



PRELIMINARY – Comments Welcome

## Private Equity Secondary Pricing: Understanding the Current Market\*

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### **Abstract**

We examine secondary market pricing for private equity buyout funds to assess what historical price trends reveal about the current market. Using almost 3,000 pricing observations spanning September 2015 through the end of 2025, we find that secondary market prices average 8% below net asset value (NAV) and move closely with public equity returns, consistent with prior evidence that discounts reflect a cyclical liquidity cost rather than mispricing. Following a Heckman selection framework, we show that the factors that determine whether a fund transacts are somewhat different from those that determine the price it fetches. We also examine the rapid growth of evergreen vehicles, which are identified as buyers in more than a quarter of our sample. We examine if transactions with evergreen buyers are associated with higher prices and do not find reliable effects – actual prices can be above or below modeled prices depending on method. The largest positive effect we document is that aggregate secondary prices since 2023 have averaged about 1.9 percentage points above the path implied by pre-2023 fundamentals. Despite record transaction volume, pricing through 2025 looks consistent with a properly functioning market.

**Keywords:** private equity, secondary transactions, evergreen funds

**JEL codes:** G11, G23, G24

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# 1 Introduction and Key Findings

Private equity's core bargain has always required investors to accept illiquidity for the potential for superior returns: a limited partner (LP) committing to a buyout or venture fund is locked in for a decade or more, with only the general partner's (GP's) judgment determining when capital comes back. For much of the asset class's history that bargain was fairly non-negotiable. However, over the past two decades a secondary market has grown from primarily a niche, distressed-seller activity into a mainstream portfolio-management tool. 2025 was the most active year to date with roughly \$230 billion in transaction volume, up more than 40% over 2024 and continuing a run of over \$100 billion since 2022 (Lexington Partners, 2024; Bank of America, 2026; Greenhill & Co., 2026). GP-led transactions, almost unheard of fifteen years ago, now account for close to half of that volume.

This growth raises a practical question: what does the price of a secondary stake tell us? A fund interest has no continuously observable market price; the only benchmark is the GP's reported net asset value (NAV), and secondary pricing is conventionally expressed as a percentage of it. Practitioners treat the gap between transaction price and NAV as a gauge of market temperature: wide discounts signal distress, narrow discounts or premiums signal a seller's market. This analysis asks whether that rule of thumb is reliable, and what the academic literature on secondary pricing implies about reading today's numbers. In 2025, aggregate pricing was near 83% of NAV and buyout fund pricing near 86%, yet the market observed a visible softening in early 2026 tied to AI- and technology-driven repricing of public comparables (Greenhill & Co., 2026; PJT Park Hill, 2026).

Understanding pricing requires understanding why secondary prices deviate from NAV, specifically whether the deviation is a fairly clean value signal or substantially affected by a mix of liquidity costs, selection, and accounting lag. Currently, we seek to understand how pricing dynamics have behaved across the 2022-2024 distribution drought that has arguably done more to swell secondary supply than any prior event (e.g., global financial crisis). This analysis draws on previous academic literature and applies it to a new dataset of secondary market transactions to gain insights into current market conditions. Our analysis follows two important academic studies that model secondary prices (Nadauld et al., 2019; Boyer et al., 2023) and uses these to frame

current pricing trends.

## 1.1 Key Findings

We provide transaction-level evidence using a proprietary dataset of 2,983 pricing observations for private equity buyout funds, combining SecondaryLink bids and transaction prices with 783 closed purchases by evergreen funds, spanning September 2015 through the end of 2025. The average transaction in our sample prices at 92% of NAV, with a standard deviation of 14 percentage points and an interquartile range of 86% to 101%, though the tails are wide with minimum and maximum prices running from 23% to 200% of NAV. Funds transacting in the secondary market skew large (72% exceed \$1 billion in size; the mean is \$4.8 billion) and middle-aged (a mean of roughly seven years old, with an interquartile range of four to ten). Consistent with Nadauld et al. (2019) and Boyer et al. (2023), quarterly discounts in our sample track public equity market returns closely, reinforcing that pricing in this decade-long, transaction-level sample follows the same cyclical pattern the earlier literature documents at lower frequency and in an earlier period.

Following the Heckman selection methodology introduced by Boyer et al. (2023), we jointly model the probability that a fund transacts in a given quarter and the price at which it does, conditional on transacting. The two stages are driven by somewhat different variables and coefficient magnitudes. Altogether, observable fund and market characteristics explain only a modest share of the variation in discounts, underscoring that a meaningful portion of secondary pricing remains idiosyncratic or related to unobserved factors such as negotiating power.

The data speak directly to one of the most debated questions in today’s market: whether the rapid growth of evergreen vehicles has itself pushed secondary prices higher. We isolate 783 of the 2,983 observations in which an evergreen fund is identified as the buyer. These observations account for more than a quarter of our sample.<sup>1</sup> The evidence is mixed. In-sample estimates point in the opposite direction and suggest that evergreen buyers pay lower prices: adding an evergreen indicator to the Heckman pricing equation yields a statistically significant coefficient of about  $-5.7$  percentage points. However, other analysis raises questions about the reliability of this estimate. In contrast, our time-series analysis, estimated using pre-2023 fundamentals, indicates

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<sup>1</sup>The evergreen indicator identifies observations in which an evergreen fund is the buyer. The broader SecondaryLink pricing data do not systematically identify whether the selling counterparty is an evergreen fund, so some observations classified as non-evergreen may nevertheless involve an evergreen seller.

that aggregate secondary prices during 2023-2025 were about 1.9 percentage points higher than predicted, a statistically significant difference ( $p < 0.001$ ). This result is consistent with modest upward pressure on market-wide secondary pricing during the period of rapid evergreen growth, even though transactions with identified evergreen buyers do not themselves price higher in the Heckman analysis. More precisely examining the relation between evergreen participation and secondary-market pricing further is a natural next step for future research once more data become available.

