Our analysis suggests that both improbably good fund selection abilities and access to the best-performing funds are necessary for an investor with a concentrated private equity portfolio to match the risk-adjusted returns from a randomly selected diversified one.

Our modeling shows that, irrespective of skill level, investors have been able to materially improve risk-adjusted portfolio returns via diversification. In effect, diversification has been shown to amplify the benefits of skill.

The first paper in our Rethinking Risk series demonstrated that diversified private equity portfolios yield better risk-adjusted returns than concentrated portfolios. It did not, however, address the potential impact of investment skill upon those returns. This paper therefore looks to quantify the effect of fund selection skill on investment returns – assuming an investor is able to access their selected funds – and compare this effect to that of diversification.

It is well established that skillful manager selection is crucial when investing in private markets, given the wide dispersion of returns relative to public markets. The benefits of selection skill increase as the dispersion of outcomes grows. In private equity, for example, where top and bottom quartile five-year annual returns commonly differ by more than 20 percentage points (pp), selection skill is clearly more valuable than among mutual funds, where the spread may be much narrower (see Chart 1).
However, this paper shows that relying on selection skill alone creates a much riskier portfolio and is not a substitute for diversification. To match the risk-adjusted returns from a diversified portfolio would require an improbably high level of skill for those pursuing a concentrated approach.

Furthermore, selection skill is best used to construct a diversified portfolio, which produces strong risk-adjusted returns when compared to an equivalent concentrated portfolio (as expressed by the Sortino Ratio, see “Better risk measures for private equity” on p. 14). Assuming that an investor can utilize their talent by accessing and investing with the best managers, diversification amplifies the impact of skillful selection.

**ANALYTICAL FRAMEWORK**

**HOW TO MEASURE AND QUANTIFY SELECTION SKILL**

In his 1988 book, *A Random Walk Down Wall Street*, Princeton Professor Burton Malkiel speculated that, “A blindfolded monkey throwing darts at a newspaper’s financial pages could select a portfolio that would do just as well as one carefully selected by experts”. To test this hypothesis, the *Wall Street Journal* ran 100 stock picking contests, pitting a group of four professional (“skilled”) investors against the newspaper staff, who selected four stocks by throwing a dart at a dartboard.

The professionals won 61 times, outperforming the random portfolio selection approach, but later peer-reviewed research demonstrated that the professional investors did not meaningfully outperform the broader market. Indeed, assessing performance against the average return from the specific asset class is a far more meaningful method of comparison. In this case, the professionals only beat the Dow Jones Industrial Average in 51 of the 100 trials.

For private markets, we can perform this same type of analysis by comparing returns from a specific fund portfolio against a control portfolio in which each asset held has an equal chance of being in the top- or bottom-half in terms of returns. A good way to imagine this is to think of each fund selection as being determined by a coin flip. If the coin comes up heads, the investor buys an asset that will be a top-half performer. If it comes up tails, they buy a bottom-half asset. Skill – in this model – therefore effectively means being able to consistently flip more heads than tails by using a weighted coin. The level of skill is the difference between the percentage of heads flipped and the average (50%).

1 Sortino Ratio = \( \frac{E[R - MAR]}{DD} \), where \( E = \) expected; \( R = \) expected return; \( MAR = \) minimum acceptable return; \( DD = \) downside deviation

2 Liang, Bing (1996). *The “Dartboard” Column: The Pros, the Darts, and the Market*. The research also found that, after careful statistical scrutiny, the professional selections were not materially better than the dart throwers.
For example, a 10pp skill advantage means an investor builds portfolios with a 60% chance of each investment being a top-half performer. This does not guarantee that 60% of the assets in a particular portfolio will come from the top half, only that over the long term the proportion will converge towards this level. Using this example, this investor’s expected return from such a portfolio would be equal to:

$$R_{10pp \text{ Skill}} = (0.6 \times R_{\text{Top-half funds}}) + (0.4 \times R_{\text{Bottom-half funds}})$$

where $R = \text{Expected Return}$.

For comparison, the expected market return (i.e., from a 50-50 coin-flip approach) would be:

$$R_{\text{Market}} = (0.5 \times R_{\text{Top-half funds}}) + (0.5 \times R_{\text{Bottom-half funds}})$$

Drawing on these two formulas, we can illustrate the mathematical reason that return dispersion matters when assessing the impact of selection skill:

$$R_{10pp \text{ Skill}} - R_{\text{Market}} = 0.1 \times (R_{\text{Top-half funds}} - R_{\text{Bottom-half funds}})$$

What this formula shows is that not only will wise fund selection help this investor outperform the market, but that the impact of their selection skill will increase in line with the dispersion of returns between good and bad assets.

