

Executive Summary

BUILDING A BETTER PORTFOLIO

Balancing Performance and Liquidity

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The search for higher returns and better diversification has led many institutional investors to allocate more capital to illiquid private assets. This has come at the cost of decreasing portfolio liquidity, as private assets are not easily sold in a short period of time and may be unable to meet immediate portfolio liquidity demands. At the same time, private asset investors may encounter additional and often hard to predict liquidity demands when GPs make capital calls stemming from prior commitments. Investors need to have a strong understanding of how the liquidity characteristics of private assets impact their portfolios.

Investors are increasingly faced with the difficult choice between potentially higher returns and greater liquidity. Given market uncertainty, the risk of failing to meet liability obligations or failing to capture attractive opportunities during market dislocations further complicates the decision. What is the right amount of private assets in one's portfolio?

Leveraging the cross-asset research capability and experience of GIC EIS and PGIM IAS, we have enhanced and expanded PGIM's **asset allocation framework (OASIS™ – Optimal Asset Allocation with Illiquid Assets)** to formally integrate liquidity measurement and cash flow management into a multi-asset, multi-period portfolio construction process.

Investors can use this framework to analyze how allocations to illiquid private assets (a top-down decision), in combination with their private asset commitment strategy (a bottom-up decision), affect their portfolio's ability to respond to liquidity demands (Figure 1).

Specifically, this framework can help investors address the following key asset allocation questions:

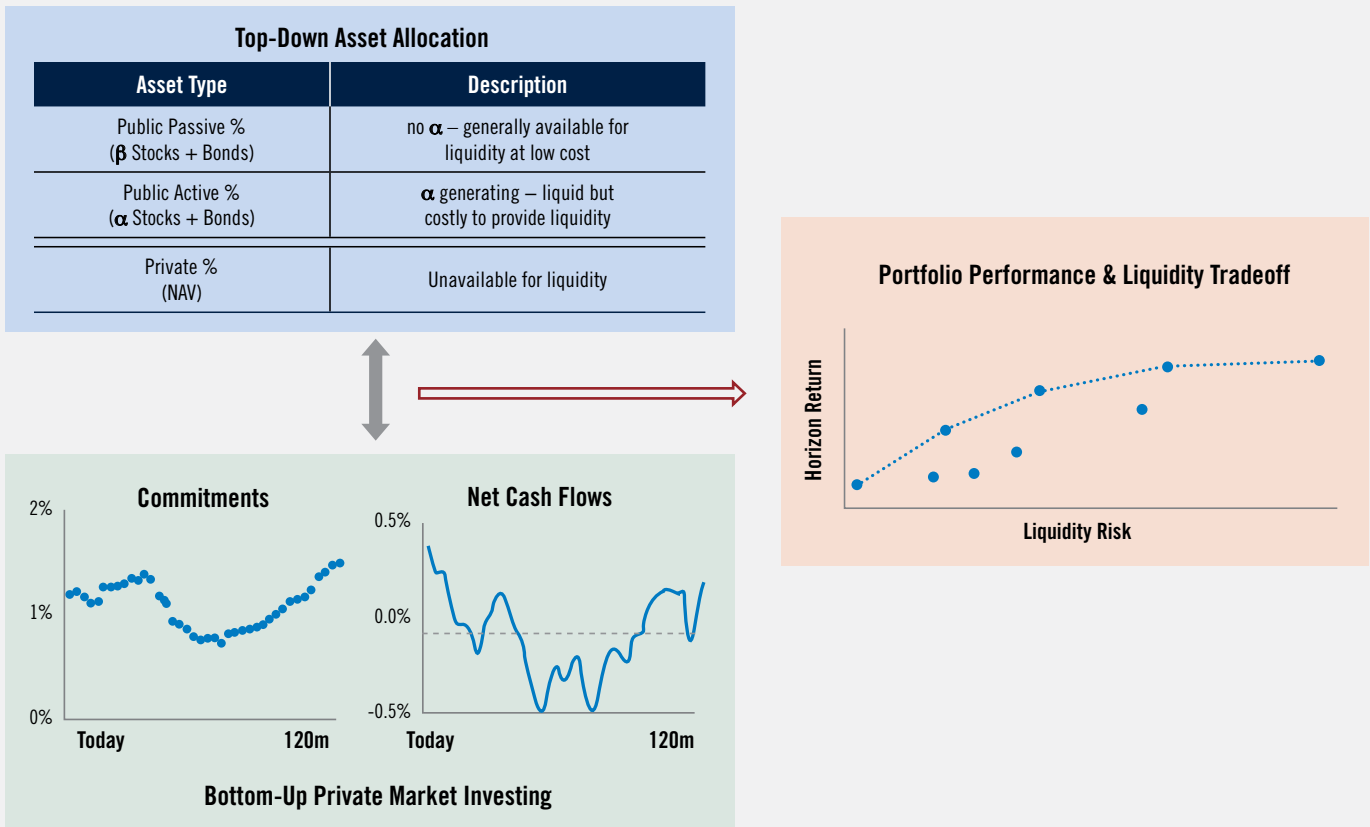
- 1) How to formulate a **private asset commitment strategy** to manage private asset exposure and the uncertainty in timing and magnitude of cash flows over time?
- 2) What should be the **desired allocations** (public *vs.* private, public passive *vs.* public active) given the investor's liquidity risk tolerance?
- 3) How would various **market scenarios** impact the portfolio's liquidity and performance?

