

Joint Meeting of the NIC and PERB Capital Market Assumptions

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Hewitt ennisknupp

An Aon Company

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Current Expected Return and Risk Assumptions

Capital Market Assumptions

- What are they?
 - Aon Hewitt's asset class return, volatility and correlation assumptions
 - Long-term; based on 10-year and 30-year projection periods
 - Forward looking assumptions
 - Best estimate assumptions (50/50 better or worse)
 - Market returns; i.e., no manager alpha (other than hedge funds and private equity which are entirely actively managed)
 - Global geographic coverage
 - Updated quarterly

Coverage

Equities	Bonds	Alternatives
All major regions covered including emerging markets	Nominal U.S. and non-U.S. government bonds	Hedge funds
	Inflation-linked government bonds	Real estate (total market and core)
	Corporate bonds	Private equity
	High yield	Infrastructure
	Emerging market debt	Commodities

Current Assumptions (10-Year): Expected Returns and Risks (Q4 2013)

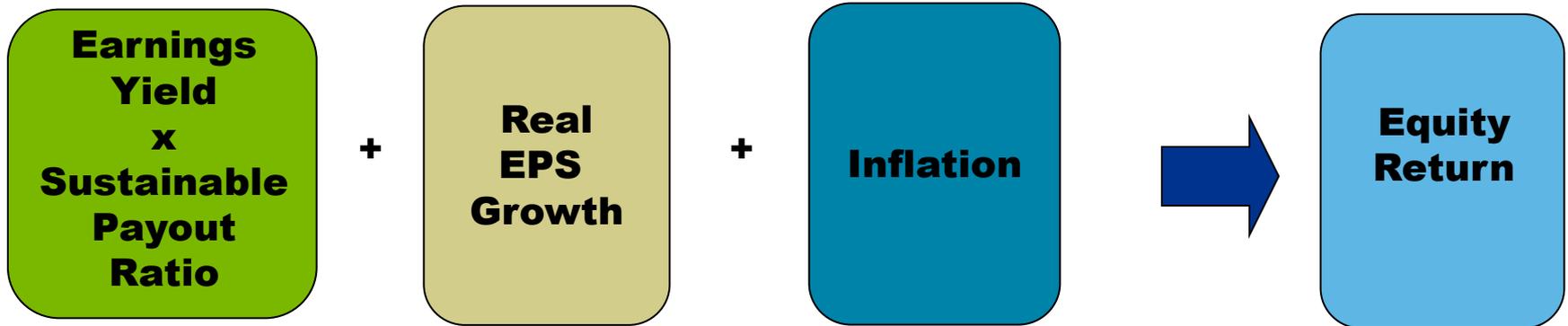
Asset Class	Expected Nominal Return	Expected Risk (Volatility)
U.S. Equity	7.2%	19.4%
Global Equity (Developed & Emerging)	7.5	19.5
International Equity (Developed)	7.3	20.5
Emerging Markets Equity	8.9	28.5
TIPS	2.7	4.5
Core Fixed Income (Market Duration)	3.3	4.0
High Yield Bonds	4.6	14.0
Non-US Developed Bonds (Unhedged)	2.7	10.0
Emerging Market Bonds (USD)	5.3	12.0
Hedge Funds (Median Manager)	5.2	8.0
Real Estate (Total Market)	7.2	14.5
Private Equity	9.3	26.0
Infrastructure	7.8	16.5
U.S. Inflation (CPI)	2.1	--

Current Assumptions (30-Year): Expected Returns and Risks (Q4 2013)

Asset Class	Expected Nominal Return	Expected Risk (Volatility)
U.S. Equity	7.2%	19.9%
Global Equity (Developed & Emerging)	7.6	20.5
International Equity (Developed)	7.4	21.0
Emerging Markets Equity	9.1	29.0
TIPS	3.6	4.5
Core Fixed Income (Market Duration)	4.6	5.5
High Yield Bonds	5.9	14.5
Non-US Developed Bonds (Unhedged)	4.1	11.0
Emerging Market Bonds (USD)	6.3	13.0
Hedge Funds (Median Manager)	6.1	8.5
Real Estate (Total Market)	7.3	14.5
Private Equity	9.3	27.0
Infrastructure	7.8	17.0
U.S. Inflation (CPI)	2.2	--

