
Modest recovery and heightened risk

Performance Research Note | April 2023

Ron Akke, Dan Golosovker, Amar Patel

Key takeaways

- The average portfolio returned 3.25% for the quarter, in part reversing the 2022 drawdown.
- Long-term performance remains high with a .8 Sharpe ratio over the past 10 years. All asset classes contributed to the positive performance figure.
- Historical scenario analysis shows that macro environments with declining inflation are on average good for equities, although there has been significant dispersion historically. Whether there's a 'soft landing' in the economy or inflation remains above target and rates remain high will impact asset prices in the coming months.
- Some key performance highlights include:
 - The difference between T-bill yields, and bank rates are at a 40-year high.
 - Deterioration of expectations for the economy, particularly the mid-March bank run, led to a broad-based volatile rally in fixed income.
 - Large company growth stocks rallied in Q1, a reversal from 2022 when defensive stocks outperformed. Growth company performance remains at odds with sector-level flows and reduction in fixed income portfolio duration.
 - Hedge funds experienced 2% returns on average with other (niche) and multi-strategy funds showing the highest performance, and macro and commodities trading accounts (CTAs) registering the worst performance. Both in aggregate and at the strategy level, hedge funds are generally highly correlated with equities.
 - Private capital funds experienced .75% returns on average. Dispersion across private capital portfolios, which has been high in recent years, has significantly shrunk. We continue to look into whether the higher cost of leverage is contributing to this trend.



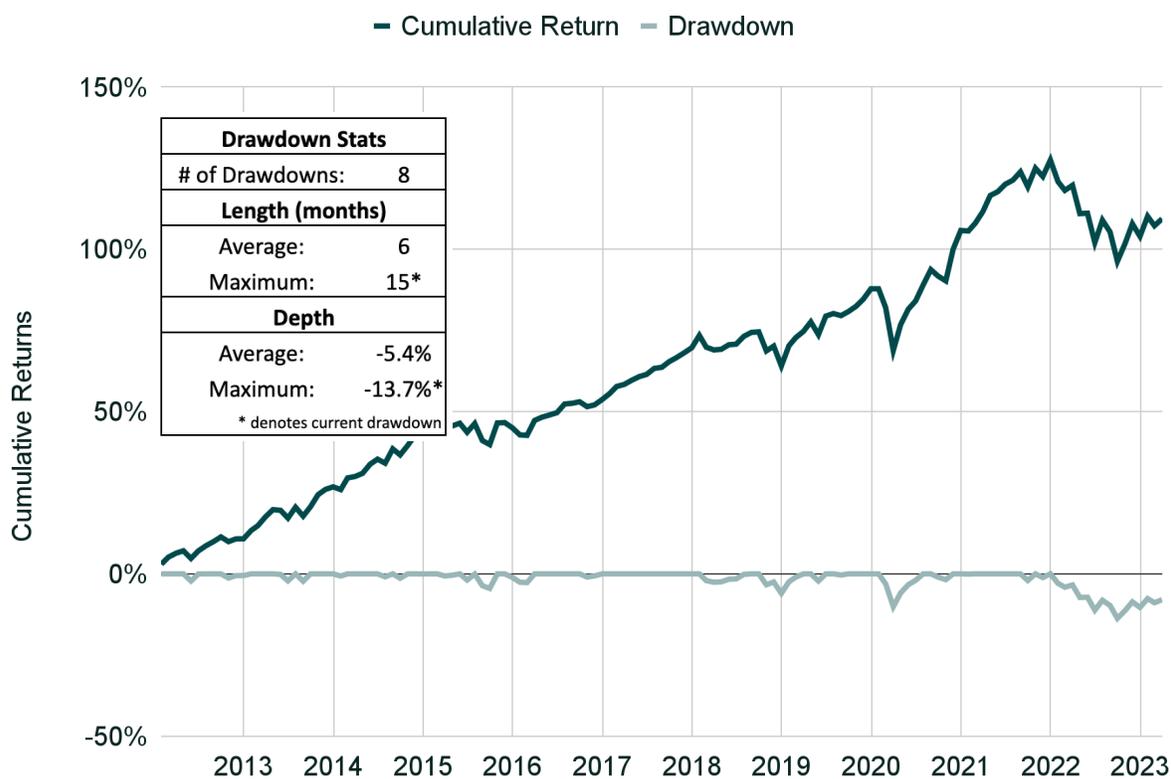
Performance update

In the first quarter of 2023, the median portfolios on our platform returned 3.25% compared to the 5.7% return of a portfolio 60% invested in equities and 40% in fixed income. The following chart shows median portfolio cumulative performance and drawdowns since 2012. The 2022 drawdown was concentrated around the first three quarters of the year and has since moderately rebounded in Q4 and Q1. Markets and portfolios rallied after the immediate aftermath of the Silicon Valley Bank (SVB) bank failure. **However, the current drawdown remains the largest and most persistent in the past 10 years.**

Exhibit 1

Addepar client portfolios have still not fully recovered from the drawdown that began in January 2022

Cumulative performance and drawdowns of the median investor, percent, 2012–2023



Cumulative returns from Jan. 2012 through Dec. 2015 are calculated using a portfolio that's 60% invested in the S&P 500 and 40% invested in 10-year U.S. Treasuries, rebalancing on a monthly basis. Returns Jan. 2016 through Dec. 2022 come from the median performing portfolio of all portfolios with data on the Addepar platform across that time period.

Source: Thomson Reuters for returns from Jan. 2012 through Dec 2015, and Addepar thereafter.