## **2 Literature Review**

### **2.1 Establishing the discount: liquidity costs in the secondary market**

The empirical study of secondary pricing effectively begins with Nadauld et al. (2019), who obtained proprietary transaction and bidding data from a leading intermediary covering 2006-2014. The central finding of the paper is that stakes trade at prices averaging 13.8% below reported NAV across the full sample, deflated by fire-sale pricing during the crisis and by unusually old funds. When restricted to the market's typical transaction (i.e., a stake in a fund between four and nine years old and traded outside of the crisis window), the average pricing relative to NAV settles closer to 91%. Overall, a secondary buyer should expect to pay roughly 90 cents on the reported dollar of NAV to compensate the buyer for supplying liquidity the seller urgently desires.

Because NAV can itself be stale or manipulated, the authors also compute realized cash flow returns. Buyers who hold to liquidation earn an average annualized IRR of 19.8% versus 2.8% for sellers. That gap narrows when adjusted for market conditions via the public market equivalent (PME) to about 5 percentage points a year (2.7 points for the typical four-to-nine-year transaction). That the market-adjusted gap is so much smaller than the raw IRR gap is instructive: much of the apparent buyer advantage reflects sellers being forced to transact during the crisis while buyers disproportionately held through the 2010-2014 recovery. What remains is a persistent liquidity premium earned by buyers, which serves as evidence that discounts compensate for immediacy rather than mispricing.

Crucially, this discount is not constant: it widens when capital available to purchase stakes is scarce and the economy is weak, and it is more pronounced for smaller funds and transactions,

where information costs per dollar invested are higher. Prices cratered to an average of 54% of NAV in 2009, recovered to 84-86% for 2010-2013, and rose to just above 93% by 2014 as buyer capital returned. This trajectory of prices is the single most useful historical benchmark for today's pricing, where aggregate pricing was near 83% of NAV and buyout pricing near 86% in 2025, and real estate and venture/growth trading meaningfully wider (Nadauld et al., 2019).

## **2.2 What secondary prices reveal**

While Nadauld et al. (2019) establish that discounts are real and cyclical, Boyer et al. (2023) ask whether NAV is a reliable measure of value at all, or whether the smoothness for which private equity accounting is known conceals risk that only surfaces when an asset changes hands. Using a larger sample of secondary transactions, corrected for the fact that not every fund trades every period and that funds that do trade are not a random sample (a Heckman-style selection correction plus a Dimson-style adjustment for non-synchronous pricing (Dimson, 1979)), the authors construct market-based indices of private equity value. We adopt a similar Heckman framework below in analyzing our own transaction-level sample.

The results serve as a caution for relying on NAVs. Over 2008, public equities fell 37% and the authors' secondary market-based buyout index fell a much steeper 60%, yet the Preqin and Burgiss NAV indices, built from similar funds, fell only 25% and 27%, respectively. Which is to say, NAV captured about two-fifths of the actual decline that secondary participants were willing to pay for. The authors estimate the secondary index's total return beta at 1.79, consistent with a portfolio of levered companies, and show that once this discount rate risk is priced, CAPM alpha for buyout funds is near zero even as cash flow-based measures (the generalized public market equivalent, or GPME of Korteweg and Nagel (2016)) show large, positive outperformance for the same funds. The gap between the two is precisely the discount rate risk premium NAV accounting fails to reflect.

These results suggest that NAV is not a reasonable floor for negotiating secondary pricing. Instead, NAVs are smoothed in a way that understates true cyclicity in both directions. Applied to 2025-2026, aggregate pricing has been roughly flat to modestly softer year over year even as public equities, particularly technology names, saw a sharp repricing in early 2026 (PJT Park Hill,

2026). The Boyer et al. (2023) framework suggests that reported NAVs for tech-adjacent portfolios have likely not absorbed the full extent of that repricing, and that softening bids for AI- and software-exposed funds reflect the market doing repricing risk faster than GP marks.

### **2.3 Crisis dynamics, cash flow cyclicalities, and market structure**

A small cluster of related papers has also examined aspects of private fund secondary transactions. Hege and Nuti (2011) document the market’s near-total freeze in early 2009, when Citigroup, AIG, and major endowments attempted to offload holdings simultaneously; they find the resulting “valuation gap” looked more like a liquidity shortage than an efficient repricing. Albuquerque et al. (2018), using European bid-level data from 2009-2016, show that demand sensitivity to liquidity shocks varies by fund type, falling for large, established funds and rising for smaller, younger ones. These authors also document that liquidity-driven demand shifts do not predict subsequent NAV-to-NAV returns, reinforcing that discounts reflect liquidity provision rather than adverse selection. Bollen and Sensoy (2022) build this evidence into a structural valuation model and find that observed returns adequately compensate moderately risk-tolerant LPs for allocations up to 40%, giving the historical haircut an asset allocation interpretation. Robinson and Sensoy (2016) add that capital calls and distributions both carry a procyclical component, with distributions more sensitive, so net cash flows to LPs are themselves procyclical. This asymmetry between distribution and contribution sensitivity illustrates an independent channel that explains why the 2022-2024 distribution drought, layered on weak public markets, is widely cited as the largest driver of recent secondary supply growth (StepStone Group, 2025).

Mason and Utke (2023) show that discounts are not attributable to illiquidity alone: differences in fund legal structure and how buyers versus sellers are taxed can impose an added discount, an increasingly relevant factor as continuation vehicles proliferate. Peterman and Lai (2009) offer a historical marker for current conditions. They document that global volume grew from \$4.4 billion in 1997 to \$63 billion by 2007, when GP-led deals were essentially unheard of. This compares to 2025’s \$230 billion in transactions, nearly half GP-led. Lerner et al. (2020) show that alternative investment vehicles reached 40% of all private equity commitments by 2017, providing context for why GP-led continuation vehicles found such a receptive market once sponsors began offering

them at scale.

