

Private Equity Insights

THIRTY-SECOND EDITION | Q4 2023

CURRENT QUARTER PERFORMANCE SUMMARY

The State Street® Private Equity Index (SSPEI) recorded an overall gain of 2.87% in Q4 2023, bringing the annual return to 7.1%. Buyout funds rebounded significantly this quarter, achieving a 3.39% gain compared to 0.35% in Q3, and posted 9.12% return for the year. Venture capital (VC) returns turned positive to 0.95% in Q4, making the first positive and highest return since Q1 2022. Private debt funds maintained stable performance, with returns of 2.96% in Q4 and 10.66% for the year. VC remains as the only strategy with a negative annual return in 2023 (see Exhibit 1).

All PE	Buyout	VC	Private Debt	
2.87%	3.39%	0.95%	2.96%	
0.06%	0.35%	-1.75%	1.83%	
1.87%	2.38%	-0.17%	2.72%	
2.12%	2.76%	-0.12%	2.60%	
7.10%	9.12%	-1.18%	10.66%	
	All PE 2.87% 0.06% 1.87% 2.12% 7.10%	All PE Buyout 2.87% 3.39% 0.06% 0.35% 1.87% 2.38% 2.12% 2.76% 7.10% 9.12%	All PE Buyout VC 2.87% 3.39% 0.95% 0.06% 0.35% -1.75% 1.87% 2.38% -0.17% 2.12% 2.76% -0.12% 7.10% 9.12% -1.18%	

Source: State Street Global Markets, as of Q4 2023.

Exhibit 1. Private Equity Performance by Strategy

Public markets rebounded from their decline in the previous quarter, exceeding private equity returns in Q4 2023. In 2023, SSPEI underperformed small-cap stocks (proxied by Russell 2000), which posted an annual return of 16.93%, and the US large-cap stocks (proxied by S&P 500), which posted an annual return of 26.29%, while it outperformed the US bond market (proxied by Bloomberg Barclays US Aggregated Bond Index). SSPEI continued to outperform the public indexes over 3-year and 10-year horizons (see Exhibit 2).

Across sectors, energy funds had the worst quarterly return of 0.91%, after having the best performance in Q3 due to a surge in oil prices back then. The 3-year returns of energy funds continue to remain among the highest, slightly below the top performer industrials funds. Financials sector funds had the

best quarterly performance in Q4 2023 with a 3.70% return. Meanwhile, the quarterly returns of funds in other sectors were all above 2% in Q4 2023. One of the top longer term performers, the industrials funds, were followed by health care, generalist, information technology (IT) and consumer funds in Q4 2023. The IT sector funds continued to be the top performer over the longest horizon of 10 years (see Exhibit 3).





Source: State Street Global Markets, DataStream, Bloomberg Barclays US Aggregate Bond Index (total returns as of Q4 2023).

Exhibit 3. Performance of Sector Focused Funds



Source: State Street Global Markets, as of Q4 2023.



VENTURE CAPITAL AT A CROSSROADS

Insights from Harvard University and the Private Capital Research Institute



By Dawson Beutler, Leslie Jeng and Josh Lerner

Introduction

Once again, the venture capital (VC) industry finds itself at a critical juncture. Following the Great Financial Crisis, VC has undergone significant transformation on several fronts. Current assets under management (AUM) have grown to nearly \$2.8 trillion, which is a tenfold increase since the beginning of 2010. Between the end of 2019 and 2021, VC AUM doubled from just over \$1.0 trillion to almost \$2.1 trillion.¹ Concurrently, the industry has rapidly globalized. The share of non-U.S. global VC investment has increased from 12% in 2001 to 33% in 2011 and 53% in 2021.²

However, the VC market has stalled since mid-2022 and continues to remain quiet. The level of U.S. dealmaking activity in Q1 2024 reached its lowest since 2018 at \$36.6 billion. Fundraising data offers an even bleaker picture, with decade lows in Q1 2024 for both the amount of quarterly capital raised and number of funds (\$9.3 billion raised across 100 funds) in Q1 2024.³ Reflecting this difficult fundraising environment, 13% of surveyed VCs say that they have no plans to raise another fund.⁴

The recent growth and present slowdown in the VC industry raises many questions about where the industry will go from here. To address these questions, this quarter's essay will take a step back and consider some of the core trends underlying VC, including implications regarding the potential performance and the structure of the asset class in the years ahead. The following discussion addresses two key points in particular:

- 1. Throughout history, VC has exhibited boom-bust cycles. Amid the present downturn, capital may exhibit a "flight-to-safety."
- Despite short run turbulence, long run VC performance will largely depend on the ability of new innovations to generate value. However, innovative

opportunities do not always translate into immediate returns.

