POLICY PROPOSAL - *HANDBOOK*
TITLE /, CHAPTER /, SECTIONS /
Title 4, Chapter 10, Section 5

Additions appear in ***boldface italics***; deletions are [~~stricken~~ and bracketed]

Section 5. Statement of Investment Objectives and Policies for the Endowment Fund

1. Introduction

a. This statement of investment objectives and policies *(the "Guidelines")* governs the investment management of the Endowment Fund (the "Fund") of the NSHE *(the "System").* These Guidelines relate to the Fund as a whole. [~~Because the endowment is perpetual, the investment objectives and policies are based on an investment horizon greater than ten years.~~]***The purpose of these Guidelines is to establish a clear understanding between all parties as to the objectives, investment policies, and goals of the Fund.***

b. The Regents are responsible for establishing the investment policies for the Fund. Accordingly, the Regents have promulgated these Guidelines pursuant to which they have established permitted asset classes, ranges, and [~~spending policy~~] ***distribution policy***. The Regents will review and revise these Guidelines from time to time as appropriate.

c. The Regents have delegated to the Investment [~~and Facilities~~] Committee (the "Committee") the [~~management~~] ***oversight*** of the Fund [~~within the parameters of these Guidelines~~]. The Chancellor, the [~~v~~]***V***ice chancellor [~~for budget and~~] ***for Finance***, and the Director of [~~banking and investments~~] Finance shall serve as ex officio nonvoting members of the Committee. The Board Chair shall appoint a Chair of the Committee and may appoint one or more individuals with investment knowledge or expertise to serve as nonvoting members of the Committee. The Investment [~~and Facilities~~] Committee shall meet at least quarterly. Minutes of each meeting of the Investment [~~and Facilities~~] Committee shall be provided to the Regents for acceptance at their next meeting.

d. [~~The Committee shall select external investment managers to manage the assets of the Fund. Subject to the manager-specific guidelines referenced in subsection 7.b and the usual standards of fiduciary prudence and responsibility, the managers will then have complete discretion over the investment of the funds in their respective accounts, including the discretion to vote proxies, the use of soft dollars and how to execute trades. Fees will be set at the time of hiring managers. The Committee may invest in indexed funds if deemed appropriate.~~] ***The Regents have granted investment management authority of the Fund to one or more Outsourced Chief Investment Office service providers (collectively, the "Fund Manager"). The Fund Manager will manage the Fund on a discretionary basis, in accordance***

with the guidelines listed below.

e. [~~The Committee shall have discretion to allocate funds among managers, subject to the permitted ranges set forth herein, and to hire and terminate managers for any reason at any time.~~]***No member of the Board of Regents and no voting or nonvoting member of the Committee shall accept or approve the acceptance by staff or any other person of any gift, travel expense, or other perquisite proffered by an investment manager, the value of which exceeds $25, without the advance approval of the Committee. Regents and employees of the System are also subject to the Code of Ethical Standards of the State of Nevada codified at NRS 281.400-480 and promulgated to govern the conduct of public officers and employees, and Regents are also subject to certain additional conflict of interest provisions***

f. [~~The Committee shall choose an independent investment consultant to provide services it deems to be necessary or helpful, including without limitation advice with respect to asset allocation and manager evaluation.~~]

g. [~~No member of the Board of Regents and no voting or nonvoting member of the Committee shall accept or approve the acceptance by staff or any other person of any gift, travel expense, or other perquisite proffered by an investment manager, the value of which exceeds $25, without the advance approval of the Committee. Regents and employees of the System are also subject to the Code of Ethical Standards of the State of Nevada codified at NRS 281.400-480 and promulgated to govern the conduct of public officers and employees, and Regents are also subject to certain additional conflict of interest provisions.~~]

2. [~~Financial and Investment~~] Objectives

a. The long-term financial [~~objective~~] ***objectives*** of the Fund [~~is~~] ***are*** to provide a relatively stable stream of spendable revenue that increases over time at least as fast as the general rate of inflation, as measured by the Consumer Price Index. In order to achieve this objective over the long term, the unit value of the Fund must also increase at least as fast as the rate of inflation.

b. ~~The~~ ***To meet the long-term financial objectives, the*** long-term investment objective of the Fund is to [~~attain~~] ***achieve*** an [~~inflation-adjusted~~] ***average annual real*** total return[~~,net of fees,~~] at least equal to the contemplated [~~spending~~] ***distribution*** rate [~~of 4.5~~] ***set forth in section 3 below over ten-year periods, net of fees. It is recognized that the real return objective may be difficult to attain in every ten-year period, but the Fund will seek to achieve the objective over a series of ten- year periods.*** [~~percent. For example, if average annual inflation were 3.0 percent, a total nominal return of 7.5 percent net of fees would have to be earned~~]. In order to achieve this objective over extended periods, endowments have had to exceed the objective substantially during some periods, such as the 1980s, in order to compensate for shortfalls during other periods, such as the 1970s. ***It is also recognized that given the static nature of this objective, it is not directly related to market performance; this reinforces the view that success or failure in achieving this objective should be evaluated in the context of the prevailing market***

environment and over the long term. The secondary objective of the fund is to outperform the Fund's custom Policy Benchmark (set forth in 6(b)(1) below) over rolling three-year periods.

c. ***The Fund will be invested in a manner that is expected to maximize the long-term total return with reasonable and acceptable levels of investment risk. Investment risk is defined in two ways: (1) the possibility of investments declining in value, and (2) the expected performance volatility of the investments in the portfolio. The Fund aims to achieve the stated return objective with a targeted annualized standard deviation similar to a simple blend of 70% global stocks (MSCI All Country World Index)/30% Bonds (Barclays Aggregate) portfolio over rolling five- to ten-year periods (or a full equity market cycle). Similar to the return objective, it is recognized that these objectives may be difficult to attain in every five-year period, but the Fund will seek to achieve these objectives over a series of five-year periods.***

3. <u>Endowment Distribution Policy</u>

a. The distribution policy represents the guidelines and administration of the annual amount of funds which can be withdrawn from the fund and made available for distribution each year. The Regents are responsible for review of the distribution policy and approval of the distribution rate.

b. [~~a~~.] Distributions from the [~~fund~~] ***Fund*** in each fiscal year will be up to 4.5 percent, subject to the restrictions in subsection c below, of the average market value for the 20 quarters ending the December 31 immediately preceding such fiscal year. For example, distributions for Fiscal Year 1996-97 will be based on the fund's average ending quarterly market values for the 20 consecutive quarters ended December 31, 1995.

c. [~~b~~.]Subject to Board of Regents' approval of an institution's request, an annual fee of up to 1.5 percent of the institution's portion of the NSHE endowment pool, subject to the restrictions in subsection [~~c~~]d below, and calculated and distributed in the same manner as the dividend, will be transmitted to that institution in consideration of additional foundation management, stewardship and development activities. Any transfer of such funds directly to the foundation for such activities is subject to the institution having an operating agreement in place between the institution and the foundation providing for adequate accounting and oversight of such funds consistent with Board of Regents' requirements specified in Title 4, Chapter 10, Section 10. After the management fee has been approved by the Board of Regents, the management fee may only be suspended or revoked by the Board of Regents:

1) due to a material breach of the operating agreement,
2) upon the declaration of a financial exigency by the Board of Regents, or
3) without cause and effective June 30 upon written notice to the institution no later than March 1 of the preceding year.

d. [~~c.~~] The total cumulative distribution as described in sections [~~a~~]***b*** and [~~b~~]***c*** above will not exceed [~~5 percent total for distributions made through June 30, 2015. Distributions made after July 1, 2015, will not exceed~~] 4.75 percent. The institution will have the discretion to allocate proceeds between spending and management fee, of which a maximum of 1.5 percent may be allocated to the management fee. Institutions will report annually the distribution allocation to the vice chancellor of finance.

e. [~~d~~.] No withdrawals from the Endowment Fund other than to fund [~~the spending amount, the estate tax liability, and capital calls~~] ***distribution to campuses noted above and the System management fee noted in 3(h) below*** are permitted without the prior approval of the Regents. [~~When there are withdrawals, the director of banking & investments will determine where the withdrawal will come from. This withdrawal will be used to rebalance the portfolio to be more in-line with the strategic allocation. This withdrawal will be approved by the assistant vice chancellor for budget, the assistant vice chancellor for finance and banking and investments, the vice chancellor for finance and administration, or the Chancellor.~~]

f. Any withdrawal will be approved by the Vice Chancellor for Finance, Director of Finance or the Chancellor who will also specify the operating checking or money market accounts for receipt of such withdrawal. The Fund Manager will determine the source of these funds.

g. ~~[e~~]The spending policy shall be administered by the [~~Banking and Investment Office~~] ***Finance Department*** in accordance with the Uniform Prudent Management of Institutional Funds Act, adopted by the Regents in accordance with the authority granted to them by *Nevada Revised Statutes (NRS)* 396.380 and NRS 396.420 to control and invest the System's funds.

h. [~~f~~]A .125 percent management fee will be imposed on the endowment pool for Board and System Administration expenses beginning July 1, 2001.

~~4. [Asset Allocation; Evaluating Performance of the Fund]~~

a. ~~[For purposes of investment policy, the Fund will be comprised of two components: an "equity portfolio" and a "fixed income portfolio."]~~

b. ~~[The strategic allocation and permitted ranges for the equity portfolio and the fixed income portfolio will be as follows:]~~

	~~Strategic~~	~~Permitted~~
~~Equity portfolio~~	~~77%~~	~~70-85%~~

~~Fixed income portfolio (B/R~~	~~23%~~	~~15-30%~~

~~[For purposes of this paragraph, the permitted ranges shall refer to the allocations to equity and fixed income managers, respectively, and, with respect to assets managed by balanced manager's allocations to equities and fixed income, respectively. Thus the permitted ranges shall not be deemed to be violated by virtue of a manager's discretionary use of investment reserves, cash, or bonds as described in subsection 5.g.]~~

c. ~~[The purposes of the equity portfolio are to provide long-term capital appreciation and a growing stream of income. It is recognized that the "equity portfolio" will have greater return variability than the "fixed income portfolio."]~~

~~i. [The purpose of the allocation to domestic common stock is to provide returns above the long term objective.]~~

~~ii. [The purpose of the allocation to international common stock is to provide returns above the long term objective and to diversify.]~~

~~iii. [The purpose of the allocation to alternative strategies is to invest in assets with returns that are not correlated to the domestic or international equity market, to reduce market risk, and to diversify.]~~

~~iv. [The purpose of the allocation to inflation hedging assets is to invest in assets with returns that are not correlated to the other asset classes, to reduce market risk, to diversify and to serve as a hedge against inflation.]~~

d. ~~[The purposes of the fixed income portfolio are to provide a hedge against extended deflation, to provide higher current income than equities, and to help diversify the Fund.]~~

e. ~~[Three measurements of risks will be used to determine if the long term financial objectives of the Fund are met with an acceptable level of risk. The overall return of the Fund, net of fees, should equal or exceed each of the following:]~~

~~(1) [The Fund's spending rate plus the increase in the Consumer Price Index measured over rolling periods of ten years or longer.]~~

~~(2) [An appropriate blend of capital market benchmarks constructed by the Committee with reference to the strategic allocation measured over rolling periods of five years or longer.]~~

~~(3) [The median return of a pool of endowments with similar investment objectives and policies measured over rolling periods of ten years or longer.]~~

f. ~~[The Committee recognizes that certain non-US securities are not within the jurisdiction of the US courts and may result in the loss of investment monies with no avenue for redress.]~~

4. Fund Composition and Asset Allocation

a. ***The Fund will be managed according to Long-Term Policy asset allocation targets and ranges outlined as follows:***

Allocation	*C|A Target*	*Russell Target*	*Blended Total Assets Policy Target*	*Policy Range For Each OCIO*
Growth	*62%*	*61%*	*61.5%*	*50%-70%*
Diversifiers	*18%*	*12%*	*15.0%*	*5%-25%*
Real Assets	*10%*	*12%*	*11%*	*5%-20%*
Fixed Income & Cash	*10%*	*15%*	*12.5%*	*5%-25%*

b. ***Roles of Investments***

i. ***The purpose of Growth Assets (e.g. domestic stocks, foreign stocks, equity hedge funds, private equity, venture capital and growth-oriented debt) is to provide a stream of current income and appreciation of principal that more than offsets inflation. It is recognized that pursuit of this objective could entail the assumption of significant variability in price and returns. Return premiums may exist for investors who accept the illiquid and inefficient characteristics of the private equity market. For private investments, the performance objective is to achieve an internal rate of return over the life of the investment that is commensurate with public equity benchmarks plus a premium for illiquidity and risk.***

ii. ***The Diversifiers allocation (e.g. absolute return hedge funds, liquid alternatives, emerging markets debt and private diversifiers) is intended to provide equity-like returns with low equity correlation and lower levels of risk than Growth Assets. The investments are intended to help moderate the volatility of the Fund in order to provide additional year-to-year stability in Fund values.***

iii. ***The purpose of the Real Assets allocation (e.g. public and private investments in hard assets such as real estate, oil and gas, natural resources equities, and commodities) is to provide potential portfolio protection against the risk of unanticipated severe inflation, thus preserving the real value of the portfolio over the long term.***

iv. ***The Fixed Income allocation (e.g. domestic and foreign bonds and cash) is intended to: (1) provide some asset appreciation in periods of declining interest rates (especially in periods of significant equity price deflation) and (2) provide ready liquidity.***

c. ***Tactical asset allocation decisions will be made from time to time by the Fund Manager within the parameters of this Investment Policy Statement. In addition, the Fund Manager***

may invest in opportunistic strategies that are generally shorter-term, tactical investments and can be allocated across the portfolio.

d. ***Rebalancing decisions will be made by the Fund Manager as part of ongoing monitoring of the Fund's actual asset allocation relative to the targets and ranges described in 4(a) above. For the purpose of gauging compliance with asset allocation policy ranges, 50% of Legacy Assets shall be attributed to each Fund Manager's portfolio. Rebalancing the actual allocation of the Fund to policy targets is useful for maintaining the risk profile adopted by the Committee. Contributions to and withdrawals from the Fund shall be allocated and managed in the discretion of the Fund Manager. In managing contributions to and withdrawals from the Fund, the Fund Manager will seek to adhere to the asset allocation policy and guidelines. In the event of cash contributions exceeding 10% of the Fund's total asset size, the Fund Manager shall develop and recommend an implementation plan for Investment Committee approval, setting forth the timeline and number of tranches to deploy the new cash in order to bring the Fund into compliance with asset allocation policy and guideline. In the event that the Fund otherwise falls outside of the ranges described in 4(a) above, the Fund Manager will communicate this breach to the Investment Committee and have a reasonable period of time to bring the Fund back into compliance with the applicable guidelines.***

~~5. [Guidelines for the Equity Portfolio]~~

~~a. [To meet the return objective with an acceptable level of risk, the "equity portfolio" will be diversified across different types of assets with expected returns, which are not perfectly correlated ;*i.e., the returns of which do not always move in tandem*. The strategic allocation and permitted ranges for the equity asset classes will be as follows:]~~

~~[Asset Class~~	~~Strategic Allocation~~	~~Permitted Ranges~~
~~Domestic common stock~~	~~35%~~	~~20 - 50%~~
~~International common stock~~	~~13%~~	~~5 - 25%~~
~~Alternative Strategies~~	~~19%~~	~~0 - 30%~~
~~Real estate and other inflation hedging assets~~	~~10%~~	~~0 - 15%~~
~~Equity fund *(total)*~~	~~77%~~	
~~Permitted range of equity fund~~		~~70 - 85%~~
~~(B/R 4/05)]~~		

~~[For purposes of this paragraph, the permitted ranges shall refer to the allocations to managers investing in a particular asset class and, with respect to assets managed by each balanced manager, the benchmark strategic allocation, if any, to that asset class. Thus the permitted ranges shall not be deemed to be violated by virtue of a manager's discretionary use of investment reserves, cash, or bonds as described in subsection 5.g.]~~

~~b. [The Committee shall periodically review asset allocation guidelines for the equity portfolio, including the strategic allocation to various types of equities and permitted~~

~~ranges for each type of equity, and may in its sole discretion adjust the strategic allocation within the permitted ranges.]~~

c. ~~[Common stocks will be managed by managers with distinct and complementary investment styles resulting in domestic and international marketable securities equity portfolios, respectively that are diversified by economic sector, industry, and market capitalization.]~~

d. ~~[The performance objective of the domestic and international marketable security portions of the equity portfolio, excluding real estate and other illiquid investments, is to achieve returns, net of manager fees, that are (1) superior to those of the appropriate market benchmarks selected by the Committee and (2) on par with or in excess of the median of an appropriate universe of institutional-quality investment managers.]~~

e. ~~[Alternative strategies will include asset classes that would be expected to increase the diversification of the total portfolio while also helping to improve the risk/return characteristics of the Fund. These asset classes may include: absolute return strategies, venture capital and/or private equity.]~~

f. ~~[Performance against objectives is to be measured quarterly and evaluated over rolling periods of five years or longer. It is recognized that the objectives may be difficult to attain in every period but should be attainable over most market cycles.]~~

g. ~~[Equity portfolio managers will normally invest in common stocks. However, managers may at their discretion hold investment reserves of either cash equivalents or bonds, including convertible issues, without limitation, with the understanding that their performances, including any cash or bonds, will be measured against the common stock benchmarks established for each account by the Committee.]~~

h. ~~[Managers may not sell securities short, buy securities on margin, borrow money, pledge of loan assets, or buy or sell options or commodities without the advance written approval of the Committee.]~~

6. ~~[Guidelines for the Fixed Income Portfolio]~~

a. ~~[The guidelines for the fixed income portfolio are intended to promote the forth in subsection 4.d. To provide a hedge against extended deflation, the fixed income portfolio should ordinarily maintain a high credit quality; i.e., normally a weighted average credit rating of AA or better and never below A; and an intermediate to long-term duration; i.e., normally at least 3.0 years and always at least 2.0 years. Money market instruments as well as bonds may be used in the fixed income portfolio, but equities are excluded. In general, the fixed income portfolio shall be well diversified with respect to economic sector, financial sector, and issuer in order to minimize risk exposure. A maximum of 5% of the fixed income portfolio may be invested in the securities of any single issuer, provided that issues of the U.S. Government or agencies of the U.S. Government may be held without limitation and provided further that issues of agencies of the U.S. Government shall be limited to the extent set forth in the manager-specific guidelines referenced in subsection 7.d. A maximum of 35% of the fixed~~

~~income portfolio may be invested in non-dollar denominated fixed income securities.]~~

~~b. [The primary long-term investment objective of the fixed income portfolio is to outperform the Barclays Capital Aggregate Bond Index, net of manager fees, and the median return of an appropriate peer group of managers over rolling five-year periods. The Committee may also establish as a secondary long-term investment objective outperforming a benchmark that is a blend of the appropriate indices to reflect the allocation to non-dollar bonds.]~~

5. Benchmarking

a. The results of the Fund will be compared with the following benchmarks, to be evaluated over varying time horizons:

i. Policy Benchmark – rolling three-year periods

ii. Simple Benchmark (Risk Equivalent) – rolling five- to ten-year periods (full equity market cycle)

iii. Long-Term Financial Objective – rolling ten-year periods

b. Benchmark definitions:

i. The Policy Benchmark represents a passive investment in the Long-Term Policy Target allocation described previously. The table below defines the asset class indices which are weighted by the Long-Term Target allocations at the beginning of each month. The Total Assets Policy Benchmark shall be computed as an asset-weighted blend of the respective Fund Manager Benchmarks listed below:

Allocation	*C/A Benchmark*	*Russell Benchmark*
Growth	*MSCI All Country World Index (net)**	*MSCI All Country World Index (net)**
Diversifiers	*0.3 beta-adjusted MSCI ACWI (net)**	*LIBOR + 400bps*
Real Assets	*One-quarter mix* of: S&P NA Natural Resources Index/ S&P GSCI / Alerian MLP Index/ FTSE EPRA-NAREIT Global RE Index*	*Public Real Assets: One-third mix of: Bloomberg Commodity Index Total Return/ FTSE EPRA NAREIT Developed RE Index/ S&P Global Infrastructure Index Private Real Assets: NCREIF Fund Index Open-End Diversified Core Equity Index*
Fixed Income	*Bloomberg Barclays Aggregate*	*Bloomberg Barclays Aggregate*
Cash	*90-day T-Bills*	*90-day T-Bills*

****** For the portfolio of the portfolio that is allocated to illiquid Private Investments, each investment will be self-benchmarked for the first 5 years of its life. This is to address the "J-curve" inherent in private investments. After each investment's fifth year of life, it will be retroactively benchmarked to the relevant public market index to reflect any value that has been added over this timeframe.***

ii. The Simple (Risk Equivalent) Benchmark shall be a weighted blend of 70% MSCI All Country World Index/30% Bloomberg Barclays Aggregate Bond Index

iii. The Long-Term Objective is a static benchmark reflecting the System's long-term performance objective of total portfolio returns exceeding the sum of its distribution policy and inflation, as defined in Section 1

("Objectives") above. Given that this static benchmark is not directly related to market performance, success or failure in achieving this goal should be evaluated in the context of the prevailing market environment over rolling ten-year periods.