An important caveat to any investment analysis is that a strategy is only as good as your ability to execute it. In private markets, selecting quality funds does not necessarily mean you can actually invest in them. The implications of this will become clear in our analysis.

**SIMULATION METHODOLOGY**

Our analysis is based on 23 years of private equity fund performance data. In this case, this encompasses more than 1,400 mature funds drawn from HarbourVest’s proprietary historical dataset of investment and due diligence data, supplemented by publicly available sources.

Using this historical return data, we performed a backtest to assess the effect of selection skill on portfolio performance. This backtest used Monte Carlo simulations (each run 10,000 times) to model portfolios of US venture and US buyout funds, calculating expected return outcomes and producing measures of downside risk. We modeled these funds in concentrated and diversified portfolios with different levels of selection skill, and created a blended portfolio combining the two strategies (see Chart 2 on page 5).
These model portfolios were simulated as evenly-paced allocations over consecutive three-year periods to account for the impact of the macroeconomic environment across different cycles. We assumed that each fund was chosen with an equal level of skill throughout each simulation, irrespective of previous selection decisions, and that our model investor was able to access all assets selected.

Our simulation produced probability density graphs highlighting the likelihood of each Distributed to Paid-In Capital (DPI) Multiple at portfolio maturity. We also calculated the median expected return and Sortino Ratio, as well as the Expected Shortfall at the 95th percentile level (shortened to Expected Shortfall 95%), which measures the average expected return in the worst 5% of modeled scenarios. The Sortino Ratios for the different asset classes were calculated using a minimum acceptable return (MAR) of 1.5x.

<table>
<thead>
<tr>
<th></th>
<th>Buyout</th>
<th>Venture</th>
<th>Blended</th>
</tr>
</thead>
<tbody>
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<td>3 buyout partnerships</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24 venture partnerships</td>
</tr>
</tbody>
</table>

3 Description of the HarbourVest data set may be found below each of the subsequent charts
4 Mature funds defined as funds that have distributed more than 80% of their total value to investors
5 A backtest is a simulation of an investment strategy used to calculate the returns such a strategy would have generated if it had been employed over a specified historical time period. It is important to note that these precise investment strategies cannot be reproduced in practice and were designed to evaluate the possible effect of skill, in the absence of access constraints, on investment outcomes.
6 A Monte Carlo Simulation is a mathematical technique to account for the inherent uncertainty and risk in quantitative analysis, involving repeating a calculation potentially thousands of times to produce a probability distribution. Rather than plugging in a single figure for each part of the calculation, this method uses a range of values for each input, with the frequency of usage of each value determined according to its likelihood in its own preset probability distribution. Through this approach, a Monte Carlo Simulation can estimate the likelihood of each possible potential outcome in a given scenario, instead of just producing a single estimated expected outcome.
7 Evenly-paced refers to an even commitment each year in terms of both funds and capital. Allocation timing is assigned during HarbourVest analysis.
8 DPI Multiple = Total distributions to a fund and/or investors divided by paid-in capital
HARD TO BEAT DIVERSIFICATION

US VENTURE

Our backtest, using the performance of mature US venture funds with vintage years from 1995 to 2010, found that a randomly-constructed (“random”) diversified portfolio had a much better risk-return profile than the simulated concentrated portfolios. A concentrated investor would require a high degree of skill just to match the median and risk-adjusted returns from a random diversified US venture portfolio (see Chart 3).

In our model, it required roughly 10.5pp extra skill for the concentrated US venture portfolio to match the random diversified US venture portfolio’s median return. Approximately 8pp skill was needed for the concentrated portfolio to match the random diversified portfolio on the basis of Sortino Ratio. Furthermore, the random diversified portfolio had better downside protection than even the 10pp skill concentrated portfolio, with a 95% Expected Shortfall of 0.94, against 0.65 for the skilled concentrated approach.

