iCapital NETWORK

EVALUATING THE IMPACT OF PRIVATE EQUITY IN A 60/40 PORTFOLIO

Introducing a private equity allocation to a traditional portfolio of publicly traded equity and fixed income securities may enhance returns and reduce risk.

Prior to the pandemic, many wealth advisors had already grown concerned about public market valuations and were exploring the private capital markets in the hopes of addressing lower return projections for their traditional 60/40 portfolios.

Now grappling with market turmoil, these advisors are focusing on constructing more durable portfolios that can deliver positive long-term outcomes while also trying to prudently take advantage of the current dislocation. The past few months have provided a stark reminder that a lack of true portfolio diversification can expose investors to dramatic increases in volatility, significant drawdowns, and the potential risk of permanent capital loss.

As advisors seek to diversify client portfolios and assess which alternative strategies are best positioned today, many are also asking how to quantify the potential impact of a private equity allocation on the return and risk characteristics of a traditionally constructed portfolio. These advisors are genuinely interested in making the private capital markets a core component of their portfolios, though little has been done to help them quantify the potential long-term implications. The purpose of this paper is to help advisors better understand the utility of private equity in a portfolio consisting exclusively of public securities.

Using realized and publicly available forecasted data, iCapital[1] has evaluated multiple scenarios that include the addition of private equity (PE) into a traditional 60/40 stock-bond portfolio. Each scenario presumes a 20% PE weighting, but models different funding options for the allocation – drawing it entirely from public equities, entirely from fixed income, or proportionately from both.

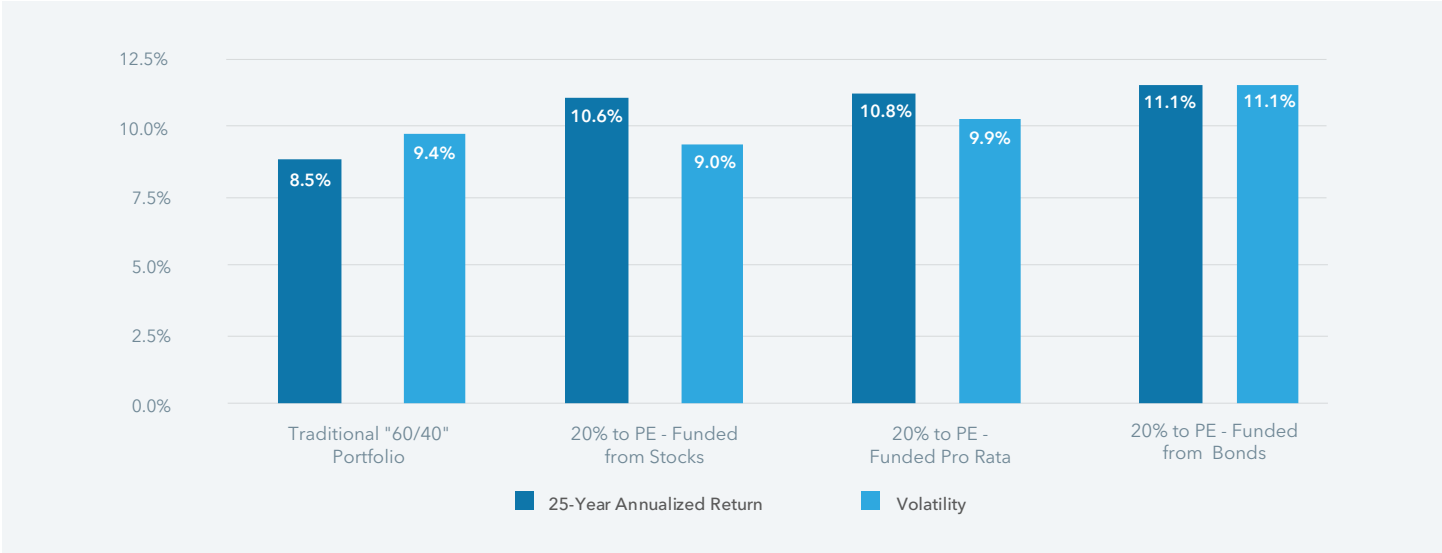
We ran the analysis using both historical (Exhibit 1) and expected (Exhibit 2) returns, volatility, and correlation inputs, and the outputs are illustrative. The analysis is intended to assist an advisor in developing a baseline hypothesis for return expectations and risk assumptions when constructing portfolios with an allocation to private equity. The information presented does not represent any actual portfolio.

