

Q3, 2021

Tail-End Research



Re-examining Tail-End private equity fund performance and secondary market alternatives

Introduction

Over the last 20 years, private equity (“PE”), including growth and venture capital, has blossomed into a critical investment strategy for institutional investors. Limited Partner appetite for PE continues to grow as pension obligations increase, driving demand for higher returns. As of 2020, 36% of LPs reported being under-allocated to PE and only 8% of LPs reported planning to invest less in PE over the next 12 months.¹

The reasons behind the dramatic increase in private equity have been well documented as the institutional market – and now a growing retail market - seeks alpha that is hard to achieve through liquid equity strategies. On an absolute basis, investing in 1st quartile US PE funds over the last 10 years has outperformed public equities, despite the strong recent public market returns.¹

However, it has been less clear whether such outsized returns should be expected on an annual basis in a Tail End portfolio, which we define as comprised of funds g that have extended beyond their original term (ten years). Frequently, investors cite one or more of the following reasons for holding private equity funds to maturity: not needing liquidity, having a long-term perspective, unwilling to accept a sale price below NAV or being under allocated to PE. However, these reasons do not address whether the investor would be better off selling their Tail End portfolio and reinvesting the proceeds versus holding them until the underlying funds dissolve.

For this report, we analyzed how US PE funds perform beyond their 10-year mark, which we refer to as the Tail-End years. We used Pitchbook data, segmented by IRR quartiles, to examine the mean Total Value per Paid-In (TVPI) within each quartile. To expand upon our previous research ([Tail-End Research Report – 2019](#)), we segmented US private equity (“PE”) and venture capital (“VC”) funds² over \$100 million with vintage years 2000 through 2020 by strategy to examine the following categories:

- US PE and VC ([Exhibit 2](#))
- US VC ([Exhibit 3](#))
- US PE ([Exhibit 4](#))
- US Buyout ([Exhibit 5](#))

We examined the performance of US PE funds to compare performance during the Tail-End Years (after year 10) to performance during the first ten years. Additionally, we averaged the TVPI quartiles to find the Average TVPI to find which produced a better long-term outcome by creating a hypothetical portfolio that assumes a sale at a 15% discount in year ten and reinvests the proceeds back into new private equity funds.

¹ Bain & Company Global Private Equity Report 2021

² Pitchbook data: US PE (Buyout, Turnaround, Mezzanine and Growth) and Venture Capital funds vintages 2000-2020

Summary

Our research found:

- Private equity funds, on average, lose value when held beyond 10 years, regardless of historic performance or quartile ranking. ([Exhibit 6](#))
- There is more downside risk than upside potential by holding funds beyond 10 years relative to the initial 10 years of their life. ([Tail-End Research Report – 2019](#))
- Adams Street Partners provided data (as of Sept. 30, 2018) on 372 US PE funds in which Adams Street Partners invested on a primary basis from 1979 – 2008. For the US PE funds in the dataset:
 - 7.8% dissolved in 10 years or less,
 - 18.8% dissolved in 12 years or less,
 - 54.4% dissolved in 15 years or less,
 - 94.4% dissolved in 20 years or less, leaving 5.1% open after 20 years.
- Selling at a discount after year 10 and reinvesting may be advantageous when any one or more of the following applies:
 - The expected timing of liquidity of the 10+ year old fund is greater than three years.
 - New investments (even outside of private equity) with average or better return potential are readily available.
 - The General Partner's economic interests are no longer aligned with Limited Partners' interests.
- Stellar returns are not required to compensate for selling at a discount. Even average private equity returns can make up for selling a tail-end fund at a double-digit discount. ([Exhibit 8](#))
- All strategies examined had stagnating performance when held beyond 10 years, however Venture Capital data showed declining performance beyond year 10 compared to PE or Buyout. ([Exhibit 3](#))
- Top quartile funds have the highest opportunity cost to hold beyond 10 years, assuming their unrealized capital could be monetized and redeployed into other top quartile funds. ([Tail-End Research Report – 2019](#))

Common Arguments for Holding Tail-End Funds

We don't need liquidity.

The reason for selling is not for the cash. The reason to sell is to reinvest in more productive assets that will produce higher long-term returns, which should be the objective of every portfolio manager or CIO. Additionally, Tail-End funds are similar to cash in that they do not appreciate. If you are picking between actual cash and illiquid "cash", wouldn't you want the liquid version?

We are a long-term investor.

This assumes holding will produce a better long-term outcome, which is typically not the case. Selling and taking a loss in the short term and committing to new private equity funds for higher future returns is exactly in line with how a long-term investor should be thinking.

We won't sell for less than NAV.

An offer below NAV usually indicates assets are perceived to have limited upside and/or there will be a long hold period before liquidity is achieved. Since Tail-End funds, on average, do not appreciate, an offer below NAV is simply accounting for the time value of money.