Our findings support the hypothesis that diversification can significantly improve median returns when the distribution of returns is positively skewed – as Chart 3 clearly illustrates is the case for US venture. Positively skewed distributions include a greater probability of unusually large payouts. A diversified portfolio containing multiple positively skewed assets is therefore more likely to experience instances of dramatic outperformance than a concentrated portfolio of comparable assets. This shifts the median return upwards.

CHART 3: Significant skill required for concentrated US venture portfolio to match diversified one

<table>
<thead>
<tr>
<th>DPI Multiple</th>
<th>% &lt;= 1.0x</th>
<th>1.0x &lt; % &lt;= 1.5x</th>
<th>1.5x &lt; % &lt;= 2.0x</th>
<th>% &gt; 2.0x</th>
<th>Median</th>
<th>Sortino Ratio</th>
<th>Expected Shortfall 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentrated 0pp Skill US Venture</td>
<td>20.35</td>
<td>35.73</td>
<td>21.46</td>
<td>22.46</td>
<td>1.42x</td>
<td>0.20</td>
<td>0.56x</td>
</tr>
<tr>
<td>Concentrated 10pp Skill US Venture</td>
<td>14.12</td>
<td>33.53</td>
<td>24.84</td>
<td>27.51</td>
<td>1.53x</td>
<td>0.38</td>
<td>0.65x</td>
</tr>
<tr>
<td>Diversified 0pp Skill US Venture</td>
<td>4.23</td>
<td>41.65</td>
<td>32.79</td>
<td>21.33</td>
<td>1.54x</td>
<td>0.34</td>
<td>0.94x</td>
</tr>
<tr>
<td>Diversified 10pp Skill Blended</td>
<td>4.23</td>
<td>41.65</td>
<td>32.79</td>
<td>21.33</td>
<td>1.54x</td>
<td>0.34</td>
<td>0.94x</td>
</tr>
</tbody>
</table>

HarbourVest proprietary data set; Vintage years 1995-2010; Funds with residual value <20%; Residual Value = 1 - (Σ Cumulative Distributions) / Total Value; Even allocation over 3 consecutive vintage years (specific timing of allocations assigned during HarbourVest analysis). Concentrated portfolios 3 funds over 3 years; Diversified portfolio 24 funds over 3 years; DPI Multiple calculated net of general partner fees and carry and gross of HarbourVest fees and expenses. Expected Shortfall 95% represents the average expected return in the lowest 5% of modeled scenarios. The graphic and data above are based on a Monte Carlo simulation. Sortino Ratio annualized for 15 years using the square root of time rule. See Appendix for more information on the construction of this simulation. Past performance is not a reliable indicator of future results.

*Skewness measures the degree of asymmetry in a distribution. Positive skew refers to a distribution where the positive, right tail is longer than the negative, left tail. In this scenario, the mean will exceed the median. For an example of academic literature that supports this hypothesis, see Watson, Ray & Gordon (1986) On Quantiles of Sums, Australian & New Zealand Journal of Statistics.
**US BUYOUT**

Unlike venture investments, the returns from US buyout funds are nearly symmetrical. The median return for a portfolio whose underlying assets have symmetrical return distributions cannot be improved through diversification alone. As such, our simulation found limited median return improvement from US buyout portfolio diversification, but there were still dramatic improvements in measures of downside risk and risk-adjusted return.

Specifically, our backtest sampled US buyout funds with vintage years from 1995 to 2010 and found that the skill required for the concentrated portfolio to match the median DPI of the random diversified portfolio was only about 3pp. However, diversification sharply improved the risk-adjusted return and significantly reduced the downside risk of the portfolio (see Chart 4).

The random diversified US buyout portfolio had a far higher Expected Shortfall (1.39x vs 1.01x) and Sortino Ratio (2.20 vs 0.62) than the skillfully invested concentrated one. To match the diversified portfolio’s Sortino Ratio an investor with a concentrated portfolio would require skill exceeding 30pp – implying that more than 80% of selected funds were top-half performers. Consistent outperformance to such a degree is possible, yet highly unlikely.

