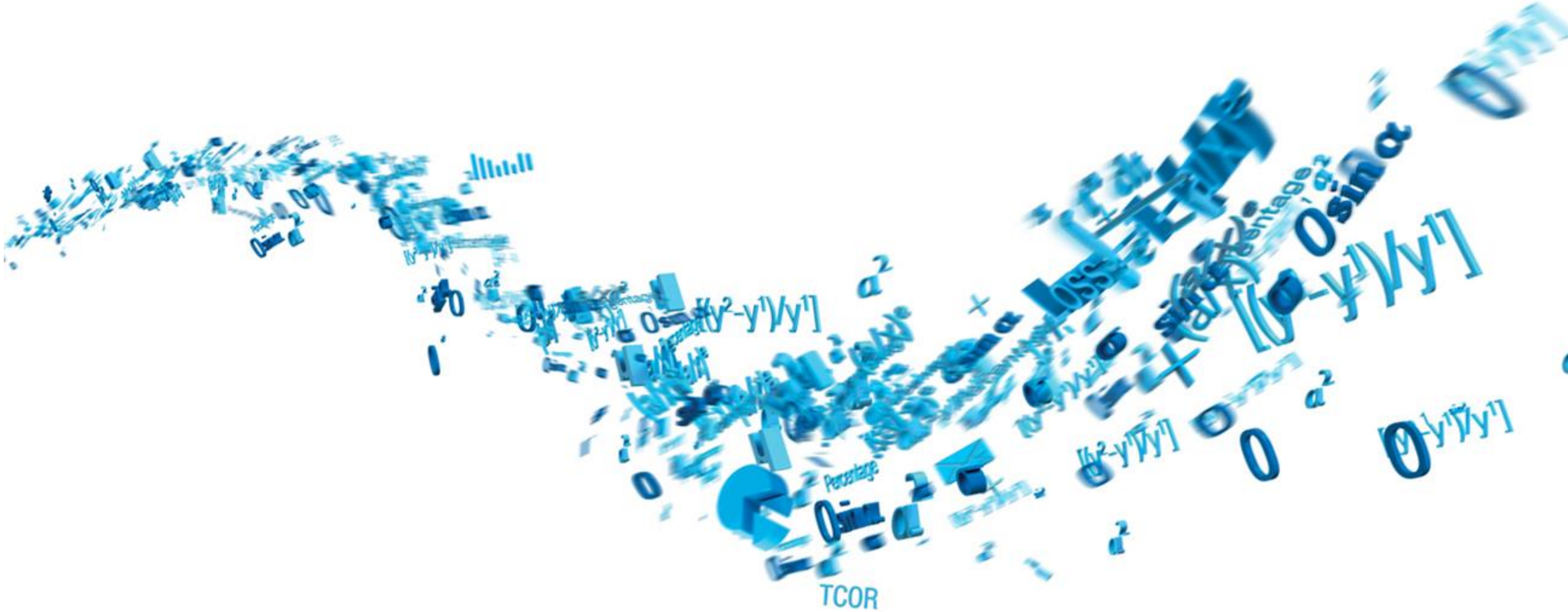

Asset Allocation / Benchmark Review

North Carolina Department of State Treasurer

Investment Advisory Committee | March 5, 2015

Aon Hewitt
Retirement and Investment

Empower Results®

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Our Discussion Today

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Agenda Tracker

Project Overview

- Aon Hewitt was retained by the North Carolina Department of State Treasurer Investment Advisory Committee to provide an overview on our fundamental beliefs regarding benchmarking and asset allocation

- Aon Hewitt attended the March 5th 2015 Investment Advisory Committee (IAC) meeting, discussed our views, and received feedback from the IAC

- Following the meeting we provided a memo highlighting our understanding of the open questions discussed at the March 5th meeting

- The following slide summarizes the follow-up items identified in the March 9th memo

- The following sections of this report address the follow-up items detailed on the next slide

Project Overview (continued)

- Analyze the NCRS Total Plan benchmark, and provide analysis to assist the IAC in better understanding its current construction as well as historical composition
- How should the IAC be measuring the success of the Plan?
- Is the current use of private equity appropriate for the Plan?
- Review the performance reporting provided to the IAC, and provide potential refinements
- Evaluate peer group usage, and the potential for identifying a standard universe
- Provide insight on peer handling of international currency exposure in their non-U.S. equity and non-U.S. fixed income portfolios

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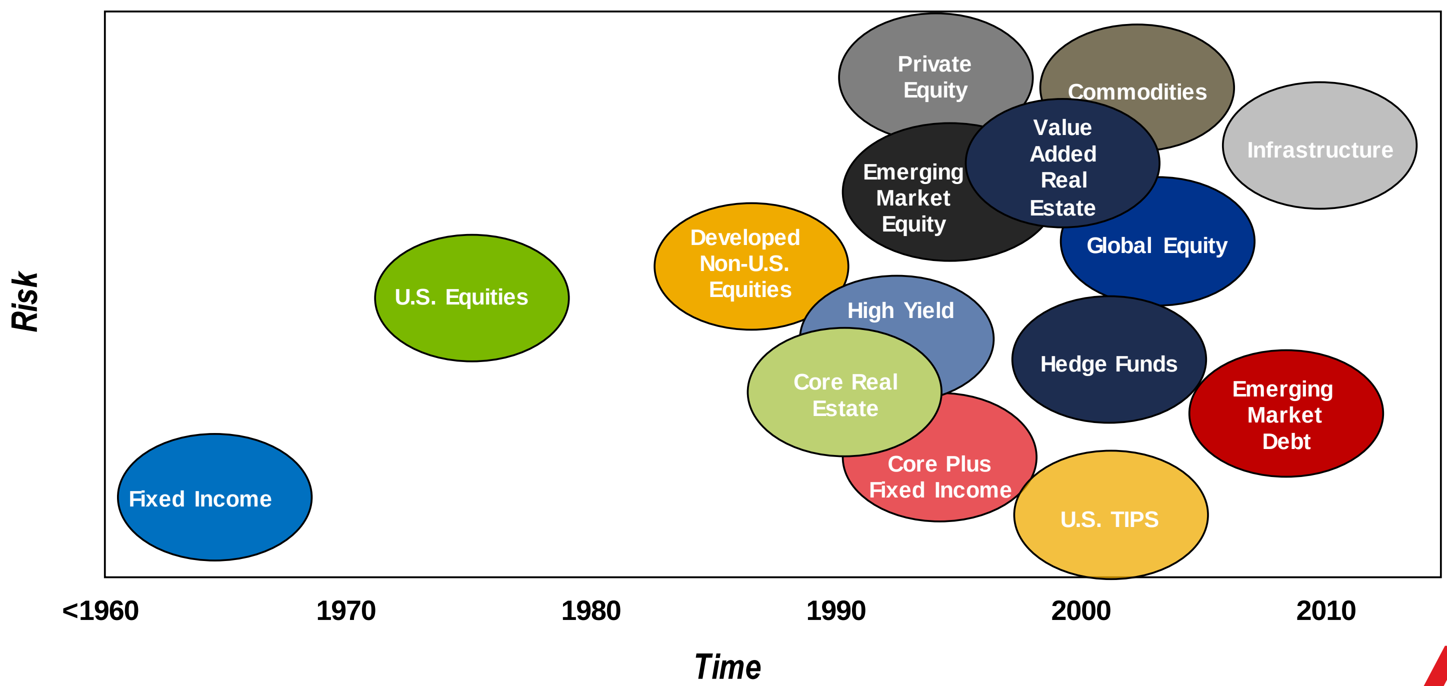
Agenda Tracker

Benchmark Review

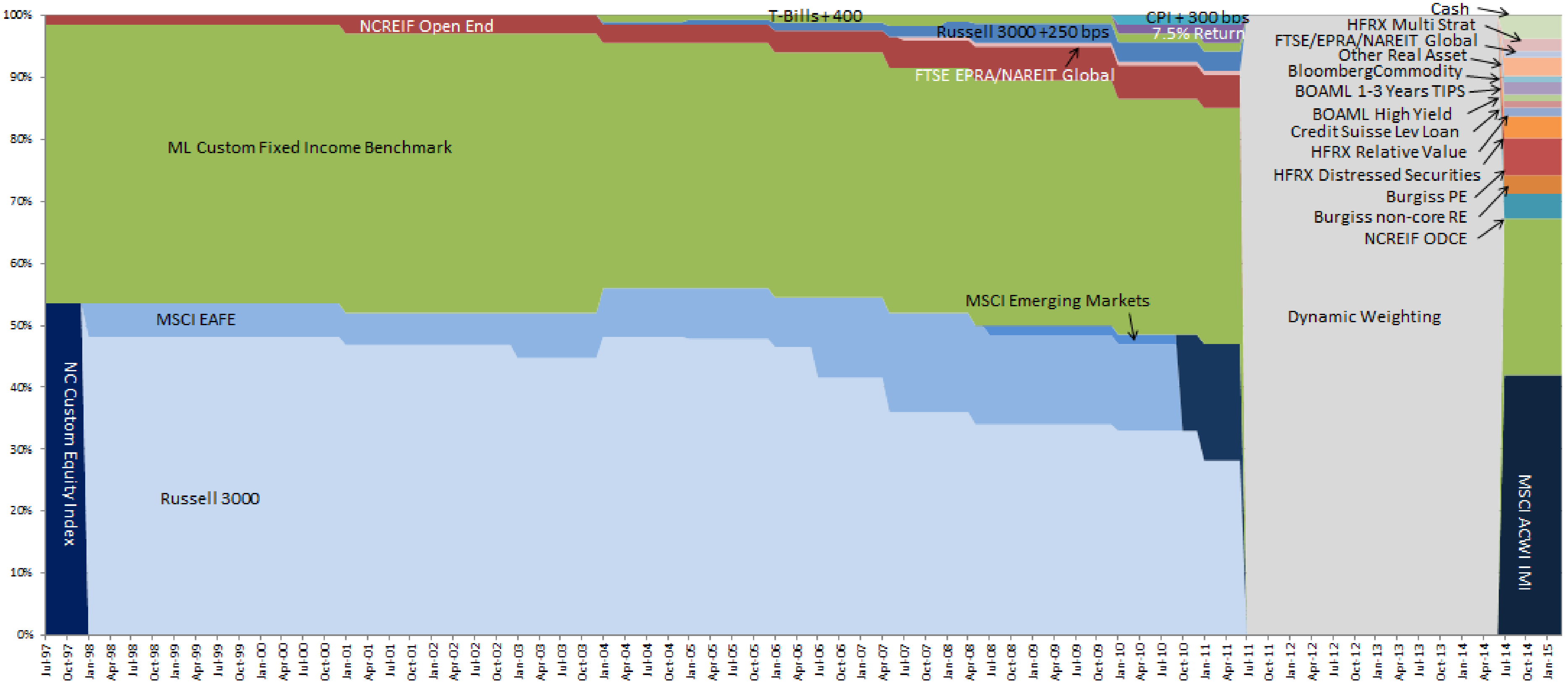
- Over time, benchmarks of institutional investors change for various reasons
  - Evolution of the investable opportunity set outlined below
  - Changes in the underlying liability of the Plan, or increased actuarial assumptions
  - Strategic opportunities available in the market

