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White Paper No. 40: Private Equity Investing

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Once an investor decides to allocate capital to private equity, the first question is: "How should I go about it?" Properly structured, private equity can be the most rewarding sector of an investment portfolio. Unfortunately, most investors in private equity don't earn returns anywhere near what they need to compensate for the risks they have taken. The purpose of this paper is to summarize the private equity opportunity, identify the key risks, and outline a strategy for investing in private equity sensibly and profitably. This paper is designed to be useful to investors who are looking to put less than $50 million into a diversified private equity portfolio.

❖ An Introduction to Private Equity – The Asset Class

Private equity investing is the business of investing in privately-held companies or those that are taken private in the process. For most individual investors this is a prohibitively difficult and risky business. A more sensible channel is to invest in private equity funds (that is, limited partnerships) alongside a seasoned private equity investment firm. The present day private equity market emerged in the 1970s when private equity firms formed partnerships to provide private financing to start-up companies. These partnerships are raised by private equity firms who act as the *general partner* (GP). Investors who provide the capital are known as *limited partners* (LPs). The date of the first investment into a company is known as the *vintage year*. Companies into which the fund invests will be in various phases of their own lives, giving rise to styles of investing. Private equity funds generally concentrate on a particular style of investing defined by the stage of development of the companies into which they invest.

The *stage* of company development represents a range from start-ups to large, mature companies. A private equity fund will generally focus its investing in a particular segment along this range of maturity. Start-up companies are generally seeded by individual angel investors or venture capital firms. Once a firm has developed its business plan, product or service, but is pre-revenue, it is considered to be *early-stage* by venture capital firms. As these companies mature, produce revenues and develop a customer base, they are considered *growth equity* or *late stage* venture capital candidates. More mature, sometime profitable and larger companies often become the interest of buyout funds. Buyout funds leverage their acquisitions of private companies with debt based on the cash flow characteristics of the underlying operating companies. Buyout firms will generally concentrate either on small, middle or large capitalization companies, sometimes a combination of two. A private equity firm's commitment to a stage will be based on the skill sets, history and experience of the individuals in the firm. In addition to stage investing, there are "other" styles, including mezzanine debt investing, distressed investing, secondary investing, etc.

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Lastly, private equity is a global asset class. Key drivers of opportunities in private equity in Europe, Asia and the US differ as we will discuss later, but diversification into non-US markets is every bit as important as stage and vintage year diversification.

Venture investing and buyout investing represent a riskier means of gaining exposure to equities than the public markets. The high leverage in buyout transactions and the early-stage nature of venture investing create greater risk and the investor has the right to expect materially higher investment returns as a result. A private equity firm's goal is to invest in a private company and then sell its interest for a profit. This realization of the investment is known as the "exit" and generally occurs as the result of a sale, public floating of the stock or merger with another firm. The correlation of returns to the public markets varies with the stages of investment but is fairly high given the importance of IPOs as exit channels and the public market impact on corporate valuations in merger and acquisition activity. Overall, historic private equity returns represent a compelling opportunity for investors, and argue for an allocation to this asset class in a well-diversified investment program. As we will see, the aggregate returns of the asset class over a long period of time are in excess of the public markets. In this paper we examine these return characteristics, their disparity and persistence amongst various fund investors, and, various other important considerations to investing in private equity.

❖ The Investment

Once an investor decides to allocate to private equity, the next question is "How?" There are several important challenges associated with realizing the historic high returns of the private equity asset class given the corresponding illiquidity, and the sometimes very confusing range of implementation alternatives available. Important considerations include cyclicality, the disparity of returns amongst upper, median and lower quartile performing private equity firms, stages and vintage years, the importance of identifying and gaining access to top-tier managers, terms and conditions, conflicts of interest and the difficulty of sorting through all of this as a 'relatively' small investor. A successful program will be long-term in nature, diversified across geography, stages and vintage years, and have access to the best managers in the business. For other than the largest institutional investors, this turns out to be a rather tall order.

Access to the top-tier funds has always been difficult. In the venture capital and small to mid-cap buyout market it is extremely difficult globally. In the US the equivalent of 'irrational exuberance' in late 1990's venture capital created an overhang of capital that took several years to absorb. The consequence was that the better funds downsized, coming back to the market less frequently making

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access all the more difficult. A similar situation unfolded in the buyout market as abundant liquidity facilitated massive fundraising and transaction activity in 2004-7. The collapse of the credit markets in 2008 brought activity to a near standstill, leaving a worrisome overhang of unused capital and problem credits associated with deals, particularly in the large cap market. As we entered 2013, the buyout market had largely succeeded in restructuring a 'wall of debt' created in 2005-8 but is left with several hundred million dollars in unused capital that, if all put to work before funds must contractually release uncommitted capital back to investors, will have a difficult time generating meaningful returns.

❖ Private Equity Returns

Private equity returns run in cycles and are strongly influenced by market conditions, credit markets, company valuations, liquidity for exits, merger and acquisition activity, and other factors, including the amount of money looking for exposure to the asset class. Private equity investing should be undertaken only with the long term in mind, i.e., investors should commit to a long-term plan of continuous investment in order to bridge the inevitable challenging return years.

