Using alternative investments in your portfolio

Merrill Lynch and its Financial Advisors do not provide tax, accounting or legal advice. You should consult your tax and legal advisors to help you determine whether your strategies are appropriate for your situation.

IMPORTANT DISCLOSURE INFORMATION

The investments discussed have varying degrees of risk, and there is always the potential of losing money when you invest in securities, and future prospects may not be realized. Some of the risks involved with equities include the possibility that the value of the stocks may fluctuate in response to events specific to the companies or markets, as well as economic, political or social events in the U.S. or abroad. Investments focused in a certain industry may pose additional risk due to lack of diversification, industry volatility, economic turmoil, susceptibility to economic, political or regulatory risks and other sector concentration risks. Bonds are subject to interest rate, inflation and credit risks. Income from investments, if any, may fluctuate. Investments in foreign securities involve special risks, including foreign currency risk and the possibility of substantial volatility due to adverse political, economic or other developments. These risks are magnified for investments made in emerging markets.

When considering the appropriateness of mutual funds or alternative investments, please be aware that there are significant differences between these investments which will cause their investment portfolios, performance, tax treatment and other factors to differ. These differences include the types, availability and diversity of securities that can be purchased, economies of scale, regulations and other factors applicable to their management. Subsidiaries of Bank of America do not provide tax, accounting, or legal advice. Any tax statements contained herein were not intended or written to be used, and cannot be used, for the purpose of avoiding U.S. federal, state or local tax penalties. Clients should consult their advisor as to any tax, accounting or legal statements made herein.

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Alternative investments are speculative and involve a high degree of risk. There generally are no readily available secondary markets, none are expected to develop and there may be restrictions on transferring fund investments. Alternative investments may engage in leverage that can increase risk of loss, performance may be volatile and funds may have high fees and expenses that reduce returns. Alternative investments are not suitable for all investors. Investors may lose all or a portion of the capital invested.

There may be conflicts of interest relating to a mutual fund(s) or an alternative investment product(s) and its service providers, including Bank of America Corporation, and its affiliates, who are engaged in businesses and have clear interests other than that of managing, distributing and otherwise providing services to the mutual fund or alternative investment. These activities and interests include potential multiple advisory, transactional and financial and other interests in securities and instruments that may be purchased or sold by the mutual fund or alternative investment, or in other investment vehicles that may purchase or sell such securities and instruments. These are considerations of which investors in the mutual fund or alternative investment should be aware.

Investors should bear in mind that the global financial markets are subject to periods of extraordinary disruption and distress. During the financial crisis of 2008–2009, many private investment funds incurred significant or even total losses, suspended redemptions, or otherwise severely restricted investor liquidity, including increasing the notice period required for redemptions, instituting gates on the percentage of fund interests that could be redeemed in any given period and creating side pockets and special-purpose vehicles to hold illiquid securities as they are liquidated. Other funds may take similar steps in the future to prevent forced liquidation of their portfolios into a distressed market. In addition, investment funds implementing alternative investment strategies are subject to the risk of ruin and may become illiquid under a variety of circumstances, irrespective of general market condition

Certain information contained in this document constitutes forward looking statements, opinions, or beliefs. Due to various risks and uncertainties, actual events or results may differ materially from such forward looking statements, opinions, or beliefs. Certain information herein has been obtained from third party sources and, although believed to be reliable, has not been independently verified and its accuracy or completeness cannot be guaranteed. No representation is made with respect to accuracy, completeness or timeliness of this document.

Investment products:

Are Not FDIC Insured	**Are Not Bank Guaranteed**	**May Lose Value**

Investment products and services may be available through a relationship with Merrill Lynch or U.S. Trust, Bank of America Private Wealth Management. Merrill Lynch makes available products and services offered by Merrill Lynch, Pierce, Fenner & Smith Incorporated (“MLPF&S”), which is a registered broker-dealer and Member SIPC and a wholly owned subsidiary of Bank of America Corporation (“BofA Corp”). Certain U.S. Trust associates are registered representatives with MLPF&S and may assist you with investment products and services provided through MLPF&S and other nonbank investment affiliates. U.S. Trust operates through Bank of America, N.A., and other subsidiaries of BofA Corp.

The Fund’s investment manager and its affiliates may be subject to certain U.S. banking laws and to regulation by the Federal Reserve Board. Such banking laws, rules, regulations and guidelines, and the interpretation and administration thereof by the staff of the applicable regulatory agencies, restrict the transactions by the Fund, as well as the transactions between the Fund’s investment manager and its affiliates and the Fund.

Bank of America, N.A., Member FDIC.

ARQBQTWV

Important risk information

Certain risks associated with investing in alternative investments

- Alternative investments are speculative and involve a high degree of risk.
- Alternative investment trade on a leveraged basis which increases the risk of loss.
- Performance can be volatile.
- An investor could lose all or a substantial amount of his or her investment.
- The use of a single fund-of-funds manager applying one set of allocation procedures could mean lack of diversification and, consequently, higher risk.
- There is no secondary market for the investor’s interest in the fund and none is expected to develop.
- There may be restrictions on transferring interests in the alternative investment.
- High fees and expenses may offset the underlying manager’s trading profits.
- A substantial portion of the trades executed by the underlying managers may take place on non-U.S. exchanges.
- **Past performance is not indicative of future results.**
- Alternative investments may require tax reports on Schedule K-1 to be prepared. As a result, investors may be required to obtain extensions for filing federal, state, and local income tax returns each year.
- In addition to the foregoing risks, each alternative investment fund is subject to its own strategy-specific or other risks. Clients must carefully review the offering memorandum for any particular fund and consider their ability to bear these risks before any decision to invest.

Please keep the following general risks in mind when investing in private equity funds:

- A private equity investment involves significant risks and will be illiquid on a long-term basis. Investors may lose their entire investment.
- Private equity managers typically take several years to invest a fund’s capital. Investors will not realize the full benefits of their investment in the near term and there will likely be little or no near-term cash flow distributed by the fund during the commitment period. Interests may not be transferred, assigned or otherwise disposed of without the prior written consent of the manager.
- Private equity funds are subject to significant fees and expenses, including management fees and, typically, a 20% carried interest in the net profits generated by the fund paid to the manager (or similarly situated party). Private equity fund investments are affected by complex tax considerations.
- Private equity funds may make a limited number of investments, and such investments generally will involve a high degree of risk, such as start-up ventures with little or no operating histories, or companies that may utilize significant leverage. In addition, funds may make minority equity investments where the fund may not be able to protect its investment or control or influence effectively the business or affairs of such entities. The performance of a fund may be substantially adversely affected by a single investment. Private equity funds may be less transparent than public investments and private equity fund investors are afforded less regulatory protections than investors in registered public securities.
- Private equity funds may obtain rights to participate substantially in, and to influence substantially, the conduct of the management of certain portfolio companies, including the ability to designate directors. This or other measures could expose the assets of the private equity fund to claims by a portfolio company, its security holders, creditors and others.
- Private equity fund investors are subject to periodic capital calls. Failure to make required capital contributions when due will cause severe consequences to the investor, including possible forfeiture of all investments in the fund made to date.

Important risk information

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Please keep the following general risks in mind when investing in hedge funds or non-traditional mutual funds (NTMF):

- An offer to purchase interests in any hedge fund referred to herein may be made only pursuant to the fund's private placement memorandum, which contains important information concerning risk factors, performance and other material aspects of the fund. This must be carefully read before any decision to invest is made. No additional written material may be provided. Failure to adhere to these restrictions will result in the violators being subject to severe sanctions, which may include fines and /or dismissal from the firm. Hedge funds are sold in private placements and may be offered only to individuals who are both Qualified Purchasers and Accredited Investors and for whom the investment is otherwise suitable.
- The risk characteristics of NTMFs can be similar to those for traditional hedge funds. They invest on a leveraged basis which increases risk of loss and performance can be volatile. Like any investment, an investor can lose all of a substantial amount of his or her investment.