- The following slide highlights how the NCRS benchmark has changed over time

The "Institutionalization" of Various Asset Classes



NCRS Total Fund Benchmark (Legacy Benchmark)



- Similar to other institutional investors, the NCRS pension plan has added additional asset classes over time
  - The grey component of the analytic represents the period of time where the investment policy was set on a monthly basis based on the actual asset allocation

NCRS Benchmark Restatement
Implementation Benchmark (restatement #1)

- In July of 2014 NCRS Staff restated the legacy benchmark, and created the Implementation benchmark with the intention of aligning the historical policy exposures more consistently with the current policy structure
  - Public Equity, Private Equity, Non-Core Real Estate, Opportunistic Fixed Income, Investment Grade Fixed Income, Inflation Sensitive, Core Real Estate, and Multi-Strategy
- The methodology of the restatement is described below;
  - Public Equity – 100% MSCI ACWI IMI for all time periods
  - Private Equity – Burgiss Group 50% Buyout, 20% Venture Cap, and 30% Spec Sit & Distressed
  - Non-Core RE – Burgiss Group 80% U.S. Non-Core RE, 20% Non-U.S. Non-Core RE
  - Opportunistic Fixed Income – 50% HFRX Distressed Securities, 20% HFRX Relative Value, 15% Credit Suisse Leveraged Loan, and 15% BOAML High Yield
  - Investment Grade Fixed Income – Prior to July 2014, 100% BOAML Core Investment Grade; July 2014 through present, transitional weighting comprised of the BOAML Core Investment Grade and iMoneyNet
  - Inflation Sensitive – Dynamically weighted using underlying components (Energy, Timber, Public Natural Resources, and Real Assets & Other Diversifiers)
  - Core Real Estate - Prior to May 2007, 100% NCREIF ODCE; May 2007 thru present, 80% NCREIF ODCE and 20% FTSE EPRA/NAREIT Global Index
  - Multi-Strategy – Dynamically weighted combination of the HFRX ED: Multi-Strategy and the market value weighted benchmarks for any other total fund strategies within the Portfolio

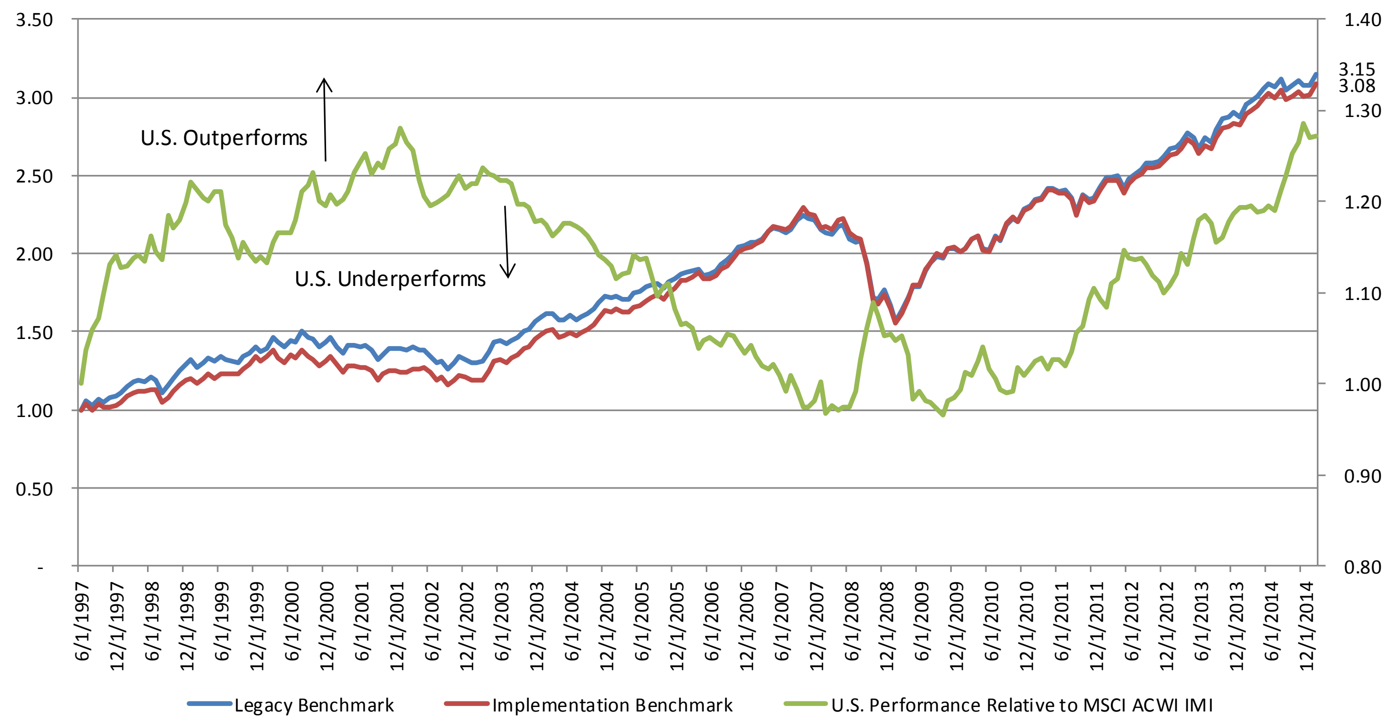
NCRS Benchmark Restatement
Long-Term Policy Benchmark (restatement #2)

- In July of 2014 NCRS Staff also created the Long-Term Policy Benchmark with the intention of replicating the projected volatility of the investment program utilizing broad traditional asset classes

- The Long-Term Policy benchmark is comprised of;
  - 57% MSCI All Country World Investable Market Index
  - 33% Bank of America Merrill Lynch 5+ Years U.S. Treasury Index
  - 6% Dow Jones-UBS Commodities Index
  - 4% Bank of America Merrill Lynch 1-3 Years U.S. Inflation-Linked Treasury Index.

NCRS Benchmark Performance
(Legacy Benchmark vs Implementation Benchmark)

- The analytic below represents the performance of the NCRS benchmarks over time
- The legacy benchmark and implementation benchmark are both intended to represent the actual exposures of the investment program over time
  - The legacy benchmark is the most representative depiction of the Plan's asset allocation exposures over time
  - The most meaningful difference between the benchmarks is the Implementation Benchmarks higher relative weight to international equities



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Benchmark Review

Asset Class	Policy Weight	AHIC Recommendation	Comments
Public Equity	42%	--	
MSCI ACWI IMI Index	--	No Change	
MSCI ACWI IMI Index (beta adjusted)	--	No Change	
Private Equity	6%	--	
Burgiss Group Buyout	3.0%	No Change	Typically AHIC recommends the use of Public Equity + Premium. However we are comfortable with peer benchmarking.
Burgiss Group Venture Capital	1.2%	No Change	
Burgiss Group Special Situations & Distressed	1.8%	No Change	
Non-Core Real Estate	3%	--	
Burgiss Group U.S. Non-Core	2.4%	No Change	Typically AHIC recommends the use of NCREIF ODCE + Premium. However we are comfortable with peer benchmarking.
Burgiss Group Non-U.S. Non-Core	0.6%	No Change	
Opportunistic Fixed Income	7%	--	
HFRX Distressed Securities Index	3.5%	No Change	Prefer HFRI Indicies relative to HFRX indicies.
HFRX Relative Value Index	1.4%	No Change	
Credit Suisse Leveraged Loan Index	1.1%	No Change	
BOAML High Yield Index	1.1%	No Change	
Investment Grade Fixed Income	28%	--	
iMoneyNet First Tier Institutional MM	2.8%	No Change	
BOAML 5+ Years Governments	7.6%	No Change	
BOAML 5+ Years Investment Grade Corporates	8.8%	No Change	
BOAML Mortgage Master	8.8%	No Change	
Inflation Sensitive	6%	--	
BOAML 1-3 Years TIPS Index	2.0%	No Change	
Bloomberg Commodity Index	1.0%	No Change	
Dynamic benchmark of Private Natural Resources or Other Real Assets and Diversifiers	3.0%	No Change	Prefer Static Weights relative to dynamic weights.
Core Real Estate	5%	--	
NCREIF ODCE Index	4.0%	No Change	
FTSA/EPRA/NAREIT Global Index	1.0%	No Change	
Multi-Strategy	2%	--	
Dynamic benchmark of HFRX Multi-Strategy Hedge Fund Index, and other utilized benchmarks	--	No Change	
Cash			
iMoneyNet First Tier Institutional MM	1%	No Change	

