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Alternative Investments: A Goals-Based Framework

Anthony B. Davidow, CIMA®

Vice President, Alternative Beta and
Asset Allocation Strategist
Schwab Center for Financial Research™

As an industry, we don't always make it easy for investors to understand the role of a particular type of investment, and consequently, sometimes scare investors away from what they should be embracing. The term *Alternative Investments* is a good example of how industry jargon gets in the way and limits integration of these strategies into investor portfolios. The name alone conjures up fear and confusion.

Are alternative investments just a fancy name for hedge funds? Are they appropriate only for institutions and very wealthy families? What are they the alternative to?

In this paper

This paper will evaluate alternative investments in a goals-based framework. In other words, what are they solving for? We'll take a deeper-dive into the various types of alternative investments and suggest a framework for using them to build goals-based portfolios. This paper will address the following:

- Why is now a good time for alternative investments?
- What is the role of alternative investments?
- How should advisors evaluate strategy and structure?
- How are sophisticated investors using alternatives?
- How can advisors use alternative investments to build goals-based portfolios?

The Appeal of Private Funds

Pros	Cons
Access to some of the top managers in the world	The common '2 and 20' fee structure rewards managers, but may not properly align interest with investors
Access to unique investment opportunities, including illiquid investments	Private funds have 'lock-up' provisions, which make it difficult for investors to access their money
Private fund structure provides managers with greater latitude in investing	Lack of transparency is a major concern for investors
Private funds offer non-correlating returns and diversification benefits	Not all private funds are created equal and it can be difficult to conduct due diligence
Potential for oversized returns	Little or no alpha net-of-fees

Why is now a good time for alternative investments?

We believe that there are three driving factors that should lead to the growth and usage of alternative investment strategies. The first is the market environment. We believe the next 20 years will likely be very different from the past 20 years[1]. There are a series of new market realities that we believe will persist for the foreseeable future:

- Globalization
- Increased bouts of volatility
- Lower bond yields
- Lower expected equity returns

We believe that this market environment is conducive for alternative investments to help dampen volatility and potentially deliver better results than traditional investments. With increasing correlations amongst traditional investments, and lower expected equity returns, advisors need to identify investments that have historically exhibited lower correlations.

Another important development has been with respect to product and structure development. We'll cover this in greater detail - but product innovation has allowed alternative strategies to be offered to investors who were previously unable to invest due to accreditation, access, and minimums. A number of new products have come to market allowing more choices for investors.

An issue that doesn't get a lot of attention is the regulatory changes that made it easier for privately offered funds to market themselves. The JOBS Act (**J**umpstart **O**ur **B**usiness **S**tartups Act) allowed for crowdfunding and eased restrictions on marketing hedge funds and private equity to individual investors. Along with the new product innovations, regulatory relief has increased the availability of these investments for "Main Street" investors.

What are alternative investments?

Alternative investment strategies are non-traditional investments designed to provide a different risk-and-return pattern over time. Often they are able to accomplish this by being long and short securities or segments of the markets. These strategies typically buy stocks, bonds, commodities, and currencies, among other investments. We believe that they should represent a portion of a diversified portfolio and that they can help in dampening clients' overall risk.

For many years, alternative investments were the exclusive domain of institutions and very wealthy families. They were primarily offered as private placements in a limited partnership or limited liability company structure (Private Funds) and offered great appeal to the savviest and most sophisticated investors.

Structural concerns about Madoff-like activities helped usher in the growth of liquid alternative strategies (mutual funds) designed to mimic their hedge fund siblings. Liquid alternatives address

[1]Davidow, Anthony B., "The Case for Global Asset Allocation", May 2017.

The Appeal of Liquid Alternative Investments

Pros	Cons
Offered in a liquid, transparent, and regulated structure	Certain strategies don't fit in a liquid structure
Available to all investors – no accredited investor requirements	Liquid Alternatives may need to retain cash to meet redemptions
Limited use of leverage and derivatives	Limited use of leverage may limit return potential
Frequent pricing and valuations	Pricing is dependent on the underlying investments
No performance fees	Performance may lag because of constraints on leverage and liquidity imposed by the regulatory structure
Tax reporting: 1099 versus K-1	

many of the structural concerns of hedge funds, primarily the lack of transparency and perceived excessive fees.

Liquid Alternatives have served to help *democratize* alternative investments, bringing them to Main Street. Liquid Alternatives grew rapidly from 2008 to 2014, and have plateaued in recent years. Morningstar estimates that there was roughly $210 billion in mutual fund AUM as of April 2017.

Alternative investment strategies also include private equity, private debt, and real assets. We'll cover private equity and debt in greater detail later in this paper. Real assets include timber, real estate, commodities, and other tangible assets. Real assets serve a valuable role in portfolios because of their low correlation to traditional investments and potential for high returns.

The pushback that we most often hear is, why would we allocate to these complex strategies if they haven't been able to outperform the S&P 500? Of course, most of these strategies aren't benchmarked to the S&P 500 and likely won't outperform in a rising bull market. We believe the industry needs to do a better job educating advisors by demystifying these unique investments in a goals-based framework.

Strategy versus Structure

Investors often confuse strategy and structure. Historically, many of the alternative investment strategies have been structured as Private Funds, and as such are often thought of as hedge funds. With the growth of liquid alternative strategies, they are becoming more mainstream allocations, but questions still persist about how to best use them in portfolios. Allow us to offer a quick refresher on strategy versus structure.

In *Democratizing Alternative Investments*[2], we divided a few of the more common strategies into two broad categories: **Directional** and **Non-Correlating.** Directional strategies seek to take advantage of market dislocations and unique investment opportunities. Non-Correlating strategies are designed to help dampen volatility.

Advisors should evaluate the different types of structures that these strategies may be packaged in, including mutual funds, private funds, and registered non-traded funds. There are pros and cons associated with each. While advisors may assume that the liquid alternative structure is preferable, it may come at a cost. Certain types of strategies may indeed fit better in a particular structure.

We believe advisors should consider the structural differences, and determine the right structure and strategy. Many advisors will use liquid and illiquid structures, depending upon the underlying strategy and the needs and preferences of their investors.

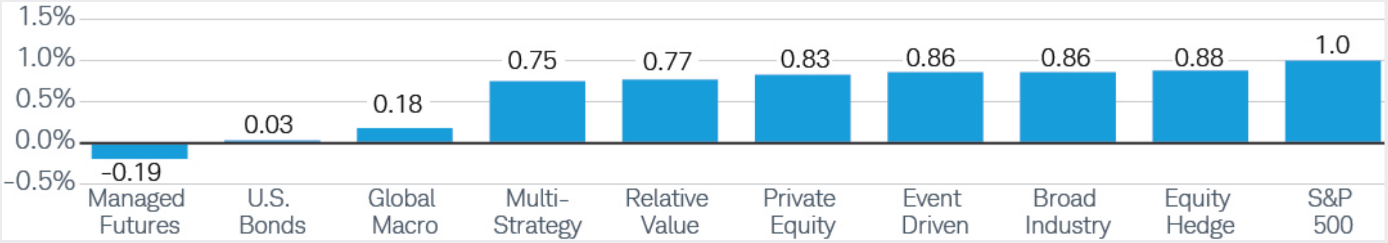
What is the role of alternative investments?