Methodology

Methodology: Equities



Methodology: Government Bonds

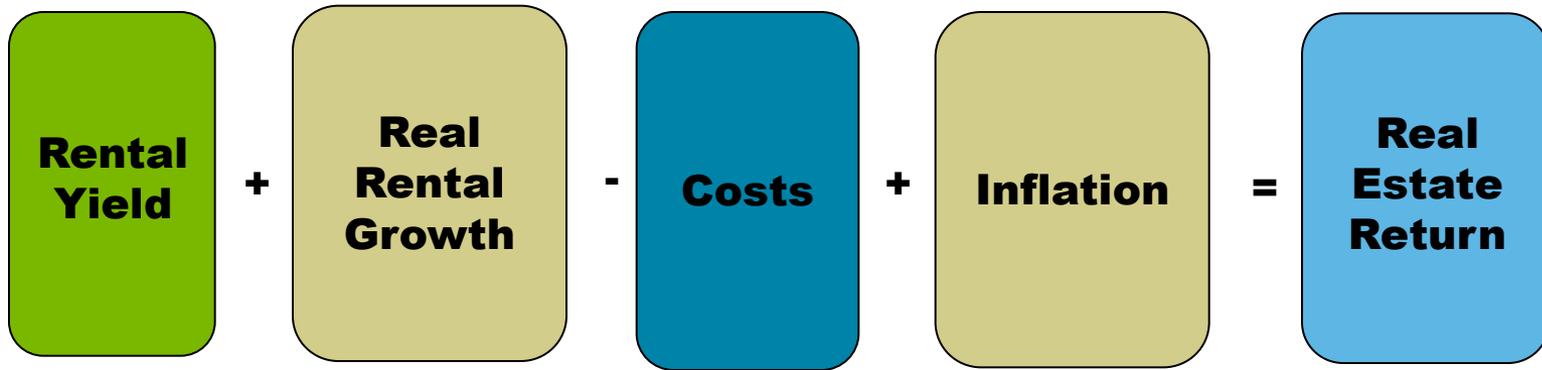
- We start from the current yield curve for government bonds
- Using a simulation model, we combine the current yield curve with an assumption of the long-term behavior of the yield curve to derive how yields are expected to evolve over time
- Total return assumptions are then derived from the forward looking yield curves
- A similar methodology is followed for inflation-linked bonds but based on real yields and incorporating our inflation assumptions

Methodology: Corporate Bonds

- Our corporate bond expected return is made up of three components:
 - Government yield
 - Corporate spread
 - Expected losses from defaults and downgrades
- All three are modeled using a wide range of simulation scenarios
- Government yields modeled as described on the previous slide
- We assume that corporate spreads revert over time from current levels to our estimate of fair value
- The expected losses from defaults and downgrades are developed using a simulation model
- Aggregate bond index returns are modeled as a combination of government and corporate bonds

Methodology: Real Estate

- Methodology similar to equities:



- Starting point is the rental yield each market is offering
- Real rental growth incorporates both a short term cyclical and long term aspect
 - We assume rents increase in line with consensus expectations over short term
 - In the long-term we assume rents grow in line with inflation
- Allow for unavoidable costs of direct real estate investment
- A real return assumption is calculated as the internal rate of return (IRR) of the projected cash flows (discounted cash flow analysis similar to equities)
- Nominal return is then calculated using expected inflation

Methodology: Private Equity

- Return assumptions are formulated for each strategy (sub-sector) based on an analysis of the exposure of each strategy to various market factors with associated risk premiums
- Strategies include leveraged buyouts (LBOs), venture capital, mezzanine, and distressed investments
- Assumptions for a diversified (broad) private equity portfolio is aggregation of assumptions for these underlying strategies

Methodology: Volatility and Correlation

- We take a forward-looking view when setting volatility assumptions as opposed to using purely historical averages. The credit crisis demonstrated the dangers of relying solely on historical values
 - Volatilities are formulated with reference to implied volatilities priced into option contracts of various terms, historical volatility levels and the broad economic/market environment we envisage
 - For illiquid asset classes such as real estate, de-smoothing techniques are employed when assessing historical volatility levels
- We assume that volatilities are not constant over time; we assume that the volatility of "risky" asset classes such as equities will be higher than historical levels in the next few years before declining over time
- Correlation assumptions are formulated with reference to historical experience over different time periods and during different economic conditions