- The table to the left depicts the underlying benchmarks utilized for Total Fund Benchmarking
- AHIC is comfortable with all the benchmarks utilized within the Total Fund Benchmark
- Where possible, AHIC has a preference for static policy weights within an asset class over dynamic weighting
- For private equity and non-core real estate we often use public markets + premium and NCREIF ODCE + premium, respectively
  - We are comfortable with the inclusion of Burgiss in Total Fund Benchmark, and it is a practice we are beginning to see more often

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NCRS Benchmark Findings

- Consistent with other institutional investors, the NCRS Total Fund benchmark has evolved over time, and additional diversifying asset classes have been added
- The Legacy Benchmark is the most relevant proxy for NCRS relative performance comparisons
- We understand the desire to restate the NCRS benchmark in a more consistent streamlined manner (Implementation Benchmark)
  - The Implementation Benchmark and the Legacy Benchmark have produced similar investment returns over time
  - The largest contributor to the return disparity over time has been the structure of the equity component
- We believe analyzing performance over long time periods relative to a broad mandate, traditional asset class structure, is useful in understanding the relative value of investing in non-traditional asset classes (Long-Term Policy Benchmark)
- We believe the Implementation Benchmark and the Long-Term Policy Benchmark can be used to draw inferences on the relative investment performance of the Plan over the last 10 years and longer
- We are comfortable with the IAC reviewing investment performance relative to the implementation benchmark going forward

<u>Recommendation</u>

- We recommend including a policy weight to U.S. and non-U.S. equity during the historical periods, prior to the legacy benchmark's usage of the MSCI ACWI IMI

Our Discussion Today

Introduction

Most important decision for long-term investment results is asset allocation

- Step 1: Asset Liability Study
  - Provides fiduciaries with an understanding of the dynamic relationship between plan assets and liabilities over time
  - Provides an evaluation of the impact of a Plan's level of risk on future economic cost
  - Provides the framework for stakeholders to make the first decision in setting asset allocation policy: Determine level of risk that is appropriate (i.e. split between return-seeking and risk-reducing assets) in the context of the Plan's liabilities

- Step 2: Setting Asset Allocation
  - Translate the results of the Asset/Liability study into an *actionable, strategic* asset allocation
  - Goal of Asset Allocation:
    - Efficiently and prudently implement previously established return-seeking/risk-reducing split
    - Improve results with better diversification
    - Increase risk/reward trade-off ➔ Improve cost savings (reward) and/or lower risk

Setting Asset Allocation: Key Qualitative Factors

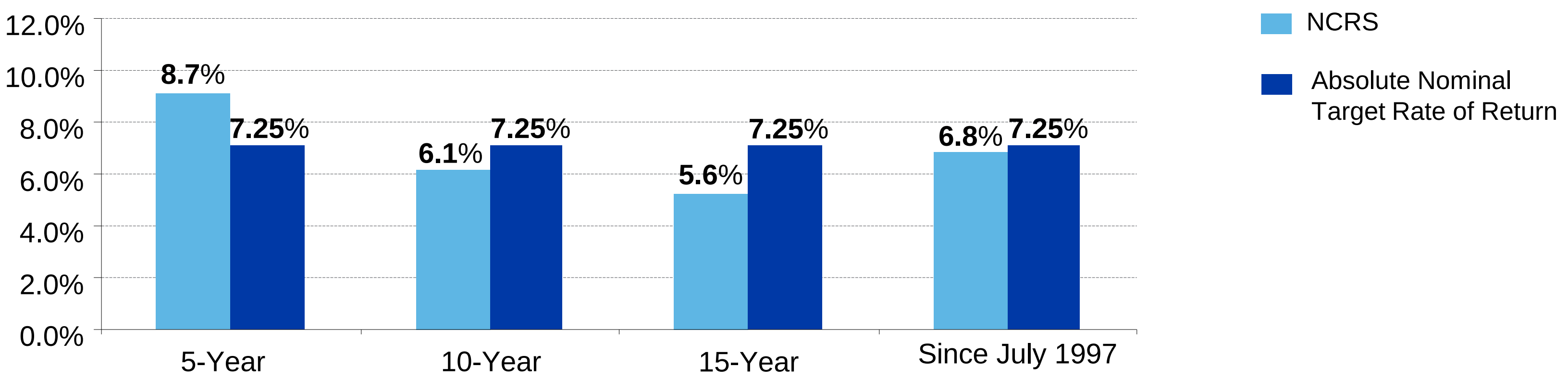
Key Drivers & Considerations	Client XYZ	
Governance • Oversight & resources • Speed of action • (Freedom from) scrutiny	**Strategic** - Public scrutiny	**Flexible** + Skilled investment staff with discretion + Expert oversight + Ability to allocate to broad range of asset strategies
Time Horizon • Life span • Cash flow position • Ability to access less liquid opportunities • Ability to capture illiquidity premium	**Short** - Large cash outflows - Risk of plan closing	**Long** + Open plan + Ability to tolerate some illiquidity
Portfolio Size • Ability to diversify • Market impact • Potential for closet indexing • Fees	**Small**	**Large** + Access to skilled managers + Ability to diversify (alternatives) + Size allows fee negotiation - Large market impact - Large # of managers/strategies

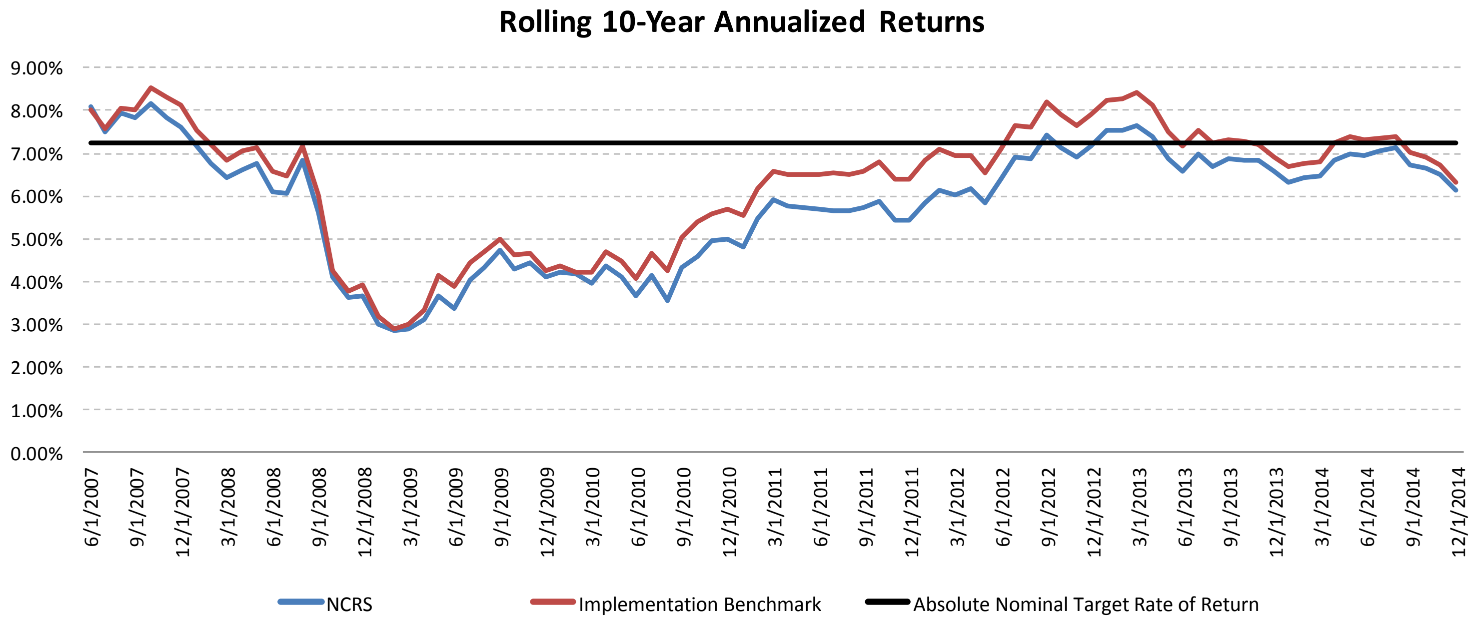
Evaluation of Asset Allocation Decisions and Investment Performance

- Evaluating asset allocation decisions over long periods of times is challenging; however, three ways to accomplish this include:
  - **Investment Objective:** Performance relative to the actuarial assumed rate of return, which is currently 7.25%
  - **Peers:** Risk adjusted performance metrics relative to peers (recognizing that each plan has unique circumstances that drive differences in long-term asset allocation)
  - **Opportunity Set:** Performance relative to the World Market Opportunity Set