A brief history of VC boom-bust cycles

Following the dot-com bubble, Lerner (2002) observed, "The recent changes in the venture capital market have been far from the first such cycles in the venture market."⁵ Twenty-two years later, this assertion remains as relevant now as it was then. Figure 1 shows global VC investment between 1969 and 2021, highlighting several cycles observed over five decades of data. A log scale is used so that the dramatic swings in earlier years are apparent.

Figure 1. Global VC investment (2011 \$B, log scale), 1969 to 2021, with selected cycles displayed⁶



VC boom-bust cycles generally follow a similar pattern. Investors realize strong returns, which attracts additional capital to the asset class. However, this results in an excess of commitments, and GPs pay increasingly higher prices for investments as too much money chases too few deals. As higher prices negatively impact returns, investors tend to retreat from VC and reduce their allocations (particularly if public market conditions deteriorate). Deal prices decline in response, and as market conditions improve, returns bounce back – and the cycle continues.

Information Classification: General

³ "Q1 2024 Venture Monitor" (PitchBook, April 10, 2024),

https://pitchbook.com/news/reports/q1-2024-pitchbook-nvca-venture-monitor. ⁴ Rosie Bradbury, "13% of VC Firms Aren't Planning to Raise Another Fund," *PitchBook*, June 4, 2024, sec. News & Analysis,

https://pitchbook.com/news/articles/vc-firms-back-off-fundraising-plans.

⁶ Compiled from Pitchbook and Refinitiv.



¹ Preqin, accessed June 17, 2024.

² Josh Lerner, Junxi Liu, Jacob Moscona, David Yang, 2023.

⁵ Josh Lerner, "Boom and Bust in the Venture Capital Industry and the Impact on Innovation," *Federal Reserve Bank of Atlanta Economic Review* Fourth Quarter 2002 (2002): 25–39.

Two drivers of cyclicality reflect fundamental aspects of the VC model: illiquidity and the fund structure. In general, LPs cannot quickly increase or decrease their allocations to VC. During boom periods in which the pace of distributions speeds up, LPs must also accelerate their rate of investment to maintain (or increase) their exposure to VC. This leads to run-ups in activity. Conversely, bust periods can be prolonged as LPs cannot quickly re-enter the market (and potential GPs with the know-how to capitalize on new opportunities must undergo the fund formation and fundraising process).

Shifts in public market sentiment also can impact the VC market. For instance, VC firms may target investment into sectors that public markets highly value. Given market exuberance, GPs often make investments without regard to the impact of future competition or other changes to the sector. One infamous example occurred in the early 1980s cycle in which nineteen disk-drive companies received VC financing amid high valuations for publicly traded computer hardware firms. While the computer hardware industry had rapidly grown, many began to question whether these investments were sensible with expectations of future growth. Shortly thereafter, between October 1983 and December 1984, the average publicly traded disk-drive firm decreased in value by 68%, many VC-backed and disk-drive companies subsequently canceled their initial public offerings.7

The consequence of cyclicality: consolidation

In a downturn, LPs exhibit a "flight-to-safety." LPs gravitate towards reputable VC firms, selecting the least uncertain options for fund investment when all else is uncertain. As the common investment manager saying goes, "Nobody ever got fired for buying IBM." Data from the current slowdown indicates reconcentration around brand-name firms. The top five largest funds raised 45% of the total 2024 U.S. VC fundraising through April as compared to 20% in all of 2023 and 11% in all of 2021.8 Indeed, just as VC firms were caught in a shakeout in 2010, some industry participants believe that a large portion of firms will significantly reduce or altogether stop their activity in the VC industry.⁹ The number of U.S. VC firms, defined as firms that have made two or more deals in a given year, decreased by 38% from 2022 to 2023.10 Other groups have reduced their level of activity, including crossover investors such as Tiger Global. For example, Tiger Global made a combined 658 VC deals in 2021 and 2022 but only 37 in 2023.11

