

LIQUIDITY MANAGEMENT IN UK LIFE INSURANCE : A DISCUSSION PAPER

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ABSTRACT

This paper is one of a series of papers being produced by the Working Party on Risk Management in UK Life Insurance, established by the Life Research Committee of the Faculty and Institute of Actuaries.

Life insurers are required to consider liquidity risk in their individual capital assessments (ICA) as part of the new FSA rules. This paper seeks to discuss issues surrounding liquidity risk in life insurance companies, the sources of liquidity available and systems and controls to mitigate liquidity risk.

Managing liquidity can be split into 3 different levels

- a) day-to-day cash management,
- b) ongoing cash flow management, typically monitoring expected cash needs over the next 6-24 months, and
- c) stress liquidity management, which is focused on catastrophic risk.

This paper focuses on c), seeking to identify possible liquidity strains in the context of UK life insurance companies and how these may be managed.

The views expressed in this draft report are those of the working party members and do not necessarily represent the views of the profession nor the employers of working party members.

Comments on this paper are invited and would be welcomed.

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1. INTRODUCTION

Traditionally liquidity has not been seen as a significant problem for UK life insurance companies. Liabilities are usually long term and while policies could be surrendered, the surrender value is usually not guaranteed for conventional business. The expansion of the UK life insurance market in the 1980s and 1990s also gave rise to strong positive cashflow as premiums from new policies and investment income outweighed claim outgo.

The situation is different for life insurers in other countries. In the U.S., surrender values are guaranteed and clauses often stipulate payment must be made within a specified period of time. In August 1999, General American Life Insurance Company went into administration when, following a credit rating downgrade, guaranteed surrender payment clauses were invoked and the resulting outgo was greater than the liquid assets available.

In the UK, liquidity has become more of an issue. Portfolios are becoming mature and cashflow is frequently negative. In addition, the experience of Equitable Life has highlighted the possibility of large discretionary outflows where consumer confidence is lost in a company.

At least one credit rating agency, S&P is concerned about liquidity risk. From their Life Insurance Ratings Criteria¹ :

“Relatively speaking almost all life insurer portfolios are somewhat liquid, but Standard and Poor’s reviews the portfolio with regard to overall liquidity because insurers may need to liquidate assets quickly to pay claims, especially if significant catastrophe exposures are present.” (page 32)

Also (page 44) “As some of the more notable insurer insolvencies of the past decade have demonstrated, the perceived lack of liquidity was the key factor leading to regulatory intervention. In retrospect, many of those insurers had sufficient assets to satisfy most policyholder and creditor claims.”

S&P’s capital adequacy model also takes liquidity into account.

The FSA is also concerned about liquidity risk. Their Integrated Prudential Sourcebook (PSB) highlights liquidity resource requirements separately from the general capital requirements in its adequacy of financial resources rules² :

“1.2.22 R A *firm* must at all times maintain overall financial resources, including capital and liquidity resources, which are adequate, both as to amount and quality, to ensure that there is no significant risk that its liabilities cannot be met as they fall due.”

¹ For more information, please see the following link
<http://www2.standardandpoors.com/NASApp/cs/ContentServer?pagename=sp/Page/FixedIncomeBrowsePg&r=1&b=2&s=7&ig=26&i=&l=EN&fi=&fig=&fs=&fr=&ft=&f=2>

² Extracts taken from policy statement PS04/16.

However it is worth noting that the FSA does not see liquidity is as much an issue for life insurers as banks, and has exempted life insurers from quantitative liquidity risk requirements. From section 5.1 of the PSB :

“5.1.7 G The FSA recognises that a typical *firm* in *PRU Category 1* or *3* generally faces *liquidity risk* from a wider range of sources and of greater significance than one in *PRU Category 2* .This section therefore explicitly applies some items of *guidance* to firms in *PRU Categories 1* or *3* .Other parts of the *guidance* are also not relevant to many *firms* in *PRU Categories 2* .In particular, where the *guidance* refers to factors that a *firm* should consider in relation to a specific type of business, a *firm* that does not undertake such business does not need to carry out such consideration.

Nonetheless, liquidity risk is likely to feature in the FSA’s ARROW visits and life insurers will need to address this risk more formally than they would have done previously as part of their own individual capital assessments (ICA), carried out as part of 1.2.26R of the PSB.

