

# **Solvency UK Matching Adjustment Reforms: Highly Predictable cash flows and their implications for investment in UK productive finance**

## **[Solvency UK Taskforce](#)**

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According to The Purple Book, UK defined benefit pension scheme liabilities stood at approx. £1trn as at 31 March 2023. For context, this was about 50% the size of the ICE BofA Sterling Broad Market Index on the same date [source: LSEG]. While insurers will continue to have a crucial role to play in de-risking corporate balance sheets and securing private sector pension member benefits, the challenge to find attractive assets - economically and particularly under the Solvency UK regime - is real.

The proposed eligibility of assets with highly predictable (HP) cash flows for Matching Adjustment (MA) portfolios, then, has been one of the most highly-anticipated aspects of the Solvency UK reforms, and it is hoped that the widening asset eligibility (along with other implemented and proposed reforms) will contribute towards the industry investing an additional £100bn into UK productive finance. (source: [Solvency UK: Cross-sector co-operation to drive £100bn investment into UK projects | ABI](#) )

We also note the removal of the sub-IG cliff, further enhancing the ability to invest in UK productive finance, particularly construction phase assets, although the appetite for sub-IG investment is yet to be seen.

To meet the “Highly Predictable” cash flow definition, an asset will need to satisfy the following conditions as set out in CP19/23:

- Cash flows are contractually bound, and failure to meet the contractual terms is a default event;
- Contractual bounding applies to the timing of cash flows; and
- Contractual bounding applies to the amount of the cash flows.

The PRA has also introduced additional controls along with the additional freedoms:

- Additional Matching Tests are required for HP cash flows: Test 4 - reinvestment risk and Test 5 - Liquidity Test.
- HP assets can contribute a maximum of 10% of the total of MA base balance sheet benefit.
- An additional Fundamental Spread (FS) for cash flow uncertainty must be assessed based on a distribution of losses, with a minimum FS add-on of 10bps.

## Taking a step back

Before launching into assessing which asset classes might have HP cash flows and therefore where future MA portfolio investments could go, it is worth remembering that many existing MA staples (such as investment grade corporate bonds and private debt) can already come with a prepayment (or call) option.

Under the 'fixity' definition, such assets are currently subject to restrictive screening with regards to the materiality of the prepayment option and the terms of any Spens clause ('adequate compensation'). For bonds and loans with a material prepayment option and without an 'adequate' Spens clause, insurers are faced with either excluding the asset altogether or taking a significant penalty in terms of the cash flows contributing to the MA.

In the case of public credit, the HP provision will now open up a segment of the market for insurance companies. However, in private and real asset debt, where deals tend to be individually-negotiated, the choice may be more nuanced. Rather than flipping a binary in-or-out switch on pre-defined transactions, the HP provision will now give asset originators more flexibility in deal negotiations, and the possibility to enter transactions where some cash flows are considered highly predictable and therefore previously would not have been eligible.

This flexibility should be exercised on the basis of overall balance sheet benefit (as opposed to the size of the MA alone). In theory, there may be scenarios where loan terms admitting more prepayment risk can generate higher economic benefit (in additional risk-adjusted spread net of capital drag) even if they result in a lower MA than terms dictating 'fixed' cash flows. However, the 10% cap on Matching Adjustment benefit which can be derived from HP cash flows represents a key additional constraint for firms. Given this limit, it is likely that companies would want to use the 'HP budget' on asset classes where cash flow non-fixity is inevitable and non-negotiable, for example construction phase assets.

In other words, while in public markets the HP provision will open doors to a range of previously ineligible assets, in private markets asset allocation choices could be more nuanced, depending on where firms choose to expand their investible

universes, the sizes of the new opportunity sets, and the relative levels of additional economic vs. regulatory benefit.

## Newly qualified

With this in mind, we can consider which additional assets which do not have 'fixed' cash flows might qualify as having HP cash flows. For each asset, we consider how it meets the criteria for HP assets set out by the PRA, the opportunity size, potential spread pick-up and link to UK productive finance.

### Bonds

The current worst-case approach taken under the 'fixity' definition penalises insurers from buying **callable** corporate bonds with material call options and without an 'adequate' Spens clause. Under the reforms, such bonds would qualify as highly predictable as the coupon and maturity payments are contractually bound and have well-defined first and last possible dates. A related feature is **step-ups**, where bond coupons increase at a known schedule and often are callable on step-up dates.