In a mere 12-year span ending December 2010, we have been witness to the unpredictability of events affecting not only activity and returns, but investor psychology. In the late 1990s, investor enthusiasm for venture investing in emerging technologies led to the now famous bubble, which burst dramatically in 2000. This left a significant overhang of excess capital and well-remembered losses. It also gave rise to an active secondary market in relieving illiquid investors of unwanted commitments. Returns stagnated for years as the industry retrenched. Events of 2001 depressed the equity markets further, placing additional pressures on exits and therefore returns. As the markets languished there was continued investing by smaller buyout firms. What was unclear at the time was these investments in 2003-5 would prove to be extremely successful later in the decade. As liquidity built in the economies of 2005-7, the large cap buyout market became extremely active and for a short period returns were spectacular. In addition, record amounts of capital were raised. Of course when the credit markets collapsed in 2008 this party came to a quick end, leaving much downsizing to be done. Meanwhile, the secondary and distressed sectors took full flight. Venture continued to downsize late in the decade producing minimal returns. As the dust settled on these events, several themes played out into 2013. Fundraising globally became very difficult and led to a market of 'haves and have nots', i.e. seasoned and successful GPs continued to raise money but others struggled. The venture industry continued to contract in size and returns of capital were sparse. Large buyout managers were confronted with a 'wall of debt' created in the 2005-8 frenzy, due for repayment beginning in 2013. Additionally, a large overhang of unused capital raised in this period

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gave rise to the question of how it would be put to work. Asia and other rapid growth emerging markets began to slow, in part due to the contractions in Europe.

So, how do you see all of this coming? You don't. Investing in this asset class requires great discipline and commitment. Realizing consistent returns over a long time frame requires patience and restraint, investing deliberately with top tier firms that have a history of success.

Asia and Europe were not immune to events that took place in the US as most of the calamities became global. Europe is mainly a buyout market and experienced similar swings as the US. Asia is dominantly a growth equity market, and while public equity markets had an effect on activity and returns, the credit markets were much less of an issue. In reality, Asia snapped back from the 2008 meltdown much faster than the rest of the world.

❖ Return Characteristics

Returns vary between private equity stages and styles. Historically early stage venture outperformed late stage venture. This can be explained by the difference in risk undertaken between the stages. Early stage companies are pre-revenue and the winners can provide huge payoffs. On the other hand, failures are plentiful, so access to the most experienced and successful investor is critical. In sustained periods of pressure on the sector's returns, e.g. the past decade, early stage v. later stage returns can trade places. During sustained periods of weak IPO markets, later stage returns can eclipse those of early stage managers by taking advantage of the M&A market for more mature entities. In any event, venture returns generally are very sporadic and like any narrowly focused strategy, they tend to be quite volatile with rewards occurring unevenly.

In buyouts, over longer periods small and mid-cap outperform large and mega-cap. The larger end of the sector utilizes more debt leverage and outperformance is therefore somewhat dependent on credit cycles. Large/mega-cap performance shows relatively short bursts of outperformance whereas the smaller end of the market is generally more dependent on operational improvement over time, generating somewhat steadier returns. It is dangerous to compare venture and buyout returns at any point in time as a predictive tool for future returns. It is also important to remember that the disparity of returns throughout the sectors is significant and what we are constantly pursuing is the upper quartile of returns. This disparity is discussed shortly.

There are three key return measurements in private equity:

- Internal Rate of Return, or 'IRR'

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- The Multiple Return
- Distributions to Paid in Capital, or 'D/PI'

Any one taken separately is important, the best measurement of progress and success is found in considering all three as one.

The IRR and Multiple are based on realized and unrealized gains at any point in time. As a result they can be influenced by the manager's approach…conservative or less so…at revaluing companies during the life of a fund. While the accounting profession has guidelines here, they are difficult to implement in a uniform manner because of the lack of comparable observations with private companies. The D/PI on the other hand is a comparison of cash distributions to cash invested by the LP.

The IRR represents a discounting of the cash inflows and outflows to provide a percentage return (also referred to as a dollar-weighted return). The faster the returns occur in the life of a fund, the higher the IRR. Many fund managers seek to provide investors with a 20% IRR over time. While this is great, it may not produce important cash returns. The multiple represents the actual or potential cash on cash return. If a combination of realized and unrealized returns amount to 20% of cash invested, then the multiple is expressed as 1.2X. Again, periodic revaluations of portfolio companies have a big impact on both. In the early life of the fund the multiple is likely to be negative, e.g. 0.9X as we will explain in the 'J-curve' discussion.

Suffice it to say, it is a combination of both being strong, say 20% IRR with a multiple of 2.0X+, that we pursue. However, the D/PI is also important, particularly in the early to mid-life of a fund. As that ratio increases in strength we gain confidence that the unrealized portion of the return will actually be realized.

