

# Challenges Facing Endowments Today

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# What are today's challenges?

- Meeting Return Expectations in a Low-Return Environment
- Managing Portfolio Risk Relative to Future Liabilities
- Manager Due Diligence: Differentiating the Best from the Rest

# Why Are Yields So Low?

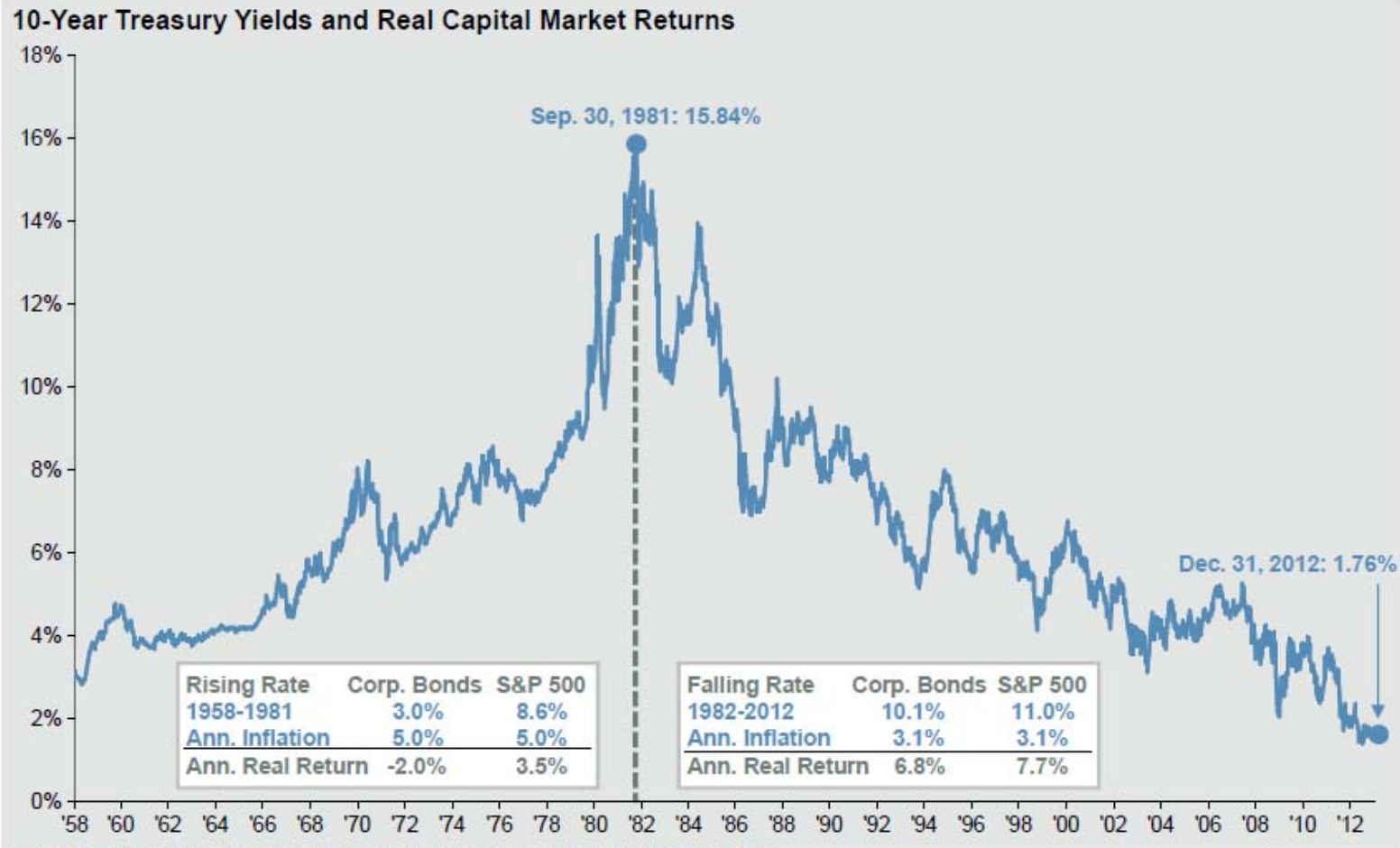
- No meaningful inflation and long-term focus by Fed to contain inflationary pressures.
- Low or no economic growth in most major regions, particular developed market countries.
- Fed Purposefully keeping yields low since 4Q08 liquidity and credit crises.
  - Stimulate Economic Growth
  - Increase lending to facilitate business expansion
  - Reduce unemployment