One of the primary roles of alternative investments is to dampen portfolio volatility. They accomplish this through access to different segments of the marketplace and the latitude to be long and short the market. Historically, this broader investing palette has led to lower correlation to traditional investments.

[2]Davidow Anthony B., "Democratizing Alternative Investments", May 2017.

Exhibit 1

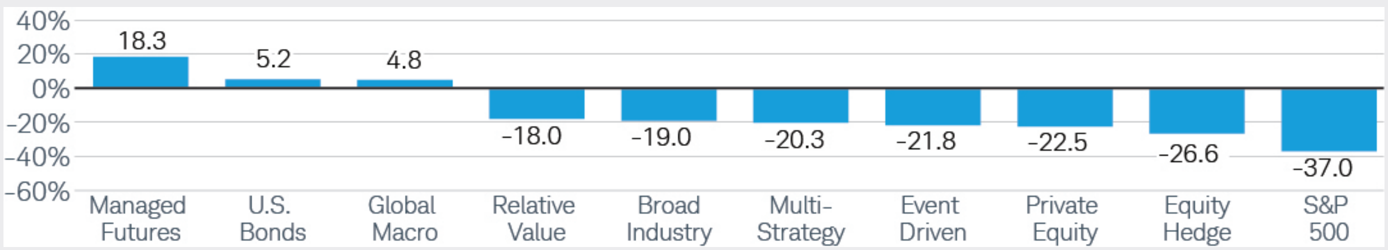
10-Year Historical Correlations of Alternative Investment Strategies vs. the S&P 500 Index
(January 1, 2007 – December 31, 2016)



Source: Schwab Center for Financial Research with data provided by Morningstar Direct. Asset classes are represented by the following benchmarks: Managed Futures – Morningstar Diversified Futures, U.S. Bonds – Bloomberg Barclays U.S. Aggregate Bond, Event Driven – HFRI Liquid Alternative Event Driven, Equity Hedge – HFRI Liquid Alternative Equity Hedge, Global Macro – HFRI Liquid Alternative Global Macro, Broad Industry – HFRI Liquid Alternative, Relative Value – HFRI Liquid Alternative Relative Value, Multi-Strategy – HFRI Liquid Alternative Multi Strategy, S&P 500 – S&P 500 Index, Private Equity – Cambridge Associates US Private Equity. **Past performance is not a guarantee of future results.**

Exhibit 2

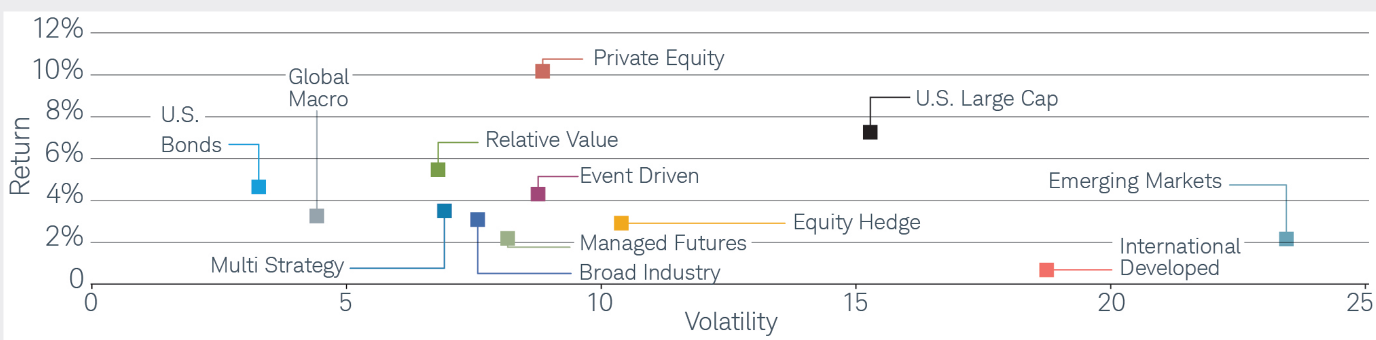
2008 Performance of Select Asset Classes



Source: Schwab Center for Financial Research with data provided by Morningstar Direct. Asset classes are represented by the following benchmarks: Managed Futures – Morningstar Diversified Futures, U.S. Bonds – Bloomberg Barclays U.S. Aggregate Bond, Event Driven – HFRI Liquid Alternative Event Driven, Equity Hedge – HFRI Liquid Alternative Equity Hedge, Global Macro – HFRI Liquid Alternative Global Macro, Broad Industry – HFRI Liquid Alternative, Relative Value – HFRI Liquid Alternative Relative Value, Multi-Strategy – HFRI Liquid Alternative Multi Strategy, S&P 500 – S&P 500 Index, Private Equity – Cambridge Associates U.S. Private Equity. Performance is calculated as annualized return. **Past performance is not a guarantee of future results.**

Exhibit 3

Risk-and-Return Characteristics
(January 1, 2007 – December 31, 2016)



Source: Schwab Center for Financial Research with data provided by Morningstar Direct. Asset classes are represented by the following benchmarks: Managed Futures – Morningstar Diversified Futures, U.S. Bonds – Bloomberg Barclays U.S. Aggregate Bond, Event Driven – HFRI Event Driven, Equity Hedge – HFRI Equity Hedge, Global Macro – HFRI Macro, Broad Industry – HFRI Composite, Relative Value – HFRI Relative Value, Multi-Strategy – HFRI Multi Strategy, U.S. Large Cap – S&P 500 Index, Private Equity – Cambridge Associates U.S. Private Equity, International Developed – MSCI EAFE, Emerging Markets – MSCI EM. Return is annualized total return, and volatility is calculated as standard deviation. **Past performance is not a guarantee of future results.**

In exhibit 1, we show the 10-year correlation amongst select traditional and alternative strategies. While equity hedge had a relatively high correlation to the S&P 500, managed futures exhibited a negative correlation over the same 10 years.

In fact, if we focus on when we needed the diversification the most (2008), managed futures was up handsomely in a very challenging environment. Exhibit 2 shows the performance of select asset classes in 2008. Managed futures helped buffer the severe draw-down in 2008, and, not surprisingly, performance has lagged somewhat since the market bottomed in March 2009.

