

NORTH CAROLINA  
DEPARTMENT OF STATE TREASURER



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INVESTMENT MANAGEMENT DIVISION

# Capital Market Assumptions Update

February 15, 2018



# NCRS Strategic Asset Allocation Background

NCRS strategic asset allocation was last changed in **July 2014**

- Asset allocation is the most important investment decision impacting the long-term success and risk of the NCRS
- The strategic asset allocation is the core of the NCRS Investment Policy Statement, reflecting the conclusions of the asset liability study
- The current strategic asset allocation was developed through an asset liability study with Buck Consulting conducted in late 2013 and early 2014

The current Strategic Asset Allocation was confirmed in **July 2016**

- An updated asset liability study with Buck Consulting revealed that no changes to the strategic asset allocation were necessary at that time

An asset liability study is essential to setting investment policy

- An asset liability study sets investment objectives and analyzes risks and trade-offs that reflect the mission of the NCRS
- It incorporates a holistic view on the “role in the portfolio” of asset classes in light of the economic and financial market outlook and NCRS circumstances
- It facilitates stress testing and scenario testing



# “Role in the Portfolio” Perspective: Investment Categories

## Return-Seeking: Growth

- Public equity (long-only and hedged)
- Private equity
- Non-core real estate
- Opportunistic fixed income (non-investment grade)

## Risk-Reducing: Rates and Liquidity

- IG fixed income (Treasuries, agency mortgages, and investment-grade credit)
- Cash and short duration

## Inflation Sensitive and Diversifiers

- Inflation (inflation-linked bonds, public and private natural resources, and real assets)
- Core real estate (public and private)

## Multi-Strategy

# Asset Liability Management Process Overview

## Inputs

1. Goals and Objectives
  - Return Requirements
  - Risk Tolerances
2. Constraints
  - Time Horizon
  - Liquidity
  - Asset Class
  - Other
3. Capital Market Assumptions
4. Liability Characteristics
5. Potential Asset Allocation Alternatives

## Simulation Model

## Outputs

1. Forecasted Asset Values
2. Forecasted Liability Values
3. Forecasted Funded Ratio
4. Forecasted Required Contribution Rates

Strategic Asset Allocation: Identify the Long Term Target Asset Allocation that best balances return and risk objectives subject to all constraints.

## 1.) Goals and Objectives of the ALM Process

1

*Reasonably* aim to earn the actuarially assumed **rate of investment return** with a desired level of likelihood

2

Maintain levels of **diversification** suitable for a system of NCRS' size, given the investment opportunity set available

3

Develop and employ suitable **risk management** measures to limit exposure to market downturns

4

Provide the necessary **liquidity** to meet benefit obligations as they come due

## 2.) Constraints

- **Time Horizon:** Long Term of 10- and 30-year horizons
- **Liquidity Needs:** Liquid assets sufficient to cover periodic pension payments
- **Regulatory Considerations:** Statutory asset allocation bounds

Statutory Citation	Asset Class	Constraint
N.C.G.S. § 147-69.1(c) & 147-69.2(b)(1)-(6b)	Fixed Income	Minimum of 20%
N.C.G.S. § 147-69.2(b)(8)	Public Equity	Maximum of 65%
N.C.G.S. § 147-69.2(b)(8)(b.)	Hedged Equity	Maximum of 8.5%
N.C.G.S. § 147-69.2(b)(6c)	Opportunistic Fixed Income	Maximum of 7.5%
N.C.G.S. § 147-69.2(b)(7)	Total Real Estate	Maximum of 10%
N.C.G.S. § 147-69.2(b)(9)	Private Equity + Multi Strategy	Maximum of 8.75%
N.C.G.S. § 147-69.2(b)(9a)	Inflation Sensitive	Maximum of 7.5%
N.C.G.S. § 147-69.2(b)(10a)	Aggregate Alternatives	Maximum of 35%



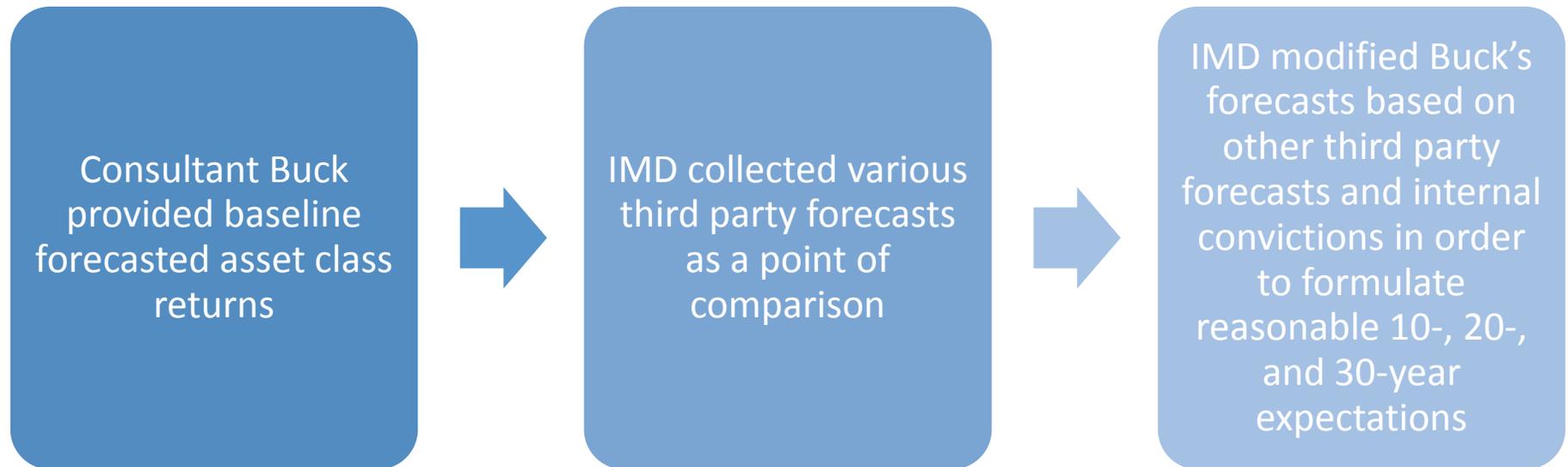
## 3.) Purpose of Capital Market Assumptions

