NCRS Tentative Transition to New Strategic Asset Allocation

May 22, 2014

North Carolina Department of State Treasurer
Investment Management

Learn. Invest. Grow. Prosper.

Topics

- Review final changes to Investment Policy Statement
- Review gaps between current asset allocation and new Strategic Asset Allocation
- Review selected market conditions, valuation considerations, etc.
- Review tentative multi-year transition plan

Final Investment Policy Statement Changes

- Effective date of July 1, 2014

- Revised benchmarks
  - Private Equity
  - Non-Core Real Estate
  - Inflation Sensitive
  - Floating benchmark weights to facilitate the transition

- Other IPS Changes
  - Dedicated short-only strategies are not authorized, although transitory aggregate net short exposures at the individual fund level will occur from time-to-time
  - Core Real Estate Separate Accounts. Over time, the Portfolio will endeavor to systematically increase the share invested through separate accounts, although not to the exclusion of compelling coinvestments and club deals; to be compared against a 60% monitoring standard
  - In recommendation memos, statutory compliance will be addressed, including a pro forma analysis of projected cash flows for the recommended investment and existing Portfolios' investments

Changed Portfolio Benchmarks

- **Private Equity**. A custom index, net of all fees and expenses, comprised of the following Burgiss Group Private iQ indices: 50% Buyout, 20% Venture Capital, and 30% Special Situations and Distressed Securities
- **Non-Core Real Estate**. A custom index, net of all fees and expenses, comprised of the following Burgiss Group Private iQ indices: 80% U.S. Non-Core Real Estate (Opportunistic and Value-Added) and 20% Non-U.S. Non-Core Real Estate (Opportunistic and Value-Added)
- **Inflation Sensitive**. A custom index, net of all fees and expenses, comprised of 33.0% Bank of America Merrill Lynch 1-3 Years U.S. Inflation-Linked Treasury Index, 17% Dow Jones-UBS Commodities Index, and 50% of the dynamically weighted combination of the benchmarks of investments classified within Private Natural Resources or Other Real Assets and Diversifiers. For that 50% portion of the Portfolio's benchmark, industry standard benchmarks will be utilized for each specific strategies (e.g., Burgiss Group Private iQ Private Energy Index, NCREIF Timberland Index, etc.), but if such benchmarks do not exist for a specific strategy the benchmark shall be the rate of consumer price inflation plus a premium of 250 basis points.

New Strategic Asset Allocation

	Minimum	Target	Maximum
Rates and Liquidity	24%	29%	42%
Investment Grade Fixed Income	24%	28%	32%
Cash	0%	1%	10%
Growth	37%	58%	71%
Public Equity	37%	42%	47%
Private Equity	0%	6%	8.75%
Non-Core Real Estate	0%	3%	8%
Opportunistic Fixed Income	0%	7%	7.5%
Inflation Sensitive and Diversifiers	4%	11%	16%
Inflation Sensitive	2%	6%	7.5%
Core Real Estate	2%	5%	10%
Multi-Strategy	0%	2%	4%

Comparing New and Current Strategic Asset Allocations

	Current Strategy	New Strategy	Overweight/ (Underweight)
Rates and Liquidity	**36.0%**	**29%**	**+7.0%**
Investment Grade Fixed Income	*36.0%*	*28%*	*+8.0%*
Cash	*0.0%*	*1%*	*-1.0%*
Growth	**55.8%**	**58%**	**-2.2%**
Public Equity	*40.5%*	*42%*	*-1.5%*
Private Equity	*6.5%*	*6%*	*+0.5%*
Non-Core Real Estate	*4.3%*	*3%*	*+1.3%*
Opportunistic Fixed Income	*4.5%*	*7%*	*-3.5%*
Inflation Sensitive and Diversifiers	**8.2%**	**11%**	**-2.8%**
Inflation Sensitive	*4.5%*	*6%*	*-1.5%*
Core Real Estate	*3.7%*	*5%*	*-1.3%*
Multi-Strategy	**0.0%**	**2%**	**-2%**

Comparing Actual to New Strategic Asset Allocation

	5/13/14 Actual	New Strategy	Overweight/ (Underweight)
Rates and Liquidity	**31.9%**	**29%**	**2.9%**
Investment Grade Fixed Income	*31.2%*	*28%*	*3.2%*
Cash	*0.7%*	*1%*	*-0.3%*
Growth	**59.3%**	**58%**	**1.3%**
Public Equity	*44.9%*	*42%*	*2.9%*
Private Equity	*4.3%*	*6%*	*-1.7%*
Non-Core Real Estate	*4.8%*	*3%*	*1.8%*
Opportunistic Fixed Income	*5.3%*	*7%*	*-1.7%*
Inflation Sensitive and Diversifiers	**7.0%**	**11%**	**-4.0%**
Inflation Sensitive	*4.0%*	*6%*	*-2.0%*
Core Real Estate	*3.0%*	*5%*	*-2.0%*
Multi-Strategy	**1.9%**	**2%**	**-0.1%**

Pro Forma Sources/Uses Analysis

Sources ($MM)	**Current Gap to Policy**
Public Equity	*$2,400*
Investment Grade Fixed Income	*$3,000*
Non Core Real Estate	*$1,500*
Subtotal	**$6,900**
Uses ($MM)	**Current Gap to Policy**
Private Equity	*($1,500)*
Opportunistic Fixed Income	*($1,500)*
Core Real Estate	*($1,750)*
Inflation Sensitive	*($1,750)*
Cash	*($400)*
Subtotal	**($6,900)**
Memo Items: Other Transition/Cash Activities	
Public Equity Rebalance: Long to Long/Short	*($2,700)*
Multi-Strategy Rebalance	*($1,000)*
Net Benefit Payments (Annualized)	*($2,500)*

Multi-Year Capital Allocation Exercise

- Bottom-up: Review of individual asset classes
  - Market environment, including valuation, intermediate-term drivers of risks and returns, and identification of attractive/unattractive subsectors
  - Current pipeline vs. potential capacity, timelines, resources, etc. to effect prudent and efficient investments
  - Types of investment vehicles available to achieve/reduce exposure

- Top-Down: Review across asset classes
  - General economic and monetary policy outlook
  - Assess relative attractiveness/unattractiveness of overweights/underweights over intermediate-term
  - Assess potential trade-offs **across** broad categories e.g., Rates and Liquidity vs. Inflation Sensitive and Diversifiers vs. Multi-Strategy
  - Assess potential trade-offs **within** broad categories e.g., Public Equity vs. Private Equity vs. Non-Core Real Estate vs. Opportunistic Fixed Income

- Investment Committee Process
  - Discussed "Street" and manager research on market environment
  - Director presentations on individual asset classes
  - Discussion of total fund positioning and need for capacity and balancing various risks and opportunities relative to new Strategic Asset Allocation

Private Equity: Market Environment

- Robust credit supply for U.S. buyouts
  - 2013 sponsored loan volume exceeded 2007 volumes with covenant-lite terms 3 times more prevalent
  - Record 2013 high yield bond issuance with spreads to Treasuries about 200 basis points below long-term averages