# Meeting Return Expectations in a Low-Return Environment

MARKET  
INSIGHTS

Interest Rates and Market Performance

Fixed Income



Source: Federal Reserve, Standard & Poor's, BLS, Strategas, J.P. Morgan Asset Management.

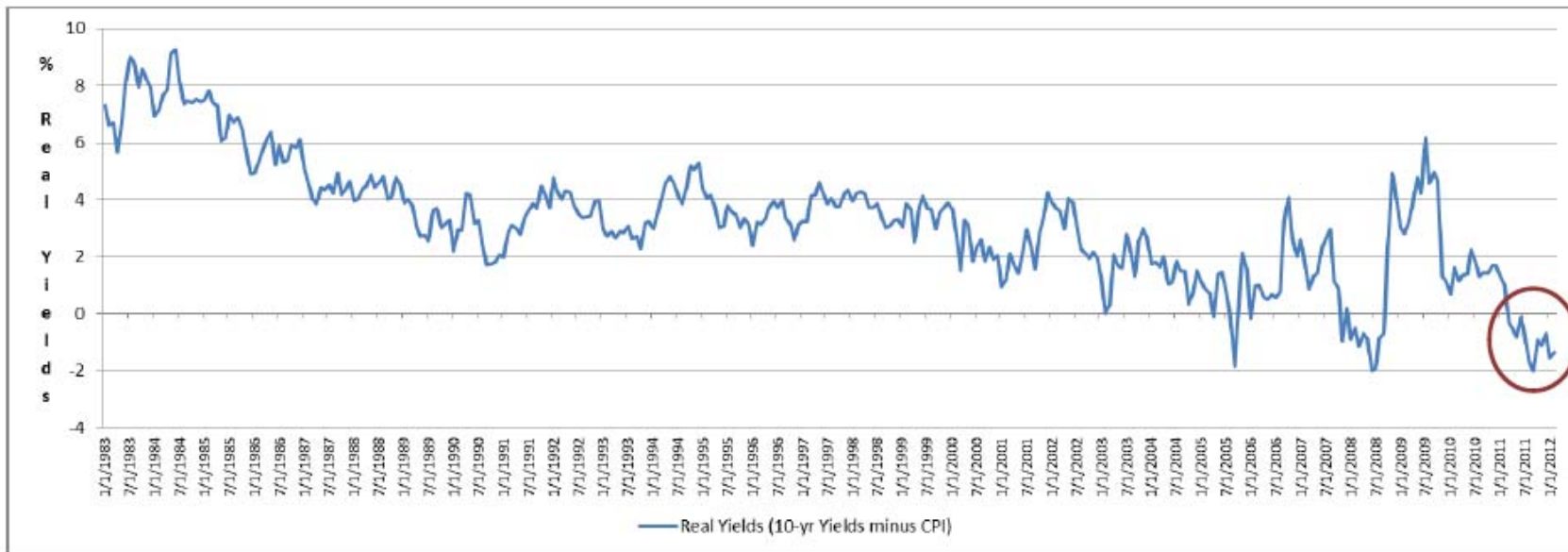
All returns above reflect annualized total returns, which include reinvestment of dividends. Corporate bond returns are based on a composite index of investment grade bond performance.

Data are as of 12/31/12.