~~6. [Monitoring of Objectives and Results; Use of Derivatives]~~

~~a. [The Committee will review these investment objectives and policies at least once every two years for their continued appropriateness.]~~

~~b. [The Committee will review the strategic allocations at least annually. At this time, a modeling of investment returns will be performed to determine what expected returns the current strategy should produce.]~~

~~c. [At least annually, the Committee will determine if any rebalancing of actual allocations should be made.]~~

~~d. [The Committee shall provide each manager of a separately managed account with a set of mutually agreed-upon guidelines. Such guidelines shall provide that, if at any time the manager believes that any guideline contained therein adversely affects, or has the potential to adversely affect, its investment performance or would prevent the manager from handling the System's portfolio in a manner similar to the firm's other discretionary accounts, it is the responsibility of the manager to communicate this view to staff in a timely fashion. Additionally, such guidelines shall require the managers to inform the System's staff promptly of any change in firm ownership of fundamental investment philosophy, any significant change in organizational structure or professional personnel, and any change in portfolio manager(s) for the System's accounts. The Committee acknowledges that managers of commingled funds are unable to respond to specific guidelines. The Committee will maintain and review periodically descriptions of the investment policies and practices of managers of commingled funds to ensure that the Committee understands such policies and practices and has determined that they are within the spirit of these Guidelines. The matters reviewed will include without limitation the managers' policies and practices with respect to risk control generally and derivatives, non-dollar denominated securities, and securities lending.]~~

~~e. [The Committee shall have prepared and shall review on a quarterly basis an investment performance report setting forth the asset allocation of the total Fund and the investment returns for individual manager accounts and for the Fund. The returns shall be calculated on a time-weighted basis net of manager fees for the most recent quarter for which data are available and any other short-term periods that the Committee may select, including fiscal-year returns when such data are available. The Committee shall select an appropriate benchmark for each manager. The Committee will use the short- term performance data to monitor the Fund and the managers for consistency of investment philosophy, returns relative to objectives and investment risk. Risk will be evaluated as a function of asset concentration, exposure to extreme economic conditions and performance volatility. At least one performance report each year shall include~~

~~data for such longer periods of time as are specified herein. Regular communication with the managers concerning investment strategy and outlook is expected. Any decision to terminate a manager will normally be based on long-term' i.e., over a full market cycle, investment performance as well as other relevant factors.]~~

~~f. [The Committee will periodically review the related services provided to the System, including securities custody, performance evaluation, and consulting. Fees for these services will be explicitly stated in the contract.]~~

~~g. [The Committee will establish and review from time to time a policy for the investment of unallocated cash held for investment in the Fund.]~~

~~h. [Derivatives may be used by the Fund's managers to hedge existing portfolio investments, e.g., to hedge the currency risk of a foreign stock or bond position, or to create unleveraged investment positions as a more efficient and cheaper alternative to investments that would otherwise be made in the cash market. Derivatives may not be used by marketable securities managers to leverage a portfolio or increase its risk above that of an account with similar objectives that is managed without derivatives. Use of derivatives by a manager other than as described in this paragraph is permitted only if such use is authorized by the Committee. The manager-specific guidelines referenced in subsection 7.d shall include negative covenants with respect to use of derivatives and shall require the managers to give written notice to the System's staff immediately upon discovering that any of the guidelines have been violated. The Committee shall periodically review the derivative policy of each manager of a commingled vehicle to ensure that such policy is within these Guidelines or that it has made an exception in appropriate cases.]~~

~~i. [No agreement to engage in securities lending or directed brokerage program shall be entered into without the prior approval of the Committee.]~~

6. Monitoring of Objectives and Results

a. The Fund will be monitored for consistency in each manager's investment philosophy, return relative to objectives, and investment risk. The Fund Manager will provide reports to the System as are necessary including statements detailing all activity in the accounts and quarterly performance reports. Not less than quarterly, the Fund Manager will provide to the System and the Committee a written summary of overall portfolio performance and review of asset allocation in relation to the investment objectives.

b. All objectives and policies are in effect until modified by the Committee, who will review these at least annually.

c. If at any time the Fund Manager believes that any policy guideline inhibits investment performance, it is the Fund Manager's responsibility to clearly communicate this view to the Committee.

d. Effective December 1, 2016, the Fund Managers have been granted full discretion to manage the Fund. Subsequent to the approval of these Guidelines of Investment Policies and Objective, there will be an implementation window of approximately

four months to allow for the portfolio to transition from the pre-existing legacy investments into the Fund Manager-managed portfolio. For purposes of assessing Fund Manager performance, the System agrees that the official Fund Manager track record will begin April 1, 2017, after which the Fund Manager will be responsible for the Fund's performance relative to the previously stated return and risk objectives.

7. Investment Restrictions

a. *Liquidity.*

i. *The Fund Managers will opportunistically commit capital to illiquid private investment strategies with the following long-term target exposures, which will be built gradually over time given the nature of private investments:*

	C|A Long-Term Target	Russell Long-Term Target	Blended Total Assets Long-Term Target
Private Growth	17%	10%	13.5%
Private Diversifiers	5%	0%	2.5%
Private Real Assets	8%	5%	6.5%
Total Private Investments	30%	15%	22.5%

ii. *Each Fund Manager shall refrain from making new Private Investment commitments (1) while the Total Private Investment net asset value is greater than 1.3-times its respective long-term target above or (2) while the Total Private Investment net asset value plus unfunded commitments is greater 1.8-times its respective long-term target above. For the purpose of gauging compliance with these liquidity guidelines, 50% of Legacy Assets shall be attributed to each Fund Manager's portfolio.*

iii. *The illiquidity constraint defined above is meant to reflect the Committee's maximum tolerance for illiquidity but does not imply the intent to reach this limit. The guideline is meant to acknowledge the reality that private investment exposure could increase meaningfully beyond the target exposures in the event of severe market stress.*

iv. *Given the illiquid, long-term nature of Private Investment funds, each Fund Manager shall preview any planned Private Investment commitments with the System pursuant to a "negative consent" protocol, as follows:*

1. ***The Fund Manager shall send details of and rationale for the planned commitment to the NSHE Finance Department by email;***
2. ***The Finance Department shall have one week to raise questions, request a conference call to discuss the planned commitment, or instruct that a decision shall be deferred until the next regularly scheduled Committee meeting;***

3. *Absent any questions or concerns raised by the Finance Department within one week of the proposal, the Fund Manager is authorized to move forward with the commitment.*

b. *Concentration*
   i. *Fund Concentration*
      1. *No single actively managed investment will be larger than 10% of the Fund.*
      2. *No single passively managed investment will be larger than 20% of the Fund.*
   ii. *Firm Concentration*
      1. *Exposure to one external investment management firm will be limited to 15% of the Fund.*
      2. *In circumstances where an external firm manages assets for the Fund on a solely passive basis, exposure to that firm will be limited to 25% of the Fund.*
   iii. *It is recognized that significant changes in investment market values could cause the portfolio to be positioned outside of these liquidity and concentration parameters. If this occurs, the Fund Manager will communicate this breach to the Investment Committee and will take action to reposition the portfolio consistent with these parameters as soon as practicable.*

c. *Derivatives*
   i. *It is understood that certain investment managers in the Fund, chiefly those generally categorized as "Marketable Alternatives," may use derivatives and leverage as part of their investment strategies. Managers using derivatives and/or leverage should have in place systems to analyze and monitor liquidity and counter party credit risk in order to minimize the risks associated with the use of derivatives.*
   ii. *The Fund Manager may use derivatives in the Fund to hedge investment risks or to replicate investment positions in a more efficient manner or at a lower cost than would otherwise be possible in the cash markets. Selling of uncovered options is prohibited.*

d. *UBTI Sensitivity*
   i. *The System understands that its share of any income from the Fund (and possibly the gain on the sale of all or a portion of its interest in the Fund) may constitute unrelated business taxable income ("UBTI"), as defined in the U.S. Internal Revenue Code. UBTI generally is subject to taxation at rates applicable to taxable investors.*
   ii. *The Fund Manager will use reasonable efforts to limit the amount of UBTI derived from investments of the Fund. However, the Fund Manager will not be prohibited from causing the Fund to make investments that generate UBTI, and the Fund likely will make such investments if the Fund Manager believes that the overall potential after-tax returns from such investments justify any potential UBTI costs attributable to such investments. The System understands and agrees that the realization of UBTI may result in additional administrative costs, including tax and accounting advice required for making the required state and federal tax filings. The System*

understands that since the characterization of income of the Fund derived from underlying funds as UBTI depends in part on the nature of the underlying investments made by underlying funds, the Fund will be limited in its ability to avoid UBTI.

8. ***Roles and Responsibilities***

   a. ***The Board of Regents have delegated overall oversight of the Fund to the Committee. In addition, the Board have delegated certain responsibilities for the day-to-day management of the investment program to the Fund Manager and to the Finance Department.***

   b. ***Effective and cohesive relationships between the Board of Regents, the Committee, the Finance Department and the Fund Manager are important to fulfilling the purposes of this Policy and the Fund. The major duties and responsibilities of the parties as determined by the Board are summarized as follows:***

Fund Manager

- ***Develop and recommend policies, guidelines and benchmarks to Investment Committee for approval***
- ***Review at least annually these Guidelines of Investment Policies and Objectives to ensure its appropriateness in the context of macroeconomic and market environments and the System's and the Fund's financial situation***
- ***Implement the policy asset allocation within specified ranges approved by the Investment Committee***
- ***Select and terminate investment managers in accordance with these Guidelines***
- ***Determine the amount of assets delegated to each investment manager***
- ***Monitor and report to the Committee and System Staff the performance of each manager, each asset class, and the total portfolio on at least a quarterly basis***
- ***Communicate to the Investment Committee and System Staff any significant portfolio issues that might arise***
- ***Administer the Fund's day-to-day investment activities including the movement of funds within the Fund as well as inflows and outflows***
- ***Prepare all manager documentation for execution. Track and monitor the flow of such paperwork***
- ***Provide documentation to support the System's audit preparation***

NSHE Investment Committee

- ***Provide initial input and approve investment policies, guidelines asset allocation targets/ranges and benchmarks***
- ***Adopt and review at least annually these Guidelines of Investment Policies and Objectives, which establishes eligible investments, asset classes, and policy allocation guidelines***
- ***Monitor effects of the distribution policy on the Fund and make modifications, as necessary***
- ***Evaluate and approve of deviations from these Guidelines of Investment Policies and Objectives deemed necessary to support the System's financial objectives***
- ***Evaluate the performance of the Fund Manager on a periodic basis***

NSHE Finance Department

- ***Manage the System's relationship with the Fund Managers***
- ***Manage relationships with financial, legal, tax and audit service providers***
- ***Authorize/sign off on cash withdrawals out of Fund***
- ***Work with Fund Manager and Investment Committee on investment program as needed***
- ***Review monthly custodian statements and***
- ***Maintain paperwork and manager materials to augment C|A's Audit Support Package for audit preparation***

Nevada System of Higher Education

December 1, 2016

Investment Planning Review

CAMBRIDGE ASSOCIATES

Nevada System of Higher Education
December 1, 2016
Investment Planning Review

Wendy Walker, CFA
Lindsay Van Voorhis, CFA
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CAMBRIDGE C|A ASSOCIATES

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CAMBRIDGE C|A ASSOCIATES

1. Policy Setting – C|A Capital Management Portfolio

Investment Philosophy

Our philosophy is based on NSHE's dual financial objectives to 1) provide a relatively stable stream of distributions to campuses and 2) preserve the real purchasing power of the corpus and distributions

- **Maximize allocation to growth assets** (typically equity-oriented)
  - Equity-oriented assets (public and private) have historically outperformed other asset classes, providing the overall portfolio a "growth engine" to meet long-term return objectives
- **Insure against the risk of ruin (hedge against deflation and inflation)** to avoid selling growth engine assets at depressed prices
  - Prolonged economic contractions (or investors' collective fear of such events) can be mitigated with an allocation to high-quality, non-callable sovereign bonds
  - An unexpected spike in inflation may be mitigated by investing in a basket of "real assets" which should appreciate in line with rising inflation
- **Mitigate volatility through diversifying investments** in strategies with lower correlations
- **Focus on the long-term**, and avoid trying to time the market
  - Consider valuation-based tactical moves in the event of dislocations
- **Rebalance to control risk** in a diversified portfolio
  - Maintain a disciplined and long-term view when hiring and firing managers

Asset Allocation: We Focus on the Role of Each Investment in Portfolio

Goal

Maximize Returns at an Appropriate Level of Risk

Role

Growth

- Equity-oriented assets are driver of portfolio growth
- PE/VC enhances returns over the long run
- Long-biased equity hedge funds mitigate volatility, and can provide attractive risk-adjusted returns

Hedge Against Catastrophic Macroeconomic Risks

- **Deflation**
- **Inflation**

Diversification

- Use uncorrelated strategies to enhance diversification and reduce overall portfolio volatility

Example of Asset Classes

Public Equities

Private Equity & Venture Capital

Long-Biased Equity Hedge funds

Fixed Income

(High Quality, Intermediate to Long-Term, Non Callable Bonds)

Real Assets

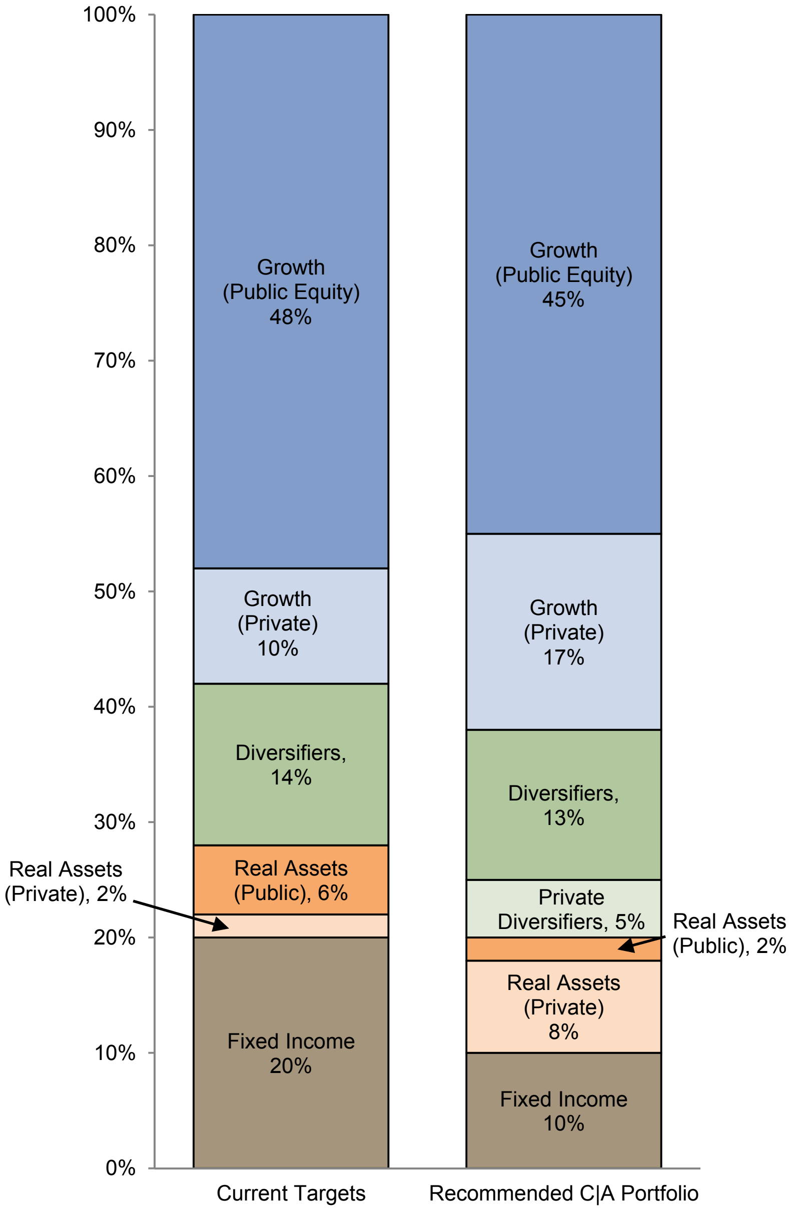
(Commodities, Real Estate, Inflation-Linked Bonds, Gold, etc.)

Diversifying Investments

(Absolute Return hedge funds, credit, liquid alternatives, global tactical allocation strategies, and other opportunistic investments)

Note: The delineation of asset classes and their roles can be blurred, with some investments serving multiple roles in the portfolio.