Non-Traditional Mutual Funds (“NTMFs) are mutual funds and exchange-traded funds that are classified as alternative investments because their principal investment strategies utilize alternative investment strategies or provide for alternative asset exposure as the means to meet their investment objectives. Though the portfolio holdings of NTMFs are generally made up of stocks and bonds, NTMFs may also hold other asset classes and may use short selling, leverage and derivatives. While the strategies employed by NTMFs are often used by hedge funds and other alternative investment vehicles, unlike hedge funds, NTMFs are registered with the SEC and thus subject to a more structured regulatory regime and offer lower initial and subsequent investment minimums, along with daily pricing and liquidity. While these investment vehicles can offer diversification within a relatively liquid and accessible structure, it is absolutely essential to understand that because of this structure, NTMFs may not have the same type of non-market returns as other investments classified as alternative investments (such as hedge funds) and thus may serve as an imperfect substitute for such other investment vehicles. The risk characteristics of NTMFs can be similar to those generally associated with traditional alternative investment products (such as hedge funds). No assurance can be given that the investment objectives of any particular alternative investment will be achieved. Like any investment, an investor can lose all or a substantial amount of his or her investment. In addition to the foregoing risks, each alternative investment vehicle is subject to its own varying degrees of strategy-specific or other risks. Whether a particular investment meets the investment objectives and risk parameters of any particular client must be determined case by case. You must carefully review the prospectus or offering materials for any particular fund/pooled vehicle and consider your ability to bear these risks before any decision to invest.

Alternative investments should be considered to help increase the probability of reaching your goals

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Alternative investments generally include hedge funds, private equity, and real assets.

These investment strategies may help you pursue better long-term performance by exposing you to a broader range of markets and securities, including less liquid assets, and by employing investment strategies and techniques typically not found in traditional investments.

Consider alternative investments if you are seeking:

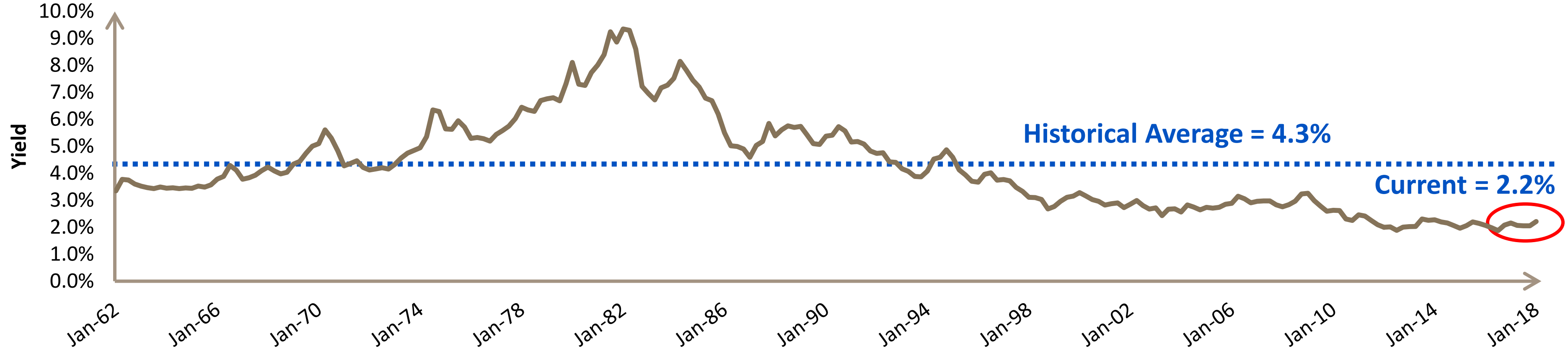
- Solutions that **complement your traditional holdings**
- **Enhanced returns** while seeking to reduce risk
- Improved **portfolio diversification**
- **Customized strategies** that seek to provide unique outcomes
- **Flexible investments** to help support your investment objectives

Past performance is no guarantee of future results. Alternative investments are intended for qualified and suitable investors only. Before you invest in alternative investments, you should consider your overall financial situation, how much money you have to invest, your need for liquidity and your tolerance for risk. Alternative investments are speculative and involve a high degree of risk. Diversification does not ensure a profit or protect against loss in a declining market.

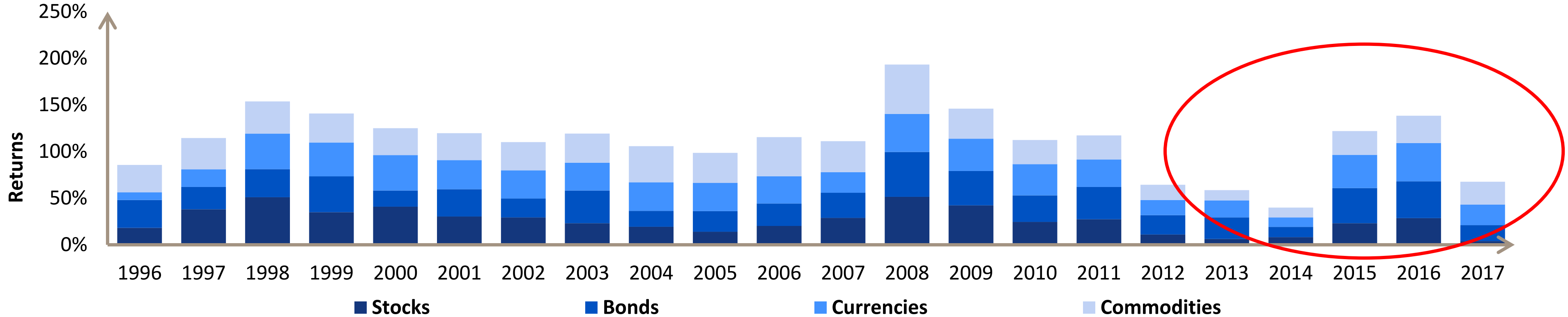
Please refer to important disclosures and risk information at the beginning of this presentation.

Current macro environment poses a challenge to traditional stock and bond portfolios

Traditional 60% stock/40% bond portfolio yields are at historic lows(1)



And there has been greater volatility across asset classes in recent years(2)



(1) **Past performance is no guarantee of future results.** Data from January 1962 through March 2018. Data sourced from Bloomberg. "Traditional 60% stock/40% bond portfolio yield" reflects a 60% stock allocation to the S&P 500 Index and 40% bond allocation to the Barclays US Aggregate Bond Index.

(2) **Past performance is no guarantee of future results.** Data from January 1996 through December 2017. Data sourced from Bloomberg. Based on frequency of weekly returns that lie more than one standard deviation away from the average return. Average return and standard deviation calculated based on preceding 10 years of data. Note: Yield based on weighted average of S&P 500 dividend yield, and 10 year treasury yield. S&P 500 dividend yield sourced from Robert Shiller (http://www.econ.yale.edu/~shiller/data.htm). 10 year treasury yield sourced from St. Louis Federal Reserve Bank. Stocks represented by S&P 500 TR index, Bonds by BofA Merrill Lynch US Treasury Index, Currencies by the US Dollar Index Spot Rate, Commodities by S&P GSCI Energy Spot CME Index.

See appendix at end of this presentation for index definitions and additional information.