❖ Comparing Private and Public Market Returns

Logically, an investor should receive a premium return from private equity over the public markets in part to serve as compensation for bearing the illiquidity of the investment. Unfortunately, empirical evidence of such a premium is difficult to observe directly as the accepted reporting methodologies for public and private equity returns differ. Public market investments are almost always reported as time weighted returns. In other words, observable monthly or quarterly returns are linked to create a longer-term compound annualized growth rate. Private equity, on the other hand, utilizes a dollar weighted return methodology also known as internal rate of return ('IRR').

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This return methodology is used since accurate monthly or quarterly return data is not generally available for private investments. Time-weighted returns and dollar-weighted returns are not directly comparable. An accepted approach to resolving this dilemma is to recalculate public market returns on a dollar-weighted basis Essentially, the private equity returns are recast by matching the cash flows associated with capital calls and distributions over the life of the private equity fund to the public markets, purchasing and selling identical amounts of the relevant public market index to derive a PME return. Once calculated, a PME of >1.0 represents a premium to the public markets. This methodology was introduced by Kaplan and Shoar in 2005 and is now widely used to compare private equity and public equity performance.

Numerous studies over the years confirm the outperformance of private equity. In the 2013 Harris, Jenkinson, Kaplan study, 'Private Equity Performance: What Do We Know?' they conclude substantial outperformance exists. The study was based on the Burgiss database, which includes detailed cash flow data of 1400 funds covering 1984-2011 ($1 trillion and 70% of all capital raised in the timeframe). The study is extensive but an important summary finding is that median private equity funds' outperformance for buyout and venture capital on a weighted average basis was r roughly 400-500 basis points over the S&P 500 Index. Studies by Gottshalg and Golding ('Finding Alpha' [2009] and 'Finding Alpha 2.0' [2011]) reach a similar conclusion, and there are numerous others, some more extensive than others. Much of the outperformance is explained by three key variables: manager selection, timing of the investment, and, a superior business model. As to the latter, in private equity management has a greater range of options for executing strategy than the typical public company, a better alignment of management and ownership interests and, to a large degree, the ability to time investments and exits. It is important to note that PME analysis is most relevant later in the life of the private equity fund when investments begin to mature and value is realized. In the early years of a fund, when cash is going out, into start-up expenses, fees and initial investments (see 'The Dreaded J-Curve'), and distributions have yet to occur, the PME is not meaningful. It only becomes meaningful after the investment period when the fruits of labor materialize.

❖ Persistence of Returns

When we talk about the importance of "access," we refer to the disparity of returns of upper-quartile performers versus those at the median and those in the bottom quartile. There is an unusually strong persistence of investment returns by individual private equity partnerships. In MIT's detailed research paper, "*Private Equity Performance: Returns, Persistence and Capital Flows*,"

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Steven Kaplan and Antoinette Schoar objectively chronicle the relative success of firms that have raised several successful funds over those that have raised fewer:

> "Returns persist strongly across funds raised by individual private equity partnerships. The returns also improve with partnership experience. Better performing funds are more likely to raise follow-on funds and raise larger funds than funds that perform poorly. Funds started in boom times are less likely to raise follow-on funds, suggesting that these funds subsequently perform worse. Aggregate industry returns are lower following a boom, but most of this effect is driven by the poor performance of new entrants, while the returns of established funds are much less affected by these industry cycles."[1]

It is these firms that are the most difficult to access.

General partners whose funds outperform the industry in one fund are likely to outperform the industry in the next. This is far different from other asset classes, e.g., large-cap equity, where the persistence of performance is evident mainly on the downside. Much of the persistence in private equity returns can be explained by the reputation of the individuals in the firms and their ability to attract the very best entrepreneurs and opportunities. These firms have a rich history of making companies successful. The resulting record of success helps to establish proprietary deal flow. As the MIT paper suggests:

> "…better funds may see and be able to invest in better investments. Second, private equity investors typically provide management or advisory inputs along with capital. If high-quality general partners are a scarce commodity, differences in returns between funds could persist."

The tendency for top-tier private equity funds to generate consistently high returns is well accepted by most institutional investors. As a result, these funds are in high demand and most are all but impossible for private investors to gain access to. "Smaller" investors can, however, obtain access to these top tier managers through well-run funds of funds.

[1] Steven N. Kaplan, Antoinette Schoar, "Private Equity Performance: Returns, Persistence, and Capital Flows," The Journal of Finance 60 (4), 1791–1823 (2005).