**J.P.Morgan**  
Asset Management

# Negative Real Yields

*Negative Real Yields*



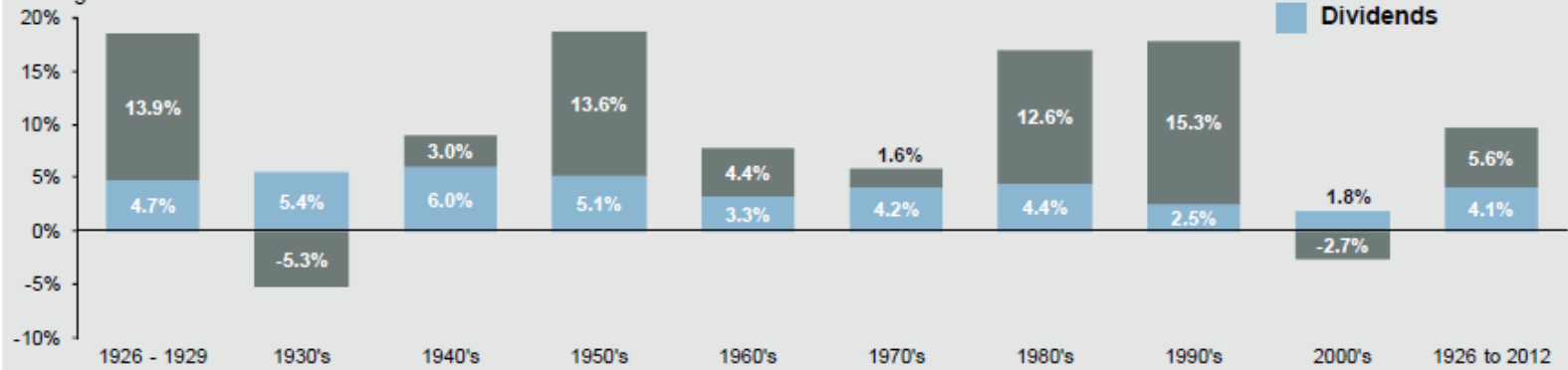
# Meeting Return Expectations in a Low-Return Environment

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Dividend Income: Domestic and Global

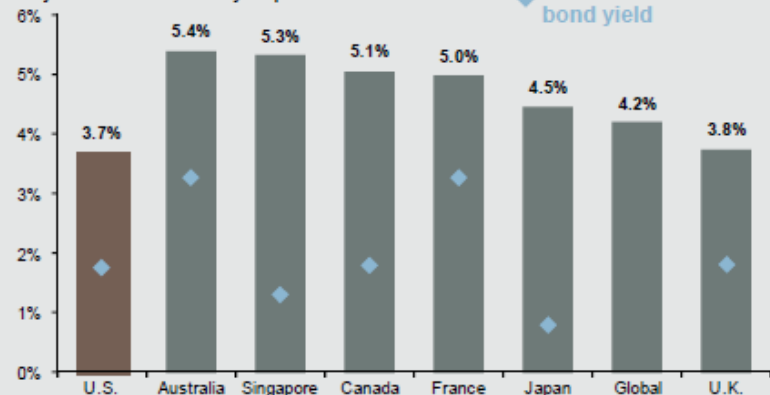
## S&P 500 Total Return: Dividends vs. Capital Appreciation

Average annualized returns



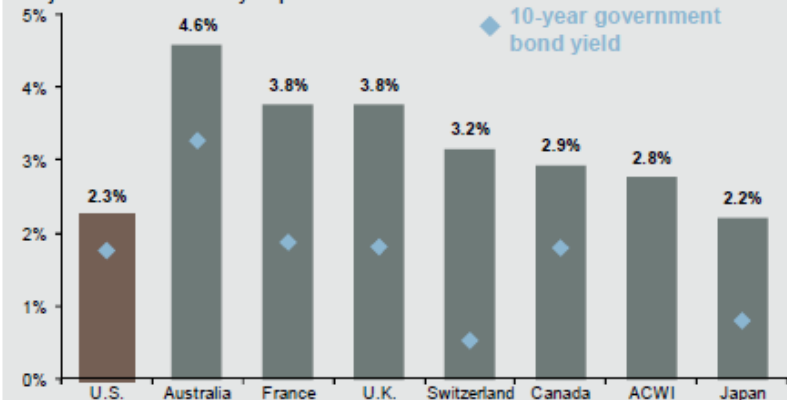
## REIT Dividend Yields

Major world markets by capitalization



## Equity Dividend Yields

Major world markets by capitalization



Source: (Top chart) Standard & Poor's, Ibbotson, J.P. Morgan Asset Management. (Bottom left) FactSet, NAREIT, J.P. Morgan Asset Management. Dividend vs. capital appreciation returns are through 12/31/12. Yields shown are that of the appropriate FTSE NAREIT REIT index, which excludes property development companies. (Bottom right) FactSet, MSCI, J.P. Morgan Asset Management. Yields shown are that of the appropriate MSCI index.