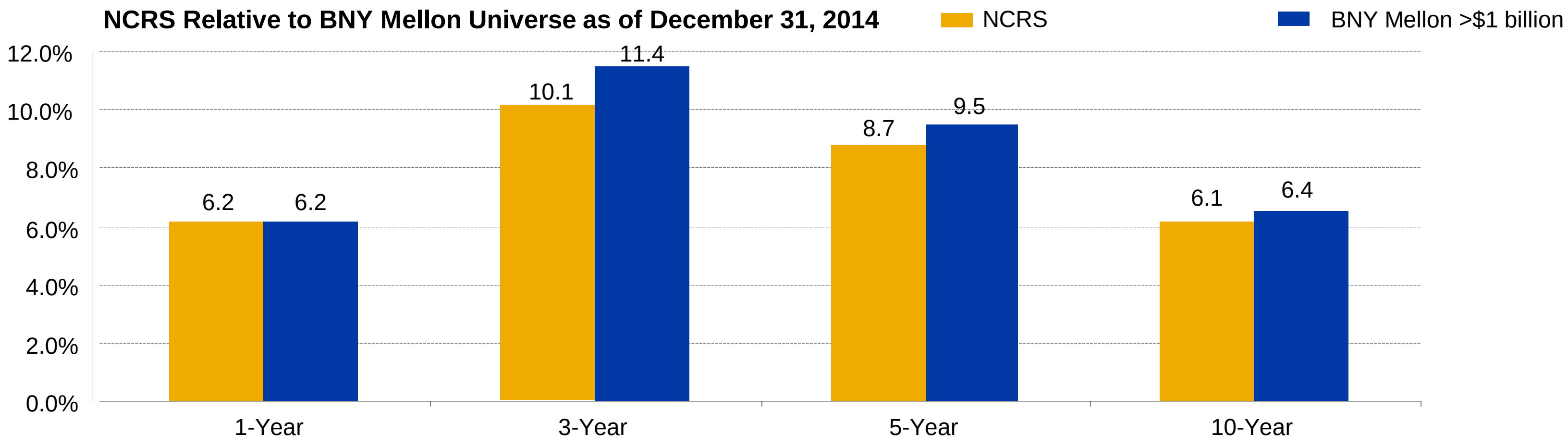
Absolute Nominal Target Rate of Return

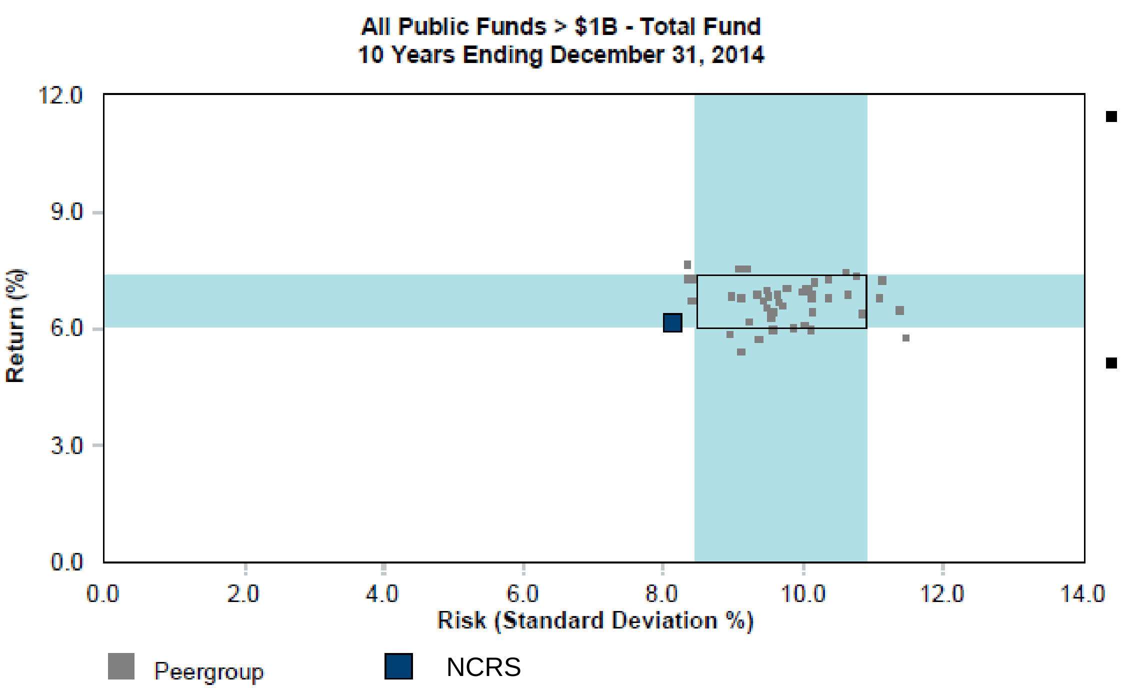
As of December 31, 2014





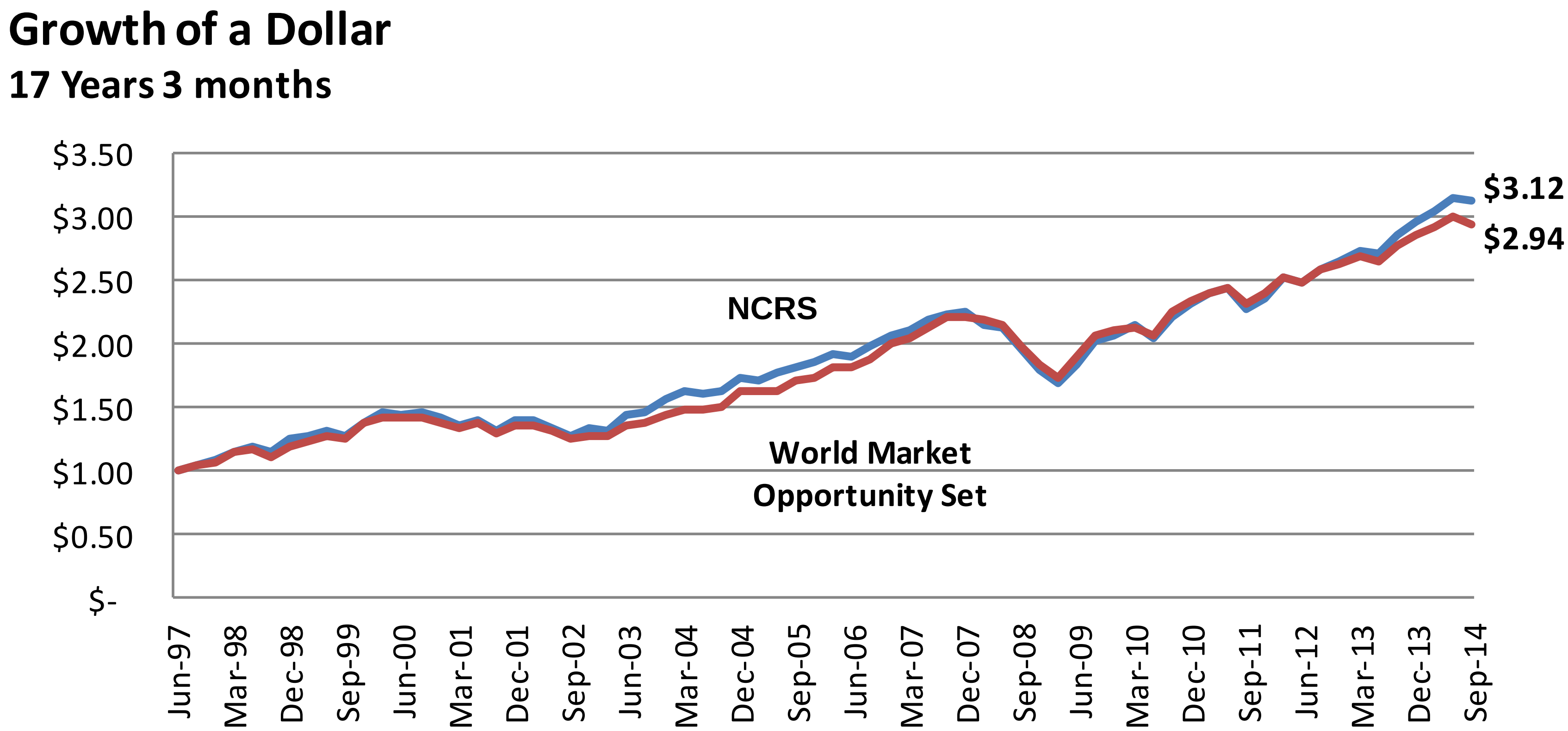
NCRS Results Relative to Peers





- On a risk adjusted basis, the Plan has produced strong investment performance over the trailing 10-year period
- The Plan has produced a return lower than the median over ten years, but has incurred the lowest level of volatility

World Market Opportunity Set



- The World Market Opportunity Set represents the sum total of the entire global investment opportunity set including global equities, global bonds, real estate, and alternatives

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Agenda Tracker

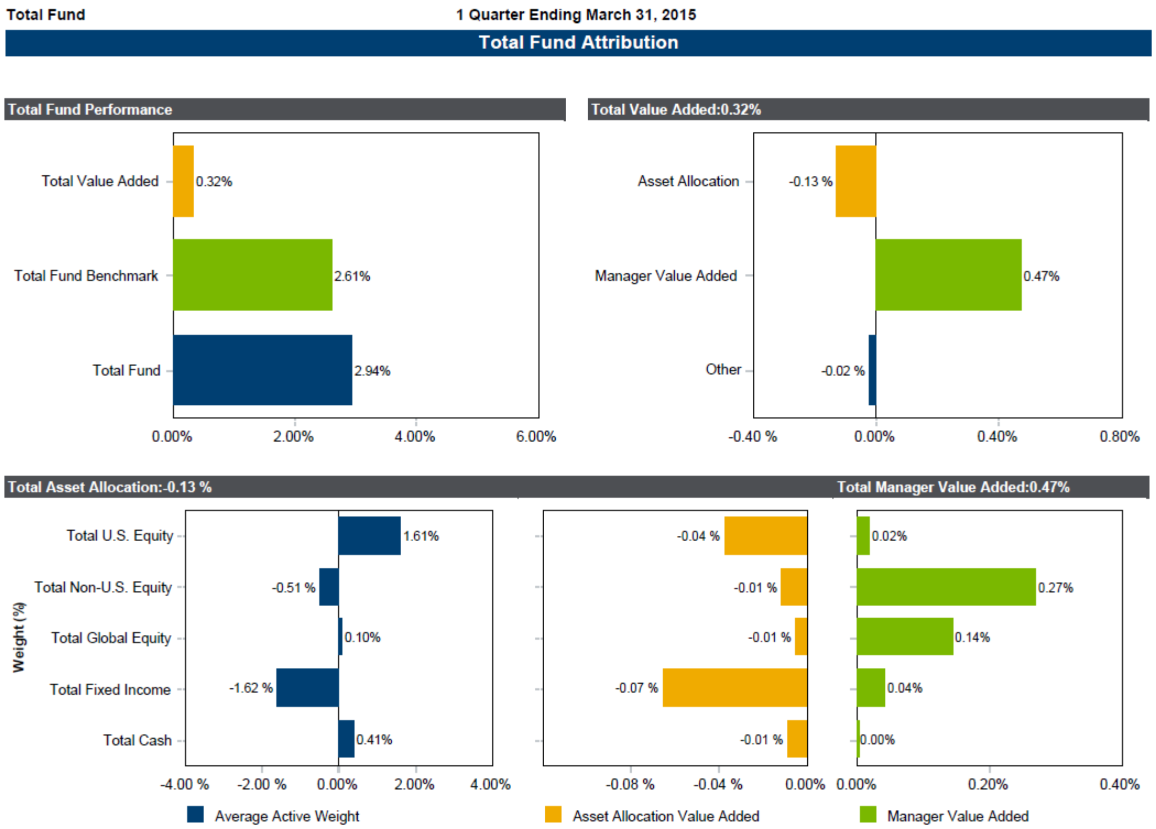
Performance Reporting

- The IAC is provided a significant level of detail on the investment performance of the Plan, its underlying asset classes, and the investment managers
- We believe the Implementation Benchmark and the Long-Term Policy Benchmark can be used to draw inferences on the relative investment performance of the Plan
- The table below represents the attribution currently provided to the IAC