2. DEMANDS ON LIQUID RESOURCES

Liquidity Risk may be defined as the risk that a firm, though solvent, either does not have sufficient financial resources available to enable it to meet its obligations as they fall due, or can secure them only at excessive cost.

The financial commitments of life insurers are typically long term, and generally assets held to back these would be long-term and may not be liquid. If liquid resources are not already available to meet a financial commitment as it falls due, liquid funds will need to be borrowed and/or illiquid assets sold in order to meet the commitment. Losses would arise from the interest on borrowings and from any discount that would need to be offered to realise assets. In the worst case scenario, a life insurer may not be able to meet its commitments.

2.1 *Liquidity risk from surrenders*

Surrenders of life assurance contracts and transfers/early vesting of pensions policies are at the discretion of the policyholder and levels of outflow will vary, making it difficult to arrange liquid resources to meet these.

For with-profit business, surrender/transfer values are typically at the discretion of the insurer, giving the insurer control of the value paid out. However the ability to vary surrender values will be constrained by a company's Principles and Practices of Financial Management (PPFM), while CP207 proposed further constraints on changing surrender/transfer values. So while in the past it may have been possible to cut values to deter surrenders, now, generally speaking, with-profit values will need to be more consistent with asset shares.

Still the PPFM may permit factors such as losses on realisation, unrelieved initial expenses and capital gains tax previously deferred but now payable to be included in the asset share calculation. In this way liquidity losses may be passed on to the surrendering policyholder, but for pensions business, early vesting is often on guaranteed terms, so the insurer may not be able to pass on the full loss. Similarly some offices also have significant portfolios of "flexible" endowments which also guarantee surrender values (these may be described as "early maturity options").

There are often practical constraints to changing surrender/transfer value scales such as ease of changing systems and dealing with requests in the pipeline – including guaranteed quotes which effectively guarantee surrender/vesting values for a few weeks – which may also limit the ability of the insurer to pass on liquidity loss onto a surrendering policyholder.

Where losses arise on surrendering policies, these may be chargeable to the asset shares of continuing policyholders, provided this is consistent with the office's PPFM. This may provide significant protection to any shareholders of the with-profit office but leads to a residual risk that the lower asset shares resulting lead to higher guarantee losses on continuing policies in the future.

For non-profit conventional business, annuities involve considerable outflows but estimating these in advance, and arranging liquidity to meet these, should not be too difficult as annuities usually cannot be surrendered (though some “back-to-back” arrangements may permit this). Meanwhile most term assurances will not have a surrender values and death claims can be readily estimated. Most other non-profit classes will usually be trivial and/or with any surrender value at the insurer’s discretion but guaranteed bonds should be analysed closely. In particular most guaranteed equity bonds will be backed in part by an illiquid over-the-counter derivative. Should the surrender value allow for this derivative component, then the basis for calculation should be consistent with the likely realisable value of the derivative.

For unit-linked policies, the surrender/transfer/vesting basis is usually prescribed in the policy document, though the ultimate value will depend on market conditions. A surge in surrenders on linked funds may lead to an initial rise in the fund manager’s box but then the fund will move to a bid basis, units cancelled and assets realised. Losses will arise on illiquid assets sold at a discount but these should be passed on to surrendering policyholders in the unit price. However this is not always possible e.g. if policy provisions refer to quoted market prices (price realised will be lower for deals above a certain size) and the insurer may bear the loss depending on how the funds operate in practice. A more serious problem is where assets cannot be sold in the first place – some assets such as property may take some months to realise. However policy provisions usually have clauses allowing unit realisation to be deferred and this should mitigate any losses from assets realised at a discount or unrealisable assets.

Policy provisions also usually guarantee the price of units to be that on one or two working days after the surrender request is received. Note that in the event of a surge in claims, a backlog is likely to emerge and it will take more than one or two days to process. The result is a temporary market risk exposure between when the unit price is set and when the claim is processed. Though any loss results is more an operational loss than a liquidity loss, unit deferral will mitigate this loss as well as those losses above.

2.2 Liquidity risk from other policy related outflow

Maturities, deaths, disability and annuity claim outgo can be reasonably estimated and liquidity can be arranged to meet this expected outgo (though death and disability can still be a source of residual liquidity risk). Similarly many with-profits bonds and linked policies have the option to take regular withdrawals, and while these are discretionary, they can be readily estimated.