We are under allocated to Private Equity.

Tail-End funds create a drag on portfolio returns, which begs the question: Should CIOs and trustees count Tail-End funds as a part of their private equity exposure from an asset allocation standpoint if they have limited prospects of appreciating?

Final Thoughts

- Each Tail-End fund is different and should be assessed independently to maximize value.
- Assessing Tail-End assets is difficult and time consuming. It can require knowledge of:
 - Company valuation methodologies
 - Security analysis
 - Partnership structures and incentives
 - Scenario modeling
- Traditional LPs should consider a more active approach to managing their Tail End portfolios. This includes selling AND buying secondary interests, particularly in the growing GP-led market. An institutional investor is highly coveted by managers seeking capital, whether as a primary capital provider or as a secondary capital provider. This is a great advantage rarely leveraged by institutions.

Whether in an advisory or discretionary capacity, Upwelling can help LPs manage Tail-End portfolios and redeploy capital into more productive assets.

Definitions

Top Mean:	Mean TVPI for the top quartile
Upper-Mid Mean:	Mean TVPI for the upper-mid quartile
Lower-Mid Mean:	Mean TVPI for the lower-mid quartile
Bottom Mean:	Mean TVPI for the bottom quartile
TVPI:	Total Value to Paid-in-Capital
DPI:	Distributions to Paid-in-Capital
RVPI:	Remaining Value to Paid-in-Capital
Normal Fund Life:	First ten years of a fund
Tail-End Years:	Years beyond year ten

Exhibit 1

Vintage Year	Normal Fund Life										Tail-End Years		
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Tail-End Year 1	Tail-End Year 2	Tail-End Year n