Alternative investments have generally outperformed traditional asset classes

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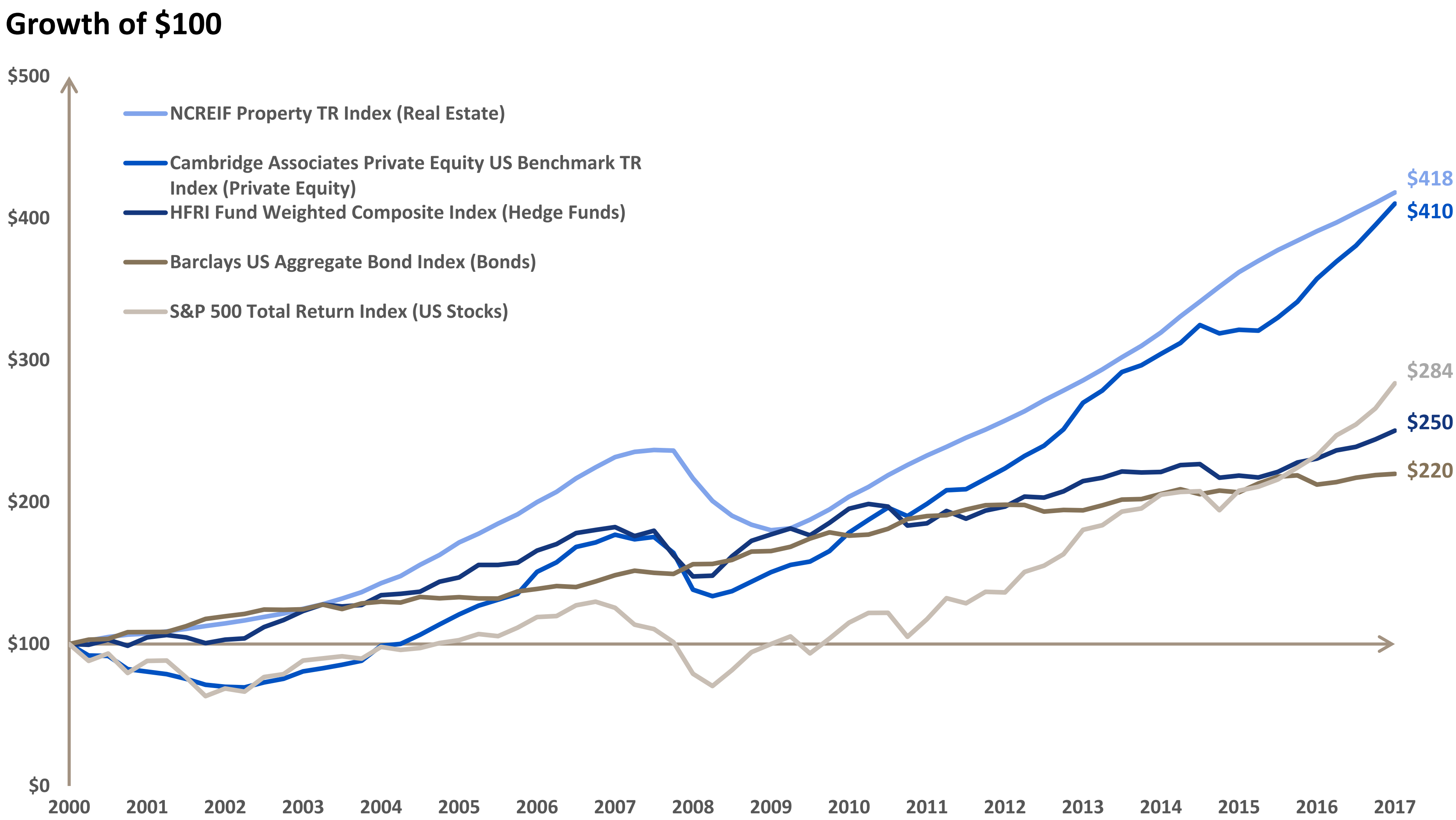

Past performance is no guarantee of future results. Based on data from December 2000 to December 2017. Performance period is dictated by availability of the private equity index, which is reported on a lag relative to other indices. **See appendix at end of this presentation for index definitions and additional information.**

Portfolio with alternative investments provides access to additional sources of risk and return

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Asset Appreciation & Income	Market returns from investing in real assets
Illiquidity Premium	Incremental returns from investing in less liquid assets
Active Management	Returns from skill-based investment decisions which generally do not depend on market direction

By adding alternative investments to your clients' portfolios, they may have opportunities to access more sources of return than just asset appreciation and income from stocks and bonds

Past Performance is not indicative of futures results. Alternative Investments are speculative and involve a high degree of risk. There can be no guarantee that an AI strategy will be successful or avoid loss.

Real assets provide access to different markets with uncorrelated returns

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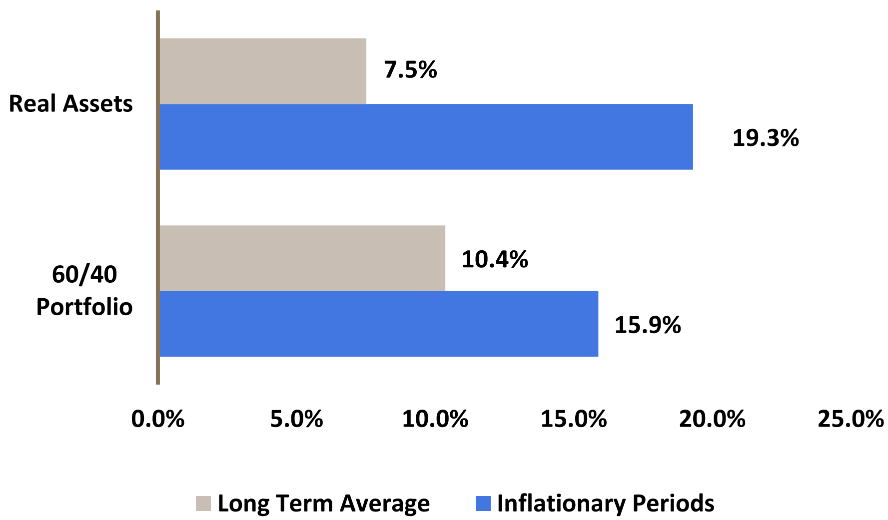
Real assets fall into two categories. **Real estate** is an investment in commercial and residential properties. **Commodities** are physical assets such as precious metals, oil, and agricultural products.

Real assets behave differently than stocks and bonds. Historically they have had low correlation to all other asset classes. In addition, they also have had particular outperformance during periods of higher inflation. Incorporating real assets into your portfolio can help you diversify your risks and serve as a hedge against inflation.

Real assets provide clear diversification and inflation protection benefits…(1)



… and historically low correlation to traditional stocks and bonds(2)

	Stocks	Bonds	Real Assets
Stocks	1.00	0.13	**0.09**
Bonds		1.00	**(0.10)**
Real Assets			1.00

(1) **Past performance is no guarantee of future results.** Data from Q1 1977 through Q1 2018. Data sourced from Bloomberg. "Inflationary periods" include years during which CPI exceeded 10%, based on the annual change in the CPI index. This includes 1979 and 1980. "Real assets" defined as an equal weighted allocation across private real estate (measured by NCREIF NPI) and commodities (measured by Goldman Sachs Commodity Index). The 60/40 portfolio is a 60% weight to the S&P 500 index and a 40% weight to the Barclays US Aggregate Bond TR index. Diversification does not ensure a profit or protect against loss in declining markets.

(2) **Past performance is no guarantee of future results**. Data from Q1 1977 through Q1 2018. "Real assets" defined as an equal weighted allocation across private real estate (measured by NCREIF NPI) and commodities (measured by GSCI). Stocks represented by the S&P500 index, Bonds by the Barclays US Aggregate Bond TR index.