Emerging managers, particularly those who entered the VC market during its peak between 2019 to 2021, may also face a disproportionate impact. The combination of a tough fundraising environment and difficulty in realizing profitable exits on deals made during the market peak will likely prevent many emerging VC firms from raising another fund. Compared to the already dampened fundraising year of 2023, a third of surveyed institutional investors stated they are less likely to invest in first-time managers in 2024 and invest less in VC overall.12

VC returns, innovation, and the future of tech

While the VC industry may continue to undergo corrections in the near term, most LPs are in the asset class for the long term. Long-term performance will largely depend on VC's ability to finance new technologies that create market value. Once again, one can look to history to support this fact. The modern VC model was pioneered by the American Research and Development Corporation (ARD). ARD was founded in 1946 and led by General Georges Doriot, who believed the U.S. economy could benefit from a new financial institution that sorts, governs, and certifies startup companies that drive economic growth through innovation. ARD invested in the early computer industry, specifically through a \$70,000 investment in Digital Equipment Corporation. ARD's stake in Digital Equipment Corporation would grow 5,000 times in value

https://pitchbook.com/news/articles/active-vc-investors-decline.

¹¹ Marina Temkin, "Why Hedge Funds Are Packing up and Leaving VC,"

https://www.privateequityinternational.com/lps-remain-cautious-with-first-timefunds/; Lawrence Aragon, "LP Perspectives 2024: Investors in VC Funds Are Super Unhappy," content, Venture Capital Journal (blog), November 27, 2023, https://www.venturecapitaljournal.com/lp-perspectives-2024-investors-in-vcfunds-are-super-unhappy/



⁷ Josh Lerner, "Boom and Bust in the Venture Capital Industry and the Impact on Innovation

⁸ Rosie Bradbury, "General Catalyst, A16z Capture 44% of US VC Fundraising in 2024," PitchBook, April 29, 2024, sec. Mega-funds,

https://pitchbook.com/news/articles/general-catalyst-a16z-funds-lpcommitments.

⁹ Pui-Wing Tam, "Venture-Capital Firms Caught in a Shakeout," Wall Street Journal, March 9, 2010, sec. Small Business,

https://www.wsj.com/articles/SB1000142405274870391520457510422109290 9884.

¹⁰ Marina Temkin, "38% of VCs Disappeared from Dealmaking in 2023," PitchBook, December 20, 2023, sec. Venture Capital,

PitchBook, December 8, 2023, sec. Weekend Analysis https://pitchbook.com/news/articles/hedge-funds-vc-consequences-lpwithdrawals ¹² Evie Rusman, "LPs Remain Cautious with First-Time Funds," content,

Private Equity International (blog), December 4, 2023,

by the end of 1971, demonstrating the allure to investors of financing high-growth (but high-risk) startups.¹³

Indeed, long-term VC returns have been excellent. Figure 2 shows the State Street Private Equity Index's reported horizon returns as of Q4 2023.

Figure 2. State Street Private Equity Index horizon returns by time horizon (as of Q4 2023)¹⁴

Horizon net IRRs		
10 years	15 years	Since inception (vintages date back to 1990)
14.90%	13.90%	14.16%

Many studies have demonstrated the strong relationship between VC and innovation. Kortum and Lerner (2000) examine innovation in terms of patenting and other proxies across twenty industries. In the study, VC appears to be three to four times more powerful than corporate research and development (R&D) in spurring innovation. While VC was only 3% compared to the total amount of corporate R&D, it was responsible for approximately 10% to 12% of privately funded innovations.15

Studies suggest that greater engagement by VCs with their portfolio companies produces more innovative and profitable outcomes. Bernstein et al. (2016) consider greater engagement by VCs as measured by the introduction of a direct flight between a VC firm and a portfolio company. Reduced travel times should allow VCs to interact more with companies, which in turn should lead to better outcomes for portfolio companies. Indeed, the study finds that greater engagement by VCs led to a 9.1% increase in the number of citation-weighted patents obtained by the portfolio company and a 5.6% greater probability of a successful exit.16

The persistent influence of VC-backed firms underscores VC's outsized impact on the U.S. economy. Of the non-financial U.S. companies that went public between 1995 to 2019, 45% were VC backed. Of those companies still publicly traded at the end of 2019, 51% were VC backed and comprised 72% of the total market capitalization. Furthermore, the VC backed companies represented 88% of the total R&D expenditure.¹⁷

Thus, the discovery of a new scientific approach, new technologies, or the diffusion of new technologies can have profound effects on the VC industry. As startups emerge that create innovative technologies or otherwise capitalize on opportunities stemming from such innovation, the demand for VC will rise and many more attractive investment candidates will materialize.