Proposed Long-Term Asset Allocation Policy– C|A Portfolio



<u>Target + Role in Portfolio*</u>

62% Growth
Drives capital appreciation that supports 4.875% effective distributions and more than offsets inflation

18% Diversification
Provides equity-like returns over a full market cycle with lower levels of volatility and lower equity correlation

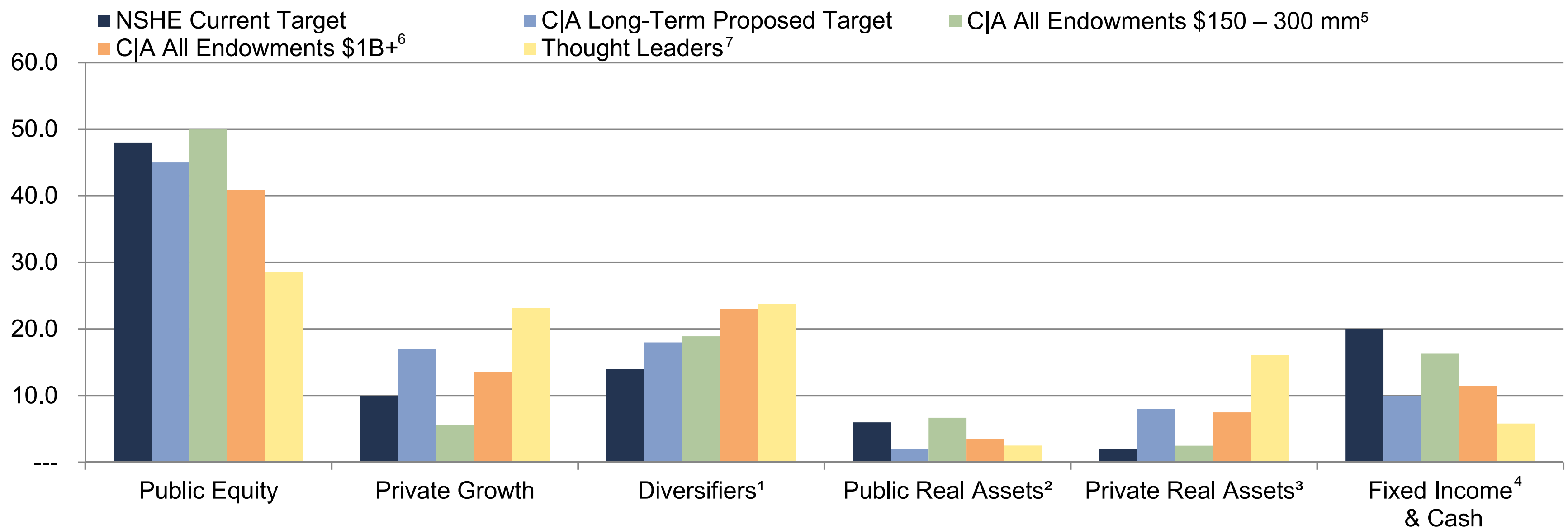
10% Inflation Sensitive
Protects against risk of high unanticipated inflation. C|A emphasizes strategies with equity-like returns.

10% Deflation Sensitive
High-quality bonds protect against prolonged contraction or flight to safety and provide liquidly (Credits offer diversification)

- Long-term targets oriented around strategic roles in portfolio
- Majority of portfolio in equity-oriented Growth strategies to drive capital appreciation
- Meaningful exposure to diversifiers (e.g., marketable alternatives) and private investments
- Opportunistic approach to private investments based on compelling valuations and managers – not an exercise in 'filling buckets'
  - Target exposures to Private Growth, Private Diversifiers and Private Real Assets will be built gradually over multiple years
  - Illiquidity constraint would drive potential / maximum allocation to private investments
- Allowable ranges provide discipline around rebalancing and tactical positioning

* The delineation of asset classes and their roles can be blurred, with some investments serving multiple roles in the portfolio.

Comparative Asset Allocation – Peer Endowments



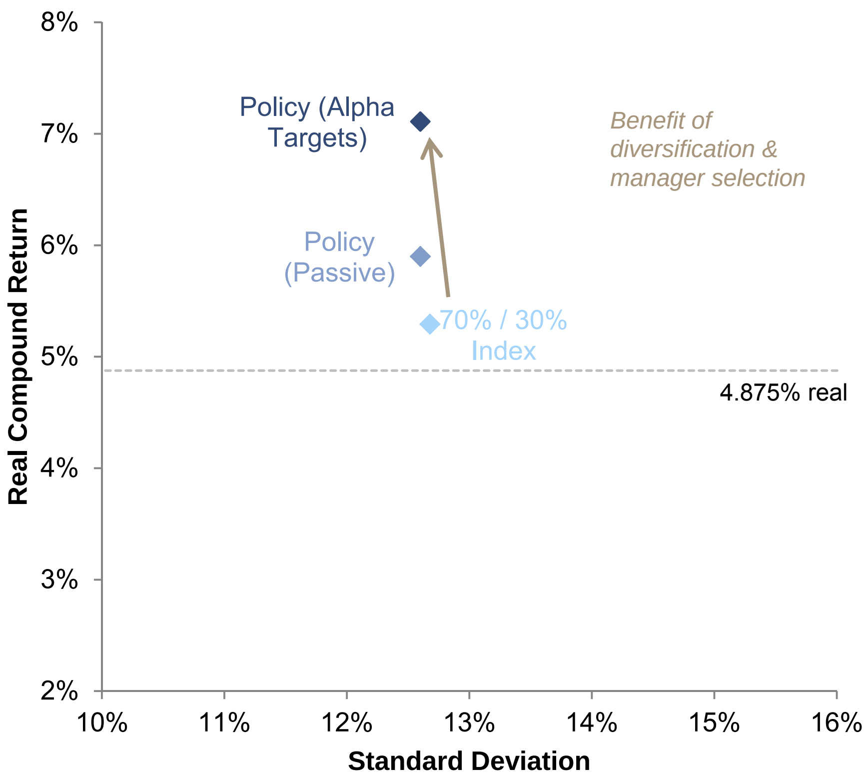
	Public Growth	Private Growth	Diversifiers[1]	Public Real Assets[2]	Private Real Assets[3]	Fixed Income & Cash[4]
NSHE Current Target	**48.0**	**10.0**	**14.0**	**6.0**	**2.0**	**20.0**
C|A Long-Term Proposed Target	**45.0**	**17.0**	**18.0**	**2.0**	**8.0**	**10.0**
C|A All Endowments $150 – 300 mm[5]	49.9	5.6	18.9	6.7	2.5	16.3
C|A All Endowments $1B+[6]	40.9	13.6	23.0	3.5	7.5	11.5
Thought Leaders[7]	28.6	23.2	23.8	2.5	16.1	5.8

[1] Diversifiers include equity hedge funds, distressed securities, arbitrage, liquidating managers, other marketable alternatives and others.
[2] Public Real Assets includes public real estate, inflation-linked bonds, commodities.
[3] Private Real Assets includes private real estate, oil & gas partnerships, timber.
[4] Fixed Income include U.S. bonds, global ex U.S. bonds, emerging markets bonds, and high-yield bonds.
[5] C|A All Endowments $150 – 300 mm universe includes 68 institutions with assets ranging between $153.5 mm and $297.1 mm. Results are preliminary as of 9/30/2016.
[6] C|A All Endowments $1B+ universe includes 30 institutions with assets ranging between $1.0B and $18.5B. Results are preliminary as of 9/30/2016.
[7] Thought Leaders reflects the mean allocation of 9 institutions: Columbia University, Darthmouth University, MIT Investment Management Company, Duke University, Yale University, University of Pennsylvania, Princeton University, Harvard Management University, and Stanford University. Data for Stanford is as of 6/30/2015. Data for all other institutions is as of 6/30/2016.

Proposed C|A Portfolio – Risk/Return Characteristics

Proposed policy offers superior returns to a simple 70/30 stock/bond portfolio with lower volatility

Long-Term **Real** Risk/Return Projections



Summary Statistics – **Real** Returns

	Proposed C|A Portfolio - Alpha Targets	Proposed C|A Portfolio	70% / 30% Index
Estimated Long-Term Real Compound Return	7.1%	5.9%	5.3%
Estimated Range of Returns (25th-75th %ile)	4.7 - 8.0%	3.7 - 7.1%	3.6 - 7.0%
Estimated Volatility (Standard Deviation)	12.6%	12.6%	12.7%
Estimated Beta to Global Equity	0.68	0.68	0.70
Long-Term Risk: Estimated Probability of Not Achieving 4.875% Real Compound Return Over 25 Years	28%	37%	43%
Short-Term Risk: Estimated Cumulative Decline, 2008 Financial Crisis	-34%* -$34mm*	-34% -$34mm	-37% -$37mm

* Assumes no positive or negative alpha from active management.

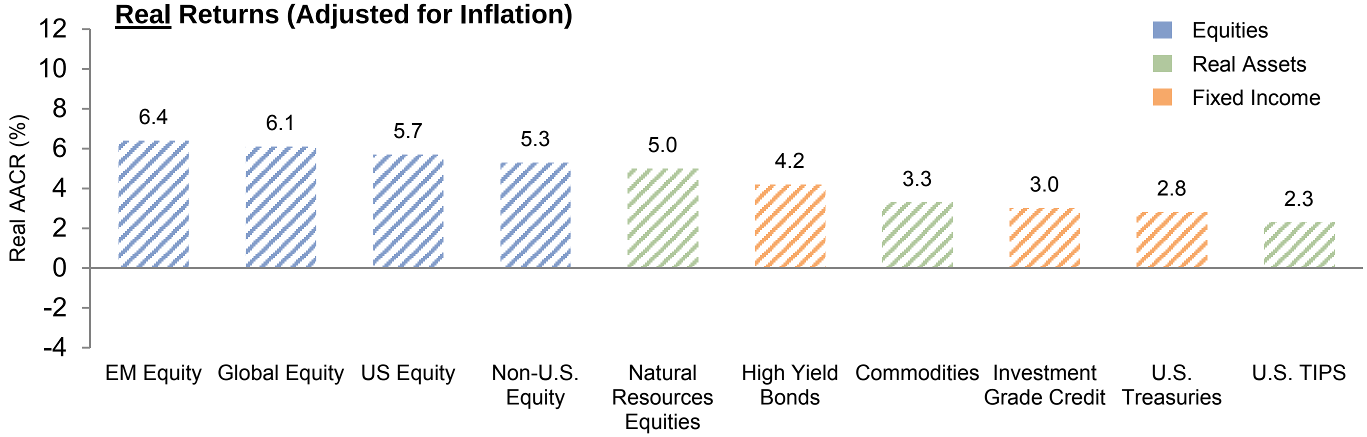
Notes: "Proposed C|A Portfolio– Alpha Targets" portfolio assumes alpha for each portfolio role over its given benchmark of: 50-150 bps from public equity, 300-500 bps from private investments, and 250-350 bps from hedge funds. Alpha is net of C|A fees. Decline statistics assume beginning market value of $100mm (C|A mandated portfolio) and use real cumulative asset class returns from November 1, 2007 to February 28, 2009.

C|A

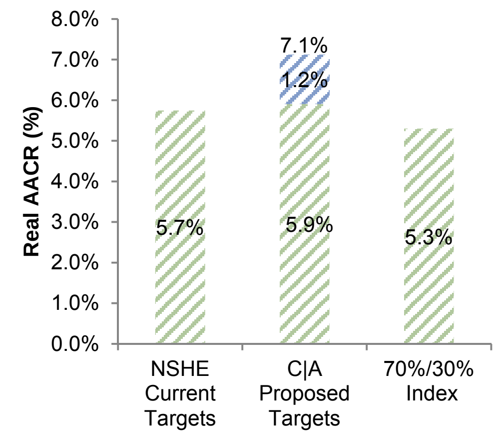
Valuations Will Challenge Intermediate-Term Market Returns: Alpha is not Optional

As Private Investment allocations are ramping up toward long-term targets, results may fall short of long-term expectations

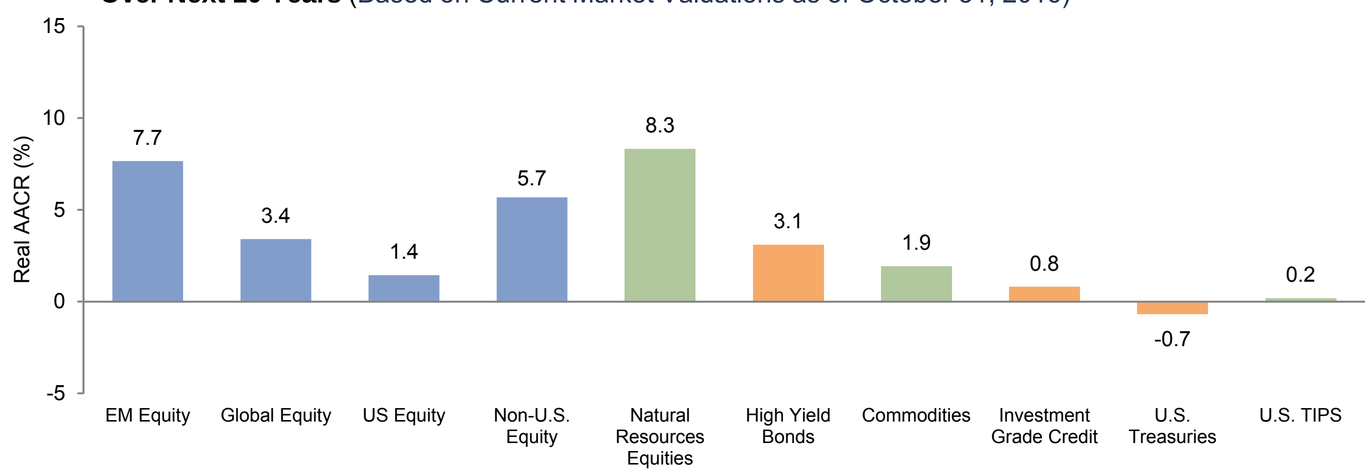
Long-Term (25-Plus Year) Steady State "Equilibrium" Assumptions: Real Returns (Adjusted for Inflation)



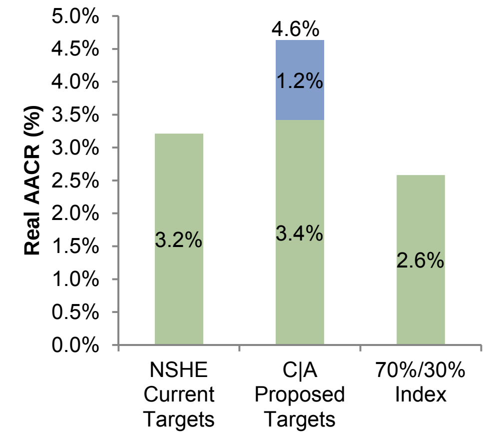
Long-Term Real Return



Intermediate-Term (10-Year) "Return to Normal" Scenario, Assuming that Valuations Normalize Over Next 10 Years (Based on Current Market Valuations as of October 31, 2016)



Intermediate-Term Real Return



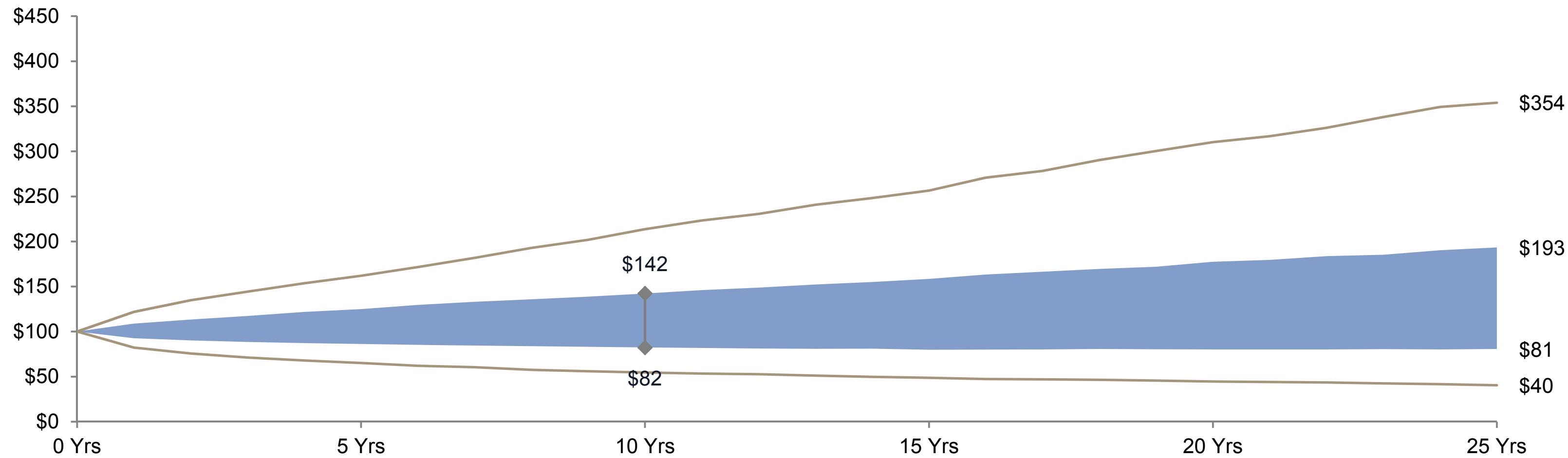
Blue bars denote targeted value added from manager selection

Key Assumptions: Inflation: 3%; Real EPS Growth: 2% for US and Dev ex US, 3% for EMs; Ending 10-Yr US Treasury Yield: 5.0%, Ending 10-Yr US TIPS yield: 2.0%

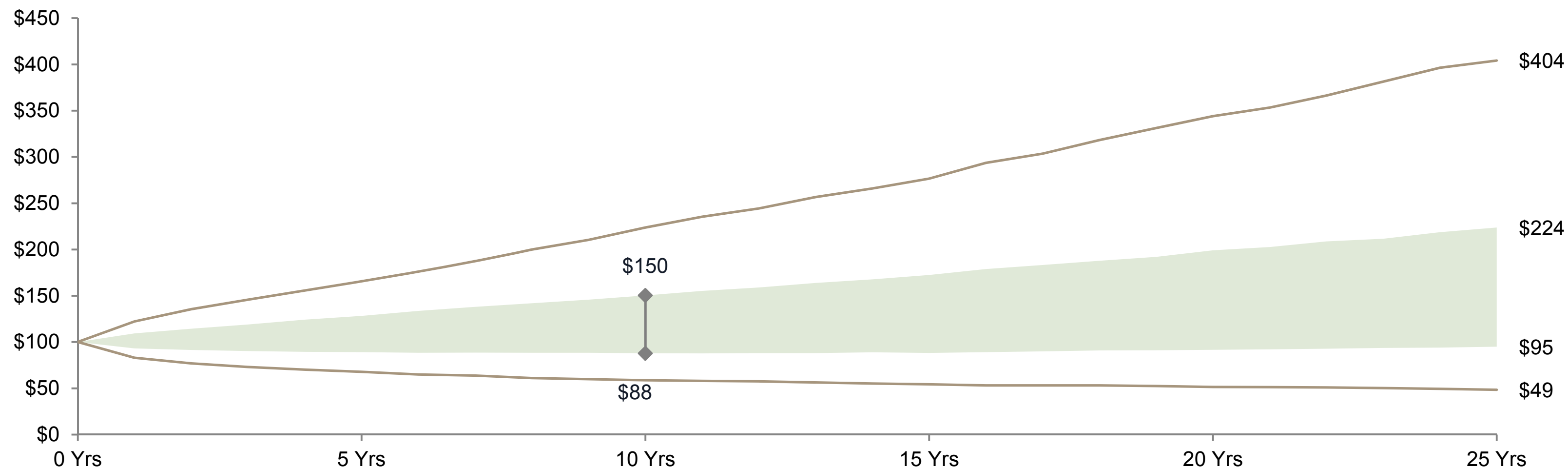
Sources: Barclays, Cambridge Associates LLC, Global Financial Data, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Policy allocations assume alpha for each portfolio role over its given benchmark of: 100 bps from public equity, 400 bps from private investments, and 300 bps from hedge funds. Alpha is net of C|A fees.

