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Asset Allocation Review

City of Jacksonville
Police & Fire Pension Fund

February 20, 2015

EXECUTIVE SUMMARY

- The purpose of this presentation is to review:
  - Summit's current Capital Market Assumptions,
  - The Current Allocation and Target Allocation, and
  - Potential adjustments to the Current Target Allocation.
  - Provide context in which to review the actuarially - assumed return.
- Capital market assumptions remain low compared to historic averages.
- The Current Allocation as of December 31, 2014 has an expected return of 6.1% with a standard deviation of 11.2% for a 10-year investment time horizon, net of fees, based on current capital market assumptions.
  - Rebalancing to the Target Allocation increases expected return 50 basis points without increasing the standard deviation of expected return.
- Improvements can be made to increase the expected return to 7.0% by making changes to the Public Equity allocation and adding Private Equity.

INVESTMENT THEMES: LOOKING FORWARD

What We Believe	*What Investors Should Do*
Growth	
• Muted global growth. — Deleveraging/deflationary pressures continue. — Growth potential continues to decline.	• Conservatively position Growth portfolio. — Move equity allocations near lower end of range. — Decrease return expectations.
• Increasing divergence in global economies. — More varied policy maker responses. — Potential source of market volatility.	• Focus on active management and quality.
• Major economies at different stages of central bank intervention.	• Emphasize broad diversification.
• Valuation differences between domestic equities and other growth assets remain elevated, presenting opportunities.	• Overweight emerging market equities and debt.
• Strengthening US Dollar versus foreign currencies.	• In developed markets, favor US Dollar exposure.
Income	
• Muted returns for most fixed income assets. — Yields are low and credit spreads remain compressed.	• Selectively overweight spread products relative to Treasuries.
Diversification	
• Market is pricing in significant deflationary pressures. • Inflation and growth expectations are at very low levels. • The cost of explicit tail insurance remains low.	• Consider adding commodities due to relative cost of deflation/inflation protection. • Discuss tail hedging strategies versus inflation hedging needs.

GROWTH BUCKET

Growth Themes

- Muted global growth, ongoing deleveraging, and demographic headwinds.
- Potential catalyst for market volatility as central bank policy accommodation diverges.

Public Equity

- Overweight emerging market equity on valuation, look to add on potential further weakness.
- Underweight developed equities, particularly US small cap, on expensive longer term earnings.
- Our bias would be to fund MLPs back to target weight, using dollar-cost averaging over 2015, on continued underperformance and increase in distribution yield.

Private Assets

- Due to current pricing, dollar flows, and deals coming to market, fund to low end of 2015 allocation target.

Hedged Strategies

- Focus on event-driven strategies (e.g. distressed, activist equities) and less efficient market niches. Look for idiosyncratic risk – avoid beta plays.

Public Debt

- Valuation metrics remain compelling for emerging market debt including additional upside from currency exposure.
- No allocation to high yield at this time; valuations have improved but close to par dollar price and increase in expected energy defaults limit attractiveness versus equities.

Risk Parity

- Strategic allocation with significant volatility reduction and diversification benefits.

INCOME BUCKET

Income Themes

- Developed market interest rates remain low by historical standards with very muted inflation expectations.
- The disconnect remains regarding interest rate forecasts of the market and policy makers.
- At their current levels, credit spreads and interest rates offer limited upside potential.

Core and Core Plus Fixed Income

- Forward curves reflect market expectation of deflationary pressures and lower-than-average interest rates persisting.
- Core plus sectors remain interesting with increased opportunities for active management.

Bank Loans

- Reasonable spread versus Barclays Aggregate with some appreciation due to current discount dollar price.
- Look to limit new private bank loan allocations as credit underwriting standards have started to deteriorate.

Relative Value Hedge Funds

- Trading opportunities remain abundant, as managers provide additional drivers of return beyond interest rates and/or credit risk.

Core Real Estate

- Cap rates remain reasonably attractive relative to traditional core fixed income with continued upside from NOI growth.

DIVERSIFICATION BUCKET

Diversification Themes

- Below-average market volatility has decreased the cost of explicit diversification strategies (buying insurance).
- Continue to monitor alternatives to current diversifying assets.

Tactical Trading

- Managers have flexibility to benefit from both long- and short-term trends across various markets.
- Recent performance highlights their strategic diversification benefits.

Long Treasuries

- Rates at the long end of the US yield curve are near all-time lows.
- Valuations imply a negative term premium for holding fixed income over cash.
- Reallocate long Treasury exposure to TIPS and commodities.

TIPS

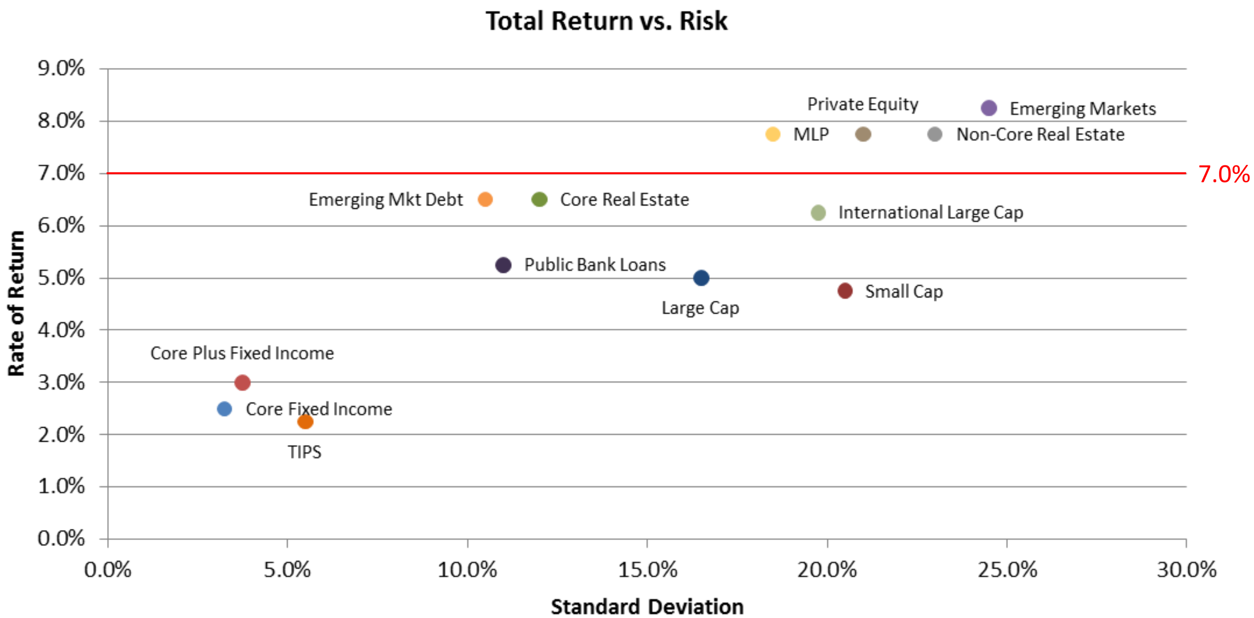
- Investors with greater diversification needs should own short and intermediate maturities that will provide rapid reinvestment at higher real rates.
- The deflationary pressures currently priced into the market suggest that inflation protection offers value at this time.

