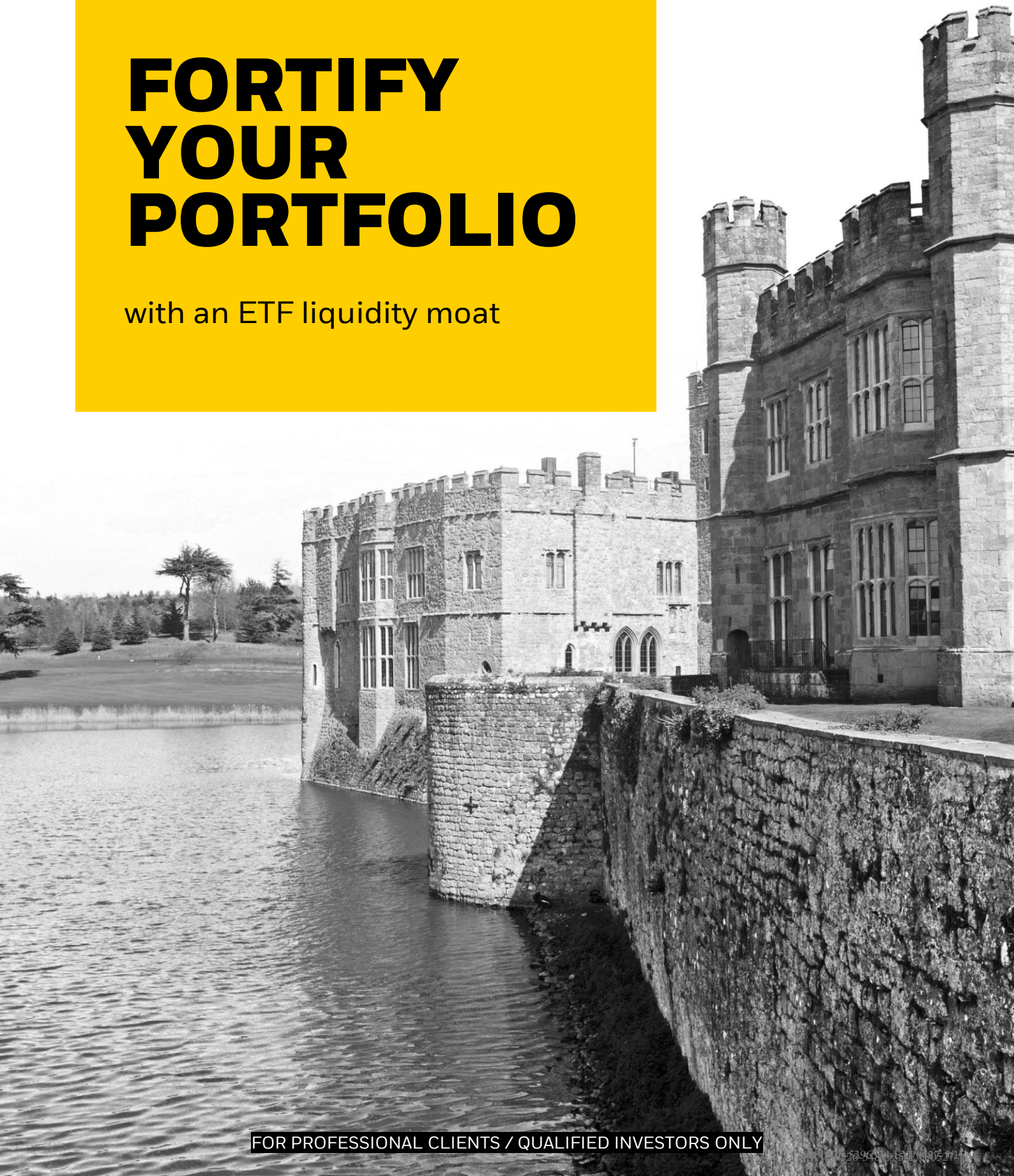


**iShares**  
by BlackRock

# FORTIFY YOUR PORTFOLIO

with an ETF liquidity moat



FOR PROFESSIONAL CLIENTS / QUALIFIED INVESTORS ONLY

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# SUMMARY

This paper examines the concept of an ETF liquidity buffer acting as a portfolio moat, designed to absorb cash-flow shocks while protecting core holdings from untimely sales and keeping capital invested. Using a 10-year historical simulation, we show that ETF-based liquidity sleeves may deliver materially higher terminal portfolio values than cash, while maintaining a comparable likelihood and severity of liquidity shortfalls.

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# INTRODUCTION

Institutional investment portfolios differ widely in objectives, governance, and risk constraints, yet they share two characteristics that materially shape portfolio construction. First, institutions typically operate with long investment horizons and large pool sizes, which increases their capacity to allocate to private markets. Second, they may be more exposed to large or irregular cash inflows and outflows, whether driven by capital calls, contributions, exits, rebalancing activity, or tactical implementation, that can alter the portfolio's liquidity profile and create unintended deviations from the Strategic Asset Allocation (SAA).

These features make liquidity management a central portfolio design consideration. The core challenge is to maintain sufficient portfolio liquidity while reducing the opportunity cost of holding cash. Accordingly, portfolio construction must address not only risk and return objectives, but it must also address the timing, magnitude, and uncertainty of cash flows coming in and out of the portfolio.

## PORTFOLIO CONSTRUCTION OF A LIQUIDITY SLEEVE

Institutions employ several tools to manage liquidity, each with clear trade-offs:

**Strategic cash allocations<sup>1</sup>** can be embedded within the SAA (e.g., 5–10%) which, while simple and reliable, can create persistent performance drag in risk-on environments.

**Credit facilities** can bridge short-term liquidity needs but introduce borrowing costs and operational complexity.

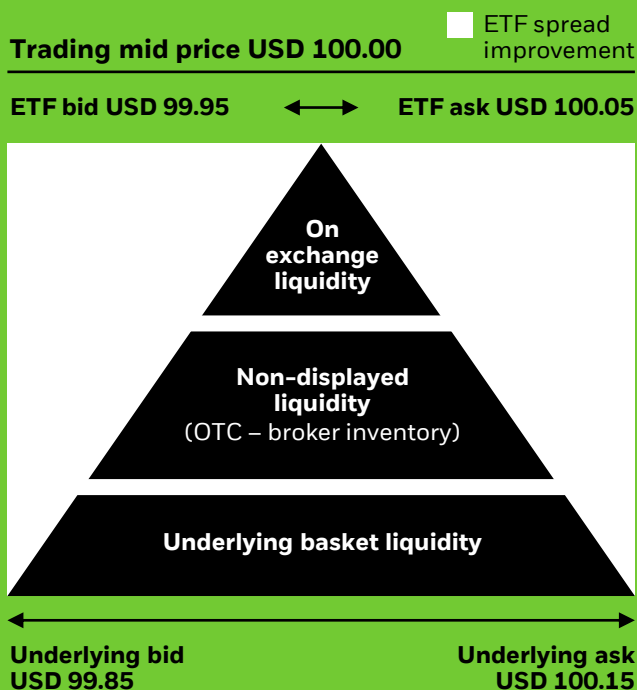
**Derivative overlays** can maintain market exposure which can reduce cash drag but introduces margin requirements, basis/roll risks as well as increased governance burden.

