The Hidden Lies of Private Equity Returns

Over the past decades, private equity has emerged as a robust asset class, consistently matching—and often outperforming—public market returns over longer horizons. This article examines the performance of private equity funds, detailing how strategies such as multiples expansion, deleveraging, and operational improvements have driven returns. Yet over the last couple of years the classical Private Equity playbook has shifted, firms are struggling to make returns in evolving macroeconomic condition: high rates, high inflation and high valuations.

We try and replicate private equity returns using a model portfolio of publicly traded stocks. By mimicking the investment criteria and leveraging typical of private equity deals, this framework offers retail investors a transparent, liquid alternative to traditional, illiquid private equity investments. But more importantly highlights how macroeconomic conditions can allow for easier returns to be generated, and we give our take on where the industry can go from here.

How do PE firms make returns?

In the decade following the Great Financial Crisis (GFC), PE funds have demonstrated robust performance, matching public market returns. The US Private Equity Index, provided by Cambridge Associates, shows that PE delivered annual average returns of 13.77% for the decade ending June 30, 2020. This measure fell slightly below the average annual return of the S&P500 (13.99%) for this same timeframe, whilst it bested the 10.50% average returns produced by the Russell 2000. Considering a wider timeframe—the 20-year period ending June 30, 2020—we find that PE returns significantly outperform those of public markets. PE funds produced average annual returns of 10.48% over these 20 years, whilst the S&P500 and Russell 2000 averaged 5.91% per year and 6.69% per year, respectively.

More recently, PE funds have increasingly outperformed their public market counterparts. Taking the *Modified Public Market Equivalent* (mPME) benchmark provided by Cambridge Associates—a private-to-public comparison evaluating the returns if the dollars invested in private investments were instead invested in public markets—US PE funds have achieved an mPME of 22.56% for the 3-year period ending June 30, 2023. In comparison, the mPME achieved by the Russell 2000 over this same timeframe is 10.07%. Over the 10-year period ending June 30, 2023, US PE funds' mPME of 16.93% almost doubles that of the Russell 2000 Index (8.58%).

Furthermore, when breaking down the PE industry into two classes of funds, PE mega-funds—typically defined as funds with commitments exceeding $5bn—have recently outperformed their smaller counterparts, after reversing a trend of five consecutive quarters of underperformance succeeding the Covid-19 pandemic. According to a recent Pitchbook US PE Breakdown, mega-funds achieved a rolling one-year IRR of 8.8% through the end of Q1 2024, outperforming smaller funds for the third consecutive quarter in a row.

To be able to achieve returns that outperform public markets, PE firms must be careful in selecting their investment universe: identifying and filtering companies that align with their overall strategy, industry expertise, and risk appetite. PEs must outline specific criteria to help guide their investment decisions: sector, company size, geography, stage of growth, ownership structure. Generally, PE funds prefer to select relatively small firms with low EBITDA multiples, as this provides an easy way of creating value through multiple expansion (we will expand this thought shortly). Properly curating investment criteria and performing thorough sourcing and due diligence enables PE funds to generate greater alpha (excess returns above market benchmarks).

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To generate alpha, private equity firms can make use of a number of strategies spanning financial engineering, operational improvements, and strategic exits. One particular strategy that PEs have adored is multiples expansion. Multiples expansion, essentially a form of arbitrage, involves buying a company at a lower valuation multiple and selling the company later down the line at a higher multiple. In order to achieve a higher multiple, usually EBITDA multiple, at exit, PE funds employ a number of techniques to improve operational efficiencies, grow business fundamentals, and increase market position. However, since the onset of the Covid-19 pandemic, cost of debt has increased and liquidity in debt markets is harder to come by given current interest rates and asset valuations. As a result, fund performance has suffered, with buyout entry multiples declining from 11.9 to 11.0 times EBITDA through the first nine months of 2023.