Commodities

- High recent correlation to risk assets as inflation has been subdued.
- Global growth is at low levels and expectations are muted; any surprise to the upside would benefit commodity prices.

	GROWTH	INCOME	DIVERSIFICATION
Undervalued	Emerging Market Equities Emerging Market Debt	Relative Value Hedge Funds	
Fairly Valued	International Large Cap Equities International Small Cap Equities MLPs Growth Hedge Funds Risk Parity High Yield Private Assets	Core Plus Fixed Income Core Fixed Income Public Bank Loans Core Real Estate Investment-Grade Corporates International Fixed Income	Tactical Trading TIPS Commodities
Overvalued	Domestic Large Cap Equities Domestic Small Cap Equities	Private Bank Loans	Long Treasuries Cash

CAPITAL MARKET ASSUMPTIONS – AS OF DECEMBER 31, 2014



- Summit's capital market assumptions are illustrated to the left and listed below.
- Asset class assumptions are geometric (net of volatility) using a 10-year investment time horizon and are net of fees.
- Today, few asset classes provide an expected return in excess of 7.0%, with the exception of many of the illiquid alternative/private investments.

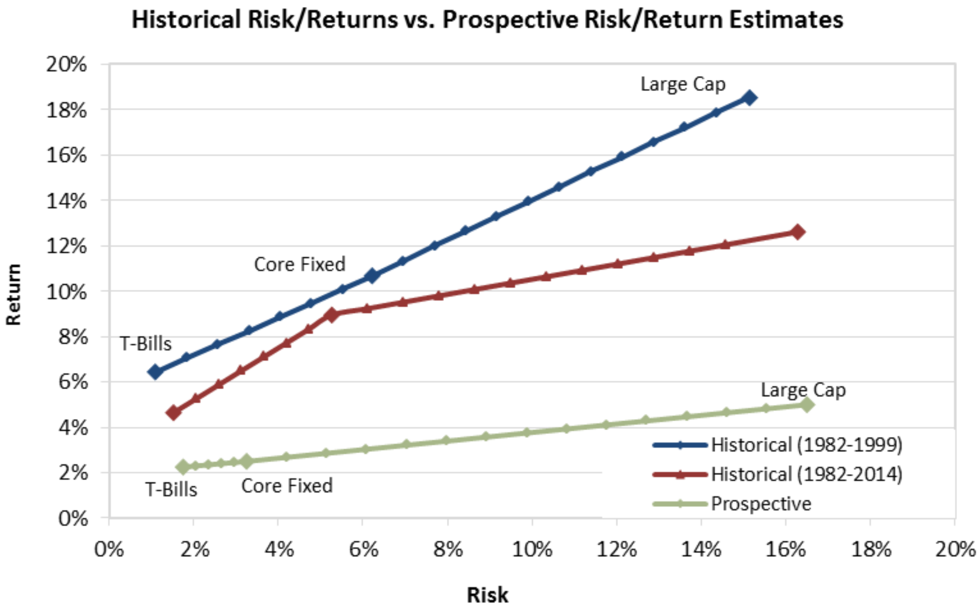
Asset Class	Expected Return	Expected Alpha	Standard Deviation	Comments Regarding Return Assumptions
Large Cap	5.0%	0.5%	16.5%	Long-term Expected, Fundamental Components
Small Cap	4.8%	0.8%	20.5%	Long-term Expected, Fundamental Components
International Large Cap	6.3%	0.8%	19.8%	Long-term Expected, Fundamental Components
Emerging Markets	8.3%	1.0%	24.5%	Long-term Expected, Fundamental Components
Emerging Mkt Debt	6.5%	0.8%	10.5%	Current Yield Curve + Sovereign Default Discount
Non-Core Real Estate	7.8%	n/a	23.0%	Current Cap Rate + NOI Growth + Liquidity Premium + Leverage Adj
MLP	7.8%	n/a	18.5%	Distribution Yield + NOI Growth
Private Equity	7.8%	n/a	21.0%	Base Return (Small Cap) + Liquidity Premium + Leverage Adj
Core Fixed Income	2.5%	0.3%	3.3%	Current Yield Curve
Core Plus Fixed Income	3.0%	0.5%	3.8%	Current Yield Curve
Core Real Estate	6.5%	n/a	12.0%	Current Cap Rate + NOI Growth + Leverage Adj
Public Bank Loans	5.3%	n/a	11.0%	Base Return (High Yield)
TIPS	2.3%	n/a	5.5%	Real Yield + Inflation Expectation

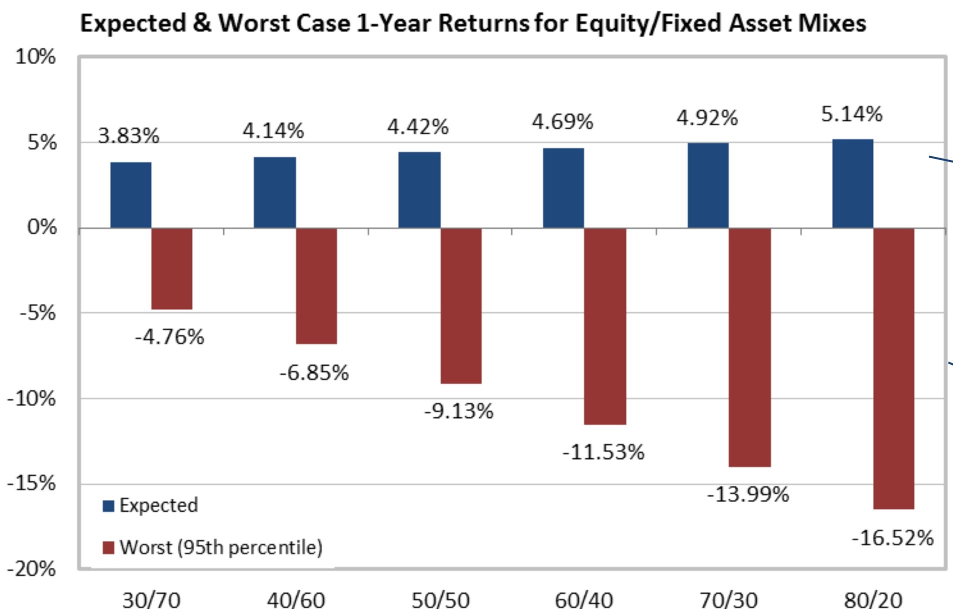
CAPITAL MARKET ASSUMPTIONS (CONTINUED)

- The table to the right summarizes changes to Summit's long-term (10-year investment time horizon) strategic capital market assumptions that have occurred since the beginning of the calendar year.
- While these assumptions are long-term by definition (one would not expect them to change frequently), there are times throughout the year when market fundamentals move dramatically, thereby altering the long-term expected performance for certain asset classes.