Data are as of 12/31/12.

Asset Class

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# Meeting Return Expectations in a Low-Return Environment

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## Fixed Income Yields and Returns

U.S. Treasuries	# of issues	Mkt. Value	Avg. Maturity	Yield		Return	
				12/31/2012	12/31/2011	2012	4Q12
2-Year	} # of issues: 169 Total value: \$5.209 tn		2 years	0.25%	0.25%	0.31%	0.05%
5-Year			5	0.72	0.83	2.29	-0.01
10-Year			10	1.78	1.89	4.13	-0.23
30-Year			30	2.95	2.89	2.34	-1.28
Sector							
Broad Market	8,109	\$16,973 bn	7.0 years	1.74%	2.24%	4.22%	0.22%
MBS	805	5,027	4.8	2.22	2.68	2.59	-0.20
Corporates	4,435	3,651	10.6	2.71	3.74	9.82	1.06
Municipals	46,472	1,343	13.6	2.17	2.82	6.78	0.67
Emerging Debt	580	860	11.0	4.34	6.07	17.95	3.29
High Yield	2,013	1,145	6.7	6.13	8.36	15.81	3.29
TIPS	33	861	8.9	1.51	1.69	6.98	0.69

Source: U.S. Treasury, Barclays Capital, FactSet, J.P. Morgan Asset Management.

Fixed income sectors shown above are provided by Barclays Capital and are represented by – Broad Market: U.S. Barclays Capital Index; MBS: Fixed Rate MBS Index; Corporate: U.S. Corporates; Municipals: Muni Bond Index; Emerging Debt: Emerging Markets Index; High Yield: Corporate High Yield Index. TIPS: Treasury Inflation Protection Securities (TIPS). Treasury securities data for # of issues and market value based on U.S. Treasury benchmarks from Barclays Capital. Yield and return information based on Bellwethers for Treasury securities.

Change in bond price is calculated using both duration and convexity according to the following formula:  

$$\text{New Price} = (\text{Price} + (\text{Price} * -\text{Duration} * \text{Change in Interest Rates})) + (0.5 * \text{Price} * \text{Convexity} * (\text{Change in Interest Rates})^2)$$

\*Calculation assumes 2-year Treasury interest rate falls 0.25% to 0.00% and the 5-year Treasury falls 0.72% to 0.00%, as interest rates can only fall to 0.00%.

Chart is for illustrative purposes only. Past performance is not indicative of comparable future results. Data are as of 12/31/12.

Fixed Income

Price Impact of a 1% Rise/Fall in Interest Rates



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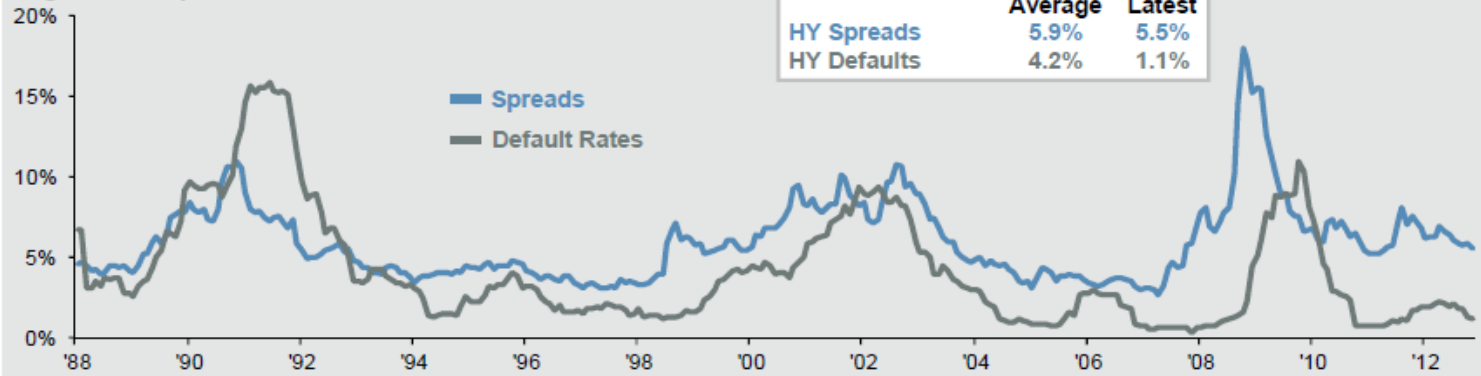