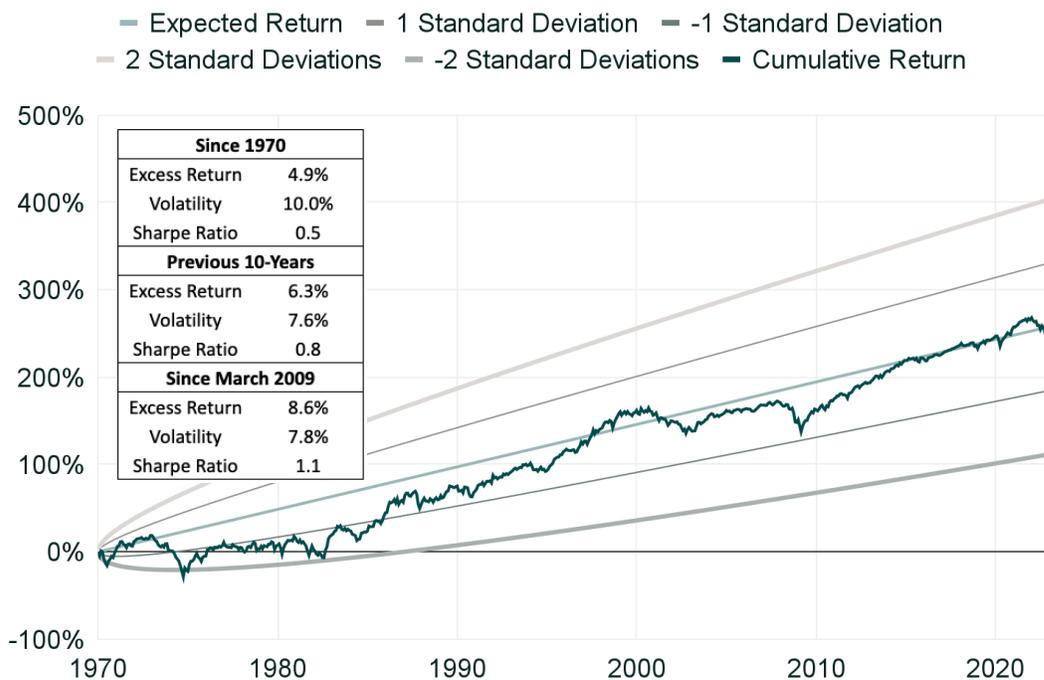


The probability cone shows cumulative performance from 1970 through Q1 2023, which provides a longer-term view of performance. The light green line shows the portfolio's excess return¹ goal (which we set to actual return for this analysis), while actual cumulative returns in dark green oscillate around the average. In gray, we have the expected range of returns based on long-term volatility estimates.

Over the past 50 years, economic environments have varied quite dramatically. Returns have also varied significantly, although long-term portfolio performance remains high. The average portfolio has produced an approximately 0.5 Sharpe ratio² or 4.9% excess return rate above cash (risk-free rate) with approximately 10.0% annualized volatility. Examining shorter time frames, particularly since the bottom of the Great Recession, investors have done really well, with portfolios on average delivering a 1.1 Sharpe ratio or an 8.6% excess return and relatively low annualized volatility of 7.8%.

Exhibit 2

Long-term performance on average remains high, even after the 2022 drawdown
 Sharpe ratio, 2008 to today and 1970 to today



¹ Return above cash.

² Sharpe ratios were calculated by annualizing the average monthly excess return and standard deviation during the given time period.



Source: Federal Reserve for returns from 1970 through 2015, and Addepar thereafter.

Investor returns from 1970 to 2015 use historical excess returns of a 60/40 equity and bond portfolio, and returns 2016 through 2022 use the median excess return of investors on the Addepar platform, rebalanced monthly. Expected returns and volatility are based on excess returns in a 60/40 portfolio dating back to 1970 and investor data from Addepar.

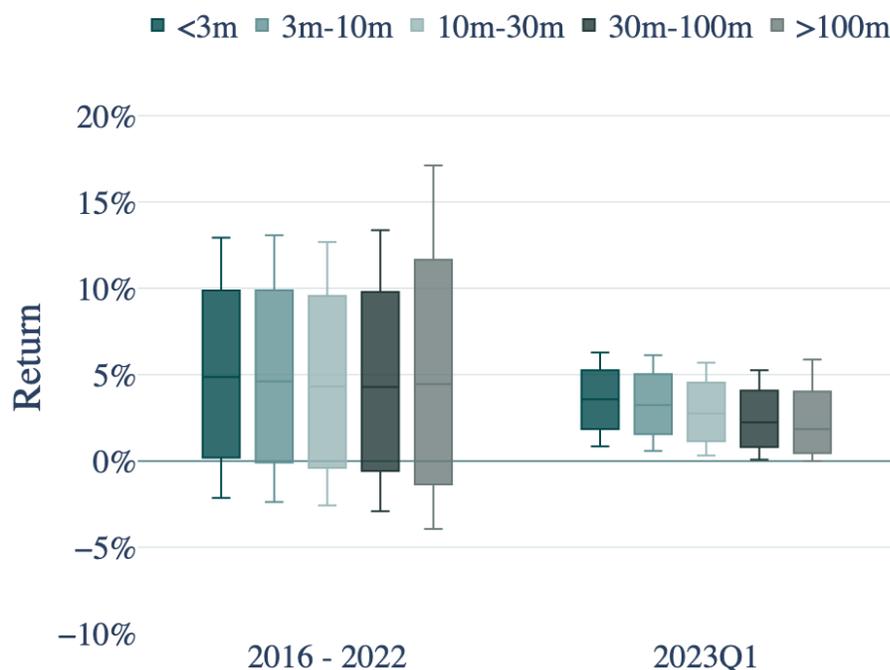
The following chart shows performance quartiles by portfolio size for the quarter and since 2016.

Performance declined according to portfolio size, with the smallest portfolios earning a median return of 3% and the largest earning 1.9%. Over the long term, regardless of portfolio size, median annual returns were approximately 4.8% since 2016, although dispersion was higher for the >\$100m portfolio category.

Exhibit 3

Performance declined with Addepar client portfolio size in Q1 2023, which is in line with long-run trends

Annual investor performance percentiles by portfolio size, 2016–2022 and Q1 2023 (10th, 25th, 50th, 75th, 90th)



Source: Addepar

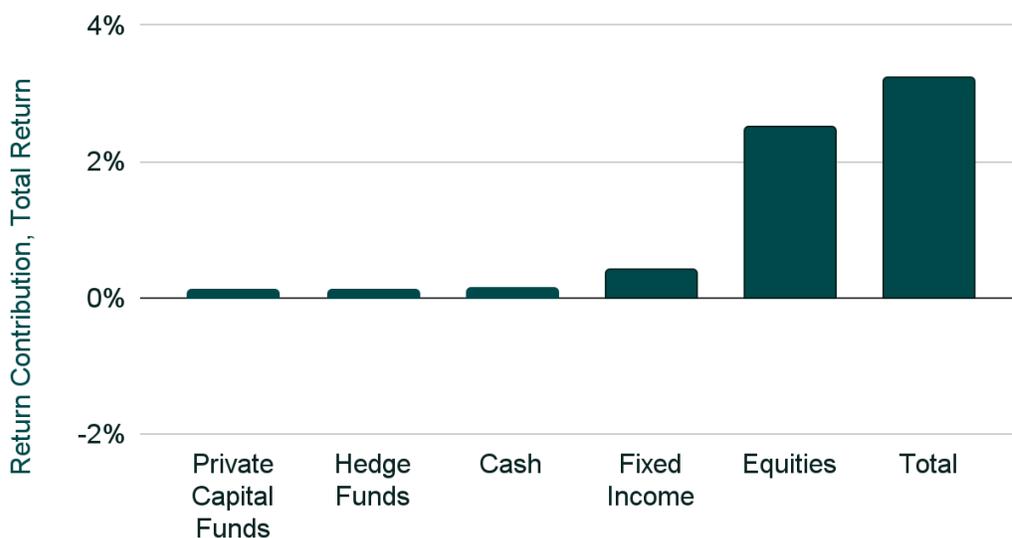
As shown below for the first quarter, all asset classes contributed positive returns totaling to 3.25% for the quarter. Equities returned 2.5% and bonds returned .4%. The equity rally was



concentrated in large growth companies in the technology, communications and consumer cyclical sectors. Bond markets experienced a volatile rally as economic conditions deteriorated and the banking crisis unfolded.