Asset Class	Expected Return as of 12/31/2013	Expected Return as of 12/31/2014	Difference
Large Cap	5.50%	5.00%	-0.50%
Small Cap	5.25%	4.75%	-0.50%
International Large Cap	6.75%	6.25%	-0.50%
Emerging Markets	8.50%	8.25%	-0.25%
Emerging Mkt Debt	6.75%	6.50%	-0.25%
Non-Core Real Estate	8.75%	7.75%	-1.00%
MLP	8.25%	7.75%	-0.50%
Private Equity	9.25%	7.75%	-1.50%
Core Fixed Income	3.50%	2.50%	-1.00%
Core Plus Fixed Income	4.00%	3.00%	-1.00%
Core Real Estate	6.75%	6.50%	-0.25%
Public Bank Loans	4.25%	5.25%	1.00%
TIPS	3.25%	2.25%	-1.00%

SUMMIT'S VIEW OF THE RISK PREMIUM





- Based on Summit's current capital market assumptions, expected returns are below historical levels while expected equity volatility has increased.
- In other words, Summit believes investors are no longer rewarded for taking risk to the extent they once were.
- Large cap equity risk-premiums have declined (comparison of 1982-1999 versus current):
  - Versus T-Bills: 12.3% down to 2.8%.
  - Versus Bonds: 7.8% down to 2.5%.
- As a result, the incremental return pick-up generated by increasing the equity allocation has decreased while the incremental risk has not.

<u>Expected</u>
+20 bps to +30 bps for each 10% increase in stocks

<u>Downside</u>
-210 bps to -250 bps for each 10% increase in stocks

CURRENT TARGET ALLOCATION

Asset Class	Sub-Class	Current Allocation (12/31/14)*	Target Allocation	Difference
Real Assets	Core Real Estate	9.6%	10.0%	- 0.4%
	Non-Core Real Estate	0.0%	5.0%	- 5.0%
	MLP	6.8%	7.5%	- 0.7%
Fixed Income	Core Fixed Income	19.5%	5.0%	+14.5%
	Core Plus Fixed Income	0.0%	7.5%	- 7.5%
	Public Bank Loans	2.4%	2.5%	- 0.1%
	TIPS	1.8%	2.5%	- 0.7%
	Emerging Market Debt	0.0%	5.0%	- 5.0%
International Equity	Developed Large Cap	13.5%	14.0%	- 0.5%
	Emerging Markets	5.7%	6.0%	- 0.3%
Domestic Equity	Large Cap	28.5%	26.0%	+ 2.5%
	Small Cap	11.9%	9.0%	+ 2.9%
	10-Year Expected Return	6.1%	6.6%	- 0.5%
	Standard Deviation	11.2%	11.2%	0.0%
	Return/Risk	0.54	0.59	- 0.05

- The graph above illustrates the differences between the Current Allocation (as of December 31, 2014) and Target Allocation.
- Non-Core Real Estate, Core Plus, and Emerging Market Debt have not been funded yet.
  - Simply funding these asset classes and rebalancing to the Target Allocation increases expected return by 50 basis points without increasing risk.
- Though modeled separately, individual asset classes will be grouped together for the remainder of the presentation.

*Note: numbers may not sum to 100% due to rounding.

ASSET CLASS RESTRICTIONS

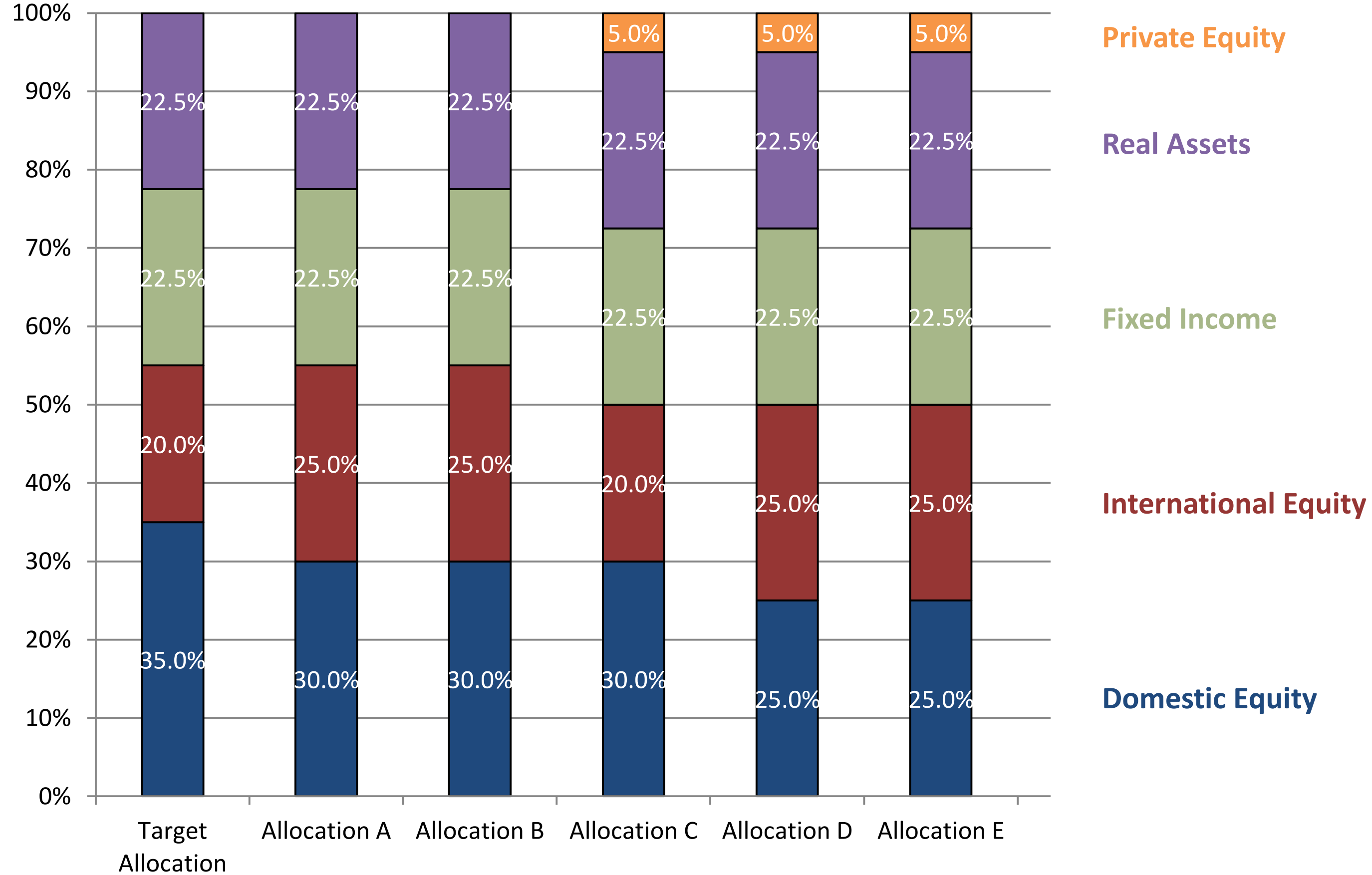
- Florida Statutes outline, especially Chapters 112.661 and 215.47, several restrictions including, but not limited to:
  - No more than 25% of the assets may be allocated toward:
    - Mortgage securities
    - Real property
    - Investment grade fixed income obligations of foreign governments and agencies, foreign corporations, or foreign commercial entities
    - US dollar denominated obligations issued by foreign governments and agencies, foreign corporations, or foreign commercial entities
    - Corporate obligations and securities of any kind of foreign corporations or a foreign commercial entity having its principal office located in any foreign country – not including US dollar denominated securities listed and traded on a US exchange (See note below)
      - Non-US corporate bonds traded outside the US shall be counted toward the 25% limit.
  - No more than 80% of the assets may be allocated to:
    - domestic equity securities listed on nationally recognized exchanges and
    - domestic corporate bonds.
  - No more than 5% in alternative assets (includes private equity, private debt, and hedge funds), if deemed appropriate and subject to other restrictions.
  - Currently, real estate is the only private investment permitted by investment policy and state statutes.
  - ADRs are permissible in domestic equity portfolios but limited to 15% of manager's portfolio per the investment policy.
- The statutory restrictions are reflected in the investment policy.
- Note: Chapter 215.47 (20) increases the 25% limit on foreign corporate securities to 35% but chapter 112.661 has not been updated to include subsection (20).
- Local ordinances may be passed to provide greater investment flexibility than that which is contained in Chapters 112.661 and 215.47 of Florida Statutes.

