Private Equity Insights

THIRTY-THIRD EDITION | Q1 2024

CURRENT QUARTER PERFORMANCE SUMMARY

The State Street® Private Equity Index (SSPEI) recorded an overall gain of 1.46% in Q1 2024, a slowdown from the previous quarter's 2.87% gain. Buyout funds show a return of 1.2% in Q1 2024, down from 3.39% return in Q4 2023. Private debt funds maintained a relatively stable performance, with a 2.17% return in Q1 2024, close to the average quarterly return of 2.53% in 2023. Venture capital (VC) continued its recovery with returns of 2.07%, marking the largest quarterly gain in the past two years(see Exhibit 1).

Exhibit 1. Private Equity Performance by Strategy

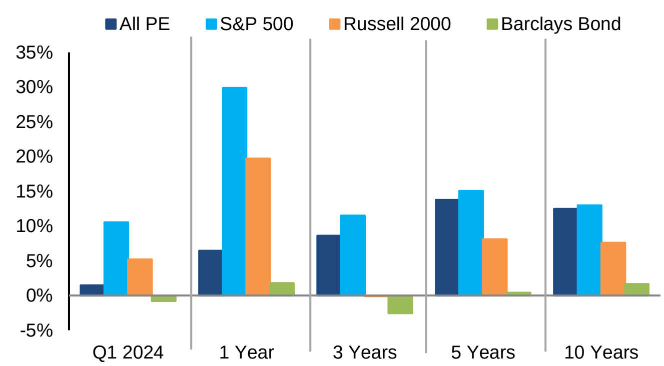
	All PE	Buyout	VC	Private Debt
2024 Q1	1.46%	1.20%	2.07%	2.17%
2023 Q4	2.87%	3.39%	0.95%	2.96%
2023 Q3	0.06%	0.35%	-1.75%	1.83%
2023 Q2	1.87%	2.38%	-0.17%	2.72%
2023 Q1	2.12%	2.76%	-0.12%	2.60%
2023 Avg	1.73%	2.22%	-0.27%	2.53%

Source: State Street Global Markets, as of Q1 2024.

Private equity performance has been lagging behind the public equities. SSPEI underperformed small-cap stocks (proxied by Russell 2000), which posted a quarterly return of 5.81%, and the US large-cap stocks (proxied by S&P 500), which posted a quarterly return of 10.56%. The US bond market (proxied by Bloomberg Barclays US Aggregated Bond Index), affected by interest rate volatility and delayed rate cut in Q1 2024, posted a -0.81% quarterly return. Persistently weaker private market performance pulled the SSPEI lower than public market returns across 1, 3, 5, and 10-year horizons (see Exhibit 2).

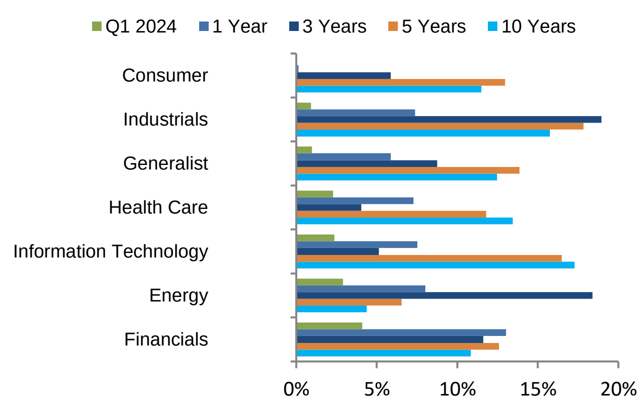
Across sectors, financials remained as the best-performing sector with a 4.09% return in Q1, while consumer funds showed the weakest return at 0%. Energy funds rebounded from the worst-performing sector in Q4 2023 to the second-best, with a 2.91% return, driven by the volatile commodity prices. IT sector funds rose back up to the third-best-performing sector with a 2.37% return and continued to be the top performer over the longest horizon of 10 years (see Exhibit 3).

Exhibit 2. Investment Horizon Returns



Source: State Street Global Markets, DataStream, Bloomberg Barclays US Aggregate Bond Index (total returns as of Q1 2024).

Exhibit 3. Performance of Sector Focused Funds



Source: State Street Global Markets, as of Q1 2024.

Continued on page 5.

GP STAKES: A NEW ASSET CLASS OR A DEAD END?

Insights from Harvard University and the Private Capital Research Institute

By Alex Billias, Josh Lerner, and Leslie Jeng

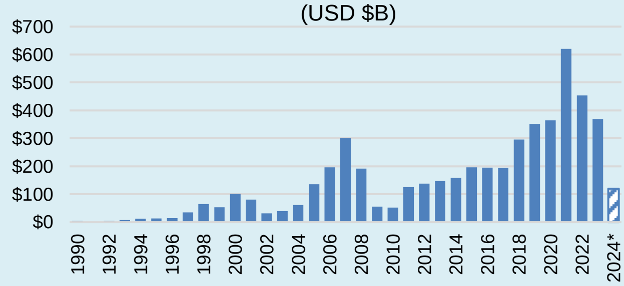
Introduction

In the past few years, the market for minority stakes in private capital groups has exploded. Large, dedicated funds offered by groups such as Blackstone, Dyal, and Goldman Sachs, as well new entrants and asset owners themselves, have targeted stakes in both large and middle market managers. Do these "GP stakes" transactions represent an innovative new asset class and a solution to the generational succession issues that have challenged many private capital groups? Or do they introduce a dangerous misalignment of incentives?

The Backdrop

Over the last several decades, the private equity ("PE") industry has grown significantly: according to data from State Street, global PE fundraising surged to a record $620 billion in 2021, representing a nearly 800% increase from two decades prior.[1] Although fundraising has slowed somewhat in the years since, 2024 appears poised to return to near record levels.

Global PE fundraising by year, 1990 - Q1 2024 (USD $B)



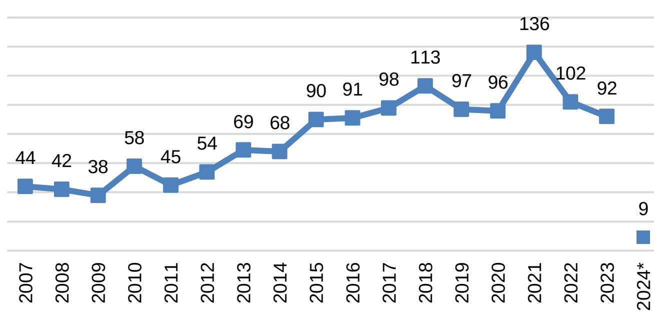
Source: State Street Global Markets, as of Q1 2024.