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**CHART 4:**
Significant skill required for concentrated US buyout portfolio to match risk-return profile of diversified one

Modeled return probabilities of concentrated US buyout portfolios with different levels of skill and a random diversified US buyout portfolio

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HarbourVest proprietary data set; Vintage years 1995-2010; Funds with residual value <20%; Residual Value = 1 - (Σ Cumulative Distributions) / Total Value; Even allocation over 3 consecutive vintage years (specific timing of allocations assigned during HarbourVest analysis); Concentrated portfolios 3 funds over 3 years; Diversified portfolio 24 funds over 3 years; DPI Multiple calculated net of general partner fees and carry and gross of HarbourVest fees and expenses. Expected Shortfall 95% represents the average expected return in the lowest 5% of modeled scenarios. The graphic and data above are based on a Monte Carlo simulation. Sortino Ratio annualized for 15 years using the square root of time rule. See Appendix for more information on the construction of this simulation. Past performance is not a reliable indicator of future results.
DIVERSIFICATION AMPLIFIES THE EFFECT OF SKILL

An investor may nevertheless still believe that they possess the requisite manager selection skill to outperform a diversified portfolio via a concentrated approach. In this section, we address this hypothesis, applying the same level of skill to the two approaches to demonstrate that superior outcomes are still achieved via diversification.

US VENTURE: COMPREHENSIVE RISK-RETURN IMPROVEMENT

Using the same modeling methodology as above, we compared the probability density of return outcomes from a concentrated US venture portfolio with those from a diversified US venture portfolio, but this time both were built with 10pp skill in fund selection (see Chart 5).

Our data shows that diversification improved outcomes across all our metrics for an investor with 10pp skill in fund selection, with the diversified portfolio producing:

- A higher median DPI (1.66x vs 1.53x)
- A significantly improved Sortino Ratio (0.75 vs 0.38)
- A better Expected Shortfall 95% (1.05x vs 0.65x)

The improved median DPI further illustrates our argument that diversification improves outcomes to a greater extent when the distribution of returns is positively skewed. Meanwhile, the improved Expected Shortfall metric reflects what is obvious in the chart, that diversifying a US venture portfolio can help reduce the likelihood of losing capital. This much-reduced downside risk underpins the sharp improvement in the Sortino Ratio.

HarbourVest proprietary data set; Vintage years 1995-2010; Funds with residual value <20%; Residual Value = 1 - (∑ Cumulative Distributions) / Total Value; Even allocation over 3 consecutive vintage years (specific timing of allocations assigned during HarbourVest analysis); Concentrated portfolio 3 funds over 3 years; Diversified portfolio 24 funds over 3 years; DPI Multiple calculated net of general partner fees and carry and gross of HarbourVest fees and expenses. Expected Shortfall 95% represents the average expected return in the lowest 5% of modeled scenarios. The graphic and data above are based on a Monte Carlo simulation. Sortino Ratio annualized for 15 years using the square root of time rule. See Appendix for more information on the construction of this simulation. Past performance is not a reliable indicator of future results.
The expected return in the worst 5% of modeled scenarios was substantially better in the diversified model.

US BUYOUT: IMPROVED DOWNSIDE RISK MANAGEMENT

Comparing a diversified US buyout portfolio to a concentrated one, assuming both were populated with 10pp skill in fund selection, also highlights the benefits of a diversified approach (see Chart 6).

The improvement in the median DPI in a skilled diversified portfolio was not economically significant (1.82x vs 1.80x) because of the near-symmetrical return distribution of the asset class, but downside risk was reduced dramatically. The expected return in the worst 5% of modeled scenarios, represented by the Expected Shortfall at the 95th percentile level, was substantially better in the diversified model.

HarbourVest proprietary data set; Vintage years 1995-2010; Funds with residual value ≤20%; Residual Value = 1 - (∑ Cumulative Distributions) / Total Value; Even allocation over 3 consecutive vintage years (specific timing of allocations assigned during HarbourVest analysis); Concentrated portfolio 3 funds over 3 years; Diversified portfolio 24 funds over 3 years; DPI Multiple calculated net of general partner fees and carry and gross of HarbourVest fees and expenses. Expected Shortfall 95% represents the average expected return in the lowest 5% of modeled scenarios. The graphic and data above are based on a Monte Carlo simulation. Sortino Ratio annualized for 15 years using the square root of time rule. See Appendix for more information on the construction of this simulation. Past performance is not a reliable indicator of future results.
IMPROVED OUTCOMES FROM SAMPLE BLENDED US PORTFOLIO

The previous four simulations have dealt with diversification within the US buyout and US venture strategies, highlighting the risk-adjusted return improvements from diversification, irrespective of skill level. This final simulation demonstrates that the same benefits are available for a traditional private equity portfolio that includes multiple strategies.