Exhibit 4

Strong equity returns and volatile yet bullish fixed income markets buoyed performance in Q1 2023
 Asset class return contributions for the average portfolio in Q1 2023



Source: Addepar

Macro Scenarios:

In a number of our previous pieces, we’ve shared analysis that shows that most portfolios are primarily exposed to U.S. equities through direct capital allocation and indirectly through hedge funds and private capital exposure. While we will not rehash these findings here, we’ll regularly provide macro analysis on how equity-heavy portfolios have behaved in analogous historical scenarios. Noting that past returns aren’t an indication of future returns, it can nevertheless help provide a better sense of the range of possible outcomes (i.e. risk profiles).

The dominant question for investors is whether the Fed will be able to achieve a soft landing or whether they’ll be too easy — resulting in persistent inflation — or too tight and get a substantial recession. Either scenario would dominate asset pricing in the coming quarters. In our annual report, we showed that equities tend to do poorly in environments when inflation is increasing. For this quarter, we zoom in on how equities have performed when inflation is declining. **As Exhibit 5**



shows, based on data from 1970 to present, average equities do better when inflation is declining, both when growth is strong or waning.

Exhibit 5

Equities tend to do better when inflation is declining regardless of growth
Annualized equity excess returns in varying inflationary and growth regimes, annualized mean returns

	Declining Inflation	Increasing Inflation	Difference
Declining real GDP	12.9%	-3.1%	16.0%
Increasing real GDP	12.3%	6.6%	5.7%

Source: Fama French

We note that there’s wide dispersion in performance across the scenarios. To help build understanding, we’ve provided three specific historical scenarios in Exhibit 6 that illustrate the possible range of outcomes. Each one shows a year of performance after rates peak (which in current conditions is priced to happen later this year).

Exhibit 6

There’s wide dispersion in equity returns in declining inflation/declining real growth scenarios
Annualized excess return on the S&P 500 during declining CPI and real GDP, percentiles average monthly returns

Declining growth and declining inflationary periods		
Time period	Equity return	Description
Jun. 2001–Jun. 2002	-19.0%	The Fed had finished raising rates a year earlier, the tech bubble burst and the U.S. was beginning a new war.
Sep. 2006–Sep. 2007	+13.4%	The Fed had just finished tightening, and housing prices reached their pre-financial crisis peak.
Mar. 2020–Mar. 2021	+42.5%	Unprecedented fiscal and monetary stimulus was provided to combat the economic effects of the Covid-19 pandemic.



Source: Federal Reserve for real growth and inflation. Increasing and declining scenarios are based on recent month relative to previous year's average. High inflation is defined as inflation in a month that's above the long-term median. Low inflation is defined as below the long-term median.

As described in the cash section of this paper, the question is whether inflation will stabilize to Fed targets with a soft landing in the economy or whether inflation remains above target causing a continuation in the Fed increasing short-term interest rates or maintaining them at a higher level than markets are pricing for a significant period of time. Ultimately performance of the markets will be dictated by how these conditions evolve relative to what's priced in.

Many of our clients benefit from historical stress testing and scenario modeling³ that simulates their portfolio allocations through these scenarios to better assess risk and the chances of meeting their financial goals. Please reach out to us for more information on our Navigator tool to stress test your portfolio through the scenarios provided in this note.

The following sections will provide asset class performance and market commentary.

Cash

In light of the recent banking crisis and high and divergent cash yields, cash management has become a top priority for many of Addepar's clients. Additionally, typical clients that use the Addepar platform hold a significant portion of their portfolios in private capital, which strengthens the importance of liquidity management where 'cash drag' is a highly visible component of private equity performance.

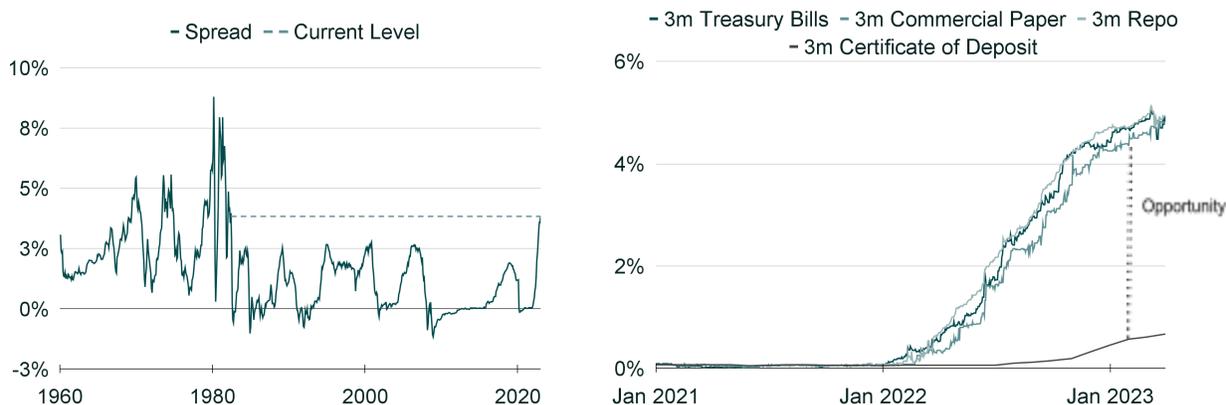
When interest rates rose throughout 2022, banks continued to offer low rates on deposits despite mounting risk of the depository base shrinking. What an investor could get from putting money in a bank versus investing in T-bills either directly or through money market funds diverged to levels not seen in generations. Yields on depository instruments have barely moved despite the Fed raising interest rates in 2022. As Exhibit 7 shows, this has led to the largest spread that banks have been able to earn since the early 1980s.

³ Learn more about historical stress testing and scenario modeling (see additional resources).



Exhibit 7

Banks are earning their highest spreads in decades while short-term rates are rising dramatically
 Spread between banks' cost of deposits and 3-month Treasury bills, percent, 1960–2023
 Daily Treasury bill, commercial paper, U.S. repo and certificate of deposit yields, Jan. 2021–Mar. 2023



Source: Refinitiv, Bloomberg “Money Market Funds Are Surging in Popularity”

Due to the banking crisis, the flight of cash — albeit small in terms of total aggregate deposits — disrupted cash markets and produced a volatile quarter in what we normally would consider the risk-less corner of the market. Investors bought Treasury bills and money market funds, presumably for their liquidity characteristics, higher yields and safety. Money market fund managers deployed their capital largely into short-term Treasury bills and to a degree into other cash products.