As the data clearly shows, *not all alternatives are created equal.* Some are more equity-oriented and some are truly non-correlating in nature. We will expand on these differences as we discuss building portfolios. We should also consider the risk-and-return trade-off between traditional and alternative investment strategies. For the 10-year period, many of the alternative strategies have historically shown lower volatility than their traditional brethren.

Private equity has delivered the highest return over the past 10 years, with lower volatility than the S&P 500. The data illustrates that various alternative strategies exhibit different risk, return and correlation characteristics.

Private Equity

As the historical data suggests, private equity offers the potential for oversized returns. Early investors in such companies as Tesla, Google, Facebook, and Alibaba were handsomely rewarded when those companies went public via IPOs (Initial Public Offerings). There is great anticipation for the next round of 'hot' IPOs. Companies such as Uber, Airbnb, Pinterest, and SpaceX have been dubbed 'unicorns' based on their multi-billion dollar valuations. Today, there are more private companies than public companies.

Of course, not all private equity investments make it to the public markets. Many private companies lack the capital to invest in their young businesses, while others are acquired by larger competitors. The allure of private equity and venture capital has been to identify and invest early in the next game-changer.

Private equity firms typically seek to add value to the owners of a private company in return for a stake in the company itself. The type of value offered depends on the life stage of the company, but typically might include providing

Exhibit 4
Stages of Private Equity

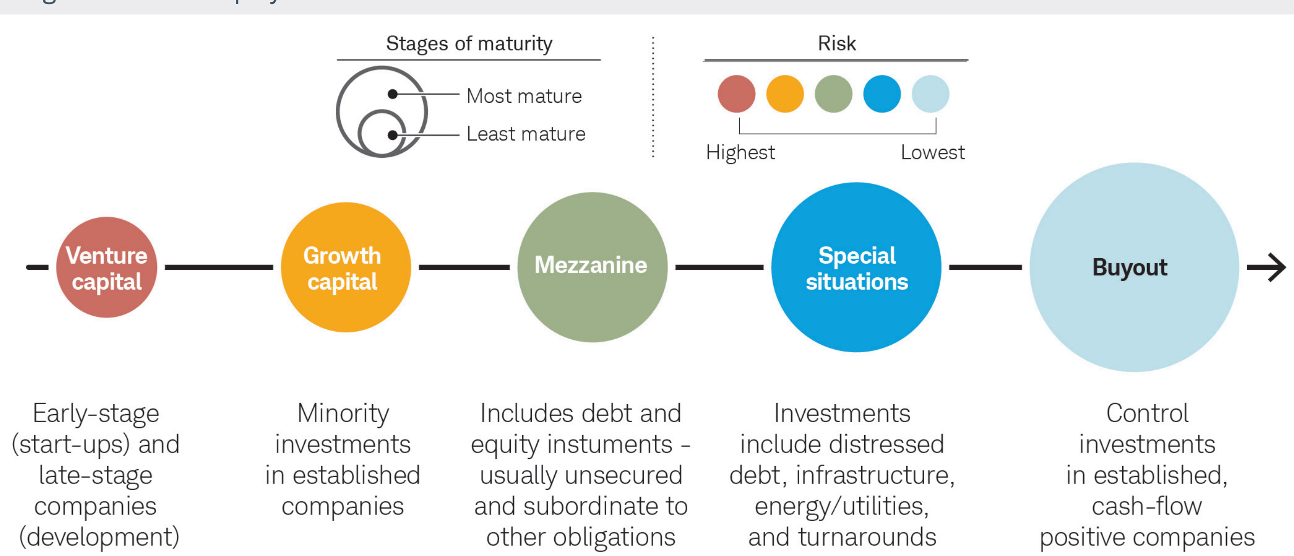
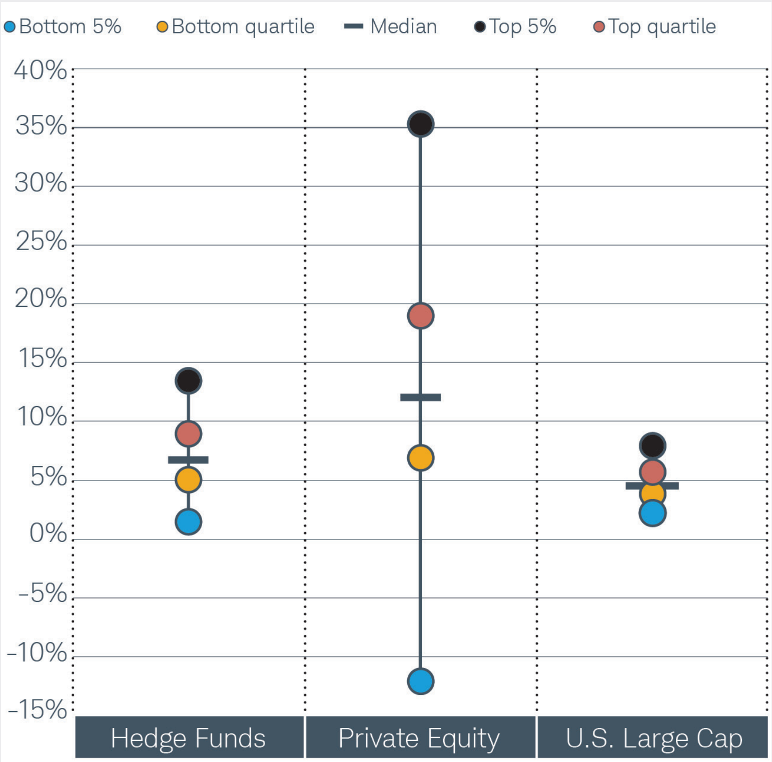


Exhibit 5
Dispersion of Returns



Source: Schwab Center for Financial Research with data provided by Morningstar Direct and Thompson One. Private Equity returns are based on the Cambridge Associates U.S. Private Equity Index for all vintage years from 2000-2016. Hedge Funds is represented by the Morningstar Direct Hedge Fund Universe. U.S. Large Cap is represented by the Morningstar Direct U.S. Large Cap Universe. **Past performance is not a guarantee of future results.**

capital to fuel further growth or strengthen a balance sheet, and managerial or operational expertise. From that standpoint, investors typically recognize different stages of a private equity company: venture capital, growth equity, mezzanine, special situations, and leveraged buyouts (LBOs). Similar to public equity investing, each of these strategies offers a different risk-and-return profile to investors, where the early stages generally carry the higher risk.

As noted earlier, private equity has historically delivered strong returns relative to traditional market indexes. It's also worth noting that there is typically a large dispersion between the best-and-worst performing private equity funds. Exhibit 5 illustrates this dispersion by comparing the top and bottom quartile funds of private equity, hedge fund, and U.S. large cap universes. The difference between the top and bottom quartile private equity funds (12%) is substantially larger than the hedge funds (4%) and large-cap funds (~2%). Therefore, there is a premium in selecting the right private equity fund. It can require significant skill and resources to consistently identify funds that will outperform.