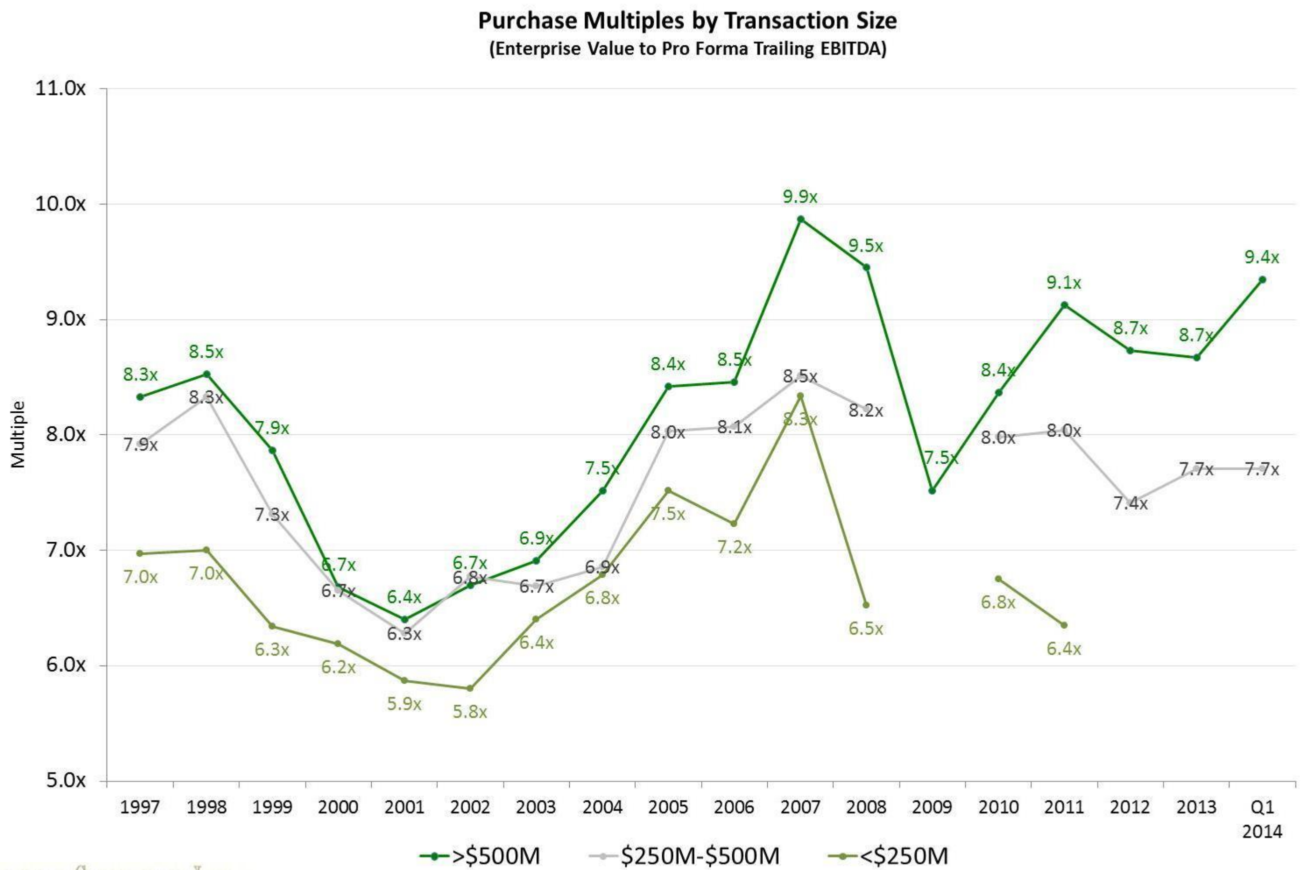
- Strong equity capital flows targeting U.S. buyouts
  - IPO market and M&A activity is robust
  - Strong 2013 general partner capital raise leading to pre-crisis dry powder levels
  - Mega buyout funds account for about 50% of 2013 fund raise

- U.S. buyout valuations have risen significantly
  - Seasoned portfolio company values have rebounded strongly in last year
  - Purchase price multiples close to pre-crisis levels
  - Equity contributions are lower, but marginally above pre-crisis levels
  - Gap to public market valuations is closing

- U.S. venture and European capital flows and valuations have improved modestly

Debt Availability + Friendly Terms + More Reliance on Financial Engineering via Greater Leverage Levels
= Higher Entry Valuations & Lower Long-Term Returns for new dollars

Purchase Price Multiples for deals over $500 million spiked to 9.4x in Q1 2014, trending toward the levels seen in 2007 and 2008, when credit markets were similarly open. Transaction values for deals over $500 million and those from $250 to $500 million have remained elevated relative to long-term averages of 8.2x and 7.6x (between 1997 and Q1 2014), respectively—suggesting a competitive market.

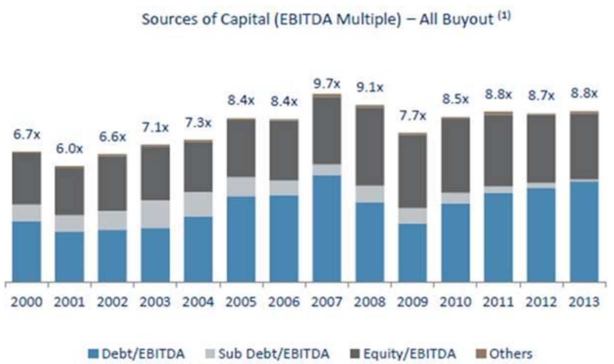


Source: S&P Capital IQ LCD’s Leveraged Buyout Review

Data reported as “N/A” in the Leveraged Buyout Review are omitted from the line graph.

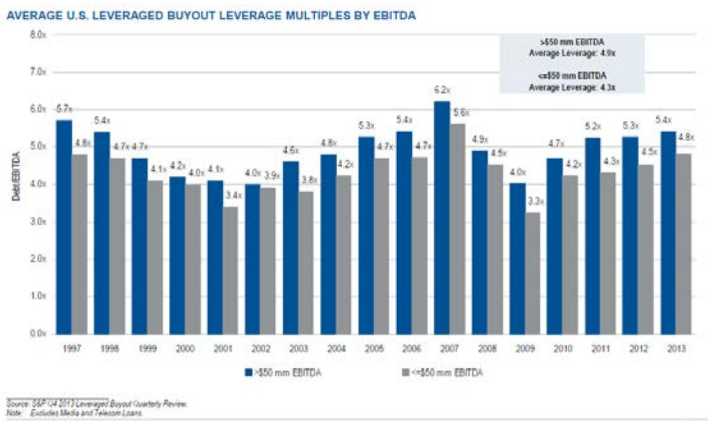
Source: SIS

Private Equity Valuations – U.S.