Exhibit 2

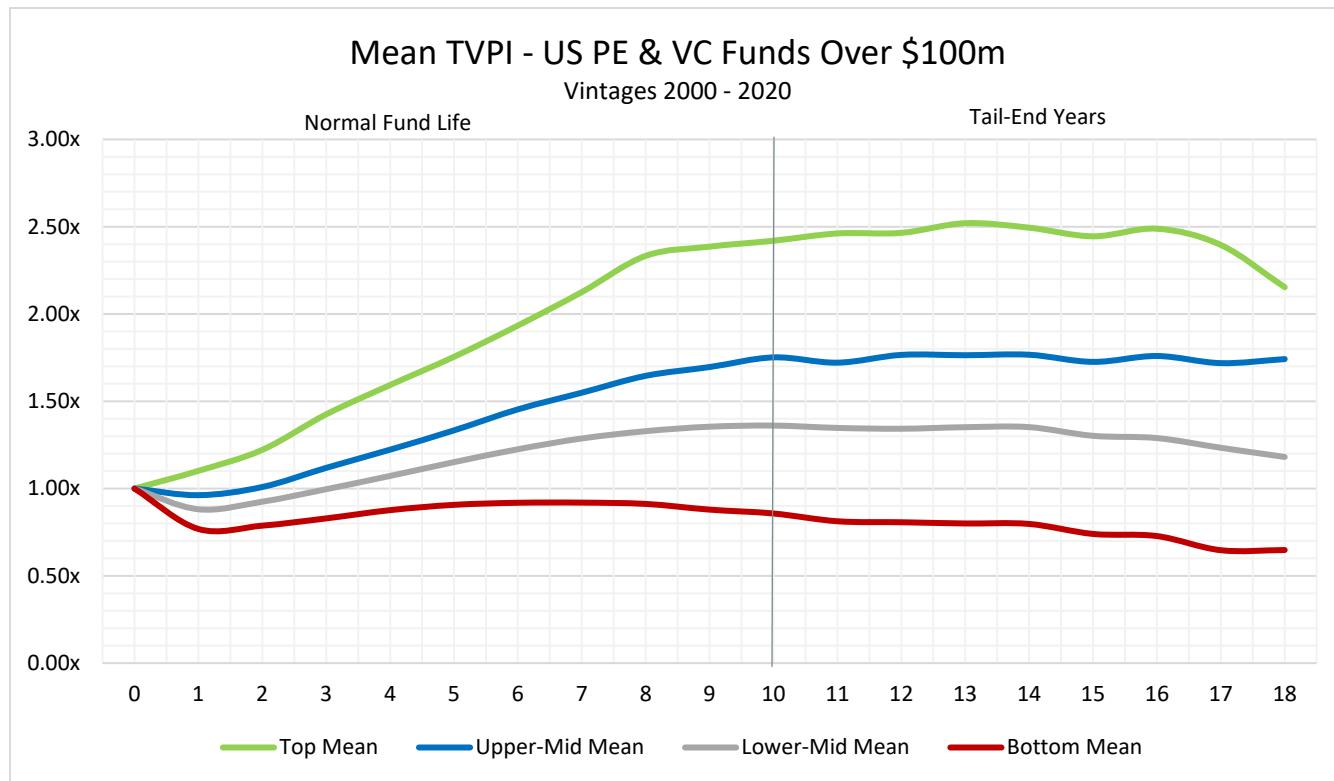


Exhibit 2 clearly shows, for US PE and VC funds over \$100 million, the value creation in the first ten years and relatively stagnant performance beyond year ten. Starting year 16, the top quartile's performance declines. This could be due, in part, to survivor bias. There were 505 funds in year 15, 374 in year 16, 280 in year 17, and only 203 in year 18. The further back in time we