Similarly, in the twenty-year span from 2005 to 2024, the average U.S. buyout fund size increased fourfold,[2] while the average number of funds raised per general partner ("GP") increased by 22.5%.[3] This reflects in part a broadening of firms' offerings to accommodate multiple strategies, pursue global opportunities,[4] or expand into asset classes beyond their traditional focus.[5]

These dynamics have largely favored established PE firms with existing brands and capital to fuel expansion. For less-established PE firms, however, the barriers to entry have only gotten higher in this era of heightened competition. At the same time, other investors have sought compelling opportunities outside the "traditional" PE fund model, a model which has become increasingly dominated by larger, established PE groups.

Emerging from these trends has been the recent rise of the "GP stakes" industry, which is characterized by investors—often through dedicated GP stakes funds—purchasing minority stakes in other PE firms. This industry has witnessed a substantial increase in activity over the last decade in particular: the number of PE GP stakes deals surged in the latter half of the 2010s, and again in the last few years.[6] Although many new firms have entered this industry recently, much of the activity to date has been driven by a handful of large GP stakes firms, most notably the trio of Blue Owl Capital, Blackstone's Strategic Capital Holdings, and Goldman Sachs' Petershill division. In fact, these "big three" firms were involved in 11% of all GP stakes transactions prior to 2015 and 56% thereafter.[7]

Number of PE GP stakes deals, 2007 - January 31, 2024



Source: Pitchbook, Feb 27th, 2024.

[1] State Street data reported as of Q1 2024.
[2] Analysis of State Street data reported as of Q1 2024.
[3] Calculated using data from PreqinPro, accessed August 6, 2024.
[4] "2022 Global Private Capital Industry Data & Analysis," Global Private Capital Association, February 16, 2022, https://www.globalprivatecapital.org/research/2022-global-private-capital-industry-data-analysis/.
[5] "Private Markets Rally to New Heights: McKinsey Global Private Markets Review 2022," McKinsey & Company, March 2022, https://www.mckinsey.com/~/media/mckinsey/industries/private%20equity%20and%20principal%20investors/our%20insights/mckinseys%20private%20markets%20annual%20review/2022/mckinseys-private-markets-annual-review-private-markets-rally-to-new-heights-vf.pdf.
[6] Clarke, Tim, Garrett Hinds, Jinny Choi, Kyle Walters, and TJ Mei, "US Public PE and GP Deal Roundup Q4 2023." *PitchBook*, February 27, 2024, https://files.pitchbook.com/website/files/pdf/Q4_2023_US_Public_PE_and_GP_Deal_Roundup.pdf.
[7] Minmo Gahng and Blake Jackson, "Selling Private Equity Fees," June 23, 2023, 7.

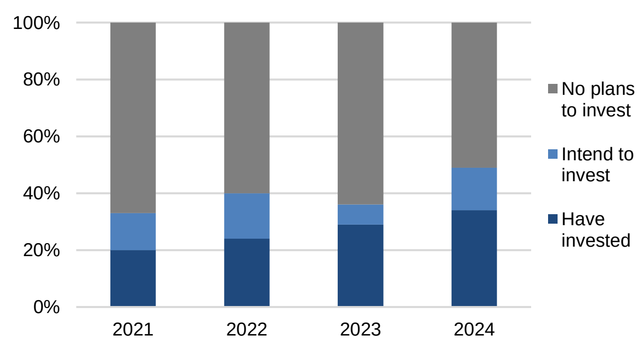
The Benefits and Drawbacks of GP Stakes Investing

Why has there been so much recent interest in GP stakes? The answer is in large part the favorable economics generated by PE firms. Typically, a GP stakes investor targets somewhere between 10% to 25% of an investee firm's earnings.[8] This 10% to 25% share of the income stream generated by GPs' investment management activities presents a highly attractive opportunity for GP stakes investors due to the significant amount of management fees and carried interest that PE firms earn per dollar under their management. Fees from existing funds provide GP stakes investors guaranteed income for years after their investment, on top of which carried interest allows them to participate in greater upside if the PE firm's investments turn out well. For instance, an academic study of 144 buyout funds raised between 1993 and 2006 calculated the present value of fees per $100 of AUM in a fund. The authors found that, on average, over the life of the fund, the management company received $10.35 in management fees and $5.28 of carry per $100 under the buyout fund's management.[9] These numbers are likely still indicative of fees and carry in today's PE environment, given that the median management fee and carry percentage has continued to be about 1.5% to 2% and 20%, respectively.[10]

From the investee firm's perspective, it gains an infusion of capital for funding ongoing operations and growth initiatives. The capital can be used for funding expansion opportunities, adding new business lines, or hiring new personnel. Some GP stakes investors take a more active approach, resulting in a strategic relationship not dissimilar to that between a GP and its portfolio companies. For instance, to the extent the investee firm is a new GP without a proven track record, GP stakes investors put their brand and credibility behind it; use their networks for the purposes of recruitment, fundraising, and so forth; and offer strategic advice as a firm goes through its growth phases. Some GP stakes investors have built prior relationships with the GPs in whom they invest (e.g., as a limited partner, or "LP"), allowing the investment to strengthen the relationship between the parties further.

Although sentiment towards GP stakes has improved in recent years, many still view this strategy with skepticism. For instance, some have described the real motivation behind GP stake sales as "de-risking the original founder generation:" many GP stakes deals occur from a founder's desire to "cash in their chips" after decades of building up a successful business.[11] Fogelström and Gustafsson (2020) comes to a similar conclusion, noting that "the real motivation behind selling a GP is for owners to realize value."[12] As a result, some view GP stake sales merely as a tool for succession planning.

There are other concerns as well, some of which are giving would-be investors pause. For instance, a December 2023 survey of 117 institutional investors globally found that nearly 90% cited potential conflicts of interest as a risk factor for GP stakes investing.[13] This worry seems reasonable: if less carry is in the hands of GPs, there may be less of an incentive to work as hard on LPs' behalf to realize strong returns. Moreover, GPs may face pressure from their GP stakes investors to pursue a "growth at all costs" strategy and maximize fee revenue, further misaligning incentives with the GPs' original LPs. These and other concerns, like a lack of predictable exits (cited as a risk factor by over 80% of surveyed LPs), resulted in over half of the LPs surveyed in December 2023 stating they have no plans to invest in GP stakes funds.