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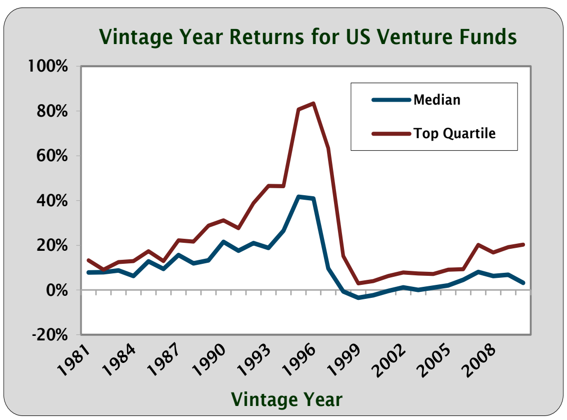
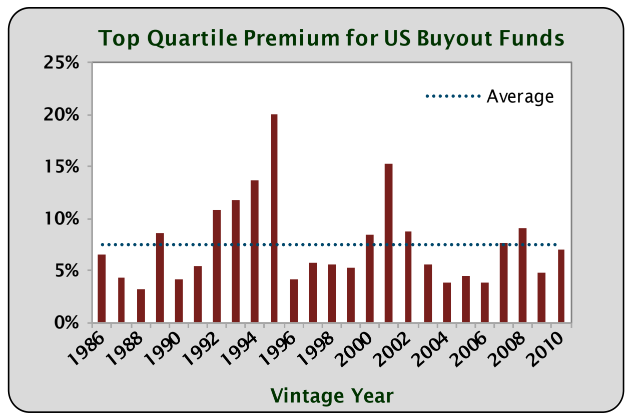
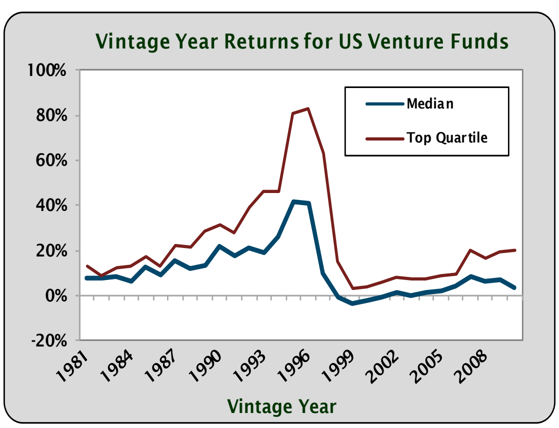
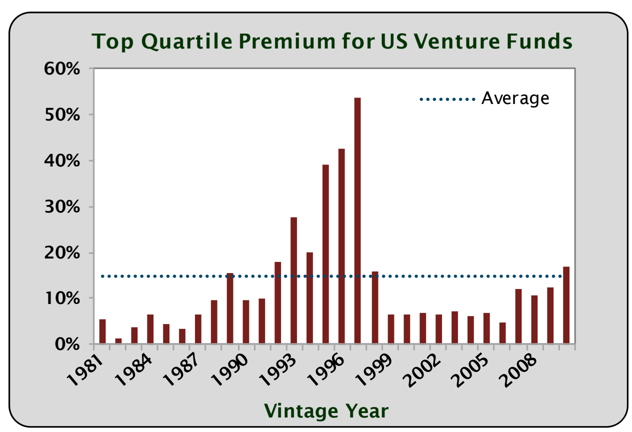
❖ Return Differentials Among Private Equity Firms

The disparity of returns between the upper quartile performers, the median and the bottom quartile performers is dramatic, underscoring the importance of gaining access to the top performers. Note that this disparity, large as it is, is understated due to "survivorship bias," i.e., it does not include the performance of funds that have failed or are no longer in business. Their inclusion would make the dispersion of private equity returns even more dramatic. In the case of performance against the median, buyout's top quartile performers have out-performed by 800 basis points, whereas venture capital's top quartile has bested the median by 1500 basis points. In the investment world, outperformance on this scale is eye-popping, indeed.









Source: Cambridge Associates

As was pointed out in the discussion of persistence of returns, firms that have raised more than one fund tend to outperform those that have raised a lesser number. (Hardly surprising – it's a lot

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easier to raise that second fund if the first one went well.) It is worth noting, however, managers that leverage early successes to raise continuously larger funds can, and often do, fail to persist.

❖ Gaining Exposure to Private Equity

Many sophisticated asset allocation programs will include exposure to private equity. The challenge is to create a durable program, to gain access to managers that have a history of out-performance, and to structure a portfolio that is well diversified across vintage years, geography, and the various stages of company maturity. There is also the challenge of reaching one's target allocation to the asset class given the nature of the investment pattern (see Ramping up to Your Target Allocation, below).

Constraints imposed by the size of an individual's allocation to this asset class are a further complication. A typical allocation for a long-term investor might be 10-20% of the total portfolio. Let's take the case of a $100 million investment portfolio. How would an investor develop a well-diversified portfolio that spans geography, time and style with "only" $10 to $20 million to invest, given the difficulty of getting access to the best managers and their generally high minimums of $5 million and up?

In order to achieve this vintage year and style diversification, patience and persistence are needed. It means making annual commitments of, say, $5 to $10 million in order to reach the $10-20 million target. Since this money will be drawn down over a 4 to 7 year period, reaching the target allocation requires discipline and some luck, given the uncertainty of the draws, the unpredictable return of cash, and the changing size of the total portfolio over time.

We recommend structuring a program comprised of one or more fund of funds and committing to investing with them over a period of years in order to achieve targeted diversification. This allows the investor access to multiple underlying funds whose minimum investments are far greater than the individual's annual commitment would otherwise permit.