Proposed Targets Increase the Range of Potential Upside over the Long Term

Current NSHE Targets – Real Endowment Value after Distributions



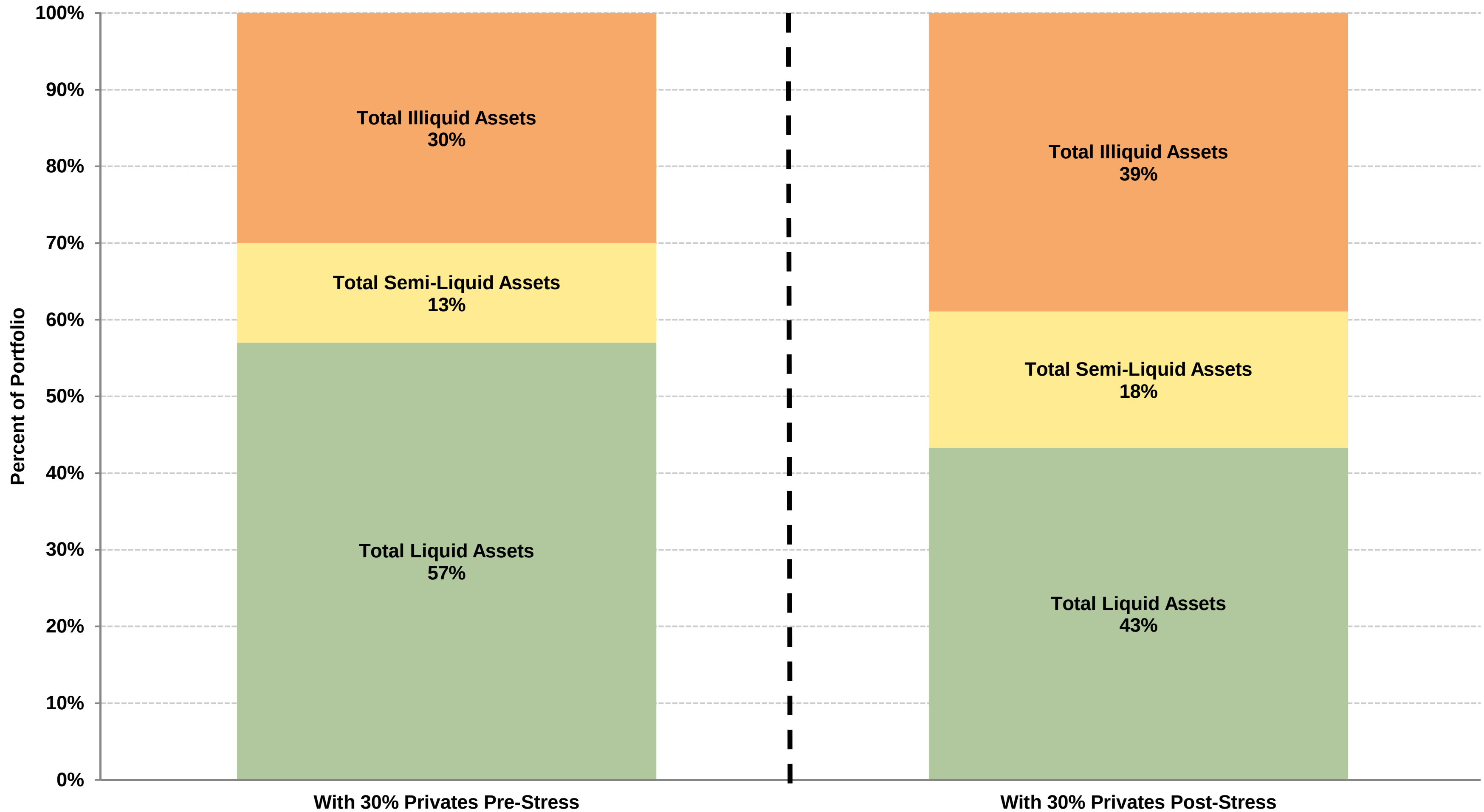
Proposed C|A Portfolio incl. Alpha Targets– Real Endowment Value after Distributions



Note: Based on Long-Term Equilibrium Assumptions. Range includes 50 percent of the distribution (25th to 75th percentile). Model employs 4.875% of the average ending portfolio market value over the trailing twenty quarters as the spending assumption.

C|A Portfolio Can Support 4.875% Payout and Maintain Liquidity Even in Market Stress

We use the Global Financial Crisis as an illustrative example of market stress, when equities fell >50%



Assumptions:

1. The stress scenario uses real cumulative asset class returns from November 1, 2007 to February 28, 2009 global financial crisis, e.g. -51.9% MSCI U.S. Index, -57.3% MSCI World ex U.S. Index, etc.
2. C|A Long-Term Policy includes "Liquid Assets": global equities (45%), public inflation sensitive strategies (2%) and deflation sensitive strategies (10%); "Semi-Liquid Assets": diversifying (13%); and "Illiquid Assets": private growth (17%). private diversifiers (5%), private real assets (8%). 4.875% annual spending is removed from liquid assets.

Measuring Results: Proposed C|A Portfolio Benchmarks

Several benchmarks assess different measures of performance and risk

	Benchmark	Description	Question Answered	Expectation	Evaluation Period
1	**Policy Benchmark** *See next page*	Weighted blend of benchmarks for each role in portfolio category	Have manager selection and tactical asset allocation been additive relative to the strategic target policy?	Outperform with comparable volatility	Rolling 3-year periods
2	**Simple Risk-Equivalent Benchmark** 70% MSCI ACWI Index (net) / 30% Bloomberg Barclays Aggregate	Weighted blend of global equities (MSCI All Country World Index) and U.S. fixed income (Bloomberg Barclays Aggregate Bond Index)	Have asset allocation and implementation been additive relative to simple, passive alternatives; has risk profile been consistent with expectations?	Outperform with equal or less volatility	Rolling 5- to 10-year periods *(full equity market cycle)*
3	**Long-Term Objective** All-in Distribution Policy (4.875%) + Inflation (CPI-U)	Static benchmark not directly related to market performance	Is the portfolio meeting NSHE's financial objectives to support a 4.875% payout and maintain purchasing power?	Outperform	Rolling 10-year periods

Proposed C|A Policy Benchmark & Liquidity Guidelines

Portfolio Role	C|A Portfolio Policy Target	Portfolio Role Benchmarks
Growth	62%	MSCI All Country World Index (net), adjusted for Private Investments*
Diversifiers	18%	0.3 beta-adjusted MSCI ACWI (net), adjusted for Private Investments*
Real Assets	10%	25% S&P NA Natural Resources Index/25% S&P GSCI/ 25% Alerian MLP Index/25% FTSE EPRA-NAREIT Global RE Index, adjusted for Private Investments*
Fixed Income	10%	Bloomberg Barclays Aggregate Index
CA Portfolio Benchmark	**100%**	**Weighted Average of Portfolio Role Benchmarks**

Liquidity Guidelines	Comment
No new commitments while: (1) Total Private Investment NAV > 39% of total CA Portfolio (1.3x Total PI Target) (2) Total Private Investment NAV + unfunded commitments > 54% of total CA Portfolio (1.8x Total PI Target) For the purpose of gauging compliance with these liquidity guidelines, 50% of NSHE Legacy Assets shall be attributed to the CA Portfolio.	▪ Long-term blended target exposure to Private Investments is 30% of Total Assets: 17% to Private Growth, 5% to Private Diversifiers and 8% to Private Real Assets ▪ Actual exposure will be function of conviction / opportunity set ▪ Liquidity guidelines provide 'cushion' in severe environments

* For the portion of the portfolio that is allocated to illiquid private investments, each investment will be self-benchmarked for the first 5 years of its life. This is to address the "J-curve" inherent in private investments. After each investment's fifth year of life, it will be retroactively benchmarked to the relevant public market index to reflect any value that has been added over this timeframe.

2. Blended Total Endowment Policy: CA Capital + Russell Portfolios

Blended Total Endowment Policy: CA Capital + Russell Portfolios

		Proposals by each Fund Manager			*Blended Total Assets Policy*	
		CA Capital		**Russell**	**Blended Total Assets**	
	Current Policy Targets (%)	**Proposed Long-Term Targets (%)**		**Proposed Portfolio (%)**	**Proposed Policy Targets (%)**	**Proposed Policy Ranges (%)**
Growth	**58.0%**	**62.0%**		**61.0%**	**61.5%**	50% - 70%
Public Growth	48.0%	45.0%		51.0%	48.0%	
Private Growth*	10.0%	17.0%	*	10.0% *	13.5%	
Less: Legacy PE/VC Fund of Funds		*9.2%*		*9.2%*	*9.2%*	
Managed Private Growth		7.8%		0.8%	4.3%	
Diversifiers	**14.0%**	**18.0%**		**12.0%**	**15.0%**	5% - 25%
Diversifiers with liquidity within 3 years	14.0%	13.0%		12.0%	12.5%	
Private Diversifiers*	0.0%	5.0%	*	0.0% *	2.5%	
Less: Legacy Liquidating Side Pockets		*0.6%*		*0.6%*	*0.6%*	
Managed Diversifiers		17.4%		11.4%	14.4%	
Real Assets	**8.0%**	**10.0%**		**12.0%**	**11.0%**	5% - 20%
Public Real Assets	6.0%	2.0%		7.0%	4.5%	
Private Real Assets*	2.0%	8.0%	*	5.0% *	6.5%	
Less: Legacy Private Real Assets FoFs		*1.4%*		*1.4%*	*1.4%*	
Managed Private Real Assets		6.6%		3.6%	5.1%	
Fixed Income & Cash	**20.0%**	**10.0%**		**15.0%**	**12.5%**	5% - 25%
TOTAL ENDOWMENT	**100.0%**	**100.0%**		**100.0%**	**100.0%**	

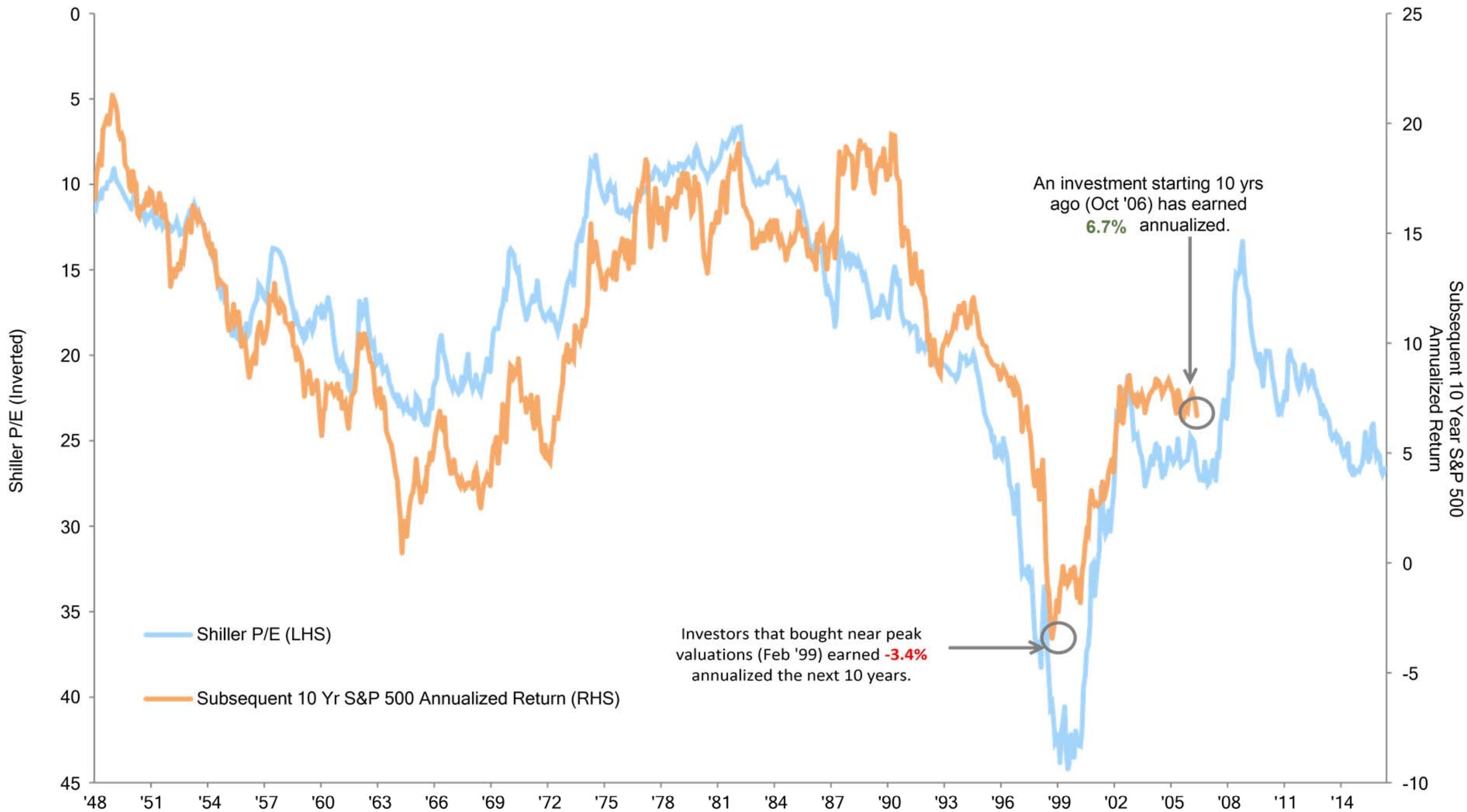
Note: For the purpose of gauging compliance with asset allocation policy ranges and liquidity guidelines, 50% of Legacy Assets shall be attributed to each Fund Manager's portfolio.

* Liquidity Guidelines: No new Private Investment (PI) commitments while:
(1) Total PI NAV > 1.3x respective Fund Manager's PI target
(2) Total PI NAV + unfunded commitments > 1.8x respective Fund Manager's PI target

3. Supplemental Materials

The importance of alpha: Valuations suggest disappointing outlook for equity beta

Shiller (Cyclically Adjusted 10 Yr) PE vs. Subsequent S&P 10 Year Nominal Returns
June 30, 1948 – October 31, 2016



Sources: Robert J. Shiller and Standard & Poor's.
Note: Normalized real P/E ratios (Shiller P/E ratio) for the S&P 500 Index are calculated by dividing the current index value by the rolling ten-year average of inflation-adjusted earnings.
2074m

The importance of alpha today: Bonds likewise look priced to disappoint

US Aggregate Bond Index
January 1, 1976 – October 31, 2016 • Percent (%)

Sources: Barclays, Bloomberg L.P., and Thomson Reuters Datastream.

Notes: Data are monthly. The last full five-year period was November 1, 2011 to October 31, 2016. The October 31, 2016 yield-to-maturity of 2.12% on the Barclays Aggregate Bond Index implies low nominal returns at best.

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Cambridge Associates Current Valuations Summary*

November 7, 2016

Very Overvalued	Overvalued	Fairly Valued	Undervalued	Very Undervalued
Euro-Denominated Credits	Developed ex US Small-Cap Equities	**Developed Markets Equities**	Asia ex Japan Equities	
Core EMU Sovereign Bonds	**US Equities**	**Developed ex US Equities**	**Emerging Markets Equities**	
UK Gilts	US Growth Equities	US Value Equities	EM Equities Asia	
Global Inflation-Linked Bonds	US High-Quality Equities	Canadian Equities	EM Equities EMEA	
US Venture Capital (late stage)	US Small-Cap Equities (>)	UK Equities	*Private Metals and Mining*	
US Private Equity	UK Sterling-Denominated Credits	Europe ex UK Equities		
European Private Equity	Leveraged Loans	EMU Equities		
	US Bonds **	Japanese Equities		
	US High-Yield Bonds	Australian Equities		
	US Corporate Bonds	New Zealand Equities (>)		
	EM Debt (Local Currency)***	EM Small-Cap Equities		
	EM Debt (USD Corporate)	EM Equities Latin America		
	EM Debt (USD Sovereign)	Chinese A-Share Equities		
	US Treasuries	Frontier Markets Equities		
	Australian Govt Bonds	US Tax-Exempt Bonds (>)		
	New Zealand Govt Bonds	Commodities		
	US Inflation-Linked Bonds	Natural Resources Equities		
	US REITs	Energy Master Limited Partnerships		
	Distressed Investing (Non-Control)	Developed Market Property Securities		
	USD vs DM Currencies	Convertible Arbitrage		
	Core US Private Property	Event-Driven Investing		
	Opportunistic US Private Property	Emerging Markets Currencies		
	Core UK Private Property	*Europe ex UK Private Property*		
	Opportunistic UK Private Property	*Emerging Asian Private Property*		
	Developed Asian Private Property	*Private Oil, Gas, & Other Energy*		
	US Venture Capital	*US Venture Capital (early stage)*		
	US Venture Capital (expan stage)	*European Venture Capital*		
		Asian Private Equity		
		Latin American Private Equity		

Notes: Data on fundamental valuations do not provide forecasts of expected returns; they reflect the vulnerability of a given asset class to disappointing economic and profit developments. Therefore, valuations may not necessarily correspond to short-term or even intermediate-term returns. For example, asset classes and investment strategies can be fairly valued yet still retain a negative outlook due to deteriorating fundamentals. Asset class and investment strategy valuations do not reflect currency valuations. Bold type represents the **aggregate** of asset classes for which we show valuation ratings for underlying strategies. Italic type represents *non-marketable asset classes*. Valuations of such investments are based on our views on prospects for new commitments made today, which are informed by recent transactions, as well as consideration of near-term trends and intermediate-term expectations such as supply and demand factors, exit opportunities, and expectations of conditions that will influence risk and return over the life of a fund. Private equity includes buyouts and growth equity. (<) Indicates a recent move in the direction of more overvalued. (>) Indicates a recent move in the direction of more undervalued.

* For more detail on our views, read our monthly Asset Class Views, available on our client website.