CONSIDERATIONS FOR IMPROVEMENT TO ASSET ALLOCATION

- The Target Allocation has a 10-year expected return of 6.6% and standard deviation of 11.2%. The expected return falls short of the actuarially-assumed rate-of-return by approximately 40 basis points.
- Minor changes to the Public Equity allocation can boost expected return 20 basis points.
- Additionally, reducing Public Equity and adding Private Equity can increase the expected return to 7.0%.

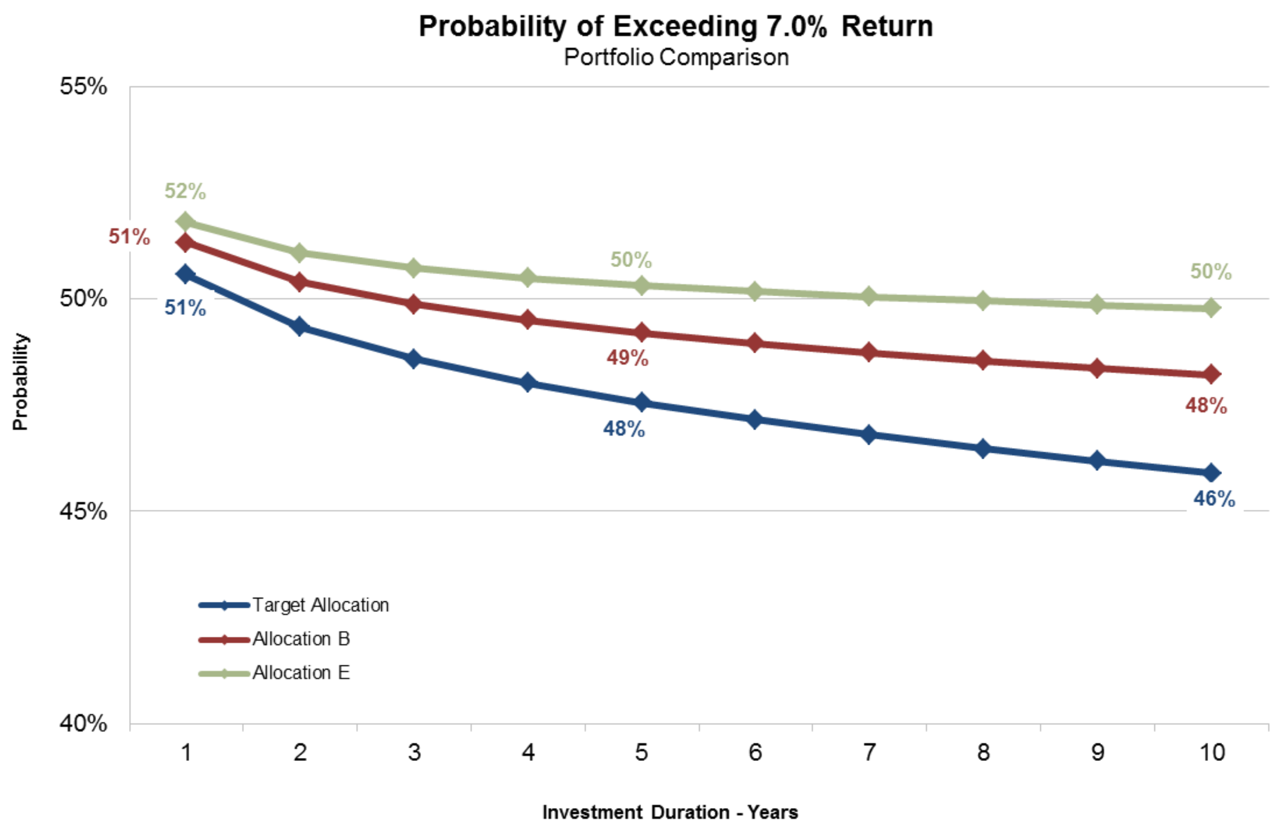
- On the following slide, the Target Allocation and several alternative allocations are modeled.
- Changes made with respect to the Target Allocation are as follows:
  - **Allocation A:** Domestic Equity is reduced 5.0%; International Equity is increased 5.0%.
  - **Allocation B:** Domestic Equity is reduced 5.0%; International Equity is increased 5.0%. Emerging Market Equity is increased to 40% of International Equity.
  - **Allocation C:** Domestic Equity is reduced by 5.0%; a 5.0% Private Equity allocation is added.
  - **Allocation D:** Domestic Equity is reduced by 10.0%; a 5.0% Private Equity allocation is added; International Equity is increased by 5.0%.
  - **Allocation E:** Domestic Equity is reduced by 10.0%; a 5.0% Private Equity allocation is added; International Equity is increased by 5.0% and Emerging Market Equity is increased to 40% of International Equity.