❖ The Emergence of Fund of Funds

Private equity funds of funds are a relatively new phenomenon. They have been around since the 1970s but proliferated in the 1990s as individuals and smaller institutions began to demand access to the asset class but were too small and/or inexperienced to gain direct access to the better individual funds. Funds of funds represent an efficient way to quickly build a diversified private equity program. There is a wide array of fund of funds, sponsored by a variety of firms, including banks,

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off-shoots of diversified asset managers and independent firms. Most of the best individual private equity funds have fairly high minimum investment requirements and are often all but closed to new investors. For the investor who will commit, say, $5 million annually, committing to a fund of funds in that amount permits access to multiple funds, vintage years, geographies and styles…at each commitment. This represents an effective alternative to building a direct private equity program. It is a way of delegating portfolio construction and monitoring to a firm with the resources to do it and that possesses the access to top performers that is so important. In selecting funds of funds for our clients, it is important to consider the investor's needs, the nature of the funds of funds' offerings, and each fund of fund's distinctive characteristics. Amongst these important characteristics is their experience, access to top-tier managers, proven relationships with these managers, fund size, the ability to identify top-tier performers, reputation and reasonable fees and terms.

Funds of funds began to proliferate after 1995. Given the disparity of private equity returns across upper quartile managers versus the mean and/or lower quartile managers, it is crucial that the fund of funds have access to the best managers, and be selective when structuring a portfolio of underlying funds. Funds of funds that seek size (for the sake of maximizing the manager's fees) tend to invest in far too many funds, including those without a high likelihood of top tier results. Fund size discipline is important. For example, a $300 million fund of funds is in a position to be selective, investing in 15 to 20 underlying funds over, say, a 2-year period, and therefore not forced to make sub-top-tier investments. The fund of funds needs to be disciplined, waiting for the best managers to return to the market, identifying top tier emerging managers and not pressing to put money to work.

Today the fund of funds industry remains a fraction of the total private equity industry but an important access conduit for the non-institutional investor. Moreover and with the passage of time there are many country and/or sector specific vehicles that provide access for even the most sophisticated investor that might not be otherwise available. Examples include non-US country specific funds of funds, small buyout vehicles in the US and Europe, Latin American and Israeli offerings, early stage venture capital, etc. London based private equity research firm Preqin tracks 238 funds of funds globally and estimates that their share of the total market is less than 10%. However, these funds are an important and reliable source of capital to high performing but smaller primary funds that are hard to otherwise access. Fund of funds have also become a significant factor in the secondary markets due to their close GP relationships, often with great success.

The investment experience of the fund of funds management is critical. The GPs of the fund of funds should have years of market experience, a vested economic interest in the fund aligned with

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those of the LPs, demonstrated manager selection capabilities, and proven relationships with and access to the top-tier managers.

❖ The Varying Characteristics of Funds of Funds

Funds of funds come with differing ownership. Some fund GPs are completely independent, some are sponsored by banks, and some are associated with diversified investment companies. We strongly favor the independent firms although we do selectively recommend some fund of funds sponsored by diversified investment firms. Irrespective of the sponsor, our primary concerns are mainly a fund of fund's access to top-tier managers, the GPs' alignment of interest with the LPs, favorable terms and conditions, and minimization of conflicts of interest.

Funds of funds also differ in their approach to portfolio construction, both as to styles and vintage year commitments. Some concentrate on one stage, e.g., early or late-stage venture capital, large-cap buyout, small to mid-cap buyout, etc. Others are diversified across these and other asset classes. In addition to the US, there are very high quality independent Asian, European and Israel–only funds of funds. For the new investor, we will often recommend starting a program designed to gain access to a range of styles, geographies and vintage year exposures. Many of the better funds of funds will also have access to many of the same underlying managers. To avoid manager overlap it is important to carefully construct the right mix of funds of funds.

Funds of funds vary in their approach to fundraising. The frequency with which a fund of funds comes to the market and the number of underlying funds to which each of their offerings will commit can vary greatly. Typically, the more frequently a fund of funds comes to market with different offerings, the fewer underlying funds it will commit to and its vintage year coverage will be shorter. For those that raise funds less frequently, they will typically commit to a larger number of underlying funds over a greater number of vintage years.

As a client gains experience with private equity investing, Greycourt will typically begin to recommend commitments to more narrowly focused funds of funds in order to enhance the diversification. Such commitments might, for example, focus on early stage venture capital, secondary investment offerings or small to mid-cap buyout, both in the US and elsewhere. These extensions into the sub-sectors can provide exposure to areas that have historically provided higher returns than the norm without creating undue concentration.

The number of investor-friendly funds of funds is extremely limited, particularly those that truly have access to the better private equity funds and who have the infrastructure to adequately perform

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due diligence and monitor and report performance. Many of these funds were typically started by groups of individuals that had extensive experience working with individual funds either at banks, family offices or investing institutions, providing them with continuing access to, and knowledge about, the better and more established firms as well as promising emerging firms.