- *Bounded cash flows: Yes. Fixed rate callable (and step-up) bond cash flows are bounded in amount, and timing bounded by call and maturity dates.*
- *Opportunity size: Medium, albeit small relative to overall investment grade corporate bond market. Out of approx. £9trn investment grade corporate bonds in GBP, USD and EUR, we estimate approx. £0.9-1.2trn of these to fall within the HP definition, depending on firms' current screening criteria for fixity. [Sources: BofA Merrill Lynch Global Broad Market Index, LSEG. Authors' estimate as at 29 March 2024.]*
- *Spread pick-up: 20-50bps over comparable corporates.*
- *Link to UK productive finance: depends on issuer but not expected to channel funds systematically towards productive industries.*

Looking at the definition for HP at face value, **floating rate bonds** have payments which are contractually bound in timing and amount. However, it is not clear whether they are intended to be included in the HP bucket. The purpose of the investment flexibility reforms, as stated in CP19/23, is to permit 'asset cash flows that are capable of being changed *by the issuers of the assets or any third parties*', and it is ambiguous whether coupon cash flows changing due to reference rates should fall into this category.

While insurers are unlikely to significantly allocate to floating rate bonds to match long-term annuity cash flows, the admissibility of floating rate coupons would make bonds with certain features (for example fixed-to-floating coupons) highly predictable. It would also have implications for other asset classes which tend to be

floating rate, for example CLOs and many sub-investment grade loans. For economic risk management and the VaR test, it is likely that firms would overlay floating rate allocations with derivatives to lengthen duration and hedge liability duration. Whether floating rate coupons are considered highly predictable can have implications for how this is done.

- If not considered HP, firms would continue to need to hedge individual cash flows by 'pairing' or 'grouping' cash flows with interest rate swaps to meet the current fixity rules. Barring any other optionality, the cash flows would be considered fixed.
- Conversely, if floating rate payments *are* considered to be highly predictable, and there are other asset features (for example prepayment options) that make the cash flows otherwise non-fixed, then a fair value (rather than cash flow) interest rate hedge approach could be taken for the purposes of the VaR test. Firms would be able to use a wider range of instruments (for example bond futures) in addition to interest rate swaps.

Finally, the CP explicitly proposes to permit bonds with 'coupons [...] linked to the achievement of environmental impact targets', which would bring assets such as **environmental impact bonds** and **social impact bonds** into scope. Given the breadth of innovation behind these assets, we propose to dedicate a separate article to this topic.

## Securitisations

A broad range of assets are considered 'securitisations' under Solvency UK. By far the largest securitised market is US **agency RMBS**; other opportunity sets include **agency CMBS, non-agency RMBS and CMBS, CLOs, and other ABS** from student loan to equipment leasing. Long-time favourites of US insurers, these assets typically offer attractive gross and risk-adjusted returns relative to corporates.

Firms considering this asset class will be aware of the heavy capital charges under the Standard Formula, particularly for 'Type 2' securitisations, and may consider developing an Internal Model for this asset class where they do not have one already.

Securitised assets arguably have lower credit risk than their corporate bond counterparts, and this can be for a variety of reasons. For agency MBS, a major protection against credit risk is the US government support (implicit or explicit depending on issuer), and for other securitised assets including non-agency MBS, ABS and CLO, protection comes from the asset structure and the collateralised nature of the underlying loans. CLOs, for example, have exhibited much lower default rates than equivalently-rated corporate bonds across credit ratings [source: S&P Global Ratings].

While an economically attractive range of assets (and possibly SCR-efficient depending on firms' Internal Models), the marginal Matching Adjustment benefits obtainable from securitised assets may be limited. This is because a significant contributor to the assets' higher spreads is prepayment risk which, even under the new HP provisions, is expected to be excluded from the MA through a higher FS add-on. However, asset allocation decisions should not be made on the size of the Matching Adjustment alone, and each asset should be evaluated on the basis of its expected *economic* merit, accounting for return and diversification benefit as well as MA benefit and cost of capital.