(1)Source: S&P Leveraged Buyout Review, 4Q 2013. TEV excl. fees & expenses

U.S. Lending Standards



Debt availability – Recaps / New Deals
Terms - Covenant Light

2013 was a banner year for the leveraged loan market, with both new-issue volume and the amount of loans outstanding ended the year at all-time highs

– Explosive refinancing and recapitalization activity propelled primary volume to $605bn from $466bn in 2012 and $535bn in 2007

Valuations to Public Markets Narrowing

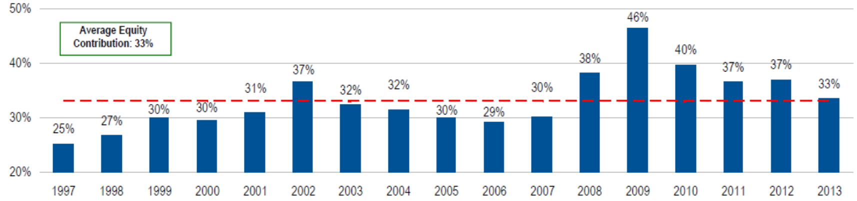
Differentials between PE multiples and public market valuations have narrowed

– S&P 500 EV/EBITDA of 10.3x as of December 31, 2013

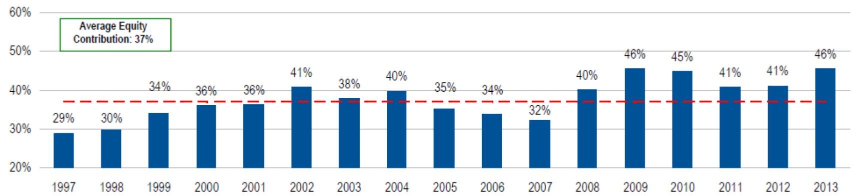
Private Equity: US vs. Europe

U.S. LBO Equity Contributions

AVERAGE EQUITY CONTRIBUTION OF U.S. LEVERAGED BUYOUTS IN COMPANIES WITH >$50 MM OF EBITDA



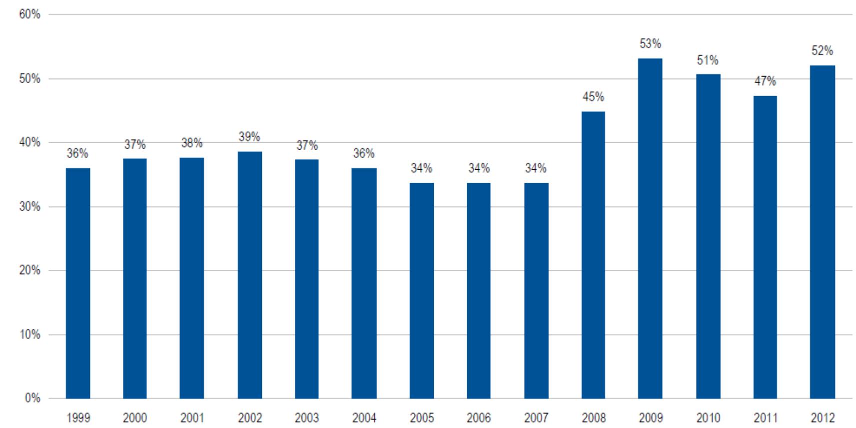
AVERAGE EQUITY CONTRIBUTION OF U.S. LEVERAGED BUYOUTS IN COMPANIES WITH ≤$50 MM OF EBITDA



Source: S&P Q4 2013 Leveraged Buyout Quarterly Review.

European Buyout Transaction Fundamentals

EUROPEAN AVG EQUITY CONTRIBUTION



Source: S&P LCD European Leveraged Buyout review Q4 2012.

Private Equity: Attractive Subsectors

- **Special Situations**
  - Secondaries
    - Changing financial regulations due to Volcker Rule, Basel III, and Solvency II
    - Estimates $100 B supply over 3 years with $75 B of capital available
  - Distressed for Control
    - Global commercial banks retrenching post global financial crisis in conjunction with increasing BASEL III capital requirements means there may be opportunities in Europe
    - Opportunities likely slow to materialize, but more attractive downside protection
  - Co-Investment
    - Reduced fees and carry
    - Less blind-pool risk and continually seeing deal flow from existing managers
- **Venture Capital and Growth Equity**
  - Do not incorporate leverage
  - Rewarded for growth

Private Equity: Less Attractive Subsectors

- **Buyout**
  - Concerns related to debt availability / entry valuations / competition
    Mitigant: Seek funds that have the following:
    - are not reliant on financial engineering
    - demonstrate operational expertise
    - deep industry experience as opposed to generalists
    - have experience in various parts of the capital structure
    - Middle-market focus, rather than large buyout
    - Europe - more attractive valuations should be explored

- **Emerging Markets**
  - Slower growth than long-term averages with policy challenges related to fiscal deficits and trade deficits
  - Vulnerable to higher U.S. interest rate environment