❖ Europe, Asia, Latin America and Israel

With the maturation of private equity outside the US and the weathering of a few cycles and several global dislocations, a number of quality non-US focused funds of funds have emerged. Many years ago the smaller investor relied on their US-domiciled fund of funds for access to non-US funds and several of them did (and still do) a good job. However, there are now several Europe, Asia, Latin America and Israel specific funds of funds that are in a position to extend access to top performing country specific funds that are difficult for non-local investors to discover and even harder to access.

Europe's economy is the largest in the world measured by GDP. Private equity opportunities exist mainly in buyout as a consequence of European Economic Community integration generating a high level of cross-border merger and acquisition activity. Private equity firms also provide operating value to smaller companies that wish to expand geographically, overcoming a variety of barriers such as language, legal and regulatory. Unlike the US where the 80/20 rule applies to large v. smaller buyout, in Europe it is much closer to 50/50. Europe's private equity investment activity as a percent of its GDP is about half that of the US. As is the case in the US, returns are the highest with small and mid-cap funds, which are the most difficult to identify and access.

Asia contains some of the fastest growing economies and rapidly emerging middle classes, offering a wide range of opportunities in private equity. As the first decade of the 2000s drew to a close, Asia had emerged as a significant source of private capital for investment. From beginning to end, Asia had increased funds raised four-fold to levels competitive with the US and Europe. Moreover, it weathered the 1997 meltdown, 2000 bubble-burst, and the 2008 credit crisis in many ways better than other parts of the world. China is the engine of Asia, but the private equity industry throughout the area is now well defined and mature. Broadly speaking, Asia private equity is not as dependent on debt as it is elsewhere. Opportunities vary from country to country. Buyout is most prevalent in Korea, Japan and Australia. Venture capital, or growth equity, dominates the opportunity in China and other parts of Asia (as it does in India). In nearly all cases there has been a rapid emergence of smaller independent quality funds that are generating the highest returns and predictably are the hardest to access. In the last decade, several high quality and independent but hard to access fund of funds have emerged.

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In Latin America, Brazil is the dominant private equity playground, with Mexico becoming more active. An emerging market and industry, recent activity in the mid-market reflects maturity as investors pursue larger targets.

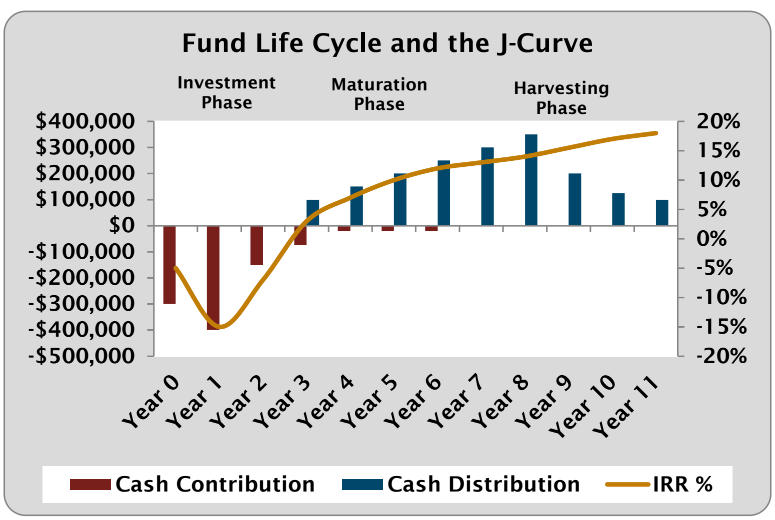
Israel private equity was traditionally a venture capital centric market and remains so today, but with an emerging later stage/buyout component. Key drivers of private equity in Israel include outsized national expenditures on research and development and one of the most highly educated populations in the world. Again, discovery of and access to smaller emerging funds is very difficult.

So, the US remains the largest market with Europe second, generally about 20-30% its size. Asia follows that with Latin America and Israel considerably smaller.

❖ Other Issues – Illiquidity and the Dreaded "J-Curve" Effect

Investors in private equity must have a relatively long investment horizon as returns on commitments do not materialize for several years and the penalty for prematurely seeking to exit a commitment is severe. Most fund partnerships have a twelve year life with the possibility of one to two year extensions thereafter – it's a long time to have your capital tied up if your circumstances change or if you've changed your mind about private equity exposure.

Another reality of investing in private equity is that returns in the early years are almost always negative as money flows out to meet capital calls before returns materialize. This phenomenon is referred to as the "J-Curve" and can be illustrated graphically.



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Note: Assumes $1MM commitment. Actual fund performance is not represented by this graph. For illustrative purposes only, as all numbers are hypothetical.

Investors who are new to private equity investing are often disturbed by the sudden drop in value of their investment, but more experienced investors recognize that the J-Curve is an inevitable part of the private equity investing life cycle. The J-Curve occurs for a number of reasons but the primary drivers include:

- Organizational expenses of private equity partnerships are deducted immediately, so no sooner does an investor meet the first capital call then his or her return immediately turns negative.[2]
- Smart GPs will identify bad investments quickly and write them down or off, while good investments will take time to pay off.
- Most of the better private equity firms follow very conservative policies when writing investments up or down: bad developments cause immediate write-downs, while good developments don't result in write-ups until some event occurs confirming the higher valuation.