Exhibit 1:
Hypothetical Historical Analysis: Private Equity Delivers a Performance Lift with Varying Degrees of Volatility

TIME PERIOD	PUBLIC EQUITIES	FIXED INCOME	PRIVATE EQUITY
June 1994 – June 2019	*S&P 500 Index, monthly returns*	*Bloomberg Barclays U.S. Aggregative Bond Index*	*Cambridge U.S. PE Index, quarterly*

Note: For each index, we used the 25-year period of June 1994 through June 2019, which includes multiple bull and bear market cycles with disparate performance results for each asset class.

Comparative Risk and Return Characteristics for Sample Portfolio Allocations (1994 - 2019)



For illustrative purposes only. Source: Evestment, as of June 2019. These hypothetical portfolios are not intended to represent portfolios that an investor necessarily would have been able to construct.

Over the 25-year period, a traditional 60/40 portfolio delivered an annualized return of roughly 8.5%, with a volatility[2] of 9.4%. Compare that risk/return profile to each of the three portfolios that include an allocation to private equity. In each scenario - regardless of whether the capital is sourced from stocks, bonds, or proportionately from each - the portfolio return increases between 210 and 260 basis points (bps), with the higher returns earned when the PE allocation is taken entirely from the lowest return generator, fixed income. Not surprisingly, the volatility increases when the PE allocation is funded 100% from fixed income, decreases when funded 100% from public equities, and is slightly higher when funded pro rata.

HYPOTHETICAL FORWARD-LOOKING ANALYSIS

Measuring a portfolio's "probability of success"

Using the model assumptions below, our forward-looking analysis seeks to demonstrate the potential impact of private equity on a traditional 60/40 portfolio through a tool familiar to many advisors. Envestnet's MoneyGuidePro® models how a new investment product can impact the likelihood that a client will achieve his/her goals by comparing the probability of success of different asset allocations, given explicit client characteristics and goals, along with investment risk and return assumptions. After gathering feedback from CIOs at several wealth advisory firms, we developed a client archetype that represents a Qualified Purchaser client (Exhibit 3).

Exhibit 2:
Model Assumptions for Forward-Looking Analysis

	RETURN	VOLATILITY
Private Equity	9.1%	16.1%
Public Equities	6.1%	15.6%
Fixed Income	3.8%	5.1%

For discussion purposes only. Future results are not guaranteed and loss of principal may occur.

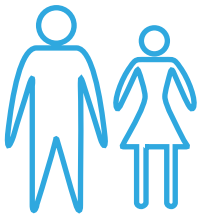
DEVELOPING FORWARD-LOOKING ASSUMPTIONS

When constructing client portfolios and investigating new products, advisors must consider many variables and their probabilities. In developing assumptions (Exhibit 2) for our forward-looking analysis, we reviewed long-term capital market assumptions (CMAs) from six firms, including global private banks, asset managers, and global consultancies.[3] The average annual private equity return expectation across these firms is just over 9%, while the average public equity return assumption is roughly 6%. This anticipated spread in performance between public and private equity is generally consistent with the historical spread.

Determining a suitable expectation for the volatility of private equity was somewhat more challenging. For example, simply taking the realized volatility of an index of private equity funds may result in a volatility expectation that is artificially low, since the quarterly reporting of PE performance effectively "smooths" the long-term results. This method would result in an index-based volatility in the 8%-10% range. Conversely, some firms don't use actual private equity data at all, instead attempting to replicate PE returns by using a public equity benchmark such as a small cap index and applying a leverage factor to determine a level of volatility. This approach results in a forecasted volatility in the range of 25%-30%, approximately three times the realized index volatility.

After examining numerous methodologies, we adopted the approach used by Hamilton Lane,[4] which incorporates what we believe to be a sound, balanced methodology that uses actual PE data and statistically adjusts the realized returns to account for the smoothing effect. The Hamilton Lane model's statistical output over multiple time periods results in an expected volatility of 16.1%, which is generally comparable with both realized and forecasted volatility for public equities.

