INVESTMENT
PERSPECTIVES

CapitalDynamics
TRULY INVESTED.

OCTOBER 2020

INCORPORATING PRIVATE EQUITY IN MULTI-ASSET PORTFOLIOS

I. ASSET CLASS CHARACTERISTICS

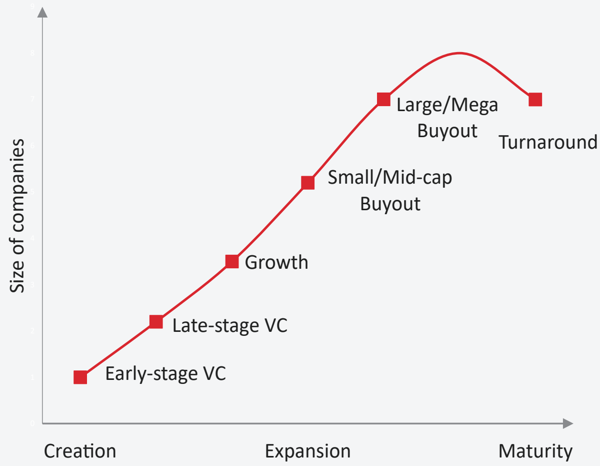
Private equity ("PE") can be broadly defined as investment in non-publicly traded companies. Private equity invests across the entire spectrum of a company's life cycle, starting from start-ups to multi-billion dollar revenue-generating companies across various strategies.

Venture investments are made into earlier stage companies (**Figure 1**) that have potentially lucrative ideas—sometimes there is a product in design (or "beta" mode) in need of full-fledged support from early-stage venture capital ("VC") investors. As start-ups develop and grow, they require additional capital for further expansion provided by late-stage venture investors and growth capital investors. Buyout investments are made into mature companies that are in need of capital to further advance their growth or reinvigorate and turn around their businesses.

Private equity is often categorized as an "alternative investment", and is typically part of an investor's balanced investment portfolio, alongside stocks and bonds. Much of the investing done in the private equity market is by private equity funds. A private equity fund is structured as a limited partnership (**Figure 2**), which is established and managed by the fund manager, also known as the General Partner ("GP"). The GP invests capital raised from investors, known as Limited Partners ("LPs"), typically pension funds, investment funds, endowment funds, insurance companies, banks, family offices / high-net worth individuals and funds of funds. GPs also invest their own money to help ensure an alignment of interests with those of the LPs and have "skin in the game".

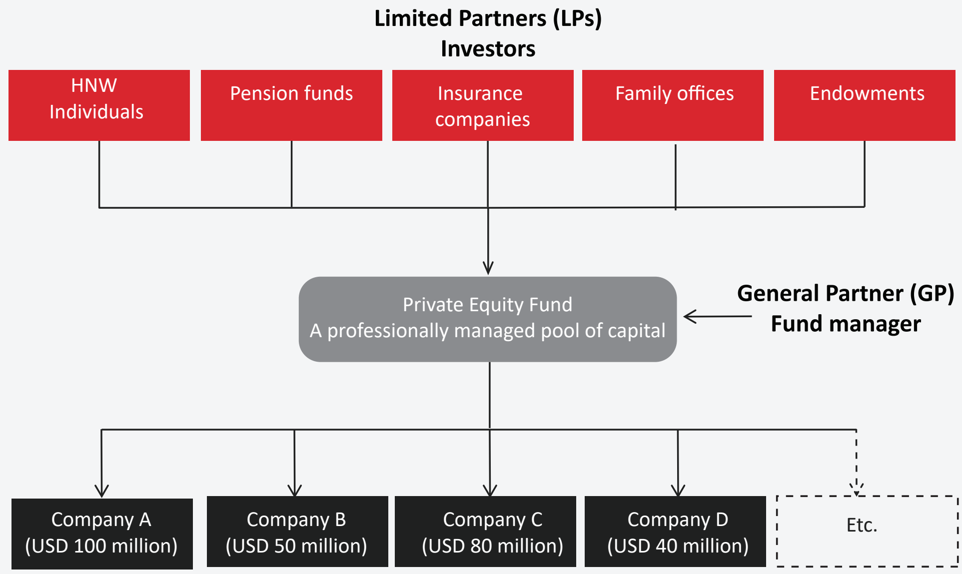
While LPs are passive investors in a fund and help ensure that GPs act in accordance with the fund agreement, known as the Limited Partnership Agreement ("LPA"), the fund manager takes an active role. The manager researches and identifies investment opportunities, undertakes investment due diligence, makes investment decisions and constructs a diversified portfolio of company investments (often more than one dozen and up to one hundred). The GP takes an active role during the investment holding period by setting up a company strategy, supporting the transformation of the business, and often of the management, while monitoring implementation of the strategy as a member of the company's Board. Finally, the GP facilitates the exit process and negotiates the terms of the sale. For its fund management services, the GP receives a management fee. In addition, the GP is incentivized to perform well by the potential of a performance fee, called carried interest ("carry"), which is paid out only if investments are realized at profit, the fund returned invested capital and some predefined rate of return ("preferred return") to LPs.

FIGURE 1: PRIVATE EQUITY INVESTS ACROSS DIFFERENT STAGES OF A COMPANY'S LIFECYCLE



Source: Capital Dynamics. For illustrative purpose only.

FIGURE 2: WHAT IS A PRIVATE EQUITY FUND



Source: Capital Dynamics. For illustrative purpose only.