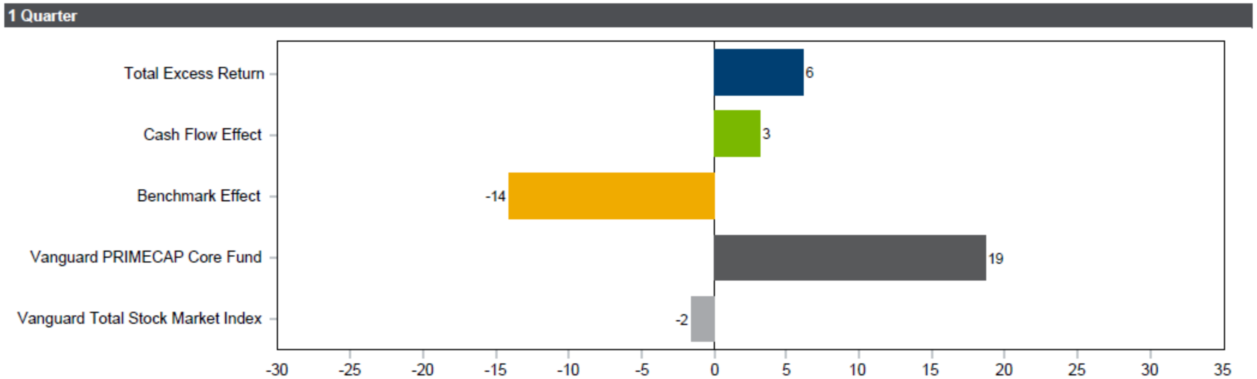
	3 months	1 Year	3 Years	5 Years
Public Equity	0.00	-0.20	0.64	0.40
Private Equity	0.08	-0.02	-0.18	-0.15
Non-Core Real Estate	0.13	0.42	0.11	0.07
Opportunistic Fixed Income	0.05	0.23	0.36	0.27
IG Fixed Income	-0.09	-0.37	0.20	0.04
Cash	0.00	-0.04	-0.03	-0.02
Inflation Sensitive	0.07	0.13	0.10	0.02
Core Real Estate	-0.07	-0.17	-0.06	-0.07
Multi-Strategy	0.00	0.00	0.01	0.05
Total NCRS	**0.18**	**-0.02**	**1.15**	**0.61**

Performance Attribution (Total Fund Attribution)

- Performance Attribution allows individuals to more easily understand the drivers of relative performance within an investment program
  - Below is a series of charts that represent similar information provided within the IAC materials, but in a format that allows readers to draw quick conclusions



Performance Attribution (Asset Class Attribution)



- Attribution can also used perform deeper analysis into the relative performance an asset class

- This client had one active investment manager who had strong performance for the period, but the asset class performance was relatively flat?
  - A Committee member could flip to the attribution page and see that the active investment manager added 19 bps of relative performance, but this was offset by the negative benchmark effect (-14 bps)
  - An overweight allocation to large cap equities during a period where large cap underperformed the asset class benchmark caused the benchmark effect of -14 bps
  - Manager selection added value, but asset class structure detracted during the period

Private Equity Usage

- For a Plan the size of NCRS we believe the benefits of private equity exposure are meaningful
- Academic research[1] increasingly suggests that private equity, particularly buyout funds, outperform the public equity market, even after adjusting for beta/leverage
- Additionally, AHIC believes that private equity is a form of equity investing which allows for a higher likelihood of alpha than traditional equity
  - Alpha produced in any asset class can be a great source of diversification and return
- As private equity requires significant time and resources, we recommend clients consider whether they have an allocation of sufficient size to overcome the semi-fixed costs of oversight
  - We believe the size of the NCRS portfolio provides significant scale to efficiently oversee a diversified private equity portfolio

[1]Harris, R., Jenkinson, T., and S. Kaplan. 2015. "How Do Private Equity Investments Perform Compared to Public Equity?" http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2597259

Peer Usage

- While AHIC understands the desire to standardize the peer information utilized, we believe it will be very difficult to use a consistent grouping of peers for all analysis

- There are times where an analysis of a smaller number of very similar plans is helpful (particular data points on extremely similar peers), and there are scenarios where having a deeper sample size is important to draw appropriate conclusions (statistical analysis)
  - In a world where perfect information existed consistent peer analysis would be ideal
  - Different vendors have access to different sources of information, however, there is likely considerable overlap across datasets

- The peer group presented on page 23 of this report utilized a larger sample size, illustrating the benefit of a larger sample sizes for statistical analysis
  - If this chart were shown with less plans it would be very difficult to visualize and understand the risk return tradeoff available in the market

- We believe as long as the peer universe is appropriate and robust, having the same samples on a consistent basis is not necessarily important

International Currency Exposure

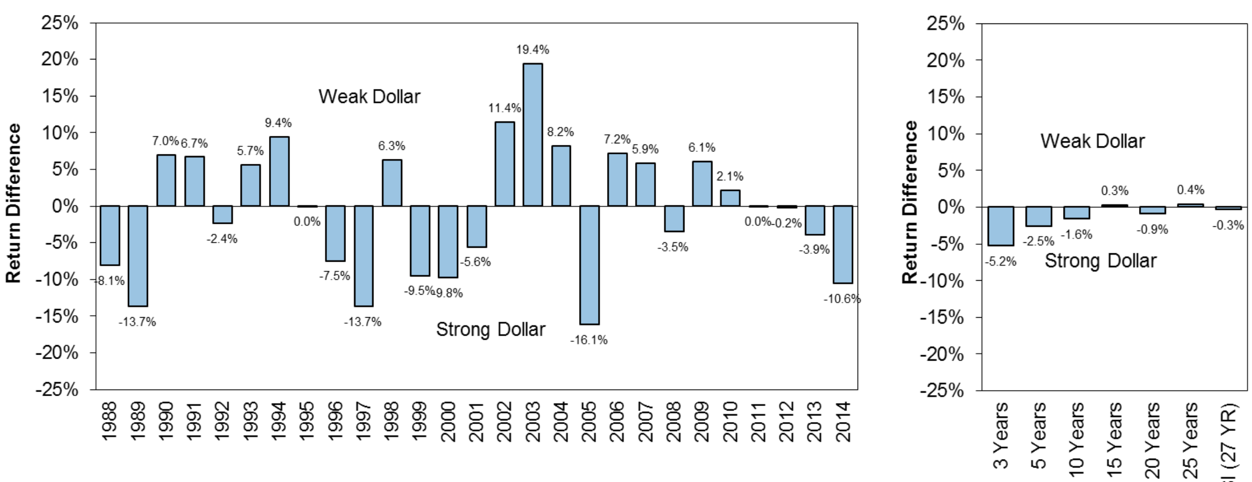
- NCRS currently has exposure to equity investments denominated in currencies other than the U.S. dollar, as the dollar has strengthened, these investments have struggled, in part due to weakening in their base currencies
- While currency impacts can be meaningful over shorter time periods, they tend to wash out over very long periods
- The challenge is how to deal with currency volatility in the short / intermediate-term
- Nearly none of AHIC's clients hedge currency exposure within their international equity portfolios on a strategic basis
  - Some clients hedge on a tactical basis, which AHIC is supportive of
- Some of our clients hedge the currency exposure within their international fixed income
- The next slide highlights to pros and cons to currency hedging

Currency Hedging – Pros & Cons

Pros	Cons
Reduce return volatility	Higher correlations reduce diversification benefits
Reduce volatility drag	Costs of hedging negates any positive returns
Liabilities in home currency	Administrative complexity
Execute tactical views (stronger dollar)	No significant volatility reduction within equities
	Cash flow volatility

- Over the long-run, currency movements tend to be a wash. No significant long-term positive return from hedging currency is expected, after factoring for hedging costs.

MSCI EAFE Return Differences 0% Hedged versus 100% Hedged (Through December 2014)



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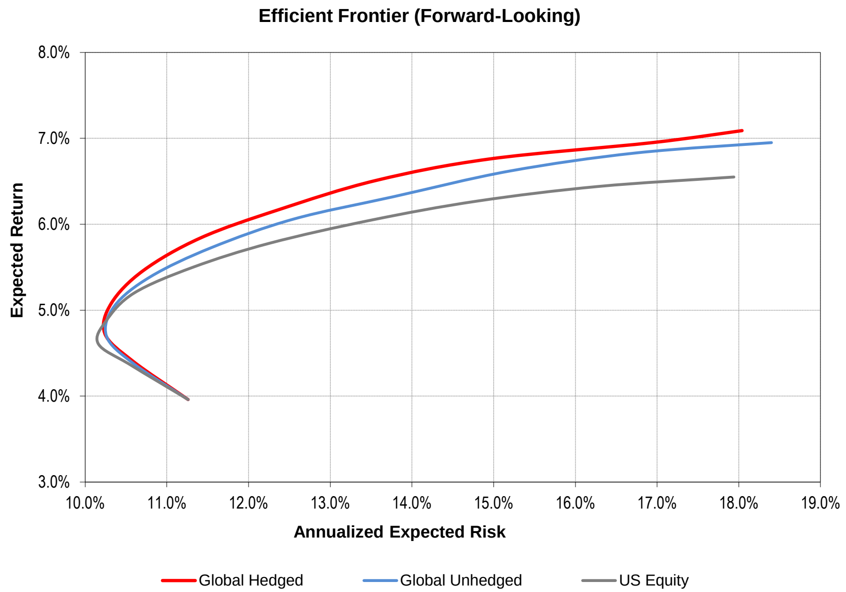
Forward-Looking Risk/Return Analysis (10 Year Assumptions)*



Global hedged portfolio assumes the major developed currencies are hedged (GBP, Euro & JPY). Liability proxy is long credit bond. Efficient frontiers assume two asset portfolio (equities and long credit bonds).