look, less fund data is available and there are simply fewer vintage years in the data. Funds dating back to 2000 went through both the dot com bubble and financial crisis which could result in lower TVPI figures compared to other vintage years. As the fund count declines, 2000 vintage year funds make up a larger portion of the fund count.

Exhibit 3

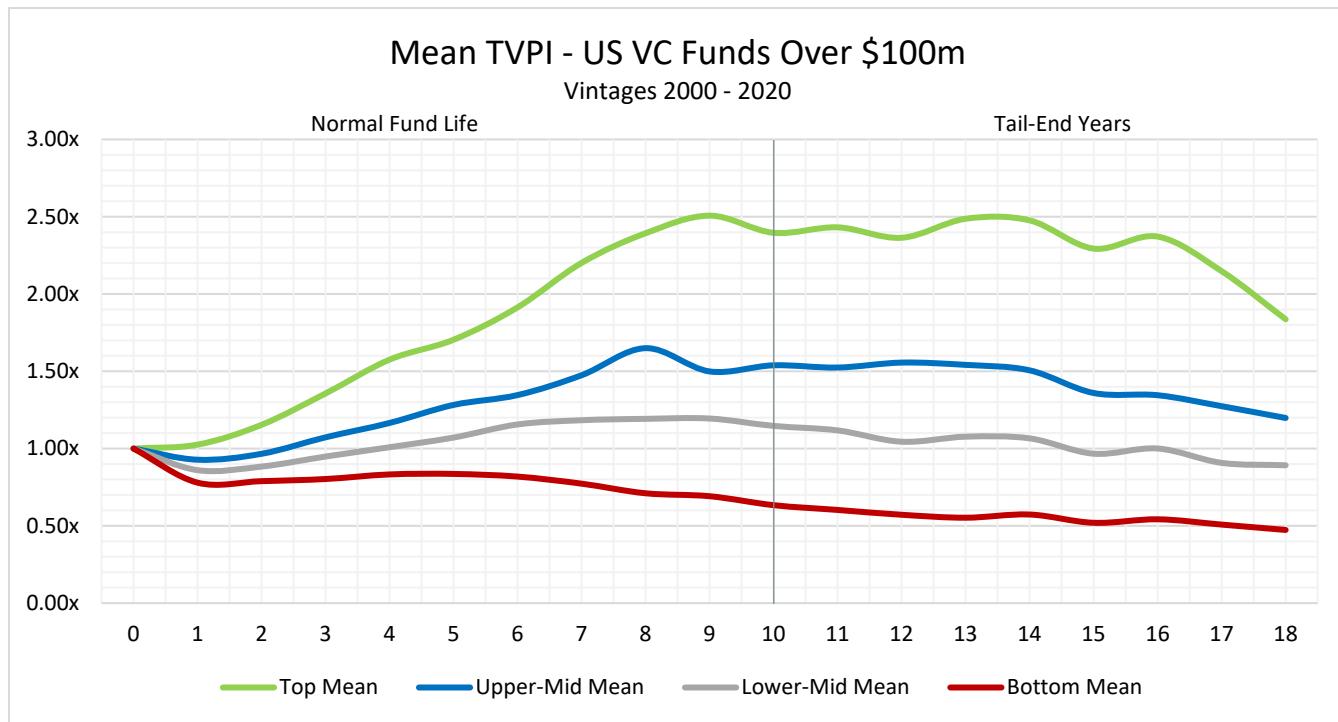
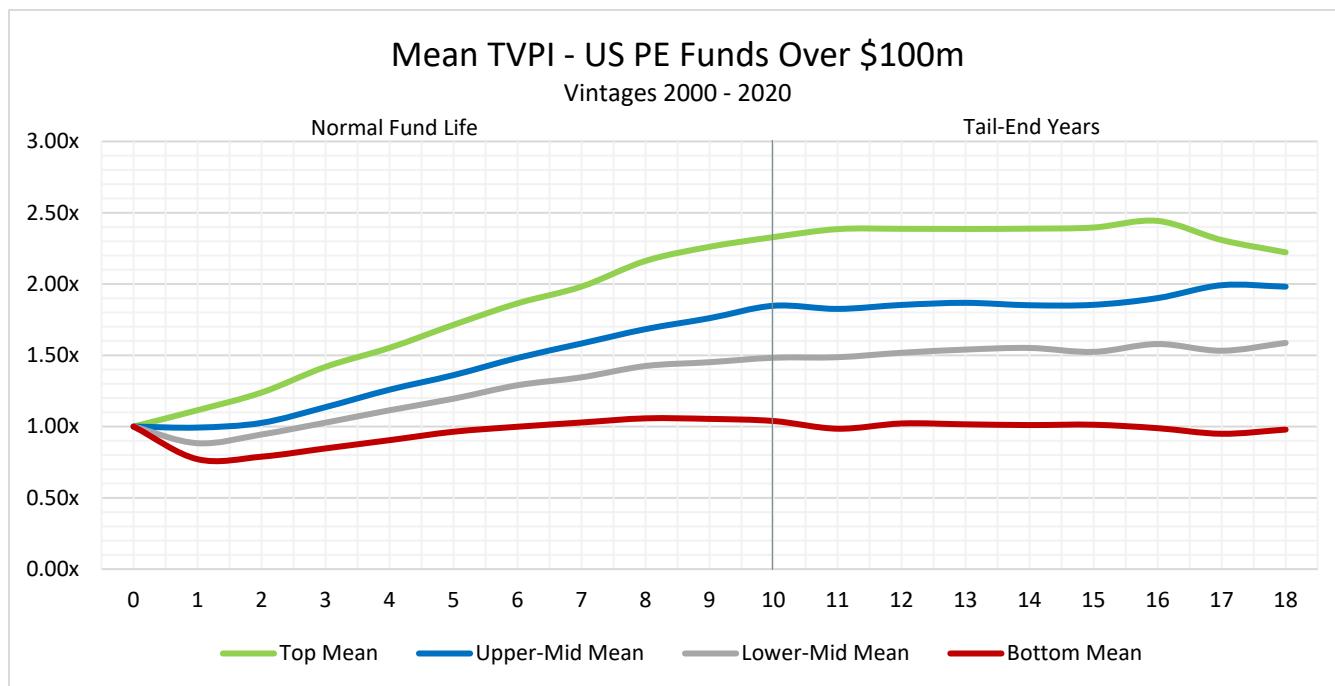