In the absence of a dedicated liquidity sleeve, the investment portfolio would have to service the cash flows. This can be costly for the investment portfolio, due to factors such as subscription/redemption fees, gates, capacity constraints and illiquidity of private market holdings.

We propose the concept of an ETF moat, a fully funded liquidity sleeve composed of a basket of ETFs, that stays invested in market exposures, without introducing leverage and unnecessary operational/governance complexity. The ETF moat serves as a buffer to service external and internal cash flows and acts as an interim investment vehicle for assets not yet deployed as part of the core investment portfolio.

1. We differentiate between 3 different types of cash which serve different purposes in portfolios: Operating Cash (same day settlement required), Core Cash (3–18 month horizon), and Strategic Cash (>18 month horizon). In this paper, we are predominantly addressing Core and Strategic Cash through ETF sleeves. However, Operating Cash can also be addressed with money market funds with a T+0 settlement cycle.

ETFs are well suited for liquidity sleeves due to their liquidity and precision. Secondary market trading, dealer inventory, and the creation and redemption mechanism provide multiple sources of liquidity, often resulting in lower trading costs than transacting underlying securities directly or via mutual funds. The breadth of available ETFs also allows liquidity sleeves to be closely aligned with a portfolio’s strategic allocation or tailored to complement private market exposures.



Liquidity sleeves typically experience high turnover as cash flows move in and out to meet funding needs such as capital calls, making trading costs a key consideration. Unlike mutual funds, segregated accounts, or direct stock and bond portfolios, trading an ETF often avoids security level frictions such as bid offer spreads, taxes, and levies that are passed directly to the investor when underlying securities are traded. In high turnover sleeves, this structural advantage can be particularly material.

ETFs also offer greater flexibility in managing redemptions. They trade intraday on exchange, typically settle on T+2, and do not impose redemption notice periods or size limits. This allows investors to adjust exposures quickly and at scale, reinforcing the case for ETFs as the preferred building blocks for institutional liquidity sleeves.

Source: BlackRock, as of 31 Dec 2025. For illustrative purposes only.

“ETFs play a vital role in providing liquidity to institutional portfolios, enabling asset owners to trade in and out efficiently during periods of market volatility—particularly for investors with higher allocations to less liquid asset classes.”

**Kirst Kuipers** - Head of Institutional iShares Sales EMEA



We propose a 3-prong framework for designing liquidity sleeves (see [Table 1](#)).

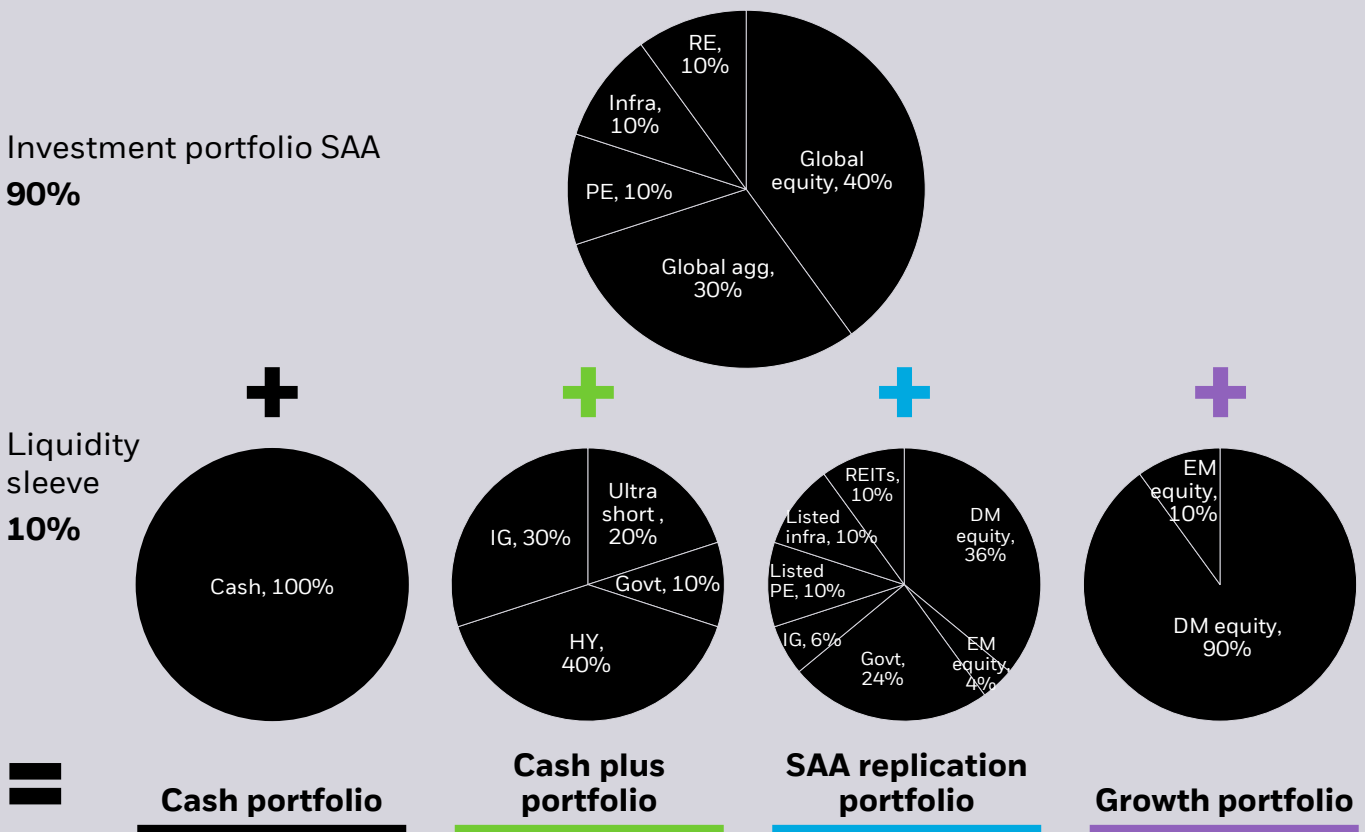
**Table 1. Portfolio construction approaches for liquidity sleeves.**

Approach	Description	Pros	Cons
<b>Cash plus</b>	Taking credit and duration risk or uncorrelated alpha to achieve yield higher than cash rate. Can also be constructed with iBonds, MMFs and buffer strategies.	Lower volatility, low correlation to capital calls, may have T+0 settlement cycle	Limited return potential
<b>SAA replication</b>	Liquidity sleeve is designed to mimic the economic exposure of the portfolio’s SAA.	Diversified, minimises active risk against the SAA	May be difficult to capture private market exposure
<b>Growth focused</b>	Predominantly invested in equities through regional, thematic or sector allocation. Can incorporate buffer ETFs.	Higher return upside potential	Higher volatility, drawdown

To illustrate the portfolio-level impact of a liquidity sleeve, we present a case study evaluating how different liquidity sleeve designs influence a hypothetical institutional portfolio's risk-return characteristics over a historical 10-year period. In doing so, we highlight key implementation and portfolio management considerations. The analysis is illustrative in nature, focusing on design mechanics and trade-offs rather than prescribing optimal asset class choices across market environments.