See appendix at end of this presentation for index definitions and additional information.

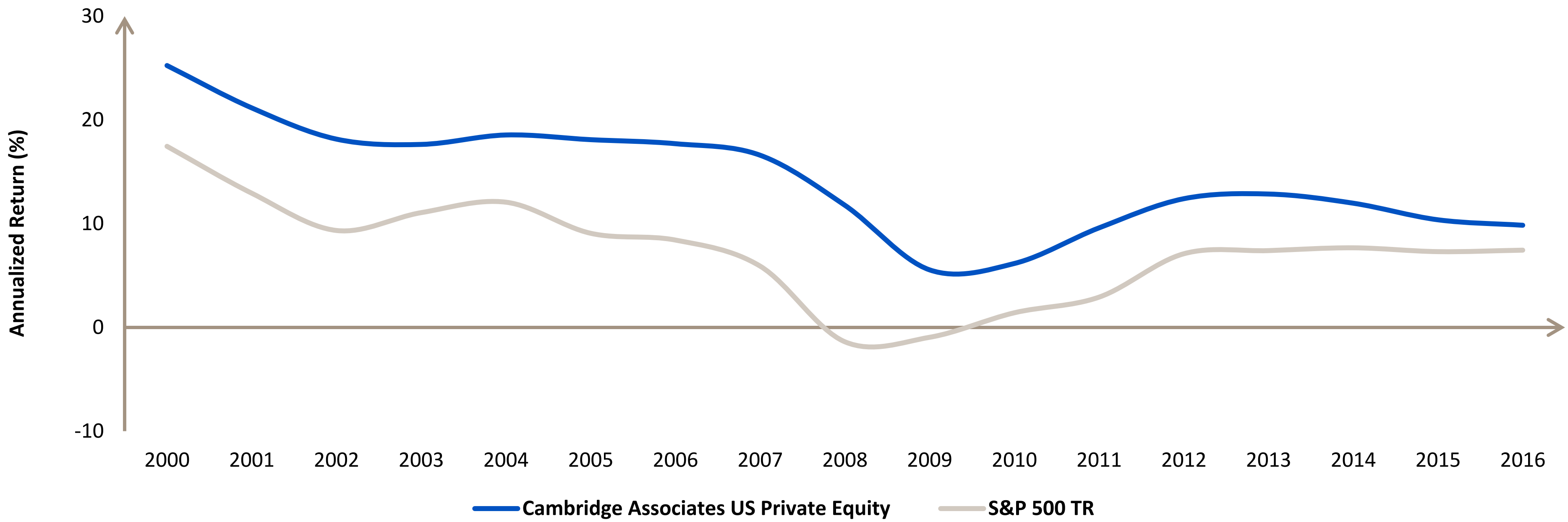
Private equity provides incremental returns with a long-term investment focus

Private equity funds invest in companies and other assets outside the public markets. Many of these investments are less liquid than publicly offered stocks and bonds.

The illiquid investments of a private equity fund provide a higher return than traditional stocks and bonds—investors are compensated for committing their capital for a longer period of time.

In addition, private equity managers can improve the operations of the companies they invest in, therefore creating even more value.

Long term returns for private equity have historically outperformed equities



Source: CIO. Data from January 1, 2001 through September 30, 2017 (most current data available). Reported Private Equity risk and return based on Cambridge Associates U.S. Buyout and Growth Equity Index Equity is represented by S&P 500 data sourced from Bloomberg. **Past Performance is no guarantee of future results. Private equity investments are illiquid and require a capital commitment for as long as 8 to 12 years (or more). See appendix at end of this presentation for index definitions and additional information.**

Hedge funds can help stabilize portfolios by adding returns that do not depend on market direction

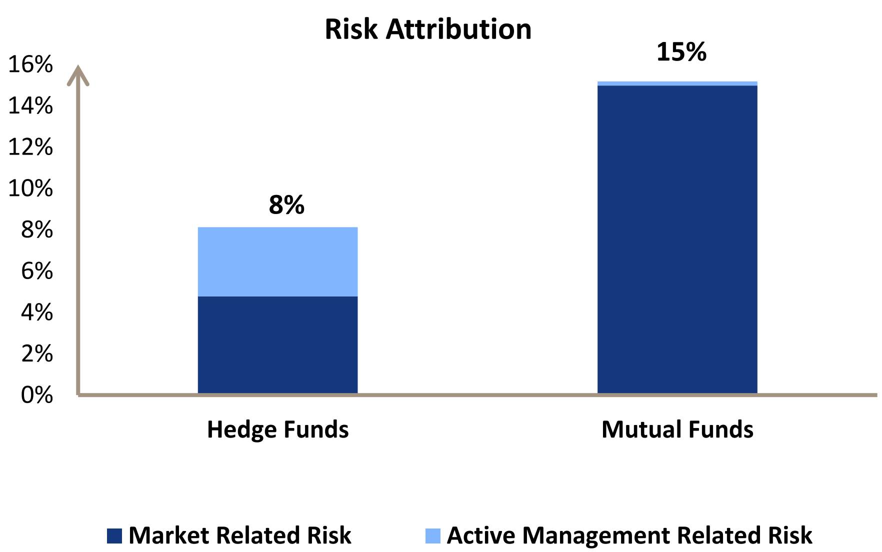
Hedge funds engage in a wide range of investments and trading strategies not available to traditional asset managers.

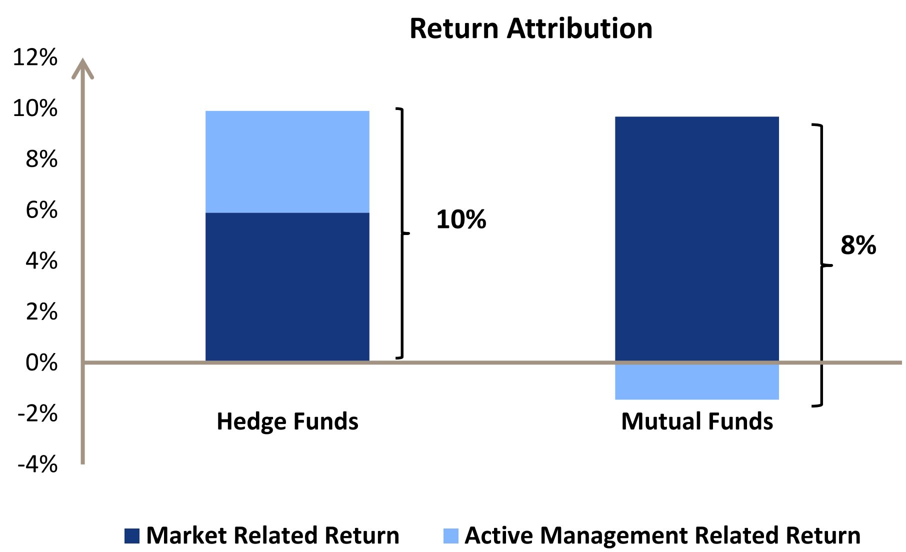
Hedge funds derive a significant portion of return from active management, which may include market timing and security selection. They can achieve this due to their ability to:

- **Invest across markets, including those with less liquidity**
- **Take concentrated positions**
- **Use leverage, derivatives, and short selling**

Because the results of active management do not typically depend on market direction, adding hedge funds to a portfolio can provide downside protection and assist with capital preservation.