One-month Treasury yields plummeted to spreads up to 80 bps below the fed funds rate as investors bought up these safe, short-dated instruments. Interestingly, other less liquid cash assets such as commercial paper and term repo saw their yields continue to creep higher along with the rising fed funds rates. This indicates the market’s preference for liquidity and lowered appetite for credit risk. As noted in our cash primers, long-term investors have historically earned significant premiums by investing through analogous periods of market stress.

In Exhibit 8, we decompose the spreads of varying cash products into duration, credit and liquidity spreads and show how these evolved over the course of the quarter. As the markets became aware of banking troubles, investors quickly repriced high quality financials CP by +75 bps. Investors also raised the premium on liquidity, requiring an additional 75 bps+ for locking their money into instruments that they would not easily be able to trade out of.

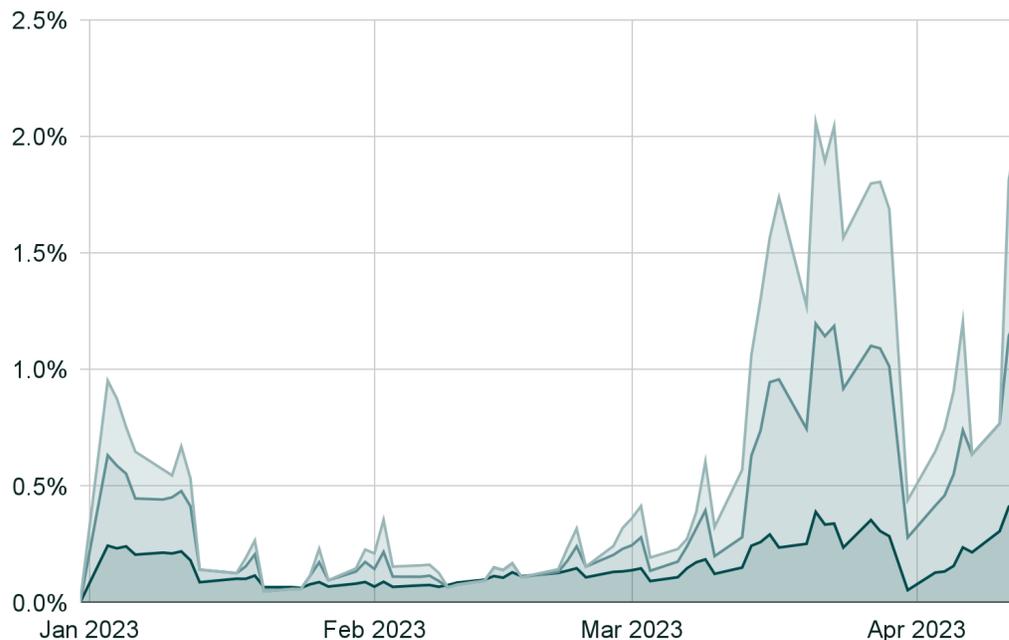


Exhibit 8

Liquidity and credit premiums ballooned during March 2023 and remain elevated

Liquidity, duration and credit premiums, January 1–April 12, 2023

■ 1m Credit Spread (A1/P1 Financial CP) ■ 1m Liquidity Spread ■ 1m Duration Spread



* Duration spreads are calculated as the (3-month Treasury bill yield - 1-month Treasury bill yield)/2. Liquidity spreads are calculated as the 1-month U.S. repo yield - 1-month Treasury bill yield. Liquidity spreads are halved for commercial paper. Credit spreads are the rest of the market priced-in spread after accounting for liquidity and duration spreads.

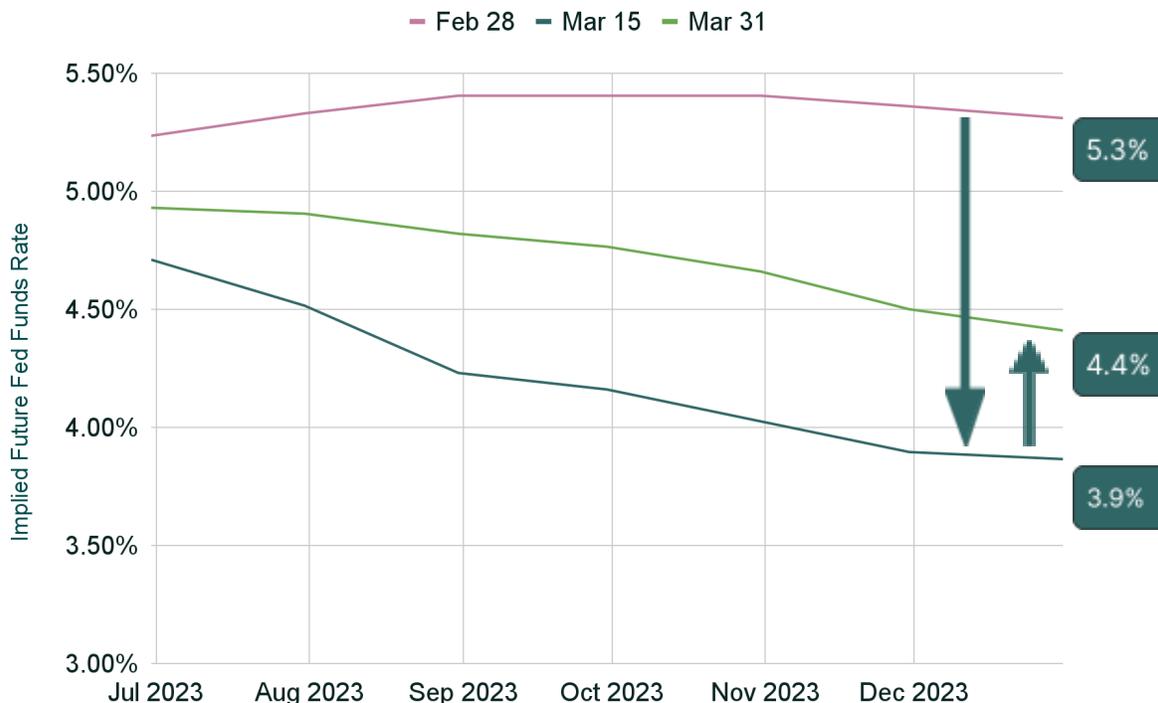
Source: Thomson Reuters, Federal Reserve Bank of New York

Cash markets have also been quite volatile in March. The market eased short-term rates dramatically. As Exhibit 9 demonstrates, market participants removed a full 100 bps of Federal Reserve tightening since mid-March. Those expectations cooled slightly, but settled at 50 bps before year-end. This shift has benefited portfolios holding some duration.