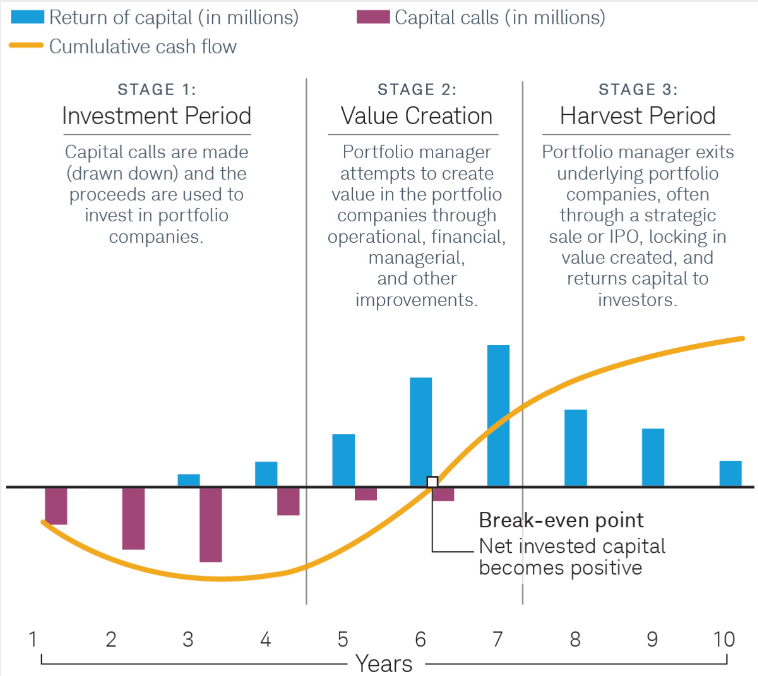
Most investors lack the time and expertise to evaluate the various companies and typically couldn't invest directly anyway. However, in a private equity fund, the General Partner (GP) or other managing entity has expertise in valuing companies and providing guidance to the management team as the companies grow. The expectations are that some of the companies will fail, but the rewards from the winners will more than offset the cost of the losers. Private equity funds are typically only available to Qualified Purchasers (QPs) at very high minimums ($5 million).

Investors in private equity funds generally commit capital that gets drawn down over six to seven years. The fund's life is typically ten to fourteen years depending on the strategy. As money flows into the fund, the GP will invest the capital in underlying portfolio companies. During the following years, the GP attempts to increase the value of the portfolio companies through various changes in these organizations and prepare for an exit. In the final years of the fund, often referred to as the harvest period, the GP exits the individual portfolio companies and distributes the capital to investors. This cash-flow effect is often shown as a J-Curve (see Life Cycle on the next page).

The early years typically reflect negative returns and the later years show the appreciation of the underlying investments. Because of the nature of the J-Curve, many investors choose to diversify their vintage years (i.e., the year the capital is contributed).

Historically, private equity has been an illiquid strategy. The illiquidity is partially responsible for delivering such strong results. Private companies don't need to answer to disparate groups of shareholders and can make long-term strategic decisions. Large endowments whose time horizon is perpetuity don't worry about

Exhibit 6
Life Cycle of Private Equity Funds



Source: Schwab Center for Financial Research. This is a simplified example, and does not represent the performance of an actual company or fund. Private equity investments involve substantial risk. There can be no assurance that actual fund cash flows will be similar to the model set forth in this chart. Cash-flow patterns will vary depending upon the activities of the underlying private equity partnerships. Data provided by Pantheon.

liquidity, but many high-net-worth investors would prefer some liquidity.

The *Feeder Fund* structure has been a popular way for investors to access private equity. Feeder funds are Private Funds that typically invest in one specific private equity fund. The feeder fund provides scale to the general partner by aggregating underlying investors. Feeder funds are typically available for smaller investments ($250,000), but still require Qualified Purchaser status.

Non-Traded Registered Funds are available for Accredited Investors ($1 million net worth). They are "continuously offered" meaning they can issue new shares based on demand. One of the biggest benefits of a non-traded registered fund, when compared with a Private Fund, is its potential for liquidity (often quarterly). There are of course trade-offs with the liquidity provisions. A fund may be forced to hold more cash than it would like to meet redemptions, thus providing a cash drag over time.

Comparing Common Private Equity Structures

	Private Equity Fund	Feeder Funds	Non-Traded Registered Funds	Private Funds-of-Funds (FoFs)
Capital Calls	Yes	Yes	No	Yes
Investor	QP, some accredited	QP, some accredited	Typically accredited	QP, some accredited
Minimums	Large	Small	Small	Large
Cash Drag	No	Limited	Potentially	Limited
Tax Reporting	K-1	K-1	1099 or K-1	K-1
Leverage	Yes, leverage typically implemented at the fund level and limitations are outlined in fund documents	Varies, leverage typically implemented by the master fund, but not the feeder fund	Leverage limited to 33% maximum borrowing at the fund level	Yes, leverage may be implemented at the underlying fund level and sometimes at the FoF level, and are outlined in fund documents
Liquidity from Fund	None	None	Typically quarterly, subject to vote by board of directors	None
Liquidity Plan	Typically structured to return capital as portfolio companies are exited over a 7-to-12 year fund life	Typically designed to return capital as portfolio companies are exited over a 7-to-12 year fund life	Varies, many now being structured as evergreen vehicles and capital from portfolio company exits is reinvested	Typically designed to return capital as portfolio companies are exited over a 7-to-12 year fund life

Another important consideration with private equity is diversification, both relative to traditional investments and across private equity. Private equity can be diversified in the following manner:

- *Industry:* diversification across industry groups
- *Geography:* global diversification
- *Vintage:* diversification across vintage years
- *Manager*: diversification across investment managers
- *Stage:* diversification across stages of maturity (from venture capital to buyouts)

Private equity is now easier to access for individual investors through feeder funds, private fund-of-funds, and non-traded registered funds. Private fund-of-funds provides diversification benefits by allocating across private equity investments. These funds may diversify across industry, geography, vintage, manager, and stage.