ASSET ALLOCATIONS



	Target Allocation	Allocation A	Allocation B	Allocation C	Allocation D	Allocation E
10 Year Expected Return	6.6%	6.8%	6.8%	6.8%	6.9%	7.0%
Standard Deviation	11.2%	11.3%	11.4%	11.2%	11.3%	11.3%
Return/Risk	0.59	0.60	0.60	0.61	0.61	0.62

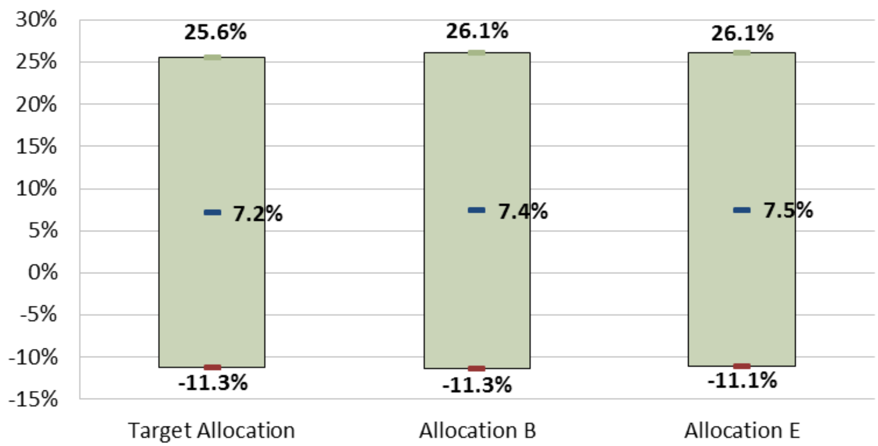
PROBABILITY OF EXCEEDING ACTUARIALLY ASSUMED RATE OF RETURN



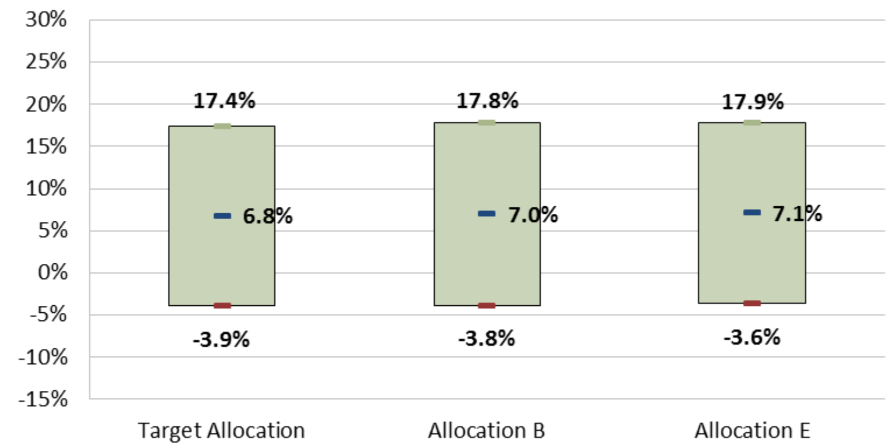
- The chart above shows the probability of exceeding the actuarially-assumed rate-of-return over a ten-year investment horizon for three selected allocations.