- Global hedged appears superior with the highest expected return, however when you factor in the cost of hedging the return advantage will disappear
- Hedging does not significantly reduce expected risk for global equities, over the long-term
- Nearly none of AHIC's clients have a policy to hedge international equity currency exposure

Performance Reporting and Plan Structure Findings

- We believe the IAC receives sufficient information to evaluate the performance of the Plan
  - We believe the quality of the reporting could be strengthened by providing attribution analytics for the Total Plan and underlying asset classes

- We believe the use of private equity is beneficial from a diversification, and nominal performance perspective

- Creating a standard peer group would be administratively difficult, and we feel it would not meaningfully increase the value of peer analysis
  - As long as the peer sample is robust and appropriate, we believe it will provide relevant insight
  - NCRS is also a client of CEM who can create custom peer groups for the IAC

- AHIC clients, in general, do not hedge international equity exposure on a strategic basis, but some do so for their international fixed income exposure

<u>Recommendation</u>

- We recommend the inclusion of Total Fund and asset class attribution analytics in the quarterly IAC reporting to allow for greater insight into the drivers of relative performance

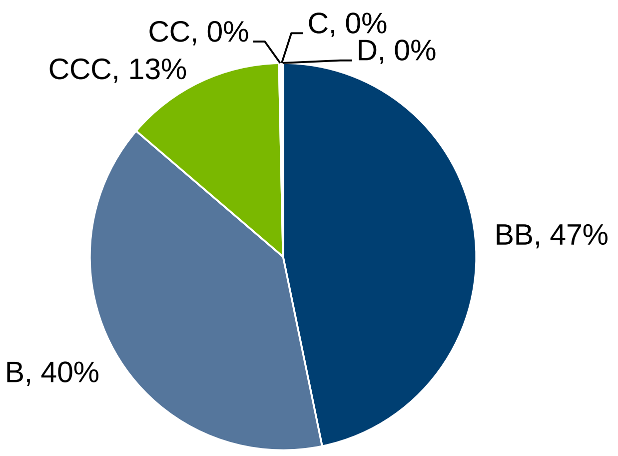
Agenda Tracker

High Yield Fixed Income: BofA Merrill Lynch US High Yield Index

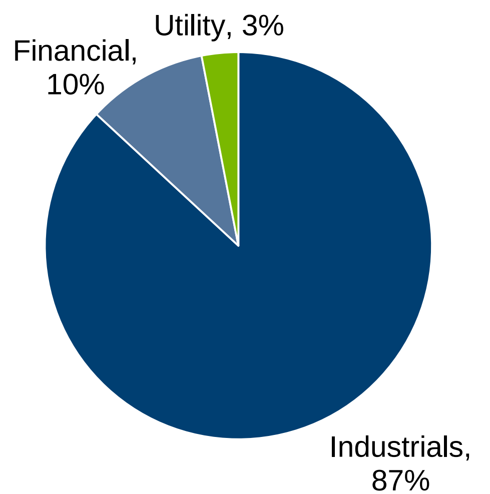
General Characteristics

- **Size:** $1,399 billion
- **Number of Issues:** 2,326
- **Average Credit Quality:** B+
- **Yield to Worst:** 6.04%
- **Modified Adjusted Duration:** 4.95yrs
- **Effective Duration:** 4.41yrs

Quality Breakdown



Industry Breakdown

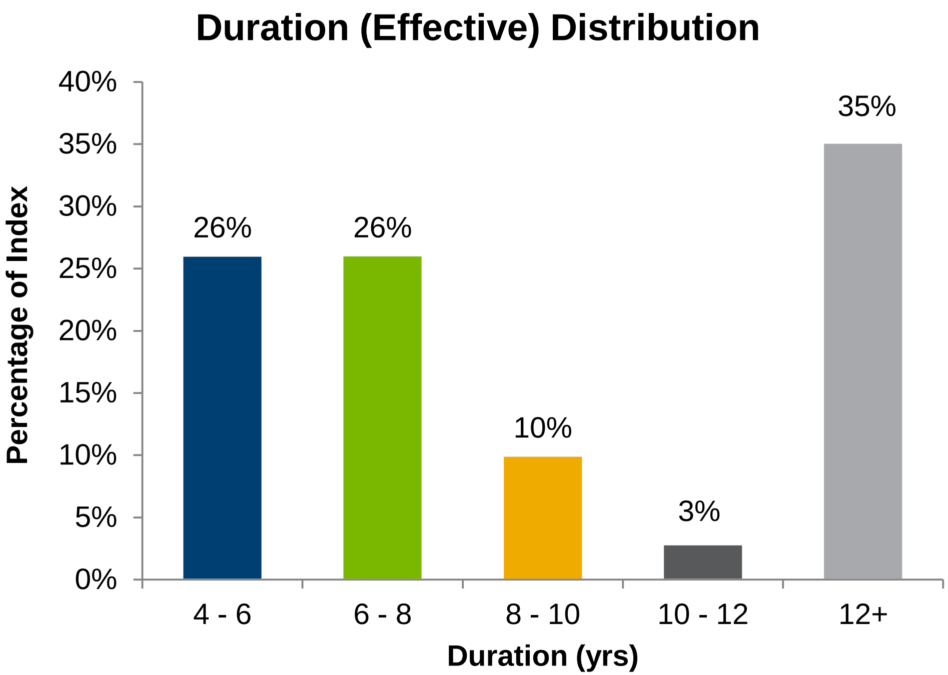


Note: Data sourced from BofA Merrill Lynch and is as of April 30, 2015

Government Fixed Income: BofA Merrill Lynch 5+ Year US Treasury Index

General Characteristics

- **Size:** $3,961 billion
- **Number of Issues:** 99
- **Average Credit Quality:** AAA
- **Yield to Worst:** 2.11%
- **Modified Adjusted Duration:** 10.37yrs
- **Effective Duration:** 10.63yrs



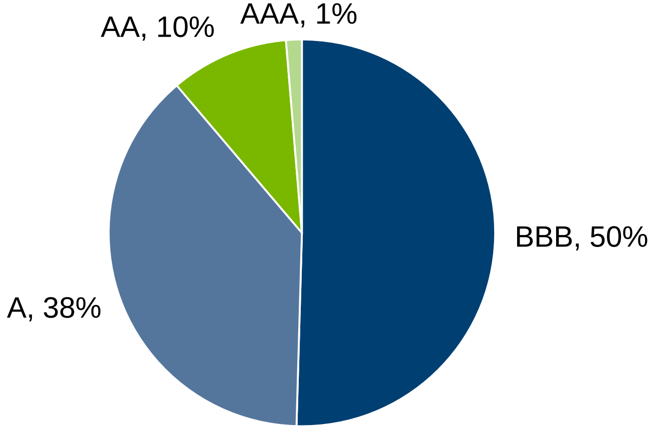
Note: Data sourced from BofA Merrill Lynch and is as of April 30, 2015

IG Corporate Fixed Income: BofA Merrill Lynch 5+ Year US Corporate Index

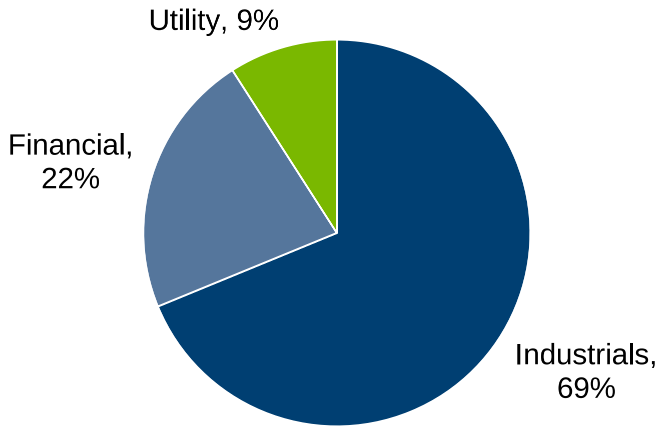
General Characteristics

- **Size:** $3,158 billion
- **Number of Issues:** 4,040
- **Average Credit Quality:** A-
- **Yield to Worst:** 3.80%
- **Modified Adjusted Duration:** 9.70yrs
- **Effective Duration:** 9.82yrs