As well as claims there are expenses and commission which can also be modelled relatively easily. Commission will vary with new business volumes, but new business plans can give a good indication of likely levels, and in any case, such payments are typically linked to the payment of premium which will offset the outflow, with amounts clawed back when these cease within a specified period.

Other sources of policy related outflow include refunds of premiums within cooling off periods, policy loans advanced and redress payments, though redress is often by enhancement of policy value.

It is worth noting that past practice in the US was for policies to offer loans at pre-determined rates of interest. This led to some severe liquidity problems when interest rates fell and the option to take out a loan on the policy became valuable. Such options are usually not offered any more, but this highlights the importance of ensuring that policy conditions do not expose the insurer to undue liquidity risk.

Offsetting such outflows are policy related inflows, principally premiums but also interest/repayments under policy loans advanced. Note however that the policyholder has the option to cease payment and either surrender the policy or make it paid-up, reducing premium income at the same time as discretionary outflow increases.

Reinsurance premiums are an outflow but these will be offset by reinsurance commission and recoveries. There is a residual liquidity risk arising from delays in payment, and reinsurer default – though a credit risk event – could also have implications for liquidity.

2.3 *Investment related liquidity risks*

Normal trading will give rise to outflows to pay for purchases and inflows from sales, but property purchases will often involve a large outflow in a single transaction and may cause temporary liquidity problems unless sufficient liquidity is put in place beforehand. Another problematic transaction could arise in rebalancing portfolios using futures. For example, a life company could go short in equity futures but long in gilts. The latter, being carried out in the cash market will result in a drain which will not be immediately offset by the sale of underlying assets. Such large transactions are difficult to model and will probably have to be dealt with on an ad hoc basis.

When dealing in derivatives, margin calls will be a source of outflow³. Three particular problems should be noted. Firstly, such calls may arise at times of market stress, at a time when asset liquidity may be tightening, and will exacerbate market risk problems. Secondly, the timing of cashflows on a derivative hedging an asset may be markedly different to the asset being held, even if they are similar in all other respects. The German industrial giant Metallgesellschaft suffered a \$1.3bn loss in 1993/94 when cash calls on a long term hedge contract could not be met even though in theory there were offsetting profits on the business hedged. Finally, large calls may be triggered by a credit downgrading which could have other effects, not least on surrender volumes. For these reasons alone, potentially significant calls should be fed into liquidity analysis which should be integrated with market risk assessment.

³ The FSA have expressed concerns over the impact of margins calls on a firm's liquidity – see 1.6 in http://www.fsa.gov.uk/pubs/other/credit_risk.pdf

Note that margin calls will not be a problem where a position is covered by liquid assets (though such assets may not be available to meet other demands on liquidity and care should be taken so they are not double-counted). Also it may be possible to meet margin calls by depositing securities rather than cash, which may mitigate this source of risk. Therefore, the collateral terms of any derivative contract should be closely examined.

Offsetting trading and margin outflows is income received from investments including dividends, rent, bond coupons etc.. Dividend and rental income is variable and may fall in the same circumstances in which the insurer is faced with high surrender claim outgo.

2.4 Other outflows

Examining other possible outflows, dividend payments and loan interest are a significant outflow arising only a few times a year, and (once a dividend has been decided upon) sufficient liquidity should be put in place before these are payable. Tax is paid on set dates and again, once the bill has been calculated, liquid resources should be put in place before the dates.

Other corporate outflows may stem from the purchase of businesses or strategic stakes. These are necessarily ad hoc outflows, but the decision to proceed should be accompanied with the realisation of liquid resources to meet any payments due.

As for derivatives, companies need to be aware of any clauses in contracts (e.g. joint venture agreements) requiring collateral to be posted in events such as credit downgrades, which can be a hidden source of liquidity strain.

3. SOURCES OF LIQUIDITY

To meet any outflows, insurers will typically hold cash in the form of bank deposits, Treasury Bills, commercial paper and other money market instruments. In addition, the following sources of liquidity may be available :

3.1 *Asset sales*

Listed bonds and equities can usually be sold quickly to raise cash, but the price attained will depend on the type of security and the amount sold, both in absolute terms and as a proportion of the total issue of that particular security. Listed asset prices are usually quoted on the basis of a certain minimum and maximum amount traded or deal size, with a market maker's spread between the bid and offer price of the asset. When selling more than the maximum deal size, the spread will widen and a lower price will apply. The maximum deal size and spread will vary with market conditions, and will deteriorate in a crisis e.g. October 1987. So liquidity losses on realising listed securities depend on the quoted maximum deal size, how much the asset sold exceeds this, the market maker spread and the increase in that spread over and above the maximum deal size, with deal sizes and spreads affected by market conditions.