**CASE STUDY**

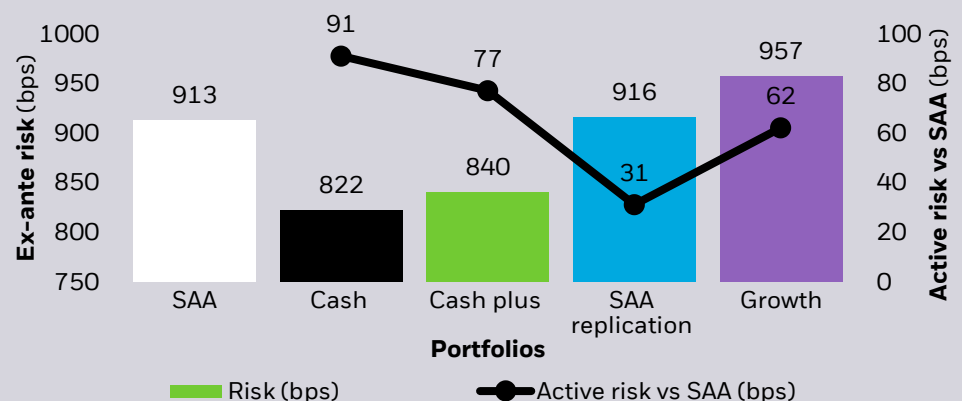
# 10-YEAR HISTORICAL ANALYSIS OF A LIQUIDITY SLEEVE



Source: BlackRock, as of 31 Dec 2025. See Appendix for more details on the indices used.

When looking at the risk of each portfolio, the one which is most aligned with the SAA is the SAA Replication Portfolio, exhibiting the lowest active risk at 31 bps (see Fig 1).

**Fig 1. Ex-ante risk of the portfolios versus the SAA**

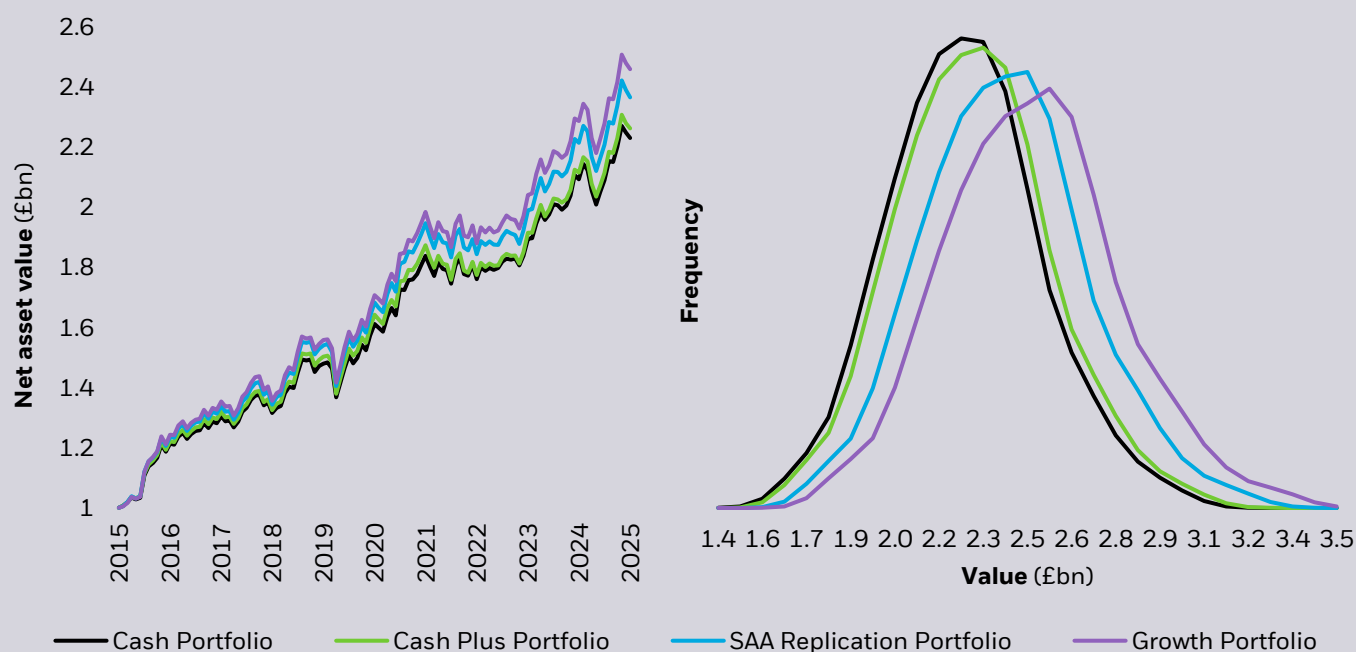


Source: BlackRock, as of 31 December 2025. Currency in GBP. Using 72 monthly observations with 36 monthly observations.

We overlay the historical return of these portfolios with 500 cash flow simulations where we model monthly cash inflows and outflows with an element of randomness. Inflows are calibrated to occur more frequently and in smaller amounts, while outflows are calibrated to occur less frequently and in larger amounts. The simulated cash flows are entirely absorbed by the NAV of the ETF liquidity sleeves. In this case study, we assume a £1bn starting portfolio, including a £100mn liquidity sleeve, and implement annual rebalancing of both the underlying asset allocation and the split between the liquidity sleeve and the investment portfolio. See Appendix for more details on the portfolio modelling.

We find the following conclusions (see [Fig 2](#) and [Table 2](#)). Firstly, staying invested reduces cash drag, especially over the long term. The Growth Portfolio resulted in over £200mn in additional capital at the end date compared to the Cash Portfolio. Secondly, the probability of a liquidity shortfall, which is calculated as the percentage of cash flow simulations that results in the liquidity sleeve's NAV dropping below 0 at least once, increased marginally from 5.8% to 7.6%.

**Fig 2. Median net asset value (left) and terminal value distribution of the portfolios (right)**



Source: BlackRock, Morningstar, time period: 31 Dec 2015 – 31 Dec 2025, currency: GBP.