** Reflects a broad-based US bonds allocation similar to the Barclays Aggregate Bond Index.

*** Currency is considered against the US dollar.

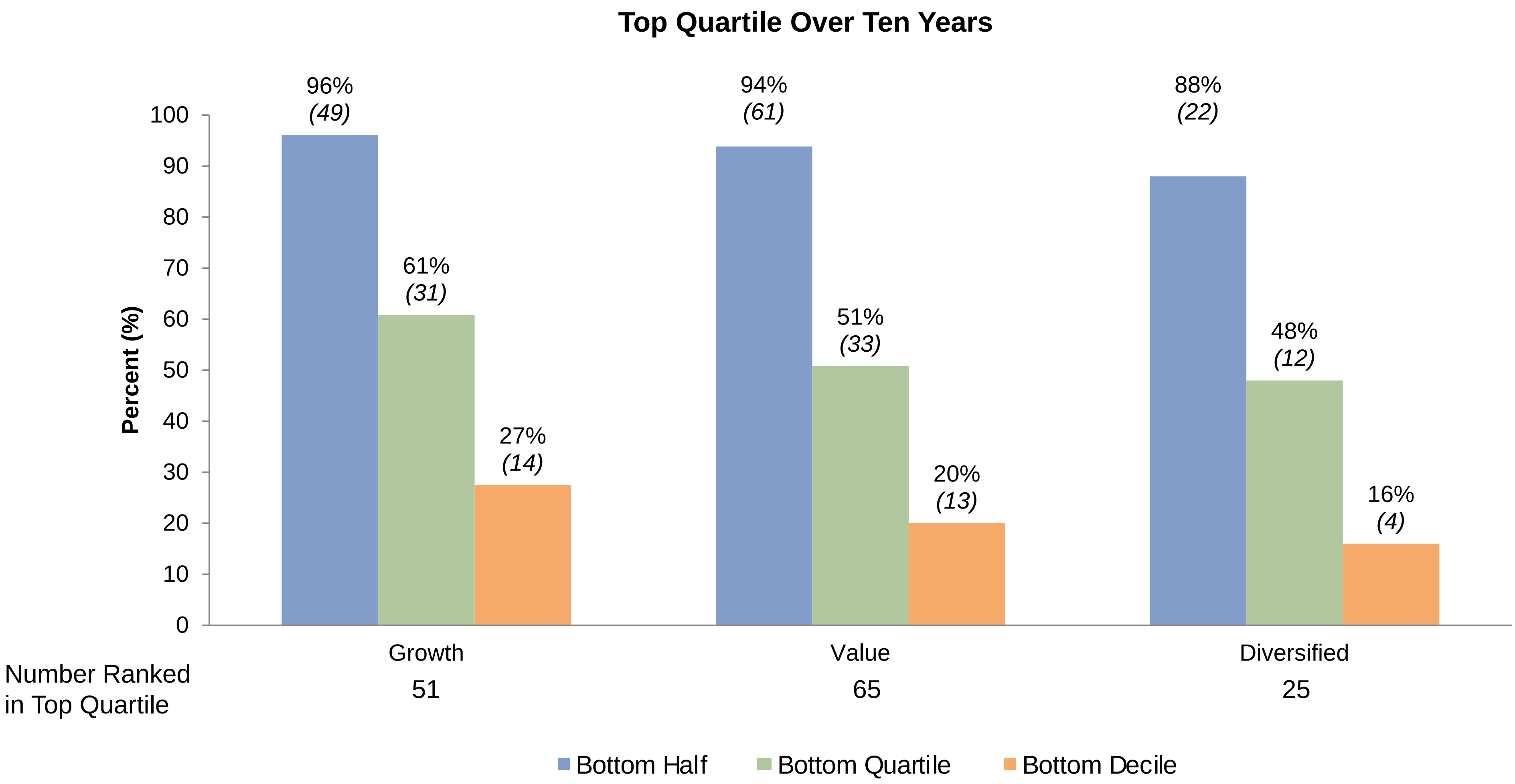
044x

How We Evaluate Managers

Organization	*Alignment*	*Strategy*	*Performance*	*Market Environment*
Partners' financial/ operational experience	Ownership and economic distribution among firm employees	Experience investing or operating in the sector	Performance attribution, if track record available	Value drivers
Networks of senior professionals and deal sourcing capabilities	GP commitment	Sourcing advantage/ industry relationships	Applicability of the track record	Valuation
Spin-out?	Performance-based compensation	Value creation strategy	Seed investments	Competitiveness
Team cohesion	LP-friendly terms	Underwriting discipline		Economies of scale
Junior and back office support		Planned exits—in-place strategic relationships		Supply/demand dynamics

Patience is Key – Even Top Performing Managers Have Weak Stretches

Percentage (Number) of Top Managers Whose Rolling 12-Quarter Ranking Fell at Least Once into the Bottom of the Managers' Respective Distribution



Source: Cambridge Associates LLC Investment Manager Database. Data as of 9/30/2016.
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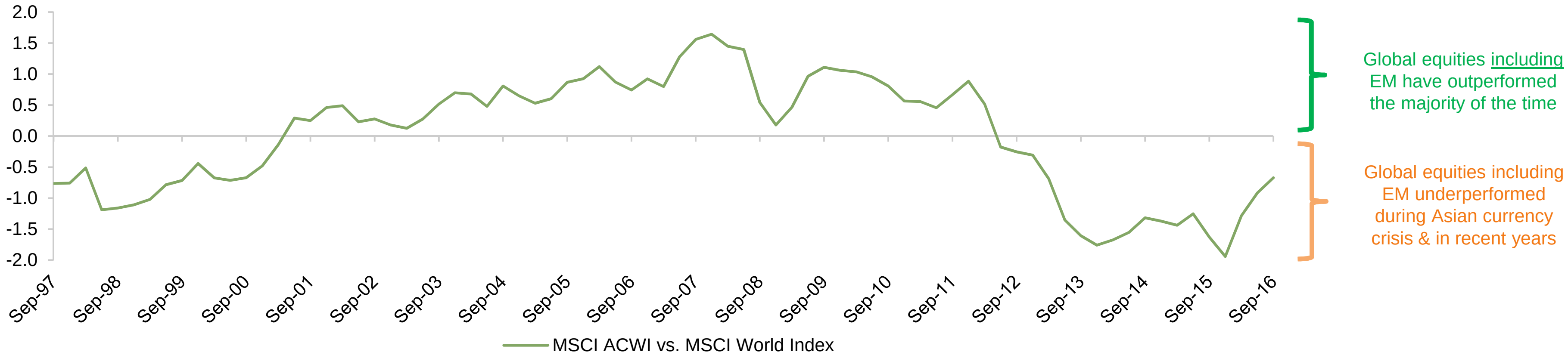
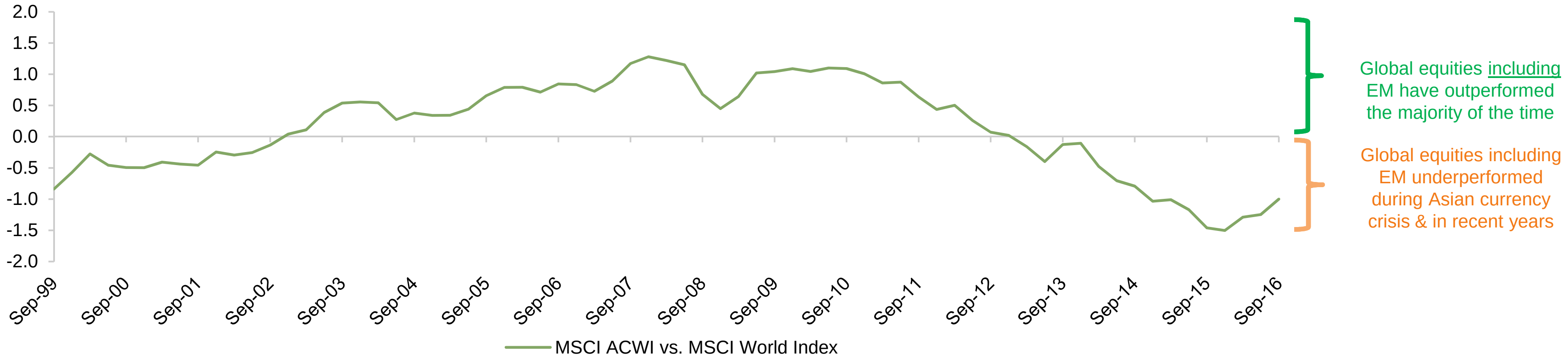
Likewise, Asset Classes Often Exhibit Cyclical Patterns of Out-/Underperformance

Rolling 3-Year AACR (%)



Rolling 5-Year AACR (%)



Outperformance: MSCI All Country World (including EM) vs. MSCI World Index (developed markets only)		
	Periods	%
Rolling 3-year periods	44/77	57.1%
Rolling 5-year periods	41/69	59.4%

Accessing Alpha: Hedge Fund Managers

Universe of approximately **11,000** hedge fund managers*

Over **3,700** funds and more than **1,900** managers tracked in our proprietary manager database*

More than **500** proposals reviewed annually**

More than **1,500** meetings per year*

…Nearly **3,200** written comments*

109 due diligence reports*

*Compiled from calendar year 2014

**Compiled from calendar year 2013

Note: Given that we make customized recommendations to each client based on that client's individual investment goals, circumstances, and risk tolerances, investment directors may rely on their own research in making recommendations.

Accessing Alpha: Private Investment Managers

We track **19,700** partnerships

There's **2,685** open and future opportunities on our Forward Calendar

We write almost **2,440** comments…

Conduct more than **2,190** meetings…

…and review **500+** proposals a year

210 due diligence reports

All data as of December 31, 2015

Note: Given that we make customized recommendations to each client based on that client's individual investment goals, circumstances, and risk tolerances, investment directors may rely on their own research in making recommendations.

Private Investments Program Strategy

Goal: 300-500 basis points of excess return over global equity markets

Why?

- Superior historical and expected performance vs. public markets
- Access differentiated exposures outside of public markets
- Bigger "tool kit" (e.g., turnarounds, cap structure optimization, sector expertise, innovation/disruption)
- Higher expected returns in low-return environment
- CA has deep resources and relationships to identify and access top performers

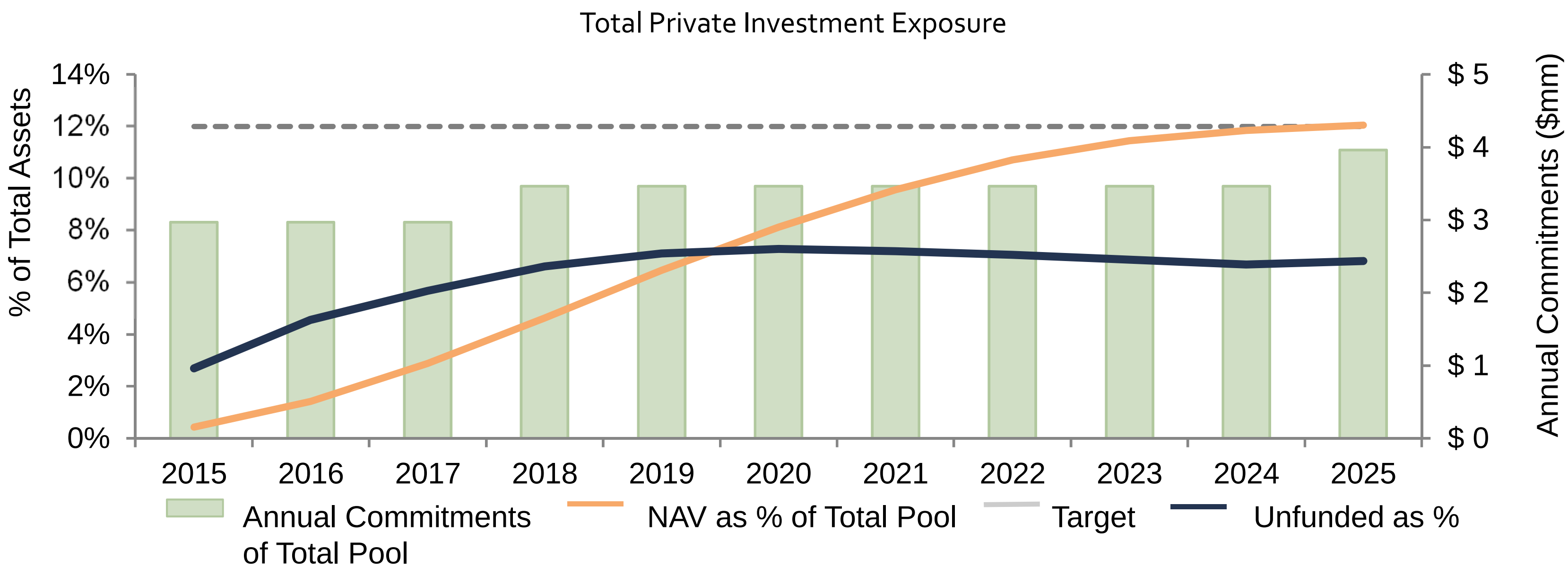
How?

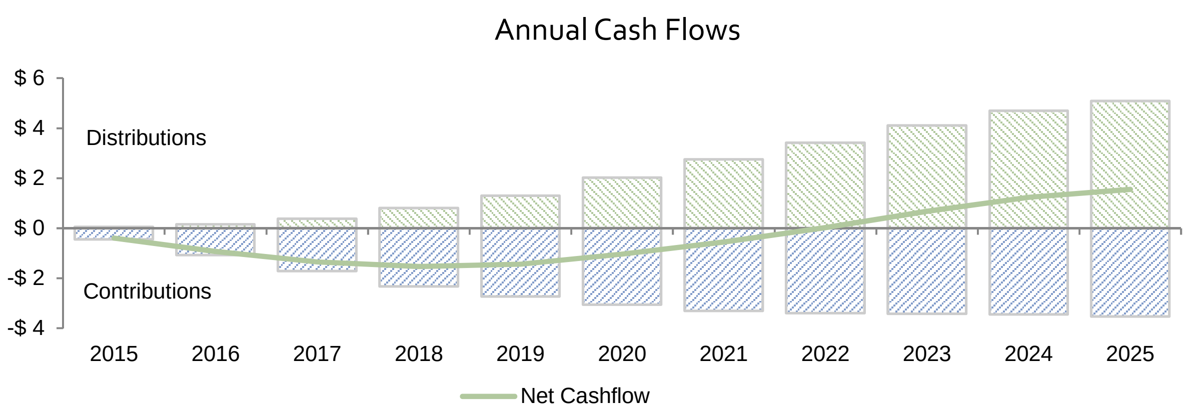
- "Best ideas portfolio": highest conviction managers in most compelling strategies
- Do not fill a bucket
- Pursue best-in-class direct managers, supplemented by secondary funds
- Focus on funds in $300-$700 million range

Target 30% Allocation (17% Private Growth + 5% Private Diversifiers + 8% Private Real Assets)

The information provided in these exhibits is illustrative and representative of recent commitments recommended by Cambridge Associates and does not constitute investment advice. Actual implementation of MOCA's portfolio will be influenced by our findings from a thorough enterprise review as well as availability of managers at the time of implementation.

Illustrative 17% Private Growth Target Allocation – How We Get There





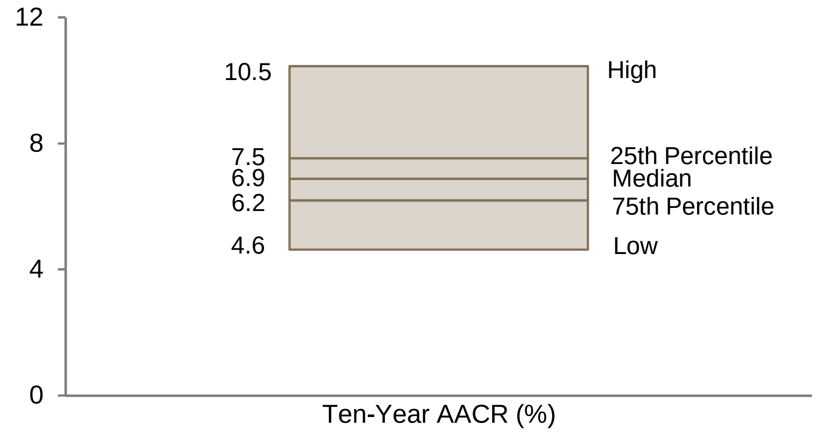
	Commitment Pace ($mm)	NAV as % of Total Assets
2015	3.0	0.4
2016	3.0	1.4
2017	3.0	2.9
2018	3.5	4.6
2019	3.5	6.5
2020	3.5	8.1
2021	3.5	9.6
2022	3.5	10.7
2023	3.5	11.5
2024	3.5	11.8
2025	4.0	12.0

The information provided in these exhibits is illustrative and representative of recent commitments recommended by Cambridge Associates and does not constitute investment advice. Actual implementation of MOCA's portfolio will be influenced by our findings from a thorough enterprise review as well as availability of managers at the time of implementation.

Top-Performing Endowments Have Had Highest Exposure to Private Investments

Trailing Ten-Year Returns and Asset Allocation of Top and Bottom Performers as of June 30, 2015

Return Distribution



Mean Asset Allocation by Performance Quartile (%): June 30, 2005, to June 30, 2015

Quartile	US Equity	DM ex US Equity	EM Equity	Bonds	Hedge Funds	PE & VC	Private RA	Public RA & ILBs	Cash	Other
Top Quartile	18.0	12.4	6.0	10.1	21.9	14.0	10.1	4.1	3.1	0.2
2nd Quartile	21.2	13.7	6.0	11.4	24.8	8.7	4.5	5.4	3.9	0.4
3rd Quartile	24.4	14.9	5.9	13.4	20.0	6.6	3.8	7.1	3.5	0.5
Bottom Quartile	26.6	16.4	5.0	19.2	16.6	4.1	1.9	6.6	3.2	0.3
US E&F Mean	22.5	14.4	5.7	13.5	20.8	8.3	5.1	5.8	3.4	0.4

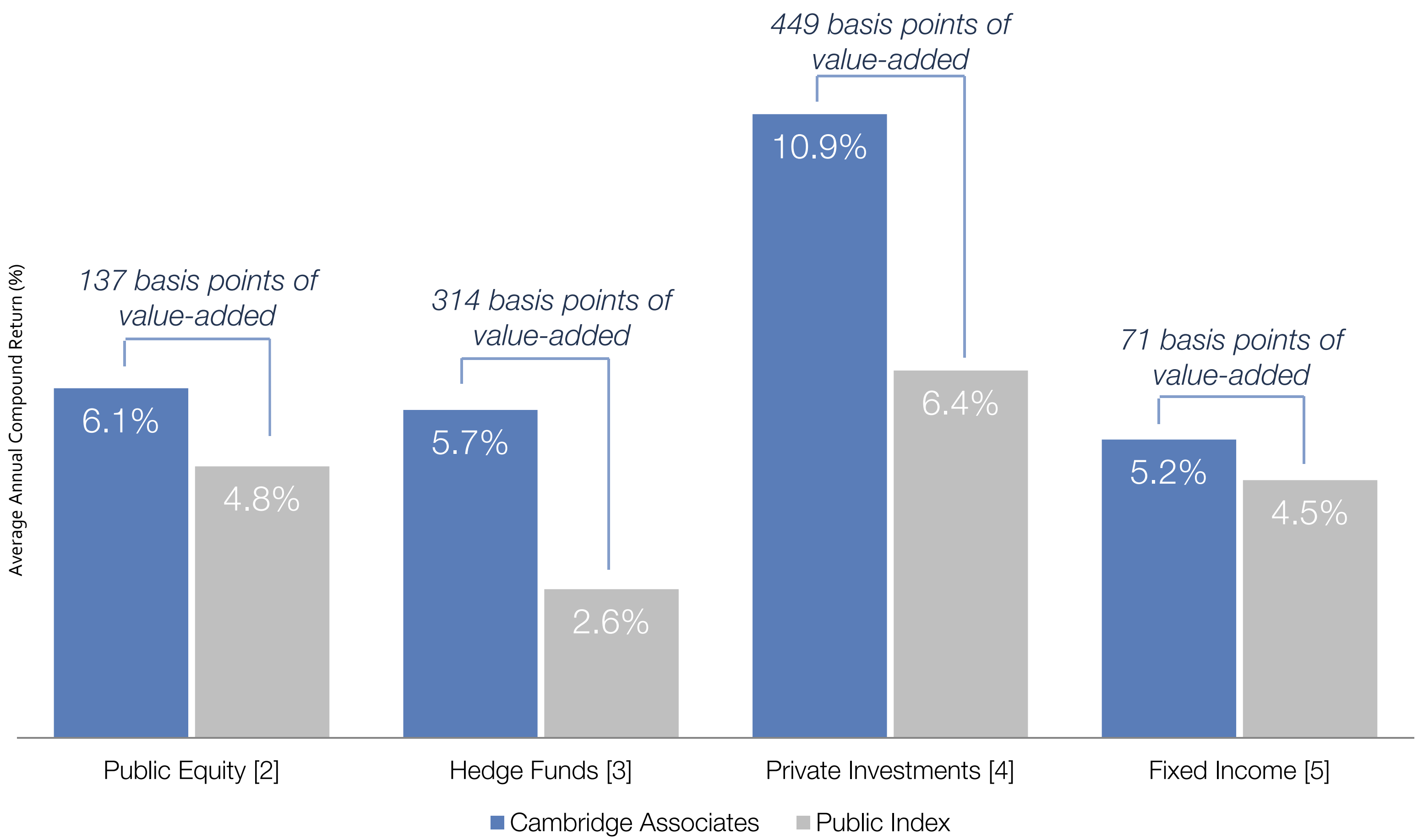
Divergence of Asset Allocation From Mean

- 4% - 2% Mean + 2% + 4%

Source: Endowment and foundation data as reported to Cambridge Associates LLC.
Notes: Performance quartiles are based on the trailing ten-year return as of June 30, 2015. Mean allocations are for the eleven June 30 periods from 2005 and 2015. Analysis includes data for 242 institutions.