RANGE OF RETURNS

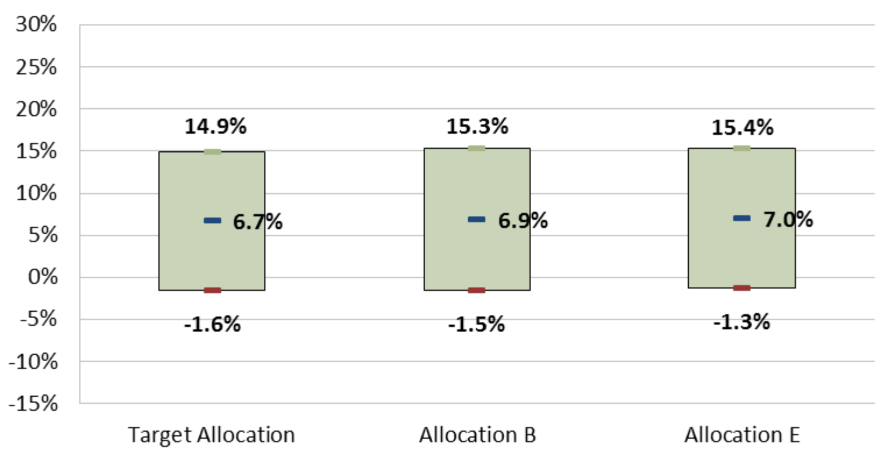
1-Year Horizon



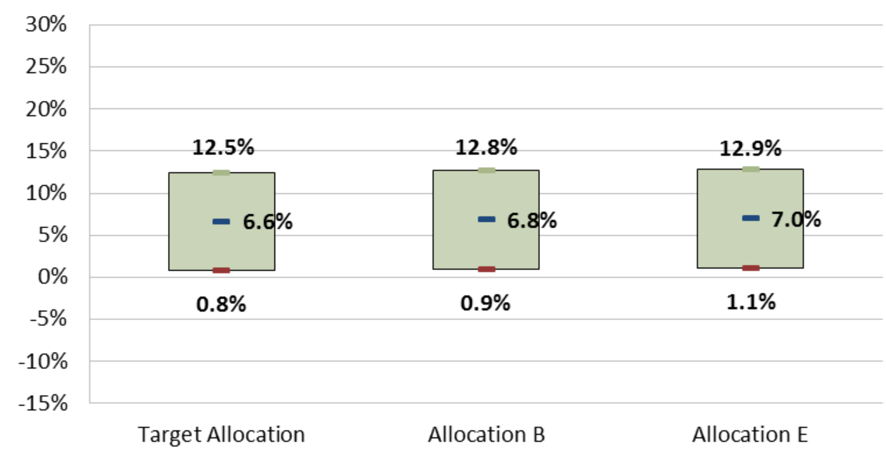
3-Year Horizon



5-Year Horizon



10-Year Horizon



95th Expected 5th

APPENDIX

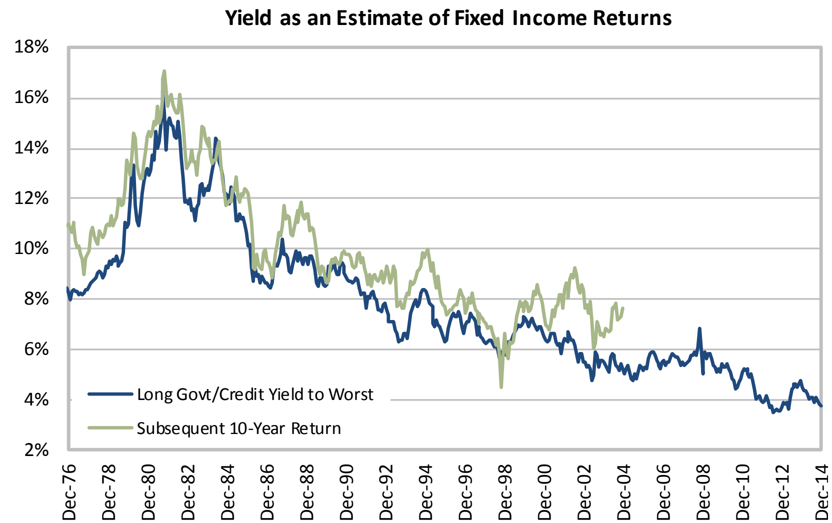
SUMMARY

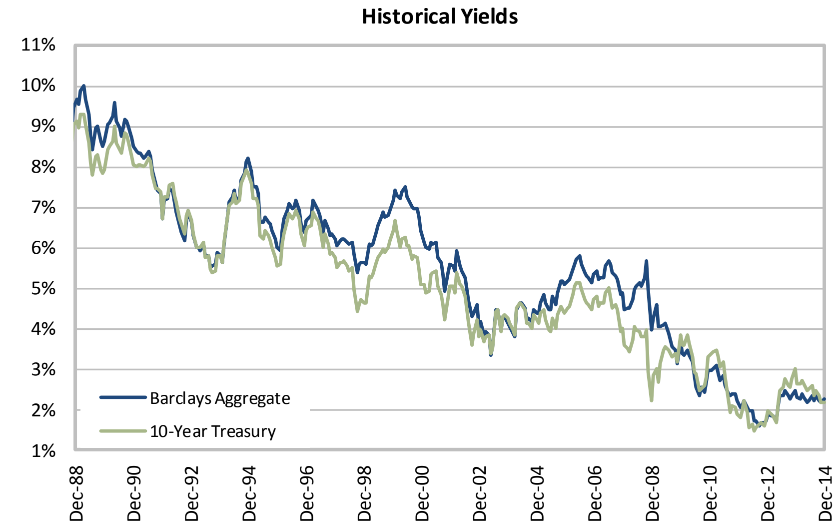
- The capital market assumptions section summarizes changes to Summit's long-term strategic capital market assumptions (Summit's full assumptions document is updated annually).
- While these assumptions are long-term by definition (one would not expect them to change frequently), there are times when market fundamentals move dramatically, thereby altering the long-term expected performance for certain asset classes.
- The pages that follow provide brief supporting documentation for each of the asset classes in the table. For a complete rationale (for all assumptions) please refer to Summit's annual "Capital Market Assumption" publication (available at www.summitstrategies.com).

Asset Class Returns and Standard Deviations

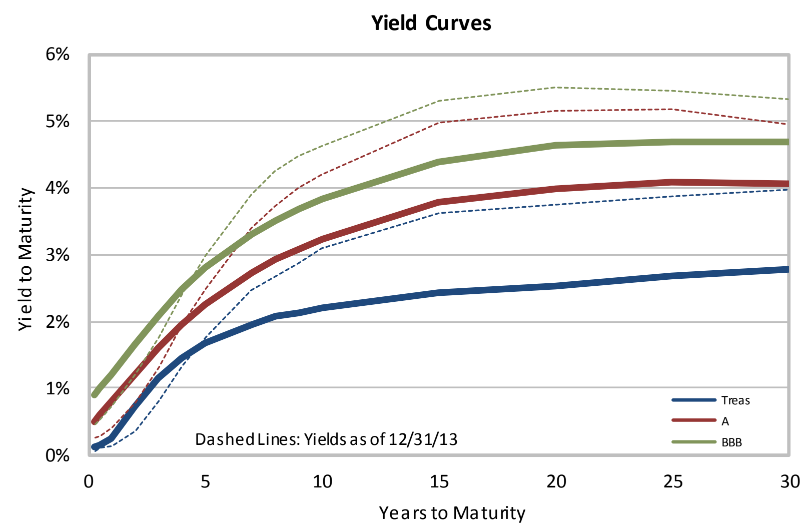
	Beginning of Year 2015		Beginning of Year 2014		
Asset Class	Expected Return	Standard Deviation	Expected Return	Standard Deviation	Alpha Assumptions
Inflation (CPI)	1.75%	1.75%	2.25%	1.75%	
GROWTH:					
Large Cap	5.00%	16.50%	5.50%	16.75%	0.50%
Small Cap	4.75%	20.50%	5.25%	20.50%	0.75%
International Large Cap	6.25%	19.75%	6.75%	20.00%	0.75%
International Small Cap	6.25%	22.75%	6.75%	23.25%	1.00%
Emerging Markets	8.25%	24.50%	8.50%	25.25%	1.00%
Master Limited Partnerships (MLP)	7.75%	18.50%	8.25%	18.00%	
Private Equity	7.75%	21.00%	9.25%	21.00%	
Growth Hedge Funds	5.75%	10.00%	6.50%	10.00%	
High Yield Bonds	5.25%	12.00%	4.25%	12.00%	0.50%
Emerging Market Debt	6.50%	10.50%	6.75%	11.00%	0.75%
Convertibles	4.50%	13.75%	4.50%	13.75%	0.50%
Private Debt	7.75%	15.00%	7.25%	15.00%	
Non-Core Real Estate	7.75%	23.00%	8.75%	23.00%	
Public Real Estate (REITs)	5.50%	15.00%	5.75%	15.00%	
Risk Parity	6.75%	10.00%	7.50%	10.00%	
INCOME:					
Public Debt					
Governments	2.00%	4.50%	3.00%	4.75%	
Corporates	3.50%	6.00%	4.25%	6.25%	0.50%
Mortgages (Agency)	2.50%	3.00%	3.25%	3.25%	0.25%
Intermediate Fixed Income	2.50%	3.25%	3.25%	3.50%	0.25%
Core Fixed Income	2.50%	3.25%	3.50%	3.50%	0.25%
Core Plus Fixed Income	3.00%	3.75%	4.00%	4.00%	0.50%
Long Gov/Credit Fixed Income	3.25%	9.75%	4.00%	9.75%	0.25%
International Fixed Income	2.50%	8.25%	3.50%	8.50%	0.50%
Public Bank Loans	5.25%	11.00%	4.25%	11.00%	
Private Bank Loans	6.50%	13.00%	5.50%	13.00%	
Relative Value Hedge Funds	4.75%	5.00%	5.25%	5.00%	
Core Real Estate	6.50%	12.00%	6.75%	12.00%	
DIVERSIFICATION:					
Cash	2.25%	1.75%	3.00%	1.75%	
TIPS	2.25%	5.50%	3.25%	5.50%	
Long Treasuries	2.50%	13.25%	3.00%	13.25%	
Commodities	5.00%	20.75%	5.25%	20.50%	
Tactical Trading	6.25%	10.00%	7.00%	10.00%	
Diversified Hedge Funds	5.25%	6.00%	6.00%	6.00%	