Source: Private Equity International, December 1st, 2023

[8] Michael Shedosky and Brian Farrell, "The ABCs of Private Equity GP Stakes," Morgan Stanley Investment Management, November 1, 2022.
[9] Andrew Metrick and Ayako Yasuda, "The Economics of Private Equity Funds," *The Review of Financial Studies* 23, no. 6 (June 2010): 2303-2341, https://doi.org/10.1093/rfs/hhq020.
[10] Josh Lerner and Ann Leamon, *Venture Capital, Private Equity, and the Financing of Entrepreneurship* (New York, NY: John Wiley & Sons, 2023), 46-54.
[11] Ali Raissi-Dehkordy and Robert Hamilton Kelly, "Keynote Interview: Funding the Future," *Private Equity International*, May 2024, https://www.petershillpartners.com/content/dam/petershillpartners/pdfs/Events-Presentations/transcripts/GP_Stakes_Funding_the_Future.pdf.
[12] Erik Fogelström and Jonatan Gustafsson, "GP Stakes in Private Equity: An Empirical Analysis of Minority Stakes in Private Equity Firms," MSc Thesis in Finance, Stockholm School of Economics, 2020, https://arc.hhs.se/download.aspx?MediumId=4842.
[13] "Perspectives 2024," *Private Equity International*, December 1, 2023, https://www.privateequityinternational.com/download-peis-perspectives-2024-study/.

Academic Insights and the Future of GP Stakes

However, recent research has shown that these fears may be somewhat overstated. Studying 2,862 GP stakes transactions completed between 1990 and 2021, Gahng and Jackson (2023) considers whether the immediate liquidity provided to GPs who sell a stake would disincentivize them to work as hard on behalf of their LPs in the future, leading to subsequently lower performance. However, the authors actually find the *opposite* to be true: for those GPs who sold a stake, after the sale their funds achieved average PMEs[14] of 1.20 – 1.30 calculated against the S&P 500.

The authors also consider more closely the relationship between GP stake sales and GP behavior. To do so, they assess to what extent firms undergoing a GP stake exhibit "waterfall clustering," or the tendency of GPs to begin liquidating investments immediately after clearing a hurdle rate to lock-in carried interest, sometimes at the expense of potentially greater future returns. The authors find that firms undergoing GP stake sales are less likely to exhibit this behavior, which "suggests that GPs are more, rather than less, aligned with their LPs after stake sales."

Given the relative youth of the GP stakes industry as an asset class, it remains to be seen whether these findings will continue to hold. For instance, much of the early success of the GP stakes industry might be attributed to the overall boom in PE activity that has coincided with the rise of GP stakes, increasing the availability of capital to commit to GP stakes strategies and the supply of PE firms in which GP stakes funds can invest. Still, the underlying economics GP stakes investors seek to capture—management fee streams and carried interest—undoubtedly remain compelling. The question becomes to what extent these income streams, generated by a mix of young and established PE firms alike, can be captured by GP stakes investors and distributed back to LPs in a sustainable way over the long term.

Alex Billias is the Chief Operating Officer at Bella Private Markets.

Leslie Jeng is Director of Research of the Private Capital Research Institute

Josh Lerner is Director of the Private Capital Research Institute and Jacob H. Schiff Professor of Investment Banking and Head of the Entrepreneurial Management Unit at Harvard Business School.

The Private Capital Research Institute is a not-for-profit 501(c)(3) corporation formed to further the understanding of private capital and its global economic impact through a commitment to the ongoing development of a comprehensive database of private capital fund and transaction-level activity supplied by industry participants. The PCRI, which grew out of a multi-year research initiative with the World Economic Forum, also sponsors policy forums.

[14] The "Public Market Equivalent," or PME, is a metric that compares the performance achieved by investing in PE funds to the performance that would have been achieved, had an investor made equivalent investments into a public market index instead. The metric is expressed as a ratio, where PMEs greater than 1.0 indicate PE outperformance and PMEs less than 1.0 indicate public market outperformance.

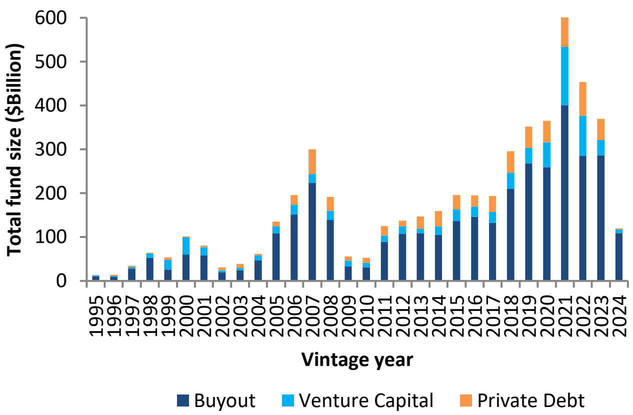
CONTINUED FROM PAGE 1

Fundraising

Fundraising activity shows signs of revival for the private market. A linear projection of the capital raised for the full year of 2024, which only includes funds that already started making capital calls in Q1 2024, is $480 billion. This estimate exceeds the total fund raised in 2022 and over 30% higher than the total fund raised in 2023. Nevertheless, 2024 fundraising projection is still 22% behind than the all-time high of $619 billion in 2021. Q1 2024's strong fundraising activities is mainly driven by Buyout funds, which raised $108 billion, up 51% from their quarterly average in 2023. Venture fundraising remained comparable to the quarterly average in 2023 at 9.48 billion. Private Debt funds raised are much smaller amount, at 1.6 billion, 86% lower than quarterly average in 2023 (see Exhibit 4A). Increased fundraising activities are also more concentrated in US and Rest of World funds, with $94 and $17 billion raised, respectively, 50% and 90% higher than their quarterly averages in 2023 (see Exhibit 4B). European funds only raised $7.5 billion in Q1 2024, 62% lower than the 2023 quarterly average.

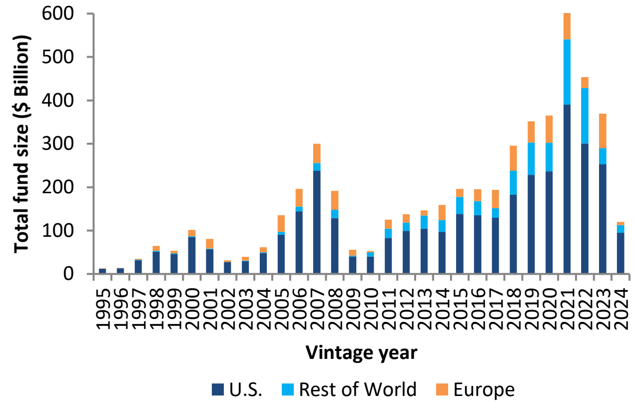
Exhibit 4. Total Fund Size (USD Billion)

A. By Strategy



Source: State Street Global Markets, as of Q1 2024.

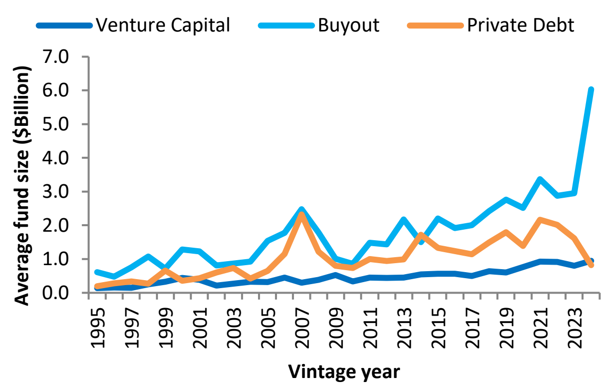
B. By Region



Source: State Street Global Markets, as of Q1 2024.