## 2.4 Bridging to today's market

Three lessons follow. First, discounts to NAV are a liquidity cost that varies predictably with the cycle and with fund and transaction characteristics, not noise. Aggregate pricing at 83% of NAV in 2025, with buyout near 86% (Greenhill & Co., 2026), and as high as 92% on a prime-portfolio basis (PJT Park Hill, 2026), sits well above the 54% crisis trough, though somewhat below the low-to-mid-90s pricing characteristic of the post-2013 market. These numbers are consistent with a well-capitalized, non-distressed market even at record volume.

Second, the finding of Boyer et al. (2023) that NAV understates true cyclicalities means the pricing softness reported for early 2026 in AI- and software-exposed portfolios (PJT Park Hill, 2026) should not be read as illiquidity stress: it is again the market marking to a forward-looking view of value faster than GP-reported NAVs. This reflects the same mechanism that was at work in 2008, now surfacing unevenly across strategies, with infrastructure near decade highs while real estate and venture/growth trade wider (Greenhill & Co., 2026).

Third, an \$8.7 trillion and growing NAV base, secondary penetration that has held at roughly 1% of NAV since 2013 (StepStone Group, 2025), and a multi-year distribution shortfall together suggest today's record volumes reflect structural catch-up rather than a cyclical peak poised to reverse. New buyers, including evergreen and perpetual capital vehicles that reportedly paid an average 430 basis point premium to general LP-led pricing in the first half of 2025 (Campbell Lutyens, 2025), point toward a broadening buyer base. In contrast, transactions involving evergreen funds in our sample price lower on average than other transactions, although this unconditional comparison is confounded by differences in timing and transaction characteristics. Whether that broadening is itself inflating prices, however, is unsettled. The transaction-level evidence presented subsequently suggests, at most pricing since 2023 about 1.9 percentage points above what pre-2023 fundamentals would predict. This difference is statistically significant in the model's specification. However, other models reveal the opposite result (as discussed below), so we do not believe there is reliable evidence suggesting evergreen funds have bid up prices of buyout funds.

### 3 Data

We examine 2,983 pricing observations for private equity buyout funds spanning September 2015 through the end of 2025. The sample combines SecondaryLink pricing data, which include both bids and completed transaction prices, with 783 closed purchases in which an evergreen fund is identified as the buyer. For the evergreen purchases, transaction prices are implied from the reported cost and book value of each fund purchased in the first quarter of acquisition. Table 1 provides summary statistics for the full sample.

The mean transaction price (measured as the percent of NAV or *Discount*) is 92% with a standard deviation of 14%.<sup>2</sup> The interquartile range is 86% to 101%, but the distribution has substantial variation in the tails with a minimum of 23% and a maximum of 200%. Figure 1 plots the histogram of transaction discounts and reveals a concentration between 85% and 105%, with the mode at 90-95%.

Fund size also varies considerably: 72% of transactions involve funds larger than USD 1 billion, and the mean fund size is USD 4.8 billion. On average, funds are about 7 years old at the time of transaction, with an interquartile range of 4 to 10 years. Transactions involve funds with vintages ranging from 1991 to 2024, corresponding to ages of 0 to 29 years at the time of transaction.

Table 2 shows that a little over half of the funds in our sample are managed by general partners (GPs) based in Western Europe and the balance by GPs based in North America. Western European funds tend to have higher prices than North American funds, with a Western European mean of 94% compared to a North American mean of 90%, and medians of 95% and 90%, respectively. Secondary transactions in Western European funds also tend to come from larger funds, with a mean (median) fund size of 5.0 (3.9) billion USD compared to 4.6 (2.7) billion USD for North American funds. However, these unconditional differences may reflect other differences in fund and transaction characteristics across regions (e.g., fund size and transaction timing).

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<sup>2</sup>Readers not familiar with terminology in the secondary market in private assets should note that, while confusing, the terms *Discount* and price (i.e., as a percent of NAV) are frequently used interchangeably. This contrasts with the common convention in public markets (e.g., publicly traded closed-end mutual funds) where a discount more intuitively is the percentage above or below the reported net asset value. So for example, a private fund valued at 15% below NAV would be referenced as being valued at a discount of 85%, whereas a public fund at the same value of 15% below NAV would typically be referenced as having a discount of 15%.

TABLE 1: Summary Statistics

| Variable            | Obs   | Mean  | StDev | Min   | Q1    | Median | Q3     | Max    |
|---------------------|-------|-------|-------|-------|-------|--------|--------|--------|
| Price               | 2,983 | 91.8% | 14.0% | 22.5% | 85.5% | 92.5%  | 100.5% | 199.5% |
| Fund Size (mil USD) | 2,963 | 4,772 | 4,964 | 19    | 855   | 3,011  | 6,886  | 26,120 |
| Fund Vintage        | 2,981 | 2015  | 4.0   | 1991  | 2012  | 2015   | 2018   | 2024   |
| Fund Age            | 2,981 | 7.2   | 3.8   | 0.0   | 4.0   | 7.0    | 10.0   | 29.0   |