**Table 2. Summary of portfolio returns overlaid with a cash flow simulation over a 10-year period**

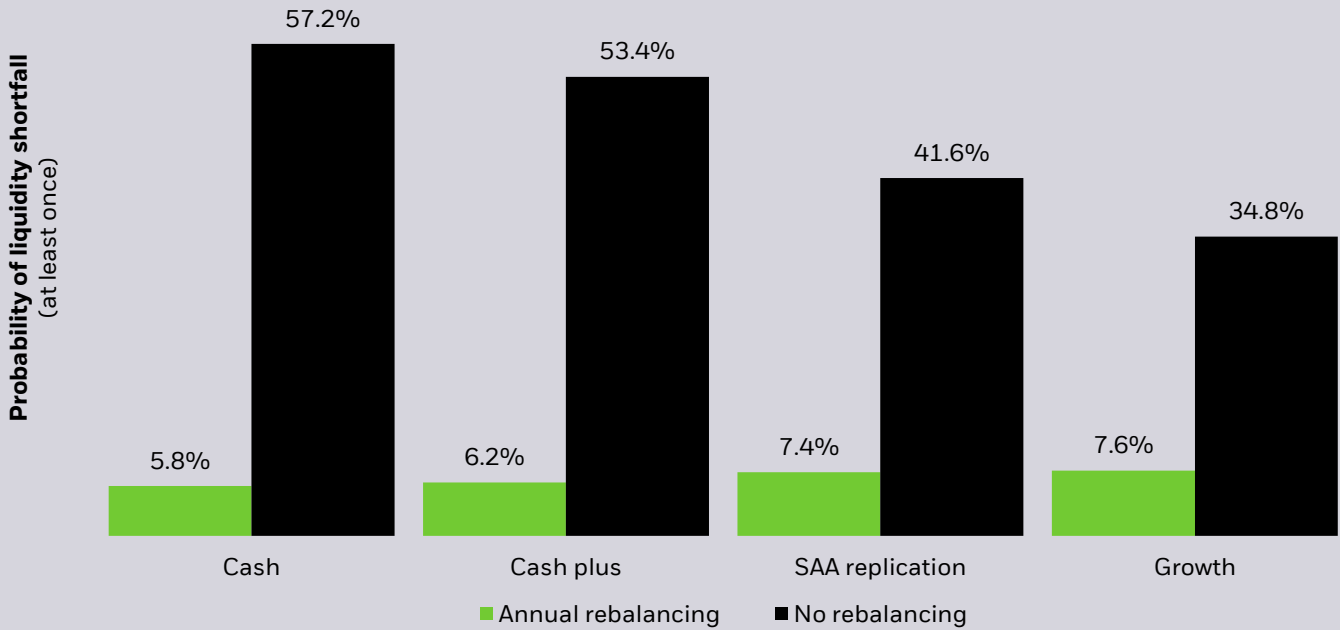
Portfolios	Median terminal value total (£mn)	Median return total (% ann)	Prob. of liquidity shortfall (at least once)	Avg liquidity shortfall (£mn)	Avg time in shortfall (months)	Avg number of liquidity shortfall events	Avg max drawdown of liquidity sleeve (%)
<b>Cash</b>	2,232	8.1%	5.8%	-14.3	2.4	1.07	72%
<b>Cash plus</b>	2,263	8.2%	6.2%	-18.0	2.6	1.10	74%
<b>SAA replication</b>	2,367	8.7%	7.4%	-15.5	2.6	1.14	75%
<b>Growth</b>	2,461	9.1%	7.6%	-14.9	2.9	1.26	76%

Source: BlackRock, Morningstar, time period: 31 Dec 2015 – 31 Dec 2025, currency: GBP.

## The importance of rebalancing

Rebalancing serves multiple purposes in liquidity sleeves. First, it ensures the liquidity sleeves are appropriately replenished, if needed. Annual rebalancing lowers the probability of liquidity shortfall across all portfolios compared to no rebalancing (see Fig 3).

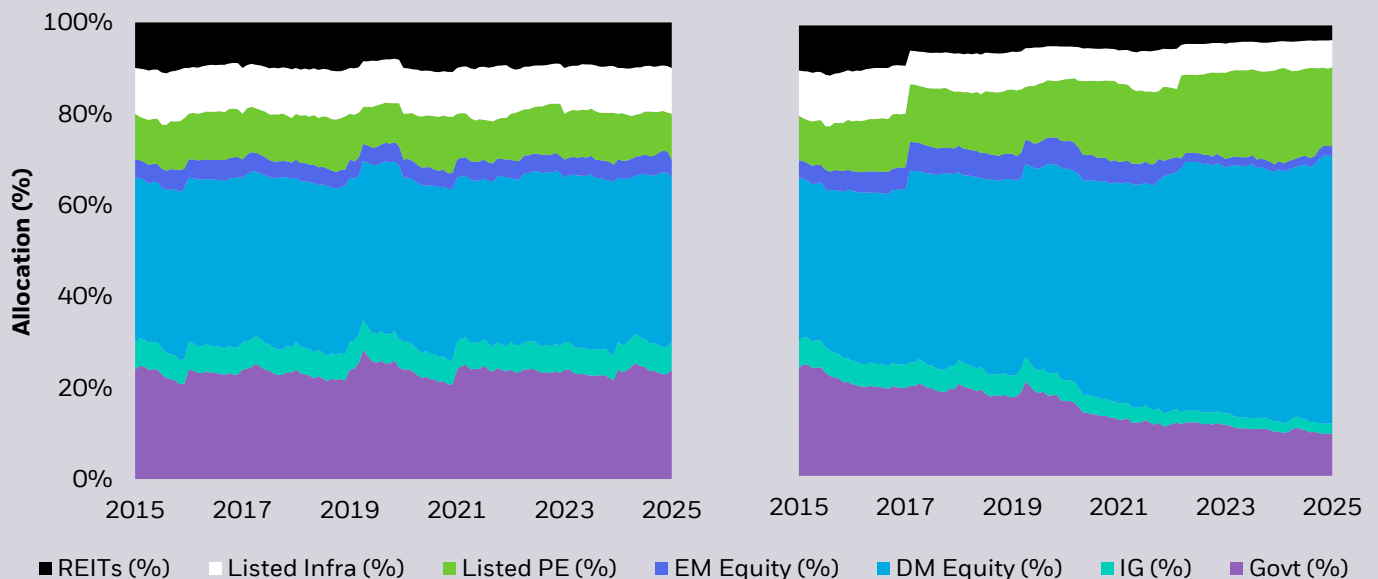
**Fig 3. Probability of liquidity shortfall (at least once) of the liquidity sleeve**



Source: BlackRock, Morningstar, time period: 31 Dec 2015 – 31 Dec 2025, currency: GBP.

Second, rebalancing helps keep the underlying composition of the portfolio and liquidity sleeve in line with the target weights, reducing unwanted tracking error. To illustrate this, we pick one cash flow simulation for the SAA Replication liquidity sleeve (see Fig 4). The liquidity sleeve without rebalancing results in a larger allocation to risk assets, including public and listed private equity, which will result in a materially different risk profile than originally intended.