Our final backtest compares returns from blended portfolios with a 70% buyout and 30% venture weighting. This includes two skillfully invested portfolios — one more diversified, one more concentrated — and a random diversified portfolio (see Chart 7).

As one might expect, the return distributions exhibit characteristics of both of the underlying strategies, but the skillfully invested diversified portfolio has a significantly better risk-return profile than its concentrated equivalent, with improved median return, Sortino Ratio and Expected Shortfall metrics.

Furthermore, the risk-adjusted returns from the random diversified blended portfolio were actually better than those from a concentrated version constructed with superior selection skill. The random diversified portfolio had a better Sortino Ratio (2.81 vs 0.89) and a much higher Expected Shortfall (1.41 vs 1.12).

CHART 7: Diversified blended portfolio has better return profile than equivalent concentrated portfolio given equal edge in selection skill

Modeled return probabilities of skillfully invested concentrated and diversified blended portfolios and a randomly diversified blended portfolio

HarbourVest proprietary data set; Vintage years 1995-2010; Funds with residual value <20%; Residual Value = 1 - \( \sum \text{Cumulative Distributions} / \text{Total Value} \); Even allocation over 3 consecutive vintage years (specific timing of allocations assigned during HarbourVest analysis). Blended portfolios weighted 70% buyout, 30% venture. Concentrated portfolios 6 funds over 3 years (3 buyout, 3 venture); Diversified portfolio 48 funds over 3 years (24 buyout, 24 venture); DPI Multiple calculated net of general partner fees and carry and gross of HarbourVest fees and expenses. Expected Shortfall 95% represents the average expected return in the lowest 5% of modeled scenarios. The graphic and data above are based on a Monte Carlo simulation. See Appendix for more information on the construction of this simulation. Sortino Ratio annualized for 15 years using the square root of time rule. Past performance is not a reliable indicator of future results.
VISUALIZING THE IMPACT OF SKILL ON RETURN OUTCOMES

Each of our backtests has shown that outperforming a randomly constructed diversified portfolio on a risk-adjusted basis is extremely difficult with a concentrated portfolio (see Chart 8).

The visualizations in Chart 9 show how skill incrementally improves two key risk-return profile metrics – the Sortino Ratio and the Expected Shortfall – across the three simulated portfolio types. Aside from clearly highlighting the significant additional skill required for a concentrated investor to match a diversified approach, it is worth highlighting a couple of points made obvious in the charts:

1. **The skill required for a US buyout investor following a concentrated approach to match the diversified portfolio on either metric is significant.** This speaks powerfully in favor of adopting a diversified approach to buyout investing, particularly as there is little persistence in buyout fund performance, which means bridging this skill gap is improbable.10

2. **The skill required for a concentrated investor to match the Sortino Ratio for a diversified US venture portfolio is much less than for US buyout.** This reflects the principle articulated earlier (see “How to measure and quantify selection skill” on p. 3) that the impact of skill will scale based on the return dispersion between good and bad assets. However, it is important to note that, in contrast to buyouts, there is proven persistence in venture manager performance from fund to fund.11 In combination with typically smaller fund sizes, this means that top-performing venture funds are usually heavily oversubscribed and very difficult to access for many investors. So while the selection skill required to match the positive effects of diversification does not seem great in theory, actually accessing the funds necessary to reliably perform at this level is incredibly difficult to do and, practically speaking, impossible at scale.

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**Top-performing venture funds are usually heavily oversubscribed and very difficult to access for many investors.**

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HarbourVest proprietary data set; Vintage years 1995-2010; Funds with residual value <20%; Residual Value = 1 - (Σ Cumulative Distributions) / Total Value; Even allocation over 3 consecutive vintage years (specific timing of allocations assigned during HarbourVest analysis). Concentrated portfolios 3 funds over 3 years; Concentrated Blended portfolios 6 funds over 3 years (3 buyout, 3 venture). Diversified portfolios 24 funds over 3 years (16 buyout, 8 venture); Diversified Blended portfolios 48 funds over 3 years (24 buyout, 24 venture); Blended portfolios weighted 70% buyout, 30% venture; DPI Multiple calculated net of general partner fees and carry and gross of HarbourVest fees and expenses. Expected Shortfall 95% represents the average expected return in the lowest 5% of modeled scenarios. The graphic and data above are based on a Monte Carlo simulation. See Appendix for more information on the construction of this simulation. Past performance is not a reliable indicator of future results.
For those familiar with the insurance market, none of our findings should come as a surprise. Indeed, combining skill with broad diversification is the foundation of many successful business models. Insurers derive their edge from data advantages. They leverage their analytical skills and information resources to price each policy in their favor. There is always the chance that individual policies may generate a loss, but the more skilled ‘bets’ the insurer makes, the lower its risk of an aggregate portfolio loss becomes. Greater diversification can be achieved by underwriting policies across a variety of different markets with different characteristics. The large number of policies and diversified exposure produces a superior risk-adjusted return.