It is useful to split this risk into endogenous and exogenous factors, the former relating to the effect of the life insurer's own selling on the market and the latter relating to those factors independent of its trading. During a stock market crash, deal size limits will reduce and normal spreads widen, which would be an example of an exogenous factor. Selling more than this would widen the spread and reduce the price further and would be an example of endogenous factors at work.

Looking at the different asset classes, gilts can usually be sold with little difficulty and with minimal impact on price, but most corporate bonds tend to be thinly traded and large sales may only be achieved at a significant discount. Equity liquidity will vary with market capitalisation and market conditions but will be less than that for gilts. Standard Life was able in early 2004 to sell £7.5bn+ of equities over a 6-week period with little impact on market price, but were the same to be attempted in a stock market crash, then the impact would have been more severe. Indeed liquidity can drive a stock market crash as happened in 19th October 1987, when the S&P500 fell by more than 20% in a single day due in part to forced selling by portfolio insurers⁴.

⁴ As a lot of portfolio insurance selling was done mainly through futures, at one stage during the crash the S&P500 December contract price was 18% below the S&P500 index. For further information on Black Monday and the impact of portfolio trading see Hull "Options, Futures & other Derivatives" on Greeks and hedging.

To analyse the amount realisable in a stress scenario, appropriate market shocks should be applied to current market value given that the scenario is likely to occur with a market shock. Even this will only reflect marginal sales in a shock scenario so a further discount needs to be applied to reflect impact of significant asset sales. This discount should reflect the narrowing deal size limits and widening spreads brought about by the depressed market conditions (exogenous factors) and the additional spread brought about by the life insurer's selling more than the maximum deal size quoted (endogenous factor).

This discount can be assessed by comparing the amount and proportion of an issue held with typical deal sizes and spreads in that issue, allowing for the impact distressed market conditions have had on these in the past. Allowance should also be made for the deterioration in terms for a distressed seller, and that it may take days if not weeks to realise a holding that is significantly greater than what is typically traded, even at a substantial discount.

Such analysis should produce a schedule of assets that can be realised in 1 day, week, fortnight etc., following a market shock and the likely amount realisable allowing for discounts.

Note that while listed securities can be realised relatively quickly, other assets such as property, mortgages and unquoted stocks may take months to realise. In theory an insurer can sell its own office via sale and leaseback, though this is unlikely in a stress situation. It may not be able to realise assets such as subsidiaries or joint venture stakes, while premium and other debts can effectively be treated as unrealisable.

3.2 Repo Sales

As an alternative to selling gilts, cash can be realised almost immediately on these (and some other approved securities) through Repo operations on the money market.

3.3 Lines of Credit

Another source of liquidity is lines of credit from banks and similar institutions. Banks may offer such facilities at minimal cost as part of a broader pitch for business.

However, the facility will usually be limited by term, and it may not be possible to renew a facility in a stress situation. Often a bank will have the right to refuse the line. Even if it doesn't, there is a counterparty risk that a bank may refuse to honour the agreement.

A line of credit may be in place from an insurer's parent, but in examining liquidity stress scenarios, it should be noted that the liquidity crisis may be brought about because of problems at the parent, who may then be unable to honour the line.