Exhibit 3 examines the US VC funds over \$100 million, separately from US PE. A similar pattern of value creation occurs in the first ten years and stagnating or declining returns after year ten. The declining performance beyond year ten could be explained by the fact that companies need to continue raising money to grow. When funds no longer have capital for follow on investments, performance could suffer.

Exhibit 4



The pattern of value creation in the first ten years and stagnant performance after year ten can be seen again in Exhibit 4, which examines US PE funds over \$100 million, separately from US VC. US PE includes buyout, turnaround, growth, and mezzanine strategies, as classified by Pitchbook.

Exhibit 5

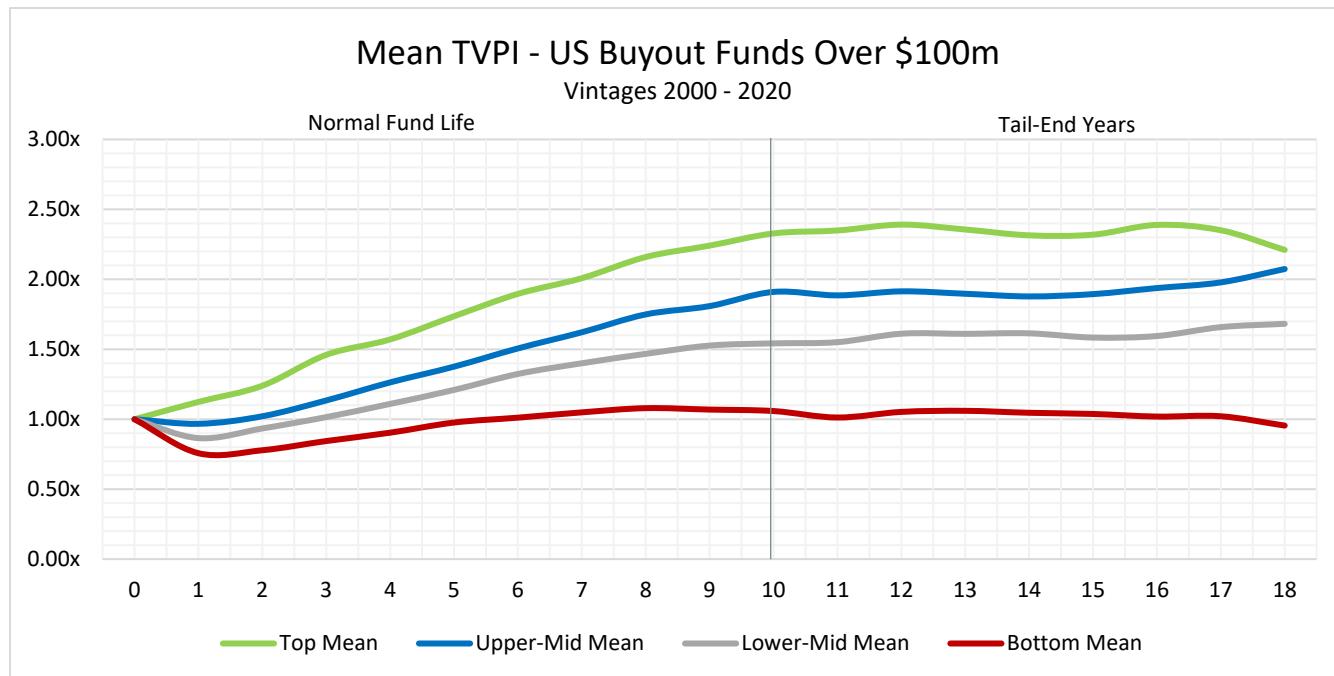
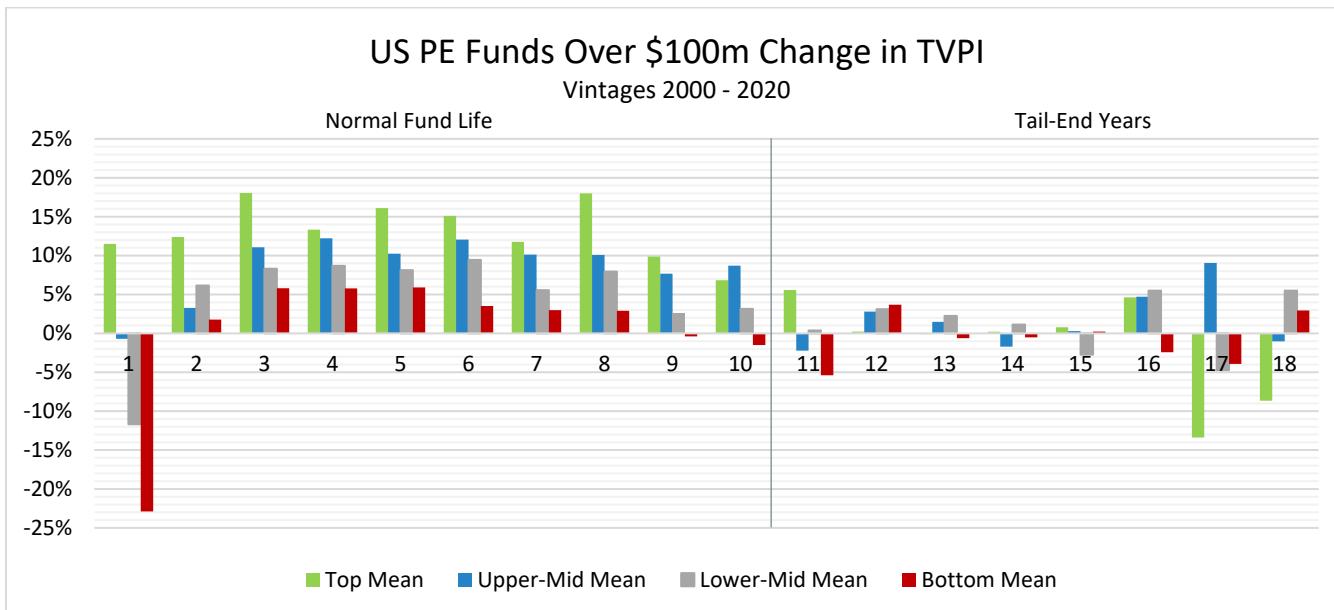