Fund selection skill is nevertheless an invaluable asset when investing in private markets, enhancing returns and reducing risk. However, our simulations highlight that the inherent advantages of a diversified portfolio are difficult to overcome with a concentrated approach, even with an exceptional level of investment skill. If you are truly skilled, our analysis demonstrates that you would be better off combining that skill with diversification, which will likely produce portfolios with superior risk-adjusted returns and lower downside risk.

As such, our data suggests that any investor in private markets, regardless of their fund selection abilities, should consider adopting a diversified portfolio approach.

While we would never advocate aping Malkiel’s monkey by selecting funds via an entirely random dartboard approach, we might suggest carefully aiming plenty of darts at the highest scoring segments on the board.
APPENDIX

BETTER RISK MEASURES FOR PRIVATE EQUITY

No investor is agnostic to risk, and any practical approach to private equity portfolio construction must include an accurate appraisal of risk.

Standard approaches use the standard deviation of returns to measure risk, but this relies upon the assumption of a symmetrical return distribution. This therefore penalizes upside and downside deviations equally – failing to differentiate between harmful volatility and the positive volatility that generates investor returns. The distribution of returns from private equity investments is not normal, exhibiting a significant positive skew. As such, a portfolio with a larger proportion of higher returning assets will actually tend to have a higher standard deviation and erroneously appear riskier.

Furthermore, methodologies that employ standard deviation use the mean return as a target return, which means they do not necessarily reflect an investor’s return needs.
As such, a more appropriate measure of risk for illiquid private equity investments is downside deviation, which focuses on the volatility of returns that fall below a defined minimum acceptable return. This addresses the issues with using standard deviation, as it does not rely on the faulty assumption of symmetrical return distributions or substitute average return for the investor’s target return.

The Sortino Ratio is a modification of the oft-deployed Sharpe Ratio that uses downside deviation as the measure of risk, allowing us to compare risk-adjusted returns for assets with non-symmetrical return distributions, such as private equity. The higher the Sortino Ratio the more attractive the investment’s risk-adjusted return. Using this method allows us to approach portfolio assessment more effectively, by calculating returns in relation to the amount of bad risk assumed rather than penalizing an investment equally for negative and positive performance.

THE SORTINO RATIO

\[
\text{Sortino Ratio} = \frac{E[R - MAR]}{DD}
\]

Where:

- \( R \) = Expected Return: the annual rate of return an investment is expected to generate.
- \( MAR \) = Minimum Acceptable Return: the minimum acceptable return or target against which that investment is to be assessed.
- \( DD \) = Target Downside Deviation: the calculation of downside risk. It is determined by first effectively eliminating positive returns from the calculation by treating them as underperformance of zero. Then you take the realized returns’ underperformance relative to the MAR and calculate their deviations. Finally, you calculate the root-mean-square of these figures.

\[
DD = \sqrt{\frac{1}{N} \sum_{i=1}^{N} (\min(0,x_i - MAR))^2}
\]

where \( x_i = i^{th} \) return

and \( N = \) total number of returns

12 Sharpe Ratio = \((\text{Expected Return} - \text{Risk-free Rate}) / \text{Return Deviation}\)
HarbourVest is an independent, global private markets investment specialist with more than 35 years of experience and more than $50 billion in assets under management. The Firm’s powerful global platform offers clients investment opportunities through primary fund investments, secondary investments, and direct co-investments in commingled funds or separately managed accounts. HarbourVest has more than 400 employees, including more than 100 investment professionals across Asia, Europe, and the Americas. This global team has committed more than $34 billion to newly-formed funds, completed over $19 billion in secondary purchases, and invested over $8 billion directly in operating companies. Partnering with HarbourVest, clients have access to customized solutions, longstanding relationships, actionable insights, and proven results.