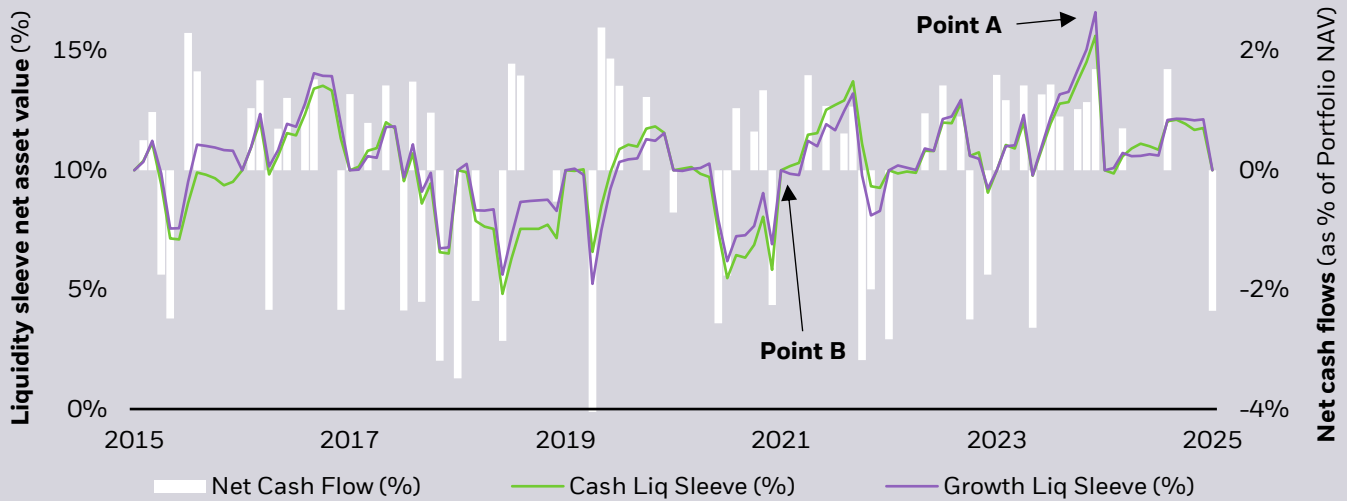
**Fig 4. SAA Replication liquidity sleeve composition with yearly rebalancing (left) and without rebalancing (right)**



Source: BlackRock, Morningstar, time period: 31 Dec 2015 – 31 Dec 2025, currency: GBP.

Third, it instils discipline in realising gains and replenishing the liquidity sleeve. We can observe this in more detail for one of the cash flow paths selected (see Fig 5). Point “A” illustrates a scenario where the yearly rebalance results in realising gains after a strong 2024 equity market.

**Fig 5. Net asset value evolution of the different liquidity sleeves for one cash flow path selected**



Source: BlackRock, Morningstar, time period: 31 Dec 2015 – 31 Dec 2025, currency: GBP.

Depending on market moves and the cash flows, the liquidity sleeve will either inject or receive money from the investment portfolio on a rebalance date. Across the 500 cash flow simulations, we find that the Growth liquidity sleeve is the only one which, on average, funds the investment portfolio (see Table 3). We also observe that the SAA Replication rebalance is closest to 0, which is evidence that it is delivering similar performance to the Investment Portfolio.

**Table 3. Average injection into investment portfolio through annual rebalancing**

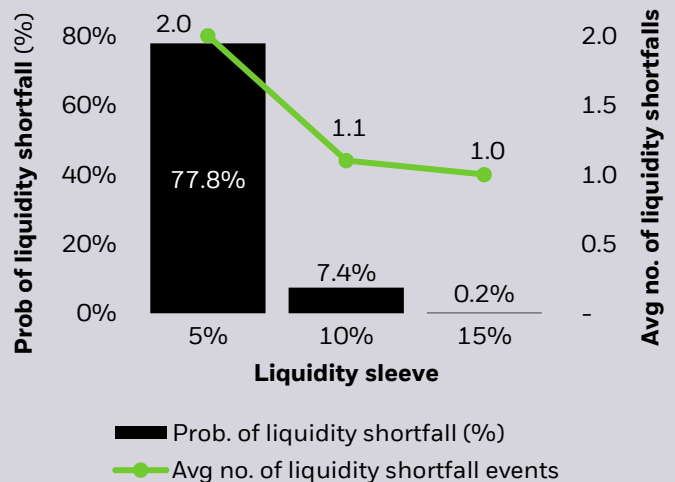
Label	Avg injection (per year, £mn)
Cash	-9.4
Cash plus	-7.7
SAA replication	-1.1
Growth	5.2

Source: BlackRock, Morningstar, time period: 31 Dec 2015 – 31 Dec 2025, currency: GBP. A positive number refers to an injection from the liquidity sleeve into the investment portfolio.

### Sizing the liquidity sleeve

The larger the liquidity sleeve, the stronger its ability to withstand liquidity shocks. To illustrate the effect of a larger liquidity sleeve, we compare a 5%, 10% and 15% liquidity sleeve using the SAA Replication portfolio, assuming asset allocation remains proportionately the same. As expected, probability of liquidity shortfall goes up as the liquidity sleeve percentage goes down. Even with a 5% liquidity sleeve, a liquidity shortfall occurs on average only in 2 out of 120 months.

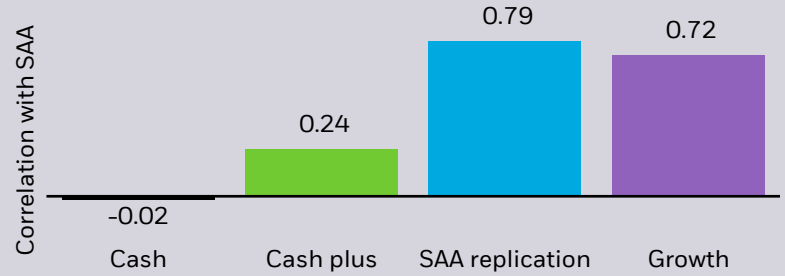
**Fig 6. Comparison of 5%, 10% and 15% liquidity sleeves for the SAA replication portfolios**



Source: BlackRock, Morningstar, time period: 31 Dec 2015 – 31 Dec 2025, currency: GBP. Avg no. of liquidity shortfall only considers cases where the liquidity sleeve has experienced a shortfall.

Generally, the larger the liquidity sleeves, the higher the portfolio tracking error versus the target asset allocation. This is where the SAA Replication approach can be beneficial, as it could help keep the tracking error of the portfolio more in line with the target weights even with higher allocation to the liquidity sleeve.