FIXED INCOME



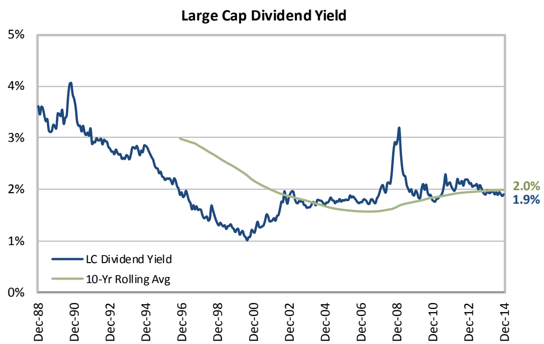


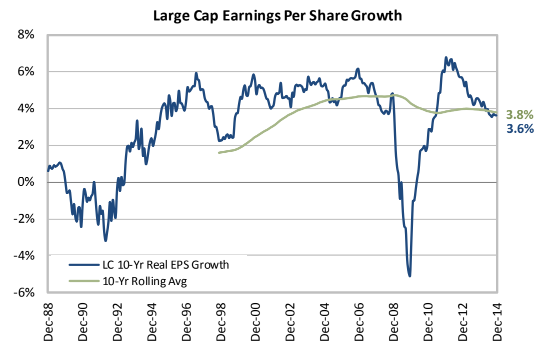
	Assumptions		Option-Adjusted Spread	
Asset Class	Current	BOY 2014	Current	BOY 2014
CPI	1.75%	2.25%	n/a	n/a
High Yield Bonds	5.25%	4.25%	424	382
Emerging Market Debt	6.50%	6.75%	n/a	n/a
Convertibles	4.50%	4.50%	n/a	n/a
Governments	2.00%	3.00%	2	3
Corporates	3.50%	4.25%	112	114
Mortgages (Agency)	2.50%	3.25%	30	35
Intermediate Fixed Income	2.50%	3.25%	32	35
Core Fixed Income	2.50%	3.50%	43	45
Core Plus Fixed Income	3.00%	4.00%	87	85
Long Gov/Credit Fixed Income	3.25%	4.00%	106	105
International Fixed Income	2.50%	3.50%	33	45
Cash	2.25%	3.00%	n/a	n/a
TIPS	2.25%	3.25%	n/a	n/a

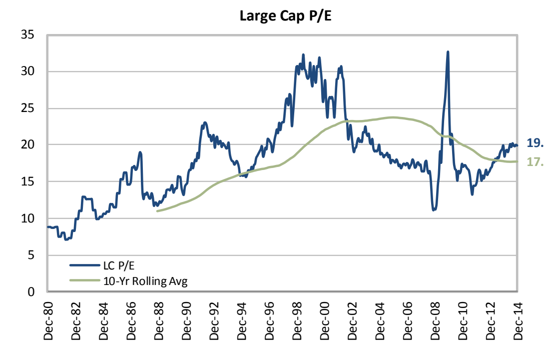


DOMESTIC EQUITY

Large Cap Equity





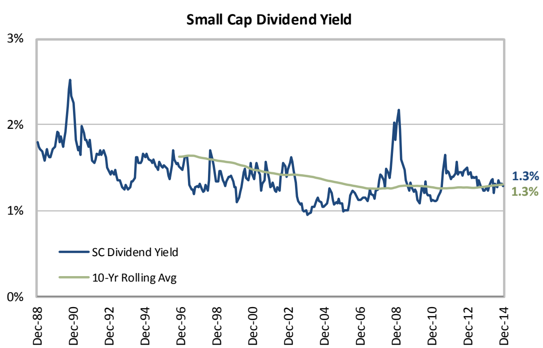


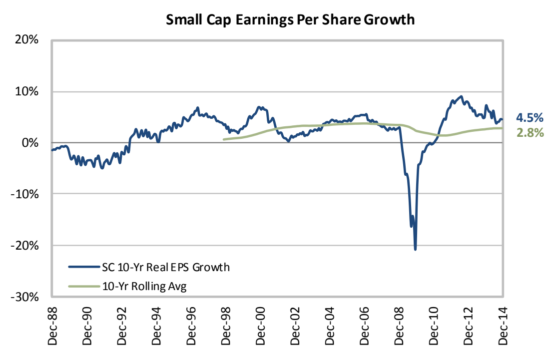
Inflation

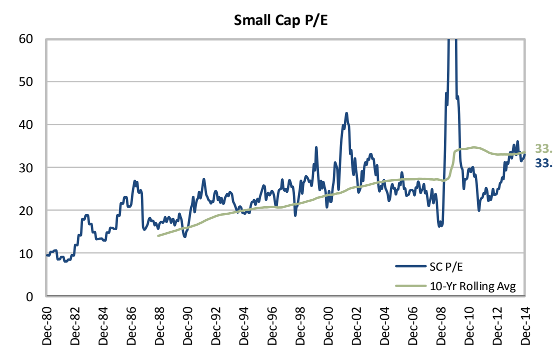
Dividend Yield: 2.00% + EPS Growth: 1.75% + Change in P/E: -0.50% + 1.75%

5.00%

Small Cap Equity







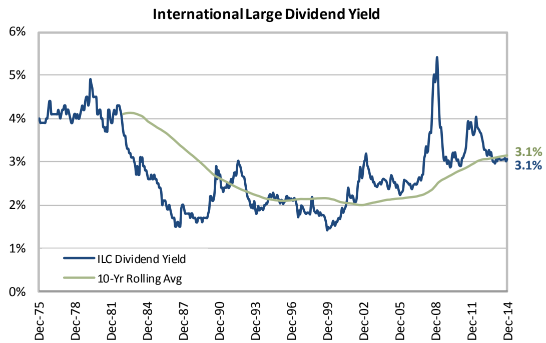
Inflation

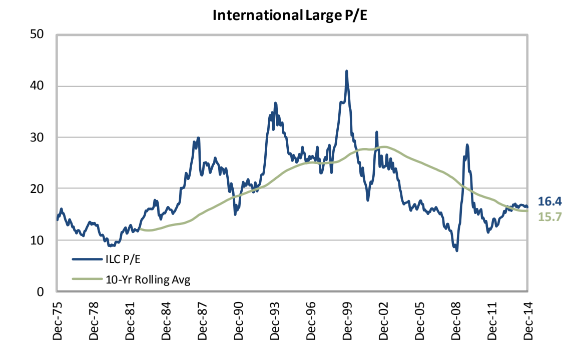
Dividend Yield: 1.25% + EPS Growth: 2.25% + Change in P/E: -0.50% + 1.75%

4.75%

DEVELOPED INTERNATIONAL EQUITY

International Large Cap Equity



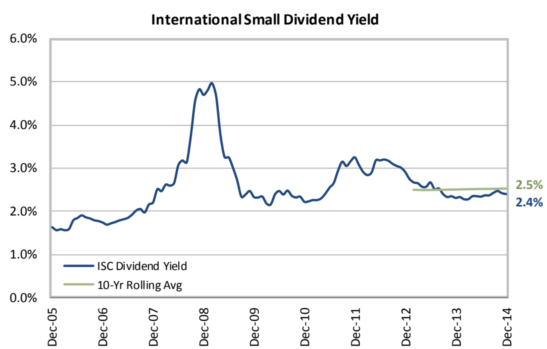


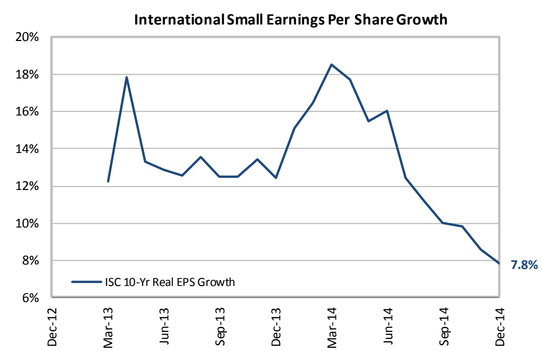
Inflation

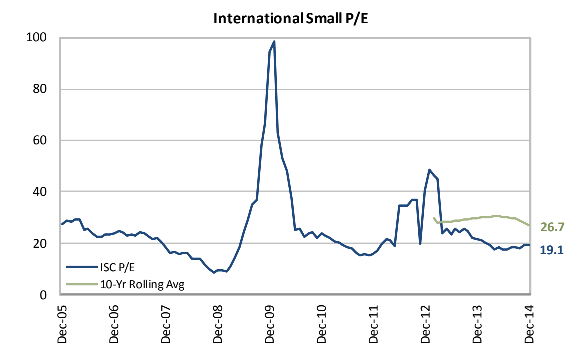
Dividend Yield: 3.00% + EPS Growth: 1.50% + Change in P/E: 0.00% + 1.75%