Another potential challenge is that the significant prepayment risk (and amortising nature of securities in some cases) associated with securitised assets mean that these assets are only likely able to support shorter-dated liabilities. Given the 10% cap on HP asset contribution to MA, however, we would not expect this to be a major constraint as any HP assets would form a small part of the MA portfolio. We also note that this is a generalisation, and actual borrower behaviour will depend on the loan terms and prevailing interest rates. In the current high interest rate environment, for example, prepayment options on long-term mortgages fixed at much lower rates are much less likely to be exercised.

- *Bounded cash flows: Yes. However, some securitised assets (e.g. CLOs) are typically floating rate and there is no consensus currently whether these would need to be paired with interest rate swaps.*
- *Opportunity size: Large overall market size, although dominated by US agency MBS. Non-agency and non-mortgage markets exist, as well as opportunities in GBP and Euro.*
- *Spread pick-up: Can be significant.*
- *Link to UK productive finance: Medium. US markets dominate global securitised markets, with UK and European markets playing a much smaller role. Most typical underlying loans include residential and commercial mortgages, auto and consumer debt, some of which will support the real economy.*

## **Equity Release**

Equity Release Mortgages (ERMs) are a large existing asset class for annuity writers. Cashflow variability arises from prepayment, mortality and property risks. As such, these have, to date, been internally securitised, with fixed notes forming part of MA portfolios.

CP19/23 2.18 states:

*The PRA considers that where assets or pools of assets have previously been restructured to create an asset that met the 'fixity' requirement, firms may seek to include these in MA portfolios in an unstructured form where they meet the proposed MA eligibility condition in the draft MA regulations and the PRA's Rulebook. The PRA proposes that this would require a new MA application...*

Firms may therefore wish to seek additional MA by holding unstructured ERMs within MA portfolios. It is likely however that the Effective Value Test (EVT) of SS3/17 would still be expected to apply, and therefore the additional MA benefit achievable may be limited. Further, this will require a credit rating assessment of unstructured loans.

It therefore seems that the benefit is greater for new entrants to the market who may be able to avoid the investment in structuring technology and processes. For firms with existing technology, the benefit may be limited, however there is now an opportunity to warehouse unstructured ERMs within the MA portfolio prior to structuring.

Another consideration is the proposed 10% cap on HP assets. Firms with structuring technology may not wish to 'spend' their HP budgets on assets that do not require it. However, para 2.19 states that firms may consider:

*...including further cash flows from internally restructured assets. In the latter case this could be by the creation of mezzanine notes, where those notes have HP cash flows. The removal of the limit on the amount of MA benefit that may be recognised on SIG assets would further benefit such assets...*

This could increase the efficiency of the structure, or at least provide some flexibility to the structuring process, notwithstanding the restrictions placed by the EVT.

Where variable cashflows are included, firms will need to demonstrate that they are contractually bounded in amount and timing. Clearly, property levels (hence size of NNEG cashflow) are not contractually bound, however firms may consider NNEG risk to be analogous to default risk on a Bond, rather than a source of cashflow variability, in which case focus would be given to non-economic sources of variability such as voluntary early redemptions, mortality and morbidity / long-term care rates.

- *Bounded cash flows (unstructured ERM): Yes*
- *Opportunity size (unstructured ERM): Variable depending on interest rate environment, however recent volumes have been c£500m per quarter (source: [Q1 2024 equity release market data - Equity Release Council](#) )*
- *Spread pick-up (unstructured ERM): Variable depending on interest rate environment*
- *Link to UK productive finance: N/A.*
- *Bounded cash flows (mezzanine notes): Yes*

- *Opportunity size (mezzanine notes): High where structuring technology exists*
- *Spread pick-up (mezzanine notes): Moderate due to EVT*
- *Link to UK productive finance: N/A.*

## **Construction phase Real Estate debt / Infrastructure debt**

Insofar as UK productive and green finance is concerned, the most meaningful change comes from the ability to invest in construction phase assets. These are believed to be the driver behind the relaxation of fixity requirements, and are anticipated to form a significant part of firms' HP budgets.

Crucially, HP cash flows under the PRA definition must be contractually bound, which imposes a restriction on the 'form' or structure of investment as well as on the 'substance' or economic and risk characteristics of the cash flows. In the context of infrastructure investments, this is a subject which we believe is worth exploring further in a separate article.