Another strategy employed by PE funds to generate alpha is through deleveraging (the process of reducing a company's debt relative to its equity or cash flows), a key strategy to improve financial stability and drive returns in leveraged buyouts (LBOs). There are many mechanisms through which PE funds achieve deleveraging: firstly, funds prioritise generating strong, consistent free cash flows to pay down the principal on the company's debt. This significantly improves the debt-to-equity ratio and reduces interest expense, increasing net income and valuation. Secondly, PE firms focus on increasing EBITDA through cost cutting, operational efficiencies, and revenues expansion. These improve the debt-to-EBITDA ratio, making the company seem less leveraged. Thirdly, PEs firms can achieve deleveraging by refinancing debt at lower interest rates—they renegotiate debt terms with lenders once the company's financial position improves.

Value Investing Myth

While deleveraging and multiple expansion are the main ways that PE firms make returns, the market is getting more and more crowded out, and the classical private equity thesis of taking an undervalued company and multiple expanding and deleveraging is getting harder and harder to replicate. Value investing is synonymous with Benjamin Graham, in his time he would almost be sure that if he held some undervalued stock for a while it would revert to its "intrinsic value". Or the Efficient market hypothesis states, but more and more we see animal spirits in the markets and its hard to see if this premise is as quite true as it used to be.

Value investing (buying an undervalued stock and waiting for it to return to true market value; believed to be undervalued due to market mispricing and would return to true value through efficient market hypothesis) in the past had a value premium of nearly 3% per year when compared to growth stocks. However, over this past decade, value stocks returned "just" 9.9% per year while their growth peers outperformed at 14.4% - the value premium has turned negative. Despite the attractive absolute returns, this inverted value premium is not uncommon when looking at its history - 22% of all rolling 10-year periods have been negative. This means that, nowadays, multiples expansion is not enough for investors to see returns on value investments. Instead, a hands-on approach is needed, with some private equity firms bringing in veterans with operational experience to fix; some laying out 5 to 10 year plans on how to improve operational efficiency.

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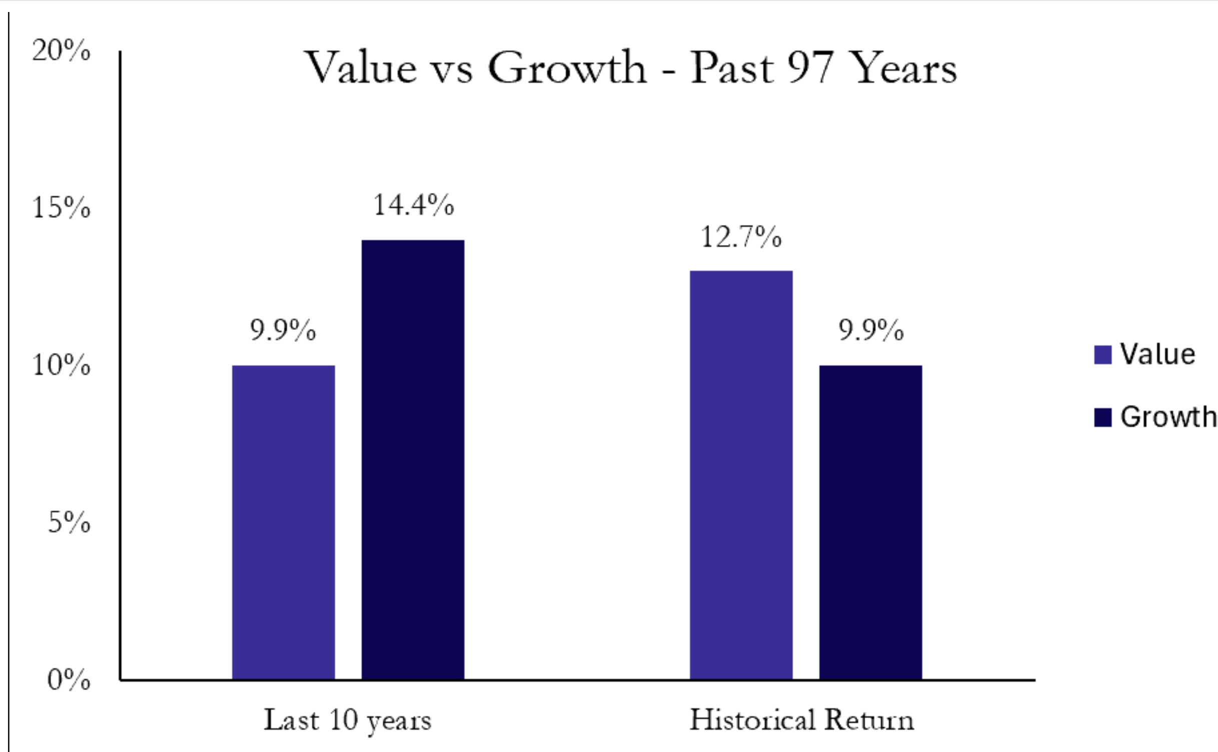