Given the performance of VC across cycles and the belief that "we are in the early stages of a decades-long innovation supercycle," many industry participants do not view the recent troubles of VC as a long-term concern.¹⁸ This is particularly true if there is a compounding effect to technological innovation. For instance, widespread personal computers helped to enable the rise of the internet, which in turn has empowered the development of social networks, mobile platforms, and cloud computing, which have ultimately led to the current era of digital transformation. The market capitalization of tech companies has scaled in tandem with the creation and adoption of these new technologies, as observed in the value of U.S. public tech companies (many, if not a majority, of which are formerly VC backed¹⁹) growing from \$0.2 trillion on average in the 1980s to \$11.2 trillion at the start of 2020.20

AI and the "productivity S-curve"

Thinking about innovation today, artificial intelligence (AI) comes top to mind. It is natural to think about Al's implications, given the long-term trend of declining productivity in the U.S. Although innovation appears to be accelerating as evidenced



¹³ Tom Nicholas, VC: An American History (Harvard University Press, 2019), http://www.jstor.org/stable/j.ctv253f7zr.

 ¹⁴ State Street Private Equity Index, accessed June 19, 2024.
 ¹⁵ Samuel Kortum and Josh Lerner, "Assessing the Contribution of Venture Capital to Innovation," The RAND Journal of Economics 31, no. 4 (2000): 674-92, https://doi.org/10.2307/2696354.

¹⁶ Shai Bernstein, Xavier Giroud, and Richard Townsend. "The Impact of Venture Capital Monitoring." Journal of Finance, 71 (August 2016): 1591-1622.

¹⁷ Josh Lerner and Ramana Nanda, "Venture Capital's Role in Financing Innovation: What We Know and How Much We Still Need to Learn," Journal of

https://doi.org/10.1257/jep.34.3.237.

¹⁸ Brijesh Jeevarathnam, Morgan Holzaepfel, and Marcus Lindroos, "Powerful Long-Term Trends Boost Venture Capital Outlook," Adams Street, Insights (blog), May 2, 2023, https://www.adamsstreetpartners.com/insights/long-termtrends-boost-venture-capital-outlook/.

¹⁹ Josh Lerner and Ramana Nanda, "Venture Capital's Role in Financing Innovation: What We Know and How Much We Still Need to Learn.' ²⁰ Brijesh Jeevarathnam, Morgan Holzaepfel, and Marcus Lindroos, "Powerful Long-Term Trends Boost Venture Capital Outlook.'

by patenting and research output, the productivity gains from such innovations have diminished.²¹

AI has the potential as a so-called "general purpose technology" to be an "invention of a method of invention."²² In other words, AI may lower the costs and improve the performance of R&D projects. Many scientific fields, such as biology and protein structure discovery, have benefited and stand to further benefit from methods of automated discovery. To use an analogy, consider the invention of optical lenses in the 17th century. While they had a direct economic impact through products such as glasses, lenses also spurred a new wave of tech opportunities through their use in microscopes and telescopes.²³

However, the timeline on which AI may enable gains in productivity (and ultimately generate economic value) may not be linear. The "productivity S-curve" exemplifies this timeline (Figure 3).