Exhibit 3:
Client Archetype: Married couple, 58 years old



Total assets:
$9 MILLION

Annual savings until retirement (7 years):
$250,000

Retirement age:
65 YEARS

Life expectancy:
90 YEARS

Annual spending in retirement:
$400,000

Desired bequest:
$1.5 MILLION

The results of this analysis are described below and in Exhibit 4. Given the return and volatility assumptions referenced above, the probability that this couple will achieve their goal with a traditional 60/40 portfolio structure is 67%. In an uncertain world, those aren't terrible odds, and some advisors might consider a "stay-the-course" approach to be most prudent.

However, with the addition of a 20% allocation to private equity, the probability of long-term success increases to 74%, 78%, and 81%, depending on whether the capital is sourced from fixed income, a pro rata blend, or from public equities, respectively. Of course, it is important to note that private equity is an illiquid asset class and, even if these return expectations are met, an investor's private capital may not be available when needed. This simply underscores the importance of investing in private equity only after considering, in addition to return objectives and risk tolerance, the possibility of an unanticipated need for liquidity.

This analysis – based on a Monte Carlo simulation using the MoneyGuidePro software – projects the probability of a client achieving his or her long-term portfolio objectives. The output is meant to level-set expectations, based on a variety of client-specific and market-driven inputs. While these probabilities reflect a singular threshold percentile (e.g., an "X" percent chance of leaving "Y" dollars to a client's heirs), the 1,000 underlying simulations provide a wide range of potential outcomes. For example, based on each asset allocation:

I. Existing 60/40 Stock & Bond Portfolio (Traditional)

The traditional 60/40 portfolio has a 67% chance of success. While there is a 33% chance of a client failing to reach his or her long-term objective, on the upside there is a 50% chance (the 50th percentile) of leaving at least a $4.0 million bequest.

II. 20% to Private Equity - Funded from Fixed Income (Aggressive)

When the PE allocation is funded from fixed income, the portfolio has a 74% chance of success, while the probability of a "negative outcome" (the client fails to meet his or her goals) falls to 26%, with a 50% chance of leaving at least $7.5 million.

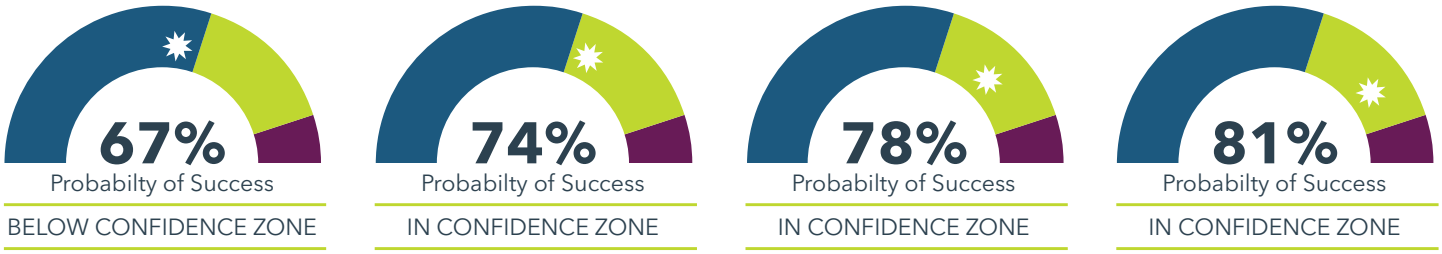
III. 20% to Private Equity - Funded on a Pro Rata Basis (Moderate)

The chance of success improves to 78% for the pro rata option. The negative outcome risk falls further, to 22% when the capital is funded equally from stocks and bonds, with a 50% chance of leaving at least $7.5 million.

IV. 20% to Private Equity - Funded from Public Equity (Conservative)

If the PE allocation is funded from public equities, the negative outcome is just 19% (reflecting an 81% probability of success), also with a 50% chance of bequeathing at least $7.5 million.