BSIC – Value vs Growth

Whilst there are many methods to identify a value stock, one way is to consider the stock's BE/ME (book to market equity) ratio i.e. the ratio of its net asset value (assets - liabilities) to its market capitalisation. A high BE/ME ratio (above 1) suggests a value stock (stock is undervalued relative to its book value) and low suggests growth. The second (and more common in practice) is to consider the EBITDA multiple (price/EBITDA or EV/EBITDA). This multiple represents the price per unit of operating income available to the capital providers of the firm. Paper shows portfolios consisting of low EBITDA multiple stocks tend to have higher excess returns than those with higher multiples. The EBITDA multiple can be rewritten as MEBITDA=R-g where is the fraction of EBITDA that is converted into cash flow, g is the constant cash flow growth rate, and R is the discount rate. Value firms can have low multiples due to high capital expenditure needs or low cash flow growth rates or high discount rates . The premise of value investing is that low multiples occur through a secondary discount rate, namely market mispricing, which can be expected to translate into positive risk-adjusted returns.

Since value investing relies on market mispricing being corrected in the long run through mean reversion, one reason why returns have been limited over the past decade is that markets have become less efficient in the relative pricing of common stocks, especially over the medium horizon. We see this by examining the value spread (ratio of valuation in whatever method is preferred between cheap and expensive stocks) as a measure of how efficient a market is - of course there can be many other reasons as to why a spread is wide/narrow but as of now it has been a decade with spreads above median. More importantly, much of it at great magnitudes which shows market inefficiencies, if we can consider these wide value spreads as such, aren't just more extreme than in the past but they are lasting longer when extreme.