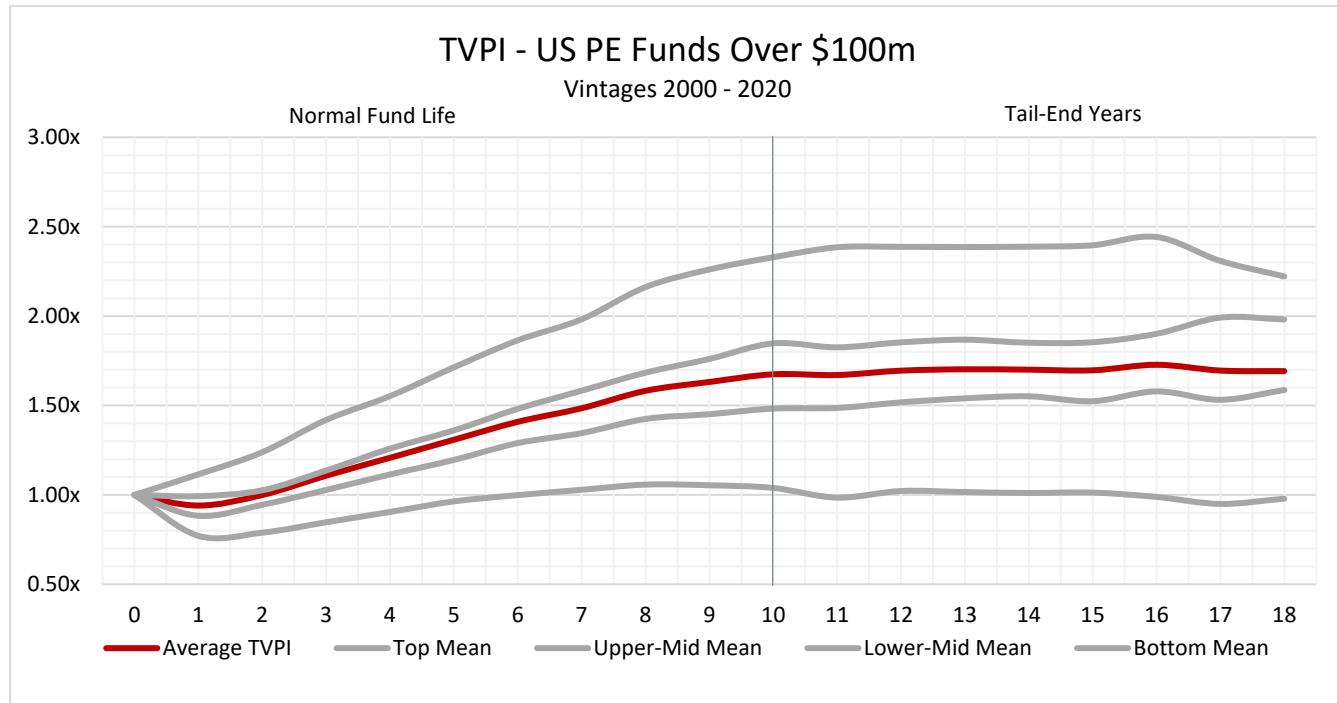
Exhibit 5 graphs the returns for US Buyout funds over \$100 million, which is the largest strategy within US PE. Once again, we see appreciation in the first ten years and flat TVPI in the Tail-End Years. Regardless of strategy, TVPI flattens in the Tail-End Years.

Exhibit 6



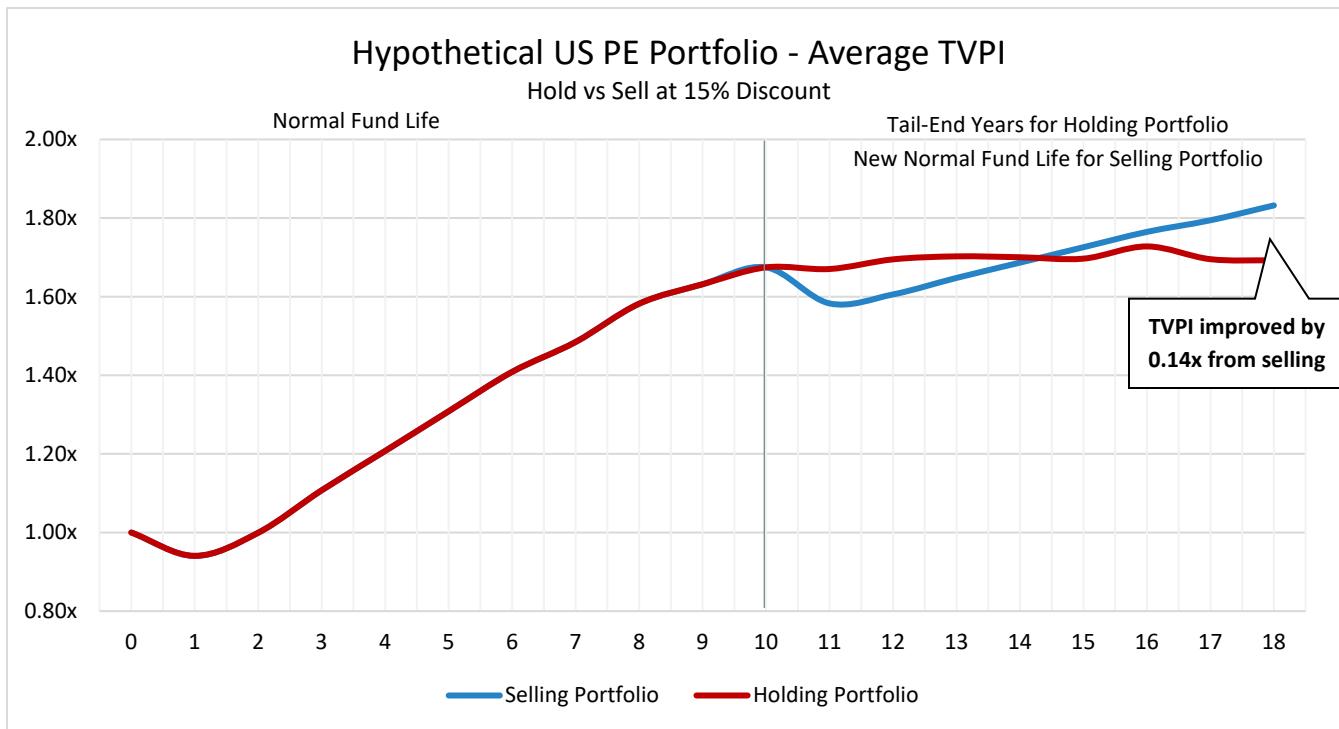
Another way to visualize the performance is by examining how TVPI changes from year to year. Exhibit 6 graphs the change in TVPI for US PE funds over \$100 million. Positive values indicate growth of TVPI, and negative values indicate declining TVPI. Exhibit 6 clearly shows how growth of TVPI drops to 5% or less in the Tail-End Years for all quartiles, whereas all quartiles except the bottom grew by 5% or more in most years in the Normal Fund Life.