There are three key features that characterize private equity:

1. **The most activist form of investing**: In contrast with publicly-listed companies, which can often have thousands of shareholders and a remote influence on companies operations and strategy, private equity managers, often as controlling shareholders, are actively involved and work together with the management team to enhance operations and value creation in the business.
2. **Illiquidity**: Investments in private companies are longer in nature as companies and securities are held for an extended time, typically for three to seven years, with credit investments potentially requiring shorter holdings due to refinancing opportunities. This longer life cycle has the benefit of allowing private equity managers to take a longer-term outlook to value creation (rather than being driven by the public market quarterly reporting cycle). However, it also means that investors in private equity funds commit to a longer investment cycle. This investment cycle has three phases, which can sometimes overlap. First, the investment period when portfolio companies are acquired by the private equity manager. During this phase, capital is called from the limited partners. Second, the maturation period when the companies are improved by the private equity managers in an effort to increase value. Third, the distribution phase when companies are realized and the proceeds are returned to investors. The term of a typical private equity fund (including all three of these cycles) usually lasts ten to twelve years.
3. **Opacity:** Unlike publicly-listed securities, which are traded on exchanges and instantly transacted upon based on publicly available information, private equity investments are made at undisclosed and negotiated terms between sellers and buyers in a resource-intensive transaction process that could last several months. The investments in target companies are made based on non-public information, which is made available by a seller to a private equity manager. For fund investors, information on private equity fund offerings (sometimes limited) is made available only for qualified prospects under the terms of non-disclosure agreements.

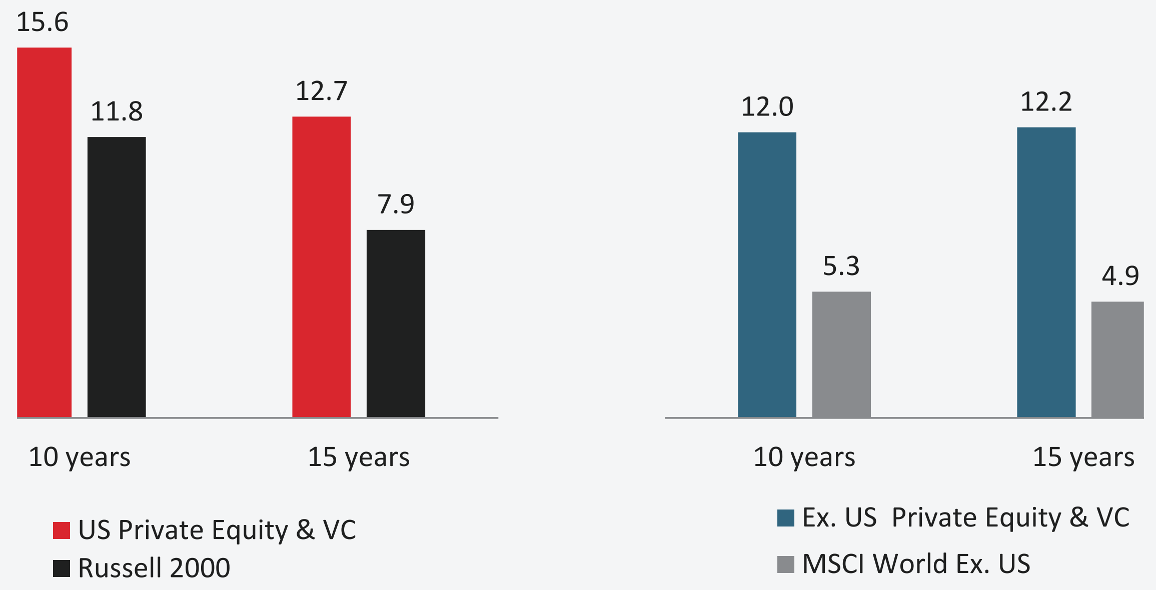
II. WHY INVEST IN PRIVATE EQUITY

The private equity asset characteristics and structural differences offer private equity investors several benefits. Private equity has historically outperformed stock markets since inception of the asset class. Private equity provides investors access to a vast majority of companies in any economy worldwide and an exposure to high-growth sectors underrepresented in public markets.

OUTPERFORMANCE OVER PUBLIC EQUITY

Private equity has historically outperformed stock markets since inception of the asset class. While absolute returns of the asset class varied across cycles, outperformance of private equity has been persistent. Average long-term private equity returns were 300 to 500 basis points above the benchmarks for public equity indices. Over the last 10 and 15 years, US private equity outperformed US small cap companies public equity index Russell 2000 by 380 and 480 basis points, (**Figure 3**) respectively. Private equity funds outside of the US trailed returns of US peers. However, investors investing outside of the US would have been much better investing in private equity compared to stocks.

FIGURE 3: LONG-TERM RETURNS PRIVATE EQUITY VS. PUBLIC EQUITY, %



Source: Cambridge Associates Private Equity & Venture Capital Index and Benchmark Statistics, Q4 2019.
Past performance is not a reliable indicator of future results.

A MUCH GREATER OPPORTUNITY SET

Private equity provides investors access to a vast majority of companies in any economy worldwide. In the US, there were 222,723 companies with over USD 10 million in annual revenue[1]. Only 2% of those companies are listed and available for public investments, meaning that private equity fund managers can source their investments from a much greater reservoir of target companies. Indeed, investors had exposure through private equity and venture funds to about 26,000 companies in the US, or six times the amount of companies available in the US public market universe. Moreover, the opportunity set for investors (**Figures 4,5**) has been steadily shrinking in public markets since its peak in 1996 and almost halved to about 4,563 companies recently as fewer initial public offerings ("IPOs") were made, particularly by private equity / venture capital investors, and some companies were taken over by private equity funds or acquired by private equity-backed companies. As a result, the private equity market grew at a much stronger rate than public markets, with assets under management increasing from USD 755 billion in 2003 to over USD 5 trillion[2] – 12.8% annual growth compared to 6.8% for global capitalization of all publicly traded stocks[3]. The growth in private equity markets was primarily driven by increased allocation by institutional investors to private equity, the emergence of new investors, such as sovereign wealth funds and high-net worth individuals, and longer holding periods for particularly attractive venture–backed companies.