In Q1 2024, VC average fund size remained stable. However, the average fund size of private debt funds decreased by 49% from its 2023 average of $1.61 billion to $0.82 billion, continuing the downward trend since 2021. Average fund size for Buyout funds is at 6 billion, twice as high as that in 2023(see Exhibit 5). Although this might indicate 2024 vintage year funds' fundraising activities and capital calls are more concentrated in larger Buyout funds, at least in the first quarter of the year, we expect to see average fund size for buyout funds decrease as we go further into 2024.

Exhibit 5. Average Fund Size (USD Billion)



Source: State Street Global Markets, as of Q1 2024.

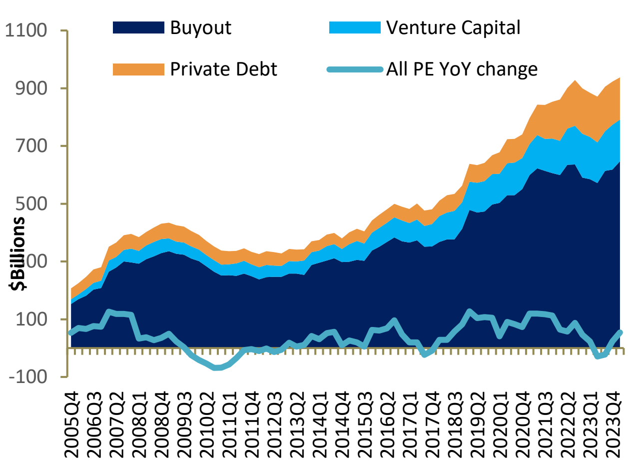
Dry Powder

Dry powder, or unfunded commitment, represents the amount of capital that has not been called, thus remaining available for future investment opportunities. The total dry powder of SSPEI constituent funds as of Q1 2024 is $937.51 billion, up from $922.96 billion in Q4 2023. This all-time high dry powder in Q1 2024 was driven by Buyout funds, likely due to the active fundraising activities in Q1 2024 (see Exhibit 6A). Dry powder for VC and Private Debt funds both treaded lower.

The quarterly dry powder normalized by the monthly average contribution of the past 12 months measures how long the current dry powder inventory can last at the recent average capital call rate without new fundraising activities. In Q1 2024, the dry powder inventory continued to rise for Buyout funds to 27 months, but it decreased by 3 months for Private Debt funds and 1 month for VC funds due to decreased fundraising for Private Debt and VC funds. Nevertheless, the runway for Private Debt and VC funds remains above 30 months due to slow down in capital deployments (see Exhibit 6B).

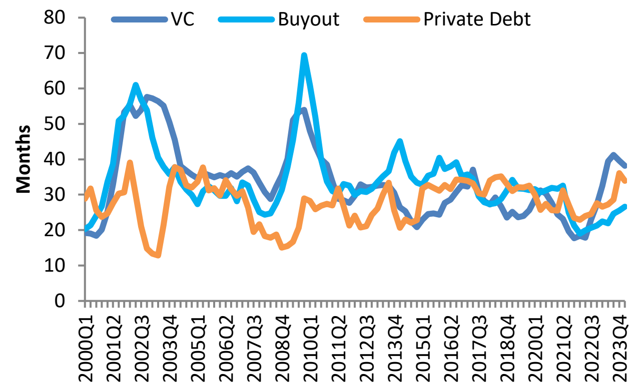
Exhibit 6. Dry Powder

A. Monthly Dry Powder



Source: State Street Global Markets, as of Q1 2024.

B. Quarterly Dry Powder Normalized by Average Contribution



Source: State Street Global Markets, as of Q1 2024.

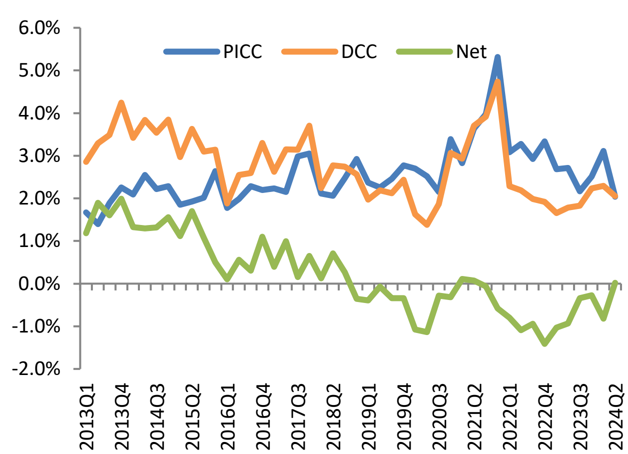
Cash Flow Activity

Despite signs of recovery in exit activities in recent quarters, the quarterly distribution to committed capital (DCC) dropped slightly to 2.1% in Q2 2024 from 2.3% from Q1 2024. The quarterly paid-in over committed capital (PICC) decreased more to 2% in Q2 2024. Net cash flow recovered but remained slightly negative (see Exhibit 7A).

Exhibit 7B provides a closer look at the net cash flows among different PE strategies. In Q2 2024, the net cash flow to committed capital for Buyout funds turned positive for the first time since end of 2021. On the other hand, for VC and Private Debt funds, net cashflow continued trending downwards, though cash flow for Private Debt remained at a positive level.

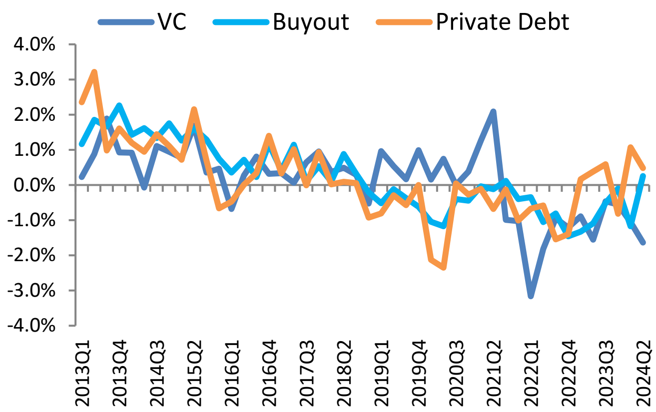
Exhibit 7. Quarterly Cash Flow Ratios Normalized by Commitment

A. Contribution and Distribution for All PE



Source: State Street Global Markets, as of Q2 2024.