Exhibit 4:
How the Addition of Private Equity Affects the Probability of Client Success



I. TRADITIONAL 60/40 PORTFOLIO	II. 20% FUNDED FROM FIXED INCOME	III. 20% FUNDED PRO RATA	IV. 20% FUNDED FROM EQUITIES
Public Equity: 60%	Public Equity: 60%	Public Equity: 48%	Public Equity: 40%
Fixed Income: 40%	Fixed Income: 20%	Fixed Income: 32%	Fixed Income: 40%
Private Equity: 0%	Private Equity: 20%	Private Equity: 20%	Private Equity: 20%

Source: MoneyGuidePro and iCapital. For illustrative purposes only. For discussion purposes only. Future results are not guaranteed and loss of principal may occur.

WEALTH SIMULATION

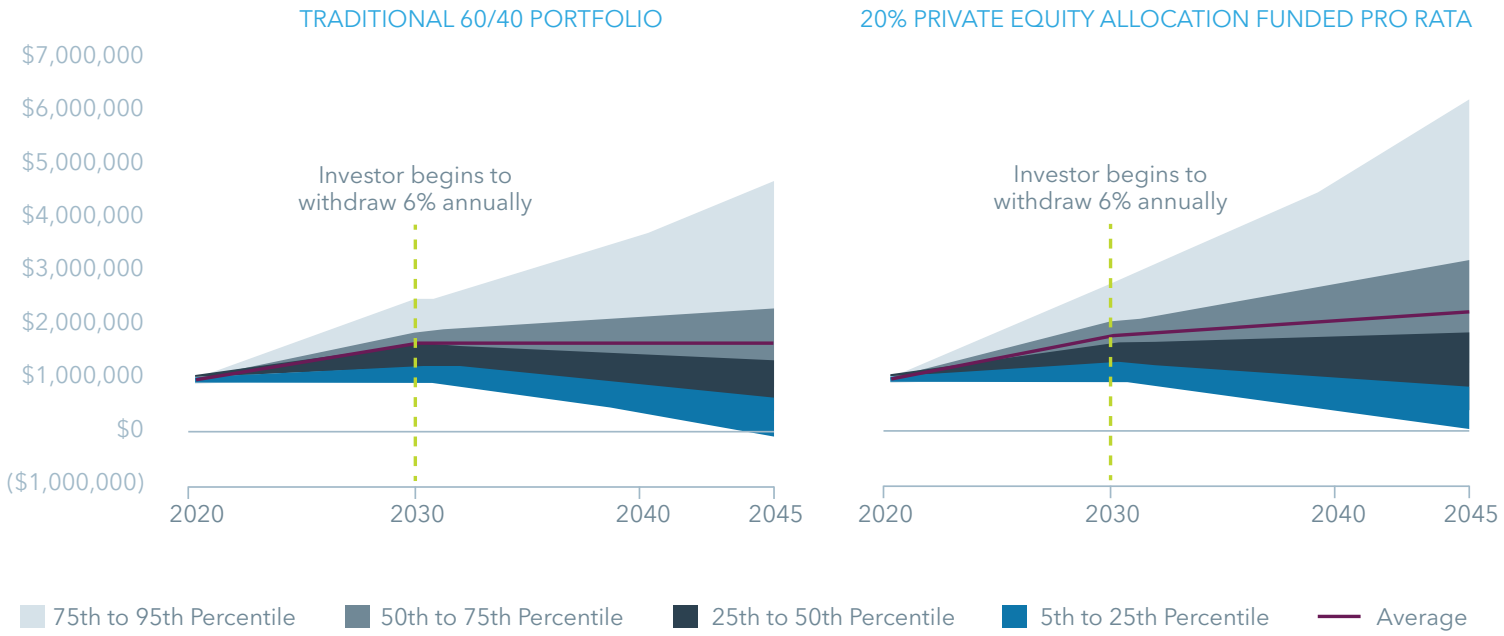
Evaluating a range of outcomes

In addition to forecasting the probability of success of portfolios with and without private equity, it can also be helpful to consider a range of "good and bad" outcomes for different allocations, recognizing that investment results can be highly variable.