Exhibit 7



To simplify performance, in Exhibit 7, we average the TVPI quartiles to arrive at an Average TVPI for US PE funds. Since it is unlikely an investor could pick funds exclusively in any one quartile, the Average TVPI provides the most likely outcome for an investor with a broad private equity program.

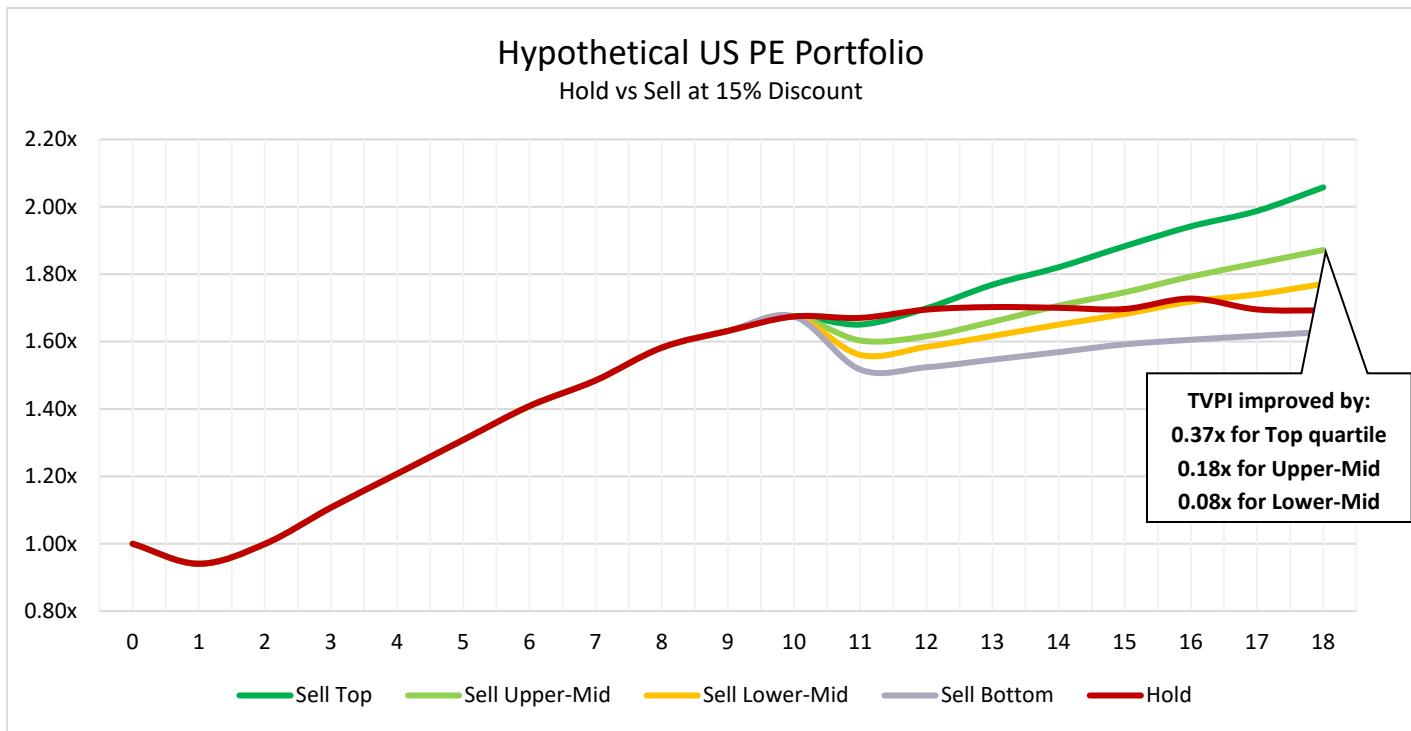
Exhibit 8



In Exhibit 8, we create a hypothetical portfolio using the Average TVPI from Exhibit 7. We compare results between holding through the Tail-End Years and selling in year ten at a 15% discount to NAV and reinvesting back into an Average TVPI US PE portfolio. The two portfolios are identical through year 10 because they are both tracking the Average TVPI, and no transaction has occurred yet. Starting year 11, Exhibit 8 shows the Selling Portfolio dip below the Holding Portfolio due to the discount and beginning the J-Curve over. However, by year 15 the Selling Portfolio's TVPI has exceeded that of the Holding Portfolio. By year 18, the Selling Portfolio TVPI exceeds the Holding Portfolio TVPI by 0.14x. To put this in perspective, if an LP has \$1 billion in Tail-End funds, holding results in \$140 million less in value by year 18. This “drag” on portfolio performance is substantial and often overlooked when LPs evaluate their private equity program performance.

Holding a \$1 billion Tail-End PE portfolio results in **\$140 million less** in value compared to selling at year 10 at a 15 % discount to NAV and reinvesting in an average TVPI PE portfolio.

Exhibit 9



In Exhibit 9, we repeat the hypothetical portfolio but rather than use the Average TVPI after selling, we break the possibilities of where to reinvest into quartiles. What Exhibit 9 shows is that selling at a 15% discount outperforms holding if you can reinvest and avoid bottom quartile performance. Even if you were selecting private equity funds at random, the odds are that three out of four times you would be better off selling Tail-End funds at a 15% discount.

Selling at a 15% discount and reinvesting improves TVPI by:

- 0.37x for Top quartile private equity,
- 0.18x for Upper-Mid quartile private equity,
- 0.08x Lower-Mid quartile private equity.

For a \$1 billion Tail-End portfolio, selling at a 15% discount and reinvesting increases the portfolio value by:

- \$370 million for Top quartile private equity,
- \$180 million for Upper-Mid quartile private equity,
- \$80 million Lower-Mid quartile private equity.

Holding a \$1 billion Tail-End PE portfolio results in **\$370 million less** in value compared to selling at year 10 at a 15 % discount to NAV and reinvesting in a top quartile TVPI PE portfolio.

Appendix

About Upwelling Capital Group

Founded in 2011, Upwelling Capital Group LLC (“Upwelling”) helps find secondary market solutions to resolve Tail-End assets and looks for new opportunities to invest across middle-market buyout, growth, venture, and credit strategies. Whether in an advisory or discretionary capacity, Upwelling can help LPs manage Tail-End portfolios and redeploy capital into more productive assets. Principals have cumulatively overseen over \$50 billion in global private equity commitments and have successfully managed over \$5 billion in legacy, tail-end commitments, transfers and workouts for leading institutional investors. Securities offered through Bridge Capital Associates, Inc. Member [FINRA](#) / [SIPC](#)

