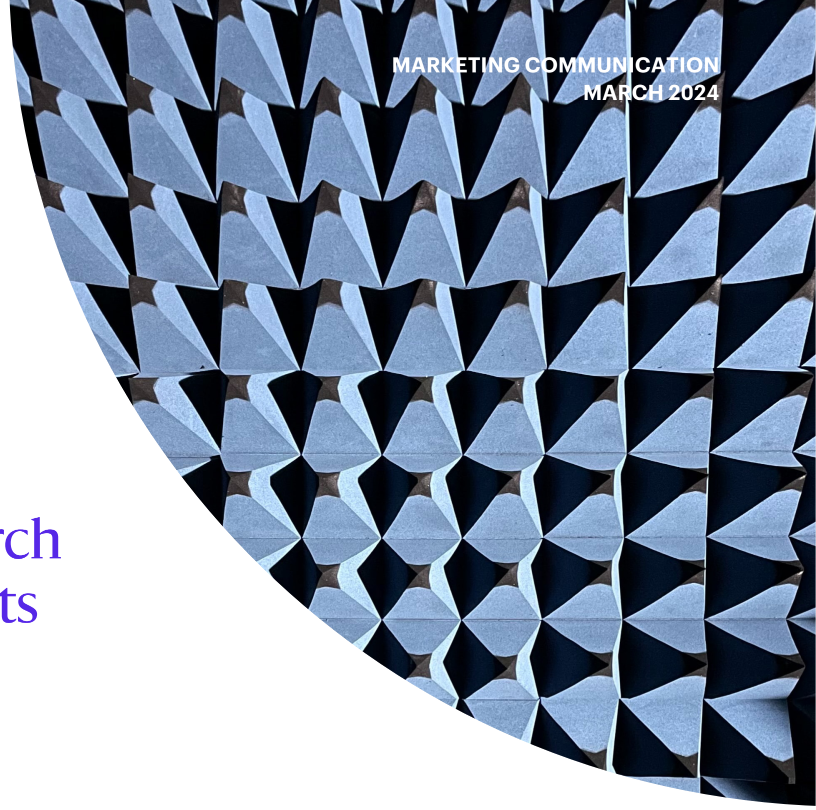


The Dragon Turns Two:

Revisiting Our Liquidity Research in Light of 2022 and 2023 Events

KEVIN KNEAFSEY, PH.D.
Senior Portfolio Manager
Systematic Edge Multi-Asset

In early 2022, we published research looking into the market-wide implications of significantly increased amounts of money flowing into illiquid assets such as private equity, private credit, and private real estate.[1] Like the early and dangerous experiments of the Manhattan Project, are investors tickling the tail of a sleeping liquidity dragon? Having managed a portfolio of hedge funds with an illiquid component throughout the Global Financial Crisis, we had an appreciation of the frightening realities of a significant market shock, compounded by the need to raise cash (in this case to meet redemptions), in the presence of a partially illiquid portfolio. Given the huge increase in illiquid asset holdings in many portfolios, we were curious whether the market had become sufficiently fragile that a significant market shock could create a liquidity price downward spiral.

Two years later, we have updated that original research, reflecting recent market dynamics. We start by briefly covering key takeaways from the original research and then discussing some of the main market events of 2022 and 2023 in light of that work. We then evaluate where many investors stand from a liquidity perspective at the beginning of 2024, concluding with some recommendations.

Key questions and takeaways from the original research

How might the increasing allocation to illiquid assets affect liquid assets?

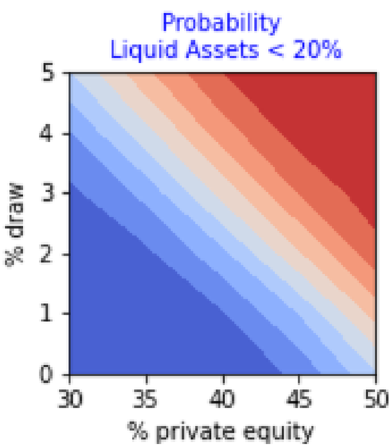
This is akin to secondhand smoke—an investor need not be invested in illiquid assets to be affected by the actions of other investors with large illiquid asset holdings. Liquidity demands are first met by selling liquid public market assets that bear the initial impact of any liquidity squeeze. In many cases, investors holding the least amount of illiquid assets will be hurt the most in a significant market drawdown.

What are the implications for illiquid assets?

The nature of this problem is that it has a tipping point. The tipping point is the point at which illiquid assets must be sold to finance cash needs. Once the tipping point is breached, the more illiquid assets held, the worse the performance.