Active management accounts for a much larger part of hedge fund performance than mutual fund performance





Past performance is no guarantee of future results.
All data based on quarterly returns from Q1 1990 through Q4 2017. Hedge Funds based on HFRI Fund Weighted Composite Index. Mutual Funds based on Morningstar US Large Blend Open-End Fund Category Average. Hedge Funds are speculative and involve a high degree of risk. There can be no guarantee that a hedge fund will be successful or avoid loss. **See appendix at end of this presentation for index definitions and additional information.**

Alternative investments enable clients to capture non-traditional sources of return

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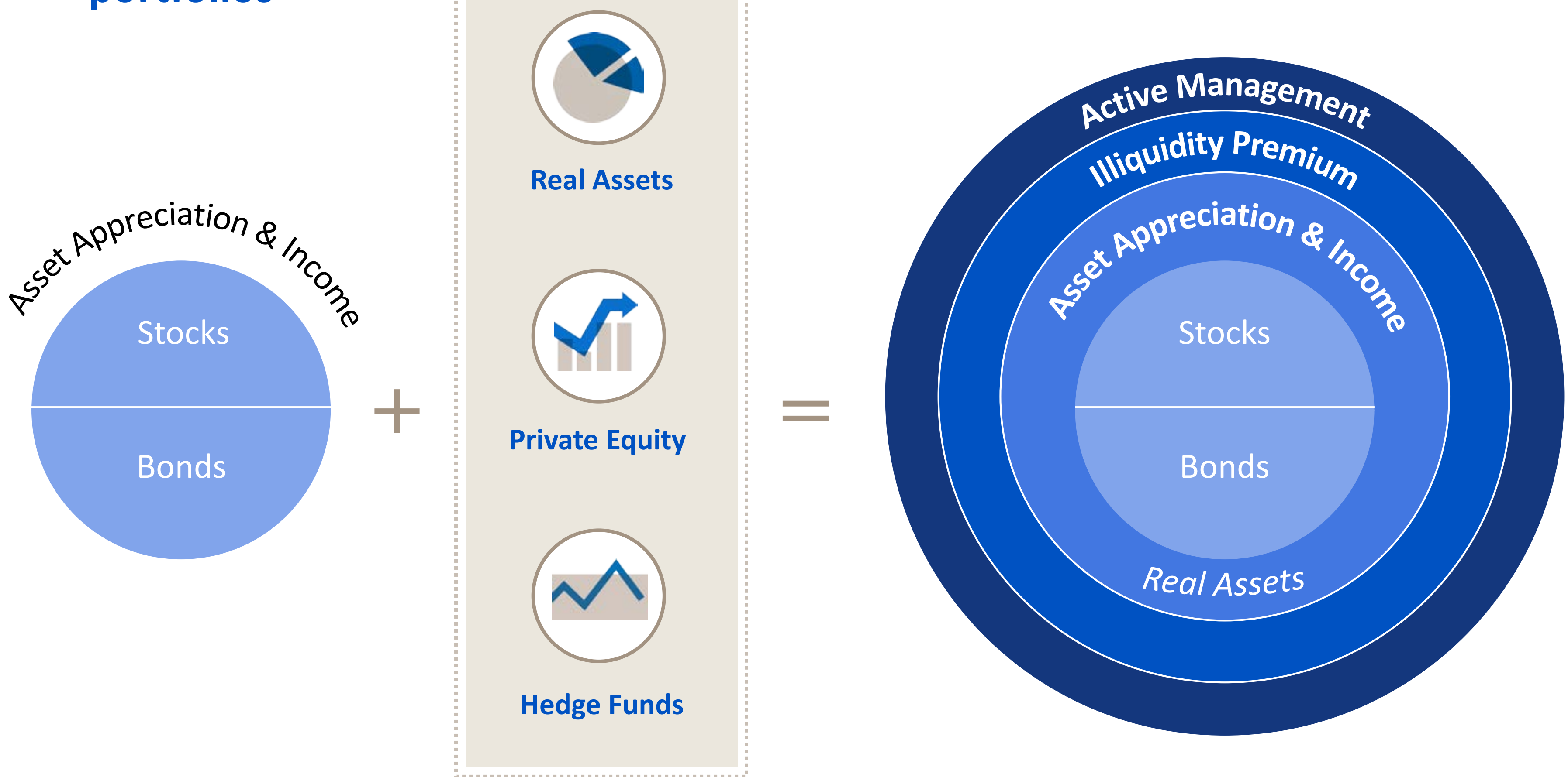
Traditional portfolios

Portfolios including alternative investments



This diversified portfolio may enhance the probability of achieving client goals

Not all asset classes are appropriate for all clients. Diversification does not ensure a profit or protect against loss in a declining market.