4. LIQUIDITY STRESS SCENARIOS – MASS SURRENDERS

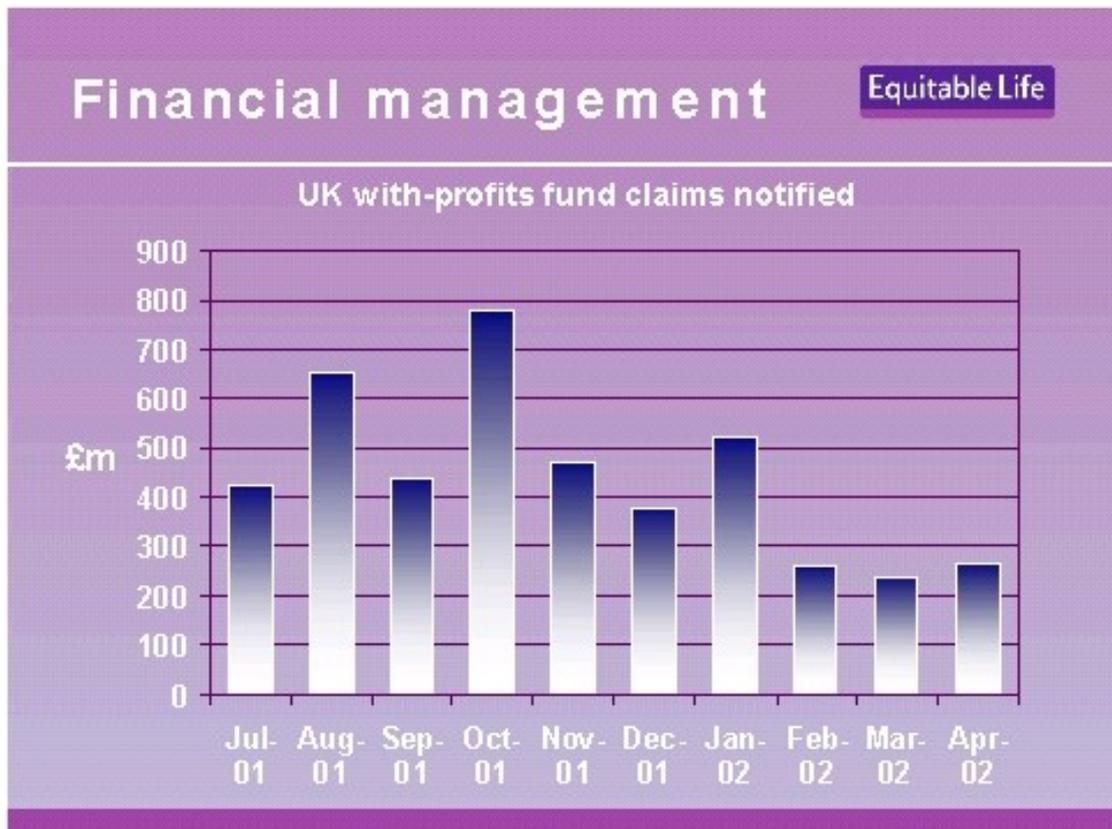
For most insurers, the most severe liquidity stress scenario they might face is mass surrenders of policies owing to a loss of confidence in its financial strength. This happened to Equitable Life following the House of Lords ruling on its guaranteed annuity liabilities in 2001.

Aside from an adverse legal ruling, such a loss in confidence could arise where a severe market fall occurs placing a strain on free assets. Alternatively, it could arise from problems experienced by a parent having a knock-on effect.

4.1 *The Equitable Life experience*

Following the House of Lords ruling, Equitable Life found itself in severe financial difficulties with much press comment questioning its solvency. Surrenders rose sharply. Net claim outgo rose from £3.0bn in 2000 to £6.2bn in 2001, with (gross) surrender outflow rising to £3.7bn and with £777m in With-Profit surrender/maturity outflow notified in October alone.

The following chart taken from the 2001 AGM report illustrates the scale of the problem faced :



Mass surrenders continued into 2002, with over £3.8bn (gross) surrender outgo in that year. Along with a fall in market values, these outflows reduced Equitable's non-linked assets from £30bn at the start of 2001 to £21bn by the end of 2002.

Received premiums also fell, with net written premiums falling from just under £3bn in 2000 to £200m or so in 2002, though the renewable single premium nature of contracts may have exacerbated this collapse

In terms of numbers, at the start of 2001, the Equitable had 1.3m With-Profit and over 0.3m linked life and pension policies. Over that year some 115,000 policies surrendered, with life surrender rates much higher than pensions. The next year a further 170,000 policies surrendered, with pensions rising to life levels. Given such a volume of claims, backlogs quickly developed and Equitable suffered further press criticism for poor service.

Note that although Equitable Life was predominantly a With-Profits office⁵, and most press coverage focussed on With-Profits policies, Equitable's linked portfolio suffered similar levels of surrender as non-linked, even though this was unaffected by the problems that beset Equitable, and was actually reassured with Halifax.