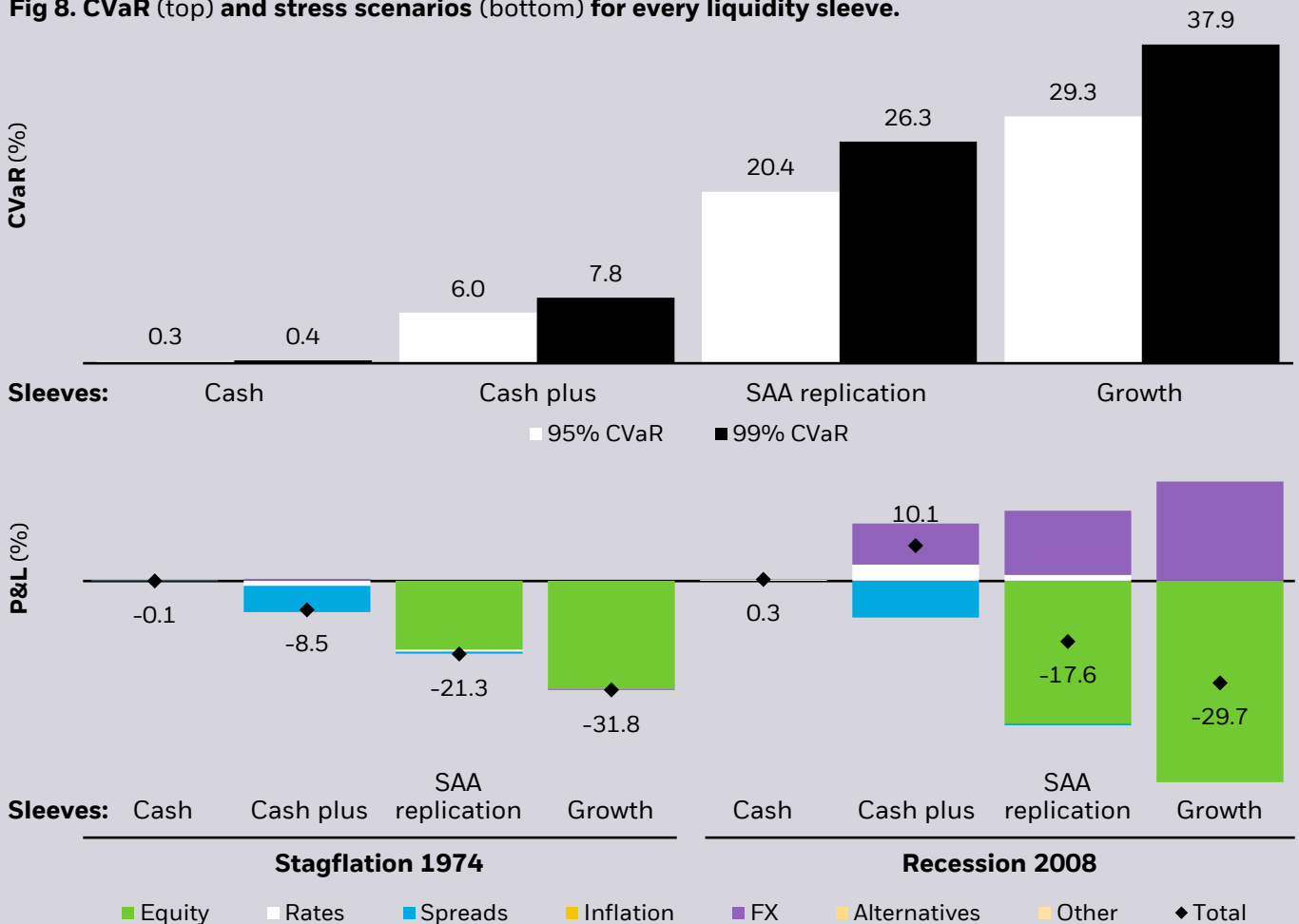
**Fig 7. Correlation of the liquidity sleeve with the SAA, excluding cash flows**



Source: BlackRock, Morningstar, time period: 31 Dec 2015 – 31 Dec 2025, currency: GBP.

The liquidity sleeve can also be sized based on tolerance to tail risk events, assessed using Conditional Value-at-Risk (CVaR) and stress testing, as shown in Figure 8. These left tail risk measures allow us to estimate how much cash outflow the liquidity sleeve can continue to service during extreme market environments. The Growth liquidity sleeve has a 99 percent CVaR of 37.9%, implying that in the most adverse 1 percent of annual outcomes the sleeve experiences an average loss of 37.9 percent. For an initial sleeve of £100 million, this suggests it could still service around £62 million of cash outflows in tail risk scenarios. Stress testing provides a complementary perspective by illustrating potential drawdowns under specific historical shocks. For example, the SAA Replication liquidity sleeve would experience a drawdown of 17.6 percent under a scenario similar to the 2008 global financial crisis. Taken together, CVaR and stress test outcomes help assess whether the liquidity sleeve is appropriately sized and whether its risk profile or composition should be adjusted to improve resilience in extreme market environments and reduce the risk of liquidity shortfalls.

**Fig 8. CVaR (top) and stress scenarios (bottom) for every liquidity sleeve.**



Source: BlackRock, Aladdin®, time period: 31 Dec 2015 – 31 Dec 2025, currency: GBP. Figures calculated in GBP based on ex-ante risk using 6 years of monthly observations with a 3-year half-life.

## Quantifying the transaction cost savings

We estimate the trading costs an investor could realise by employing ETFs in a liquidity sleeve compared to using index mutual funds (IMF) or segregated accounts (see Table 4).

**Table 4. Estimation of round-trip costs**

Label	Roundtrip cost (bps) – IMF	Round-trip cost (bps) – ETF	Liq sleeve inflows (£bn)	Trading cost saving over 10 years	Comments
Cash plus	0.26%	0.07%	£660 mn	£1.3 mn	Cost advantage of FI ETFs compared to primary market bond t-costs
SAA replication	0.10%	0.07%	£665 mn	£0.2 mn	Trading cost savings limited by availability of IMFs for listed private market exposures
Growth	0.12%	0.04%	£690 mn	£0.3 mn	Reflecting lower trading costs from EM ETF secondary-market liquidity

Source: BlackRock, as of 31 Dec 2015. For illustrative purposes only. The savings in trading costs are based on point-in-time roundtrip cost estimates applied to the total inflows traded in each respective liquidity sleeve over a 10-year time period. Additional details can be found in the appendix.

## Modelling other types of cash flow profiles

For this case study, we assume a cash flow profile characterised by infrequent but potentially large cash outflows. This kind of “lumpy outflow” pattern is typically viewed as higher risk from a liquidity perspective because it increases the probability that the portfolio must raise cash at an inconvenient time, potentially during periods of market stress or when certain holdings cannot be liquidated without material discounts.

