Developing Investment Strategies

Presented by

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Overview of the session

- Building blocks: traditional and alternative asset classes
- Diversification: opportunities and pitfalls
- Developing investment strategy for DB plans
- Implementing investment strategy:
 - Active and passive approaches
 - Defining benchmarks

Risk and Return

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	YTD
EM Equities	Global RE	Natural Res.	Gold	EM Equities	Gold	TIPS	Global RE	US Equities	Global RE	Municipals
34.5	43.7	53.0	5.5	79.0	29.7	13.6	29.8	32.6	14.7	1.0
Natural Res.	Infrastructure	EM Equities	Inv. Grade	High Yield	Global RE	Municipals	EM Equities	Dev. ex-US	US Equities	Inv. Grade
27.5	39.5	39.8	5.2	58.8	20.0	10.7	18.6	21.6	13.4	0.4
Gold	Natural Res.	Gold	Global Fixed	Natural Res.	EM Equities	Gold	Dev. ex-US	Infrastructure	Infrastructure	High Yield
18.4	33.6	31.3	4.8	53.6	19.2	10.2	17.0	15.0	13.0	0.1
Infrastructure	EM Equities	Infrastructure		Global RE	Natural Res.	Inv. Grade	EM Fixed	60/40	Municipals	Cash
15.0	32.6	23.2	1.8	41.3	18.6	7.8	16.8	12.3	9.1	0.0
Dev. ex-US	Dev. ex-US	EM Fixed	TIPS	Dev. ex-US	EM Fixed	Global Fixed	US Equities	High Yield	Inv. Grade	TIPS
15.0	26.2	18.1	-2.4	34.4	15.7	5.6	16.1	7.4	6.0	-0.2
Global RE	Gold	Dev. ex-US	Municipals	US Equities	US Equities	High Yield	High Yield	Global RE	60/40	Dev. ex-US
10.7	23.0	12.9	-2.5	27.1	15.4	5.0	15.8	2.2	5.0	-1.4
60/40	US Equities	TIPS		Infrastructure	High Yield	US Equities	Infrastructure	Cash	TIPS	60/40
7.5	15.3	11.6	-5.2	25.3	14.9	2.0	11.9	0.0	3.6	-1.7
EM Fixed	EM Fixed	60/40	High Yield	Gold	60/40	Cash	60/40	Natural Res.	High Yield	US Equities
6.3	15.2	10.0	-25.9	24.0	10.7	0.1	11.4	-0.3	2.5	-2.6
US Equities	60/40	Global Fixed	60/40	60/40	Dev. ex-US	Infrastructure	Natural Res.	Inv. Grade	Global Fixed	Global Fixed
5.7	14.2	9.5	-25.9	23.0	9.4	-0.4	9.0	-2.0	0.6	-2.7
Municipals	High Yield	Inv. Grade	US Equities	EM Fixed	Inv. Grade	60/40	TIPS	EM Equities	Cash	Gold
3.5	10.8	7.0	-37.1	22.0	6.5	-1.2	7.0	-2.3	0.0	-4.4
Cash	Global Fixed	US Equities	Infrastructure	Municipals	TIPS	EM Fixed	Gold	Municipals	Gold	Global RE
3.0	6.6	6.0	-39.0	12.9	6.3	-1.8	7.0	-2.6	-1.5	-5.9
TIPS	Municipals	Cash	Dev. ex-US	TIPS	Infrastructure	Global RE	Municipals	Global Fixed	EM Equities	Infrastructure
2.8	4.8	4.8	-43.2	11.4	5.8	-8.1	6.8	-2.6	-1.8	-6.9
High Yield	Cash	Municipals	Natural Res.	Global Fixed	Global Fixed	Dev. ex-US	Global Fixed	TIPS	Dev. ex-US	EM Fixed
2.8	4.8	3.4	-45.3	6.9	5.5	-11.8	4.3	-8.6	-3.9	-12.3
Inv. Grade	Inv. Grade	High Yield	Global RE	Inv. Grade	Municipals	Natural Res.	Inv. Grade	EM Fixed	EM Fixed	EM Equities
2.4	4.3	2.3	-48.9	5.9	2.4	-12.5	4.2	-9.0	-5.7	-12.6
Global Fixed	TIPS	Global RE	EM Equities	Cash	Cash	EM Equities	Cash	Gold	Natural Res.	Natural Res.
-4.5	0.4	-4.7	-53.2	0.1	0.1	-18.2	0.1	-28.3	-7.2	-17.2

Source: Bloomberg, Northern Trust Investment Strategy. Gross total returns in USD. Year-to-date column through 8/31/15. Indices shown are preferred Investment Policy Committee proxies; 60/40 = 60% MSCI ACWI & 40% Barclays US Agg Bond Index; risk-control assets in shades of green; CAGR = Compound Annual Growth Rate (trailing 10 years through 8/31/15).