4.2 Mass surrender scenario - recognition

Timely recognition is key to handling such mass surrenders. While management might be aware of a potential loss of confidence in advance, the first objective indicator would be a rise in the number of surrender claims notified. A backlog would quickly develop in the claims servicing function.

Next unit fund box managers would see increased outgo arising from the linked surrenders that are processed. They may decide to reduce their unit holdings and in due course the fund may move to a "bid" basis. However, unless the box managers are made aware of the extent of the backlog in claims servicing, they may be holding excessive units.

The accounts department would also see operating cash balances being depleted and overdraft facilities being called upon. At this stage any line of credit may be invoked, but if the root cause is a problem with the insurer's parent, any line of credit with this parent may not be honoured.

⁵ At the end of 2000, With-Profit assets accounted for £25bn out of a total of £30bn non-linked assets, with only £4bn linked.

4.3 *Mass surrenders – managing the problem*

Life insurers should have a liquidity management structure in place to deal with such a crisis. This should bring together individuals with knowledge of money market operations to raise cash, and of investments who know what can be realised and when.

Those involved in liquidity crisis management should have the authority to put in place a pre-agreed contingency funding plan to mitigate the risks arising. To let them know when to invoke this contingency plan, procedures should be in place so they are notified when any of the events described in 4.2 arise e.g. where a significant backlog (> x days) arises, funds move to a “bid” basis, cash balances fall below/overdrafts rise above a certain level or a line of credit needs to be invoked.

In the situation where mass surrenders are received, liquidity outgo will be constrained by the ability to process surrenders. So in this situation, initial outflows would be based on the maximum number of surrenders that can be processed per day with current resources times average surrender value. When assessing average surrender value, consideration should be given to the likely profile of surrenders. Higher net worth clients may be more aware of a crisis and surrender accordingly. Life surrenders will be easier to effect than pension transfers, though note the ease at which group pension policies may be able to affect bulk transfers (see also 5.).

To the mass surrender outgo, one would need to add projected maturities, deaths and annuity claims outgo, as well as expenses and other outgo. Premium income allowing for PUPs – but it is worthwhile noting the collapse of premium income at Equitable – would be netted off, as would projected investment income. The net outflow can be compared with a schedule of realisable assets in 3.1 above, along with existing cash, Repo assets and any lines of credit that might be available, to give an indication as to how the insurer would cope with the immediate strain.

Going forward this comparison would need to factor in expansion in claim processing capacity – it is unlikely the FSA would accept an expanding backlog without action to reduce this.

Even if the insurer has sufficient liquid assets to meet the initial strain, the backlog arising creates problems of its own. Most linked contracts will stipulate that the surrender/ transfer value is calculated on the unit price on the day after the instruction is received. This effectively guarantees the surrender/transfer value from that date and the longer it takes to process a surrender, the longer the life insurer is exposed to market risk on this guarantee.

However most linked policies contain a provision allowing the insurer to defer realisation of units. If these provisions are invoked when the crisis is recognised, then not only will immediate liquidity outflow be reduced, but market risk will be minimised as the insurer will only be guaranteeing the price from when the deferral period ends.

Another problem with a large claim backlog is that the reported box will be larger than it should be, as it does not include units surrendered on current prices but yet to be processed. This can be mitigated by the box manager reducing his holding, and possibly going into a negative position should the circumstances dictate. Clear communication of the extent of the backlog to box managers is essential to minimise box losses.

For unitised with-profit policies, there will be no provision to defer realisation, but the policy may allow a market value reduction (MVR) to be levied (/increased if one already exists) and this may allow liquidity losses to be passed on to policyholders and may also deter surrenders. Similarly conventional with-profit surrender scales may be altered. However in both cases the revised surrender values still need to be consistent with policy provisions and the insurers PPFM. Also, it may take some time to change MVRs and scales and losses in the interim will fall on the insurer. Speed of recognition of, and response to, the stress scenario is key.

Linked with the liquidity risk scenario is the market risk posed to with-profits contacts as cash resources are depleted and gilts are committed on the Repo market, the equity backing ratio (EBR) will rise. While equity sales will offset this, selling futures can help a more orderly reduction in exposure, but this may exacerbate liquidity strains. For this reason management of the EBR and the liquidity crisis should be integrated.

Large asset sales will also lead to capital gains tax (CGT) crystallising. Any existing CGT provision is likely to prove inadequate. For unit-linked, once outflow turns negative, pricing will move to a “bid” basis which should allow for the increased liability.