B. Net Cash Flow to Committed Capital By Strategy



Source: State Street Global Markets, as of Q2 2024.

Valuations

The Dollar Value Added (DVA) is the sum of NAV changes and net cash flows. It measures the realized and unrealized gains and losses in dollar amounts.

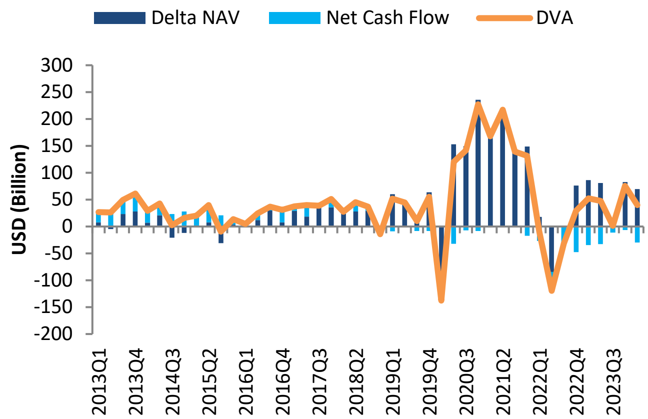
$$DVA = EndingNAV - BeginningNAV + Distribution - Contribution$$

The quarterly DVA of all PE funds dropped from $74.8 billion in Q4 2023 to $39.6 billion in Q1 2024, due to a more genitive net cash flow (see Exhibit 8A). NAV for Buyout and VC funds continued to increase, while NAV for Private Debt funds, on the other hand, took a slight dip (see Exhibit 8E).

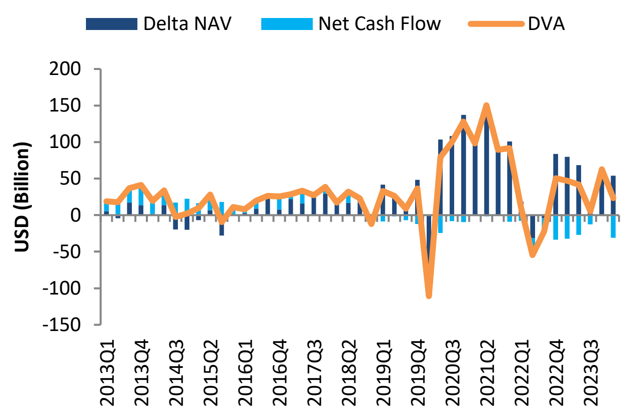
Despite drop in NAV for Private Debt funds, Private Debt funds is the only strategy that has a positive net cash flow in Q1 2024, reversing the negative cash flow in Q4 2023 (see Exhibit 8D). Net cash flow for Buyout and VC funds are more negative in Q1 2024, dragging down their respective DVAs despite steady valuation (see Exhibit 8B and 8C).

Exhibit 8. Dollar Value Added

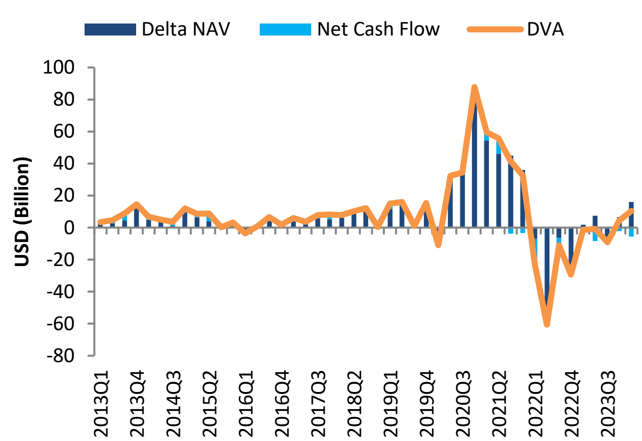
A. All PE



B. Buyout

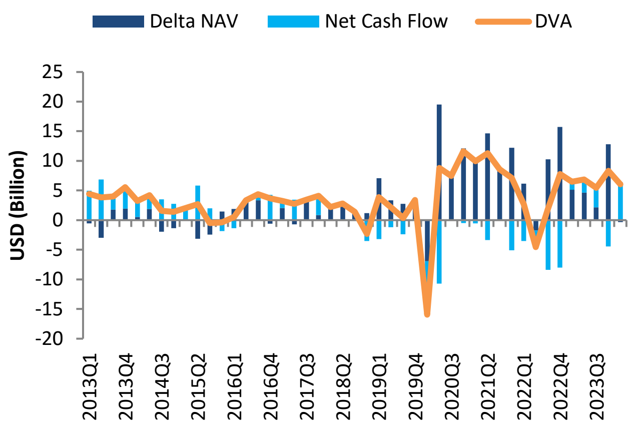


C. Venture Capital

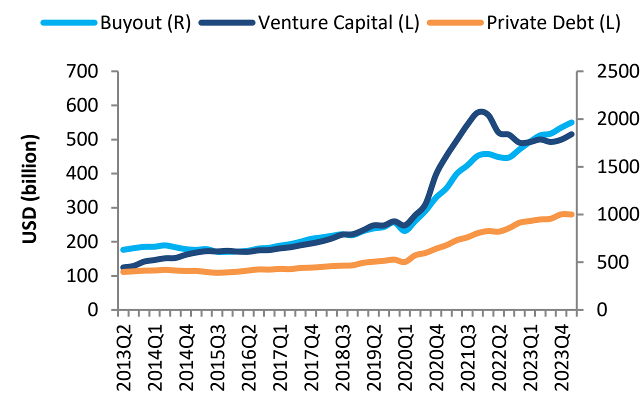


Source: State Street Global Markets, as of Q1 2024.

D. Private Debt



E. NAV by VC, Buyout and Private Debt



Source: State Street Global Markets, as of Q1 2024.

Holdings Exposure

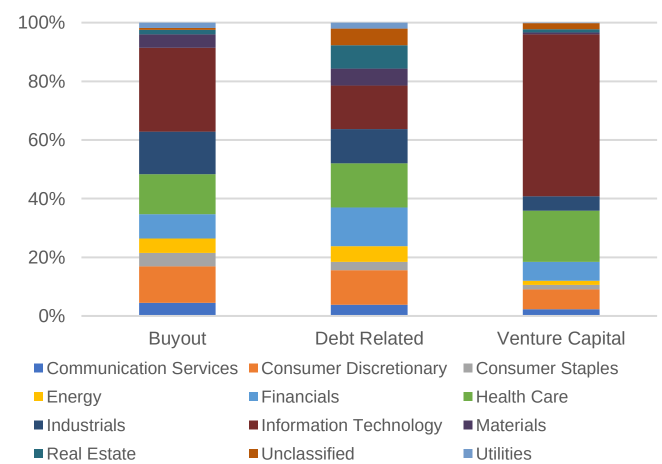
In SSPEI, sector focus is categorized at the fund level. While this classification offers insights into the overall fund strategy, classifications at the holding company level would provide finer granularity, allowing us to identify the exposures more precisely.