FIGURE 4: NUMBER OF LISTED COMPANIES IN THE US

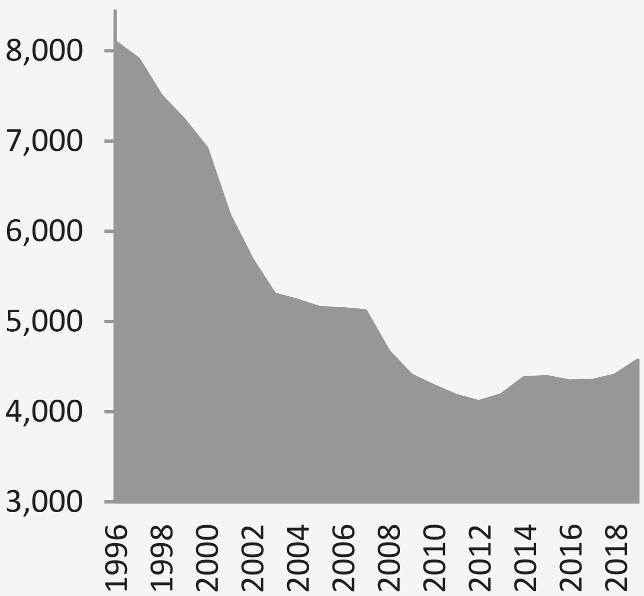
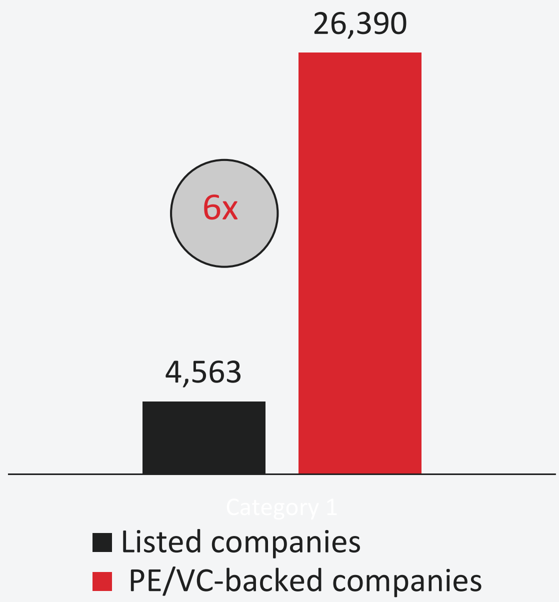


FIGURE 5: US INVESTABLE UNIVERSE: PRIVATE VS PUBLIC



Source: World Bank, The World Federation of Exchanges, Pitchbook for private equity data.

[1] HTTPS://WWW.NAICS.COM/BUSINESS-LISTS/COUNTS-BY-COMPANY-SIZE/

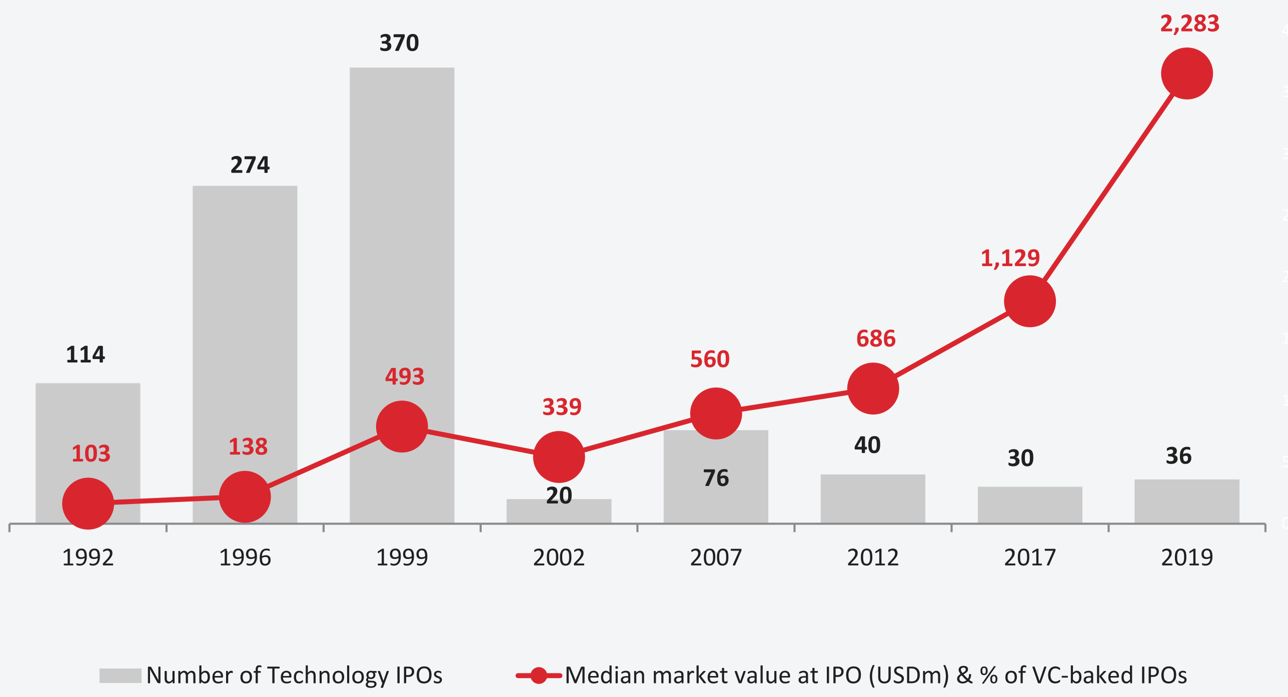
[2] PREQIN, DATA AS OF DECEMBER 31, 2019 RETRIEVED ON OCTOBER 12,2020.