### 1. Help to set expectations about future market conditions:

- Returns
- Risk
- Correlation among asset classes
- Interest rates
- Inflation

### 2. Inform decisions around asset allocation

# 2016 ALM Capital Market Assumptions Process

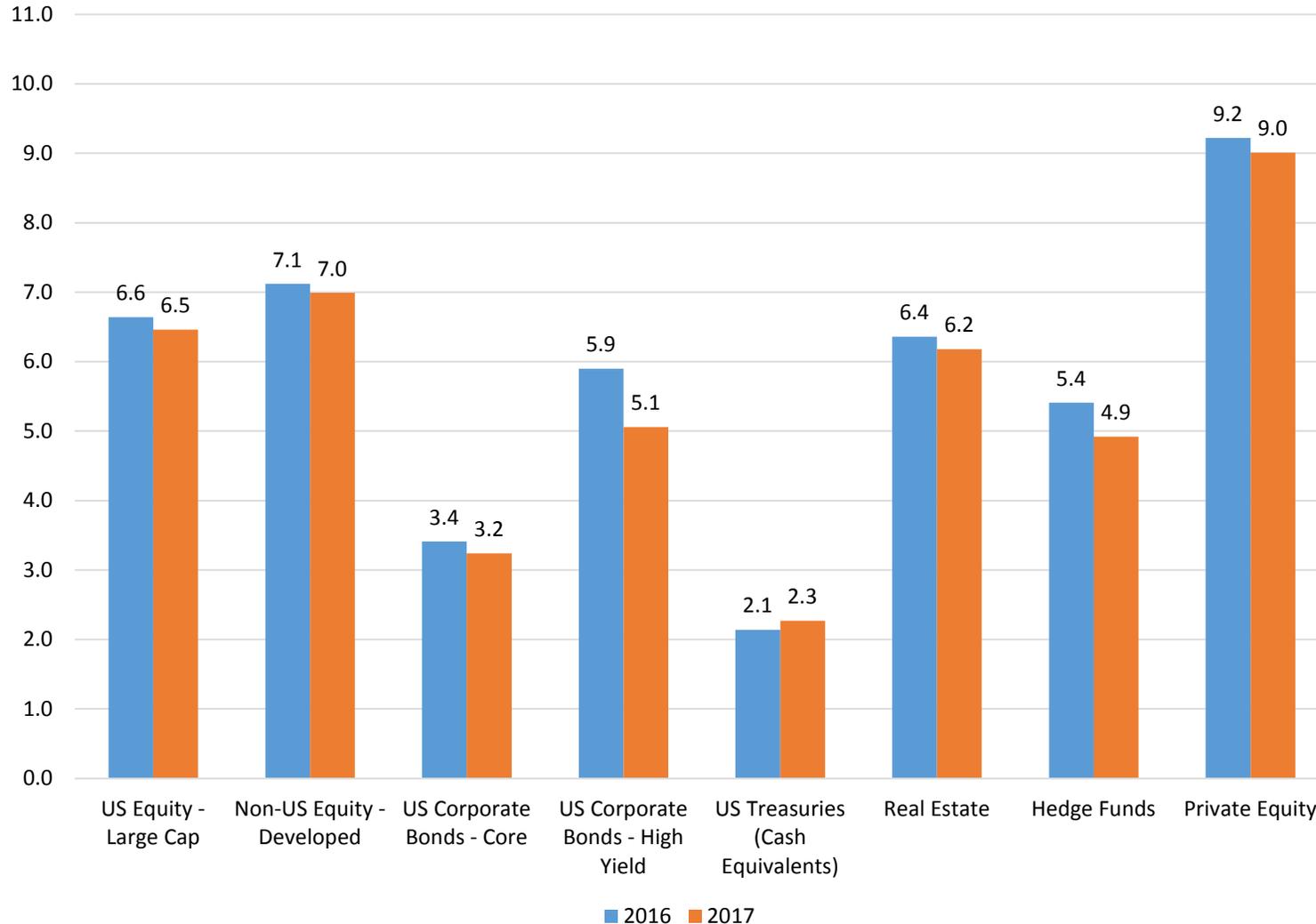


## Total Plan Projected Ranges of Annualized Compound Passive Returns

Horizon	5 <sup>th</sup> Percentile	25 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile	95 <sup>th</sup> Percentile
10 Years	0.2%	4.0%	5.9%	8.0%	11.5%

# Updated Industry Outlook on Returns

10-Year Annualized Return Forecast



Source: Horizon Actuarial Services, LLC, Survey of Capital Market Assumptions, 2016 and 2017 Editions  
Note: Expected returns are annualized (geometric)



## Takeaways

- In general, capital market assumptions around returns have come down modestly
- Return expectations for high quality fixed income have moved slightly higher as interest rates have moved upward
- No urgent need for a full ALM study at this time
- However, this will be revisited once Cavanaugh Macdonald is fully in place as the new actuary

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