Exhibit 9

The market now expects that the Fed will ease policy by 90 bps by year-end due to bank stress
 Fed funds futures implied rates for the second half of 2023 as of Feb 28th, Mar 15th and Mar 31st, 2023



Source: CME Group, Eikon

Looking forward, active cash managers must weigh whether they believe the Fed will ease as markets are now pricing, or whether the Fed will hold rates high to continue to fight inflation. The implication determines appetite for holding duration.

Fixed income

Following the biggest bond rout in a generation in 2022, median bonds portfolios returned 2% relative to 3.5% for the world government index for the quarter. All bond categories had positive returns, although government bonds and opportunistic strategies had larger gains relative to their performance history.

Fixed income markets were dominated by deterioration of expectations for the economy, particularly the mid-March bank run. As the crisis unfolded, a volatile rally ensued. Two-year Treasuries rallied 60 bps and the yield curve similarly flattened. In the acute phase of the bank run, corporate spreads sold off, although these have somewhat retraced.

**Exhibit 10**

Investors allocated capital into those sectors which performed the best in relative terms in Q1 Q1 2023 median performance, quarterly return Z-score, Q1 2023 vs. Q4 2022 average ownership

	QoQ Returns	Z-Score of QoQ Returns	2023Q1 % of Assets	2022Q4 % of Assets	Difference
U.S. Treasuries	1.7%	1.1	2.5%	2.2%	0.3%
U.S. municipals	2.0%	1.0	8.3%	7.9%	0.4%
U.S. corporate	2.4%	0.9	5.5%	5.1%	0.3%
International developed	1.8%	0.5	0.6%	0.6%	0.0%
Emerging markets	2.5%	0.3	0.3%	0.3%	0.0%
Opportunistic	3.3%	1.3	0.7%	0.6%	0.1%
Other fixed income	1.3%	0.2	3.2%	2.8%	0.4%

Source: Addepar

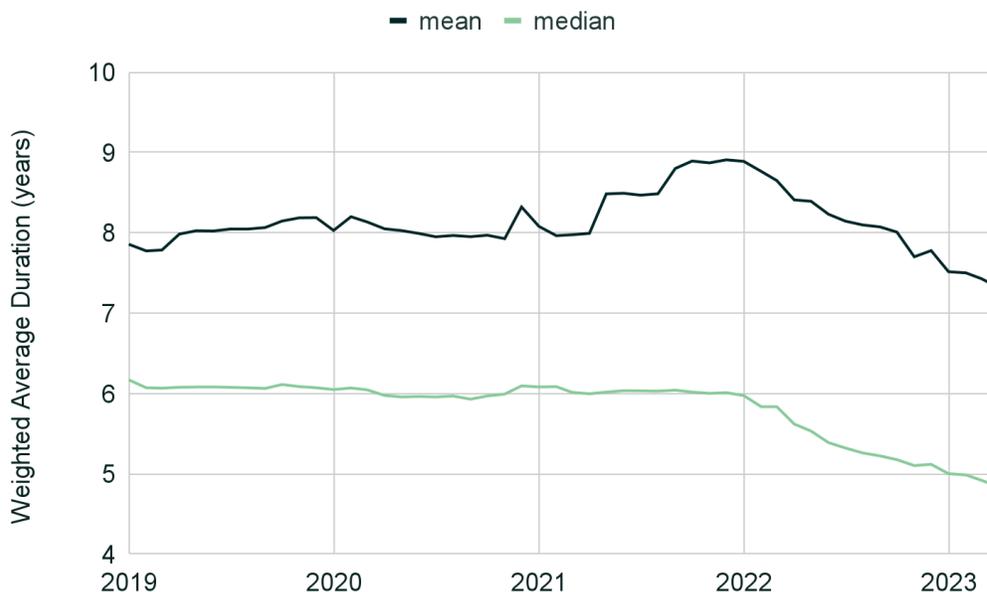
Looking forward, investors are debating whether high inflation will force the Fed to keep rates high to push inflation to target levels. **The following exhibit shows that investors have reduced duration by more than a year from their portfolios in 2022 and throughout the quarter.** This trend mirrors institutions that are ramping up shorter-dated and core fixed income allocations. Market commentators are questioning who in the private sector will buy long-dated Treasuries coming into the market resulting from Fed quantitative tightening and bank selling.



Exhibit 11

Median durations have decreased by up to 20% since January 2022

Median and mean weighted-average durations of fixed income investors, Jan. 2019–Mar. 2023



Source: Addepar

Equities

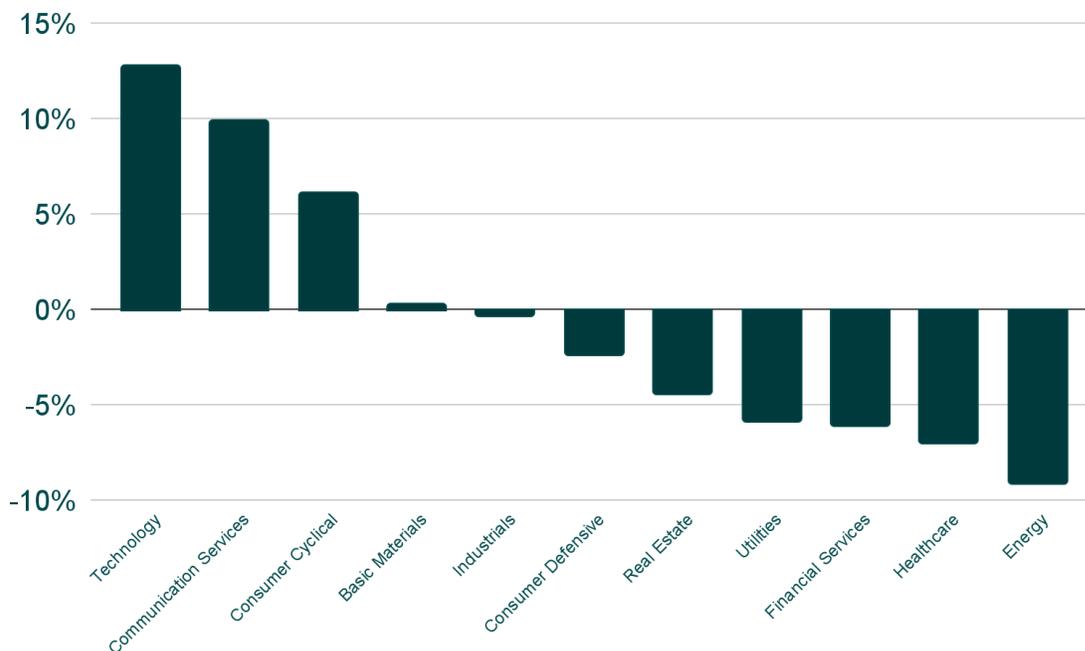
In the first quarter, growth and technology-oriented sectors outperformed defensive and commodities. This was a sharp reversal from 2022, where high-cash-flow companies ruled. The median equity portfolio returned 5.6% relative to 7% for the S&P 500 and 17% for the tech-heavy NASDAQ for the quarter. With technology, communications and consumer cyclical sectors leading the pack, some of the large companies within these sectors such as Nvidia (90% rally) and Meta (76% gain) showed massive double-digit performance.