Holdings composition did not change much in Q1 2024. Exhibit 9A displays the NAV weights of GICS sector classifications of the portfolio companies in SSPEI constituent funds, based on State Street proprietary private holdings data, across strategies as of Q1 2024[15]. For Buyout funds, overall there is 28% NAV in information technology sector, followed by industrials, health care and consumer discretionary with similar NAV weights between 12-15%. The NAV of venture capital is highly concentrated, with 55% in IT, followed by 17% of health care and 7% of consumer discretionary. Private debt holdings appear the most diversified among strategies, with health care, IT and remained as the top two sectors having largest NAV weights of 15% and 14% respectively. However, financials sector overtook Industrials sector and became the third-ranked sector for private debt at 12%.

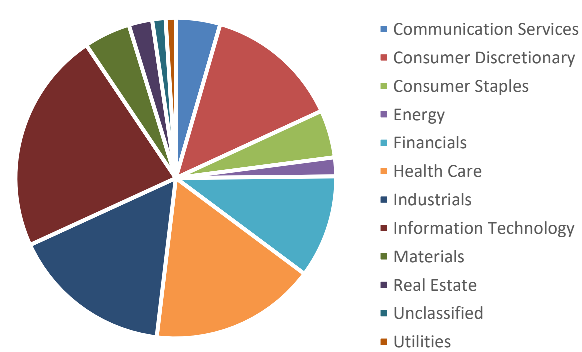
For funds classified as generalist in SSPEI, their top sector exposure in holdings data showed a similar pattern to buyout funds. Information technology consists of 24% of the NAV, followed by industrials, health care and consumer discretionary, accounting for 17%, 17% and 12% respectively. These four sectors collectively represented 70% of the NAV within generalist funds (see Exhibit 9B).

Exhibit 9. Holdings Sector Exposure Measured by NAV

A. Sector Exposure by Strategies



B. Sector NAV weights for Generalist PE Funds



Source: State Street Global Markets, as of Q1 2024.

[15] As of Aug 2024, the coverage of Q1 holdings data was 67% of the overall NAV in SSPEI.

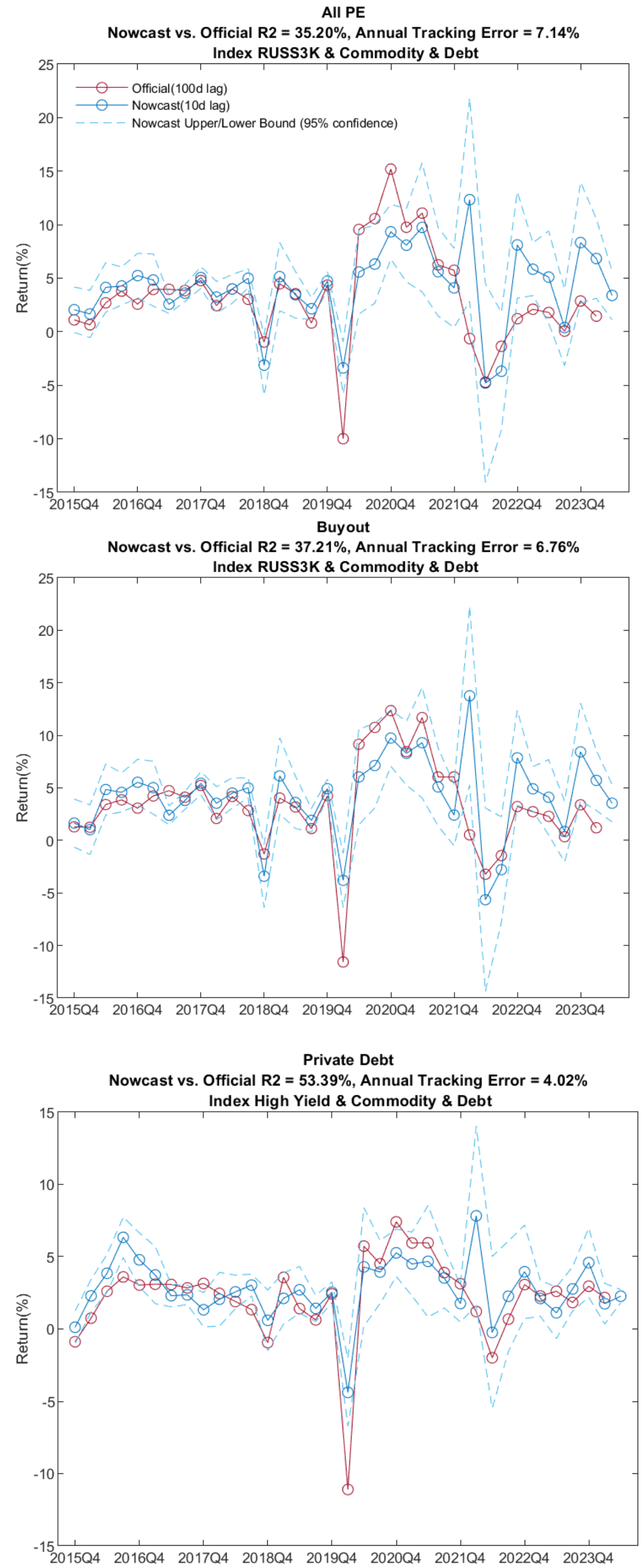
Nowcasting

Inspired by the concept of nowcasting, SSPEI research team developed a model, aspiring to estimate the concurrent performance of private equity market, of which the reporting is otherwise delayed at least by one quarter. We hereby only share the model predictions for Q2 2024 without going into theoretical background. For model details, please refer to State Street Private Equity Insights Q3 2021 publication.[16] Nowcasting results are out-of-sample predictions based on the regression coefficients from the past 5 year rolling window and the observed public market returns and private market cash flows.

Looking back at the current quarter, the actual Q1 2024 returns of All PE, Buyout, Venture Capital and Private Debt were 1.46%, 1.20%, 2.07% and 2.17% respectively. The corresponding nowcasting model predictions for these returns were 6.84%, 5.71%, 8.80% and 1.75%. Exhibit 10 shows that the Q1 return prediction of the nowcasting model for private debt lies within the 95% confidence interval. While the realized returns of VC, buyout and all PE are slightly below their respective confidence bands, all four predictions successfully predicted the relative drop in PE returns in Q1 for all PE, buyout and private debt, as well as the marginal increase in VC returns.