Manager selection has allowed us to deliver value-added across asset classes

Value-added from manager selection: 10-year annualized returns[1]



Note: This exhibit is incomplete without the disclosures provided in Disclosures section at the end of this presentation

[1] Private Investment performance is shown as of June 30, 2015 as Private Investment performance data is reported semi-annually and on a quarterly lag. Performance data for Public Equity, Hedge Funds, and Fixed Income is reported quarterly and is shown as of December 31, 2015.

[2] Public Index: MSCI All Country World Net

[3] Public Index: Beta-adjusted MSCI All Country World comprised of 30% MSCI All Country World Index (Net) and 70% 91-Day T-Bills.

[4] Public Index: MSCI World PME. Public Market Equivalent (mPME) Analysis contains tools that enable benchmarking of any PI data set (from fund-level to entire client portfolios) against public markets, providing context on what performance would have been had the PI cash flows been subject to public returns. mPME assumes that private contributions are invested in the relevant index and that distributions are taken out in the same proportion as in the private investment. It attempts to evaluate what performance would have been had the private investment manager's return-earning skills been replaced with public returns. Proprietary CA methodology that uses cash flows in and out of the private investment portfolio to determine the timing of purchases and sales of an equity index. Performance is then compared to that of the private investment.

[5] Public Index: Barclays Aggregate Bond Index

Sources: Barclays, MSCI Inc. and Cambridge Associates LLC. MSCI data provided "as is" without any express or implied warranties.

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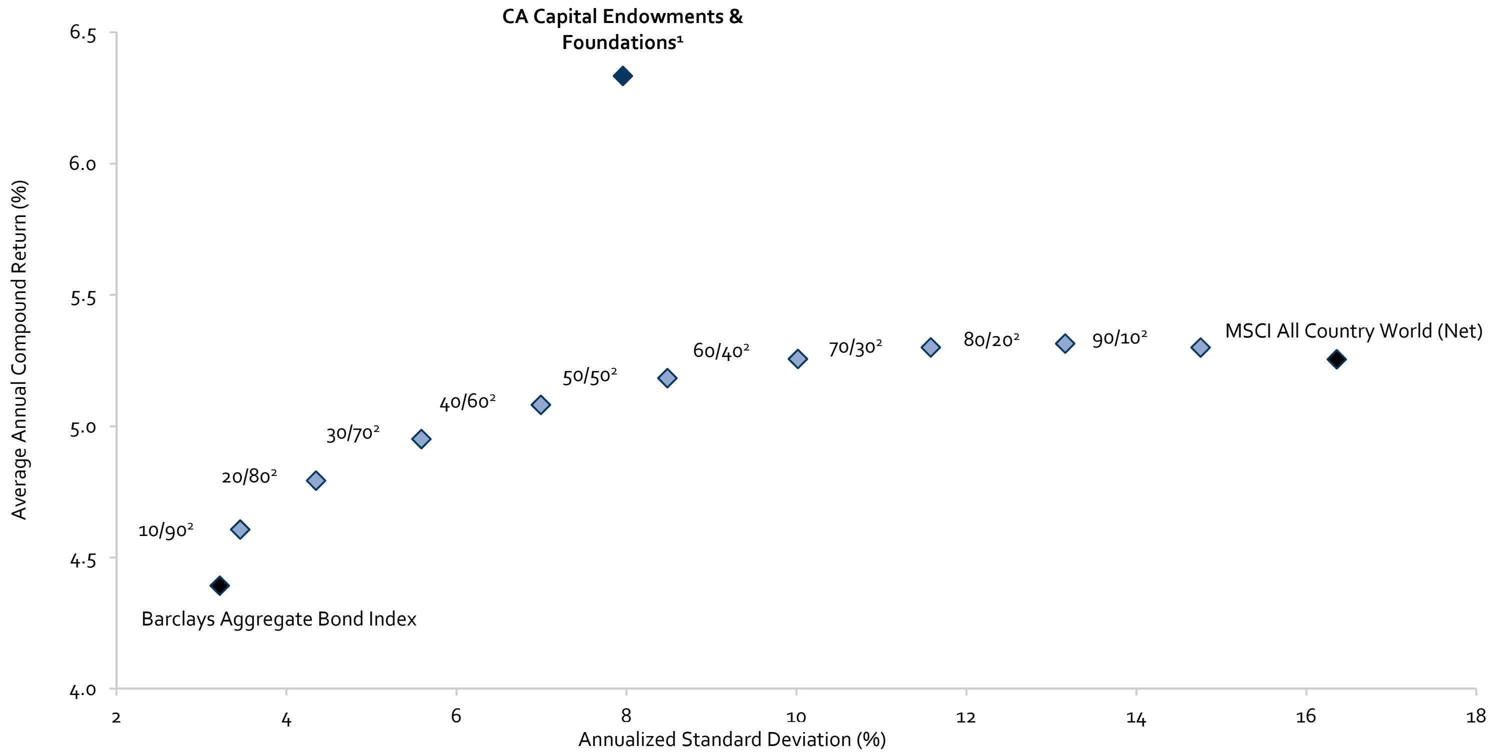
C|A Capital endowments and foundations composite

Risk vs. return analysis since inception: March 1, 2006 – December 31, 2015



Note: This exhibit is incomplete without the disclosures provided at the end of this presentation.

[1] Client returns are net of the management fee paid to Cambridge Associates and fees paid to underlying investment managers. CA Discretionary E&F Composite includes 27 total portfolio discretionary endowment and foundation clients of Cambridge Associates Group as of December 31, 2015. Client returns are reported in the currency for which performance is reported. Discretionary E&F clients include nonprofit endowment and foundation institutions. At the start of the 10 year timeframe covered in this exhibit, CA had one discretionary client in the sample. Clients are added to the sample over time based on their contract start date or, when applicable, the mutually agreed date on which the client measures investment team performance. Clients are included for those periods during which they are discretionary clients. To date, two discretionary E&F clients have reduced their discretionary services. Annualized mean returns are calculated based on a monthly asset-weighted client composite mean return. Mean returns are calculated using clients' annualized average annual compound return (AACR) for each time period reflected in the exhibit. Private investment returns are only calculated on a quarterly basis. To include these returns in the monthly data, for a given quarter, the actual quarterly return is used in one of the months and a 0% return is used in the other months. As private investments report on a quarter lag, the performance for these assets are estimated for the most recent period by scaling the S&P 500 return by a 0.5 beta.

"The Cambridge Associates Group" (herein referred to as "Cambridge Associates") comprises five investment consulting affiliates that were established for the sole purpose of providing our consulting, research, and performance monitoring services in various regulatory jurisdictions around the globe: Cambridge Associates LLC, Cambridge Associates Asia Pte Ltd., Cambridge Associates Investment Consultancy (Beijing) Ltd., Cambridge Associates Limited LLC, and Cambridge Associates Limited. These entities serve our clients from our U.S., Singapore, Beijing, Sydney, and London office locations, respectively. All clients in this sample are served by Cambridge Associates LLC. Each of the affiliates has full access to all of CA's research and consulting resources.

[2]The global equity/investment grade bond blend consists of MSCI All Country World Index (Net) and Barclays Aggregate Bond Index.

Sources: Barclays Capital, MSCI Inc., and Cambridge Associates LLC. MSCI data provided "as is" without any express or implied warranties.

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The Nevada System of Higher Education Outsourced Investment Office

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Senior Investment Associate

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Reporting Analyst

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115 Professionals

Business Risk Management
16 Professionals

Capital Markets Research
25 Professionals

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Focus and Experience

Wendy is a Managing Director and Chief Investment Officer in CA Capital Management, Cambridge Associates' outsourced investment office business. Wendy has nine years of investment experience and currently serves eight clients. She works with a number of museum, university, hospital and other nonprofit institutions. Wendy is also a member of the firm's Mission Related Investing group.

Prior to joining Cambridge Associates, Wendy worked on the investment teams at Imprint Capital Advisors, focusing on socially responsible and environmental-themed investment managers, and at Parnassus Investments, conducting industry and company-specific research. Before graduate school, Wendy was a securities analyst at Argus Research, where she co-managed four model portfolios and published equity research on media and business service companies. She also previously performed fiduciary and tax accounting at McLaughlin & Stern, LLP. Wendy is a former vice chair of the Sustainable Investing Committee of the New York Society of Security Analysts.

Education

- CFA Charterholder
- MBA (with Honors), Walter A. Haas School of Business, University of California at Berkeley
- BA (cum laude) in Comparative Literature with Theater Studies, Yale University

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Focus and Experience

Lindsay is a Managing Director and Director of Private Investments in CA Capital Management, Cambridge Associates' outsourced investment office business. Lindsay advises a number of universities, colleges, foundations, private clients, and pension plans in the U.S. ranging in size from $50 million to over $5 billion. He serves as both a generalist and specialist investment director focused on private investments. Lindsay serves on the firm's research committees for private equity and hard assets.

Prior to joining Cambridge Associates in 1995, Lindsay performed equity research on technology stocks at Volpe, Welty. Previously, he was the Director of Client Services and Technical Development at Securities Data Company for six years. In this role, he also managed the research effort of the firm's public and private securities offering databases.

Education

- CFA Charterholder
- MBA, Stanford Graduate School of Business
- BA in Economics (magna cum laude), Duke University

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Focus and Experience

David is a Managing Director and Director of Diversifiers in CA Capital Management, Cambridge Associates' outsourced investment office business. David works with a number of universities, foundations, and other non-profits in the U.S., ranging in size from $120 million to $900 million. He serves as both a generalist and a specialist investment director focused on hedge fund assets. David is also a regular contributor to hedge fund manager research and has co-authored a paper on manager fees.

David's background includes ten years in the equity research field, where he served institutional hedge and mutual fund clients in the U.S. and Europe. Before David joined Cambridge Associates in 2006, he served as Director of Research with Primary Global Research, LLC, a boutique provider of proprietary research services for institutional managers active in the technology sector. Prior to that, he served as a Managing Director with Bear Stearns, where he was responsible for analysis and stock recommendations in the enterprise software sector. Previously, he was a Vice President with Prudential Securities and a research associate with Robertson Stephens and Montgomery Securities.

Education

- MBA, Stanford Graduate School of Business
- BS, Stanford University

Jeff Wilson
Director of Portfolio Operations
jwilson@cambridgeassociates.com

Focus and Experience

Jeff is a Director of Portfolio Operations in CA Capital Management, Cambridge Associates' outsourced investment office business. Jeff has more than a 12 years of investment operations experience. Additionally, Jeff is involved with several internal projects and initiatives focusing on best practices, operational improvements, and client service.

Prior to joining Cambridge Associates in 2015, Jeff was a New Business Implementation Officer at State Street Global Advisors. Prior to that, he had many years experience at Brown Brothers Harriman and began his career as a Corporate Actions Analyst at State Street Global Advisors

Education

> BA, Hamilton College
> MBA, Northeastern University

Passive portfolio risk return assumptions

We used CA's standard equilibrium asset class assumptions, which we've included on the next slide, in the following manner:

- Global Public Equities – 50% U.S., 40% Developed ex. U.S., and 10% Emerging Markets Equities (which roughly reflects the geographic weightings in the MSCI ACWI global public equity index)
- Marketable Alternatives– 30% Global Public Equities (as defined above) / 70% Cash, which approximates the 0.3 equity beta of a 'typical' diversifiers portfolio
- Private Equity / Venture Capital – Same assumption used for Global Public Equities
- Cash (standard assumption)
- U.S. Government Bonds (standard assumption)
- U.S. Core Bonds (50% U.S. Government Bonds / 50% Investment Grade Corporate Bonds)

Value-added from manager selection: public equity

Exhibit disclosures

The exhibit shows returns for the global equity allocations of CA's discretionary clients. In keeping with SEC guidelines, it is important to evaluate this information with the following facts in mind:

- The return figures are provided from the date that CA began managing each clients' portfolio and may or may not reflect investments made by clients prior to joining CA.
- The size of each client's total investment portfolio varies considerably, and each client may have different risk tolerances.
- Past performance is not necessarily a guide to future performance.
- The performance data is net of investment managers' fees but has not been adjusted to reflect CA's management fees and other expenses that a client may incur. A client's return will be reduced by the amount of such fees and expenses which are described in Part II of CA's Form ADV. The following example demonstrates the effect, using a model fee, of compounded management fees over a period of years on the value of a client's portfolio:

A hypothetical portfolio with a beginning value of $100 million, experiencing an annual return of 6.1% per annum, would grow to $180.78 million after ten years, assuming no fees were paid. Accounting for an annual fee payable in advance to CA of 30 bps (0.30%), the same portfolio earning an annual return of 6.1% would only grow to $175.43 million after ten years. The annualized returns over the ten-year time period are 6.1% (gross of CA's fees) and 5.8% (net of CA's fees). Actual fees could be higher or lower depending on services provided.

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Value-added from manager selection: hedge funds

Exhibit disclosures

The exhibit shows returns for all discretionary clients who have dedicated hedge fund programs. In keeping with SEC guidelines, it is important to evaluate this information with the following facts in mind:

- The return figures are provided from the date each client joined CA and may or may not reflect investments made by clients prior to joining CA.
- The size of each client's total investment portfolio varies considerably, and each client may have different risk tolerances.
- Past performance does not guarantee future returns.
- The performance data is net of investment managers' fees but has not been adjusted to reflect CA's management fees and other expenses that a client may incur. A client's return will be reduced by the amount of such fees and expenses which are described in Part II of CA's Form ADV. The following example demonstrates the effect, using a model fee, of compounded management fees over a period of years on the value of a client's portfolio:

A hypothetical portfolio with a beginning value of $100 million, experiencing an annual return of 5.7% per annum, would grow to $174.08 million after ten years, assuming no fees were paid. Accounting for an annual management fee payable in advance to CA of 30 bps (0.30%), the same portfolio earning an annual return of 5.7% would only grow to $168.93 million after ten years. The annualized returns over the 10-year time period are 5.7% (gross of CA's fees) and 5.4% (net of CA's fees). Actual fees could be higher or lower depending on services provided.

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Value-added from manager selection: private investments
Exhibit disclosures

This exhibit shows the private investment returns of Cambridge Associates' clients relative to public market equivalents. In keeping with SEC guidelines, it is important to evaluate this information with the following facts in mind:

- Because of the private nature of the investments included in this analysis, CA is unable to track and include portfolios for clients that have terminated their services with CA. The data does not include investments made by Cambridge Associates' clients prior to their becoming a client.
- The experience of individual clients of CA will differ from the returns shown in this exhibit due to the size and composition of each client's portfolio of partnerships.
- All CA client returns are net of management fees, expenses, and carried interest but do not account for CA's fees.
- The performance of CA clients may be attributable to factors other than CA's advice because CA clients may or may not follow this advice. As a result, the experience of a client that follows CA's advice may differ materially from the performance presented.
- Past performance does not guarantee future returns.
- The performance data provided by CA's clients has not been adjusted to reflect CA's fees and other expenses that a client would incur. A client's return will be reduced by the amount of such fees and expenses which are described in Part 2A of CA's Form ADV. The following example demonstrates the effect, using a model fee, of compounded advisory fees over a period of years on the value of a client's portfolio:

A hypothetical portfolio with a beginning value of $100 million, experiencing an annual return of 10.9% per annum, would grow to $281.39 million after ten years, assuming no fees were paid. Accounting for an annual fee payable in advance to CA Capital of 30 bps (0.30%), the same portfolio earning an annual return of 10.9% would only grow to $273.07 million after ten years. The annualized returns over the ten-year time period are 10.9% (gross of CA's fees) and 10.6% (net of CA's fees). Actual fees could be higher or lower depending on services provided.

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Value-added from manager selection: fixed income markets

Exhibit disclosures

The exhibit shows returns for the fixed income allocations of CA's discretionary clients. In keeping with SEC guidelines, it is important to evaluate this information with the following facts in mind:

- The return figures are provided from the date that CA began managing each clients' portfolio and may or may not reflect investments made by clients prior to joining CA.
- The size of each client's total investment portfolio varies considerably, and each client may have different risk tolerances.
- Past performance is not necessarily a guide to future performance.
- The performance data is net of investment managers' fees but has not been adjusted to reflect CA's management fees and other expenses that a client may incur. A client's return will be reduced by the amount of such fees and expenses which are described in Part II of CA's Form ADV. The following example demonstrates the effect, using a model fee, of compounded management fees over a period of years on the value of a client's portfolio:

A hypothetical portfolio with a beginning value of $100 million, experiencing an annual return of 5.2% per annum, would grow to $166.02 million after ten years, assuming no fees were paid. Accounting for an annual fee payable in advance to CA of 30 bps (0.30%), the same portfolio earning an annual return of 5.2% would only grow to $161.10 million after ten years. The annualized returns over the ten-year time period are 5.2% (gross of CA's fees) and 4.9% (net of CA's fees). Actual fees could be higher or lower depending on services provided.