[3] BLOOMBERG, AS OF OCTOBER 12, 2020.

EXPOSURE TO HIGH GROWTH

Capital markets research from J.P. Morgan concluded that sectors with the highest e-commerce intensity showed the strongest revenue and margin growth rates. That said, Russell 2000 index sector exposure was skewed towards sectors with lower e-commerce intensity, such as Financials and Industrials[4]. Therefore, we believe investors seeking exposure to the high-growth Technology sector which consists of internet-related companies in information and communications industries have to build their access through private markets. The Technology sector has been a key of focus for US venture funds for decades, while US buyout funds investments in Technology companies have continuously been trending upwards post-Global Financial Crisis and advanced to the sector with the highest number of concluded deals in the last three years[5]. **Figure 6** shows the IPOs of new technology companies dried up since 2000, with stock market investors missing out on the attractive sector exposure. When public equity investors had the opportunity to invest in the small number of floated companies, they usually did it at higher valuations as PE / VC-backed companies stay private longer nowadays due to availability of private equity capital to build out their businesses. The median valuation of a floated technology company was five times higher than two decades ago, underpinning growth under private ownership.

FIGURE 6: US TECHNOLOGY COMPANY IPOs



Source: University of Florida "Initial Public Offerings: updated statistics", June 2020.

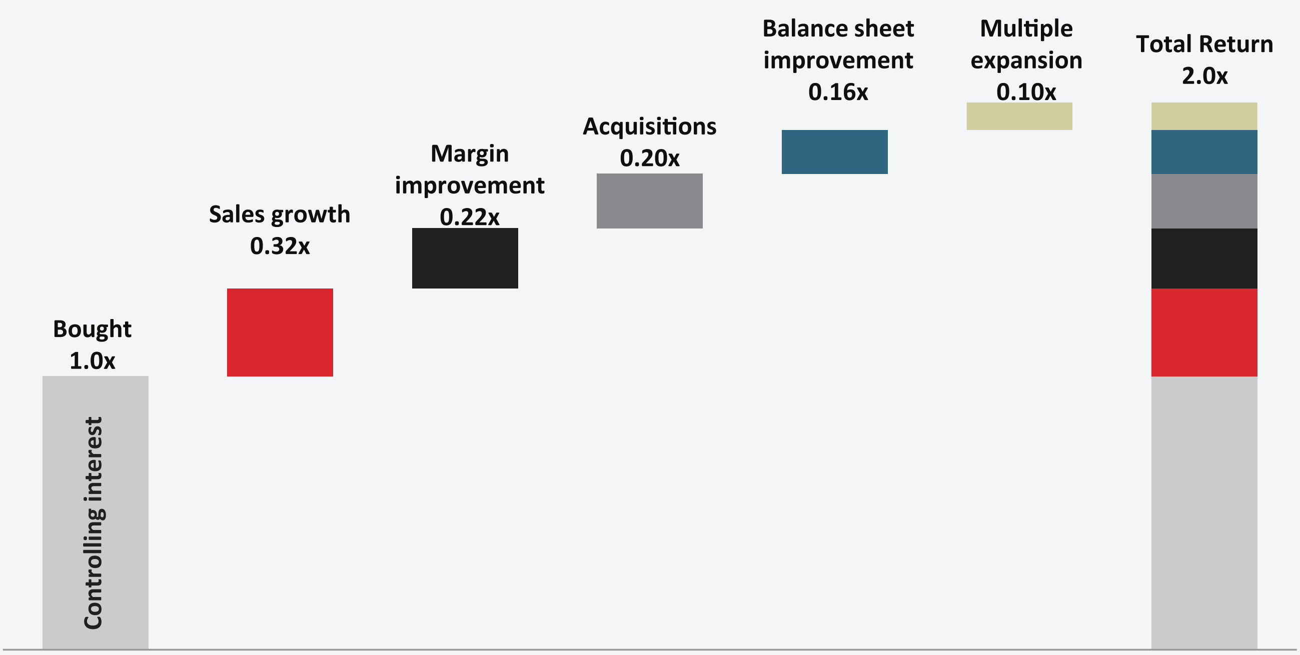
[4] J.P. MORGAN „LONG-TERM CAPITAL MARKET ASSUMPTIONS" 2020.
[5] PREQIN DEAL DATABASE, AS OF SEPTEMBER 30, 2020.

III. HOW PRIVATE EQUITY GENERATES RETURNS

Private equity active ownership can drive growth and operational improvements, and ensure close alignment of interest between the GP and company management. Private equity makes money by making companies more efficient and profitable.