Alternative Investments are a meaningful percentage of endowment assets

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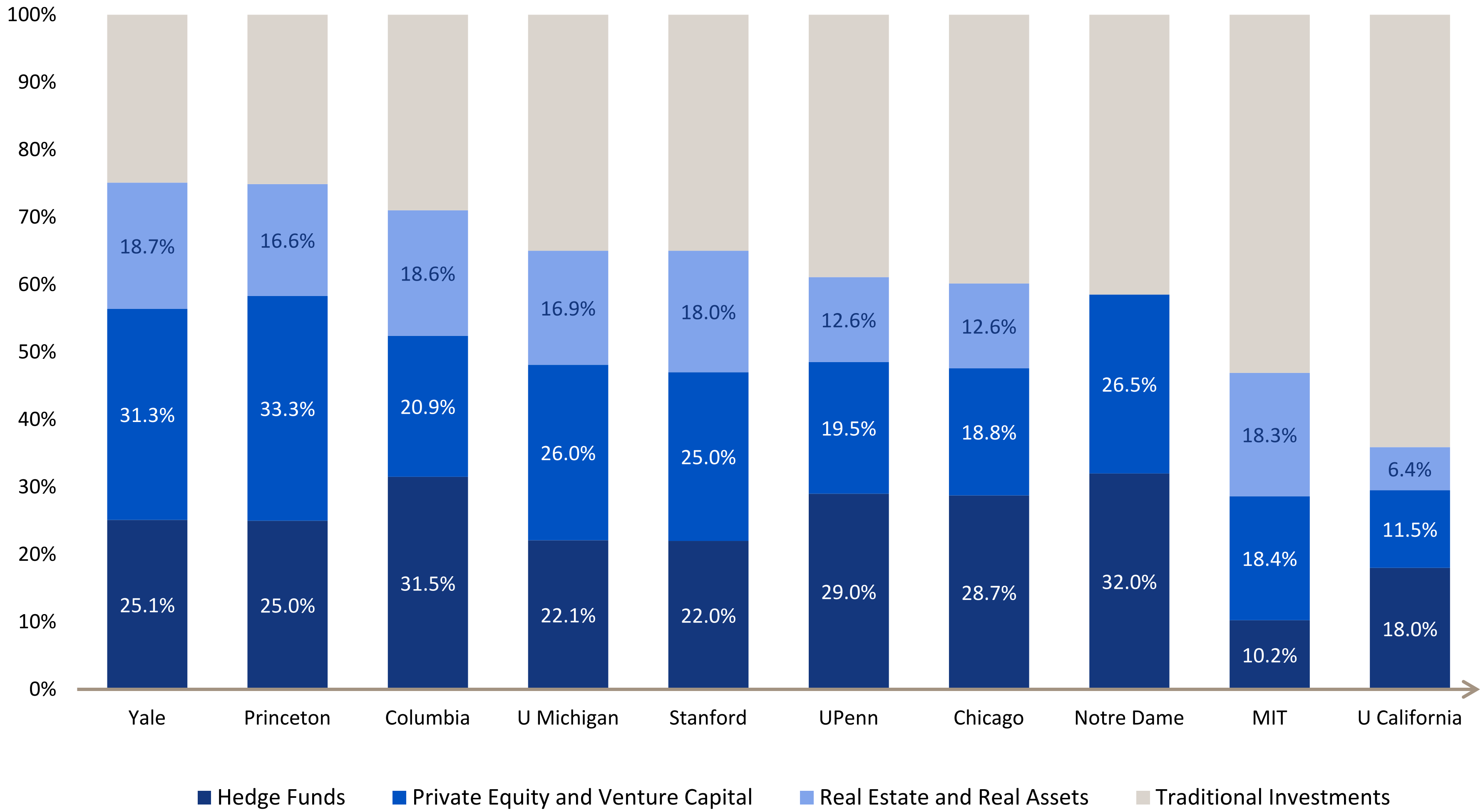
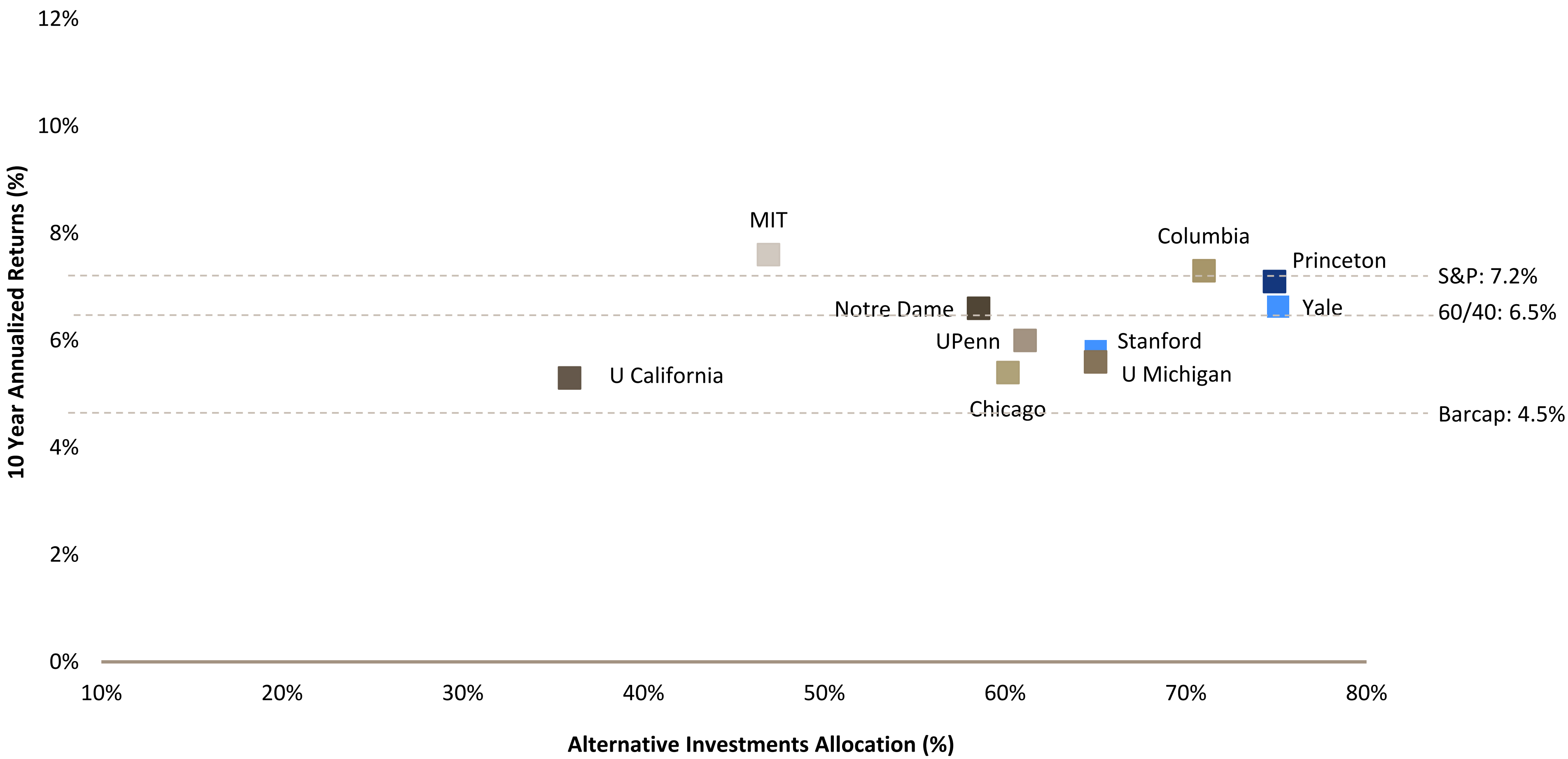


Note: Allocations represent fiscal year 2017 actuals. **Past performance not indicative of future results.** Based on data available from endowment websites, Bloomberg, and various web based sources. See sources and disclosures regarding endowments at the end of this presentation.

Sophisticated investor portfolio performance is directly linked to alternative investments allocation

AI allocation vs. 10-year performance



Data as of June 30, 2017. **Past performance is not indicative of future results.** Based on public data available from NACUBO-Commonfund Study of Endowments, endowment websites, endowment annual reports, and various web based sources. **See sources and important disclosures regarding endowments at the end of this presentation.**

Incorporating alternative investments into your asset mix

	Cons	Mod Cons	Mod	Mod Agg.	Agg.
Stocks	17%	32%	47%	60%	73%
Bonds	55%	51%	34%	18%	3%
Cash	15%	2%	2%	2%	2%
Alternative investments	13%	15%	17%	20%	22%
Hedge Funds	6%	8%	9%	10%	11%
Private Equity	2%	3%	4%	6%	7%
Real Assets*	5%	4%	4%	4%	4%

The recommended weights are generated by the Research Investment Committee ("RIC") Report.

Strategic allocations are hypothetical and are not intended to indicate specific investment recommendations or advice. Asset allocation cannot eliminate the risk of fluctuating prices, uncertain returns, or involves substantial risk, and should not constitute a complete investment program.

* "Real Assets" defined to include commodities and private real estate.
Recommended AI weights are for investors with moderate liquidity preferences, following CIO Tier 2 Liquidity – Low tax Sensitivity guidelines (moderate liquidity; up to 30% of the portfolio may be unavailable for 3-5 years). CIO, March 2018.

Carefully weigh all benefits and considerations before investing

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Potential Benefits

- Can employ sophisticated investment strategies in pursuit of your personal goals
- Have historically demonstrated lower standard deviation than equities
- Potential to generate returns with lower correlation to traditional stock and bond markets
- Seek better risk-adjusted returns through increased portfolio diversification
- A range of options are available with different minimum investment levels

Risk Considerations

- May offer limited liquidity and may restrict the timing of withdrawals
- Provide reduced transparency relative to other managed portfolios
- High fees and expenses may offset fund profits
- May employ leverage, which can increase the risk of loss
- Alternative Investments are speculative and involve a high degree of risk
- It is possible to lose your entire investment

Asset allocation and diversification does not ensure a profit or protect against loss in a declining market.

Merrill Lynch is positioned to serve as your alternative investments partner

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30+
YEARS

An alternative investing pioneer with more than 30 years of experience.

$48.57
BILLION

Clients have more than $48.57 billion invested in alternative structures.[1]

100+
PROFESSIONALS

The intellectual capital of more than 100 alternative investments professionals.