In practice, cash flows and liquidity dynamics vary substantially across investor types and across portfolio maturity. A closed Defined Benefit pension scheme, for example, may experience comparatively stable and forecastable outflows in the form of member benefit payments. Inflows can also be more predictable due to higher allocations to fixed income, including LDI. A university endowment may have a relatively predictable annual spending requirement driven by a spending rule (such as a percentage of trailing assets). Family offices can be more idiosyncratic, with cash needs shaped by lifestyle spending, opportunistic investments, and distributions that may not follow a pre-defined schedule.

Liquidity management challenges are not limited to funding outflows. Excess cash can also be difficult to manage, particularly as it may persist

for longer than intended. Holding too much cash can introduce unwanted tracking error versus strategic target weights, leave the risk budget underutilised, and create a structural return drag. For example, a family office that experiences a major liquidity event through the sale of a business may see a large inflow arrive faster than it can be prudently allocated in line with the portfolio’s SAA. In such cases, ETF-based liquidity sleeves can be used to obtain market exposure quickly.

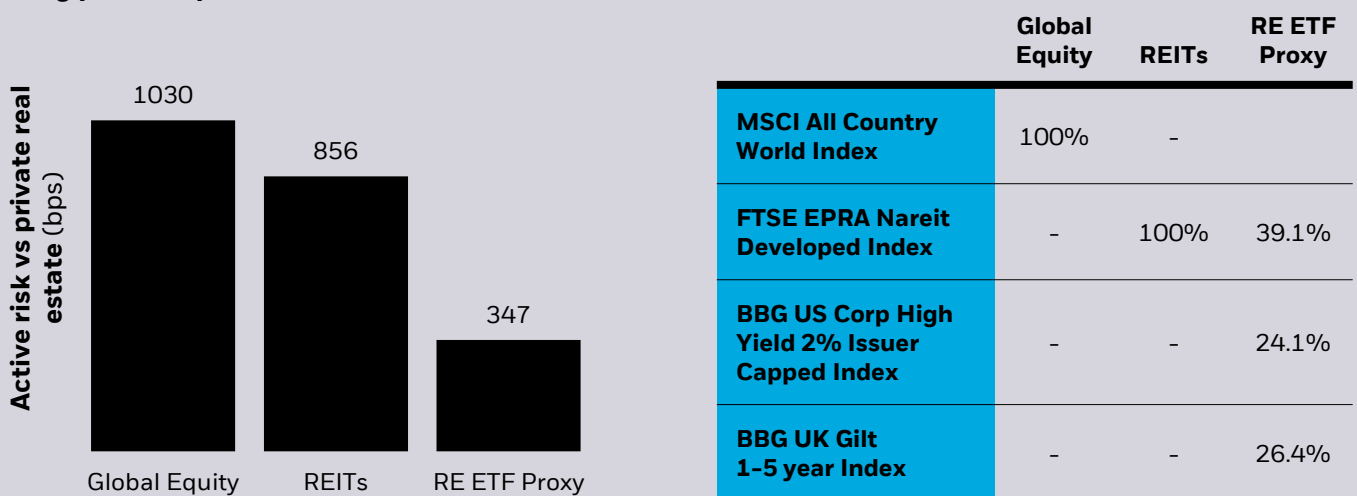
Separately, consider a newly established but well-funded sovereign wealth fund with a long-term target allocation of 40% to private markets: it may take five years or more to build the private markets allocation. During this ramp-up, the portfolio may be disproportionately exposed to public markets relative to the SAA. Where the portfolio cannot quickly align to its strategic asset allocation, whether due to large inflows awaiting deployment or private market allocations that must be built over time, we would consider a form of SAA replication referred to as a **completion liquidity sleeve**. The objective of such a sleeve is to complement the existing assets and “complete” the portfolio to keep overall exposures closer to the SAA.

## Designing forward-looking liquidity sleeves

The case study has been created using historical returns which are beneficial in capturing historical and recognizable market moves as well as changes in correlations between asset classes. In practice, however, we will use Capital Market Assumptions (CMAs) developed by the BlackRock Investment Institute to inform the composition of the liquidity sleeve considering the portfolio's risk, return and liquidity objectives.

Furthermore, some liquidity sleeves, as is the case for the SAA Replication approach, will require a liquid proxy for private markets. In this case study, we have used liquid proxies such as REITs, listed private equity and listed infrastructure. In practice, we look at the risk decomposition of private markets and proxy part of the macro risk using public exposures accessed through ETFs (see Fig 9).

**Fig 9. Illustration of how to minimize tracking error versus a private market asset class using public exposures**



Source: BlackRock, as of 31 Dec 2025. Figures calculated in GBP using 10 years of monthly observations with a 3-year half-life, based on a point-in-time allocation. Weights are based on a ex-ante tracking error minimisation.

Capital calls in private markets can spike sharply during periods of public market weakness. As a result, liquidity sleeves that are highly correlated with market returns may experience drawdowns at the same time that funding needs rise, reducing their ability to service cash outflows. This dynamic is most relevant for growth oriented and SAA replication sleeves. However, many institutional cash flows, such as benefit payments or recurrent spending are largely independent of market performance, meaning that market linked liquidity sleeves can still play an effective role in overall liquidity management.

## Additional considerations on the portfolio modelling

We have used index returns as a proxy to ETF returns. In practice, fees and tracking error should be considered for both passive and active strategies for both the investment portfolio and the liquidity sleeves. Furthermore, in this case study, we are assuming that the illiquid part of the portfolio can be rebalanced back to the target weights which may not be possible given vintage timings and ramp up periods.

# INDEX ASSET ALLOCATION

Investors may already have the governance framework and operational infrastructure needed to establish and maintain a liquidity sleeve. Alternatively, clients may choose to utilise BlackRock's **Index Asset Allocation (IAA)** service, which provides portfolio implementation and ongoing day-to-day management for institutional investors at no additional fee<sup>2</sup> when using iShares ETFs. IAA combines BlackRock's index portfolio management experience, Aladdin technology, and global trading capabilities, applying the same processes used to manage over \$7T of index assets.

IAA trades through BlackRock's trading desk, which transacts over \$95T notional annually across asset classes, connects to more than 335

venues globally, and accesses around 680 counterparties. This scale supports best execution and generates tangible trading cost advantages for our clients. Additionally, BlackRock does not conduct proprietary trading, and our Aladdin Crossing Engine can internally cross trades which further reduces trading cost.

Once the asset allocation is agreed via an Investment Management Agreement (IMA) and onboarding is complete, IAA can process daily cash flows and rebalance to client specified targets. Clients retain full control of strategic allocations while outsourcing implementation, using the breadth of the iShares range and IMA flexibility to tailor the solution.

## CONCLUSION

A standing ETF liquidity sleeve functions as a portfolio moat, protecting long-term allocations from cash flow shocks while keeping capital efficiently invested through highly liquid, cost-efficient ETFs. When appropriately sized and rebalanced, it enhances portfolio resilience, reduces cash drag, and limits disruption to less liquid holdings without introducing unnecessary operational complexity.