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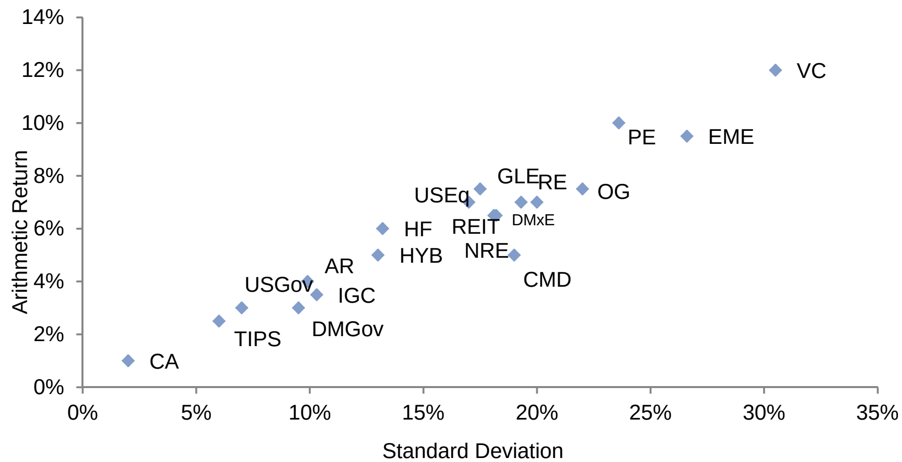
C|A's Standard Equilibrium Assumptions

	Real Arithmetic Return	Standard Deviation	*Range Contains 50% of 25-Year Periods* [1]			*Implied Real Compound Return*
U.S. Equity	7.0	17.0	**4.8**	**-**	**9.2**	*5.7*
Developed Market ex U.S. Equity	7.0	19.3	**4.5**	**-**	**9.5**	*5.3*
Emerging Market Equity	9.5	26.6	**6.2**	**-**	**12.9**	*6.4*
Global Equity	7.5	17.5	**5.2**	**-**	**9.8**	*6.1*
Absolute Return	4.0	9.9	**2.7**	**-**	**5.3**	*3.5*
Equity Hedge Funds	6.0	13.2	**4.3**	**-**	**7.8**	*5.2*
Venture Capital	12.0	30.5	**8.3**	**-**	**15.9**	*8.1*
Private Equity	10.0	23.6	**7.0**	**-**	**13.1**	*7.6*
Commodities	5.0	19.0	**2.6**	**-**	**7.5**	*3.3*
Natural Resource Equity	6.5	18.2	**4.2**	**-**	**8.9**	*5.0*
Real Estate Securities	6.5	18.1	**4.2**	**-**	**8.9**	*5.0*
Real Estate	7.0	20.0	**4.4**	**-**	**9.6**	*5.2*
Oil & Gas	7.5	22.0	**4.7**	**-**	**10.4**	*5.3*
U.S. Government Bonds	3.0	7.0	**2.1**	**-**	**3.9**	*2.8*
U.S. TIPS	2.5	6.0	**1.7**	**-**	**3.3**	*2.3*
Developed Market Government Bonds	3.0	9.5	**1.7**	**-**	**4.3**	*2.6*
Investment Grade Credit	3.5	10.3	**2.1**	**-**	**4.9**	*3.0*
High Yield Bonds	5.0	13.0	**3.3**	**-**	**6.7**	*4.2*
Cash	1.0	2.0	**0.7**	**-**	**1.3**	*1.0*



Correlations

	USEq	DMxE	EME	GLE	AR	HF	VC	PE	CMD	NRE	REIT	RE	OG	USGov	TIPS	DMGov	IGC	HYB	CA
USEq	1.0																		
DMxE	0.7	1.0																	
EME	0.6	0.7	1.0																
GLE	0.9	0.9	0.8	1.0															
AR	0.4	0.6	0.4	0.5	1.0														
HF	0.7	0.8	0.6	0.8	0.5	1.0													
VC	0.6	0.6	0.5	0.6	0.4	0.5	1.0												
PE	0.6	0.7	0.5	0.7	0.4	0.6	0.5	1.0											
CMD	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0										
NRE	0.5	0.7	0.6	0.7	0.4	0.6	0.4	0.5	0.4	1.0									
REIT	0.7	0.7	0.6	0.8	0.5	0.7	0.5	0.6	0.1	0.6	1.0								
RE	0.4	0.5	0.3	0.5	0.3	0.4	0.3	0.3	0.0	0.4	0.6	1.0							
OG	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.5	0.5	0.2	0.2	1.0						
USGov	0.0	0.0	-0.1	0.0	0.1	0.0	0.0	0.0	-0.2	-0.1	0.1	0.0	-0.1	1.0					
TIPS	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.0				
DMGov	0.1	0.3	0.0	0.2	0.4	0.3	0.2	0.2	-0.2	0.1	0.3	0.2	0.1	0.7	0.3	1.0			
IGC	0.3	0.5	0.2	0.4	0.5	0.5	0.3	0.4	-0.1	0.3	0.5	0.4	0.2	0.7	0.3	0.9	1.0		
HYB	0.6	0.6	0.5	0.7	0.5	0.7	0.4	0.5	0.0	0.5	0.7	0.4	0.2	0.1	0.1	0.4	0.7	1.0	
CA	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.2	0.0	1.0

Asset Allocation

Nevada System of Higher Education

Russell Investments

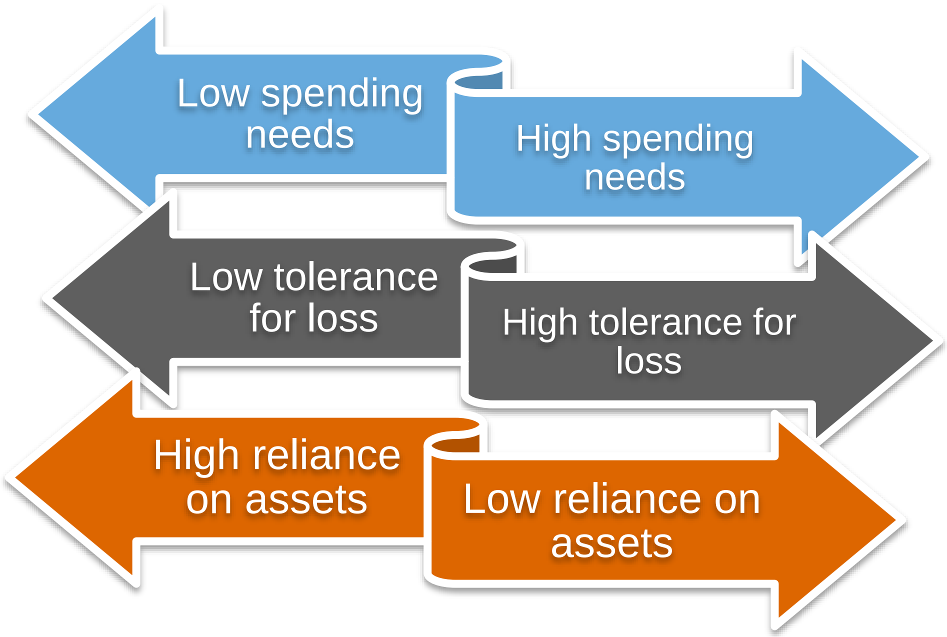
DECEMBER 1ST, 2016

Contents

Framing the asset allocation decision

Balancing NSHE's portfolio objectives

Priority of Lower Risk



Priority is Higher Return

A relatively high spending rate coupled with substantial reliance on these assets can be challenging to effectively balance with acceptable risk levels

Russell Investments

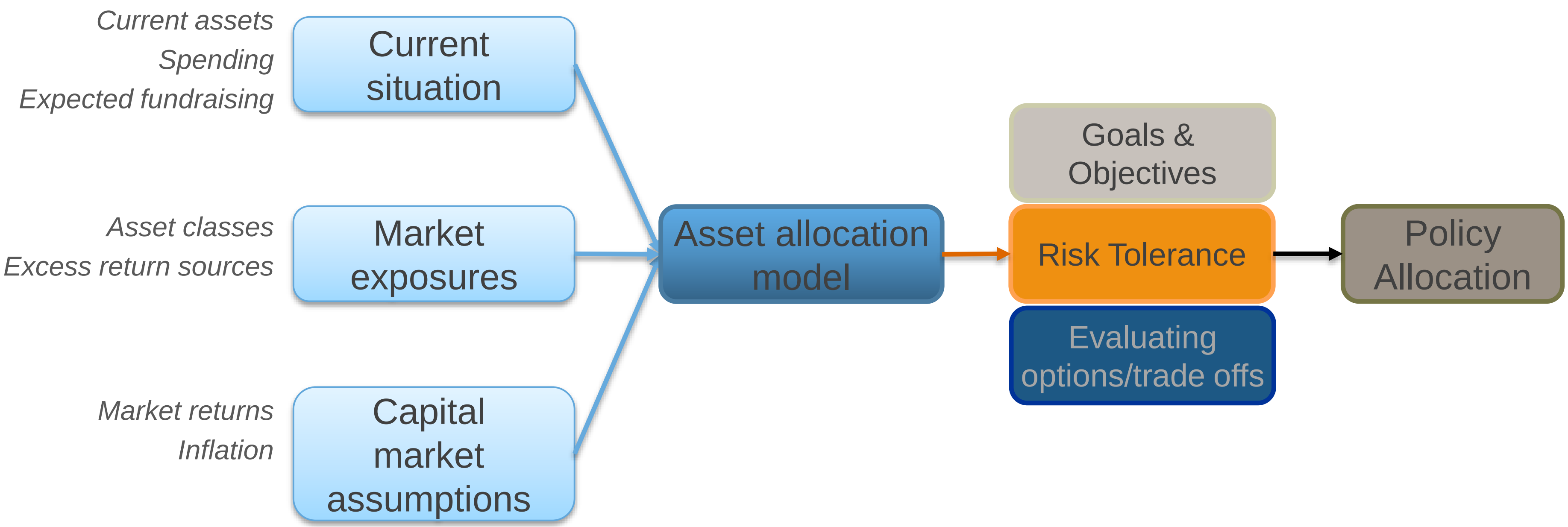
Prioritize portfolio goals to align with desired outcome and System needs

	Levers in asset allocation and spending analysis		
Competing portfolio goals	**Increase allocation to growth assets**	**Increase diversification**	**Reduce spending**
Maintain real asset base in perpetuity	✓	✓	✓
Protect downside asset results	⊘	✓	
Maintain current support to the organization		✓	⊘

It is difficult to simultaneously achieve all three goals

Real refers to the market value stated in today's dollars, i.e., adjusted for inflation.

Asset allocation process
Assessing trade-off between risk and reward



Asset allocation analysis

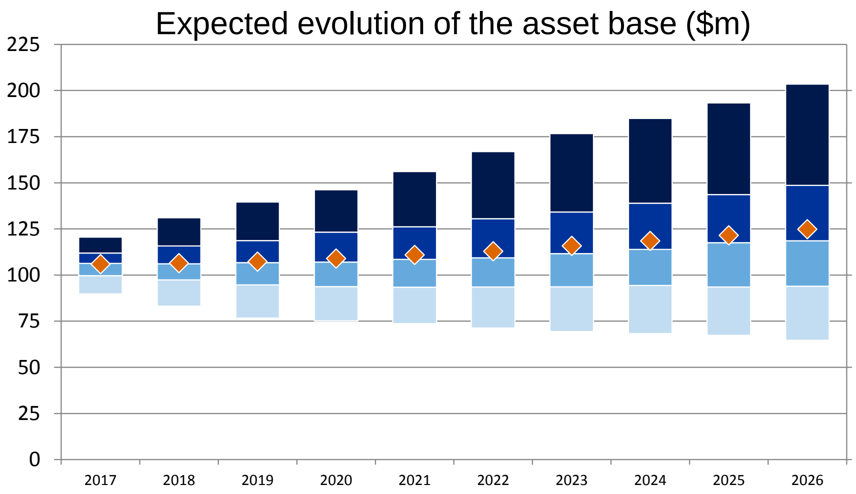
NHSE initial conditions

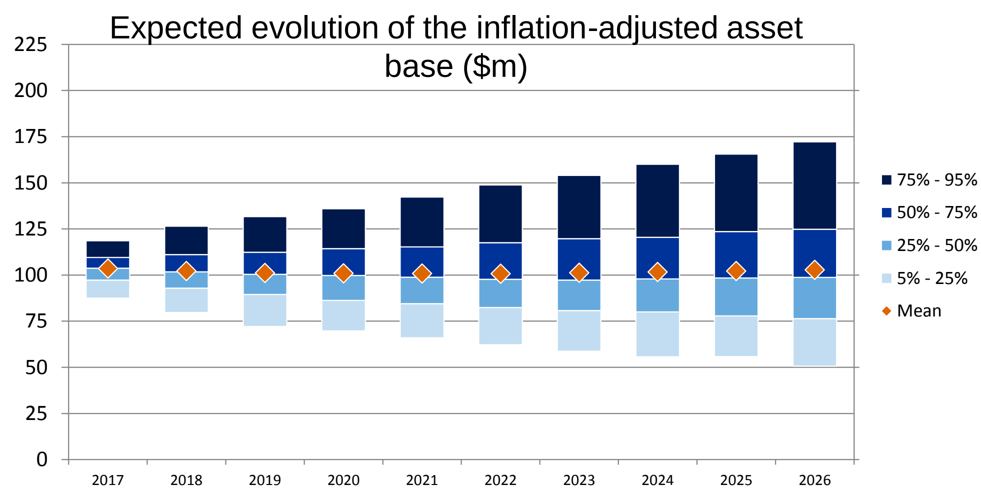
- Endowment starting asset value of $105m[(1)]
- Forecast spending rate based on actual spending of 4.75% of the five year average market value of assets
  - There are additional administrative expenses of 0.125% of the asset base
- No expected fundraising
- Current portfolio contains well diversified mix of assets

(1) Estimated Russell mandate size

Projections(1) of the current asset base

Based on a spending rate of 4.75% + administrative expenses





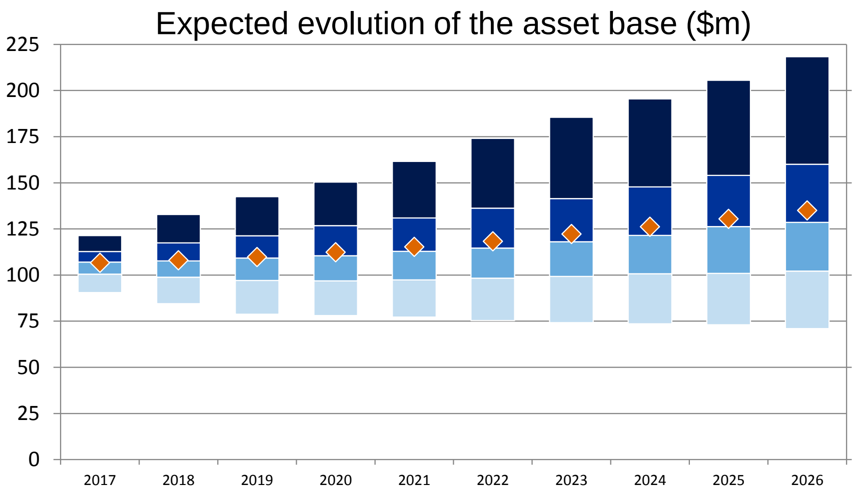
- On a nominal basis, the assets in the endowment are expected to grow by ~19% cumulatively, on average, over a 10 year period.
- In the context of a high, persistent spending rate there is expected to be, on average, a slight decline in the real asset base over 10 years.

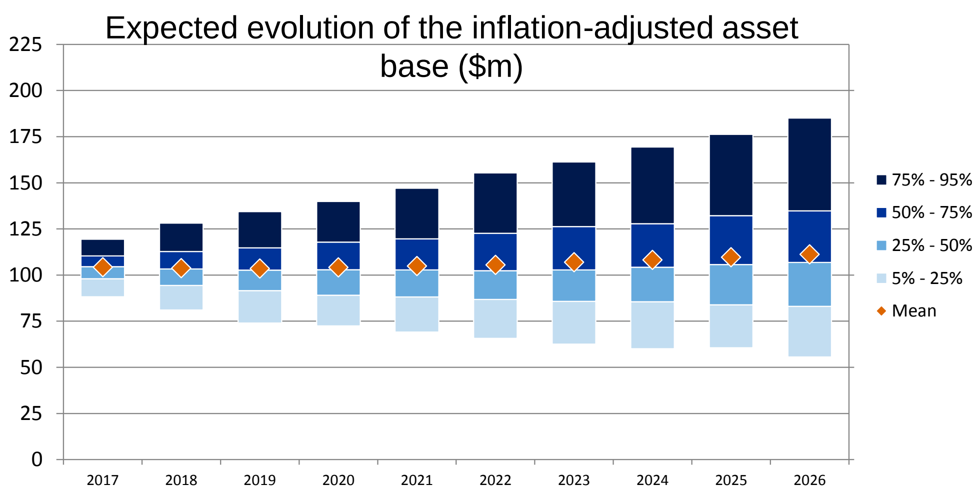
(1) Using initial proposed asset allocation mix

Russell Investments

Projections of the current asset base

Based on a spending rate of 4.00% + administrative expenses





- With a 4.0% spending rate, both the nominal and real asset bases are expected to grow through time
- On a nominal basis, the assets in the endowment are expected to grow by ~29% cumulatively, on average, over a 10 year period.
- A reduction in spending does equate to lesser average distributions by the System over the near term, however the durability of the pool is expected to be somewhat greater, helping to preserve inter-generational equity.

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Asset allocations examined

		Initial proposed	Final strategic portfolio
Growth	MAC+	53%	58%
Return Enhancement	Private capital	10	10
Risk Reduction / Diversifying	Private real estate	5	5
	Hedge funds	12	12
	Absolute return FI	5	5
	Core FI	15	10
Expected 10yr gross return		7.3%	7.6%
Annual fees		0.69%	0.70%
Expected 10yr net return		6.6%	6.9%
Expected 10yr net real return		4.6%	4.8%
10yr Standard Deviation		10.5%	11.2%
Expected 20yr net return		7.4%	7.6%
Expected 20yr net real return		5.2%	5.4%
20yr Standard Deviation		11.1%	11.9%
Average 5th percentile one year drawdown (CVaR)[1]		-14.4%	-15.5%

(1) Cumulative Value at Risk

Asset allocations examined

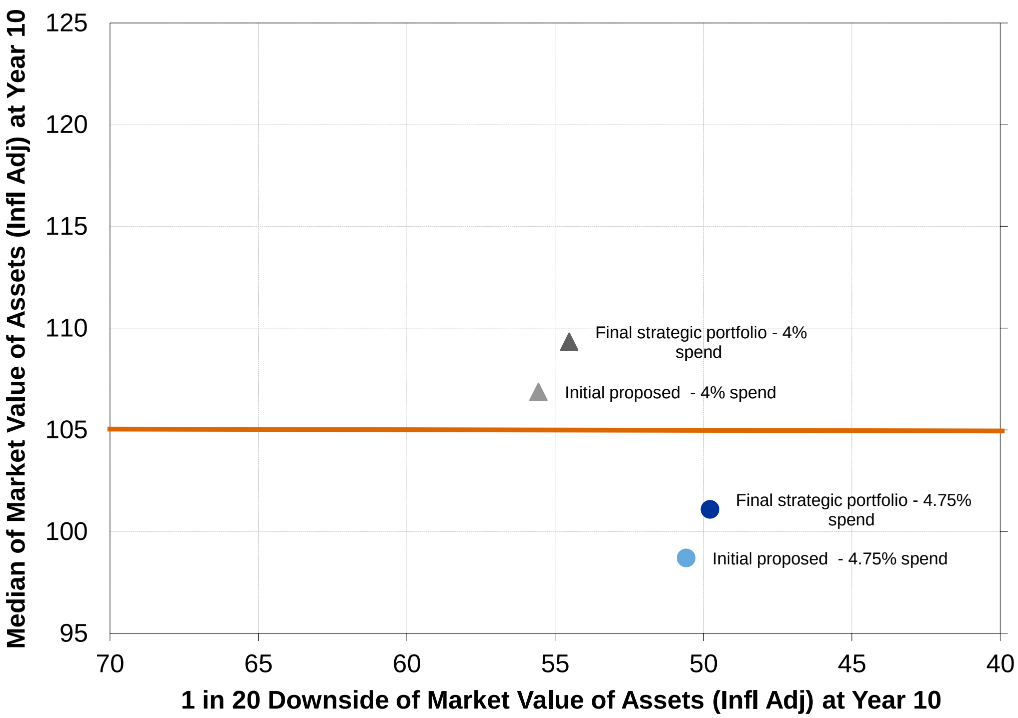
	Initial proposed	Final strategic portfolio
Likelihood of maintaining real asset base with:		
4.75% spending over 10 years	43%	46%
4.00% spending over 10 years	51%	54%
4.75% spending over 20 years	46%	48%
4.00% spending over 20 years	57%	60%
Average 5th percentile one year drawdown (CVaR)[1]	-14.4%	-15.5%
Likelihood of 10% loss in year one	5.1%	5.7%
Length of time until recovery of asset base with:		
4.75% spending	11yrs	10yrs
4.00% spending	9yrs	9yrs

- A more aggressive asset allocation increases the likelihood of maintaining the real asset base, but also increases the size of potential drawdowns
- Higher spending rates allow for greater support of System distribution goals, but make it less likely to be able to maintain that support in the future and harder to recover from market losses

(1) Cumulative Value at Risk

Interaction of spending rate and asset allocation

10 year horizon



- Over a 10 year horizon, the endowment is not expected to <u>fully</u> maintain the real value of assets while spending 4.75% plus administrative expenses
- A higher allocation to growth assets can improve the probability of reaching the objective
- Inter-period variation in returns will create annual outcomes that are potentially well ahead or behind the average expectation.