[1] Source: Bank of America. The Investment Solutions Group Alternative Investments group is part of Global Wealth and Investment Management (GWIM), the wealth and investment management division of Bank of America Corporation. As of March 31, 2018, GWIM clients had client balances (Client Balances) of approximately $48.57 billion in their GWIM accounts invested in alternative investment products. Alternative investment products include hedge funds, managed futures funds, private equity funds, nontraditional mutual funds and real assets. Client Balances includes assets invested (i) in funds or accounts under the discretionary management of GWIM entities (Assets Under Management);(ii) in products sponsored but not advised by GWIM entities; and (iii) in products sponsored or managed by unaffiliated third-party investment managers. Client balances invested in private equity funds include total committed but uncalled capital for funds in their initial commitment period. **This reflects a change in calculation methodology effective June 30, 2013, to include nontraditional mutual fund assets.**

Merrill Lynch's alternative investments capabilities can help you more easily integrate them into your financial strategy

Access

We offer access to industry leading partners and managers allowing our clients to tap into leading managers, niche markets and exclusive offerings.

Professional Advice

We offer industry-leading insight and tools, including access to market perspectives, investment strategy and implementation processes.

Solutions

We offer a wide range of solutions through more liquid offerings, niche investment opportunities and turn-key alternative model portfolios.

Customization

We offer custom solutions for clients who need a more tailored approach including custom AI portfolios and third-party managed single investor funds.

Flexibility

We offer exposure to solutions at lower minimum investments and with integrated and seamless execution to make the investment process more efficient.

Appendix

Terms and definitions

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Accredited Investor: For purposes of Regulation D under the Securities Act, an "accredited investor" includes among other investors, an individual who: (i) has income in excess of $200,000 (or joint income with the investor's spouse in excess of $300,000) in each of the two preceding years and has a reasonable expectation of reaching the same income level in the current year; or (ii) has a net worth (or a joint net worth with that person's spouse) at the time of purchase in excess of $1 million, excluding the value of such individual's primary residence.

For purposes of determining the value of the primary residence to be excluded from net worth, the investor should exclude any net equity in his or her primary residence (i.e., the amount by which the current market value of the residence exceeds the current outstanding balance of any mortgage or other indebtedness secured by the residence). If the current outstanding balance of any such mortgage or other indebtedness exceeds the current market value of the residence, the amount of any such excess shall cause a reduction in the investor's net worth to the extent that such mortgage or other indebtedness gives the lender recourse to the assets of the investor other than the residence securing the mortgage or other indebtedness.

Qualified Client: Within the meaning of Rule 205-3 under the Advisers Act, a "qualified client" means an individual or company (other than an investment company) that has a net worth (or in the case of an individual a joint net worth with the individual's spouse) of more than $2,100,000. Net worth for these purposes is the same as used in "Accredited Investor."

Qualified Eligible Purchaser: For purposes of CFTC Rule 4.7, a "qualified eligible purchaser" includes among other investors:
(i) An individual who is an "accredited investor" and:
(a) owns securities and other investments worth at least $2,000,000 or,
(b) has on deposit for its own account with a futures commission merchant, at any time during the preceding six months, $200,000 or more in exchange-specific initial margin and option premiums for futures and other commodity interest positions, or
(c) has a portfolio made up of a proportionate combination of the investments specific in (i) above and the margin and premium specified in (ii) above e.g., investments of $1,000,0000 and margin and option premiums of $100,0000
(ii) A corporation with $5,000,000 in total assets

Qualified Purchaser: For purposes of Section 2(a)(51) of the Investment Company Act of 1940, a "qualified purchaser" includes among other investors:

- Any natural person who owns $5,000,000 or more in net investments;
- Any person, acting for his own account or for the accounts of other qualified purchasers who, in the aggregate, owns and invests on a discretionary basis, not less than $25,000,000 in net investments;
- Any family-owned organization or entity that owns $5,000,000 or more in net investments; and
- Any trust that was not formed for the specific purpose of acquiring the securities offered, as to which each trustee and person who contributed assets to the trust meets the requirements above.

Terms and definitions

Beta is the measure of a fund's volatility relative to the market. (Many fund managers correlate themselves to the S&P 500.) A beta of greater than 1.0 indicates that the fund is more volatile than the market, and less than 1.0 is less volatile than the market. For example, if the market rises 1% and a fund has a beta equal to 2.5, then the fund is likely to rise faster than the market (and conversely fall faster than the market when the market falls).

Correlation is a measure of the strength of linear association between two variables. It quantifies the extent to which the asset and a comparative benchmark move together. Be aware that (a) correlation does not mean causation, (b) it measures only the strength of a linear relationship, and (c) it is affected by outliers. It is useful to calculate downside/upside correlations and participations. The correlation coefficient is expressed as a value between -1 and +1. For example, a correlation coefficient of 1 would suggest that two asset classes are perfectly correlated, a coefficient of zero suggests no relationship, and a coefficient of -1 suggests an inverse relationship.

Exchanged-Traded Funds ("ETFs") are subject to risks similar to those of stocks. Investment returns may fluctuate and are subject to market volatility, so that an investor's shares, when redeemed or sold, may be worth more or less than their original cost.

Mezzanine is generally unsecured, subordinated debt. Due to higher risk relative to senior debt, investors receive higher interest payments and in many cases "equity kickers" in the form of equity warrants.

Standard deviation is only one measure of risk, assesses performance volatility only (not absolute performance or risk exposure to events which did not happen to occur during the period presented) and does not reflect the "risk of ruin" inherent in alternative strategies, a risk which is not present in traditional bond and stock portfolios. Furthermore, the performance of a hedge fund index is unlikely to be representative of the performance of any investor's actual hedge fund portfolio, and the methodology by which the Index is compiled may self-select for an optimized ratio of rate of return to standard deviation. The comparison of an index of actively managed products such as hedge funds to passive securities indices is subject to material intrinsic limitations.

Index definitions

The indexes shown are provided for illustrative purposes only. They do not represent benchmarks or proxies for the return of any particular investable hedge fund product. The hedge fund universe from which the components of the indexes are selected is based on funds which have continued to report results for a minimum period of time. This prerequisite for fund selection interjects a significant element of —survivor bias into the reported levels of the indexes, as generally only successful funds will continue to report for the required period, so that the funds from which the statistical analysis or the performance of the indexes to date is derived necessarily tend to have been successful. There can, however, be no assurance that such funds will continue to be successful in the future. ISG AI group assumes no responsibility for any of the foregoing performance information, which has been provided by the index sponsor. Neither ISG AI group nor the index sponsor can verify the validity or accuracy of the self-reported returns of the managers used to calculate the index returns. ISG AI group does not guarantee the accuracy of the index returns and does not recommend any investment or other decision based on the results presented. Reference to indexes or other measures of relative market performance over a specified period of time (each, an index) are provided for illustrative purposes only and do not imply that any Merrill Lynch account, fund or portfolio will achieve returns or volatility results similar to the index. The figures for the index reflect the reinvestment of dividends but do not reflect the deduction of any fees or expenses which would reduce returns. Investors cannot invest directly in indexes. We strongly recommend that these factors be taken into consideration before an investment decision is made.

S&P 500 (Standard & Poor's 500): A market-capitalization weighted index that measures the market value of 400 industrial stocks, 60 transportation and utility company stocks and 40 financial issues.

Barclays Capital U.S. Aggregate Bond Index (BarCap U.S. Agg): Benchmark index composed of U.S. securities in Treasury, Government-Related, Corporate and Securitized sectors. It includes securities of investment-grade quality or better, have at least one year to maturity, and have an outstanding par value of at least $250 million. Benchmark selected to represent fixed income returns.

Cambridge Associates U.S. Private Equity Index: Tracks the performance of thousands of U.S. and European venture capital and buyout funds formed since 1969. Sources are financial documents and schedules from Limited Partners investors and General Partners. All returns are calculated net to investors (net of fees and carried interest) by Thomson Venture Economics from the underlying financial cash-flows using both cash on cash returns (distributions and capital calls) and the unrealized net asset value of funds as reported by private equity fund managers.