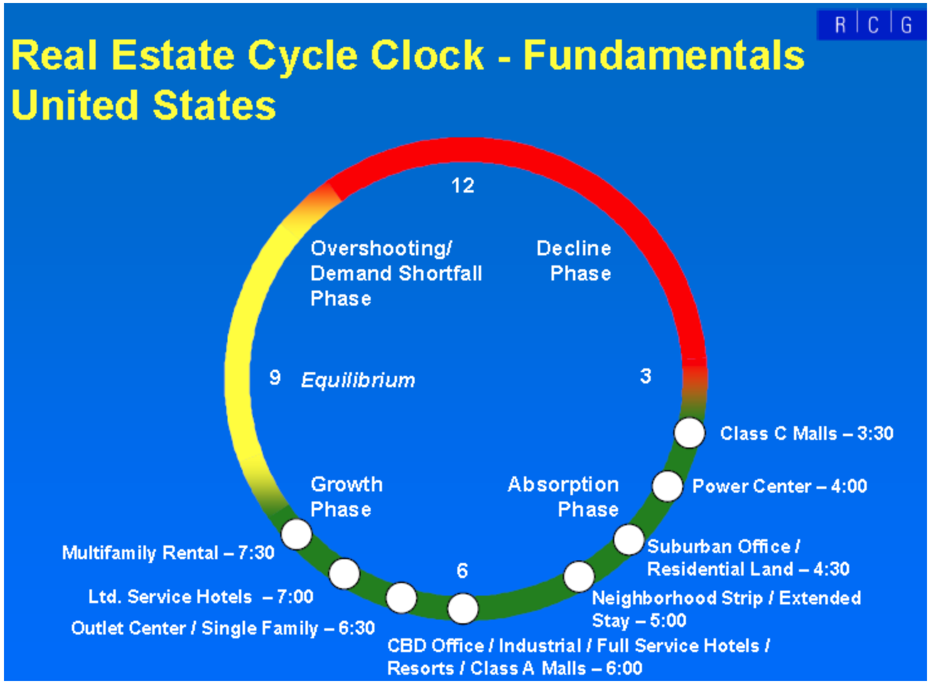
Real Estate: Market Environment

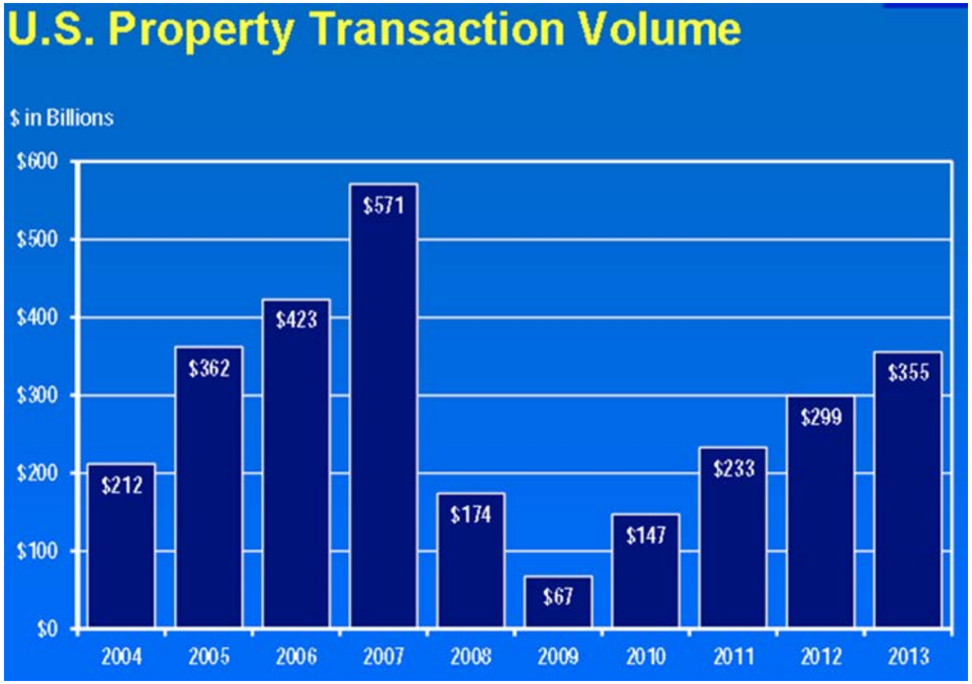
- Real Estate is in the middle stages of a fundamentally driven recovery
  - Steady, respectable economic growth in major metro markets and select other markets
  - Accelerating demand with minimal supply will continue to improve fundamentals (increase in NOI & decrease in vacancy) which will eventually lead to new supply
  - Transaction volumes have increased substantially since the downturn and are back to 2005 levels

- Strong equity and improving debt capital flows
  - Foreign private equity capital have been targeting prime core assets and markets and domestic private equity capital flows are increasing
  - New domestic Commercial Real Estate debt originations approximate 2005 levels
  - In 2014 and 2015 capital flows are expected to be from diverse sources and be more comfortable investing outside prime core assets

- Valuations up significantly, but not across all property types or strategy (e.g., core vs. non-core)
  - On an absolute basis Real Estate Cap Rates are somewhat low by historical standards, but relative to 10 Year Treasury yields still look attractive
  - Valuations of CBD Office and Multi-Family have exceeded pre-recession levels, opportunities exist in Industrial and Retail
  - Industry consensus: Cap rates will absorb 80% of the first 100BP increase and 40-60% of the increase for the next 200-300 BP increase in interest rates