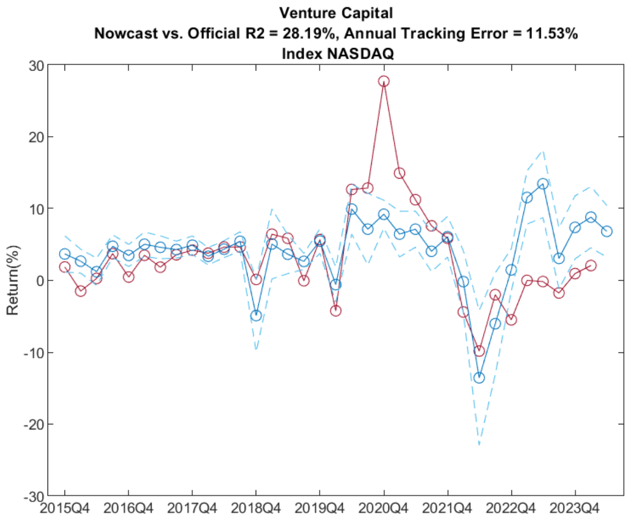
Looking forward, our nowcasting model estimates a drop in the Q2 2024 returns of all strategies, except for private debt. For all PE, VC and buyout, the model predicts quarterly returns of 3.39%, 6.83% and 3.54% respectively; while private debt return is predicted to marginally increase in Q2 to 2.27%. Nowcasting of all PE, VC and buyout are related to the performance of the public equity market performance like the Russell 3000 Index, the total return of which decreased from 10.0% in Q1 2024 to 3.2% in Q2 2024. The marginally higher predicted return for private debt is mainly driven by the stable growth in commodities and the corporate bond market. Bloomberg Commodity Index total return was 2.9% in Q2 2024, up from 2.2% in Q1 2024, while the Bloomberg US Corporate High Yield Bond Index total return was 1.1% in Q2 2024, slightly down from 1.5% in Q1 2024.

Exhibit 10. Actual vs. Out-of-sample Nowcast IRRs



Source: State Street Global Markets, as of Q1 2024.

[16] State Street Private Equity Insights Q3 2021
https://globalmarkets.statestreet.com/portal/peindex/ publications



Source: State Street Global Markets, as of Q1 2024.

DISCUSSION – FX Forward-Adjusted Private Equity Benchmarks

Quarterly private equity valuations are commonly reported 45-90 days after the quarter-end (e.g., June 30th), with certain investments, such as co-investments and fund of funds, often experiencing even longer reporting lags. These delays can pose challenges not only for accurate and timely calculation of an investors' performance but also for benchmarking and performance attribution.

For instance, when calculating quarter-end performance as of September 30th, an investor may only have GP-reported valuations of June 30th for most of the private equity (PE) investments in their accounting book of records (ABOR). Those lagged PE valuations in foreign currencies need to be revaluated at the FX rates as of September 30th closing. Consequently, the quarterly return based on the closed-book valuations includes both the private equity returns as of June 30th and the FX impact between June 30th and September 30th.

In contrast, SSPEI is usually published 105 days after the quarter-end (e.g., June 30th) to ensure comprehensive coverage of updated valuations. The valuations and cash flows in foreign currencies are converted to the base currency (i.e. USD or EUR) of the index on the valuation date (i.e. June 30th) and actual cash flow date. Therefore, SSPEI is not affected by the FX revaluation in the aforementioned example.

To enable an apples-to-apples comparison between the performance of an investor's portfolio and SSPEI, we developed an FX forward-adjusted index. This benchmark involves adjusting FX rates forward by one quarter for the valuations of all index constituent funds while keeping their contribution and distribution cash flows intact, before calculating the performance.

As Exhibit 11 illustrates, the reported SSPEI beginning valuations on 3/31/2015 are revaluated by using 6/30/2015 FX spot rate, and the ending valuations on 6/30/2015 are revaluated by using 9/30/2015 FX spot rate, before calculating the 2015 Q2 FX forward adjusted benchmark return.

Exhibit 11. FX Forward Adjustment (sample data)

	Reported NAV (USD)		FX Rate			Recalculated NAV (USD)	
Currency	**2015Q1**	**2015Q2**	**3/31/2015**	**6/30/2015**	**9/30/2015**	**2015 Q1**	**2015 Q2**
Formula	**A**	**B**	**C**	**D**	**E**	**F=A*C/D**	**G=B*D/E**
AUD	200	210	1.30899	1.30107	1.42399	201	192
CAD	300	315	1.2665	1.24845	1.3407	304	293
DKK	100	105	6.956	6.6953	6.68325	104	105
EUR	1,500	1,575	0.9311	0.89751	0.89586	1,556	1,578
JPY	200	210	119.925	122.365	119.765	196	215
GBP	800	840	0.67363	0.63585	0.66017	848	809
SEK	100	105	8.62405	8.2975	8.38705	104	104
CHF	100	105	0.9713	0.93455	0.9771	104	100
USD	9,000	9,450	1	1	1	9,000	9,450
Total	**12,300**	**12,915**				**12,417**	**12,846**

Note:
A and B are fund NAVs recorded in USD.
C, D and E are FX spot rate on each quarter end date.
F and G are FX adjusted NAVs, recorded in USD.

The main advantage of this approach is that it closely replicates the FX revaluation process in ABOR performance calculation from the individual fund level. Other adjustment methods, such as weighted average of FX forward-adjusted returns of the regional focus sub-indices (US, Europe and Rest of the World), provide less accurate approximations.

This FX forward-adjustment benchmark is particularly valuable for investors in today's global investment landscape, where currency risk could significantly impacts performance outcomes. These benchmarks enhance the accuracy of performance analysis, ensuring that investors can make informed decisions in diverse markets.

ABOUT THE STATE STREET PRIVATE EQUITY INDEX

Participants in private capital markets need a reliable source of information for performance and analytics. Given the non-public nature of the private equity industry, collecting comprehensive and unbiased data for investment analysis can be difficult. The State Street Private Equity Index ("SSPEI") helps address the critical need for accurate and representative insight into private equity performance.

Derived from actual cash flow data of our Limited Partner clients who make commitments to private equity funds, SSPEI is based on one of the most detailed and accurate private equity data sets in the industry today. These cash flows received as part of our custodial and administrative service offerings are aggregated to produce quarterly Index results. Because the SSPEI does not depend on voluntary reporting of information, it is less exposed to biases common among other industry indexes. The result is an index that reflects reliable and consistent client data, and a product that provides analytical insight into an otherwise opaque asset class.

- Currently comprises more than 4,000 funds representing more than $5.2 trillion in capital commitments as of Q1 2024
- Global daily cash-flow data back to 1980.
- The Index has generated quarterly results since Q3 2004.
- Published approximately 100 days after quarter-end.