The HFRI Fund Weighted Composite Index: An equal weighted index that includes over 2000 constituent funds, both domestic and offshore. All funds report assets in USD, net of all fees, on a monthly basis and have at least $50 Million under management or have been actively trading for at least twelve (12) months. No fund of funds are included in the index.

The NCREIF Property Index: A quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NCREIF Property Index (NPI) have been acquired, at least in part, on behalf of tax-exempt institutional investors—the great majority being pension funds. As such, all properties are held in a fiduciary environment.

Index definitions

Merrill Lynch
Bank of America Corporation

NCREIF Transaction Based Index: The NCREIF Transaction Based Index (NTBI) is an equal-weighted transaction and appraisal index while the NCREIF Property Index (NPI) is a value weighted index calculated using appraised value. A value weighted index treats the NPI as a complete population or portfolio of all properties in the “universe” held by members whereas an equal weighted index views the properties in the NPI as a sample from a broader population of commercial real estate since only a small portion of properties in the NPI transact each quarter and are included in the NTBI.

Bloomberg Commodity Index: The Bloomberg Commodity Index (BCOM) tracks prices of futures contracts on physical commodities on the commodity markets. The index is designed to minimize concentration in any one commodity or sector. It currently has 22 commodity futures in seven sectors. No one commodity can compose less than 2% or more than 15% of the index, and no sector can represent more than 33% of the index (as of the annual weightings of the components). The weightings for each commodity included in BCOM are calculated in accordance with rules that ensure that the relative proportion of each of the underlying individual commodities reflects its global economic significance and market liquidity. Annual rebalancing and reweighting ensure that diversity is maintained over time.

Russell 2000: The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000® Index representing approximately 8% of the total market capitalization of that index. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership.

MSCI EAFE: The MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada. The MSCI EAFE Index consists of the following 22 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

MSCI Emerging Markets: The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. As of May 27, 2010 the MSCI Emerging Markets Index consisted of the following 21 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

BofA Merrill Lynch UK Gilt Index: Gilts indexed to inflation and similar to Treasury inflation-protected securities in the United States. Gilts are bonds issued by the UK government, and they are generally considered low-risk investments.

BoFA Merrill Lynch Japan Government Index: The BofA Merrill Lynch Japan Government Index tracks the performance of JPY denominated sovereign debt publicly issued by the Japanese government in its domestic market fiduciary environment.

BoFA Merrill Lynch German Government Index: The BofA Merrill Lynch German Government Index tracks the performance of EUR denominated sovereign debt publicly issued by the German government in the German domestic or eurobond market.

Index definitions

Japanese Yen Spot: Japanese Yen Spot Price. Yen is the official currency of Japan and is the third most traded currency in the foreign exchange market after the United States dollar and the euro.

British Pound/US Dollar Spot Exchange Rate: Mean of spot buying and selling rates as observed by the Bank of England's Foreign Exchange Desk in the London interbank market.

S&P GSCI (Formerly the Goldman Sachs Commodity Index): Recognized as a leading measure of general price movements and inflation in the world economy. The index – representing market beta – is world-production weighted. It is designed to be investable by including the most liquid commodity futures, and provides diversification with low correlations to other asset classes.

S&P GSCI Energy Spot CME Index: A sub-index of the S&P GSCI, provides investors with a reliable and publicly available benchmark for investment performance in the energy commodity market.

S&P GSCI Industrial Metals Spot CME Index: Index provides investors with a reliable and publicly available benchmark for investment performance in the industrial metals market.

S&P GSCI Precious Metals Spot CME Index: Index provides investors with a reliable and publicly available benchmark for investment performance in the precious metals market.

S&P GSCI Agricultural Spot CME Index: Provides investors with a reliable and publicly available benchmark for investment performance in the agricultural commodity market.

S&P GSCI Agricultural Spot CME Index: Provides investors with a reliable and publicly available benchmark for investment performance in the agricultural commodity market.

Morningstar US Large Blend Open-End Fund Category: Blend style assigned to portfolios where neither growth nor value characteristics predominate. These portfolios tend to invest across the spectrum of U.S. industries, and owing to their broad exposure, the portfolios' returns are often similar to those of the S&P 500 Index. Large-blend portfolios are fairly representative of the overall U.S. stock market in size, growth rates, and price. Stocks in the top 70% of the capitalization of the U.S. equity market are defined as large-cap.

Index definitions

Indices used for Slide 6, chart 2:

Stocks	Bonds	Currencies	Commodities
S&P 500	BofA Merrill Lynch US Treasury Index	US Dollar Index Spot Rate	S&P GSCI Energy Spot CME Index
Russell 2000	BofA Merrill Lynch UK Gilt Index	Japanese Yen Spot	S&P GSCI Industrial Metals Spot CME Index
MSCI EAFE	BofA Merrill Lynch Japan Government Index	British Pound/ US Dollar Spot	S&P GSCI Precious Metals Spot CME Index
MSCI Emerging Markets	BofA Merrill Lynch German Government Index	Euro/US Dollar Spot	S&P GSCI Agricultural Spot CME Index

Important sources

Sources for endowments allocations and returns :

Investors should bear in mind that these university endowments are highly sophisticated investors with vast resources, long time horizons and very limited need for liquidity in the short term. The universe of investment opportunities available to these endowments is much larger than that available to individual investors. Many endowments have access to managers who are not open to other investors. The funds available through the respective university endowments does not mirror the portfolio of any particular university endowment or approach the depth of opportunities available to them. There is a wide range of target asset allocations among university endowments and these allocations are subject to change at any time. For example, during the financial crisis many endowments reduced allocations to alternative investments, particularly private equity, only to later increase those allocations.

Yale University	https://news.yale.edu/2017/10/10/investment-return-113-brings-yale-endowment-value-272-billion https://www.barrons.com/articles/yales-endowment-learns-hard-diversification-lesson-1510867491 https://static1.squarespace.com/static/55db7b87e4b0dca22fba2438/t/5ac5890e758d4611a98edd15/1522895146491/Yale_Endowment_17.pdf
Princeton University	https://finance.princeton.edu/princeton-financial-overv/report-of-the-treasurer/2016-2017.pdf
University of Pennsylvania	http://www.thedp.com/article/2017/12/university-finances-tax-plan-endowment-upenn-philadelphia-year-2017 http://www.finance.upenn.edu/vpfinance/AnnualRpt/Financial_Report_FY17.pdf
Columbia University	http://finance.columbia.edu/files/gateway/content/reports/financials2017.pdf http://www.columbiaspectator.com/news/2017/10/18/columbia-university-endowment-increases-to-over-10-billion-reports-134-percent-return/ https://www.bloomberg.com/news/articles/2017-10-17/columbia-university-posts-13-7-return-with-ceo-holland-at-helm
Stanford University	http://www.smc.stanford.edu/sites/default/files/site_files/Report%20from%20SMC%202017.pdf
Massachusetts Institute of Technology	https://vpf.mit.edu/sites/default/files/downloads/TreasurersReport/MITTreasurersReport2017.pdf
University of Michigan	https://publicaffairs.vpcomm.umich.edu/wp-content/uploads/sites/19/2018/02/2017-Endowment-Profile.pdf
The University of California	http://invest.universityofcalifornia.edu/opportunity.html
University of Notre Dame	https://controller.nd.edu/assets/260907/annual_report_2017.pdf
The University of Chicago	http://finserv.uchicago.edu/sites/finserv.uchicago.edu/files/uploads/Documents/doc/F_666275_RESTRICTED_17_TheUniversityofChicago_FS.pdf
NACUBO-Commonfund Study of Endowments 2017	http://www.nacubo.org/Research/NACUBO-Commonfund_Study_of_Endowments/Public_NCSE_Tables.html