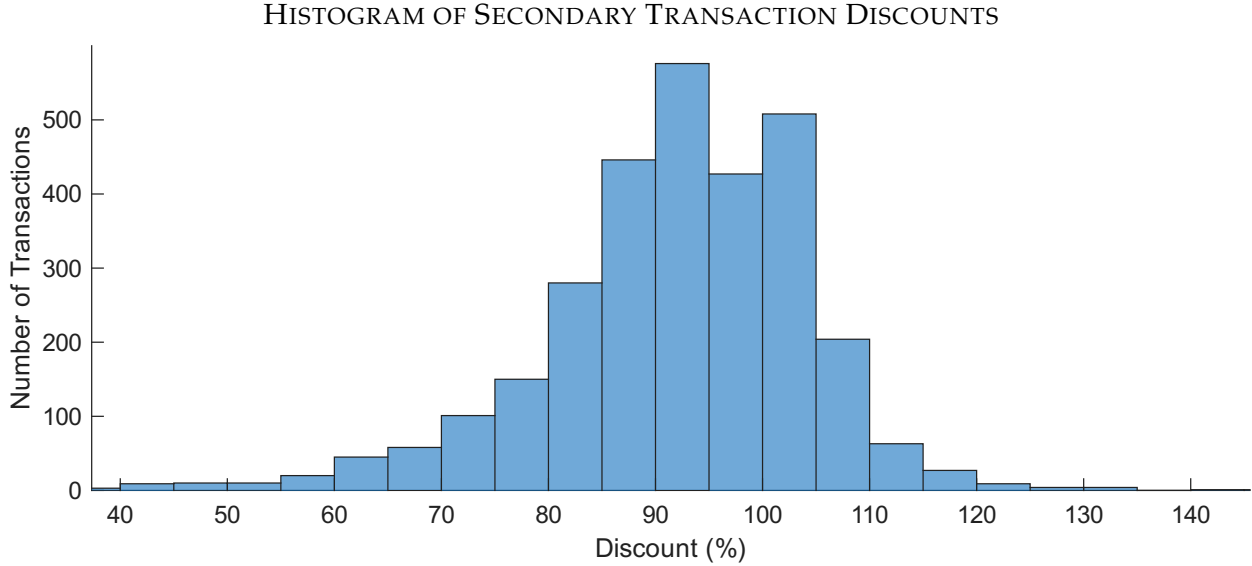


FIGURE 1: This figure shows the histogram of discounts for secondary transactions, omitting values below the 0.5th and above the 99.5th percentiles for visual clarity.

TABLE 2: Region Statistics

| Geography                  | North America | Western Europe |
|----------------------------|---------------|----------------|
| Observations               | 1,473         | 1,510          |
| Mean Discount              | 89.5%         | 94.2%          |
| Median Discount            | 90.0%         | 94.6%          |
| Mean Fund Size (mil USD)   | 4,560         | 4,981          |
| Median Fund Size (mil USD) | 2,700         | 3,850          |

We generate two quarterly time series of discounts by calculating (1) the mean and (2) the median discount among all transactions in each quarter of our sample period (see Figure 2). These two series track each other closely over time, but the mean discount is slightly less volatile. Discounts follow a valuation cycle that is highly correlated with public equity market returns.

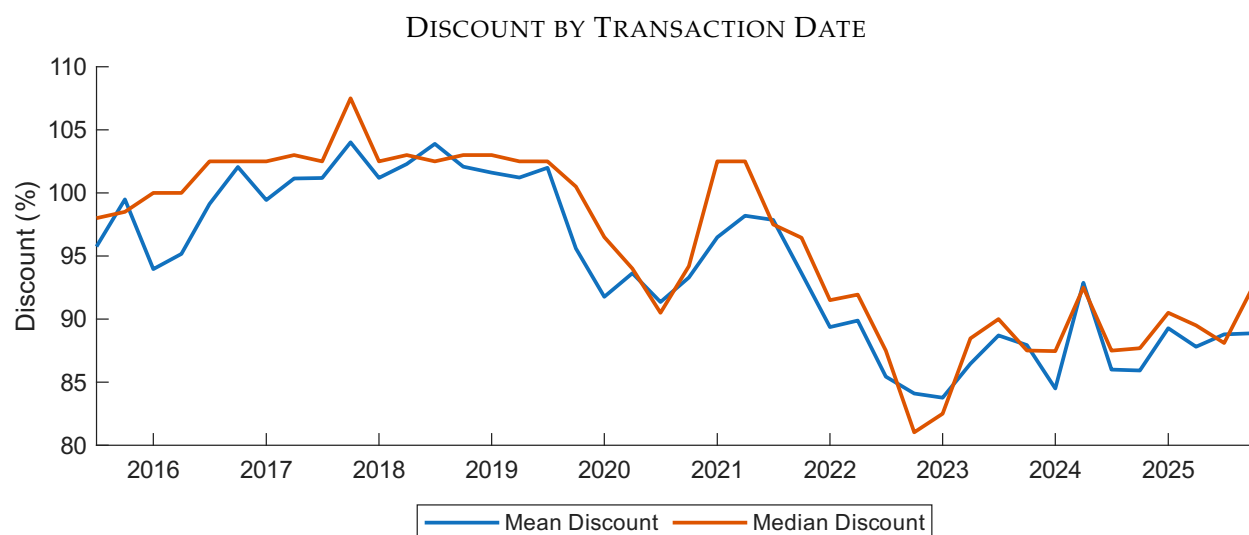


FIGURE 2: This figure shows mean and median discounts by quarter from 2015Q3 through 2025Q4.

## 4 Valuation Determinants

We analyze observed discounts as a function of fund characteristics. Figure 3 shows that transaction discounts tend to increase with fund age. Figure 4 shows that there is no strong relation between fund size and discount over the full sample period. However, average fund size grew substantially over the last decade, so not correcting for this trend may obscure the relation between discounts and fund size.