❖ Ramping Up to Your Target Allocation

Once again, we return to the art department. In private equity investing, particularly when investing through funds of funds, there is a considerable lag between when commitments are made and when actual capital is invested. Funds of funds commit to underlying private equity partnerships over a two to four year period. In turn, the underlying funds generally invest in operating companies over a three to seven year period. As a result, the investor in a fund of funds can expect that the deployment of capital will occur rather slowly. Compounding this, capital from early investments will begin to be returned as early as the third year and accelerate in years four through seven. As a result and in most cases, less than 70% of an investor's committed capital will ever be outstanding. For this reason, we recommend carefully over-committing to the asset class in order to achieve the desired target exposure. The graph below offers a hypothetical view of cash flows and valuations of a blended fund of funds. It serves to show what might happen, based on the historic pattern of commitments, capital calls and returns with a well-diversified fund of funds:

[2] Another unhappy effect of the J-Curve is that fees, including startup fees, are applied against a smaller asset base, making already-high private equity fees look even more outrageous. This situation will, however, typically correct itself in time.

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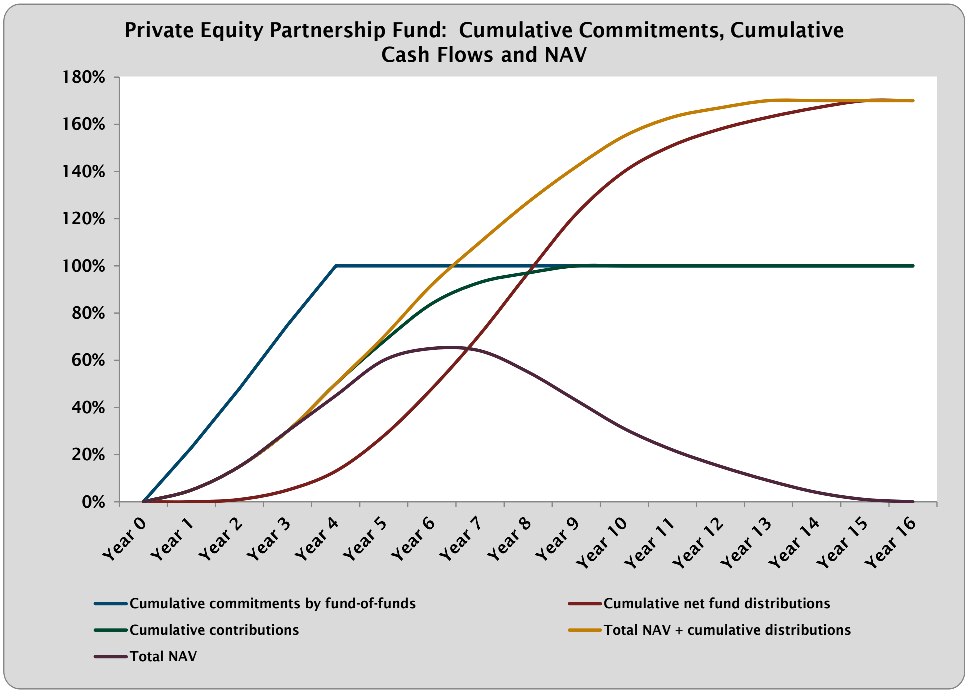

Waterfall analysis is a quantitative approach to thinking about the requirements of repeated commitments to funds of funds in order to reach the target allocation and then sustaining it. The likely pattern of cash flows to and from various funds of funds will help to determine how much and how frequently commitments should be made to achieve a target allocation and how long it will take to get to that target. Taking into consideration various commitment sizes also allows us to project the out of pocket exposure over time.

For example, the following graph shows the yearly required commitments for an investor with $160 million in assets to achieve their desired allocation to private equity (15%.) The goal is to maintain a 15% exposure over time, despite unpredictable returns, varying capital call and distribution schedules, and a broader non-private equity portfolio that compounds over time.

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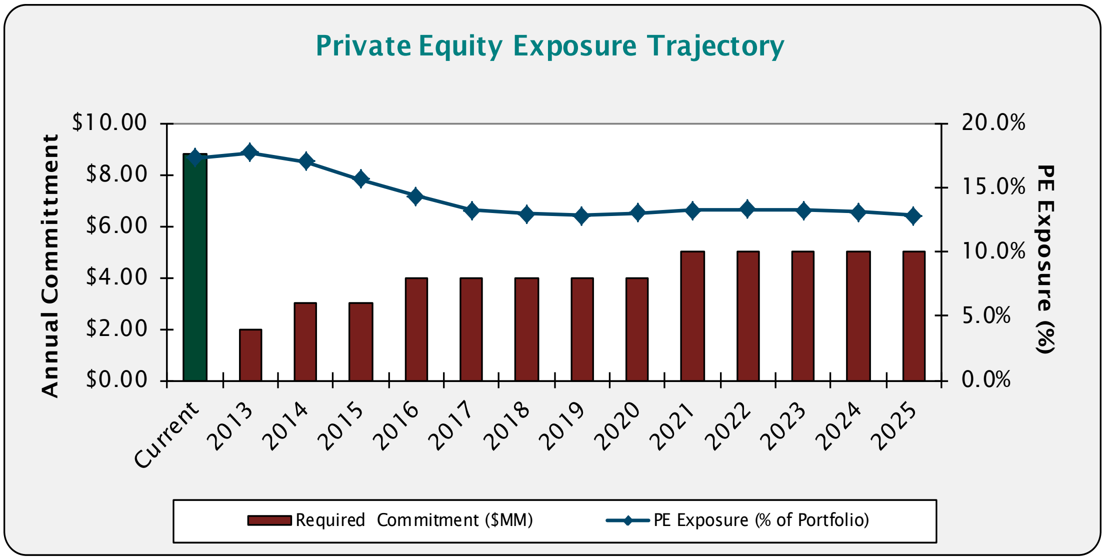