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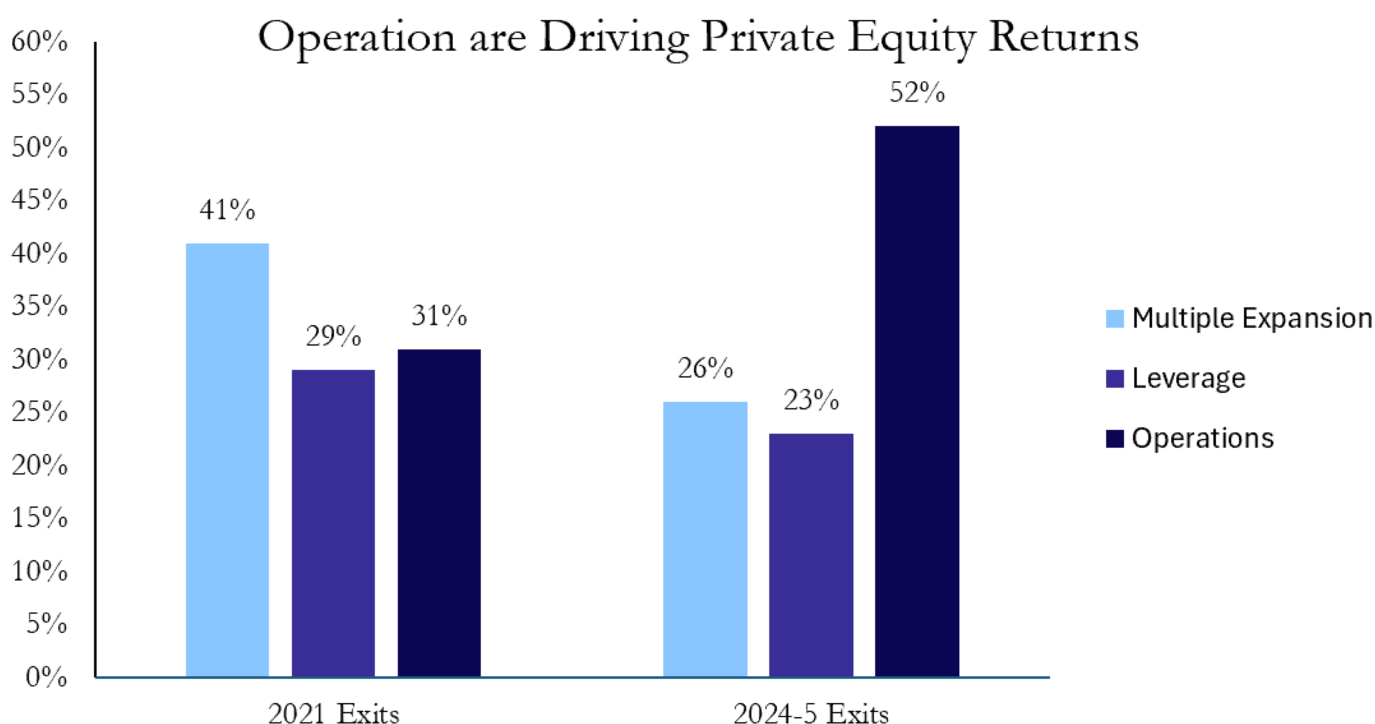
There are many hypotheses as to why this is the case; mainly indexing which has made stock prices more inelastic, and technology. Specifically availability of data, or more specifically people thinking accurate data is available to them at their fingertips. Additionally, the gamification of investments through the development and evolution of online trading applications has made individual investors feel overconfident and thus has made the market less efficient. While some argue that data now travels faster than it once did and this should make the market more efficient, the extent to which this impacts trading strategies in practice is extremely limited. Even if you lag backtests over 10 years by a few weeks, deterioration is only minimal, which is what we expect for medium term strategies - they should not be impacted by such a short change in time frame. The market becoming less efficient has meant valuation bubbles occur more often, in larger magnitude and last longer. Therefore, for a rational investor, someone who can hold investments in the long term is better off than having a shorter time horizon.

Preqin's examination of deals under $1 billion from 2006 through 2019 also found that gains from improving revenue and margins beat out multiple expansion. Companies need to improve operational efficiency because private equity firms are dealing with droughts in deals markets and holding periods are nearly three years longer than historical averages. A lot of investments made in 2021 when interest rates hovered near 0 are now bleeding out as multiples expansion can no longer be assumed and has been seen to be shrinking as of last year.



BSIC – Operations are Driving Private Equity Returns

Despite the downturn in value investing, there is still reason for optimism for private equity firms. For example, following the three-year value premium at the end of June 2020 (-17% per year), value stocks massively outperformed in the next three-year period by 11% per year, with many other examples of this happening. With multiple private equity firms now hiring operational experts, there is more to be done on improving a company fundamentally to raise its intrinsic value, and in turn its stock price, with hope that in the long term, value investing will rise back to its historical highs.

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Forward guidance & Operations Maximizing

Over the past 40 years or so, private equity buyout managers largely invested capital in an environment of declining interest rates and escalating asset prices. During that period, they were able to rely on financial leverage, enhanced tax and debt structures, and increasing valuations on high-quality assets to generate outsize returns for investors and create value. Nowadays times have changed, multiple expansion doesn't come for free like it once did.