# Is High Yield the Answer?

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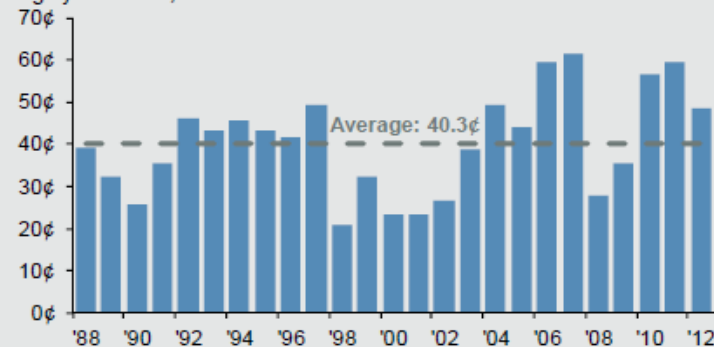
## High Yield Bonds

### High Yield Spreads and Defaults



### Historical High Yield Recovery Rates

High yield bonds, cents on the dollar



### Annual Flows into High Yield Mutual Funds & ETFs

Billions USD



Source (Top chart): U.S. Treasury, J.P. Morgan, J.P. Morgan Asset Management. Default rates are defined as the par value percentage of the total market trading at or below 50% of par value and include any Chapter 11 filing, prepackaged filing or missed interest payments. (Bottom left): J.P. Morgan, Fitch, J.P. Morgan Asset Management. (Bottom right): Strategic Insight, J.P. Morgan Asset Management. Yield to worst is defined as the lowest potential yield that can be received on a bond without the issuer actually defaulting and reflects the possibility of the bond being called at an unfavorable time for the holder. Spreads indicated are benchmark yield to worst less comparable maturity Treasury yields. 2012 recovery rate is a year to date number as of November 30, 2012. Flows include ETFs and are as of November 30, 2012. Past performance is not indicative of comparable future results. Data are as of 12/31/12.

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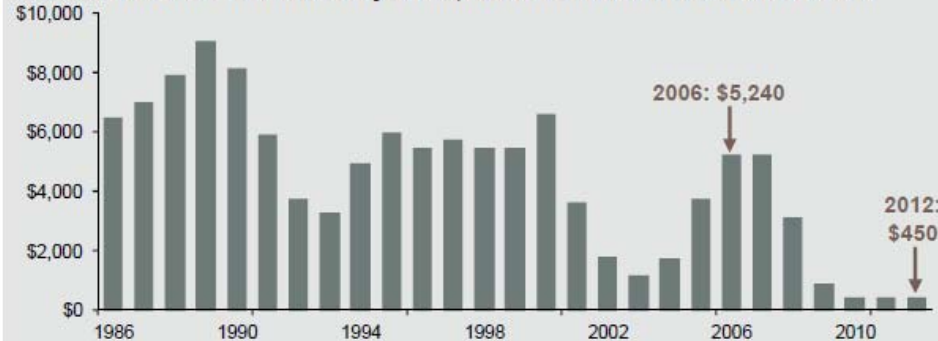