Exhibit 12

Technology and communication services led equities higher while energy dampened returns

Equity sector return in excess of median portfolio equity return in Q1 2023, percent



Source: Addepar

Growth companies are high duration because their long-dated cash flows are sensitive to changes in discount rates, which are closely correlated with long-term interest rates. The move into these companies appears at odds with what we’re seeing in equity sector flows and declining duration in fixed income portfolios shared above.

Hedge funds

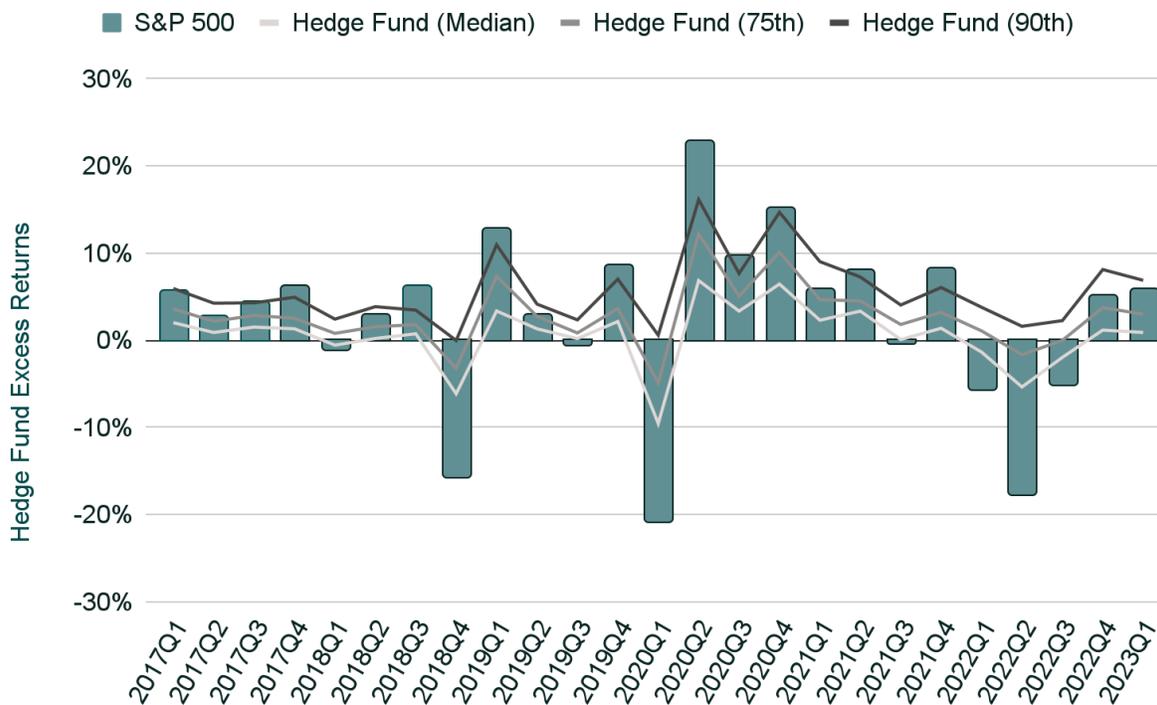
For Addepar’s clients, the median hedge fund investment returned 2% for Q1 2023, relative to a 7% return in the S&P 500. Exhibit 13 presents the quarterly excess returns of the median, 75th and 90th percentiles⁴ of hedge fund portfolios compared to the excess return of the S&P 500 from Q1 2017 through Q1 2023. Hedge funds and equities remain highly correlated.

⁴ Note that the median and 90th percentile hedge fund is not the same for each period. It’s sampled independently from the set of hedge fund returns for each quarterly time period.



Exhibit 13

In line with historical norms, all but the top 10% of hedge fund managers trailed equities in Q1
 50th, 75th and 90th percentile hedge fund investors' excess returns vs. the S&P 500, 2017–2023



Source: Addepar

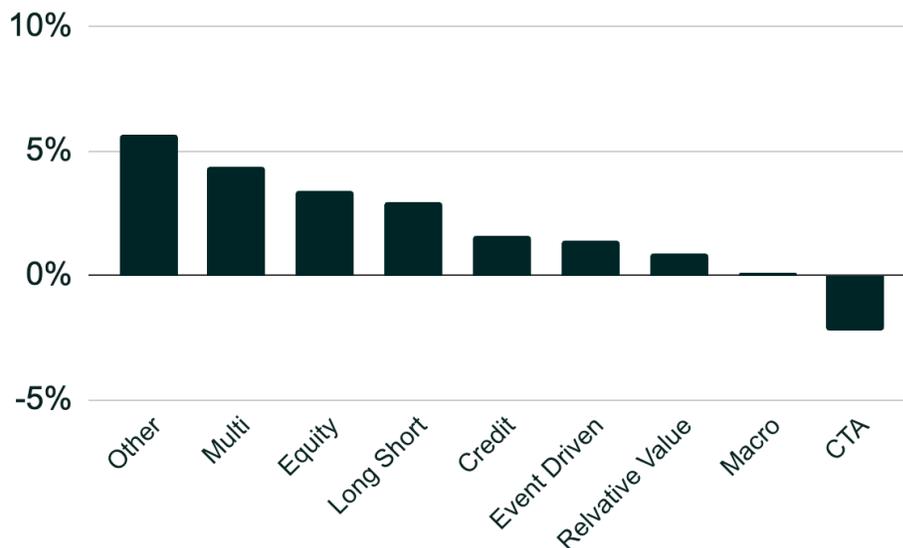
At the strategy level other (niche) and multi-strategy funds performed the best while macro and CTA strategies underperformed.