Currently, firms only receive full MA benefit for real asset debt assets that are in their income phase. Construction phase assets with bounded cash inflows are in some cases MA eligible, however the MA benefit is based on a 'worst of all worlds' approach, in which inflows start at the latest possible date and end at the earliest possible date, even though the length of the income phase is itself fixed.

Treating these assets as HP allows a much higher proportion of the inflows to contribute towards the MA; para 2.53 of the CP suggests that this could be up to three quarters of the amount lost in the 'worst of all worlds' scenario.

An example of a subset of infrastructure assets that the PRA mentions specifically in the CP is that of "leases with 'upward only rent increases'", with a suggestion that the income from such an asset may be assumed to have an upper bound if "appropriate assumptions" are made. This would seem to suggest the possibility to take greater benefit from such assets than the current rules permit.

- *Bounded cash flows: Yes*
- *Opportunity size: Medium*
- *Spread pick-up: High*
- *Link to UK productive finance: High*

## **Living on the edge**

Finally, it is worth highlighting that the HP concept will also interact with the removal of the BBB cliff. In addition to greater levels of credit and liquidity risk, **sub-**

**investment grade assets** tend to come with higher levels of prepayment risk. The introduction of HP cash flows will therefore supplement the removal of the BBB cliff in opening up opportunities in sub-investment grade assets including leveraged loans, high-yield bonds and sub-investment grade real asset debt and securitisations. As sub-investment grade assets are also more likely to be floating rate, the question of whether floating rate interest payments can be considered highly predictable will have an impact on firms' approach to interest rate risk management.

Cliff edge removal notwithstanding, however, unstructured high yield assets do not naturally lend themselves to backing long-term insurance liabilities. The elevated levels of credit and liquidity risk, especially in stress scenarios, make these assets more challenging to manage on a classic MA 'buy and maintain' basis. Their lower duration compared to investment grade assets (due to a combination of shorter maturities, high prepayment risk and often floating rate nature) also make them unlikely candidates for backing long-dated liabilities at scale. A more immediate (and perhaps the main intended) benefit for the removal of the BBB cliff, therefore, is likely to be the reduction of procyclicality in the event of downgrades.

## **The big picture**

Whilst the introduction of assets with HP cash flows should create new investment opportunities for insurers, the extent to which this will take the form of UK productive finance remains to be seen.

At a firm level, with the cap on MA benefit from HP assets at 10%, and the material amount of modelling and governance associated with the inclusion of HP assets (for example FS addition and additional cash flow tests), some firms may simply consider it not worth their while. Those who do choose to use the 10% budget, in turn, may find the cap difficult to manage to. Due to its static nature, the cap is insensitive to relative spread movements between asset classes. During periods of tightening public market spreads, for example, firms with illiquid HP assets may passively breach the 10% cap simply because of valuation lags inherent in private assets. To work around this insensitivity, firms are likely to introduce additional safeguards and buffers, creating more complexity and likely a long-term average MA benefit from HP assets of lower than 10%.

Given the investment of time and resource required in submitting MA applications, and firms often (naturally) prioritising asset classes that will maximise economic benefits, insurers may be selective over which investment types they choose to pursue. Further, given our analysis of asset classes above, an asset with HP cash flows does not necessarily equate to increased investment in UK productive finance.



Looking more broadly, with the ABI's "Investment Delivery Forum" (of which the majority of the UK's annuity writing firms are members) calling for "public-private partnerships" to facilitate these investments [source: <https://idforum.org.uk/wp-content/uploads/2024/04/Investment-Delivery-Forum-Programme-for-Government.pdf>], alongside the issues outlined above, it would seem that the UK's insurers may not see an immediate path to the £100bn of incremental investment in UK productive finance that was promised to the Government.

To alleviate the operational burdens outlined above, the PRA has agreed to explore insurers' proposals for a regulatory "sandbox", facilitating exploration of new (and possibly ineligible) asset classes without the need for a full MA application. It has been touted by some that this could be the secret to unlocking increased investment into productive finance.

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This is the fourth article from the [Institute and Faculty of Actuaries](#) Life Board sponsored [Solvency UK Taskforce](#). Focussed on the investment opportunities in UK productive assets created by the anticipated reforms proposed in CP19/23.

<https://www.linkedin.com/pulse/solvency-uk-matching-adjustment-reforms-highly-predictable-zy3he/?trackingId=63DF4xlu1leDA99%2Fwdm6Fw%3D%3D>