Dev. ex-US 4.4 **TIPS** 4.1 Global Fixed 3.5 Cash

10 YEAR **CAGR** Gold

High Yield

US Equities 7.3 Infrastructure 6.8 **EM Equities** 5.8 60/40 5.3 Global RE 5.3 Natural Res. 5.1 **EM Fixed** 4.8 Municipals 4.5 Inv. Grade

Correlations

Correlation USD - Total Return %

Asset Class	Proxy Indexes	Barclays Global Aggregate TR USD	Barclays US Corporate High Yield TR USD	MSCI World IMI GR USD	MSCI EM IMI GR USD	S&P Global Infrastructure TR USD	Bloomberg Commodity TR USD	NCREIF Property – UNSMOOTHED
Global Fixed Income	Barclays Global Aggregate TR USD	1.00	0.36	0.40	0.44	0.55	0.45	(0.22)
US High Yield	Barclays US Corporate High Yield TR USD	0.36	1.00	0.77	0.74	0.73	0.50	0.50
Developed World Equity	MSCI World IMI GR USD	0.40	0.77	1.00	0.88	0.92	0.61	0.45
Emerging Markets Equity	MSCI EM IMI GR USD	0.44	0.74	0.88	1.00	0.86	0.65	0.42
Infrastructure - Public Global Listed	S&P Global Infrastructure TR USD	0.55	0.73	0.92	0.86	1.00	0.62	0.41
Commodities - Futures	Bloomberg Commodity TR USD	0.45	0.50	0.61	0.65	0.62	1.00	0.37
Real Estate - Private Core	NCREIF Property - UNSMOOTHED	(0.22)	0.50	0.45	0.42	0.41	0.37	1.00

Source: Northern Trust

Note: The correlation has been calculated over the last 10 years (through June 30 2015)



Alternative Asset Classes

Real Assets

- Infrastructure, timber, agriculture etc.
- Can provide good long term inflation protection
- May not be particularly liquid

Other non traditional equity and debt exposures

- Private equity, distressed debt, insurance linked securities etc.
- Typically expected to deliver a return premium and/or diversification
- Liquidity varies

Hedge Funds

- Not an asset class; heterogeneous
- May involve significant leverage
- Intended to deliver returns based on manager skill rather than asset class exposure
- High fees



Diversification

'There is no free lunch but diversification is definitely a cheap lunch'

Caveats:

- Correlations increase in times of market stress
- Diversification only works if done by risk factors, not asset class labels
- The broader the range of exposures considered the more effective diversification can be.

Investment Strategy for a DB plan

Fundamental Questions:

- The funding position of the plan
- The strength of the employer covenant and the tolerance of the employer for volatility of contributions
- The extent to which the fund seeks to match the liability cashflows and if applicable, how this is done

Balanced portfolio (e.g. 60/40 equities/debt)

- The traditional approach
- No attempt to match liability cashflows
- Long term returns may be good but also volatile
- Funded position of plan impacted by changes in interest rates.

Immunised portfolio (using physical bonds)

- Portfolio consists wholly of bonds designed to match as closely as possible the liability cashflows
- Funding position is largely immune to changes in interest rates
- Perfect matching is not generally possible and this approach is not typically used by UK pension funds.

Liability driven approach (using swaps)

- Portfolio comprises two segments: a swaps portfolio, designed to protect against interest rate and inflation risks, and a physical assets portfolio, designed to achieve strong long term returns
- Increasingly used by large funds, particularly if they are underfunded.



Implementing Investment Strategy

Active vs Passive Strategy

- Active managers seek to beat the designated benchmark while passive seek to match the benchmark
- Significant trend towards passive management: passive involves much lower fees; traditional active strategies often fail to consistently beat the benchmark net of fees

Selection of asset class benchmarks

- Traditional approach: market cap weighted benchmarks e.g. FTSE; S&P 500
- Increasingly funds are using more sophisticated benchmarks including ESG benchmarks and 'smart beta'
- Smart beta involves
 managing to benchmarks
 defined according to specific
 factors e.g. value; volatility;
 dividends; quality etc.



Key Takeaways

- Developing and implementing an appropriate Investment strategy is fundamental to the long term viability of a pension plan
- 'True' diversification (across risk factors not asset class labels) is key to an effective investment strategy
- Investment strategy for a DB plan needs to be considered in conjunction with the funded position of the plan, the strength of the employer covenant and the tolerance for volatility of contributions
- An explicit decision should be made about the extent (if any) to which a liability driven investment strategy should be used
- Implementation of investment strategy should include careful consideration of the merits of:
 - Active versus passive approaches,
 - Use of non market cap benchmarks and related approaches (often known as 'smart beta')
 - Incorporation of ESG principles.



Important Information

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Important Information Regarding Hypothetical Returns – Where hypothetical portfolio data is presented, the portfolio analysis assumes the hypothetical portfolio maintained a consistent asset allocation (rebalanced monthly) for the entire time period shown. Hypothetical portfolio data is based on publicly available index information. Hypothetical portfolio data contained herein does not represent the results of an actual investment portfolio but reflects the historical index performance of the strategy described which were selected with the benefit of hindsight. Components of the hypothetical portfolio were selected primarily utilizing actual historic market risk and return data. If the hypothetical portfolio would have been actively managed, it would have been subject to market conditions that could have materially impacted performance and possibly resulted in a significant decline in portfolio value.

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