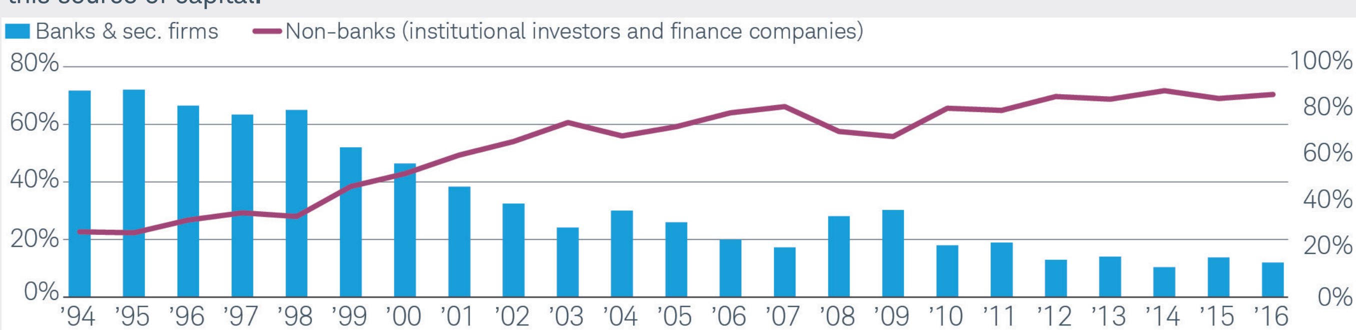
Some of the newer product structures are seeking to tackle one of the bigger hurdles with private equity – liquidity – in a more sophisticated structure. The investing landscape is expanding and this once limited investment is making its way to Main Street.

Private Debt

Investing in the debt of private companies is another way investors may gain exposure to private companies, with a potentially lower level of risk than investing in the equity of a private company. Similar to investing in the debt of a public company, private debt may offer investors an attractive stream of income. Typically, private debt demonstrates low correlation to other more traditional fixed income, as the debt is not traded and subject to the volatility of the public markets. Further, the debt is often floating rate, so in a rising rate environment the income paid to the investor should increase with interest rates.

Funds dedicated to private debt have grown substantially since the financial crisis as both institutional investors and retail investors alike are seeking attractive levels of yield in a low rate environment. The growth of these funds is partially attributable to a decline in lending by banks in the aftermath of the financial crisis and as a result of the Dodd-Frank Act. As the data in Exhibit 7 illustrates, since 1994 bank participation in loans has decreased to just over 10% of financing activities, while non-bank participation has increased to almost 90%. According to Preqin data, assets under management of private debt funds are now over $595 billion, up from $149 billion in December 2006[3].

Exhibit 7
Bank participation in loans has decreased, while non-bank institutions are stepping in to provide this source of capital.

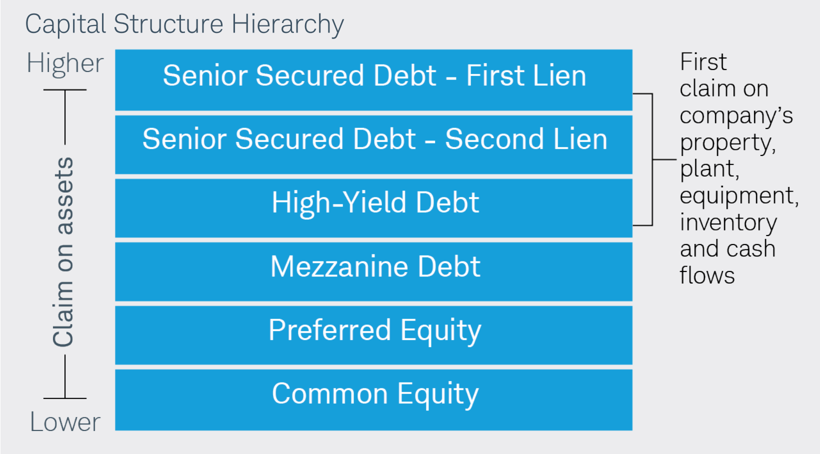


Source: LCD, an offering of S&P Global Market Intelligence. Used with permission. For illustrative purposes only. Non-Banks include: institutions, insurance, and finance companies.

[3] Prequin Investor Outlook: Alternative Assets, 2017

Comparing Private Debt Structures

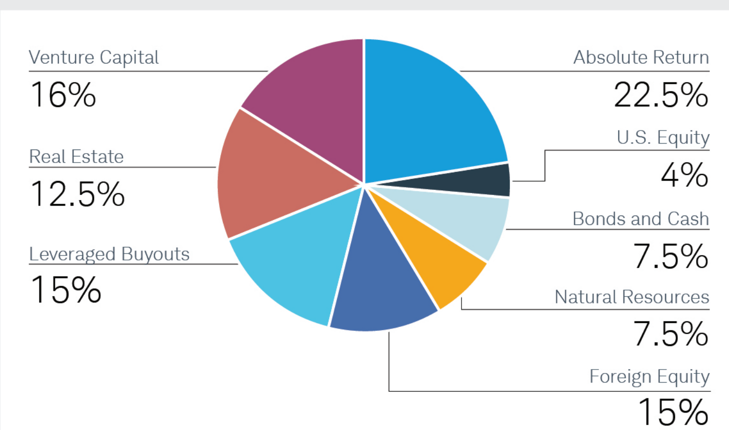
	Reg. D Private Debt Funds	Private Business Development Corporations	Reg. D Fund-of-Funds (FoFs)	Lending Platforms	Publicly Registered Non-Traded Business Development Corporation (BDC)	Mutual Funds
Capital Calls	Yes	Varies	Yes	No	No	No
Investor Eligibility	QP, some accredited	Accredited	QP, some accredited	All	State suitability standards	All
Minimums	Large	Moderate	Moderate	Low	Low	Low
Income Distribution to Investors	Varies, typically not a primary objective	Varies, typically quarterly	Varies, typically not a primary objective	Monthly	Quarterly, if approved by Board of Directors	Monthly
Tax Reporting	K-1	K-1 or 1099	K-1	1099	1099	1099
Leverage	Yes, leverage is typically implemented at the fund and limitations are outlined in fund documents	Leverage limited to 50% maximum borrowing at the fund level	Yes, leverage may be implemented at both the underlying fund level and sometimes at the FoF level, and are outlined in fund documents	Varies, most do not add leverage to loans	Leverage limited to 50% maximum borrowing at the fund level	Mutual funds typically do not employ leverage
Liquidity from Fund	None	Prior to an exchange listing, limited liquidity may be available quarterly, if approved by board of directors	None	Typically as loans mature	Prior to an exchange listing, limited liquidity may be available quarterly, if approved by board of directors	Daily
Liquidity Plan	Many are structured to return capital over 5-to-7 year fund life, though some are also managed in perpetuity	Typically designed to pursue a public listing creating exit opportunity for investors, however, the fund may pursue other liquidity routes such as a merger or asset	Many are structured to return capital over 5-7 year fund life	N/A if investors allocate to direct loans	Typically designed to pursue a public listing creating exit opportunity for investors; however, the fund may pursue other liquidity routes such as a merger or asset sale	N/A



Before investing in private debt, investors must consider the type of debt in which the fund is investing to make an appropriate assessment of the risk level of the fund, relative to the underlying securities. It's important to consider the capital structure hierarchy to determine which type of investment has preference and priority (referenced above).