According to our research, what private equity does between buying and selling plays a major role in outperformance[6]. The below value creation bridge (**Figure 7**) shows how a private equity investment can double in value. The major value driver of private equity returns are operational improvements that result in revenue growth and margin improvement. Accretive acquisitions, balance sheet efficiency and expanding valuation of the company can also contribute to the final return. These below improvements take time, which private equity GPs are afforded through the illiquid nature of the asset class (the illiquidity premium). While public companies are held to quarterly reporting and earnings, therefore working towards short-term goals, private equity managers are able to make patient improvements that typically outperform in the long run.

FIGURE 7: PRIVATE EQUITY VALUE CREATION BRIDGE



Source: Capital Dynamics. For illustrative purpose only.

[6] CAPITAL DYNAMICS RESEARCH STUDY "VALUE CREATION IN PRIVATE EQUITY" (2018).

Furthermore, private equity firms obtain unique access to internal information of investment targets while conducting due diligence and exploit inefficiencies in private markets.

Moreover, the much larger universe of private companies compared with quoted companies provides more investment opportunities. Private equity funds are building portfolios of unique investments unlike in public markets where various investment funds can have exposure to the same company. Enhanced investment selection, exit timing and negotiation skills of private equity managers help create outperformance over public equity. Private equity outperformance over public equities is driven by the fundamental difference in investment models as summarized below in **Figure 9**. These fundamental differences suggest that a continuation of such outperformance can be reasonably expected.

FIGURE 9: DIFFERENCES IN THE INVESTMENT MODEL: PUBLIC VS PRIVATE

Public Equity	Private Equity
Buying or selling only possible action	Active ownership of investment
Information limited to regulatory demands	Full access to information
No additional value	Value added on multiple levers
Principal-agent conflict	Alignment of interests
More efficient markets	Less efficient markets

Source: Capital Dynamics.

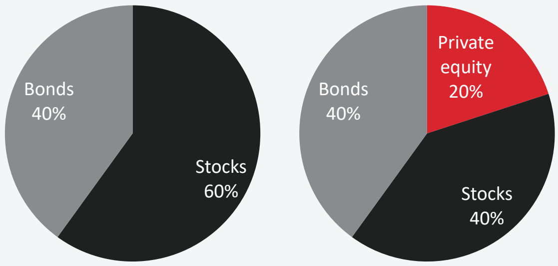
As private equity returns are largely driven by private equity managers' skills, the variance in returns are greater in private equity than in other asset classes. The performance difference between top and bottom quartile private equity funds is significant and can be as high as 20%, far wider than for public equity and bond investment funds, which is typically between 3% to 5% and 2% to 3% respectively over the long term. Rigorous manager evaluation and fund selection skills are therefore critical for private equity investors as overall private equity portfolio returns may depend on commitments to well-performing managers. Access to such private equity managers is equally important, and requires strong industry relationships, scale and the ability to commit capital consistently over time.

IV. HOW ADDING PRIVATE EQUITY CAN IMPROVE RETURNS

The role of private equity has evolved for investors over the past four decades. Once considered a niche investment, except for large endowments and pension funds, allocations to private equity considerably increased for a broader investor group.

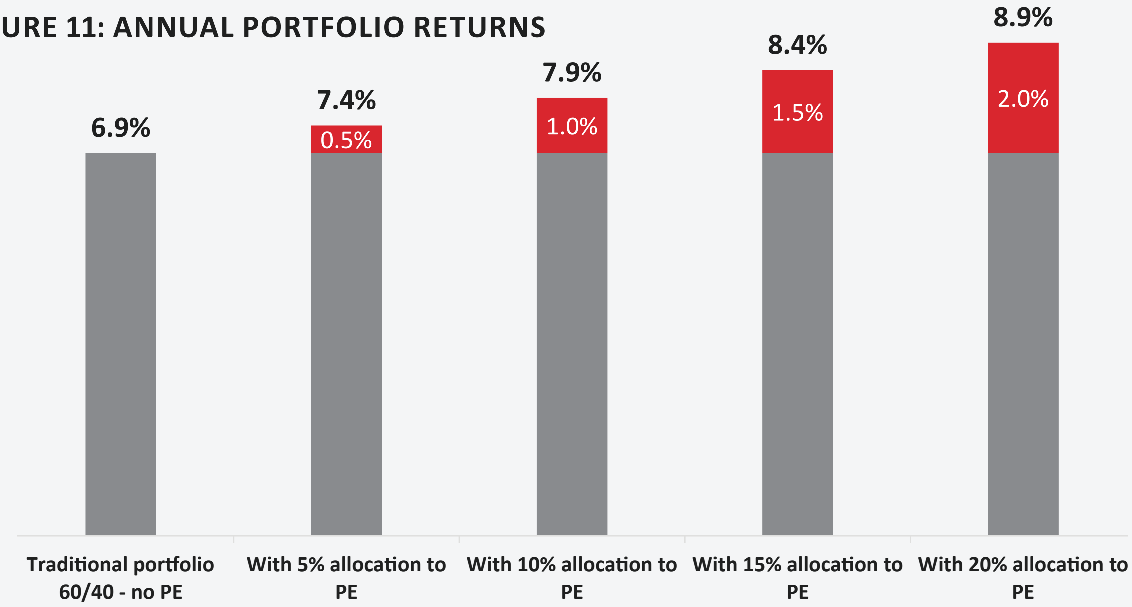
Meanwhile, return expectations decreased for most asset classes in the low interest environment, particularly for bonds. Private equity maintained strong levels of performance and outperformance. Therefore, adding private equity to investors' portfolios can enhance overall performance. **Figure 10** shows an example of a traditional portfolio consisting of 60% stocks and 40% bonds and a portfolio with a private equity exposure. **Figure 11** shows how a simulated portfolio of stocks (MSCI World Total Return Index) and corporate bonds (Barclays Global-Aggregate Total Return Index) performed with additions of private equity (Cambridge Associates PE & VC cash flows) over 30 years from 1990 until 2019. The total portfolio returns have been measured with various long-term target allocations to private equity. As the results show, by adding private equity, investors can achieve higher portfolio returns. On average, every 5 percentage point increase in target allocations yielded in 0.5% incremental returns to the portfolio.