Projections surrounding federal funds rates signal that they will remain above 4% through 2025, potentially dropping to 3% at the end of 2026. Even then, rates will still be higher than they were when the majority of PE buyout deals were underwritten. This creates issues with recapitalisation and floating interest rate resets for a portfolio company's debt. Considering that borrowers take leveraged loans at an average interest coverage ratio of 3 times EBITDA; rising interest expenses and profitability headwinds could cause these coverage ratios to fall below 2 times or even get close to 1 times EBITDA. As a result of high interest rates, there is a mismatch of exit valuations for the most recent vintage of PE assets. These assets remain highly valued relative to their public market equivalents, and it will likely take more time for private assets to fully reflect market conditions due to a slowdown in exits and financing.

To help PE funds navigate these challenges, a recent McKinsey report has outlined two principles through which buyout managers can maximise operational value creation. 1) the report suggests that buyout managers should focus on developing a rigorous and integrated approach to assessing operational efficiency—in a nutshell, managers need to conduct both strategic and operational diligence for new assets. Their focus should be on assessing top-line and operational efficiency. During the underwriting process, managers should also identify actions that could expand and improve EBITDA margins and growth rates during the holding period, identify the costs involved in this transformation, and create rough timelines to track the assets' performance. In essence, managers should invest with the idea of value creation in mind, not as an afterthought. 2) PE managers should asses their capabilities and compensate their weaknesses by bringing best-of-breed capabilities to portfolio companies. Procurement: Portfolio companies can draw on a buyout manager's long-established procurement processes, team, and negotiating support), Executive talent: PE firms should bring in top talent from their portfolio network, Partners & Portfolio synergies: Using other partners and cross synergizing companies in their own portfolios private equity firms can maximize operational efficiencies.

One firm that has been able to successfully navigate the fundraising and exit challenges that have come about due to higher interest rates has been Clayton Dubilier & Rice (CD&R). Due to their expertise in operational maximization, CD&R has found success in remaining a pure-play buyout shop due to its ability to achieve operational transformation in buyouts. The firm raised a $26bn fund in 2023, an increase of $16bn from its previous fundraising round. Another firm that has been able to generate alpha despite ongoing macroeconomic uncertainty is Blackstone [NYSE: BX]. However, unlike CD&R, Blackstone has focused on deleveraging on a massive scale. Driven by deals to manage insurance company assets, Blackstone's credit business brought in $100bn in 2024. Furthermore, the firm raised $28bn from individuals last year, nearly double what it raised in 2023.

Since financial engineering isn't working as well as it used to firms are having to actually run the companies they but, CD&R stands out in this and that's why they can do so well in harder times, generate true alpha through operational optimization. Meanwhile, Blackstone firms like that can de-lever on a massive scale and stand out by being just huge in size. Looking forward the private equity industry is going to have a lot of laggards, specifically in smaller middle market firms. How are they going to create returns like the best of the best in these difficult times ?

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Thesis for model

Now we have given a background on private equity returns over the last years. And while our tone might have been majorly pessimistic looking forward, the market has an insane demand for private equity and private assets. In the last 12 months alone, Blackrock [NYSE: BLK], Apollo [NYSE: APO], and Invesco [NYSE: QQQ] have wanted to package private investment opportunities into passive ETF wrappers. Private assets are the fastest-growing market in the financial world, yet retail investors have little to zero allocation to these investments in their own portfolios. Due to this excess demand for private assets, money managers wanted to capture that demand with these ETFs. Seeing more and more of these ETFs launching, we wanted to test if retail investors couldn't themselves recreate returns from private investing.

Our idea consisted of testing out if private equity returns can be replicated with a model portfolio with private equity-Esque characteristics. From common knowledge, private equity firms select counter-cyclical, steady cash flow, undervalued companies. They take on leverage to boost their internal returns on investment. Their main source of alpha comes from multiple arbitrage and deleveraging, and historically, private equity firms are regarded as having made a killing in the markets. But how useful are the hundreds of hours a week that private equity analysts actually do? Are the returns replicable if we discount the fees that private equity firms take? Furthermore, are private investments just regarded as safe due to their illiquidity? Is that an artifact of valuation discretion or a true reflection of economic exposure?