NIC Defined Benefit Plan Expectations

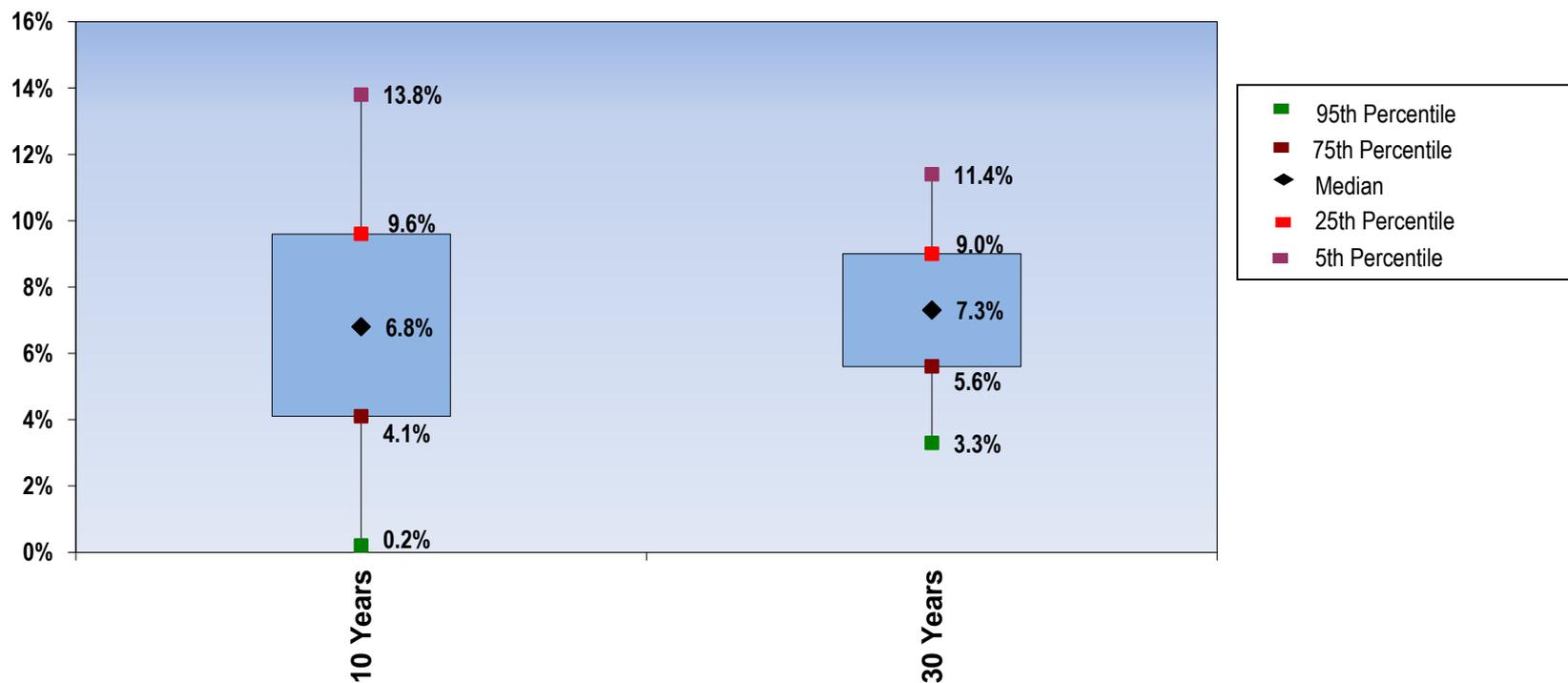
Projected Returns

	Long-Term Policy Allocation	Annualized Return (10 Year Forecast)	Standard Deviation (10 Year Forecast)	Annualized Return (30 Year Forecast)	Standard Deviation (30 Year Forecast)
U.S. Equity	31.5%	7.2%	19.4%	7.2%	19.9%
Non-U.S. Equity	13.5	7.8	21.6	7.9	22.1
Global Equity	15.0	7.5	19.5	7.6	20.5
Fixed Income*	30.0	3.6	4.6	4.9	5.8
Private Equity	5.0	9.3	26.0	9.3	27.0
Real Estate	5.0	7.2	14.5	7.3	14.5
Total Fund	100.0%	6.8%	13.2%	7.3%	13.7%

- Given existing market conditions, exceeding the actuarially assumed rate of return of 8.0% will likely prove challenging