For with-profits, the surrender value could be reduced to reflect this for surrenders processed, though this needs to be consistent with PPFM. So when reviewing MVRs and surrender scales for liquidity losses, CGT liabilities will also need to be included. For policies in-force, the existing provision will need to be strengthened though release of reserves on surrender should offset this.

In the event of protracted surrenders, expenses may go unrelieved. This will lead to a loss for linked business though for with-profits it should be possible to allow for it in surrender terms given, though again this will depend on the PPFM.

4.4 Mass Surrenders – Summary

Probably the key liquidity risk faced by life insurance companies is the loss of confidence in the insurer leading to mass surrender claims. In this scenario, outflow is limited by the capacity to process surrenders but this in itself causes second order effects. Quick recognition is key to managing these effects.

Looking to the future, greater online processing may increase the amount of surrenders that can be transacted in a given period and this will exacerbate the strain in this scenario.

5. OTHER LIQUIDITY STRESS SCENARIOS

Depending on the office, the following scenarios may have a material impact.

5.1 *Traded Endowments*

Traded Endowment funds are often geared and may liquidate when markets and surrender values are falling in order to cut their losses. Such a liquidation could have a similar initial impact to the scenario in 4., though it only relates to a subset of an insurer's portfolio and will not have the same sustained impact of that crisis of confidence scenario.

Management information should be developed to identify what policies have been assigned to a given fund, and what strain would arise were the fund to liquidate its position. Surrender processes should capture when a fund is liquidating policies, and for large exposures, publicly available information on the fund's condition should be sought.

5.2 *Corporate Pension schemes*

As in 5.1, a large block of liabilities is owned by one entity, in this case the trustees of a corporate pension scheme. A large scheme transferring en masse could generate similar liquidity problems.

As before management information should capture large schemes, and be able to pick up on when these are switching out. Most recent schemes are linked and it may be possible to defer realisation provided the switch out is identified in time.

It is worth noting pooled funds where the trustee has a single pot invested in a linked fund, usually for defined benefit schemes (as opposed to a defined contribution schemes where a collection of policies exist). These would be quicker to realise but aside from usual deferral provisions, there may also be the option to offer an en specie transfer instead of cash, simply assigning assets to the new fund manager. For segregated funds, en specie transfers would be typical.

Conventional defined benefit contracts would typically require some time to value, and this would generate time to realise assets.

Note that Group Life contracts could generate large outflows when a catastrophe event occurs (e.g.Piper Alpha) but in practice it will take some time to process claims, again giving time to realise assets.

5.3 *Bank failure*

Aside from any market and credit exposure to a bank failure, money on deposit will be lost, depleting liquid resources. This can be mitigated by spreading cash across a range of banks. The other impact a bank failure might have is loss of confidence in the financial system in general and possibly mass surrenders as in 4. More serious is the risk of a systematic failure of the banking system, but this is considered an unlikely event in the UK.

5.4 *Premium collection failure*

Premium collection may fail due to a problem with internal systems or external payment systems (e.g.BACS).

While the inability to collect premiums will impact on liquidity, it is unlikely that this would last long-term. Also insurers will usually have a number of internal systems for historic reasons, which reduce the impact of one failing.

5.5 *Margin calls*

Margin calls under derivative contracts will impact on cash resources. Such calls may arise as a result of a credit rating downgrade, requiring collateral to be posted. The risk can be mitigated by limits on derivative positions and regular reporting of potential obligations.

6. CONCLUSION

To date, liquidity risk has not been a serious issue for UK life insurers, but the experience of Equitable Life should be noted. However, given proper management information and prompt action, any potential crisis can be mitigated.

Going forward, circumstances may change. A key limitation on insurer outflow is processing capacity, which may change with greater online processing. New products could also cause problems e.g.US-style contracts guaranteeing payment in a set time, and special options exercisable on credit downgrades. Liquidity risk management should have input to the design process, and be regularly reviewed in line with trends.

One particular reason why liquidity risk has typically not been a difficult problem for UK life insurers is that policy terms have generally avoided commitments that can be onerous in producing liquidity problems. However life insurers are faced with increased accountability as a result of their issuing their Principles and Practices of Financial Management, and with FSA rules on treating customers fairly ; the outcome may be some loss of flexibility, and life offices will need to consider liquidity risk problems more closely.