Exhibit 14

Niche and multi-strategy hedge funds outperformed while macro and managed futures underperformed in Q1

Hedge fund return by strategy for the average investor in Q1 2023



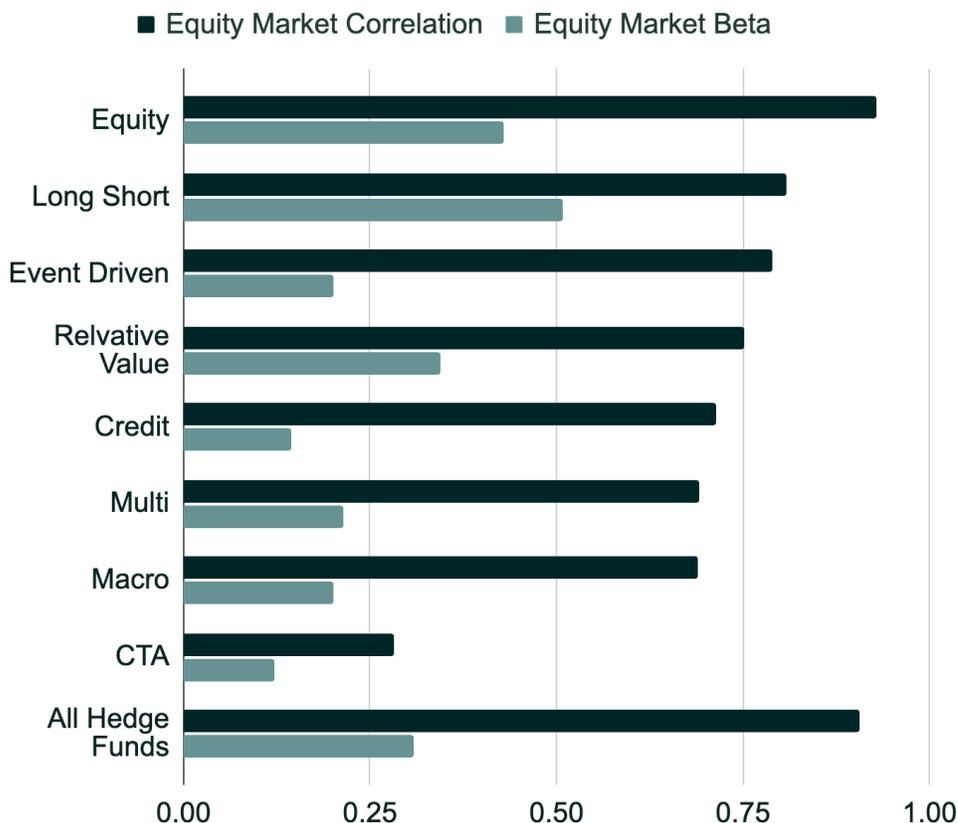
Source: Addepar

In previous reports, we’ve shared our observation that aggregate hedge fund returns closely track equity markets. We further refine this analysis in this report to review correlations and betas to U.S. equities for hedge fund strategies. As shown in Exhibit 15, equity strategies are most correlated to U.S. equities and CTAs are least correlated. With the exception of CTAs, most strategies have high correlation.

Exhibit 15

Most hedge fund strategies are highly correlated to equity market performance with lower risk

Correlation and equity market betas of hedge fund strategy returns for the average investor, Jan. 2016–Mar. 2023



Source: Addepar

In this context, many investors continue to evaluate their allocations to hedge funds (high fees and lack of diversification). As shown in our asset allocation research note, we continue to see moderate outflows from hedge funds. Many institutional investors are also reevaluating their hedge funds allocations. For example, the University of California recently scrapped their allocations entirely⁵.

Private capital

Performance in private capital for the median investor was .75% for the first quarter. At the aggregate level, we see that private capital returns tend to track equities (i.e. high correlation). To illustrate this correlation, we compare the excess returns (returns above cash) of private equity against the excess returns of the S&P 500. Returns have been extremely correlated ($\rho = +0.8$) since 2017, indicating that public and private equities (in aggregate) are quite similar on a quarterly basis. Choosing the correct manager makes a meaningful difference in returns. Since 2017, the S&P

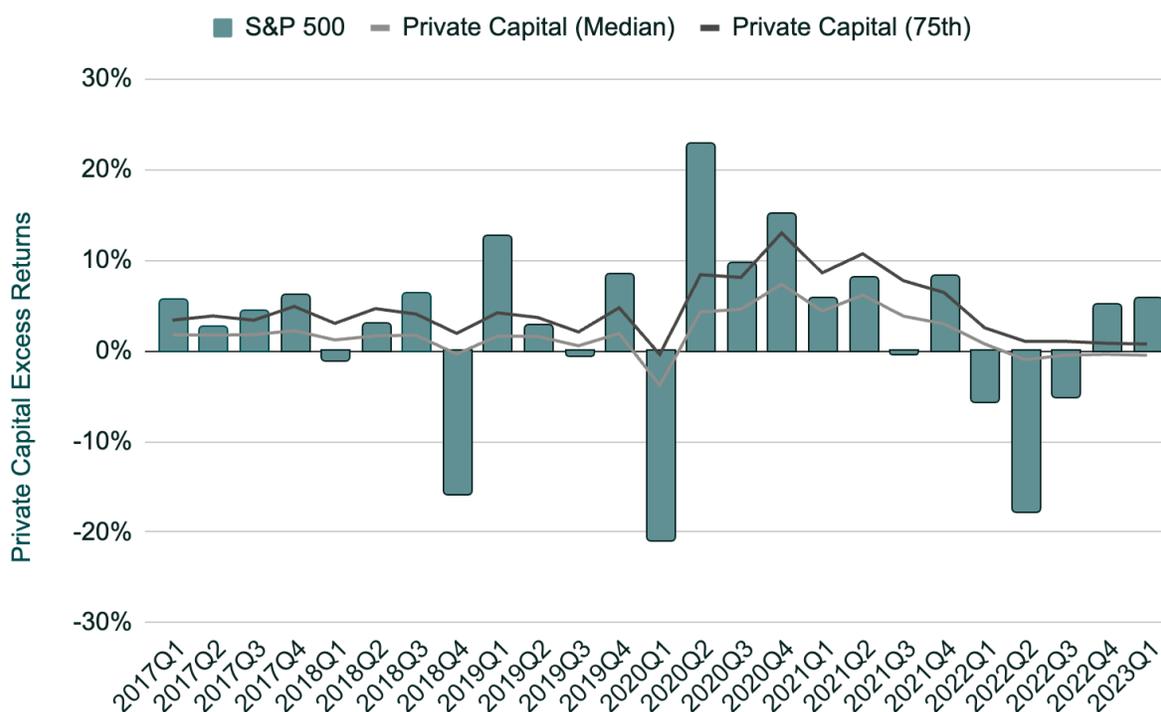
⁵ Maglione, F & Gittelsohn, J. (2023) University of California to Dump Hedge Funds for Private Credit. *Bloomberg*. www.bloomberg.com/news/articles/2023-03-16/uc-endowment-plans-to-jettison-hedge-funds-cio-bacher-says#xj4y7vzk9



500 had a quarterly average return of 3.0%, while the median private capital fund only returned 2.2%. But those upper-quartile investors who chose their managers wisely achieved an average return of 4.9%. Unlike hedge funds, there’s much more dispersion in private capital portfolios.