Time

New companies developing proprietary AI models and related tools are rapidly emerging, but implementation challenges may delay benefits associated with full adoption of these new technologies. This relates to the historical example of the adoption of electricity in factories at the turn of the 20th century. Electric power replaced the need for steam engines and waterpower in factories. However, the initial adoption of electricity only led to modest gains in productivity from less energy waste and safety improvements. Only years later, towards the 1910s and into the 1920s, did massive gains in productivity occur from electrified factories. Steam engine factory floors were necessarily designed around a centralized engine that provided power via drive shafts, whereas electricity allowed power to be delivered precisely wherever needed. Once factory owners discovered they could reorganize their floors around organizational efficiency instead of power consumption, these factories realized huge productivity gains (e.g., through the assembly line).²⁴

For AI specifically, implementation challenges have already manifested, such as in its application to radiology. Agarwal et al. (2023) studies collaboration between radiologists and AI systems in an experiment in which the doctors diagnosed chest pathologies. Although the authors' AI tool performed better than 75% of the participating radiologists, granting the radiologists access to the tool's predictions did not improve their performance on average. AI assistance particularly decreased the performance of the radiologists when they were confident in their diagnoses before receiving the AI results.²⁵ This suggests that while AI has great potential in improving the efficiency of human tasks, appropriately integrating it into existing systems may take time.

Of course, VCs firms will want to invest early (but not too early) if AI is going to ultimately experience a "productivity S-curve." The market seems to largely believe that this growth will occur in the near future: nearly 26,000 VC deals related to AI and machine learning were completed between 2021 and 2023.²⁶ Still, it remains uncertain to what extent and how quickly innovations from these companies will be adopted and generate value for investors.

Conclusion

The VC market had extraordinary performance during the 2010s and into the 2020s. However, since 2022, many

²⁴ Richard B. Du Boff, "The Introduction of Electric Power in American Manufacturing," *The Economic History Review* 20, no. 3 (1967): 509–18,

Information Classification: General

²⁶ "Q4 2023 Artificial Intelligence & Machine Learning Report" (PitchBook, February 27, 2024), https://pitchbook.com/news/reports/q4-2023-artificialintelligence-machine-learning-report.



²¹ Robert J Gordon, "Why Has Economic Growth Slowed When Innovation Appears to Be Accelerating?," *National Bureau of Economic Research Working Paper Series* No. 24554 (2018), https://doi.org/10.3386/w24554.

Paper Series No. 24554 (2016), https://doi.org/10.3560/w24554.
21 lain Cockburn, Rebecca Henderson, and Scott Stern, "The Impact of Artificial Intelligence on Innovation: An Exploratory Analysis," in *The Economics of Artificial Intelligence: An Agenda*, Ajay Agrawal, Joshua Gans, and Avi Goldfarb, editors, Chicago, University of Chicago Press for NBER, 2019.
23 lain Cockburn, Rebecca Henderson, and Scott Stern, "The Impact of Artificial Intelligence on Innovation: An Exploratory Analysis."

https://doi.org/10.2307/2593069; Tim Harford, "Why Didn't Electricity Immediately Change Manufacturing?," *BBC*, August 20, 2017, https://www.bbc.com/news/business-40673694.

²⁵ Nikhil Agarwal, Alex Moehring, Pranav Rajpurkar, and Tobias Salz, "Combining Human Expertise with Artificial Intelligence: Experimental Evidence from Radiology," Working Paper no 31422, National Bureau of Economic Research. 2023.

questions have surrounded the future of the asset class. In assessing what may be next for VC, it is important to recall lessons learned from the industry's past:

- First, cyclicality is inherent to VC. The structure of the industry makes downturns difficult to avoid and creates the possibility for long-term investors to miss out on potentially high returns. A consequence of downturns is the exit from the industry of many VC firms and other investor types as LPs refocus around reputable players.
- Second, innovation and the performance of VC are largely interdependent. However, startups that create even revolutionary innovations may not translate into immediate returns for VCs and their investors. For new tech such as AI, the "productivity S-curve" may dictate the rate of adoption and thus impact VC returns.

In summary, VC stands at a crossroads, but not an unfamiliar one: changes exist on the horizon, but the asset class will likely remain as the key financer of innovation.

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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.



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Fundraising

Fundraising activity has kept its pace in the fourth quarter, with the SSPEI constituent funds raising \$96 billion in Q4 2023 and \$323 billion in 2023. This annual fundraising corresponds to a 29.0% decrease from 2022 and 47.8% drop from the all-time peak of \$619 billion raised in 2021. Buyout, VC, and private debt funds all continued to slow down their fundraising pace in 2023, with a fund size decrease of 12.8%, 59.7%, and 52.6% from 2022 respectively (see Exhibit 4A), of which VC funds saw the largest decrease in committed capital. US, Europe, and Rest of World funds raised \$232.52 billion, \$56.42 billion, and \$34.19 billion respectively (see Exhibit 4B). Among regions, fundraising of Rest of World funds slowed down dramatically.