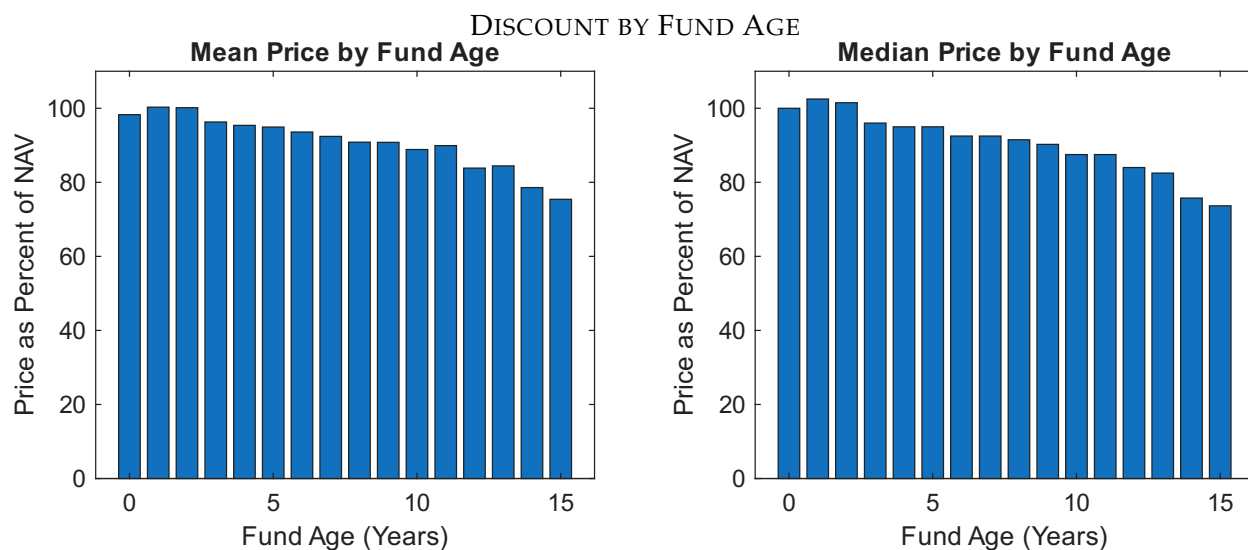


FIGURE 3: This figure shows mean and median discounts (price as a percent of NAV) by fund age. Fund ages above 15 years are omitted for visual clarity.

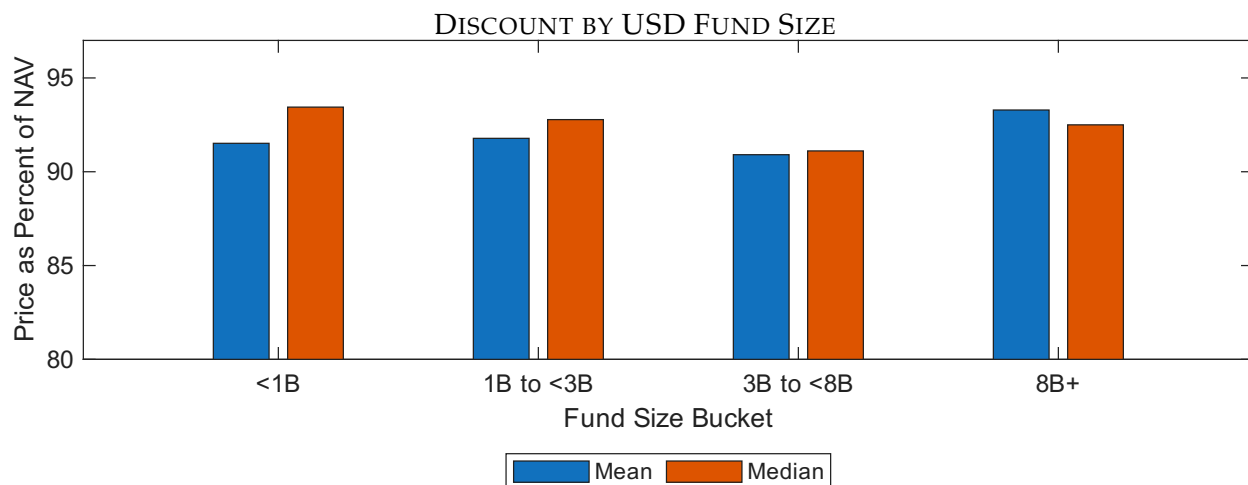


FIGURE 4: This figure shows mean and median discounts by fund size.

Previous research has demonstrated that secondary market transactions are not random occurrences. Instead, the intensity of secondary market transactions depends on a variety of market-level and fund-specific factors. To better understand this selection effect and how it relates to observed transaction discounts, Boyer et al. (2023) use the selection model of Heckman (1979) that jointly estimates the determinants of a transaction occurring and the transaction discount. We fol-

low a similar methodology, but use a slightly different set of explanatory variables because of data availability.

The overall model has two parts. The first part models the probability of a transaction occurring at all, and we call this the *Transaction Model*. The panel is constructed from fund-quarter observations beginning in each fund's vintage year and continuing through the end of the sample period. Quarters with no observed transaction contribute one nonselected observation, while quarters with transactions contribute one selected observation for each observed transaction. The model is specified as a probit model and infers how likely a transaction would be to occur in a particular quarter based on fund size, fund age (and age squared to pick up nonlinearities), the Kaplan and Schoar (2005) public market equivalent of all funds of the same vintage, the contemporaneous and one-quarter-lagged excess return on the Fama-French regional market portfolio (North America or Europe, matched to the fund's geography), the annualized standard deviation of daily returns on the corresponding regional market portfolio (market volatility), the current total NAV of private equity buyout funds in the corresponding region, measured in NAV, the Shiller cyclically adjusted price-to-earnings (CAPE) ratio, the Yale Value Confidence Index (Confidence Index) and Crash Confidence Index (Crash Index), all obtained from Shiller Data (Shiller, n.d.), and an indicator for 2020 Q1 & Q2 (COVID=1).

The results of the transaction model for the full sample are shown in the first column in the top half of Table 3.<sup>3</sup> Several of the variables are important for explaining when secondary market transactions occur. Larger funds are more likely to transact. The positive coefficient on fund age and negative coefficient on age-squared indicate that there is a preference for "middle-aged" funds that are not too young or too old. Funds from successful vintages (high PMEs) are less likely to transact. Some of the market-wide cyclical factors are also statistically important for explaining when funds transact. Specifically, transactions are more likely following positive excess market returns in the prior quarter and when valuations as measured by CAPE are high. In contrast, transactions are less likely when market-wide private fund valuation (Market NAV) is high.