1. Whitney, Duane, and Kevin Kneafsey. “Tickling the Dragon’s Tail: A Model of the Systemic Impact of Increased Illiquid Asset Holdings in Times of Market Stress.” Allspring, March 2022.

The graph below presents one view of our tipping point results, illustrating the probability of liquid assets dropping below 20% of portfolio assets during a three-year period that includes and follows a 3-standard-deviation market shock. Deep blue represents a 0% to 10% probability, and deep red represents a 90% to 100% probability. Shades in between deep blue and deep red represent 10% probability increments.



Source: Allspring.

For smaller private market allocations and smaller organic cash flow needs (the "draw" as a percent to pre-drawdown portfolio assets), it is very unlikely that liquid assets fall below 20%. Contrast this with large (5%) organic cash flow needs and a large starting illiquid allocation (50%), which results in almost certainty that liquid assets will fall below 20% of portfolio assets. The graph also makes clear the idea of a tipping point, moving from deep blue to deep red.

What are the key factors that determine a breach of the tipping point?

The market shock and market fragility are the key determinants of whether a breach occurs.

- **Market shock:** The larger the shock and the longer the duration of the drawdown, all else equal, the higher the probability of breaching the tipping point.
- **Market fragility:** The more fragile the market, the more likely a breach for a given market shock. Market fragility is determined primarily by two things:
  - **Organic cash flow:** The larger the cash drain on liquid assets, the more fragile the system.
  - **Illiquid allocation:** The larger the illiquid allocation, the more fragile the system. Each dollar allocated to illiquid assets results in one less dollar available to fund liquidity needs. Also, the larger the illiquid allocation, typically the larger the capital commitment, which exacerbates the drain on liquid assets.

Given the macroeconomic and market events of 2022 and 2023, it's helpful to discuss each year in light of this research and then highlight the implications for 2024.

2022: A rough start with a better end

This was the year inflation got out of control globally. Central banks responded by tightening monetary policy with, among other things, significant interest rate increases. Public market equities, real estate, and bonds fell by 15% to 30% at the trough of the drawdown. Private market assets, as they are known to do, were very slow to write down asset values. The result was that many institutional investors lost control of their asset allocation as illiquid assets breached the upper allocation bounds and public market assets fell through their lower allocation bounds.

Pension funds continued to make benefit payments, endowments and foundations continued to distribute funds, and private market funds continued to call capital that had been previously committed. Distributions from private markets dried up. These net cash outflows led to a further depletion of liquid assets. Fortunately, much of the asset market drawdown had slowed or ended by the fourth quarter, and this improvement continued into 2023.