Source: State Street Global Markets, as of Q4 2023.

Information Classification: General 6736093.1.1.GBL.

The average fund size dropped significantly for private debt funds in 2023 while it slightly decreased for VC funds and remained stable for buyout funds. As of Q4 2023, the average fund size of private debt funds decreased by 33% from its 2022 average of \$2.01 billion to \$1.34 billion. On the other hand, VC funds posted a drop of 5% from its 2022 average of \$0.9 billion to \$0.86 billion, while buyout funds remained stable around 2.9 billion. (see Exhibit 5).





Source: State Street Global Markets, as of Q4 2023.

Dry Powder

Dry powder, or unfunded commitment, represents the amount of capital that has not been called, thus to be used for future investment opportunities. By the end of 2023, the total dry powder of SSPEI constituent funds was at \$883 billion, a slight decrease from the \$886 billion in Q3 2023. Given the drop of total capital commitments is much more drastic, the milder decrease of dry powder suggests a slowdown instead in capital deployment, consistent with the downward trend since the Q4 2022 (see Exhibit 6A).

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 Q4, the dry powder inventory continued to rise for buyout and private debt funds due to muted deal activities, while it slightly decreased for VC funds, for which the current inventory will last about 41 months. While buyout funds recorded a marginal inventory increase from 24 to 25 months, as a continuation of an upward trend since early 2022, private debt funds



experienced a drastic inventory increase from 28 to 35 months, indicating a larger degree of slowdown in capital deployment for private debt funds (see Exhibit 6B).

Exhibit 6. Dry Powder

A. Monthly Dry Powder



Source: State Street Global Markets, as of Q4 2023.

B. Quarterly Dry Powder Normalized by Average Contribution



Source: State Street Global Markets, as of Q4 2023.

Cash Flow Activity

We have observed early signs of recovery in exit activities in recent quarters. The quarterly distribution to committed capital (DCC) has been rising since Q2 2023 and is approaching 2.6% in Q1 2024, nearing its 10-year average of 2.7%. The quarterly paid-in over committed capital (PICC), on the other hand, has slightly dropped to 2.3% in Q1 2024, implying a positive net cash flow for the first time since Q3 2021. (see Exhibit 7A).

Exhibit 7B provides a closer look at the net cash flows among different PE strategies. In Q1 2024, the net cash flow to committed capital seemingly increased and turned positive for buyout and private debt funds. VC funds, on the other hand, experienced a further drop in net cash flows, implying a larger (in absolute value) negative net cash flow of -0.76% in Q1 2024 (see Exhibit 7B).

Exhibit 7. Quarterly Cash Flow Ratios Normalized by Commitment

A. Contribution and Distribution for All PE



B. Net Cash Flow to Committed Capital By Strategy



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

Valuations

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

DVA = EndingNAV - BeginningNAV + Distribution - Contribution

Information Classification: General 6736093.1.1.GBL.

STATE STREET. 8

The quarterly DVA of all PE funds rebounded from \$2.0 billion in Q3 to \$74.8 billion in Q4 2023. The positive DVA in Q4 2023 is due to the increase in NAVs being larger than the negative net cash flows (see Exhibit 8A). While the increase in NAVs is primarily attributable to buyout funds, private debt and VC funds also had marginal increases in their NAVs (see Exhibit 8D). Exhibit 8B shows that Europe focused funds experienced a significant jump in DVA in USD during Q4 2023, due to higher NAVs. However, this jump in the DVA is driven by the relative depreciation of the US dollar against the Euro in Q4 2023. Exhibit 8C shows that Europe funds had marginally positive DVA in terms of Euro during Q4 2023.

Exhibit 8. Dollar Value Added

A. All PE



B. Europe (USD)



C. Europe (EUR)



D. NAV by VC, Buyout and Private Debt



Source: State Street Global Markets, as of Q4 2023.