Investors should note the type of underlying debt held in portfolios. Senior secured debt has priority over high-yield debt, mezzanine debt, preferred equity, and common equity. In other words, holders of senior secured debt will have a preferential claim on assets. Investors can access private debt investments through a variety of fund structures which have natural trade-offs that investors must assess.

Exhibit 8
Yale endowment fiscal targets for 2016



Source: Yale University Investment Office. Yale Endowment Model for Fiscal Year 2017. For illustrative purposes only. Not representative of any specific investment or account.

The table on the previous page compares some of the pertinent features of various debt offerings, from mutual funds to private debt. We compare the capital calls, investor eligibility, minimums, income, leverage, liquidity, and tax reporting. There may be trade-offs in the type of structure utilized and they require careful consideration. Please note, there can be significant differences in the fee structures. Advisors should carefully consider all expenses and fees associated with these offerings.

Allocating to Alternatives

For many decades, David Swenson, Chief Investment Officer of the Yale Endowment, has been considered one of the most brilliant investors of our generation. Since joining the Yale Endowment in 1985, he has espoused the virtues of alternative investments, and has been able to deliver stellar returns. Much of his success can be attributed to the large allocations to non-traditional investments, including: absolute return strategies, natural resources, LBOs, real estate and venture capital, among others. In fact, his target allocation for non-traditional investments is roughly 73%, with a mere 4% allocation to domestic equity and a 7.5% allocation to fixed income.

Based on Yale's success, firms began to promote the *Endowment Model* as the new asset allocation model. Like Yale, their models had high allocations to absolute return strategies and private equity. Unfortunately, most of these strategies failed to deliver on the promise of oversized and uncorrelated returns.

We should consider the differences between individual investors and institutions – and Yale's scale imperative. For starters, Yale is an endowment and their time horizon is perpetuity. Individual investors often have cash flow needs and typically aren't willing to lock-up funds for extended periods of time. If Yale requires additional funding, it can seek donations from alumni. Most of us would hesitate to ask for financial help due to performance shortfalls.

Lastly, Yale has a real scale imperative relative to an individual investor. Yale can negotiate favorable terms with hedge fund managers and access strategies that many of us can't get into[4].

[4] Yale's Endowment Shows its Muscle in Negotiating Manager Fees, Bloomberg, April 11, 2017
https://www.bloomberg.com/news/articles/2017-04-11/yale-s-endowment-shows-its-muscle-in-negotiating-manager-fees

Yale helps seed many new managers and can demand "favored nation status". Yale also employs a dedicated team of professionals to analyze strategies.

"I see every day how competitive the markets are, and how tough. So the idea that you can do this yourself, that's out the window".

-David Swensen, CIO – Yale Endowment

While we wouldn't suggest blindly following the Endowment Model, we do believe that there are some valuable lessons to be learned. Alternative investments can be a source of differentiated returns. Diversification across alternative strategies may be an additional source of return and risk reduction. Exhibit 9 shows data from the 2016 NACUBO-*Commonfund Study of Endowments.* NACUBO (National Association of College and University Business Officers) annually tracks the allocation of colleges and universities.

As the data shows, the larger endowments have the highest allocation to Alternative Strategies and the lowest allocation to Domestic Equities. We don't think it would be prudent for the average investor to allocate in this fashion, but it is instructive in the sense that these sophisticated institutions see significant value in alternatives investments. Note, their alternative allocations include: absolute return, market-neutral, long/short, event driven, private real estate, and private equity, among others.

A Goals-Based Framework

Goals-based investing has become increasingly popular over the last several years. Part of the appeal is tracking progress relative to a goal rather than an arbitrary benchmark. We all know that investors often follow three benchmarks – the S&P 500, cash, and their best friend's portfolio, whichever performed best. We would all benefit from moving our clients away from fixating on short-term benchmarks.

We believe that there is value in changing the discussion with our clients to the role of various asset classes rather than comparing assets to an arbitrary benchmark. It should be easier for investors to comprehend the individual role of an asset class, and also appreciate the collective impact of combining the pieces of the puzzle together.

Growth will come primarily from equity-oriented investments, including: U.S. stocks, international stocks, emerging markets, smart beta, relative value, long/short, and private equity, among others.

Income will come primarily from income-oriented investments, including: treasuries, corporates, high yield, REITs, and Alternative Credit, among others.

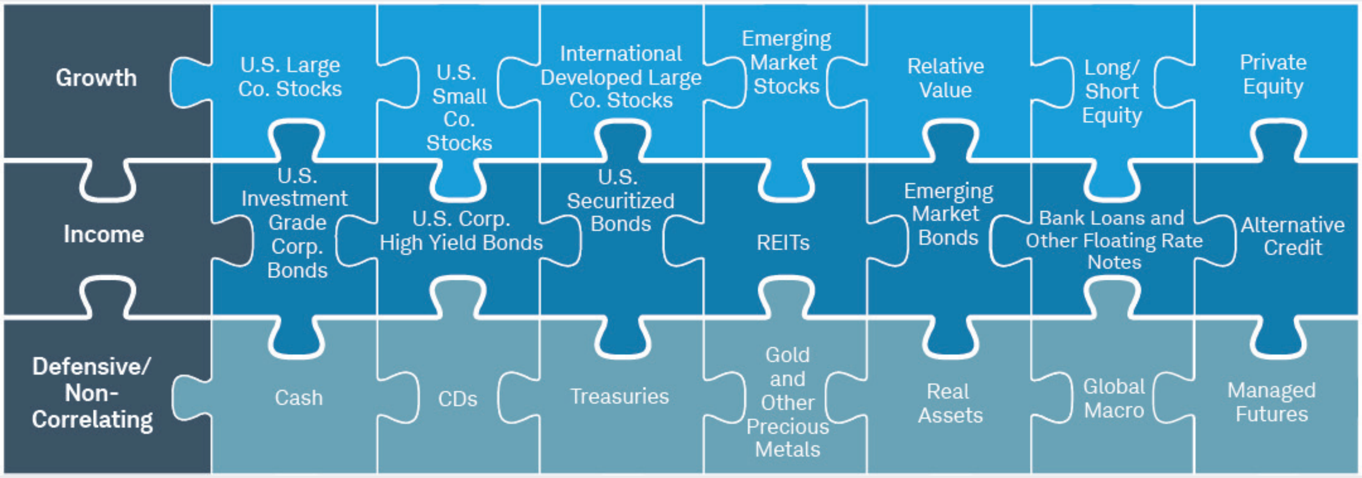
Exhibit 9

Asset Allocation for U.S. College and University Endowments and Affiliated Foundations - Fiscal Year 2016