Waterfall analysis is also a useful tool that can pave the way for more detailed planning, such as potential ways to accomplish diversification by strategy, geography and vintage year. However, it is important to remember that a waterfall analysis is only an estimate. Therefore, a private equity program should be re-evaluated regularly throughout the forecast period as the actual investments materialize and market conditions change.

❖ Secondary Offerings

Secondary investing is the business of buying limited partnership interests from investors in funds prior to their maturity. There are several motivating interests for a LP to opt out of his or her commitment during the life of the fund. In some cases the investor's strategy or target allocation might change. The investor might become unable or unwilling to meet his or her commitment. Whatever the cause, the most likely solution is a sale to a third party, e.g., a secondary buyer. In most cases, the general partner will control the sale. In the case of very large sales, an auction may take place among larger secondary funds. At this writing, there are numerous multi-billion dollar secondary funds pursuing this strategy. We think that the auction process tends to drive up prices, thus diluting return potential. But there are a handful of smaller, focused, exclusively secondary funds that deal one-on-one with general partners for smaller interests that have produced high, counter-cyclical returns by raising and disbursing small funds aimed at "bite-sized" investments. The typical approach is to carefully evaluate each partnership interest based on the underlying company

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valuations, thereby lessening risk and accelerating returns. The advantage of these funds is that the money goes out faster, there is little or no "J-Curve" effect and returns occur earlier. Secondary investing, opportunistically, can be an excellent enhancement to a diversified program. It can also serve to accelerate attaining an investor's target allocation to the asset class. (See White Paper No. 45 for an in depth look at secondary investing.)

❖ Terms and Conditions

An investor's interest in a fund of funds is governed by a partnership agreement. While the list of important terms and conditions is lengthy and interrelated, there are several issues that rise to the top. First, is the fee structure fair? Management fees range from 50 to 100 basis points per annum. Often, there is a scaling down of these fees in the latter years of the life of the fund, recognizing the declining work load of the GP. Second, is the GP's interest aligned with those of the LP? This is generally reflected in the profit sharing structure between the two parties and the investment the GP makes in the fund alongside the LP. Profit sharing, or the so-called "carry," is an important indicator of alignment of interests. While the carried interest will serve to reduce returns to the LPs, it serves as an incentive for management to produce higher returns and generally has less of an impact on an LP's overall returns than does the management fee. While it is true that funds of funds represent another layer of fees to the investor, for top-tier funds of funds we consider these fees to be more than offset by the access to the top performers that the best funds of funds typically provide. Lastly, are there any potential conflicts of interest and are there remedies to control them?

❖ A Word about Conflicts of Interest

The best independent funds of funds carefully avoid most conflicts of interest and provide access to the best underlying partnerships. At the other end of the spectrum are funds of funds (often sponsored by banks) where the offering memorandums normally articulate in elaborate detail the potential for conflicts of interest. These include the relationship that bank affiliates, such as investment banking arms, maintain with large buyout firms that they will be investing with, where they have fee relationships. The banks may have a lending or underwriting relationship with the operating companies in the banks' funds. Other affiliate funds of the bank may compete with the bank's funds of funds for investments in underlying funds and/or companies. The banks might be working with firms that will be bought from, or sold to, their own fund. Also, in the event that there is the potential for secondary investing, investors have to be concerned with these conflicts as they relate to affiliated advisors to the transaction and the potential that the seller is a related party. Further, since fund of funds and secondary offerings are "blind pools", it is uncertain whether they

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will be dealing with their own offerings and/or clients. Finally, and perhaps of most concern, the GP of the sponsored fund of fund is usually the ultimate parent firm whose interest lies with all of its subsidiaries, including competing funds, investment bankers, underwriters, asset managers, and the like. There is little or no protection for the LPs in the partnership agreements.

❖ Conclusion

Private equity investing is not without its challenges. However, investors able to commit to illiquid investments like private equity can profit handsomely by buying private investments at discounts to equivalent public securities as a result of most investors unwillingness to tie up their capital for long periods of time. The most important considerations are structure of the investment program (that is, vintage year, geography and stage diversification), access to top-tier performers, and knowledge about emerging private equity firms.

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