FIGURE 10: MULTI-ASSET PORTFOLIO



Source: Capital Dynamics. For illustrative purpose only.

FIGURE 11: ANNUAL PORTFOLIO RETURNS

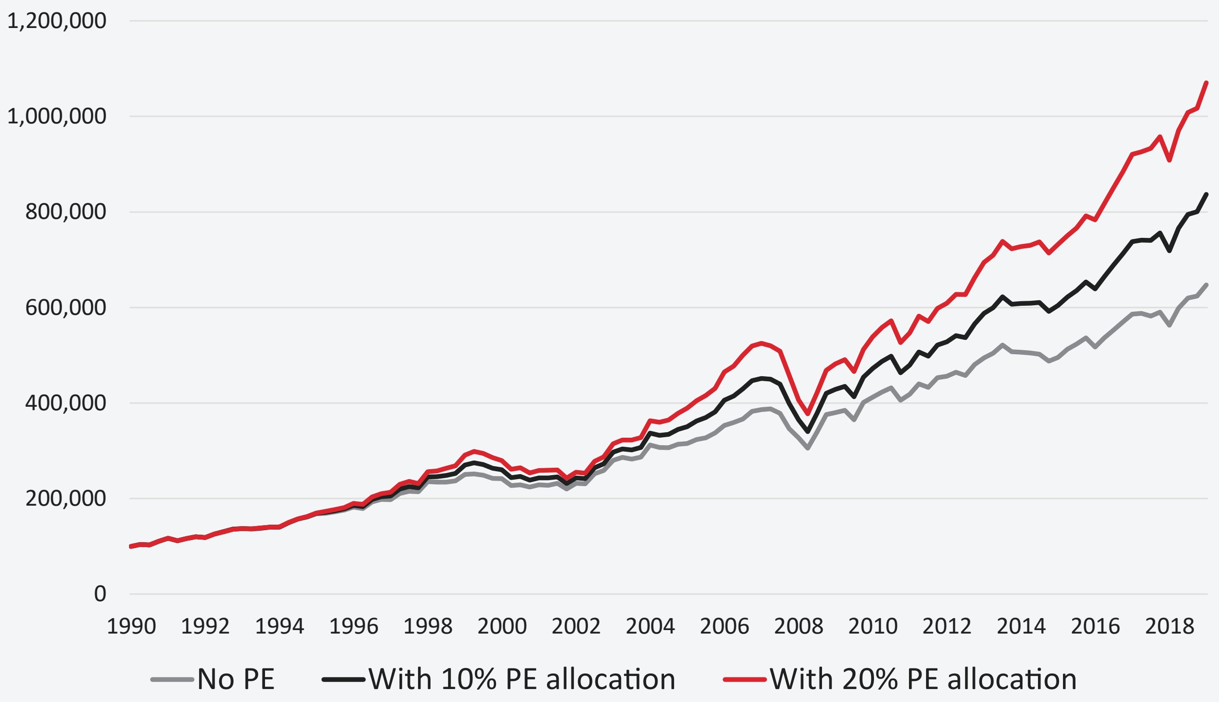


Source: Capital Dynamics. Past performance is not a reliable indicator of future results.

While a 1% increase in annual returns for a 10% target allocation does not appear overly impressive at first glance, cumulative wealth of an investor can be dramatically different over 30 years. **Figure 12** illustrates that if an investor started with USD 100,000 of investment capital in December 1990, with 60% allocated to equities and 40% allocated to bonds, by year-end of 2019, their wealth would have grown to USD 647,000. With a 10% allocation to private equity, investors would have earned USD 190,000 more and with a 20% allocation, the investor would have become a millionaire – wealth would have grown by nearly 11 times to USD 1.1 million. An investor would have an incremental wealth of USD 423,000 compared to a traditional 60 / 40 portfolio.

> **"CUMULATIVE WEALTH OF AN INVESTOR CAN BE DRAMATICALLY DIFFERENT OVER 30 YEARS. WITH 20% ALLOCATION TO PRIVATE EQUITY, AN INVESTOR WOULD HAVE AN INCREMENTAL WEALTH OF USD 423,000 COMPARED TO A TRADITIONAL 60 / 40 PORTFOLIO."**

