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IFRS 17: liquidity characteristics of insurance liabilities

Introduction

IFRS 17 requires that the discount rates used to calculate the present value of the best estimate liabilities associated with a group of insurance contracts represent the "characteristics" of those liabilities. These characteristics include the timing, amount, currency and liquidity of the cashflows due under the contracts (*ref:* p*aragraph 36 – IFRS 17 Insurance Contracts*).

In a market-consistent world, so called "risk-free" discount rates are the theoretical norm. However, it has become market practice to include a "liquidity premium" in addition to a risk-free discount rate where an insurance entity adopts a "buy-to-hold" strategy on the assets backing the long-term liability cash flows associated with the insurance contracts. The underlying assumption being that as the insurer has no intention of trading those assets, it is not exposed to their price volatility and can therefore "lock in" the premium above the risk-free rate that is considered to compensate the holder of the asset for the fact that the investment is locked up for the long-term (termed the "liquidity premium").

The most common case of this in the UK is in relation to in-payment annuities which, subject to sufficient volume, can usually be reasonably well matched at medium term durations with fixed interest asset portfolios. In such an example, the "liquidity premium" can be derived from the yield on the backing asset portfolio using a range of approaches.

Given we are currently in a time where interest rates (across the developed world) are at all-time lows, in practice, insurance entities look further than simply fixed interest portfolios. In the UK, many insurers look for other illiquid asset classes that can bridge the gap left behind by the fixed interest market but still satisfy the required level of cash flow matching, which, in many cases, will involve some level of restructuring. Such assets include equity release mortgages (or ERMs), income producing real estate, consumer loan, commercial mortgages and infrastructure debts. Many of these asset classes by their very definition are illiquid and therefore do not have an observable, deep and liquid market from which data is available to derive a liquidity premium from and so alternative approaches are required to estimate any liquidity premium that may be implicit within the yield. It is not difficult to see that this can quickly become very complex with a high dependency on expert judgement and wide reaching assumptions. This can lead to divergence between different entities, calling into question its market consistency.

Given that this is the current picture for insurance entities, the concept of determining a discount rate purely on the characteristics of a group of insurance liabilities (as is required by IFRS 17) somewhat turns this on its head. The methods currently adopted to determine a liquidity premium are all fundamentally based on adjusting the implied yield on the actual portfolio of matching backing assets.

The prevalence of these approaches led to a question to the Transition Resource Group ("TRG"), set up by the IASB to support interpretation of IFRS 17 for preparers, as to whether the portfolio of assets actually held by an insurer can be used as a reference portfolio from which to derive the IFRS 17 compliant discount rates. The outcome of the TRG's discussions, and confirmed by the IASB, was that it was appropriate to use the actual asset portfolio as the reference portfolio should the

characteristics of that portfolio be deemed to sufficiently match those of the liabilities (see Agenda Paper 02 from September 2018 TRG meeting). For many insurers, thorough processes (largely in order to satisfy Solvency II requirements) have been undertaken in order to construct asset portfolios in such a way that the characteristics in terms of timing, amount and currency are closely matched. The liquidity characteristics of the groups of liabilities has not so thoroughly been considered as Solvency II takes a fairly narrow approach to what types of contracts are considered "eligible" for a liquidity premium, largely limiting the use of the Matching Adjustment under Solvency II to annuity business. The Volatility Adjustment under Solvency II, also an addition to the risk-free discount rate, is more widely applicable but is less a liquidity premium and more a counter-cyclical measure.

In terms of liquidity characteristics, the real questions raised by IFRS 17 are:

1. How to determine the "liquidity characteristics" of a group of liability cash flows?
2. Do assets exist with consistent characteristics to those liabilities from which a liquidity premium could in theory be derived?
3. Where assets do exist, in the absence of observable market data, how to reliably determine the implied liquidity premium?

This paper will look to explore possible approaches to 1.

What characteristics of insurance contracts exist that could be used to determine their liquidity?

When considering the liquidity characteristics of insurance liabilities we must consider the liquidity from the perspective of a policyholder. To do this we can look at the features of insurance contracts that could act as a disincentive to a policyholder to lapse (or surrender) their policy or features that entirely restrict a policyholder from lapsing their policy at all.

Such features that could provide some insight to the liquidity characteristics of a group of insurance contracts could include:

- the ability to lapse the policy in full or in part;
    - were a contract to be unable to lapse at all then it will be required to remain in force until its full term and could therefore be considered illiquid whereas a contract that allows full lapse may be considered more liquid.
- the existence of any penalties upon full or partial lapse;
    - a contract that incurs a penalty on full or partial lapse may act as a disincentive to the policyholder and therefore could be considered to be less liquid than an equivalent contract without such a penalty.
- any tax incentives that may encourage a lapse or otherwise;
    - the existence of a tax benefit may lead to a policyholder being incentivised to lapse at least some of their policy but equally a tax charge may exist that may incentivise the policyholder to remain in force.
- any valuable options or guarantees or smoothing benefits that may exist within the contract;
    - some contracts may offer investment, underwriting or income guarantees that may be forfeit on lapse that therefore act as a disincentive to lapse, which may be considered to make the contract less liquid.
    - options may also exist that allow the policyholder to extend the term or change some other feature of the insurance contract.
- the term of the contracts;
    - a longer term contract may be considered to be less liquid than a shorter term contract.