To account for the various scenarios that may occur over time, which can dramatically impact a portfolio, we collaborated with BlackRock's Portfolio Solutions Team to run a 25-year wealth simulation on a hypothetical $1,000,000 portfolio. This simulation compares the various outcomes for a traditional 60/40 allocation and one that includes a 20% allocation to private equity, sourced pro rata from stocks and bonds. The analysis assumes that, after the first 10 years, 6% of the total portfolio's value is withdrawn annually to accommodate the client's spending needs.

This simulation suggests that adding private equity could boost long-term wealth creation, while simultaneously minimizing the potential for capital loss. For example, the median 50th percentile outcome forecasts that the value of the portfolio with private equity could rise by 78.8% after 25 years versus 38.7% for the traditional 60/40 portfolio. At each percentile level shown below, the portfolio with private equity is likely to come out ahead of the traditional asset-only portfolio (Exhibit 5).

Exhibit 5:
25-year wealth simulation, growth of $1,000,000 with 6% annual spending after 10 years



For illustrative purposes only.

25-Year Wealth Simulation	Traditional 60/40	20% Pro Rata
5th Percentile	$49,412	$202,964
25th Percentile	$708,495	$1,015,561
50th Percentile	**$1,387,130**	**$1,877,501**
75th Percentile	$2,324,223	$3,102,725
90th Percentile	$4,298,258	$5,883,596

For discussion purposes only. Future results are not guaranteed and loss of principal may occur.

	Traditional 60/40		20% Pro Rata	
Target	**Year 10**	**Year 25**	**Year 10**	**Year 25**
Target $0 (-100%)	**100.00%**	**96.10%**	**100.00%**	**97.65%**
Target $500,000 (-50%)	100.00%	82.81%	100.00%	89.46%
Target $1,000,000 (0%)	95.32%	63.87%	96.73%	75.57%
Target $1,500,000 (50%)	58.21%	46.24%	66.43%	60.37%
Target $2,000,000 (100%)	20.91%	32.02%	30.08%	46.86%

For discussion purposes only. Future results are not guaranteed and loss of principal may occur. Hypothetical analysis forecasts likelihood that each portfolio will meet or exceed target asset level in 10 and 25 years.

Private equity has added significant value to institutional investors' portfolios over the past quarter century. While PE returns may decline over the coming decade on an absolute basis, the performance spread over public markets is widely expected to continue. This is consistent with the inherent benefits of private equity: private equity firms can pursue longer term investment strategies, private company valuations are generally less expensive than public company valuations, and there is more organic growth in the private markets. In addition, the illiquidity of private equity investments suggests a corresponding premium over more liquid public investments. As a result, adding an allocation to private equity may better position investors to achieve their long-term financial goals.

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END NOTES

1. Institutional Capital Network, Inc. and affiliates ("iCapital" or "we" herein).
2. Volatility reflects the standard deviation of returns for each representative portfolio. Source: Evestment.
3. We evaluated the most recent publicly available CMAs from UBS, Callan, Invesco, JP Morgan, Blackrock and BNY Mellon as of March 2020.
4. Hamilton Lane has been advising institutional investors on the private markets for almost 30 years and today has over $415 billion in advisory assets and $65 billion in discretionary assets.

WEALTH SIMULATION DISCLOSURES

The wealth simulation was created with MPI Stylus Pro with data provided by Morningstar. Aladdin Portfolio Risk Analysis: Charts and graphs provided herein are for illustrative purposes only. Neither BlackRock nor the Aladdin portfolio risk model can predict a portfolio's risk of loss due to, among other things, changing market conditions or other unanticipated circumstances. The Aladdin portfolio risk model is based purely on assumptions using available data and any of its predictions are subject to change. The Aladdin portfolio risk model is subject to significant limitations. This model is not intended to provide, and should not be relied upon for investment, accounting, legal or tax advice, or used with any third-parties. Equity and fixed income characteristics and allocations are for informational purposes only. Such characteristics and allocations are not intended to be predictions or projections of any portfolio's performance. Diversification does not assure a profit nor does it protect against loss of principal. The allocation of a portfolio may differ from the illustrations herein and there is no guarantee that the same level of diversification will be achieved. Each portfolio's allocation and targets depend on a variety of factors, including prevailing market conditions and investment availability. There is no guarantee that the allocations of the alternate portfolio show herein will be achieved.

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