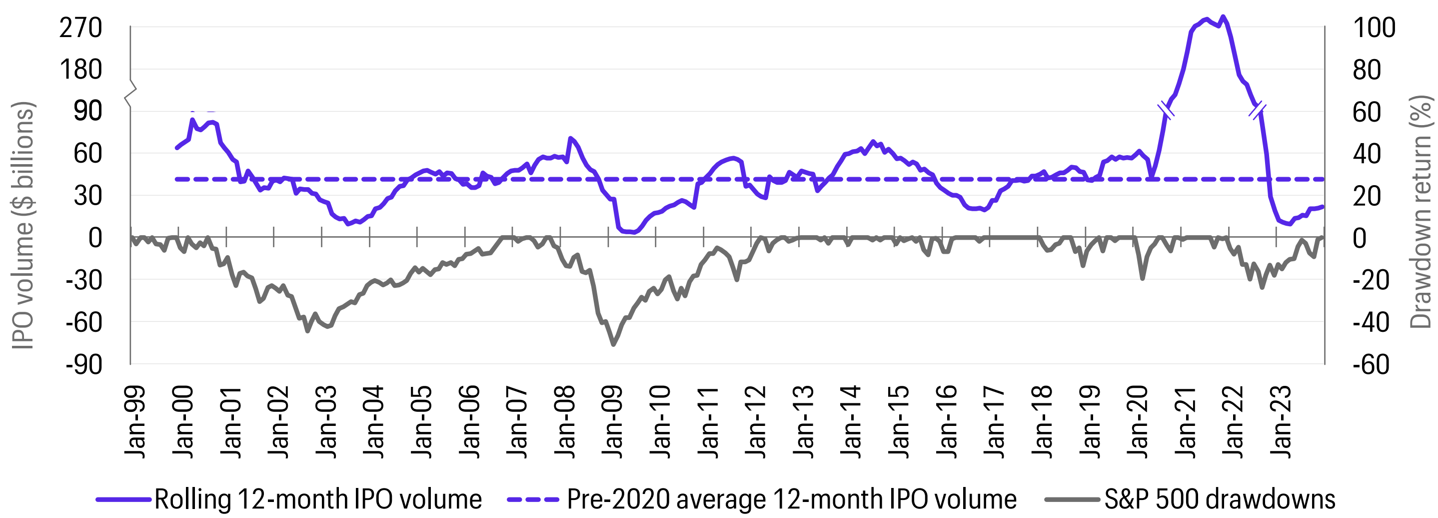
2023: Volatility below the surface

Last year saw inflation come under control and monetary tightening cease. Public market equities and bonds rallied significantly, with equities largely recovering ground lost in 2022. Public market bonds rallied as yields fell, and public real estate held steady. This rally in liquid assets helped bring investors' asset allocation closer to target levels. The year was not without its excitement, however, with the failures of Silicon Valley Bank and Signature Bank and the rescue of First Republic Bank. In all three cases, the balance of illiquid assets (loans to venture capital firms and start-ups, investments in cryptocurrency) to liquid assets (largely Treasury bonds and bills) grew too large and concerned depositors demanded their money.

Blackstone's private real estate investment trust (known as BREIT and as one of the world's largest real estate funds) continued to gate redemptions—a process that started in the fourth quarter of 2022 and continued through all of 2023. Despite the gating, BREIT breached the tipping point and properties had to be sold to meet redemptions. Pension funds continued to make benefit payments, endowments and foundations continued to distribute funds, and private market funds continued to call capital that had been previously committed. Distributions from private markets remained anemic.

To get a sense of how anemic distributions from private markets became, the figure below plots the drawdowns on the S&P 500 Index in gray and the rolling 12-month dollar volume of initial public offerings (IPOs) in violet. IPOs are a primary way for private equity to distribute capital to investors. The relationship between the two is striking—when the S&P 500 Index draws down meaningfully, IPOs disappear and then trail the recovery in the S&P 500 Index by six to nine months. At the end of 2023, distributions remain well below the pre-2020 average. This is particularly acute across much of venture capital.

S&P drawdowns and IPO dollar volume



Sources: Allspring and Bloomberg Finance L.P., Jan-99–Dec-23.

Before jumping into 2024, it's worth getting clarity on where investors found themselves at the end of 2023. The "legacy of loss" is the idea that losses leave a mark. For any given loss, the recovery takes a larger return than the original loss—for example, a 50% loss requires a 100% return to get back to even.[2]

We also know that the recovery is a non-linear function of the size of the loss—for example, a 25% loss requires a 33% gain to recover but a 50% loss (2 x 25% loss) requires a 100% gain to recover, not a 66% gain (2 x 33%). This is important because cash outflows in the presence of a loss increase the return needed to fully recover the impact of that cash flow by more than the amount of that cash flow.

To make this more concrete, we construct a hypothetical portfolio with realistic cash flows and walk it through 2022 and 2023. Consider a portfolio at the end of 2021 that was 70% liquid assets and 30% private (illiquid) assets. The liquid allocation is 60% MSCI All Country World Index (ACWI) (Net), 30% Bloomberg U.S. Aggregate Bond Index, and 10% MSCI U.S. REIT Index. Next, we assume net annual cash outflows of 3% of the 2021 portfolio value and private market capital calls net of distributions of 1.5% of the 2021 portfolio balance.[3] We also assume rebalancing within the liquid assets to the target liquid asset weights each month.

2. If a $100 portfolio loses 50%, it drops down to $50 and must gain $50 (100% of its new value) to get back to the portfolio's original value.
3. The 1.5% comes from assuming committed capital equal to 25% of the private market value on December 31, 2021. This committed capital is called equally over five years, so 1.5% = 25% x 30 x 1/5. All cash outflows are assumed to happen evenly every month. We assume no distributions from private market assets over this period.

The first row in the table shows annualized returns for 2022 and 2023 for each asset class.[4] Here we see that, by the end of 2023, public equities had just recovered from the 2022 drawdown while bonds and real estate still had a ways to go to fully recover. The next two rows show the dollar balances in each asset at the end of 2021 and then again at the end of 2023. There was a 13% reduction in liquid assets at the start of 2024 compared with the start of 2022. To understand the consequences of this scenario, we turn to 2024.

	ACWI	U.S. Agg	U.S. REIT	Privates
Annualized return 31-Dec-21 to 31-Dec-23	-0.1%	-4.2%	-7.3%	0.0%
Dollar value at 31-Dec-21	42.0	21.0	7.0	30.0
Dollar value at 31-Dec-23	36.4	18.2	6.1	33.3
Dollar shortfall	5.6	2.8	0.9	
Percent shortfall	13.3%	13.3%	13.3%	

Source: Allspring and Bloomberg Finance L.P., 31-Dec-21 to 31-Dec-23.