Quality Breakdown



Industry Breakdown

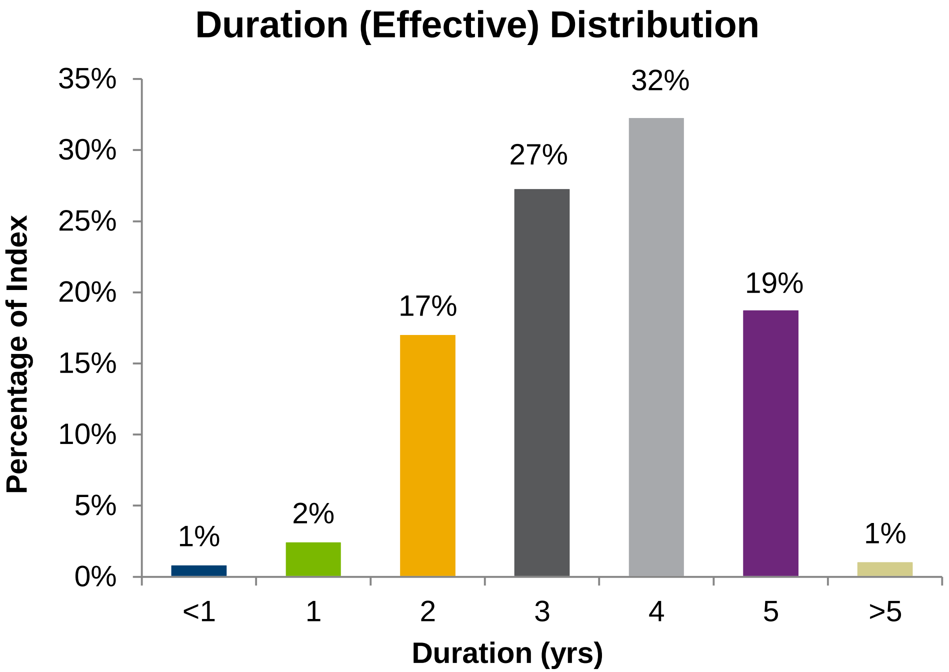


Note: Data sourced from BofA Merrill Lynch and is as of April 30, 2015

Securitized Fixed Income: BofA Merrill Lynch US Mortgage Backed Securities Index

General Characteristics

- **Size:** $5,200 billion
- **Number of Issues:** 456
- **Average Credit Quality:** AAA
- **Yield to Worst:** 2.19%
- **Modified Adjusted Duration:** 4.47yrs
- **Effective Duration:** 3.97yrs

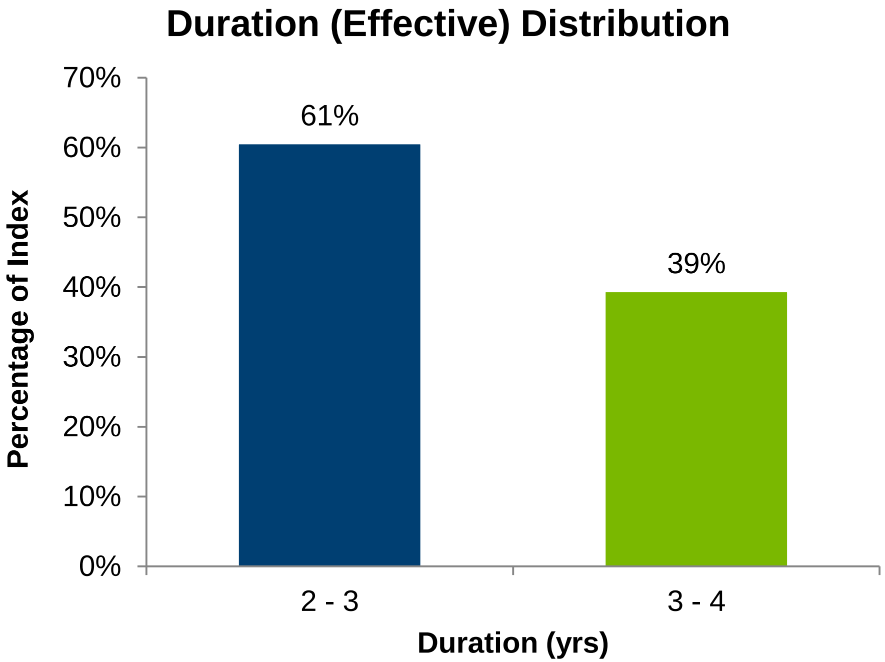


Note: Data sourced from BofA Merrill Lynch and is as of April 30, 2015

Inflation-Protection Fixed Income: BofA Merrill Lynch 1-3 Year US Inflation-Linked Treasury Index

General Characteristics

– **Size:** $181 billion
– **Number of Issues:** 6
– **Average Credit Quality:** AAA
– **Yield to Worst:** -0.99%
– **Modified Adjusted Duration:** 2.20yrs
– **Effective Duration:** 2.85yrs



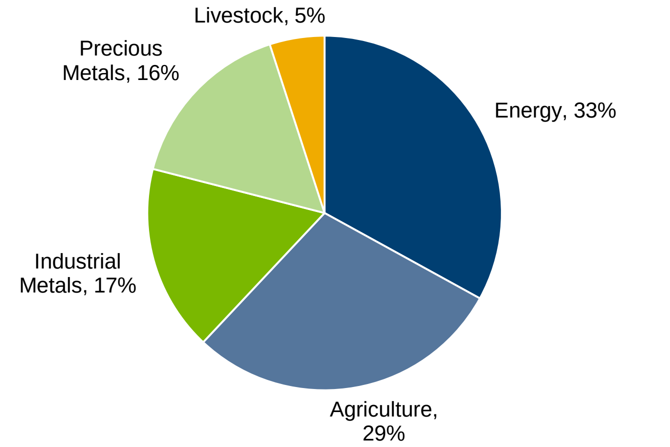
Note: Data sourced from BofA Merrill Lynch and is as of April 30, 2015

Inflation Sensitive: Bloomberg Commodity Index

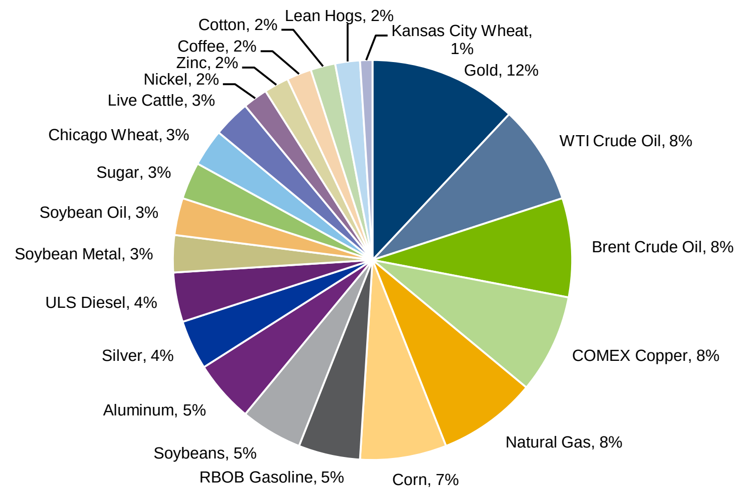
General Characteristics

- **Introduction:** July, 1998 (formerly known as the Dow Jones-UBS Commodity Index)
- **Number of Issues:** 22 exchange-traded futures, which represent 20 different commodities
- **Weighting:** Commodity weightings are based on production and liquidity; no related group of commodities constitutes more than 33% of the index, and no single commodity constitutes more than 15%
- **Review Frequency:** Reweighted and rebalanced annually on a price-percentage basis
- **Opinion:** Weighting restrictions on individual commodities and commodity groups promote diversification

Commodity Sector Breakdown



Commodity Breakdown

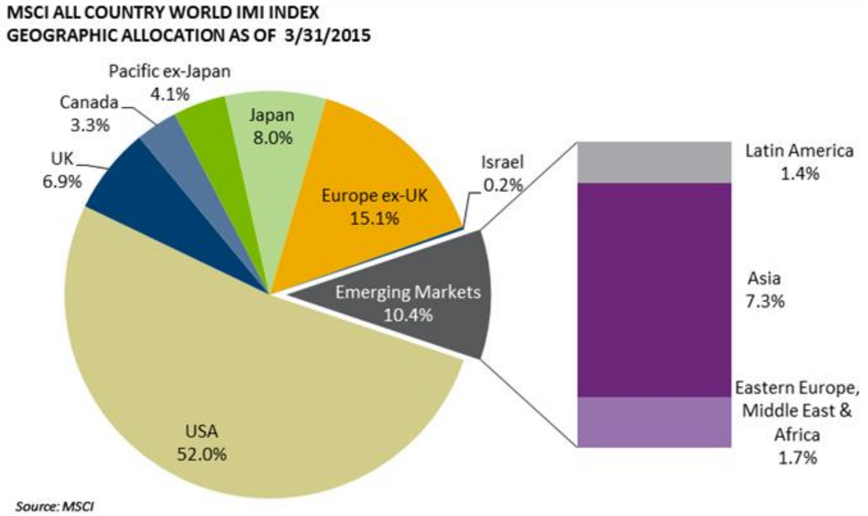


Note: Data sourced from Bloomberg and is as of March 31, 2015

Public Equity: MSCI ACWI IMI Index

General Characteristics

- **Size:** $43,404 billion
- **Number of Securities:** 8,551
- **Methodology:** Market Capitalization Weighted
- **Market Coverage:** Approximately 99% of investable market universe
  - 23 Developed Markets; 23 Emerging Markets
  - Large, mid, and small market cap representation



Top 10 Constituents

	Market Cap (USD Billions)	Index Weight (%)
Apple	729.76	1.68
Exxon Mobil	359.93	0.83
Microsoft	318.36	0.73
Johnson & Johnson	281.59	0.65
Wells Fargo	268.1	0.62
General Electric	249.15	0.57
Nestle	243.69	0.56
Novartis	227.71	0.52
JPMorgan Chase	226.46	0.52
Procter & Gamble	221.41	0.51
Total	3,126.16	7.19