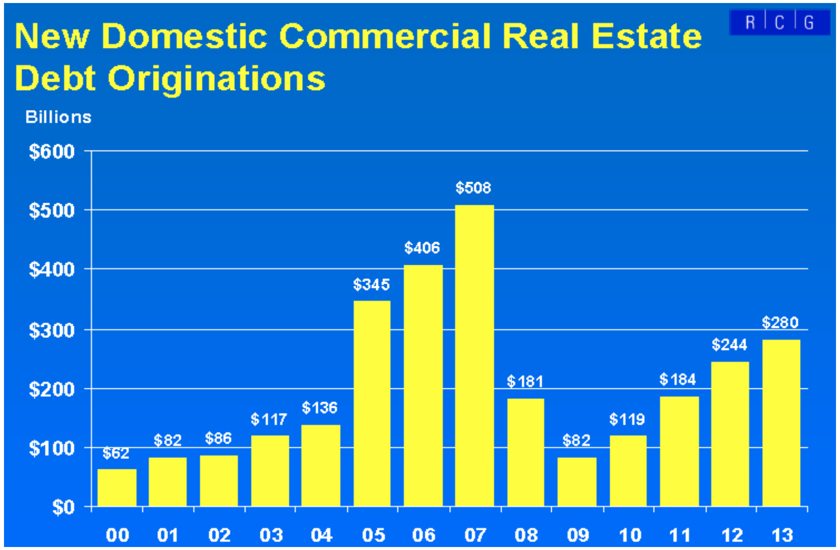
Real Estate: Market Environment

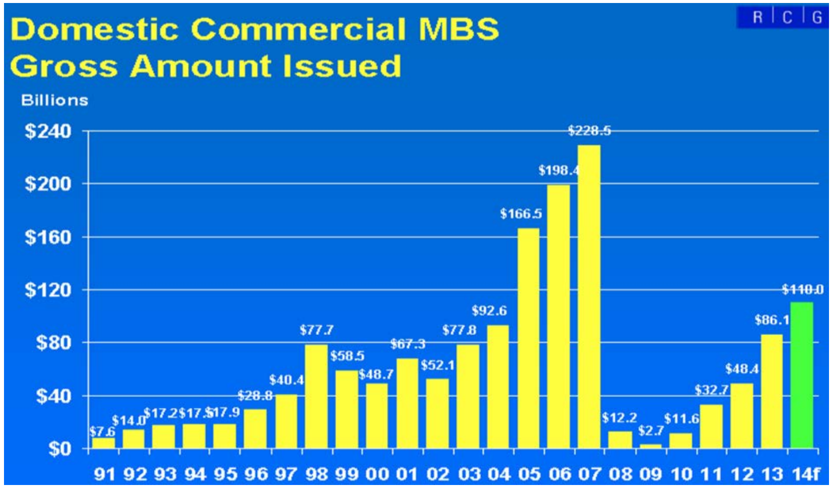




Source: Moody's/Real Capital analytics, Rosen Consulting Group

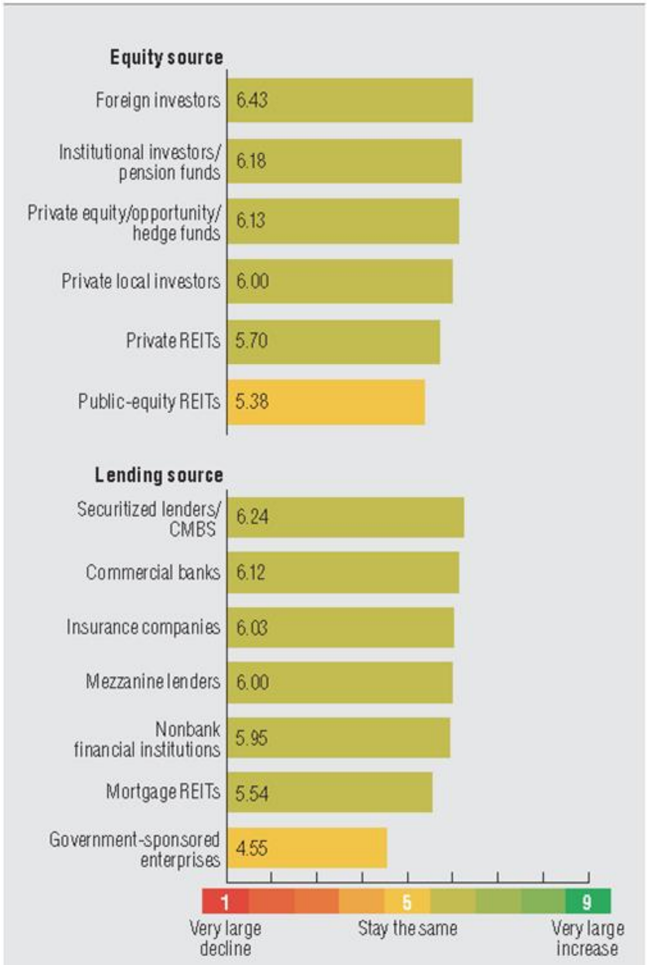
Real Estate: Market Environment





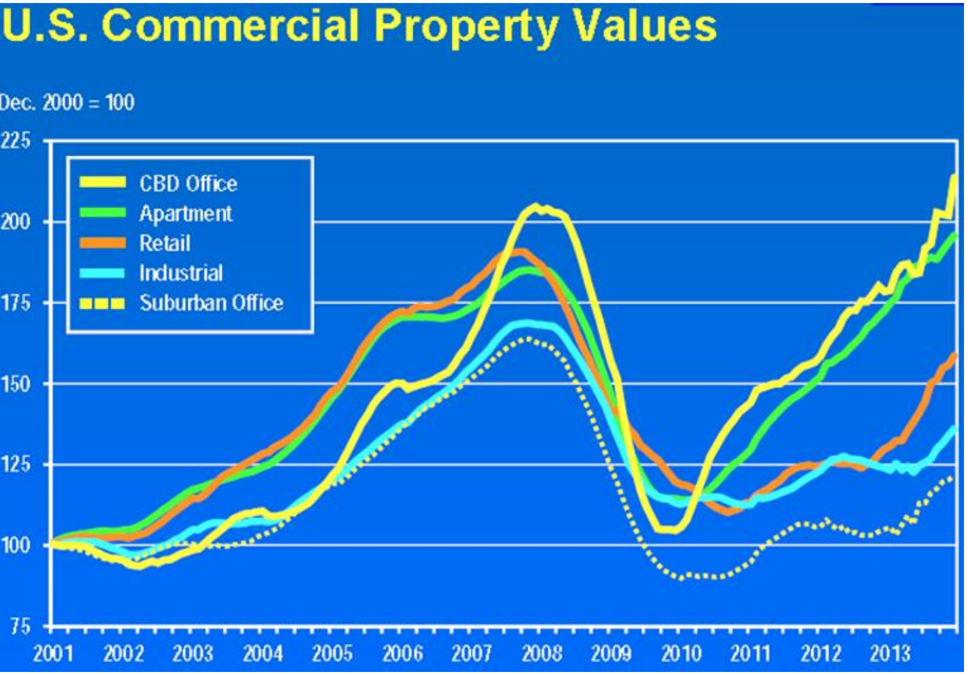
Source: Mortgage Bankers Association, FDIC, Eastdil, Rosen Consulting Group

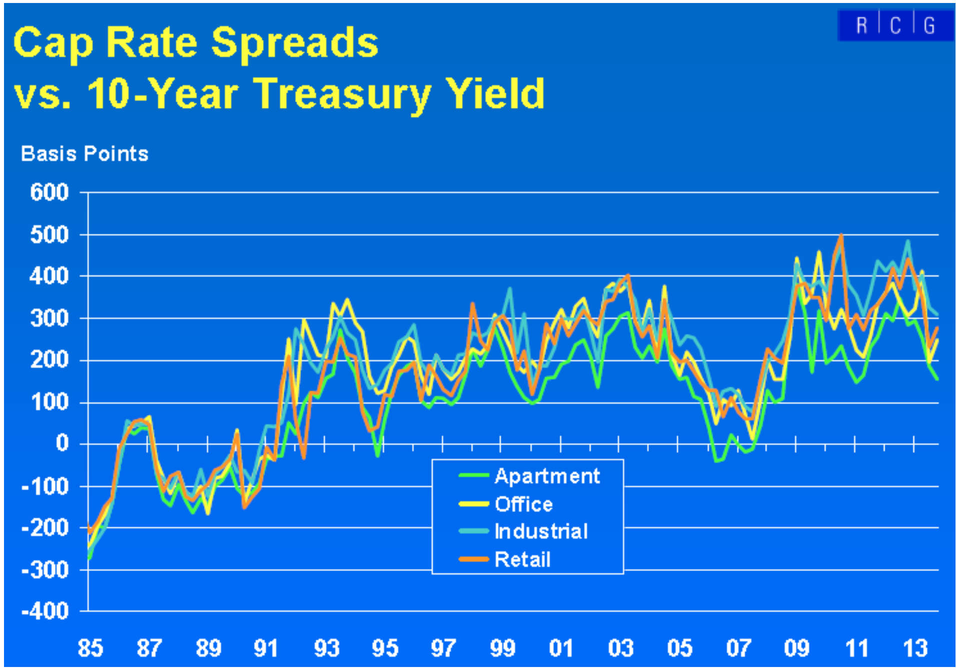
Change in Availability of Capital for Real Estate in 2014



Source: *Emerging Trends in Real Estate 2014* survey.
Note: Based on U.S. respondents only.

Real Estate: Market Environment





Source: ACLI, Real Capital analytics, Rosen Consulting Group

Real Estate: Attractive Subsectors

- **Industrial**
  - Acquisition and development, non-core separate accounts
  - Need to act fast to get ahead of the demand
  - Changes in needs for distribution driven by technology and warehousing is becoming more localized, closer to the consumer

- **European Debt & Equity**
  - Complete existing mandate begun in 2013 to exploit distressed owners and lenders
  - Europe behind US in terms of recovery providing attractive opportunities

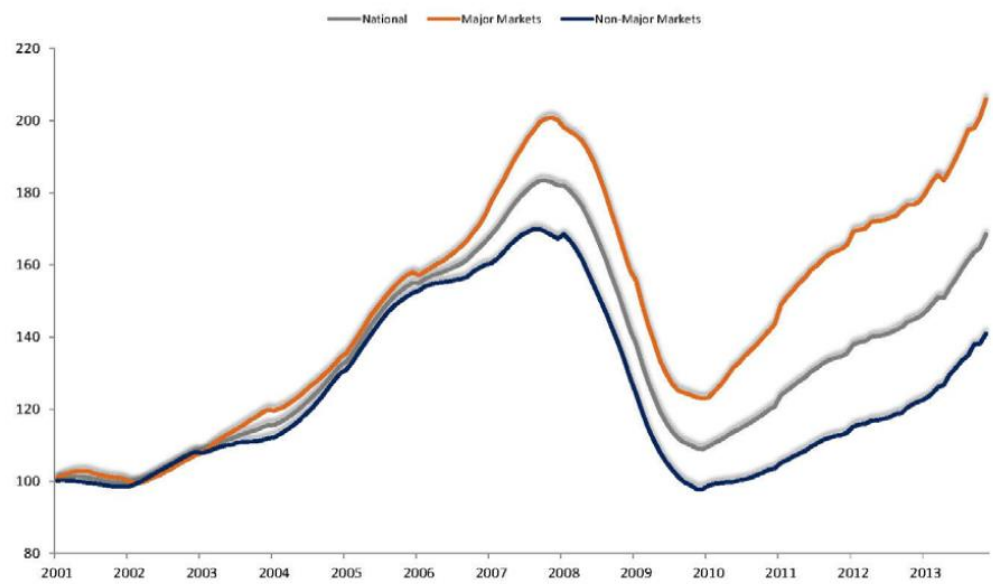
- **Co-Investments and JV's**
  - Reduced fees
  - Continue to see attractive deal flow from existing managers

- **Income Strategies**
  - Separate accounts to pursue demographic trends such as Medical Office and Senior Housing
  - REIT strategies