*Modeled as 24% Aggregate Bonds, 4% High Yield Bonds, and 2% Non-U.S. Bonds

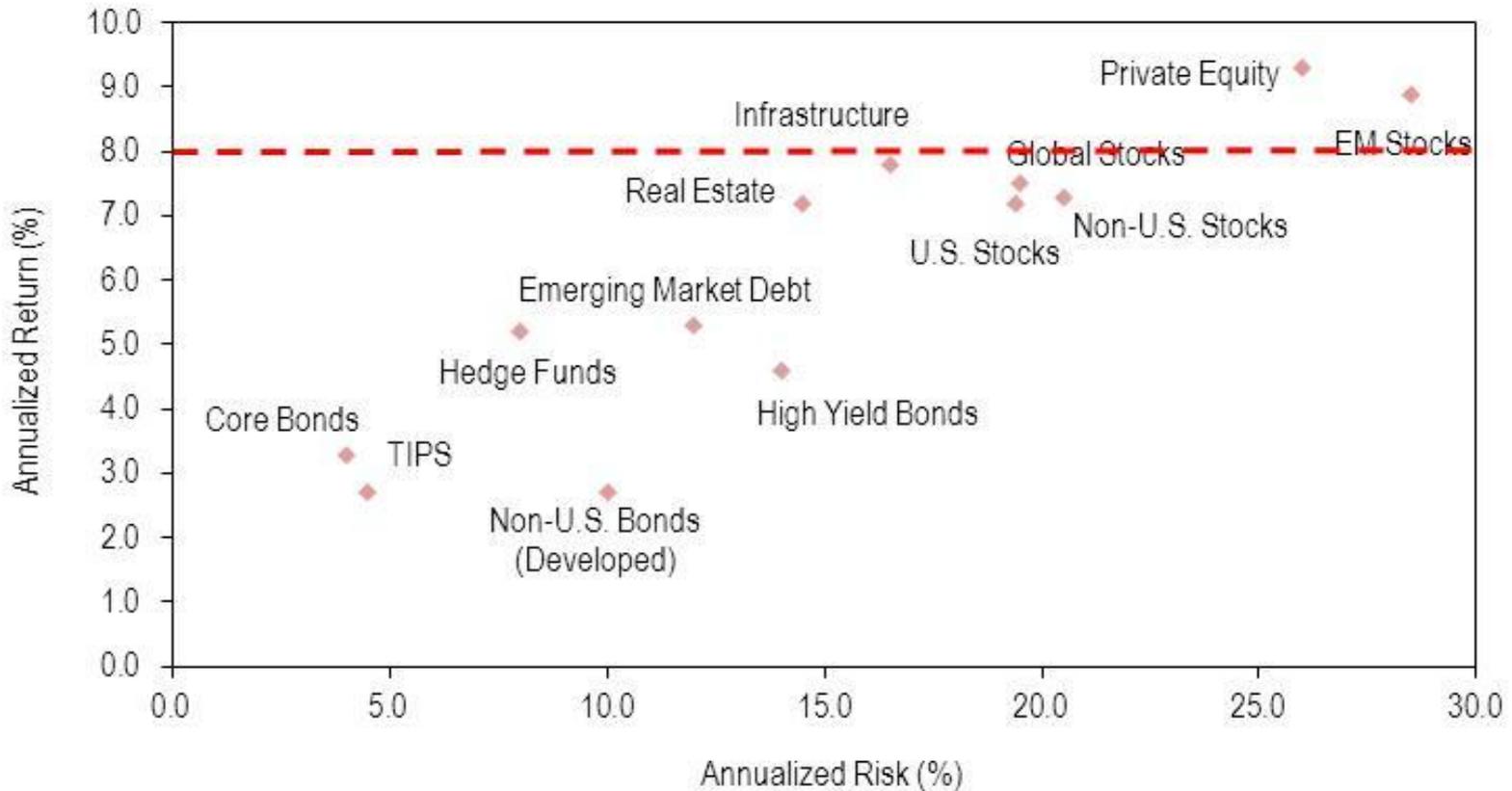
Projected Returns (cont'd)



- The defined benefit plans have an approximately 40% chance of meeting or exceeding the assumed rate of return over both the intermediate and long-term based on our current capital market forecasts and the plans' asset allocation policy

Appendix

Risk-Return Hewitt EnnisKnupp 10 Year Capital Market Assumptions



Appendix (Cont'd)

Risk-Return Hewitt EnnisKnupp 30 Year Capital Market Assumptions