Using publicly available data from Yahoo Finance, we try to replicate the returns of private equity investments by constructing a portfolio of publicly traded firms that share similar characteristics with companies typically acquired by private equity funds. To ensure fairness between our model portfolio and private equity firms, we compare our returns with private equity post-fees, assuming the stereotypical fee structure of 2% on AUM and 20% on profits. We also replicate the leverage a private equity company takes in their typical LBO process. Our portfolio is constructed with a target leverage ratio of 1.5x, which is applied using margin borrowing, with borrowed funds accruing interest at the prevailing one-month U.S. Treasury bill rate.

Our portfolio is constructed by selecting stocks that match the characteristics of firms commonly targeted by private equity buyouts. Due to data scarcity, for the replication model, we are using only the top 100 biggest companies in terms of market cap in the S&P 500. We filter companies based on their size, valuation multiples, and leverage. Specifically, companies with relatively small market capitalizations and low EBITDA multiples are prioritized, as these factors align with the empirical patterns observed in private equity acquisitions. To take the "Value Factor" into account, high book-to-market ratio stocks are selected to mirror the investment style of private equity funds. The filtering process is conducted at the beginning of each period, with firms ranked according to these financial metrics, and a subset of the lowest EBITDA multiple stocks chosen for inclusion in the portfolio.

To replicate the holding periods of private equity firms, we assume a four-year holding period for selected stocks and then rebalance at the end of that period. This approach reflects the longer-term investment horizon of private equity funds while ensuring that new undervalued stocks are periodically selected to maintain exposure to the value factor.

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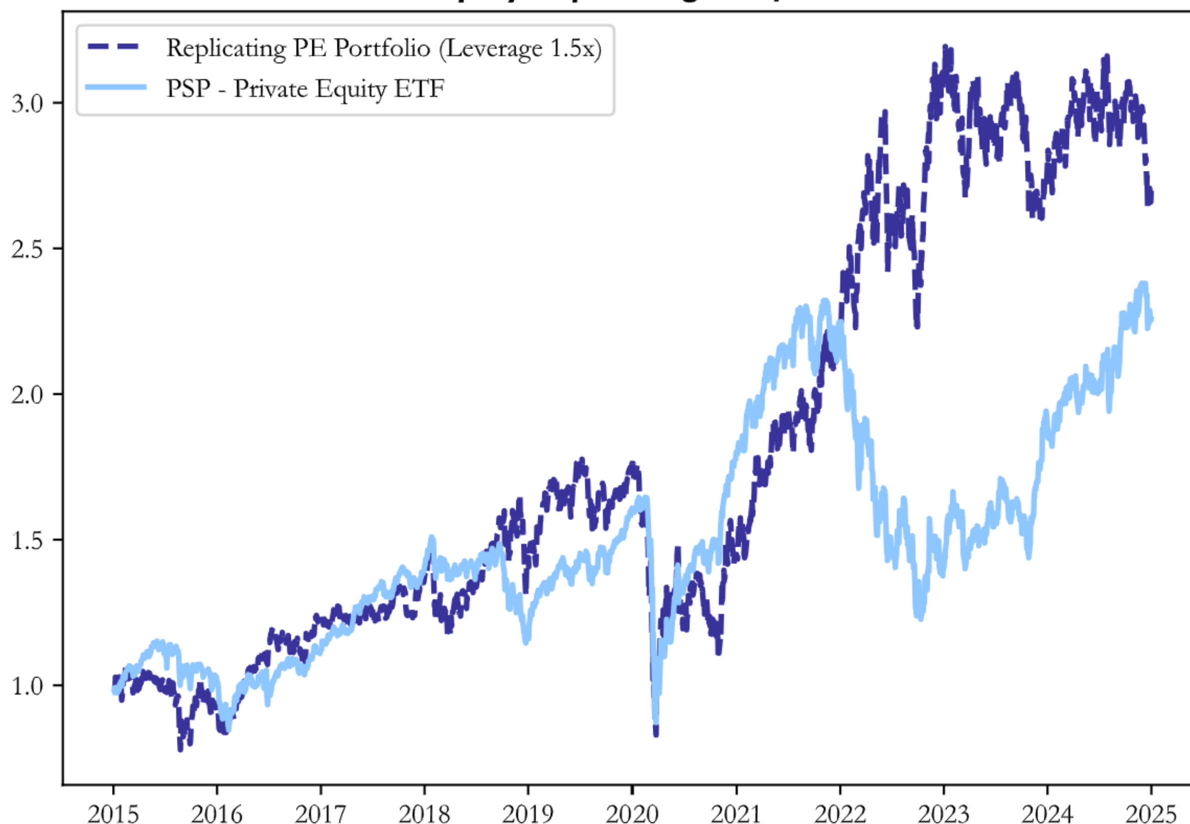
To evaluate the accuracy of our replication, we compare our portfolio's performance to a widely recognized private equity benchmark, the PSP Index. The Invesco Global Listed Private Equity ETF (PSP) tracks an index of publicly traded companies engaged in private equity activities, including direct investment in private firms and management of private equity funds. This benchmark provides a transparent and liquid measure of private equity performance, allowing us to assess how closely our replicating portfolio mimics actual private equity returns.