- **Special Situations**

Real Estate: Less Attractive Subsectors

"Non-Major Markets" Are Poised for Further Value Recovery…

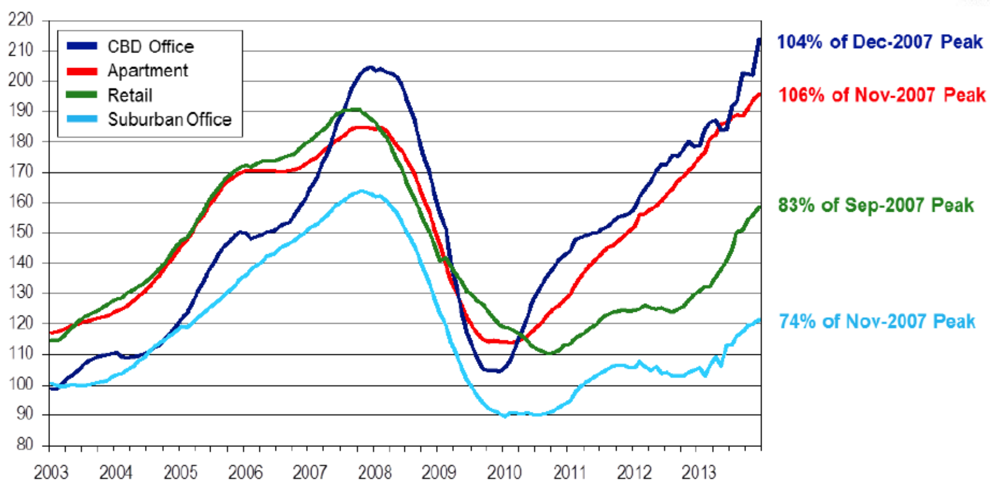


Prime Core in Major Markets

Multi-family - Acquisitions

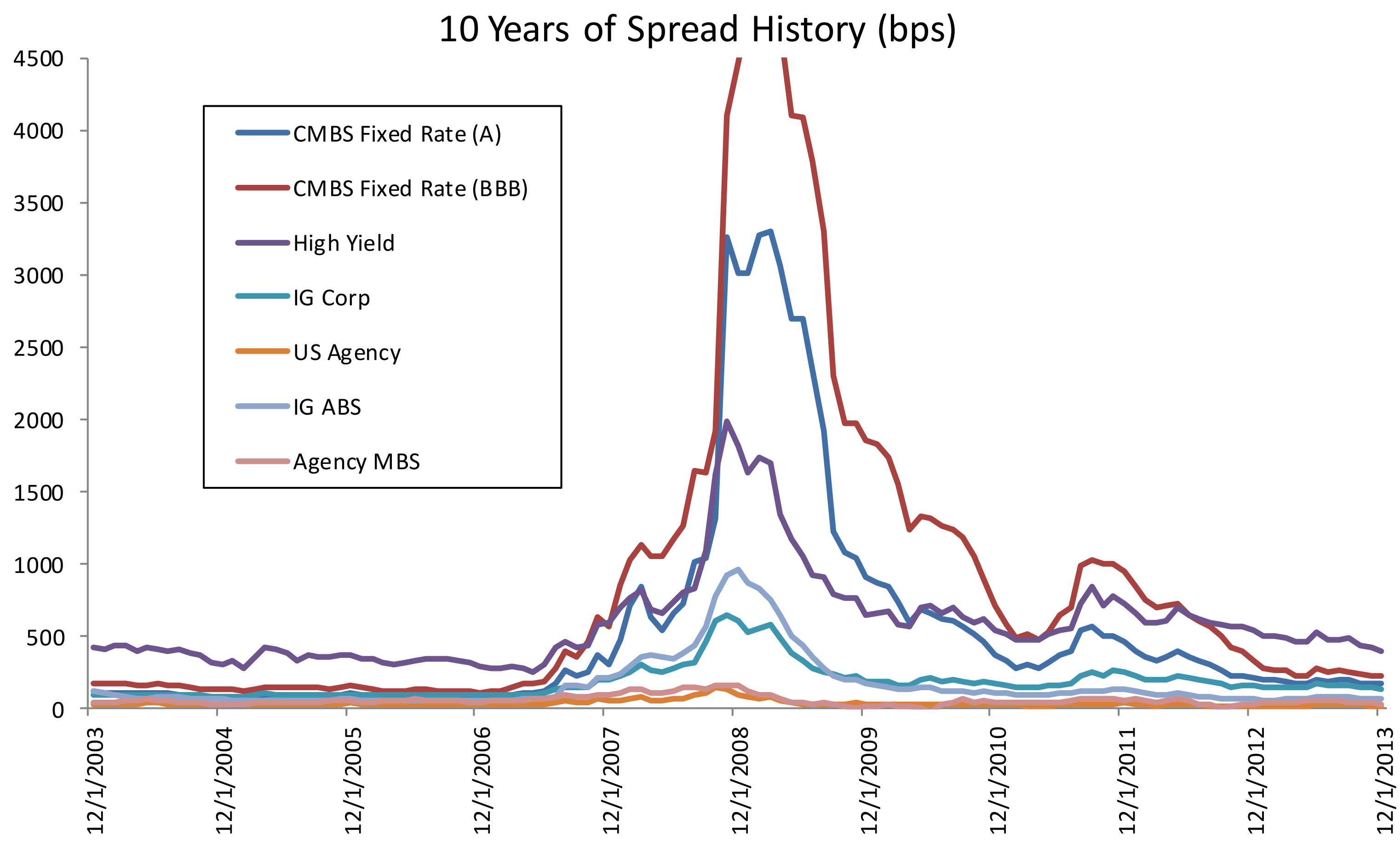
High Quality Office and Apartments Have Recaptured Previous Peak Pricing…

December 2000 = 100



Source: Moody's/ RCA

Opportunistic Fixed Income Market Environment



Opportunistic Fixed Income Market View

- Liquid high yield credit is expensive for the risk, implying long/short, senior secured, and idiosyncratic strategies are appealing on a risk-adjusted basis for an "All-Weather" portfolio
- Credit demand from sound middle market borrowers in the face of limited supply from banks and specialty finance companies (e.g., CIT-types) means better pricing/terms

Attractive

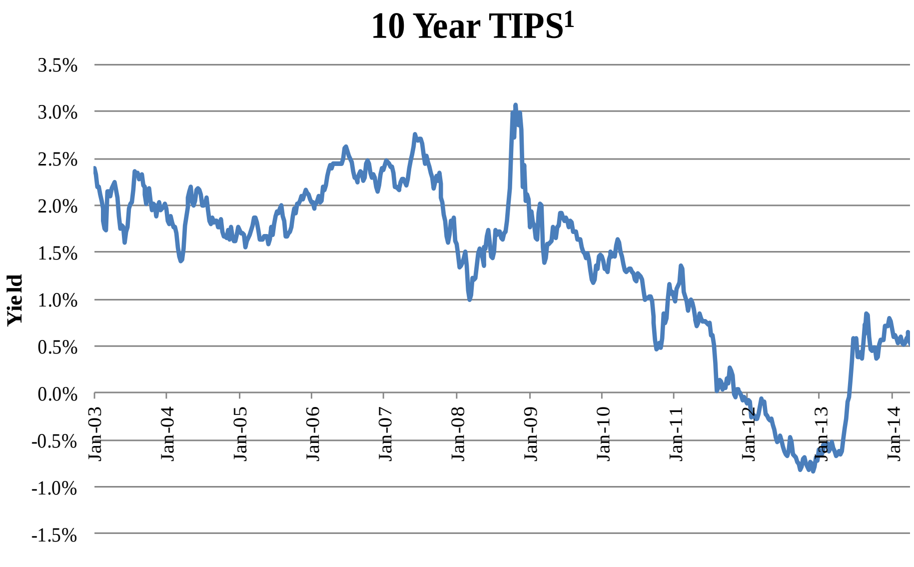
- Direct lending
  - U.S. & European Middle Markets
- European Distressed
  - NPLs
  - Opportunistic
- Whole loans
  - Residential
  - Commercial & Industrial
- Specialty financing
- Structured credit and select ABS, including residual, complex CDOs