AUTHORS

Derin Aksit, PhD daksit@statestreet.com

Yuou Wu ywu20@statestreet.com

Maggie Miao, CFA QMiao@StateStreet.com

Nan R. Zhang, CFA, PhD nzhang2@statestreet.com

Disclaimers and Important Risk Information [2024.01]

This communication is provided only to professional clients or eligible counterparties or their equivalent by State Street Bank and Trust Company or, where applicable and permissible, its bank and non-bank affiliates (“State Street”). State Street Bank and Trust Company is authorized and regulated by the Federal Reserve Board, registered with the Commodity Futures Trading Commission as a Swap Dealer, and is a member of the National Futures Association. State Street Bank International GmbH (“SSBI”) is regulated by the European Central Bank (“ECB”), the German Federal Financial Supervisory Authority (“BaFin”) and the Deutsche Bundesbank. Details about the extent of SSBI’s regulation by the ECB, the BaFin and Deutsche Bundesbank are available from us on request. Products and services described herein may not be available in all jurisdictions or through all State Street entities. Activities described herein may be conducted from offshore. Information provided is of a general nature only and has not been reviewed by any regulatory authority.

This communication is intended for general marketing purposes, and the information contained herein has not been prepared in accordance with legal requirements designed to promote the independence of investment research. It is for clients to determine whether they are permitted to receive research of any nature. Market commentary provided by trading desks is not investment research. This communication is not intended to suggest or recommend any transaction, investment, or investment strategy, does not constitute investment research, nor does it purport to be comprehensive or intended to replace the exercise of an investor’s own careful independent review and judgment regarding any investment decision.

This communication is not intended for retail clients, nor for distribution to, and may not be relied upon by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to applicable law or regulation. This communication or any portion hereof may not be reprinted, sold or redistributed without the prior written consent of State Street. This communication and the information herein does not constitute investment, legal, or tax advice and is not a solicitation to buy or sell securities or any financial instrument nor is it intended to constitute a binding contractual arrangement or commitment by State Street of any kind. The information provided does not take into account any particular investment objectives, strategies, investment horizon or tax status.

The views expressed herein are the views of State Street as of the date specified and are subject to change, without notice, based on market and other conditions. The information provided herein has been obtained from sources believed to be reliable at the time of publication, nonetheless, we make no representations or assurances that the information is complete or accurate, and you should not place any reliance on said information. State Street hereby disclaims any warranty and all liability, whether arising in contract, tort or otherwise, for any losses, liabilities, damages, expenses or costs, either direct, indirect, consequential, special, or punitive, arising from or in connection with any use of this document and/or the information herein.

State Street may from time to time, as principal or agent, for its own account or for those of its clients, have positions in and/or actively trade in financial instruments or other products identical to or economically related to those discussed in this communication. State Street may have a commercial relationship with issuers of financial instruments or other products discussed in this communication.

This communication may contain information deemed to be forward-looking statements. These statements are based on assumptions, analyses and expectations of State Street in light of its experience and perception of historical trends, current conditions, expected future developments and other factors it believes appropriate under the circumstances. All information is subject to change without notice.

Participating in trading any financial instrument, including but not limited to foreign exchange, equities, futures, fixed income or derivative instruments, or investments in non-liquid or emerging markets, or digital assets, or participating in securities lending, repurchase transactions or other collateral services present risks, which may include but are not limited to counterparty, collateral, investment loss, tax, and accounting risks. Where applicable, returns may increase or decrease as a result of currency fluctuations. Derivatives may be more volatile than the underlying instruments. Certain foreign exchange business, including spot and certain forward transactions, may not be regulated in all jurisdictions. Past performance is no guarantee of future results.

Please contact your State Street representative for further information.

To learn how State Street looks after your personal data, visit: https://www.statestreet.com/utility/privacy-notice.html.

Global Markets Research Disclaimer Supplement [2024.01]

Australia: This communication is provided to wholesale clients by State Street Bank and Trust Company (Australian Business Number 70 062 819 630, Australian Financial Services License 239679).

Brazil: The products in this marketing material have not been and will not be registered with the Comissão de Valores Mobiliários - the Brazilian Securities and Exchange Commission ("CVM"), and any offer of such products is not directed to the general public within the Federative Republic of Brazil ("Brazil"). The information contained in this marketing material is not provided for the purpose of publicly soliciting investments from investors residing in Brazil and no information in this marketing material should be construed as a public offering or unauthorized distribution of the products within Brazil, pursuant to applicable Brazilian law and regulations.

Israel: State Street Bank and Trust Company is not licensed under Israel's Regulation of Investment Advice, Investment Marketing and Portfolio Management Law, 1995. This communication may only be distributed to or used by investors in Israel which are "eligible clients" as listed in the First Schedule to Israel's Regulation of Investment Advice, Investment Marketing and Portfolio Management Law 1995.

Japan: This communication is made available in Japan by State Street Bank and Trust Company, Tokyo Branch, which is regulated by the Financial Services Agency of Japan and is licensed under Article 47 of the Banking Act.

Oman: State Street Bank and Trust Company is not a bank or financial services provider registered to undertake business in Oman and is not regulated by the Central Bank of Oman or the Capital Market Authority.

Qatar: The information in this communication has not been reviewed or approved by the Qatar Central Bank, the Qatar Financial Markets Authority or the Qatar Financial Centre Regulatory Authority, or any other relevant Qatari regulatory body.

Singapore: This communication is made available in Singapore by State Street Bank and Trust Company, Singapore Branch ("SSBTS"), which holds a wholesale bank license by the Monetary Authority of Singapore. In Singapore, this communication is only distributed to accredited, institutional investors as defined in the Singapore Financial Advisers Act 2001 ("FAA") and its regulations. Note that SSBTS is exempt from Sections 27 and 36 of the FAA. When this communication is distributed to overseas investors as defined in the FAA, note that SSBTS is exempt from Sections 26, 27, 29 and 36 of the FAA. This advertisement has not been reviewed by the Monetary Authority of Singapore.

South Africa: State Street Bank and Trust Company is authorized in South Africa under the Financial Advisory and Intermediary Services Act, 2002 as a Category I Financial Services Provider; FSP No. 42671.

United Arab Emirates: The information contained within this communication is not intended to lead to the conclusion of any contract of whatsoever nature within the territory of the United Arab Emirates.

United Kingdom: State Street Bank and Trust Company is authorised and regulated by the Federal Reserve Board of the United States, authorised by the Prudential Regulation Authority ("PRA") and subject to regulation by the Financial Conduct Authority and limited regulation by the PRA. Details about the extent of our regulation by the PRA are available from us on request.

State Street Bank International GmbH is authorised and regulated by the European Central Bank and the BaFin, deemed authorised by the Prudential Regulation Authority, and subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details of the Temporary Permissions Regime, which allows EEA-based firms to operate in the UK for a limited period while seeking full authorisation, are available on the Financial Conduct Authority's website.