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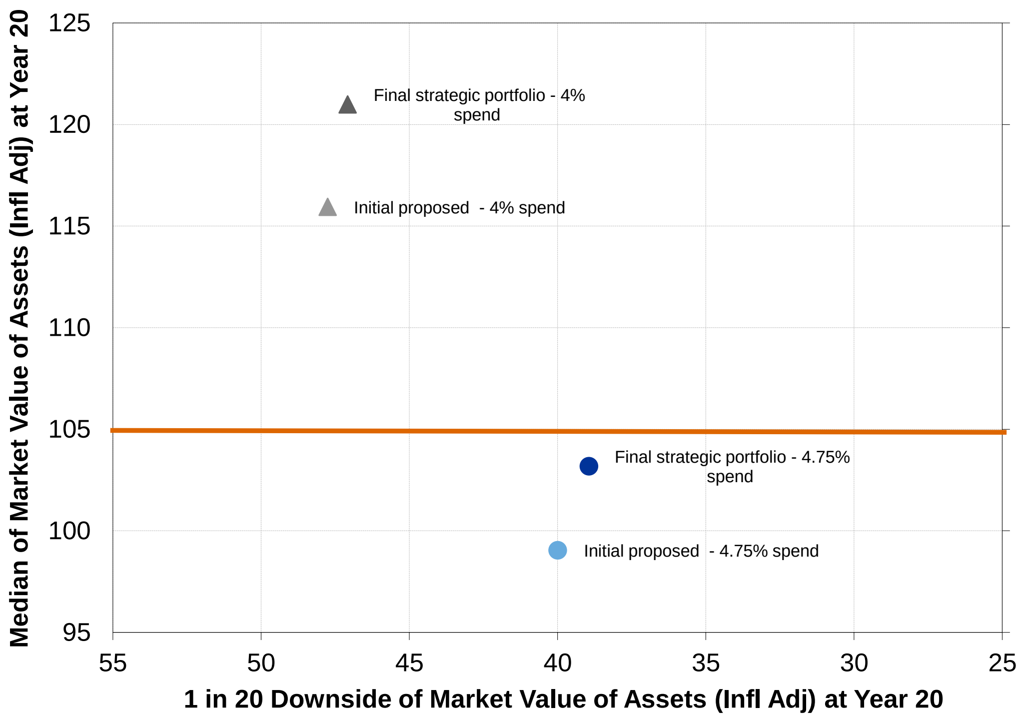
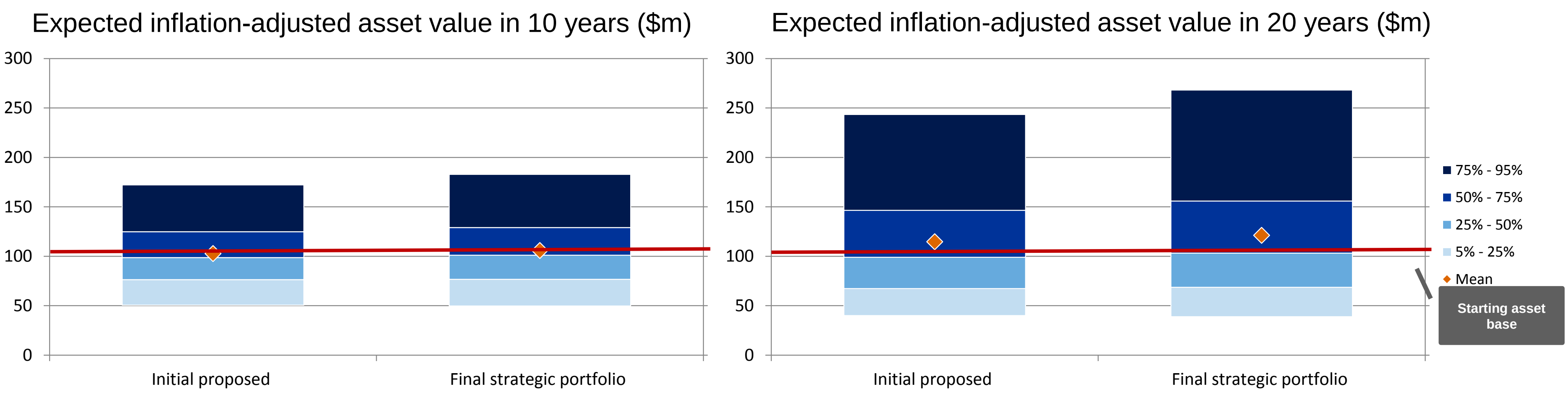
Interaction of spending rate and asset allocation

20 year horizon



- Over a sufficiently long horizon, Russell expects capital markets to return to a normal paradigm. In this context the asset base is more likely to maintain its real value over a 20 year horizon
- Over a long forecast window, a higher allocation to growth assets is expected to be rewarded

Impact of asset allocation on asset base



- Higher allocations to growth assets increase the likelihood of success, but the broader determinant of success will be the capital market environment that develops in the future

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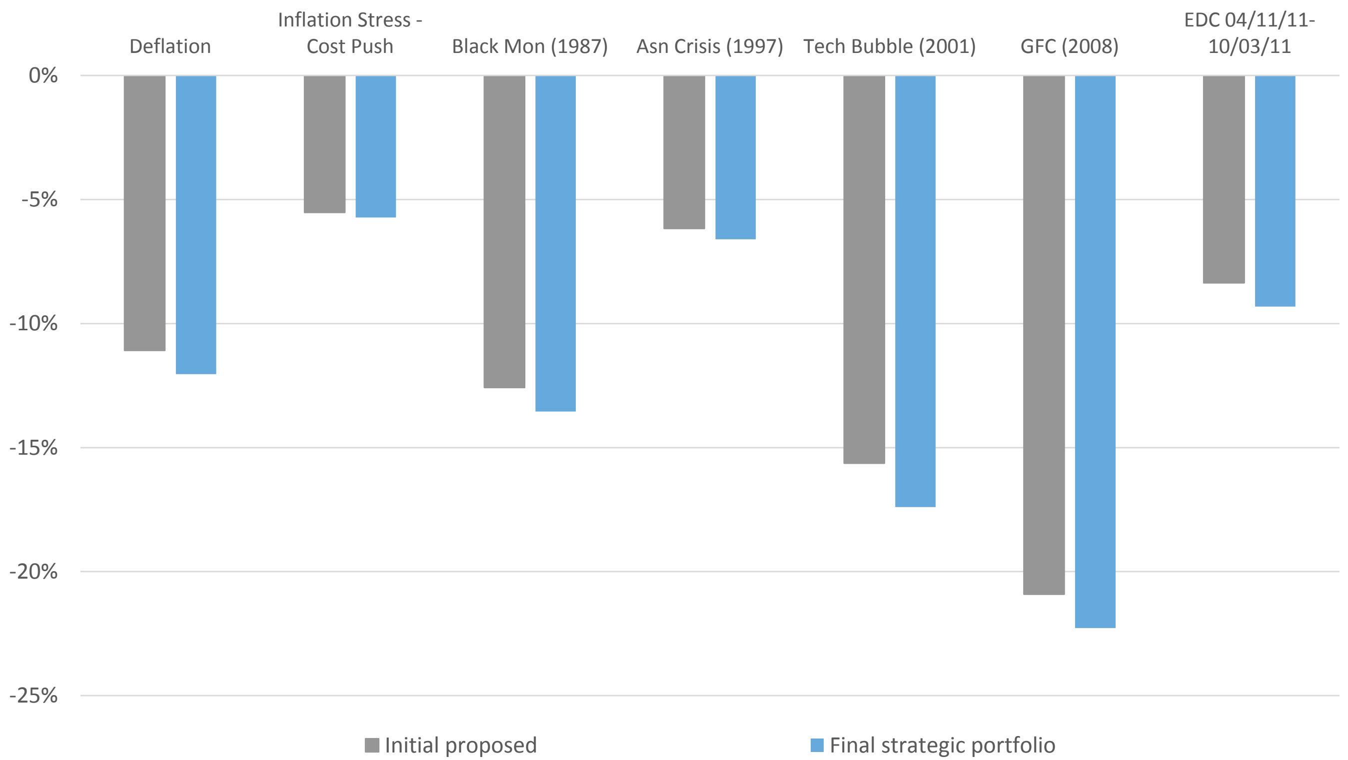
Portfolio stress testing



› Notwithstanding a well balanced and diversified asset mix, even in stressed environments the meaningful allocation to growth assets creates the potential for notable near term losses

Appendix

Capital market assumptions

Strategic planning assumptions

Through June 30, 2016

		Equity					Private - Unlisted				Fixed Income											Marketable Real Assets				Other	Economic
		US Equity	EAFE Equity	Emerging Markets Equity	Global Equity	Global Equity ex US	Global Private Equity	US Real Estate	Global Real Estate	Global Infrastructure	Long Govt	Govt	Long Credit Fixed	Credit Fixed	Long G/C Fixed	Agg Fixed	Global High Yield H	EM Debt	TIPS	Cash	LIBOR	Global Commodities	US Listed Real Estate	Global Listed Real Estate	Global Listed Infrastructure	NonDir. Hedge Fund	Inflation
	5 Yr Arithmetic Return	5.8%	6.9%	6.9%	6.3%	6.9%	7.8%	4.5%	4.8%	4.6%	0.0%	0.7%	1.2%	1.6%	0.6%	1.1%	3.8%	2.3%	1.3%	1.5%	1.6%	4.7%	5.2%	5.8%	5.6%	2.7%	2.0%
	5 Yr Volatility	17.6%	19.6%	22.7%	18.0%	19.6%	13.4%	11.3%	9.8%	7.9%	5.6%	1.9%	6.0%	3.0%	5.1%	2.7%	14.8%	9.6%	4.0%	2.0%	2.0%	15.8%	23.1%	20.3%	16.0%	4.1%	2.2%
	10 Yr Arithmetic Return	6.5%	7.1%	7.6%	6.9%	7.2%	8.3%	5.1%	5.3%	5.3%	0.9%	1.6%	2.2%	2.5%	1.6%	2.0%	4.2%	3.0%	2.1%	2.3%	2.4%	5.5%	5.9%	6.3%	6.3%	3.4%	2.1%
	10 Yr Volatility	17.9%	19.1%	22.7%	17.9%	19.1%	18.0%	13.3%	11.2%	9.2%	4.9%	1.8%	5.3%	2.7%	4.5%	2.2%	14.3%	9.3%	4.4%	3.7%	3.6%	16.0%	23.4%	20.4%	16.4%	5.0%	3.8%
	20 Yr Arithmetic Return	7.2%	7.4%	8.1%	7.4%	7.6%	8.8%	5.8%	5.9%	6.0%	2.2%	2.6%	3.3%	3.6%	2.8%	3.1%	5.0%	4.0%	2.9%	3.1%	3.2%	6.2%	6.7%	6.9%	7.0%	4.2%	2.4%
	20 Yr Volatility	18.0%	18.3%	22.6%	17.6%	18.4%	20.8%	14.8%	12.0%	10.5%	3.8%	3.6%	4.5%	3.6%	3.6%	3.2%	14.1%	9.1%	6.0%	6.4%	6.3%	16.9%	24.0%	20.4%	16.8%	7.1%	6.6%
	20 Yr Time Series Volatility	17.6%	19.9%	23.0%	17.9%	19.8%	7.9%	7.4%	6.9%	5.3%	7.7%	4.1%	7.8%	5.2%	7.2%	5.0%	13.5%	9.2%	4.5%	1.7%	1.7%	16.2%	24.2%	21.1%	16.4%	4.2%	1.8%
	Correlations																										
Equity	**US Equity**	1.00																									
	EAFE Equity	0.88	1.00																								
	Emerging Markets Equity	0.75	0.81	1.00																							
	Global Equity	0.97	0.96	0.85	1.00																						
	Global Equity ex US	0.88	0.98	0.90	0.97	1.00																					
Private - Unlisted	**Global Private Equity**	0.86	0.86	0.76	0.89	0.87	1.00																				
	US Real Estate	0.49	0.50	0.36	0.50	0.48	0.48	1.00																			
	Global Real Estate	0.63	0.69	0.55	0.68	0.68	0.65	0.91	1.00																		
	Global Infrastructure	0.58	0.57	0.49	0.60	0.58	0.56	0.50	0.61	1.00																	
Fixed Income	**Long Govt**	0.09	0.13	0.12	0.12	0.14	0.13	0.01	0.03	-0.04	1.00																
	Govt	0.11	0.08	0.09	0.10	0.09	0.03	0.07	0.06	0.08	0.53	1.00															
	Long Credit Fixed	0.35	0.38	0.33	0.38	0.39	0.31	0.16	0.22	0.16	0.72	0.41	1.00														
	Credit Fixed	0.25	0.25	0.23	0.26	0.26	0.12	0.11	0.14	0.13	0.55	0.63	0.77	1.00													
	Long G/C Fixed	0.23	0.27	0.25	0.26	0.28	0.23	0.08	0.13	0.05	0.94	0.53	0.85	0.73	1.00												
	Agg Fixed	0.21	0.23	0.20	0.23	0.23	0.12	0.09	0.12	0.09	0.69	0.80	0.72	0.86	0.77	1.00											
	Global High Yield H	0.29	0.29	0.24	0.30	0.28	0.22	0.17	0.22	0.21	0.05	0.09	0.50	0.54	0.26	0.33	1.00										
	EM Debt	0.28	0.28	0.24	0.29	0.28	0.22	0.15	0.20	0.18	0.17	0.17	0.61	0.66	0.39	0.46	0.91	1.00									
	TIPS	0.12	0.06	0.10	0.10	0.08	0.04	0.07	0.06	0.11	0.01	0.32	0.05	0.15	0.04	0.10	0.05	0.03	1.00								
	Cash	0.03	-0.07	-0.02	-0.01	-0.06	-0.09	0.05	0.02	0.14	-0.44	0.32	-0.27	0.01	-0.38	-0.13	0.04	-0.03	0.49	1.00							
	LIBOR	-0.01	-0.12	-0.06	-0.06	-0.11	-0.15	0.03	-0.01	0.11	-0.45	0.31	-0.30	0.00	-0.40	-0.14	0.03	-0.05	0.48	0.99	1.00						
Marketable Real Assets	**Global Commodities**	0.32	0.33	0.37	0.35	0.37	0.31	0.25	0.35	0.35	-0.05	0.07	0.11	0.10	0.03	0.06	0.17	0.15	0.08	0.14	0.12	1.00					
	US Listed Real Estate	0.58	0.60	0.43	0.60	0.58	0.53	0.87	0.86	0.55	0.04	0.06	0.23	0.16	0.14	0.13	0.22	0.20	0.08	0.02	-0.01	0.28	1.00				
	Global Listed Real Estate	0.70	0.76	0.59	0.74	0.74	0.66	0.81	0.92	0.62	0.06	0.06	0.28	0.19	0.18	0.16	0.26	0.24	0.07	-0.01	-0.05	0.35	0.94	1.00			
	Global Listed Infrastructure	0.69	0.70	0.59	0.72	0.70	0.64	0.55	0.69	0.87	0.01	0.08	0.25	0.18	0.13	0.14	0.26	0.24	0.10	0.08	0.04	0.39	0.65	0.74	1.00		
Other	**NonDir. Hedge Fund**	0.43	0.39	0.44	0.44	0.43	0.35	0.32	0.41	0.48	-0.26	0.24	0.02	0.15	-0.14	0.03	0.24	0.18	0.35	0.64	0.61	0.51	0.35	0.42	0.52	1.00	
Economic	**Inflation**	0.08	0.01	0.05	0.05	0.02	0.02	0.06	0.04	0.13	-0.19	0.17	-0.10	0.01	-0.16	-0.09	0.03	-0.01	0.89	0.58	0.57	0.09	0.05	0.04	0.10	0.40	1.00

Yields		Yield	Duration	Quality
Yields	Long G/C Fixed	4.5	15.5	AA
	Agg Fixed	4.0	5.5	AA
	US Long Credit	5.3	14.0	A
	US TIPS	1.0	5.3	Govt

Correlation values shown are for the 10-year forecast horizon.
Assumptions do not take fees into consideration and all returns are assumed gross of fees. Yields represent the level at a ten-year horizon.
The information presented in this document is based on data from multiple sources: including Russell Investments, Barrie & Hibbert, Barclays Capital, Bloomberg, and Consensus Economics, Inc. The summary statistics presented in this document are not intended for use in mean-variance optimization.
Please note all information shown is based on assumptions. Expected returns employ proprietary projections of the returns of each asset class. We estimate the performance of an asset class or strategy by analyzing current economic and market conditions and historical market trends. It is likely that actual returns will vary considerably from these assumptions, even for a number of years. References to future returns for either asset allocation strategies or asset classes are not promises or even estimates of actual returns a client portfolio may achieve. Asset classes are broad general categories which may or may not correspond well to specific products.

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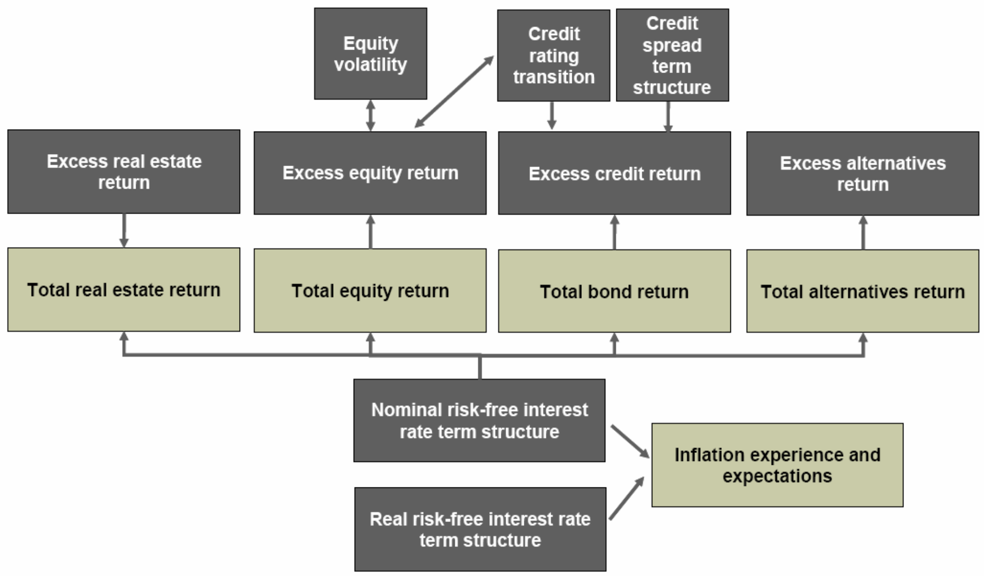
Structure of Russell's global forecasting model

Global capital markets, local economies

- Within each economy
  - Full nominal and real interest rate curves
  - Full credit curves
  - Local asset class returns
- Key features
  - Captures 'fat tails' and volatility clustering
  - Explicit currency modelling
  - Global equity risk premium
  - Fitted to current market conditions
  - Credit risk linked to equity risk
  - Alternatives modelled using factor model



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