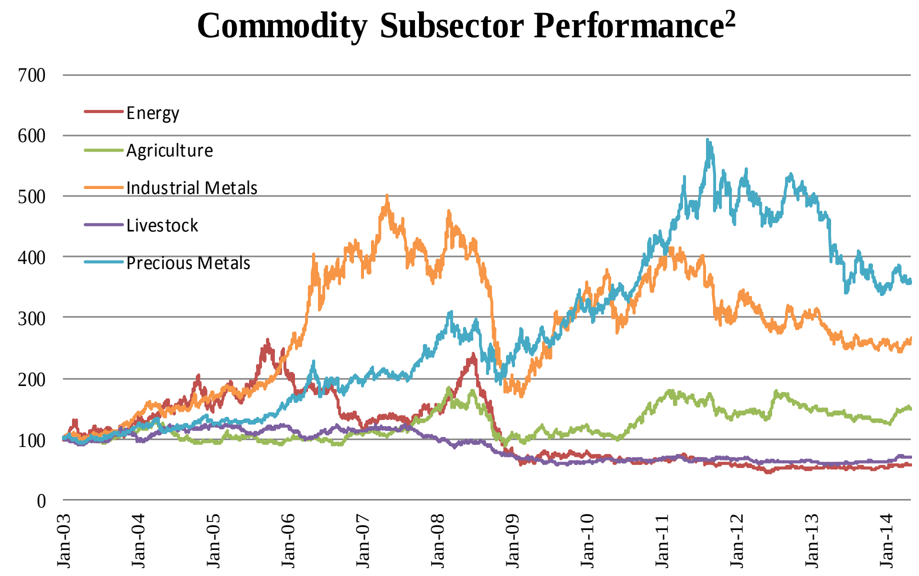
Less Attractive

- Global long only high yield bonds and leveraged loans
- U.S. & EU CLOs
- Sovereign Emerging Market debt

Inflation Sensitive Market Environment

- Direct liquid inflation hedging strategies are unattractive:
  - TIPS are expensive
  - Long-only commodities have heightened volatility with uncertain supply/demand fundamentals
- Also, private energy strategies have received large capital flows for several years





1. St. Louis Fed, Weekly data, Not Seasonally Adjusted
2. DJUBS Commodities TR Sub-Sector Indices, Daily data

Inflation Sensitive Market View

- Better valued inflation protection may be accessible via hard asset-related investments:
  - A majority of consumer price inflation is derived from housing and medical
  - Debt that is floating rate and/or has potential credit enhancement correlated with inflation-drivers, escalators, or contractual payments

Attractive

- Whole loans
  - Residential
  - Commercial
- Specialty financing
- ABS, especially floating-rate RMBS/CMBS
- Transportation
  - Shipping
  - Aircraft
- Drug Royalty
- Metals & Mining
- Long/Short Commodities

Less Attractive

- U.S. TIPS
- Long Only Commodities
- Power
- Coal
- Natural Gas (in North America)
- Renewable Energy

Top-Down Components of Capital Allocation

- Economic and Macro Views
  - Modest economic growth brings improved U.S. labor and housing markets and supports late-cycle profit growth albeit with narrowing corporate margins
  - Inflationary pressures remain muted into 2015 and gradual Federal Reserve rate increases occur in 2015, but yield curve steepening will lead Fed policy
  - Public equity valuations span neutral to modestly stretched, with U.S. markets subject to more volatility due to higher valuations and Fed policy changes

- Recommended trade-offs **across** broad categories
  - Maintaining a 1.2% overweight to Growth is acceptable
  - Reducing a 3.2% overweight to Rates and Liquidity should be a priority along with reducing the 4.0% underweight to Inflation Sensitive and Diversifiers

- Recommended trade-offs **within** broad categories
  - Prioritize reducing underweight to Opportunistic Fixed Income vs. reducing overweight to Non-Core Real Estate vs. reducing underweight to Private Equity
  - Prioritize reducing underweight to Inflation Sensitive vs. reducing underweight to Core Real Estate

Pro Forma Projected Impact of Tentative Transition Plan

Sources ($MM)	**Current Gap**	**Projected ~2016 Gap**
Public Equity	$2,400	$500 - $1,300
Investment Grade Fixed Income	$3,000	($1,400) - $0
Non-Core Real Estate	$1,500	$1,500 - $1,700
Subtotal	**$6,900**	**$600 - $2,600**
Uses ($MM)	**Current Gap**	**Projected ~2016 Gap**
Private Equity	($1,500)	($1,500) - ($1,000)
Opportunistic Fixed Income	($1,500)	($200) - $200
Core Real Estate	($1,750)	($1,000) - ($600)
Inflation Sensitive	($1,750)	($400) - $800
Cash	($400)	$0
Subtotal	**($6,900)**	**($2,600) – ($600)**
Memo Items	**Current Gap**	**Projected ~2016 Gap**
Public Equity Rebalance: Long to Long/Short	($2,700)	($800) - $0
Multi-Strategy Rebalance	($1,000)	$0 - $500

Pro Forma Projected Tentative Commitments

Sources ($MM)	**Current Gap**	**Annualized Commitments**
Public Equity	$2,400	$0
Investment Grade Fixed Income	$3,000	$0
Non Core Real Estate	$1,500	$300 - $500
Subtotal	$6,900	$300 - $500
Uses ($MM)	**Current Gap**	**Annualized Commitments**
Private Equity	($1,500)	$1,200 - $1,600
Opportunistic Fixed Income	($1,500)	$500 - $1,400
Core Real Estate	($1,750)	$700 - $1,000
Inflation Sensitive	($1,750)	$1,000 - $2,500
Cash	($400)	$0 - $400
Subtotal	($6,900)	$3,400 - $7,000
Memo Items	**Current Gap**	**Annualized Commitments**
Public Equity Rebalance: Long to Long/Short	($2,700)	$500 - $1,500
Multi-Strategy Rebalance	($1,000)	$500 - $1,000

Context and Qualitative Considerations for Transition Planning

- Timing and amounts of “Pro Forma” commitments/investments are tentative, subject to change, and express directional intent over the next 1 to 3 years (and possibly longer)
    - Commitment to move gradually and thoughtfully over time
    - A changing market environment will impact allocations/transition tactics/timing
    - Staffing/resourcing remains a challenge
- Fees, structures, and liquidity remain important to long-term success
    - We estimate annual fees may increase about 10 basis points due to the allocation away from internal fixed income, but see potential value-add from expanded strategies
    - Commitment to continue to proactively negotiate existing/new relationships
    - Commitment to move portions of the investment program to traditional separate accounts and to utilize customized vehicles with more transparency, investor protections, and alignment
    - Expect to implement material portions of the new investments in publicly-traded securities and shorter-duration private vehicles