The OASIS framework is modular (Figure 2), with each underlying component customizable by the investor.

First, it begins by simulating the returns and risk of public and private assets in a multi-asset portfolio. The simulation can incorporate an investor's own capital market assumptions. It also allows investors to express their views on future private asset performance (relative to public assets) and their fund-selection skills which can be an important performance driver. In addition, the framework introduces cash flow modeling which is consistent with and responsive to the underlying market environment.

Second, the framework uses the investor's portfolio structure that specifies a "waterfall" rule for sourcing liquidity: Which assets to sell to meet a liquidity demand, starting with those that are the least disruptive and costly.

Figure 1: Interaction of Asset Allocation & Private Market Investing

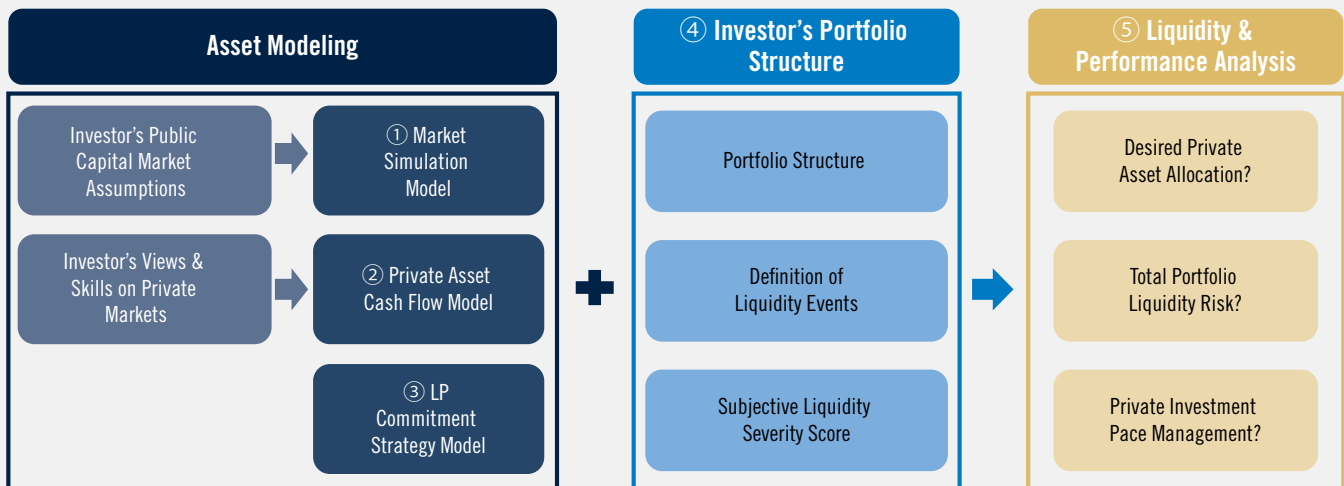


Source: GIC EIS & PGIM IAS. Example shown for illustrative purposes only.

Last, bringing it all together, we apply the framework and show examples of how investors can analyze their portfolio’s performance and liquidity. This flexible and customizable framework can incorporate investors’ own assumptions regarding:

- Public asset performance and risk (beta and alpha);
- Private asset performance and risk (relative to public assets) and fund-selection skills;
- Private asset commitment strategy;
- Total portfolio cash flow needs and liquidity supply waterfall; and
- Penalty for various liquidity events.

Figure 2: Flowchart of the OASIS Asset Allocation Framework



Source: GIC EIS & PGIM IAS. Example shown for illustrative purposes only.

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