We use the same set of variables in the second part of the Heckman model, which we call

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<sup>3</sup>The area under the curve (AUC) demonstrates that the probit selection criterion is effective at classifying fund-quarters with and without a transaction. A common rule of thumb states that an AUC between 0.5 and 0.7 is "not much better than a coin toss", 0.7 to 0.8 "acceptable discrimination", 0.8 to 0.9 "excellent discrimination", and above 0.9 is "outstanding discrimination" (Hosmer et al., 2013).

TABLE 3: Heckman Regression Models

|                               | (1)<br>All | (2)<br>All + Type | (3)<br>Evergreen Omitted | (4)<br>Evergreen Only |
|-------------------------------|------------|-------------------|--------------------------|-----------------------|
| <b>Transaction Model:</b>     |            |                   |                          |                       |
| Fund Size (100 mil USD)       | 0.010***   | 0.010***          | 0.009***                 | 0.009***              |
| Fund Age                      | 0.218***   | 0.216***          | 0.224***                 | 0.209***              |
| Fund Age $\times$ Fund Age    | -0.011***  | -0.011***         | -0.012***                | -0.009***             |
| Vintage PME                   | -0.493***  | -0.492***         | -0.440***                | -0.462***             |
| Excess Market Returns         | 0.179      | 0.171             | 0.154                    | -0.384                |
| Excess Market Returns (Lag 1) | 0.373**    | 0.362**           | 0.764***                 | -1.596***             |
| Market Volatility             | 0.311      | 0.319             | 0.039                    | 1.048***              |
| Market NAV                    | -0.016***  | -0.015***         | -0.026***                | 0.018***              |
| CAPE                          | 0.072***   | 0.072***          | 0.070***                 | 0.060***              |
| Confidence Index              | 0.067      | 0.060             | 0.140                    | 0.150                 |
| Crash Index                   | -0.000     | 0.005             | -0.754***                | 2.797***              |
| COVID=1                       | -0.017     | -0.018            | 0.042                    | -0.935***             |
| <b>Pricing Model:</b>         |            |                   |                          |                       |
| Fund Size (100 mil USD)       | 0.122***   | 0.141***          | 0.067***                 | 0.279***              |
| Fund Age                      | 1.889***   | 2.305***          | 0.826                    | 5.057***              |
| Fund Age $\times$ Fund Age    | -0.170***  | -0.192***         | -0.122***                | -0.290***             |
| Vintage PME                   | -1.261     | -2.435            | 3.834**                  | -13.271**             |
| Excess Market Returns         | -1.704     | -0.086            | 0.116                    | -33.985**             |
| Excess Market Returns (Lag 1) | 3.188      | 2.103             | 9.094***                 | -76.824***            |
| Market Volatility             | -7.908     | -5.343            | -16.345***               | 34.177**              |
| Market NAV                    | -0.656***  | -0.616***         | -0.576***                | 0.287*                |
| CAPE                          | 1.270***   | 1.429***          | 0.873***                 | 1.867***              |
| Confidence Index              | -2.373     | -3.296            | -1.007                   | -0.794                |
| Crash Index                   | -10.643*** | -5.900            | -10.415***               | 79.739***             |
| COVID=1                       | -1.968     | -2.561            | 1.533                    | -32.782***            |
| Evergreen                     |            | -5.739***         |                          |                       |
| athrho                        | 1.287***   | 1.462***          | 0.968***                 | 1.689***              |
| Selected obs.                 | 2,905      | 2,905             | 2,181                    | 724                   |
| Nonselected obs.              | 34,139     | 34,139            | 34,139                   | 34,139                |
| R-sq                          | 0.238      | 0.239             | 0.421                    | 0.054                 |
| Adj. R-sq                     | 0.235      | 0.235             | 0.417                    | 0.039                 |
| AUC                           | 0.796      | 0.796             | 0.789                    | 0.878                 |

Selected observations are fund-quarters with a transaction; nonselected observations are fund-quarters without a transaction. *athrho* is the inverse hyperbolic tangent of  $\rho$ , where  $\rho$  is the correlation between the error terms in the transaction and pricing equations. AUC is the area under the receiver operating characteristic (ROC) curve for the Transaction Model. \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$  p-values calculated using cluster-robust standard errors with fund ID as cluster units. Not all transactions have complete data so the sample for this analysis is slightly smaller than the full sample.

the *Pricing Model*, to model the price of secondary transactions. These results for the full sample are also shown in the first column in the bottom half of Table 3. A somewhat different set of variables explain prices. Fund size and age are still important for pricing: larger funds price higher, while the positive coefficient on fund age and negative coefficient on age squared imply a concave relation between age and price. However, vintage PME and lagged excess market returns are no longer statistically significant. NAV has a significant negative effect on pricing, while CAPE has a significant positive effect. Finally, the Crash Index has a strong negative effect on secondary pricing. Explanatory power as measured by the adjusted R-squared indicates that about 24% of variation in secondary pricing can be explained by the factors we consider.

## 5 Evergreen Funds

An important current issue in private equity has been the rise of evergreen funds which have raised substantial amounts of capital in recent years. Evergreen funds are investment vehicles with no fixed life that can continuously raise and reinvest capital. These funds have frequently deployed newly raised capital by making purchases in the secondary market, with some observers believing that this buying activity has been driving up prices. As noted previously, our sample includes 2,983 pricing observations, including 783 closed transactions in which an evergreen fund is identified as the buyer. The remaining SecondaryLink observations include both bids and completed transaction prices.

