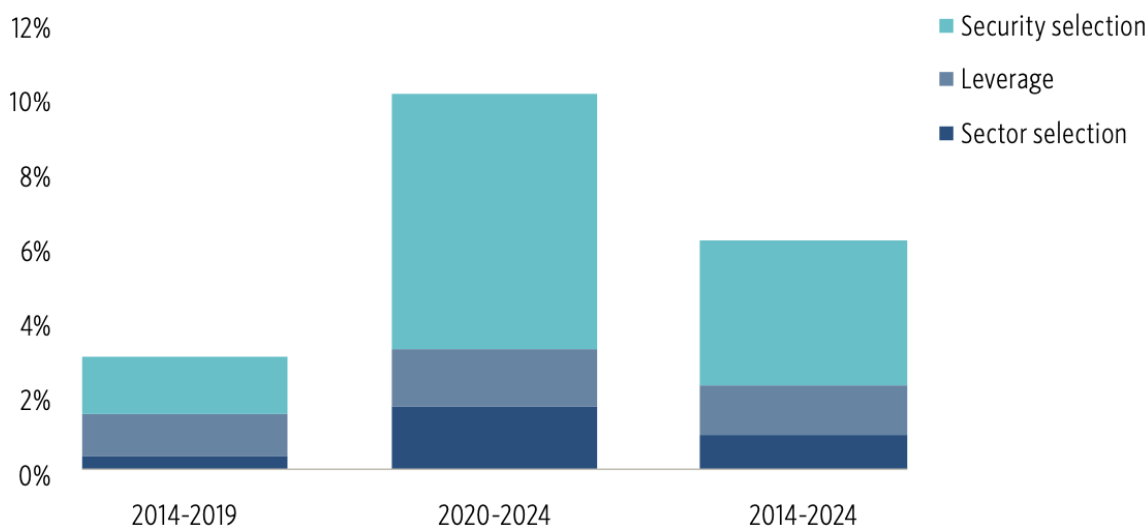


Morningstar PitchBook Buyout Replication Index excess performance attribution (annualized)

PitchBook | March 13, 2025



Sources: Morningstar and PitchBook • Geography: US • As of November 30, 2024

Note: Excess performance is relative to the Morningstar US Small Cap Extended Index.

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A returns-based factor analysis using the Fama-French five-factor model plus momentum reveals that the positive alpha from security selection can be explained primarily by a higher market beta. On average, the Index had a monthly excess return of 0.2%, which was not statistically significant. The Index loaded strongly on the broader market with an equity beta of 1.7, but this was consistent with the equity beta of the sector- and leverage-adjusted Morningstar US Small Cap Extended Index, suggesting that the high beta was driven by leverage rather than the model selecting higher beta stocks. The Index had a higher beta to the size factor than the adjusted Morningstar US Small Cap Extended Index, which is consistent with the fact that take-private deals involve companies at the smaller end of even the small-cap universe. Interestingly, we did not find a significant loading to the value factor, making it different from similar past studies.¹¹ In the holdings-based analysis that follows, we show that this is likely due to buyout managers having a different definition of value than the academic definition, which compares equity book value to market value.

(Past performance is no guarantee of future results.)