Appendix: Additional Exhibits

Context for 2013-14 Asset Liability Study

- Baseline focus on 10-, 20-, and 30-year economic and financial environment
  - Initially very low interest rates moderately rising over intermediate term
  - Moderately rising inflation
  - Modest public equity market returns by long-term historical standards for intermediate term
  - Some benefits to diversification, but all investments approaches are impacted by low return environment
- Risk Scenarios: Fragility due to continued high reliance on global policy makers in face of unprecedented interventions, cyclical headwinds, and structural imbalances
  - U.S. economy has less momentum than expected; emerging market BOP issues and delayed European normalization; systemic shock
  - Inflation rises more than expected; global growth surprises on upside; supply shocks

“Role in the Portfolio” Perspective

- Rates and Liquidity
  - Treasury bonds, mortgage agency bonds, and investment grade credit
  - Cash/short duration
- Growth
  - Global public equity (long-only and hedged equity)
  - Private equity
  - Public/Private non investment grade credit (distressed, mezzanine, and long/short)
  - Non-core real estate
- Inflation Sensitive and Diversifiers
  - Short duration TIPS and/or global ILB
  - Core real estate (public and private)
  - Public/Private natural resources (commodities, energy, timberland, agriculture, etc.)
- Multi-Strategy

Fund Benchmarks

- Long-Term Policy Benchmark has roughly equivalent projected volatility as the Strategic Asset Allocation
  - 57% MSCI All Country World Investable Market Index, in dollar terms, net of withholding taxes on non-resident institutional investors
  - 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

- Implementation Benchmark is a weighted performance of the Portfolios' individual benchmarks using the Target Allocations

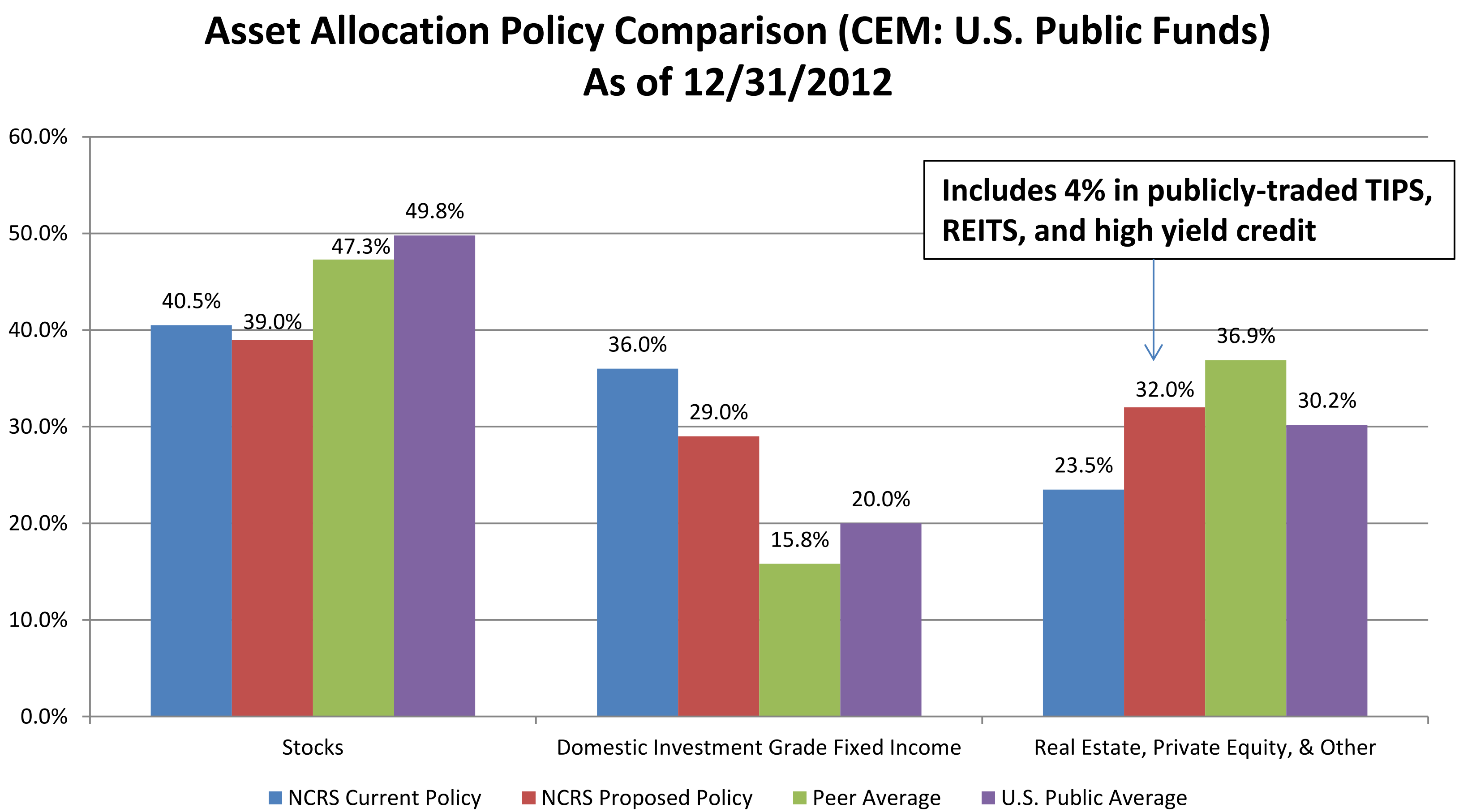
Projections with New Strategic Asset Allocation

Projected Ranges of Annualized Compound Passive Investment Returns

Horizon	5^{th} Percentile	25^{th} Percentile	Expected (Average)	75^{th} Percentile	95^{th} Percentile
10 Years	0.0%	3.6%	6.1%	8.3%	11.9%
20 Years	2.6%	5.4%	7.3%	9.1%	11.7%
30 Years	3.8%	6.2%	7.8%	9.3%	11.8%

Source: IMD and Buck Consulting

Peer Comparisons



<u>CEM Peer Group for NCRS:</u>

- 16 U.S. public sponsors
- Fund sizes range from $38 billion to $249 billion
- Median size of $71 billion

Statutory Compliance as of May 13, 2014

Statutory Citation	Minimum or Maximum	Current %	Compliant?
NCGS §§ 147-69.1(c) and 147-69.2(b)(1)-(6b) for fixed income and cash	At least 20%	31.9%	Y
NCGS § 147-69.2(b)(8) for public equity	No more than 65%	44.9%	Y
NCGS § 147-69.2(b)(8)(b.) for public equity limited liability investment vehicles	No more than 8.5%	0.2%	Y
NCGS § 147-69.2(b)(6c) for other fixed income	No more than 7.5%	5.3%	Y
NCGS § 147-69.2(b)(7) for real estate	No more than 10%	7.7%	Y
NCGS § 147-69.2(b)(9) for private equity and other alternatives	No more than 8.75%	6.2%	Y
NCGS § 147-69.2(b)(9a) for inflation protection	No more than 7.5%	4.0%	Y
NCGS § 147-69.2(b)(10a) for the 35% aggregate portfolio limit	The sum of rows 3 to 7; No more than 35%	23.3%	Y

Thank You!

Together we can build and maintain a fiscally strong and prosperous North Carolina.

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