Exhibit 16

Choosing the right private capital manager has historically led to outperformance vs. peers
 Median investors’ private capital excess returns vs. S&P 500 excess returns, quarterly 2017–2023



Source: Addepar

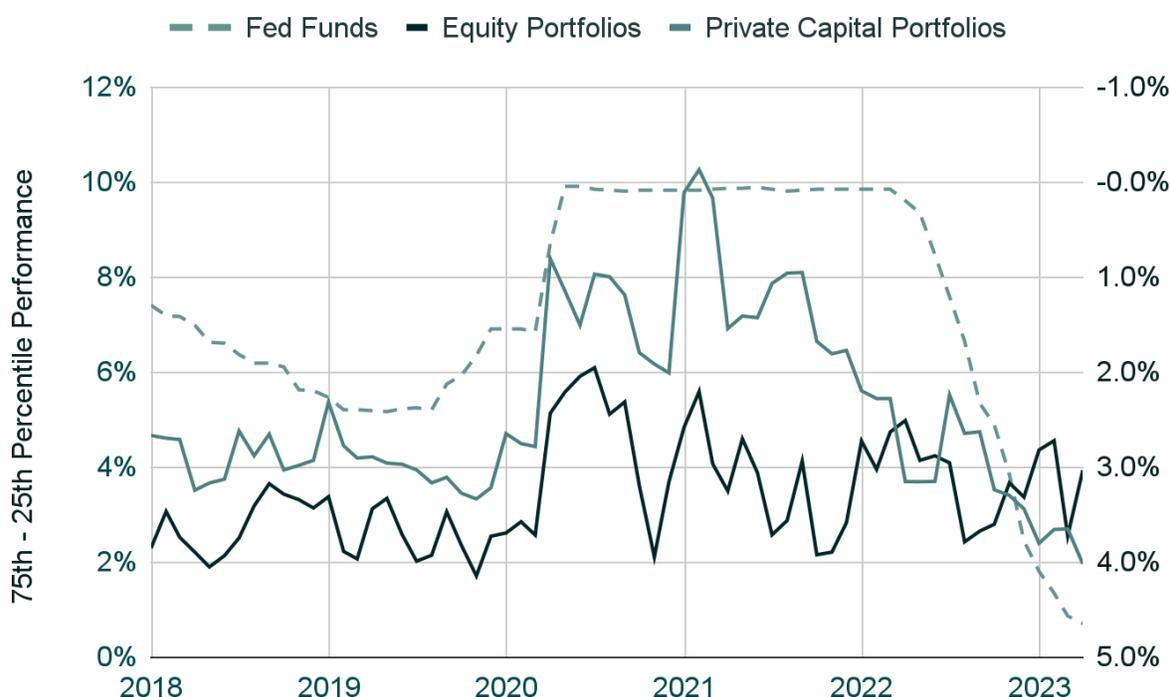
Although aggregate returns in alternatives have historically tracked public market equivalents, they remain a popular asset class due to the ‘alpha’ potential in manager selection. As shown below, **investors who are able to identify and select high-quality private capital managers may be able to generate excess returns.** In Exhibit 17, we highlight the amount of dispersion in one-year cumulative returns in public equity and private equity from January 2017 through December 2022. We measure dispersion by subtracting the 25th percentile cumulative return for each asset class from the 75th percentile cumulative return for that asset class. **We see that over long periods of time, high-net-worth (HNW) investors have experienced higher dispersion in their private equity investments, although this dispersion has dissipated in 2022.**



While we're still looking into it, **we do find some evidence to suggest that outperformance may in part be due to use of leverage by GPs in their funds.** As an example, when short-term interest rates are low (i.e. borrowing is cheap) the relative portfolio dispersion between equities and private capital is high and vice versa. Correlations are in fact -0.6 , quite high indeed.

Exhibit 17

Dispersion in both private capital and public equities rises when leverage is cheap to achieve
 Spread between 75th and 25th percentile private capital and equity returns vs. fed funds, Q1 2018–Q1 2023



Source: Addepar, Federal Reserve

Conclusion

We've provided a range of views and transparency into the performance of portfolios on the Addepar platform. As we mentioned, we'll be publishing updates to these views on a quarterly basis. In addition, you're invited to read our companion note on Q1 2023 portfolio positioning. Please email research@addepar.com if you have any thoughts or suggestions on how this publication can be improved.



Asset Classifications

Asset class	Sub-asset class
Cash	Cash Cash equivalents
Fixed income	U.S. Treasuries and Agencies U.S. TIPS U.S. investment-grade credit U.S. high yield U.S. bank loans International developed markets Emerging markets Opportunistic Other fixed income Unknown fixed income U.S. municipals/tax exempt
Equities	U.S. equities Global equities Developed markets–Americas Developed markets–EMEA Developed markets–Asia Pacific Emerging & frontier markets Other equities Concentrated equity positions Unknown equities
Mixed allocation	Asset allocation vehicles Held-away accounts
Alternatives	Hedge funds Concentrated alts positions Private equity & venture Real estate funds Other alts Unknown alts
Private business	Direct private companies
Direct real estate	Direct real estate
Other	Collectibles Direct loans Unknown Liability



Notice and Disclaimers

All information provided by Addepar, Inc. or its subsidiaries (collectively, “Addepar”), including without limitation, all text, data, graphs and charts (collectively, the “Information”) is the property of Addepar and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or re-disseminated in whole or in part without prior written permission from Addepar. All rights in the Information are reserved by Addepar.

The Information may not be used to create derivative works or to verify or correct other data or information without prior written permission from Addepar. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other Addepar data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information.

Addepar makes no express or implied warranties or representations with respect to the information (or the results to be obtained, but rather the use thereof), and to the maximum extent permitted by applicable law, Addepar expressly disclaims all implied warranties (including, without limitation, any implied warranties of originality, accuracy, timeliness, non-infringement, completeness, merchantability and fitness for a particular purpose) with respect to any of the information.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

Addepar does not recommend, endorse, approve or otherwise express any opinion regarding any issuer, securities, financial products or instruments or trading strategies and Addepar’s research products or services are not intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such.

Addepar, Investment Sentiment Index and other Addepar brands and product names are the trademarks, service marks or registered marks of Addepar or its subsidiaries in the United States and other jurisdictions.

© 2023 Addepar. All rights reserved.