    - charges that may have been incurred at the start of the contract that may discourage an early exit
- the coverage of any biometrical risks
    - surrendering and repurchasing may not be economically advantageous in some cases, for example a policyholder may be benefiting from the pricing on a level term assurance such that if they were to move to another provider they would see an increase in their premium.
    - the onerousness of underwriting processes may also act as a disincentive to exit as policyholders may not wish to repeat the process elsewhere.

Where it exists, historical lapse experience may also provide some insight to the actual "stickiness" of the group of insurance contracts. Where there is very little experience of lapses, despite a lack of apparent explainable disincentives, it could suggest that the group of insurance contracts are displaying illiquid characteristics. However, in such an analysis, care would need to be taken to ensure there was not some underlying cause for the lack of lapse experience, for example a particular economic scenario or particular cohort demographics. In any case, the point remains that a group of contracts that has (statistically credible) historical data that suggests a lower lapse rate than another group of contracts could imply that one possesses more illiquid characteristics than the other. This sort of technique is clearly limited to cases where historical data exists, and therefore will be less informative for new business lines.

Each of these factors may provide some information as to the likelihood of the group of insurance contracts remaining in force and therefore being considered to be illiquid.

Possible approaches to determining the liquidity of the liabilities

There will be no single way in which to systematically and robustly derive a liquidity premium of a group of insurance contracts when considering the various characteristics of the liabilities listed above.

Any approach adopted will need to be easily repeatable and where possible minimise expert judgement. This may lead insurance entities to want to adopt an approach that requires minimal repeated analysis – insurers may want to avoid any derivations that require analysis of historical data as it would imply a regular refresh. This may only be justifiable where it is felt that the outcome would be materially different.

One possible approach is to create a framework that is used to allocate products into "buckets". Each of the above characteristics could be given a score in terms of its impact on the overall liquidity of a product. This may be in the form of a spectrum from "highly liquid" to "highly illiquid". Caution will need to be taken to ensure that the scoring system adopted does not create spurious accuracy. Products could then be allocated to buckets, which each take a particular proportion of a liquidity premium determined from a reference portfolio of assets.

The proportion of the asset derived liquidity premium to apply to each bucket should be assessed considering the relative liquidity of the insurance contracts to the assets that form the reference portfolio, rather than the absolute liquidity of the insurance contracts. For example, an insurance contract may not be considered to be "100% illiquid" but may receive 100% of the liquidity premium derived from a portfolio of investment grade corporate bonds because the insurance contracts are at least as liquid as those bonds.

Taking this further, one could argue that there are insurance contracts that might be considered to be more illiquid that the assets used to derive the liquidity premium. For example, a portfolio of in-payment immediate annuities could be considered to be more illiquid that a portfolio of bonds and therefore a bucket which allocates greater than 100% of the asset derived liquidity premium ("grossing up") may be appropriate. Such an approach would have some potentially undesirable implications from an ALM perspective. In particular, applying a higher discount rate on the liability side of the balance sheet than the yield expected on the actual assets held will lead to future investment losses.

The extent to which this "grossing up" type approach may be required will be exacerbated where a single reference portfolio is used for all liability buckets. Where a separate reference portfolio is chosen for each bucket, it would be expected that the liquidity characteristics of the liabilities could be more closely matched to that of the assets. The problem still remains however, given that assets may not exist that exhibit the same liquidity characteristics as the liabilities.

Clearly, with such an approach as described above, there are a number of areas of subjectivity where expert judgement is likely required. In particular, having discreet buckets leads to borders, which in turn leads of cases where it is subjective whether the contracts should fall into one bucket or another. It will be important when defining the scoring system for contract characteristics that it is defined in a robust enough way that clearly sets out rules for the allocation to buckets.

This approach has the benefit of being fairly easy for users to understand and is broadly consistent with approaches that have been considered in the past for other reporting metrics. In particular, Market Consistent Embedded Value ("MCEV") and the QIS5 stage of Solvency II.

Although, in theory at least, there are other approaches to determining the liquidity characteristics of the liabilities, an example being to try to attempt to directly measure the liquidity of insurance contracts by assessing transactions of insurance contracts in the market, the bucketing approach described above seems to be a pragmatic solution that is not overly spurious or prohibitively complex.