Table 4 shows the distribution of transactions with identified evergreen buyers since 2015 and that the bulk of these transactions occur after 2021 rising sharply in 2023 and more than doubling in 2024. Table 5 makes simple univariate comparisons of the characteristics of transactions with identified evergreen buyers and other transactions. Discounts tend to be lower for transactions with identified evergreen buyers, though this is confounded by the temporal variation (lower values) over the more recent years when the evergreen transactions are concentrated. Identified evergreen buyers purchase stakes in somewhat larger and older funds as compared to other secondary market participants.

TABLE 4: Evergreen Transactions by Year

| Year             | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025* |
|------------------|------|------|------|------|------|------|------|------|------|------|-------|
| No. Transactions | 3    | 1    | 12   | 18   | 16   | 14   | 48   | 60   | 116  | 305  | 247   |

\* 2025 is annualized based on 185 observed transactions through September. The full evergreen sample contains 783 observations, including five observations prior to 2015 that are not shown in the table. All prior years report observed transaction counts.

TABLE 5: Summary Statistics by Evergreen Buyer Status

| Variable        | Evergreen | Mean  | Median |
|-----------------|-----------|-------|--------|
| Price           | No        | 93.6% | 94.5%  |
|                 | Yes       | 86.8% | 87.3%  |
| Fund Size (USD) | No        | 4,428 | 2,546  |
|                 | Yes       | 5,732 | 3,900  |
| Fund Age        | No        | 6.9   | 6.0    |
|                 | Yes       | 8.1   | 7.0    |

Sample size is 2,200 for observations not identified as having an evergreen buyer and 783 for observations in which an evergreen fund is identified as the buyer.

As discussed above, there are important selection factors both in the cross-section of funds and through time that limit the usefulness of univariate comparisons for understanding the effects of transactions with identified evergreen buyers on secondary prices. To address these limitations, we consider a few statistical approaches.

We first re-estimate the Heckman model presented in column (1) of Table 3 under three additional specifications. Column (2) adds a dummy variable for transactions with an identified evergreen buyer to the pricing equation; column (3) estimates the model after omitting transactions with identified evergreen buyers; and column (4) estimates the model using only transactions with an identified evergreen buyer.

We start by examining the results in column (2). The estimated coefficients in both the transaction (selection) model and the pricing model are similar in size and statistical significant to those in column (1) with the only exception being that the crash index is no longer statistically significant in column (2). Of most interest is the significant negative coefficient for the Evergreen dummy variable in column (2) which indicates that after accounting for selection and other pricing factors, the pricing of transactions with identified evergreen buyers is statistically *lower* by about 5.7

percentage points than for transactions without an identified evergreen buyer.

Columns (3) and (4) allow each factor's effect to differ for transactions with and without identified evergreen buyers by estimating the model separately for the two subsamples. In fact, for some of the market-wide variables we observe opposite effects. For example, in the transaction model, lagged market returns, market NAV, and the crash index have statistically significant coefficients with opposite signs. Important differences exist for the pricing equation as well with vintage PME, lagged market returns, market volatility, market NAV, and the crash index all having coefficients with opposite signs. These results all suggest the possibility that common factors affect both the propensity to transact and transaction prices differently for evergreen funds relative to other market participants.

Two caveats to this analysis are worth noting. First, the time-series power of the evergreen analysis is severely limited by the recent clustering of transactions. Second, the explanatory power of the evergreen-only model in column (4) is very low compared to the full sample, with an adjusted R-squared of only about 4%. The differences in coefficients across the evergreen and non-evergreen subsamples also suggest that the pooled specification in column (2), which allows transactions with identified evergreen buyers to differ only through an intercept shift, may be misspecified. Taken together, these considerations cast doubt on the reliability of the negative coefficient on the evergreen dummy reported in column (2).

We next consider a pure time-series approach that averages out potential noise in the data. We again fit a pricing model to historical data through 2022 and then extrapolate from this model the path of secondary-market prices implied by pre-2023 relationships. An econometric challenge is posed by having only 30 quarterly observations with which to work for pre-2023 model calibration. An accurate fit typically requires many variables and lags thereof. We address this challenge by taking our explanatory variables of interest – fund age at transaction, private market NAV, PME, market returns, Yale's confidence and crash indices, Shiller's CAPE, market volatility, and the risk-free rate – and collapsing them via factor analysis. The results are shown in Table 6 and suggest using only the first two factors for analysis due to having eigenvalues in excess of unity. These two factors jointly explain around 77% of total variation in the set of regressors.

TABLE 6: Factor Analysis Eigenvalues

| Factor   | Eigenvalue | Difference | Proportion | Cumulative |
|----------|------------|------------|------------|------------|
| Factor 1 | 2.202      | 0.649      | 0.454      | 0.454      |
| Factor 2 | 1.554      | 0.856      | 0.320      | 0.774      |
| Factor 3 | 0.698      | 0.237      | 0.144      | 0.918      |
| Factor 4 | 0.461      | 0.071      | 0.095      | 1.013      |
| Factor 5 | 0.390      | 0.248      | 0.080      | 1.093      |
| Factor 6 | 0.143      | 0.285      | 0.029      | 1.123      |
| Factor 7 | -0.143     | 0.060      | -0.029     | 1.093      |
| Factor 8 | -0.203     | 0.048      | -0.042     | 1.052      |
| Factor 9 | -0.251     | –          | -0.052     | 1.000      |

Number of observations: 30.

Method: principal factors; rotation: unrotated; retained factors: 2.

LR test of independent vs. saturated:  $\chi^2(36) = 95.17$ ,  $p = 0.000$ .

Principal-factor extraction uses estimated communalities rather than unit diagonal elements in the correlation matrix. As a result, some eigenvalues may be negative and the cumulative proportion may temporarily exceed one.