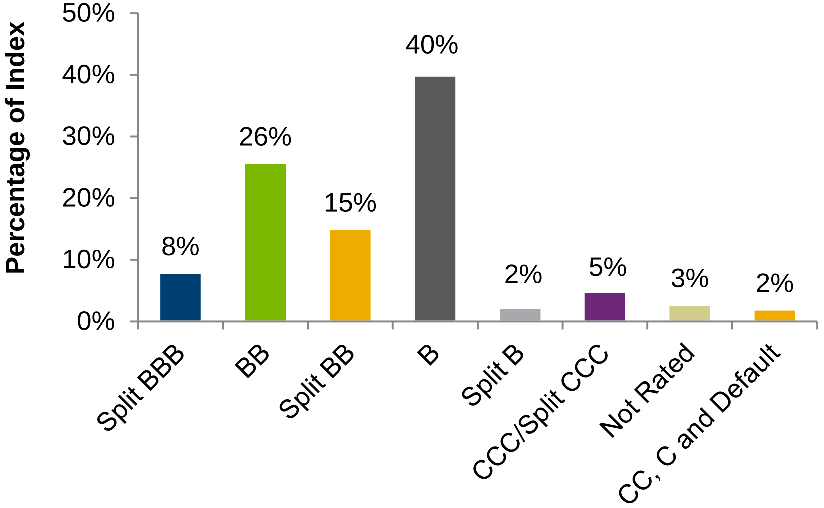
Note: Data sourced from MSCI and is as of March 31, 2015

Opportunistic Fixed Income: Credit Suisse Leveraged Loan Index

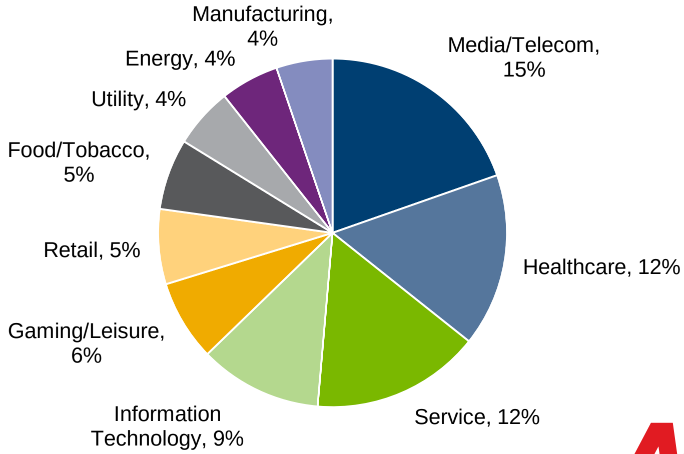
General Characteristics

- **Size:** $951 billion
- **Number of Issues:** 1,651
- **Average Credit Quality:** Split BB
- **Yield to Maturity:** 5.82%
- **Industry Type:**
    - Defensive: 51%
    - Cyclical: 45%
    - Energy: 4%

Rating Distribution



Top 10 Industries Breakdown



Note: Data sourced from Credit Suisse and is as of March 31, 2015

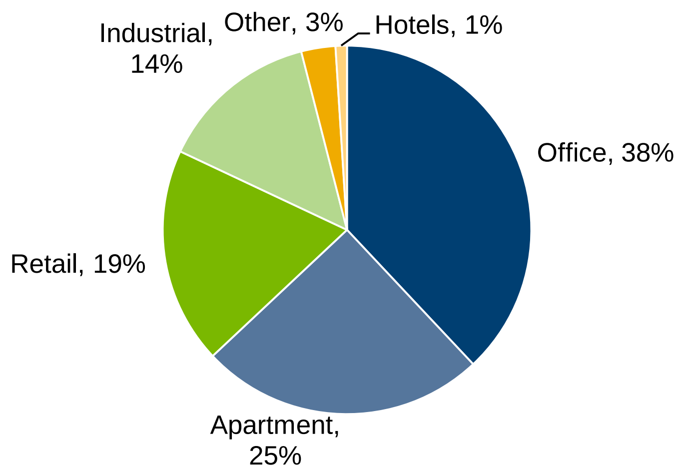
Core Real Estate: NCREIF Open End Diversified Core Equity Index

General Characteristics

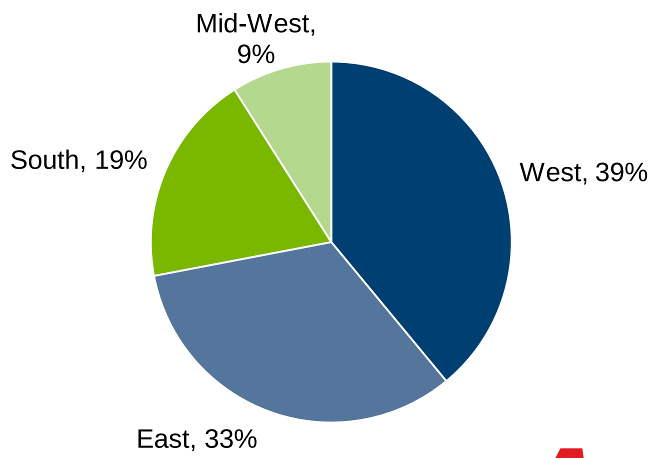
- **Benchmark:** Index representing investment returns of an aggregate of open-end, commingled equity real estate funds with similar Core investment strategies
- **Size:** $133 billion
- **Index Type:** Fund Level
- **Pricing:** Quarterly
- **Number of Active Funds:** 23
- **Average Leverage:** 21.7% (up to 40% allowed)
- **Pros:** Includes leverage and is net of fees
- **Cons:** Less properties represented than the NCREIF Property Index; only represents the Core real estate market

Opinion: AHIC views the NCREIF ODCE Index as an appropriate benchmark for core private real estate

Property Type Diversification



Regional Diversification



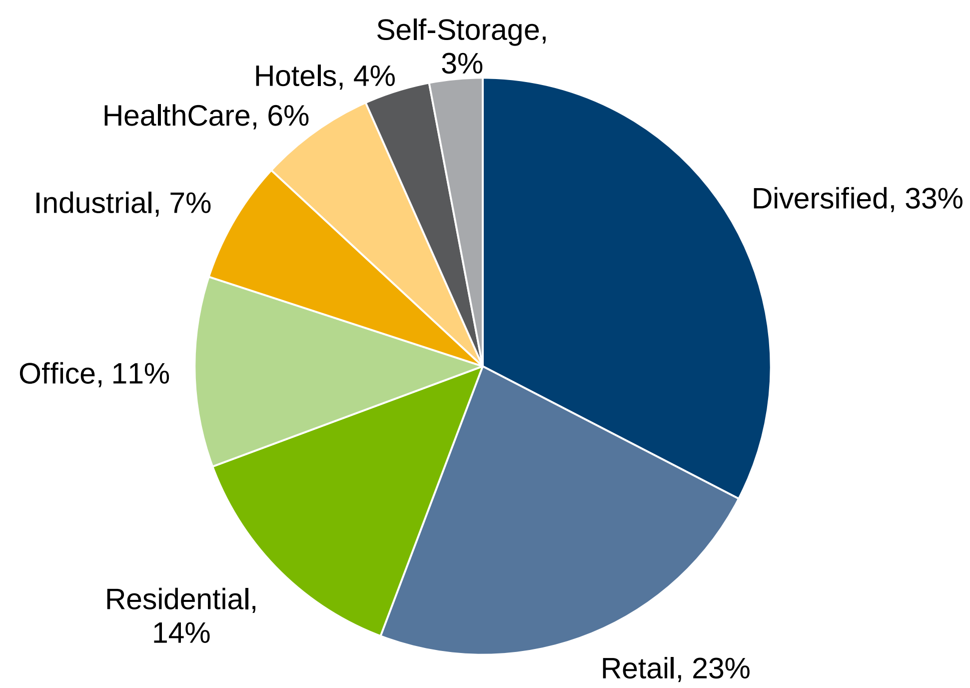
Note: Data sourced from NCREIF and is as of March 31, 2015

Public Real Estate: FTSE EPRA/NAREIT Global Index

General Characteristics

- **Size:** $1,465 billion
- **Number of Constituents:** 470
- **Dividend Yield:** 3.27%
- **Pricing:** Daily/Real Time
- **Diversification:**
  - International: 55%
  - USA: 45%

Industry Breakdown



Note: Data sourced from FTSE and is as of April 30, 2015

HFRX Indices

Methodology

- Constituents of all indices are selected from an eligible pool of more than 6,800 funds that report to the HFR Database. These funds are screened for various reporting characteristics, the level of assets under management, length of track records, unique fund strategy inclusion, and if open to accepting new investments via a fully transparent managed account format
- Funds included in the HFRX monthly indices must have the following criteria:
  - Report monthly returns
  - Report net of all fees returns
  - Report assets in USD
  - Active and accepting new investments
  - Have at least $50 Million in assets under management or have been actively trading for at least 24 months
- Funds are grouped by strategy and indices are formulaically calculated on an asset-weighted basis
  - Cluster and correlation analyses are performed to group managers by true strategy categories and to eliminate outliers. Monte Carlo Simulation helps determine the adequate number of managers to replicate each strategy. Selected managers must provide daily transparency and pass extensive qualitative screening
  - Manager investments are then weighted to maximize representation with their group

Source: HFR

Potential Biases

- Survivorship bias as poor performing funds can discontinue posting returns if they so please
- Selection bias due to not including closed funds, the $50 Million AUM restriction and required two year track record
- Small universe of eligible managers due to restrictive inclusion characteristics
- HFR claims that it does not allow data to be back-filled by hedge funds. Additionally, the effects of the back fill bias are reduced with asset-weighted indices
- Valuation bias is not a concern since side-pockets are excluded from the database
- The investabilty requirement is a better representation of performance accessible to investors in the hedge fund universe than other hedge fund indices without this requirement

HFRX Indices

Index Biases

- Selection bias refers to the lower likelihood that managers with poor performance will choose to report their returns to index providers, and that each of the many hedge fund indices includes a small sample of managers in the universe

- Backfill bias refers to the inclusion of managers' historical performance in an index once they decide to report their returns, which typically doesn't happen until after the track record looks good

- Survivorship bias refers to the fact that hedge funds tend to stop reporting before they close their doors or "blow up" since only managers with ongoing operations continue to report returns. However, conversely, well performing managers may choose to no longer report returns once they stop accepting capital, which is may be indicative of asset growth from strong performance

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