Size of Endowment	**Domestic Equities**	Fixed Income	Non-U.S. Equities	**Alternative Strategies**	Short-Term Securities/ Cash/Other
Over $1 billion	**13%**	7%	19%	**58%**	3%
$501 million - $1 billion	**20%**	9%	18%	**45%**	8%
$101 - $500 million	**26%**	13%	20%	**35%**	6%
$51 - $100 million	**33%**	17%	19%	**24%**	7%
$25 - $50 million	**38%**	20%	17%	**17%**	8%
Under $25 million	**44%**	24%	15%	**10%**	7%

Source: NACUBO. Average asset allocations as of June 30, 2016. All data are dollar-weighted unless otherwise specified. Due to rounding, details may not sum to 100%. Alternative strategies are categorized in the NCSE as follows: Private Equity (LBOs, Mezzaninne, M&A funds, and international private equity); Marketable alternative strategies (hedge funds, absolute return, market netural, long/short, 130/30, and event-driven and derivatives); Venture Capital; Private equity real estate (non-campus); Energy and natural resources (oil, gas, timber, commodities, and managed futures); and Distressed debt. On-campus real estate is included in the Short-term Securities/Cash/Other category.

Exhibit 10
Goals-Based Investing



Source: Schwab Center for Financial Research. For illustrative purposes only.

Defensive/Non-Correlating assets should help in dampening portfolio volatility, and would include: gold, real assets, global macro & managed futures.

If we switch the discussion to a goals-based framework, and focus on the three broad categories of growth, income, and defensive/non-correlating assets, we now can move away from grouping alternative investments as a single decision. In fact, depending upon the underlying strategy, alternatives can serve multiple roles within a portfolio.

Alternative investments should be viewed as part of an expanded toolbox. Rather than building a house with only hammers and nails – good tools but not a complete set - you'll likely need pliers, screw drivers, wrenches, and a tape measure among others. Certain types of alternative investments may be viewed as multi-purpose tools. With the proliferation of better tools for building portfolios, we need to better understand how to use them.

Putting the Pieces Together

We began our discussion by laying out the role of alternatives, and then sharing return, risk, and correlation data amongst alternative investments, and then compared them to traditional investments. We tried to glean some insights from the most sophisticated investors, and then later suggested we focus on the role of the various asset classes in building portfolios. Now let's look at a sample client case study, and how a goals-based portfolio can fulfill the needs of the family.

Case Study:

John and Mary Smith are 55 and 54 respectively. Their two children – Bob and Becky – are grown and married. John is a doctor and Mary is a teacher. Their combined income is $1 million/ year, their home is valued at $2 million and they have $5.3 million in savings. They have a retirement home in Napa and both have pension plans. They are sophisticated investors, having invested in the markets for over 25 years. John has invested in hedge funds, private equity and private real estate. They both hope to retire in 12 years, and would like to see their portfolio grow leading up to retirement.

Using the Case Study data, the chart below reflects a sample allocation geared toward generating growth over the next 10 years. We've included relative value, long/short equity, and private equity in the Growth-Oriented bucket, and alternative credit in the Income-Oriented bucket. Managed futures is in the Defensive/ Non-Correlating bucket.

Depending upon an individual's risk appetite, time horizon, and income needs, the allocations

Exhibit 11
Sample Goals-Based Asset Allocation

Growth-Oriented	50%	Jan. 1, 2002 - Dec. 31, 2016	
		Ann. Returns	Ann. Std Dev
U.S. Large Cap	15%	6.69%	15.87
U.S. Small Cap	7%	8.49%	20.06
Intl. Developed Large	10%	5.28%	19.23
Emerging Markets	5%	9.50%	23.77
Private Equity	5%	12.76%	9.38
Relative Value	5%	6.04%	4.30
Long/Short Equity	3%	4.86%	7.96

Income-Oriented	35%	Current Yield (As of June 30, 2017)
Treasuries	10%	2.31%
Corporates	12%	3.11%
High Yield	5%	5.32%
REITs	3%	4.12%
Alternative Credit	5%	5.07%

Defensive/ Non-Correlating	10%	Correlation to S&P 500
Gold	2%	0.04
Real Assets	3%	0.54
Managed Futures	5%	-0.23
Cash	**5%**	

Source: Schwab Center for Financial Research with data provided by Morningstar Direct, Zephyr STYLEAdvisor and Bloomberg. Asset classes are represented by the following benchmarks: U.S. Large - S&P 500, U.S. Small - Russell 2000, Intl. Developed Large - MSCI EAFE, Emerging Markets - MSCI EM, REITs - S&P United States REIT, Relative Value – HFRI Relative Value, Long/Short Equity – HFRI Equity Hedge, Treasuries - Bloomberg Barclays U.S. Treasury 10 year, Corporates - Bloomberg Barclays U.S. Corporate Credit, High Yield - Bloomberg Barclays VLI High Yield, Alternative Credit – Credit Suisse Leveraged Loan, Gold - S&P GSCI Gold, Real Assets - Morningstar Real Asset, Private Equity – Cambridge Associates Private Equity, Managed Futures - Morningstar Diversified Futures, Cash - Bloomberg Barclays Short Treasury 1-3 Month. **Past performance is not a guarantee of future results.**

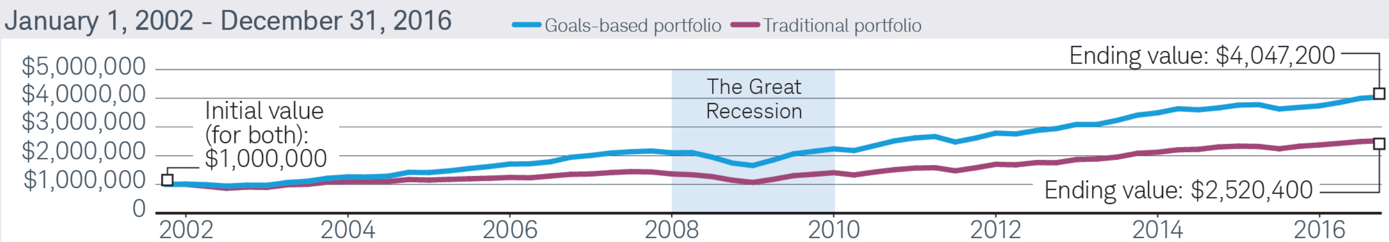
should be adjusted accordingly. The goals-based framework allows for greater alignment with goals and objectives. If the family was primarily seeking income, they would have higher allocations to their income bucket and may use different underlying strategies.

Two investors, of similar ages and income, may have dramatically different needs. One may live a modest lifestyle and have significant savings. One may have a loved one with special needs and require income to pay for medical expenses. Advisors and investors should spend time to determine the right asset allocation based on their individual goals and objectives.