6.25%

International Small Cap Equity







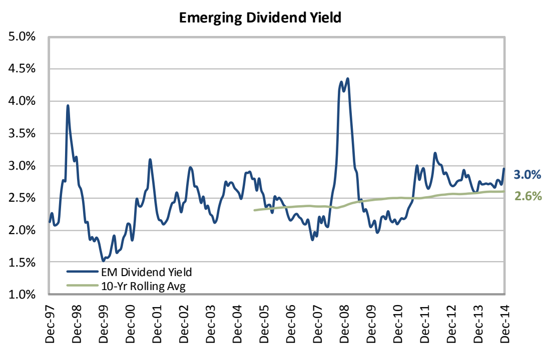
Inflation

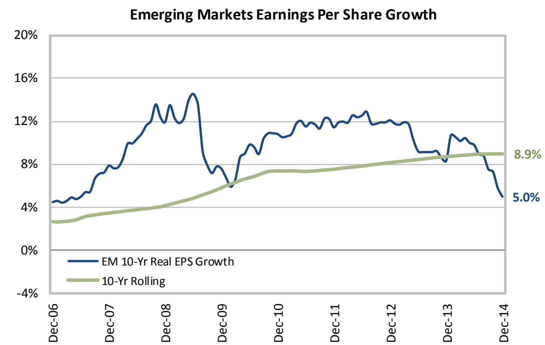
Dividend Yield: 2.50% + EPS Growth: 2.00% + Change in P/E: 0.00% + 1.75%

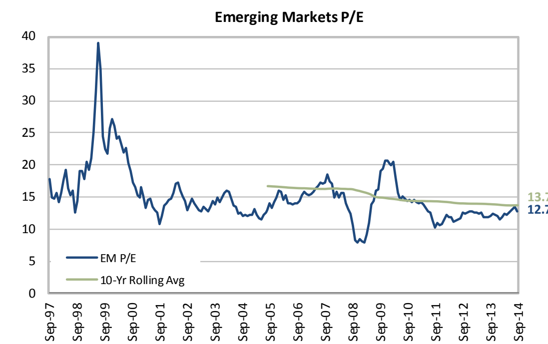
6.25%

INTERNATIONAL EQUITY

Emerging Markets Equity







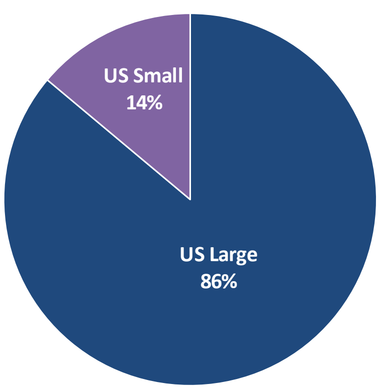
Inflation

Dividend Yield: 2.75% + EPS Growth: 3.25% + Change in P/E: 0.50% + 1.75%

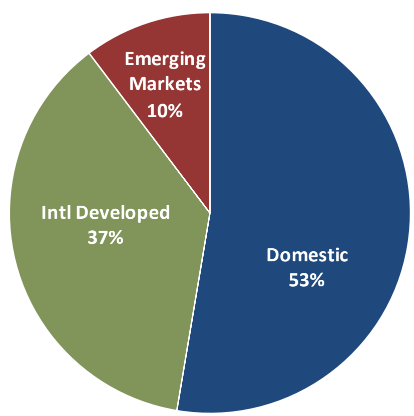
8.25%

Global Market Capitalization

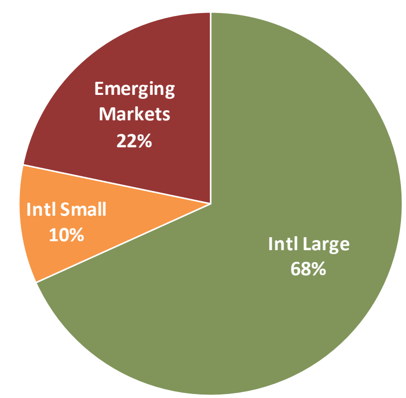
Domestic
$22.4 Trillion



Global
$42.6 Trillion



International
$20.2 Trillion



ALTERNATIVES

GROWTH									
					Small Cap		*Return Premium*		*Expected*
Private Equity					4.75%	+	3.00%	=	7.75%
	Expected Sharpe Ratio				*Cash*		*Vol-Adj Excess Returns*		
Growth Hedge Funds	0.35				2.25%	+	3.50%	=	5.75%
					High Yield		*Return Premium*		
Private Debt					5.25%	+	2.50%	=	7.75%
			Distribution Yield		*Distribution Growth*		*Valuation*		
Master Limited Partnerships			6.00%	+	1.75%	+	0.00%	=	7.75%
	Current Cap Rate		*Growth*		*Liquidity Premium*		*Leverage Adjustment*		
Non-Core Real Estate	5.50%	+	1.00%	+	1.25%	+	0.00%	=	7.75%
	Current Yield		*Growth*		*Valuation*		*Leverage Adjustment*		
Public Real Estate (REITS)	3.75%	+	1.00%	+	0.00%	+	0.75%	=	5.50%
	Expected Sharpe Ratio				*Cash*		*Risk-Adj Beta Exposure*		
Risk Parity	0.45				2.25%	+	4.50%	=	6.75%
INCOME									
					Public Bank Loans		*Return Premium*		
Private Bank Loans					5.25%	+	1.25%	=	6.50%
	Expected Sharpe Ratio				*Cash*		*Vol-Adj Excess Returns*		
Relative Value Hedge Funds	0.50				2.25%	+	2.50%	=	4.75%
	Current Cap Rate		*Growth*		*Valuation*		*Leverage Adjustment*		
Core Real Estate	5.50%	+	1.00%	+	0.00%	+	0.00%	=	6.50%
DIVERSIFICATION									
					Cash		*Return Premium*		
Commodities					2.25%	+	2.75%	=	5.00%
	Expected Sharpe Ratio				*Cash*		*Vol-Adj Excess Returns*		
Tactical Trading	0.40				2.25%	+	4.00%	=	6.25%
	Expected Sharpe Ratio				*Cash*		*Vol-Adj Excess Returns*		
Diversified Hedge Funds	0.50				2.25%	+	3.00%	=	5.25%