FIGURE 12: CUMULATIVE WEALTH GROWTH OF A PORTFOLIO WITH AND WITHOUT PRIVATE EQUITY OVER 30 YEARS, USD

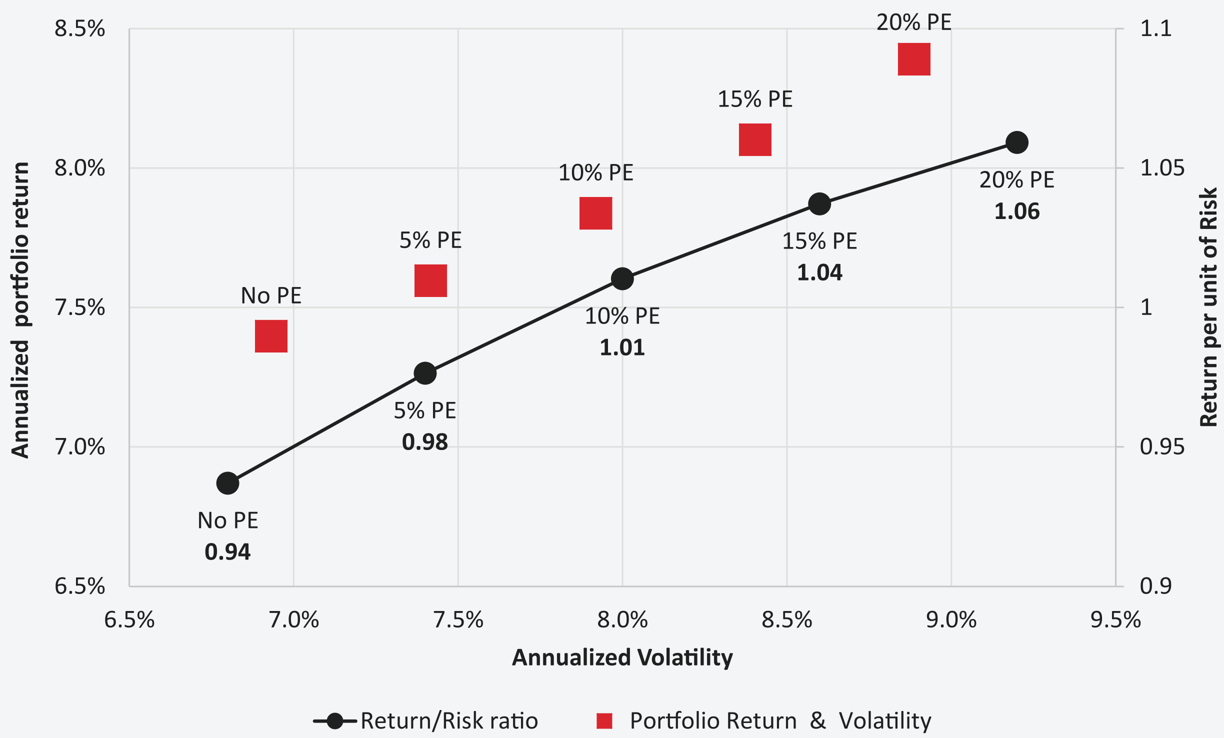


Source: Capital Dynamics. Past performance is not a reliable indicator of future results.

Adding private equity also improves the risk return profile of the portfolio. While portfolio risk increases slightly, the incremental return from adding private equity exceeds the increased volatility. As a result, investors would not only achieve higher absolute returns, but also higher risk-adjusted returns. As shown in **Figure 13**, the return per unit of risk increases from 0.94 for a portfolio without private equity to 1.06 for a portfolio with a 20% allocation to private equity.

In addition, private equity can help to further diversify an overall investment portfolio for two reasons. First, privately held companies (particularly smaller ones in the lower and mid-market) can look and feel very differently from publicly traded companies. As a result, many are less exposed to global market forces, currency risks, and are driven more by factors which are idiosyncratic to the local market and industry in which they operate. Second, an individual investor's private fund returns are less impacted by market-timing because money cannot be quickly put in and pulled out of the market. This reduces the risk that investors will remove money from the market at inopportune times – particularly after market corrections, which can represent some of the most compelling buying opportunities.

FIGURE 13: PORTFOLIO RISK AND RETURN



Source: Capital Dynamics. Past performance is not a reliable indicator of future results.

V. HOW TO INVEST IN PRIVATE EQUITY

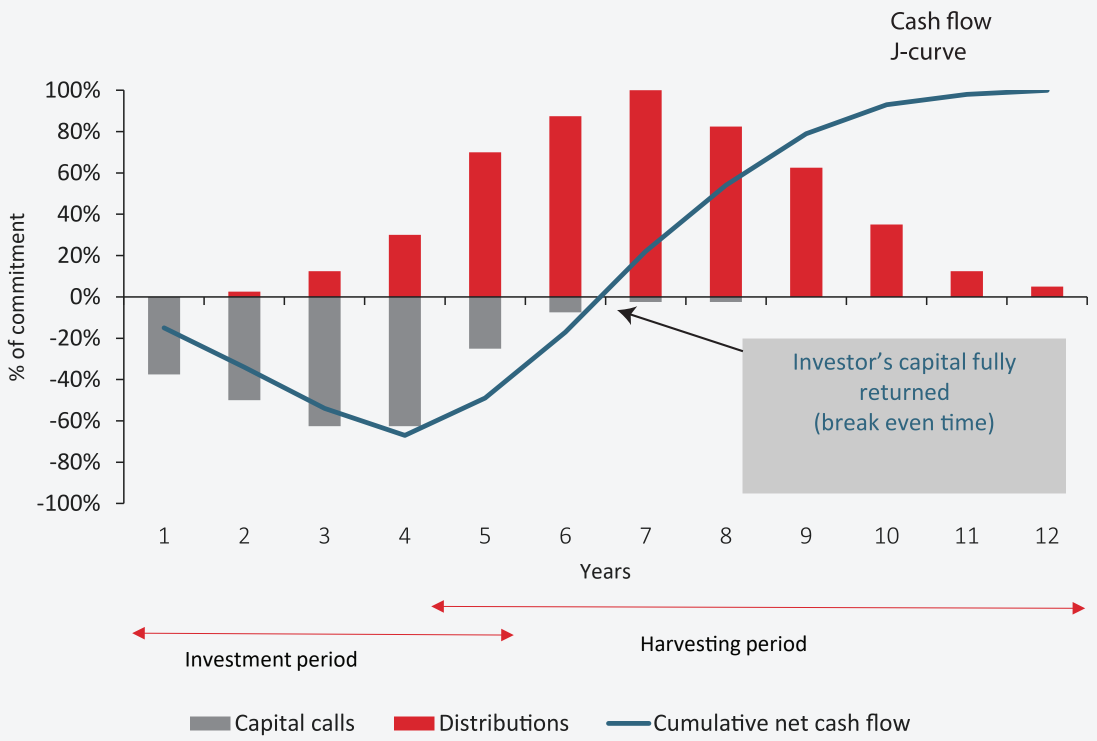
Investing in private equity is different to public equity investing. While all allocated capital is invested instantly in public markets, in private equity investors make a commitment to a fund that invests the allocated capital typically over five investment years.