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 Q1 2024 without going into theoretical background. For model details, please refer to State Street Private Equity Insights Q3 2021 publication.²⁷ Nowcasting results are out-of-sample predictions based on the regression coefficients from the past 5 year rolling window and

²⁷ State Street Private Equity Insights Q3 2021 <u>https://globalmarkets.statestreet.com/portal/peindex/ publications</u>

Information Classification: General 6736093.1.1.GBL.

the observed public market returns and private market cash flows.

Looking back at the current quarter, the actual Q4 2023 returns of All PE, Buyout, Venture Capital and Private Debt were 2.87%, 3.39%, 0.95% and 2.96%. Correspondingly, the nowcasting model predicted returns were 8.33%, 8.43%, 7.39% and 4.59%. As is visually evident from Exhibit 10, the nowcasting model Q4 return prediction of all PE and private debt lie within the 95% confidence interval. Although the realized returns of VC and buyout fall outside of the confidence band, all four predictions successfully predicted the recovery of PE returns from Q3 to Q4 2023.

Looking forward, our nowcasting model expects the Q1 2024 returns of all strategies to decrease from where they currently are, except for VC. Private debt predicted reversal is mainly driven by the reversal in corporate bond market. Bloomberg US Corporate High Yield Bond Index total return was 1.54% in Q1 2024, down from 7.49% in Q4 2023. All PE and buyout nowcasting are related to the model parameter adjustment given the relatively low realized PE returns and overoptimistic predicted PE returns in 2023. For all PE, buyout, and private debt, the model predicts quarterly returns of 6.84%, 5.71% and 1.75% respectively; meanwhile, VC is predicted to see an increase in Q4 return with 8.80%. VC prediction is primarily driven by the outstanding public equity market performance since Q4 2023. Nasdaq composite index surged for 13.8% in Q4 2023 and 9.3% in Q1 2024.

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





Venture Capital Nowcast vs. Official R2 = 31.04%, Annual Tracking Error = 11.49%





Source: State Street Global Markets, as of Q4 2023.

Information Classification: General 6736093.1.1.GBL.



DISCUSSION – Private Debt Quickly Fills the Gap Left by Banks

Private Debt has become an alternative source of capital after the Great Financial Crisis, as the regulatory changes reduced the ability of traditional lenders (i.e., commercial banks) to take on risks.²⁸ In more recent years, the COVID crisis, government stimulus programs, and Fed monetary policy swings have driven significant fluctuations in the lending capability of banks, as proxied by the movement of the financial soundness indicator ²⁹. As banks shore-up their capital buffers and become more risk-averse in lending, the commercial and industrial loan³⁰ amounts fall. Interestingly, the net asset value of private debt, moved higher as the banks pull back, indicating private debt funds are quickly filling the lending gaps left by banks (see Exhibit 11).

The changes in the macroeconomic conditions over the past few years have shifted the incentives of institutional investors'. Starting in early 2020, the historically low interest rate environment made private debt funds more attractive to institutional investors that often rely on fixed income investments. Following the start of the Fed's hiking regime at the end of 2022 Q1, the annual change in private debt net asset value started to decline, despite remaining positive and above that of commercial and industrial loans.





Source: State Street Global Markets, FRED, as of Q4 2023.

29 Board of Governors of the Federal Reserve System (US), Financial Soundness Indicator; Regulatory Tier 1 Capital as a Percent of Risk-Weighted Assets, Level [BOGZ1FL010000016Q], retrieved from FRED, Federal Reserve

Bank of St. Louis; https://fred.stlouisfed.org/series/BOGZ1FL010000016Q, June 25, 2024.

30 Board of Governors of the Federal Reserve System (US), Commercial and Industrial Loans, All Commercial Banks [TOTCI], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/TOTCI, June 25, 2024.



²⁸ Private Debt: Risks, Returns, and Opportunities, <u>State Street Associates In-</u> <u>Practice paper</u>, June 2024.

ABOUT THE STATE STREET PRIVATE EQUITY INDEX

Participants in private capital markets need a reliable source of information for performance and analytics. Given the nonpublic 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 3,900 funds representing more than \$5.1 trillion in capital commitments as of Q4 2023
- Global daily cash-flow data back to 1980.
- The Index has generated quarterly results since Q3 2004.
- Published approximately 100 days after quarter-end.

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