2024: Uncertainty ahead

The implications for 2024 are that, while equity market indexes are back at or near their 2021 peaks, public bond and real estate indexes are not, as interest rates remain well above the levels at the end of 2021. Liquid asset balances in most portfolios are well below their 2021 peaks. This is largely because, over the course of 2022 and 2023, many investors had to sell public market assets to fund cash distribution and to meet capital calls from private market investments. A lot more money suffered the drawdown than enjoyed the recovery. This leaves many portfolios more exposed to a liquidity stress event following a market shock than they were at the end of 2021.

If equity markets continue to rally, distributions from private markets should also pick up. If, however, equity markets slip and/or uncertainty increases significantly—possibly on the back of escalating geopolitical risk—distributions from private markets are likely to remain anemic. Because the liquid asset base has shrunk relative to the end of 2021, a smaller market shock in 2024 would move markets to the tipping point than the shock necessary in 2022.

What can investors do?

A few things that we recommended in our original research still apply today.

01 **Manage liquidity:** Take stock of your liquid assets and the cash flow demands on them.

a. Consider reducing or suspending any new commitments that turn liquid assets into illiquid assets. For the sake of this analysis, consider any asset you can turn into cash within six months without significant price concession to be liquid.

b. Consider explicit downside protection on your liquid equities. One of the fastest ways for a liquidity position to shrink is to suffer a significant market drawdown in liquid assets. Explicit protection provides gains to offset losses when they are most needed.

02 **Be a provider of liquidity in times of market stress:** A liquidity-stressed market will see many forced sellers who must make significant price concessions to remain solvent. Investors with sufficient liquidity will be able to buy many assets—public and private—at distressed prices. For investors uncomfortable with reducing or suspending private market commitments (as suggested in point 1 above), consider reducing or suspending those commitments but earmarking that capital to be deployed in the secondary market for private assets in case of a liquidity event.

4. We assume a 0% return to private assets, as it makes the cash flow into privates more transparent, but we could put any number in here as it has no impact on the liquid asset portfolio.

03 **Consider trend-following strategies:** Our modeling suggests that sales of liquid assets over time to meet cash flow needs will lead to trending in markets on the way down. This liquidity-driven selling will further depress prices well below fundamental value, which will result in prices trending upward during a recovery. Trend-following strategies should be well positioned to benefit portfolios on the way down (providing much-needed protection) as well as on the way up (buying recovering assets at bargain prices). Trend-following strategies are a systematic way of implementing the suggestions in points 1 and 2 above.

04 **Long volatility:** This is the worst advice in most market environments. Volatility generally fails to live up to its expectations, so being short volatility tends to pay off and being long volatility tends to be a consistent money loser. But in a liquidity-driven market, when many investors are forced to sell to meet cash flow needs, prices should fall and volatility could spike to new levels.

All of these suggestions are best implemented if discussed and agreed on before we suffer a market shock that kicks off a liquidity-stressed environment.

Preparing for when the dragon awakes

Our original paper published in early 2022 highlighted risks to the entire market (not just those with large illiquid allocations) of the significant shift by many investors into illiquid assets—primarily private market assets. Two years have passed, and equity markets have largely retraced their steps recovering from the drawdown in 2022 while bond and real estate markets have not. The selling of liquid assets to meet cash flow demands over those two years left less capital exposed to the recovery than was exposed to the drawdowns, further compounding the incomplete recovery. That, coupled with the actual net cash outflow over those two years, leaves many portfolios more vulnerable to a market drawdown and extreme liquidity stress than they were at the end of 2021. It may be time to consider steps to preserve and protect liquidity as well as to prepare to capitalize on the opportunities that a liquidity-stressed market may provide. The best time to prepare for a storm is when the sun is shining—and when the dragon is still sleeping.

For further information

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- For retail clients, contact your financial advisor.
- To reach our intermediary sales professionals, contact your dedicated regional director, or call us at +1-866-701-2575.
- To reach our institutional investment professionals, contact your existing client relations director, or email us at AllspringInstitutional@allspringglobal.com
- To reach our retirement professionals, contact your dedicated defined contribution investment only specialist, or call us at +1-800-368-1370.

FOR EMEA AND APAC INVESTORS ONLY

To reach our EMEA- and APAC-based investment professionals, contact us at AllspringInternational@allspringglobal.com.

FOR SUSTAINABLE INVESTING

To discuss sustainable investing solutions, contact Henrietta Pacquement, head of Sustainability, and Jamie Newton, deputy head of Sustainability, at henrietta.pacquement@allspringglobal.com and jamie.newton@allspringglobal.com.

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