate of the rate which is expected to be earned in the future, and therefore should be a prospective rate rather than a smoothed historic rate. In current circumstances, a gross rate of interest in excess of 7% p.a. is unlikely to be appropriate.

The Discounting of Outstanding Claims for Non-life Business

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