Limitations

Past performance is not predictive of future results. Since data collected is backward looking, it may not be representative of future economic conditions. This analysis does not consider the impact of credit lines prevalent today that are used to fund management fees and expenses, which impact TVPI.

Data selection could impact results. 2000 – 2020 vintage funds were used in this analysis such that sample funds contain performance impacted by the 2000 market correction and the Global Financial Crisis. The funds may also have benefited from the subsequent market improvement between cycles. A separate cross-section of sample funds may generate different results when using the same analytical methodology used in this report.

Sample size and survivor bias could impact results.

Quartile rankings disguise outlier risks and do not capture movement between quartiles of individual funds from year to year. A single fund’s performance within a quartile (particularly top and bottom quartiles) may deviate significantly from the quartile mean.

Measurements of TVPI are relative to initial capital invested. This mutes changes to NAV, both up and down, in later years because the remaining assets are typically small relative to the initial capital invested.

Given the unique nature of each portfolio and underlying investments, the findings that follow may not be universally applicable. They are intended to provide general parameters and guidance for investors to contemplate when considering a potential secondary sale.

Areas for Refinement

A dataset that tracks a constant sample of funds would improve the model by removing survivor bias. Although, this may not be possible since the number of funds with an 18 to 20-year history is small.

Hypothetical portfolio modeling could be revised to be more sophisticated, using annual commitments and drawdown schedules to better reflect how private equity programs are managed.

Funds could be segmented by size to see if fund size impacts performance or liquidity during the Tail-End years.

Disclosures

This report is the property of Upwelling Capital Group LLC (“Upwelling”) and may not be summarized, reproduced, or disseminated, in whole or in part, without the express written consent of Upwelling prior to use. Upwelling is not providing tax or legal advice. Some information contained in this report was obtained through outside sources and Upwelling makes no representation as to the accuracy or completeness of such information. Any statements or calculations made constitute Upwelling’s judgement and should be regarded as indicative and for illustrative purposes only. This report is not a recommendation to buy or sell any security. Each potential transaction should be evaluated on its own merits. Results may differ materially from the findings in this report.