As we put the pieces of the puzzle together in Exhibit 12, we can see that the goals-based portfolio helped mitigate risk with a maximum drawdown of -23.42% versus -26.00%. It also outpaced the traditional '60/40' portfolio over time, where $1,000,000 grew to $4,047,200 in the goals-based portfolio versus $2,520,400 for a traditional portfolio. Small allocations, to multiple alternative strategies, and the inclusion of a broader set of asset classes, helped smooth the ride and allowed the portfolio to participate in growing segments of the market place. The expanded toolbox shows its value over time.

Please note, the results above do not include the impact of fees. Depending upon the product structure, the fees can vary a great deal.

Exhibit 12
January 1, 2002 - December 31, 2016



	Initial value	Ending value	Max Drawdown	Annualized return	Standard deviation
Goals-based portfolio	$1,000,000	$4,047,200	23.42%	9.77%	8.94%
Traditional portfolio	$1,000,000	$2,520,400	26.00%	6.36%	8.95%

Source: Schwab Center for Financial Research with data provided by Morningstar Direct and Zephyr StyleADVISOR. Traditional Portfolio is represented by 60% U.S. Large Cap (S&P 500), and 40% U.S. Bonds (Bloomberg Barclays U.S. Aggregate). The Goals-Based Portfolio is represented by the following benchmarks: U.S. Large - S&P 500, U.S. Small - Russell 2000, International Developed Large - MSCI EAFE, Emerging Markets - MSCI EM, Private Equity – Cambridge Associates US Private Equity, REITs - S&P Global REIT, Relative Value - Relative Value, Long/Short Equity Hedge - HFRI Equity Hedge, Treasuries - Bloomberg Barclays US Treasury 10 year, Corporates - Bloomberg Barclays U.S. Corporate Credit, High Yield - Bloomberg Barclays VLI High Yield, Alternative Credit - Credit Suisse Leveraged Loan, Gold - S&P GSCI Gold, Real Assets - Morningstar Real Asset, Managed Futures - Morningstar Diversified Futures, Cash - Bloomberg Barclays Short Treasury 1-3 Month. Please see the table above for allocation percentages. Taxes and fees are not taken into account, the Goals-Based and Traditional portfolios are rebalanced annually, and all dividends are reinvested. **Past performance is not a guarantee of future results.**

Conclusion

While alternative investments are versatile tools in building better portfolios, they are often misunderstood, and consequently, investors shy away from them. Many alternatives provide valuable diversification relative to traditional investments. In periods of market stress, they can help in mitigating big draw-downs in portfolios. As we've shown, not all alternatives are created equal.

If we can think of these tools in a goals-based framework, and allocate across **Growth-Oriented, Income-Oriented,** and **Defensive/Non-Correlating**, we can help our clients achieve their long term goals, dreams, and aspirations.

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- Alternative Investment Access is a no-transaction-fee platform of private placement investments that enables select registered investment advisors and their eligible clients to access sophisticated investment solutions.

Glossary of Terms

Accredited investor. Accredited Investor is defined in Regulation D of the Securities Act of 1933. Typically a natural person meets the Accredited Investor standard if their net worth, or joint net worth with a spouse, exceeds $1,000,000, excluding the value of a primary residence. An individual may also meet the Accredited Investor standard if their income exceeded $200,000 in each of the most recent two years, or $300,000 with a spouse, and they have a reasonable expectation of exceeding this income threshold in the current year.

Business Development Company (BDC). Business development companies are closed-end fund companies that pool capital from investors by selling shares of common stock to make debt or equity investments in privately held or middle market companies. BDCs were created by Congress in 1980 and are regulated under certain provisions of the Investment Company Act of 1940. While BDCs may be traded or non-traded, many start as non-traded companies and list on an exchange later in the fund life.

Cash Drag. Cash drag refers to the possible reduction in returns that an investor may experience if a fund manager holds low returning cash in the portfolios at a time when other portfolio holdings are generating excess returns.

Limited Partnership. A form of partnership entity often used by private funds, which is comprised of a General Partner and Limited Partner(s). The General Partner is the Managing Partner of the entity and has unlimited personal liability for the debts and obligations of the partnership. Limited Partners are "silent" investors in the partnership who are not involved in day to day management and they do not have personal liability for the debts and obligations of the partnership.

Lock Up. The period of time investors may be initially prohibited from redeeming their shares. The actual time frame is determined by the individual fund and may vary from the stated time frame.

Qualified Purchaser. The Qualified Purchaser standard is defined under section 3(c)(7) of the U.S. Investment Company Act of 1940. A natural person, who owns at least $5,000,000 of investments, including assets with their spouse, is typically considered to meet the standard.

Vintage Year. Vintage year refers to either the year a fund was initially formed or the year in which it makes its first capital call to fund an investment. Investors often compare performance of private funds using the same vintage year. Likewise, many investors attempt to diversify their funds across different vintage years.

Anthony B. Davidow, CIMA®

Vice President, Alternative Beta and
Asset Allocation Strategist

Anthony Davidow is responsible for providing Schwab's point of view on asset allocation and portfolio construction. He is also responsible for providing research and analysis on alternative beta strategies and how investors can incorporate them in their portfolios. Davidow is also a member of the firm's Asset Allocation Council and Alternative Investment Product Council.

Before joining Schwab, Davidow was a managing director, portfolio strategist, and head of the ETF Knowledge Center for Guggenheim Investments. Before joining Guggenheim, Davidow was executive vice president and head of distribution for IndexIQ. Previously, he spent 15 years at Morgan Stanley, where he served as managing director and head of sales and training for the Consulting Services Group. While at Morgan Stanley, he worked with many of the firm's largest clients in developing and implementing asset allocation strategies, incorporating active and passive strategies, and using alternative investments as risk management tools.

Davidow has authored several white papers, and spoken at numerous industry conferences on a range of topics, including: "Asset Allocation and Manager Selection" "Alpha-Beta Separation," "Democratizing Alternative Investments," "An Evolutionary Approach to Portfolio Construction," and "The Case for Global Asset Allocation" among others. In 2017, he was awarded the Steven L. Kessler Writing Award for "Strategic Beta Strategies: An Evaluation of Different Approaches"; and in 2015, he received the Steven L. Kessler Writing Award (Honorable Distinction) for "Alternative Beta Strategies".

Davidow holds a B.B.A. degree in finance and investments from Bernard M. Baruch College, and has earned the Certified Investment Management Analyst (CIMA®) designation from the Investment Management Consultant's Association (IMCA) and the Wharton School of the University of Pennsylvania.

He served on the Board of Directors for IMCA from 2009 to 2015, and currently serves as the Chair, Investment & Wealth Monitor, Editorial Advisory Board. He holds FINRA Series 7, 24, and 63 registrations.

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