The company investments are made by drawing cash from investors up to a committed amount. As investments are realized, investors receive distributions from the fund. Capital calls and distributions are made by the private equity fund manager and investors do not have control over timing of such cash flows. Therefore, liquidity management is important for an investor. Capital calls are usually issued to investors two weeks in advance, while distributions are made with a few days' notice.

Historically, investors received all invested capital back after six to seven years, as shown in **Figure 14**. If another fund commitment is made, the distributions from the older funds can finance capital calls for the younger fund commitments. A well-diversified and mature fund-of-funds portfolio can become self-funding.

The example below shows the net cash flows of a fund which takes a shape of the J-curve due to

FIGURE 14: PRIVATE EQUITY FUND CASH FLOWS



Source: Capital Dynamics. Cash flows and returns above are hypothetical, for illustrative purpose only.

negative net cash flows during the investment period. The term J-curve also refers to a return of a particular fund plotted over time since inception of such fund. Returns of a fund can initially be negative as investments are held at cost until portfolio companies build value while fund expenses and management fees weigh on returns. As an example, **Figure 15** shows the quarterly net pooled performance, measured by net Internal Rate of Return ("IRR") for a sample of 224 private equity funds from Cambridge Associates database pursuing buyout, growth and venture capital strategies formed in same year. Net IRR was negative for this particular sample during six quarters. Investments across many years help smooth the J-curve while building investors' portfolios. Some strategies can help mitigate or avoid J-curve altogether.

In order to reach the target allocation, investors have to continuously commit a certain amount each year as not all committed capital is drawn at the beginning of the commitment. Furthermore, as assets are realized, the fund net asset value ("NAV") declines, thereby reducing the actual investor allocation.

Therefore, a constant commitment pace is crucial for three key reasons:

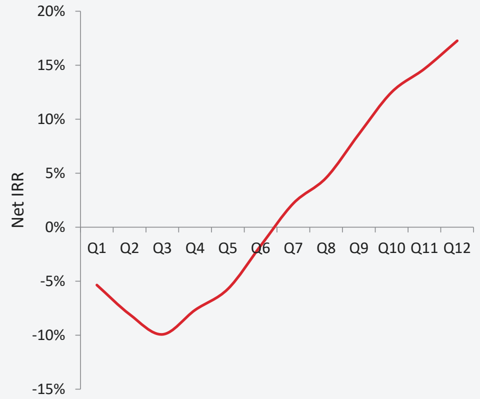
1. To reach and maintain the target allocation

2. To difersify among funds and to ensure exposure during the most attractive vintage years for private equity

3. To create a self-funding portfolio as the distributions from older private equity fund commitments can be used to fund investments in new private equity funds.

According to Capital Dynamics' investment pacing model, an investor may need to commit about 25% to 30% each year of the targeted allocation percentage to reach the target allocation and maintain it over the years. The allocation to private equity has to be aligned with an investor's personal investment horizon, goals and flexibility. Importantly, the allocation to private equity has to be meaningful to make a difference to the investor's wealth.

FIGURE 15: PERFORMANCE J-CURVE



Source: Capital Dynamics. Past performance is not a reliable indicator of future results.

CONCLUSION

Private equity is a diverse asset class encompassing strategies that benefit from various economic environments, and provides access to new and growing industries and companies long before they become public. A large spectrum of products and services is available for qualified individual investors who have a long-term investment horizon and seek exposure to the asset class that has demonstrated outperformance and has a potential to improve portfolio returns and diversification.

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Capital Dynamics is an independent global asset management firm focusing on private assets including private equity, private credit, and clean energy infrastructure. Capital Dynamics offers a diversified range of tailored offerings and customized solutions for a broad, global client base, including corporations, family offices, foundations and endowments, high net worth individuals, pension funds and others. The firm oversees more than USD 17 billion in assets under management and advisement[7]. Capital Dynamics is distinguished by its deep and sustained partnerships with clients, a culture that attracts entrepreneurial thought leaders and a commitment to providing innovative ideas and solutions for its clients.

Capital Dynamics' roots go back to 1988, the year our predecessor (Westport Private Equity) was founded in the UK. Our headquarters were established in Zug, Switzerland in 1999. The firmemploys approximately 160 professionals globally and maintains offices in New York, London, Paris, Tokyo, Hong Kong, San Francisco, Munich, Milan, Birmingham, Dubai and Seoul.

In 2020, Capital Dynamics was awarded the highest rating (A+) from the Principles for Responsible Investment for (i) Strategy & Corporate Governance, (ii) private equity strategy, and (iii) clean energy infrastructure strategy. For more information, please visit: www.capdyn.com

[7] As of September 30, 2020.

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