We then perform an ordinary least squares regression of the quarterly mean secondary price on these factors. Both AIC and BIC variable selection point toward including the first factor contemporaneously, while the second factor also includes two lags. The regression results are shown in Table 7, and the fitted values, including for quarters beyond the estimation sample (i.e., years 2023 through 2025), are shown in Figure 5. Because the specification includes two lags of the second factor, the regression sample falls from 30 to 28 quarterly observations.

The conclusion we draw from Figure 5 is that actual secondary prices during 2023-2025 are about 1.9 percentage points higher than what would be predicted from fundamentals calibrated on periods of low evergreen activity, and the difference is statistically significant ( $p < 0.001$ ). However, the magnitude is modest: the 1.9 percentage-point gap is about 2% of the sample mean price of 91.8% of NAV and about 0.14 standard deviations relative to the 14-percentage-point standard deviation of transaction prices. This result is therefore consistent with minor upward pressure on secondary-market prices during the period of rapid evergreen growth. At the same time, an out-of-sample Heckman analysis does not indicate that transactions with identified evergreen buyers themselves price higher.

TABLE 7: Factor Regression Model

|                  | Price                |
|------------------|----------------------|
| Factor 1         | −3.501***<br>(0.000) |
| Factor 2         | −2.597***<br>(0.000) |
| Factor 2 (lag 1) | −0.863*<br>(0.051)   |
| Factor 2 (lag 2) | −2.399***<br>(0.000) |
| Constant         | 96.593***<br>(0.000) |
| N                | 28                   |
| Adj R-sq         | 0.761                |

Parentheses contain p-values.  
 \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .  
 \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$   
 p-values calculated using HAC-robust standard errors.  
 Estimated through 2022Q4.

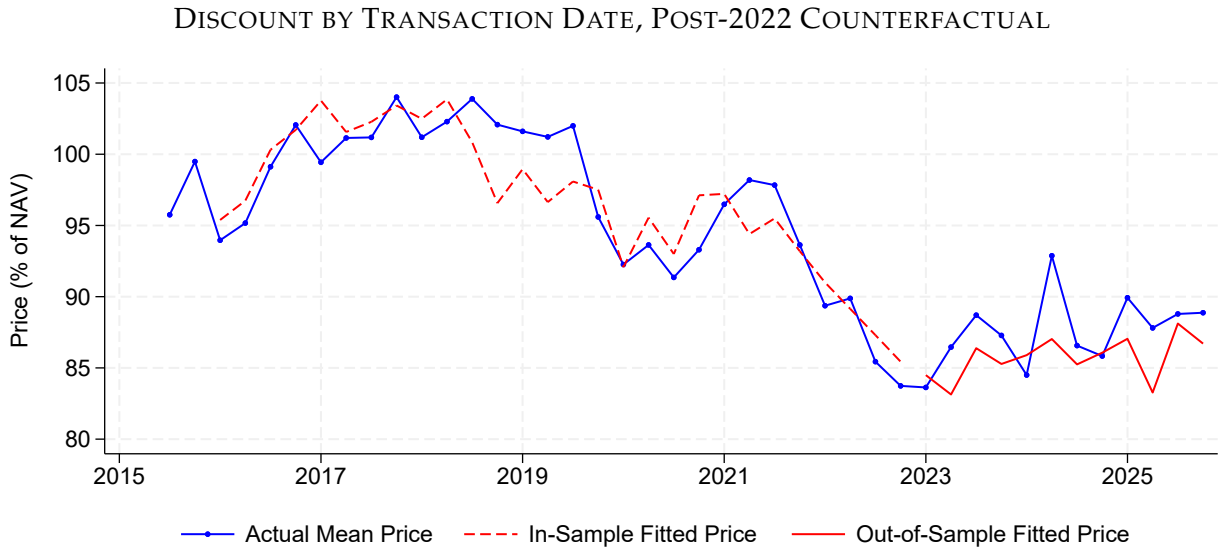


FIGURE 5: This figure shows quarterly mean actual secondary prices from 2015Q3 through 2025Q4, along with prices implied by a regression estimated using data through 2022Q4. The dashed line shows in-sample fitted values through 2022Q4, while the solid prediction line shows out-of-sample predicted prices for 2023–2025. Actual prices are shown separately with markers.

## 6 Conclusion

Secondary market pricing relative to NAV is best read as at least partially reflecting market factors, rather than as just noise or a literal proxy for asset value. The academic literature, anchored by Nadauld et al. (2019) and Boyer et al. (2023), establishes both halves of this claim: discounts to NAV widen and narrow in a measurable, countercyclical pattern (from a 54%-of-NAV trough in 2009 to the low 90s by 2014), and NAV is a smoothed series that understates cyclicity, meaning the public market prices, not GP marks, are likely a better guide to how private equity value is trending in real time. Our own transaction-level evidence, drawn from a decade of SecondaryLink data, confirms this basic pattern at a more granular level, while also showing that pricing varies with fund-specific characteristics, particularly fund size and age, in addition to the market-wide cyclical forces the literature emphasizes. The transaction model also shows that larger, middle-aged funds and funds from weaker vintages are more likely to transact, with transaction activity increasing following positive excess market returns and when CAPE is high, and decreasing when NAV is high.

Set against that backdrop, current market conditions seem consistent with continuation of well-documented dynamics. Record 2025 volumes, aggregate pricing near 83% of NAV and buy-out pricing near 86%, and early-2026 softening concentrated in technology-exposed portfolios are all consistent with a well-capitalized market repricing risk in response to a public market shock, rather than with froth or distress. The more open question is structural rather than cyclical, namely, whether the rapid rise of evergreen and other perpetual-capital vehicles is reshaping the market's pricing dynamics. Our evidence is mixed: observations with identified evergreen buyers do not price higher in the Heckman analysis, while aggregate secondary prices since 2023 have averaged about 1.9 percentage points above the path implied by pre-2023 fundamentals. However, resolving this uncertainty, along with tracking whether the share of observations with identified evergreen buyers continues to grow, is a natural focus for future research.

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