Source: BSIC

We observe strong similarities in the returns of our replication portfolio and the PSP Index, with a slight divergence emerging after 2022. This suggests that while private equity returns can be closely approximated using public equities with similar characteristics, structural changes in the private equity market or broader economic shifts post-2022 may have introduced some differences in performance.

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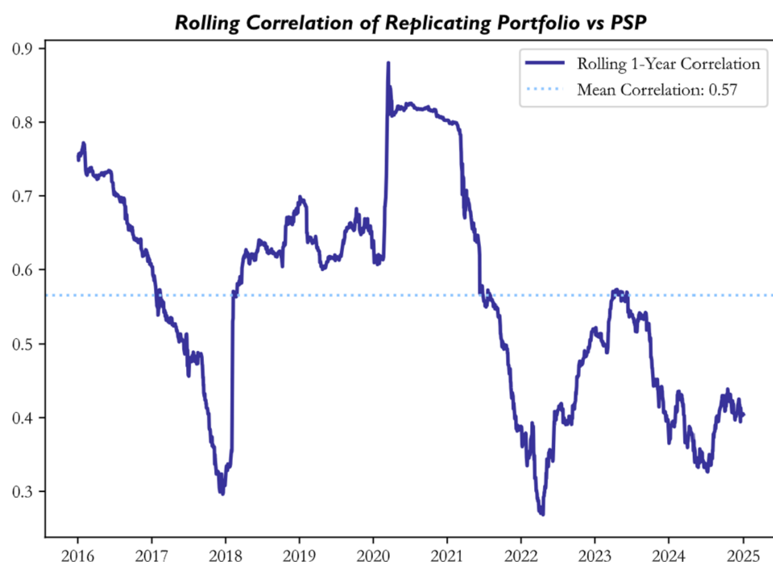

Source: BSIC

	PSP	Replicating Portfolio
Market Beta	0.68	0.59
Sharpe	0.41	0.63
Anualized Vol	0.22	0.28
Max Drawdown	-1.00	-1.01

Conclusion

Ultimately, private equity remains a critical asset class for institutional investors, offering diversification, hands-on management, and the potential for long-term value creation. However, the golden era of easy PE returns is fading, and the firms that will thrive in the coming decade are those that embrace a more hands-on, operationally-driven approach to investing.

In this article, our model portfolio attempts to test whether private equity-style returns can be replicated in public markets. While the results indicate that some aspects of PE investing—such as targeting undervalued companies with steady cash flows—can be mirrored, there are unique structural advantages to private investments that remain difficult to replicate. The perceived stability of private equity, largely due to discretionary valuation methods and the illiquidity premium, continues to offer benefits for long-term institutional investors seeking reduced volatility in their portfolios.

Looking ahead, the private equity industry faces a bifurcation. Large, well-established firms with deep operational expertise and the ability to drive transformational change will continue to outperform, while smaller, middle-market players may struggle to generate historical levels of returns. Only time will tell to see how the private equity industry will adapt to the new time we live in.

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