Institutions can tailor this moat using different liquidity sleeve designs depending on objectives and constraints. Cash-plus approaches prioritise stability and capital preservation while modestly improving returns relative to cash. SAA-replication sleeves seek to preserve the portfolio's strategic economic exposure, helping to minimise tracking error and unintended asset-allocation drift as cash flows occur. Growth-oriented sleeves accept higher volatility in exchange for greater long-term return potential and, over time, can become a source of funding for the core portfolio. Together, these approaches provide a flexible framework for aligning liquidity management with governance, risk tolerance, and portfolio maturity, allowing institutions to remain fully invested while maintaining portfolio resilience.

2. Subject to portfolio size minimums.

# APPENDIX

## Additional details on cash flow and back-test modelling

For this case study, contributions and distributions are each calibrated to 4.5% per annum on average, so that net cash flows are broadly neutral over time. This helps ensure that the returns shown in the analysis are driven primarily by asset class performance rather than by external cash flows.

Both the timing and magnitude of cash flows are linked to contemporaneous equity market conditions using the historical return series of MSCI ACWI NR EUR. Distributions are modelled to be more likely and larger when equity returns are weak, while contributions are modelled to be more likely and larger when equity returns are strong. Returns are standardized into z-scores and used to drive both effects.

The strength of this relationship is determined by two parameters: the probability beta, which controls how sensitive the likelihood of a cash flow event is to market conditions, and the size beta, which controls how sensitive the magnitude of the cash flow is. A random noise term is also included to allow for dispersion around these market-driven patterns.

When the liquidity sleeve's NAV falls below zero, the shortfall is assumed to be funded through borrowing. Interest is charged at the prevailing monthly cash rate, and the liquidity sleeve is restored to 10% of total portfolio NAV at the next rebalance date.

## Portfolio composition

The portfolios and indices used in the case study are detailed below.

Name	Cash Portfolio		Cash Plus Portfolio		SAA Replication Portfolio		Growth Portfolio	
	Liquidity sleeve	Weight	Liquidity sleeve	Weight	Liquidity sleeve	Weight	Liquidity sleeve	Weight
Ultra Short	-	0%	Y	1%	-	0%	-	0%
Govt	-	0%	Y	2%	Y	2.4%	-	0%
HY	-	0%	Y	4%	-	0%	-	0%
IG	-	0%	Y	3%	Y	0.6%	-	0%
DM Equity	-	0%	-	0%	Y	3.6%	Y	9%
EM Equity	-	0%	-	0%	Y	0.4%	Y	1%
Listed PE	-	0%	-	0%	Y	1%	-	0%
Listed Infra	-	0%	-	0%	Y	1%	-	0%
REITs	-	0%	-	0%	Y	1%	-	0%
Glb Equity	-	36%	-	36%	-	36%	-	36%
Global Agg	-	27%	-	27%	-	27%	-	27%
Cash	Y	10%	-	0%	-	0%	-	0%
PE	-	9%	-	9%	-	9%	-	9%
Infra	-	9%	-	9%	-	9%	-	9%
RE	-	9%	-	9%	-	9%	-	9%

Source: BlackRock, as of 31 December 2025.

Name	Index used for historical analysis	Index used for ex-ante risk analysis
<b>Ultra Short</b>	ICE BofA GBP 3M Dep Bid Rt Avg TR GBP	JP Morgan GBP 3M Cash
<b>Govt</b>	Bloomberg Global Treasury Index GBP H	Bloomberg Global Treasury Index GBP H
<b>HY</b>	Bloomberg Global High Yield Index GBP H	ICE BofA Global High Yield Index GBP H
<b>IG</b>	Bloomberg Global Agg Corp Index GBP H	Bloomberg Global Agg Corp Index GBP H
<b>DM Equity</b>	MSCI World Index	MSCI World Index
<b>EM Equity</b>	MSCI Emerging Markets Index	MSCI Emerging Markets Index
<b>Listed PE</b>	S&P Listed Private Equity Index	S&P Listed Private Equity Index
<b>Listed Infra</b>	FTSE Global Core Infrastructure Index	S&P Global Infrastructure Index
<b>REITs</b>	FTSE EPRA Nareit Global REITs Index	FTSE EPRA Nareit Global REITs Index
<b>Glb Equity</b>	MSCI All Country World Index	MSCI All Country World Index
<b>Global Agg</b>	Bloomberg Global Aggregate TR Hdg GBP	BBG Global Aggregate Index (GBP Hedged)
<b>Cash</b>	ICE BofA GBP 1M Dep Bid Rt Avg TR GBP	ICE BofA GBP 1 Month LIBOR
<b>PE</b>	Cambridge Global Private Equity	PE - Buyout Global
<b>Infra</b>	Cambridge Infrastructure	INF - Diversified Global
<b>RE</b>	Cambridge Real Estate	RE - Core Global

Source: BlackRock, Morningstar, as of 31 December 2025. Private market indices are expressed monthly with returns only captured at quarter-end.

## Trading cost methodology

To model the trading cost of ETFs and Index Mutual Funds (IMFs), weighted round trip trading costs using dual priced IMF bid / ask spreads and ETF average three-month spreads were used as of December 31, 2025. Where no Index Mutual Fund data was available for a particular index exposure, the equivalent ETF trading spread data was used, or alternatively, the underlying securities basket spreads. This highlights the broader range of ETF exposures compared to IMFs. The cases where ETF data was used as proxy to IMFs are Listed Private Equity and Global Listed Infrastructure. The case where the underlying basket spreads were used is High Yield. For the MSCI Developed Markets equity exposure, a building block portfolio replicating the MSCI World index was used; this improved the exposure's holding cost while maintaining low trading costs.

Name	Roundtrip cost assumption (bps)	
	ETF	Index Mutual Funds
<b>Ultra Short</b>	0.04%	0.04%
<b>Govt</b>	0.09%	0.06%
<b>HY</b>	0.08%	0.40%
<b>IG</b>	0.08%	0.29%
<b>DM Equity</b>	0.04%	0.08%
<b>EM Equity</b>	0.04%	0.45%
<b>Listed PE</b>	0.12%	0.12%
<b>Listed Infra</b>	0.04%	0.04%
<b>REITs</b>	0.07%	0.08%

Source: BlackRock, Bloomberg, big xyt as of 31 December 2025. For the ETF: 3m Average Spreads at fund level refers to the tightest average spread across all listings of the share class. Average Spread data relates to on-screen bid-ask spreads. The ultimate price and outcome for a trade may differ and cannot be guaranteed by iShares. For the IMF: The dealing spreads aim to reflect the ongoing liquidity environment (i.e. close to actual trading costs). Hence, spreads are revised periodically to reflect the prevailing market conditions, in order to pass on the cost of trading to the dealing clients and protect exiting/remaining investors. Listed PE and Listed Infra roundtrip cost estimated from ETF cost.

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