# Cash may not be the answer as well...

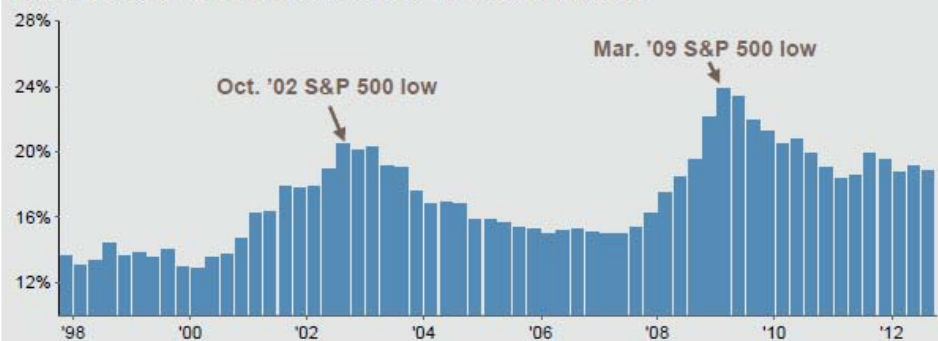
MARKET INSIGHTS

## Cash Accounts

Annual Income Generated by \$100,000 Investment in a 6-month CD



Cash as a % of Total Household Financial Assets



Money Supply Component	\$ Billions	Weight in Money Supply
M2-M1	7,873	76.9%
Retail MMMFs	632	6.2%
Savings deposits	6,596	64.4%
Small time deposits	645	6.3%
Institutional MMMFs	1,733	16.9%
Cash in IRA & Keogh accounts	638	6.2%
<b>Total</b>	<b>10,245</b>	<b>100.0%</b>

Source: Federal Reserve, St. Louis Fed, Bankrate.com, J.P. Morgan Asset Management.

All cash measures obtained from the Federal Reserve are seasonally adjusted monthly numbers. All numbers are in billions of U.S. dollars.

Small-denomination time deposits are those issued in amounts of less than \$100,000. All IRA and Keogh account balances at commercial banks and thrift institutions are subtracted from small time deposits. Annual income is for illustrative purposes and is calculated based on the 6-month CD yield on average during each year and \$100,000 invested. 2012 average income is through November 2012. IRA and Keogh account balances at money market mutual funds are subtracted from retail money funds.

Past performance is not indicative of comparable future results.

Data are as of 12/31/12.

Asset Class

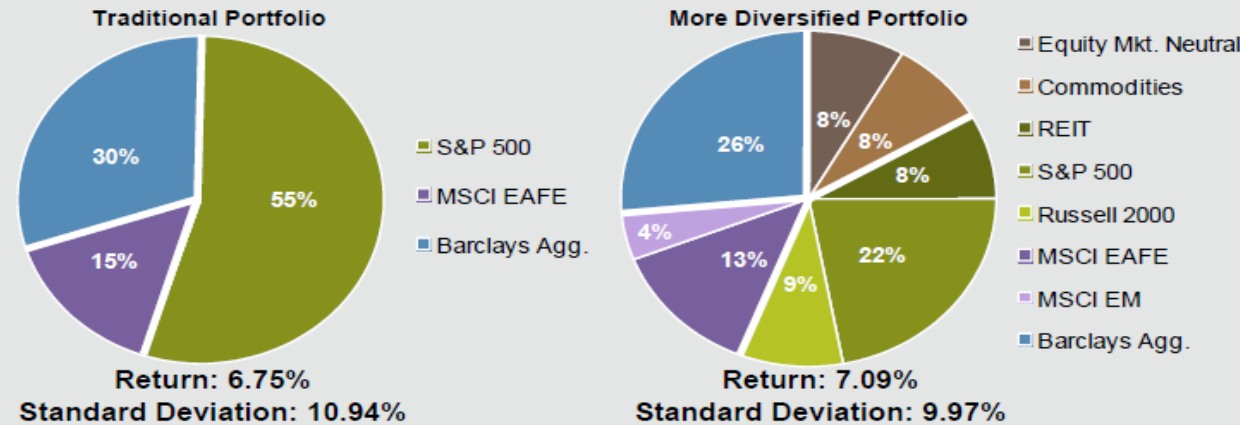
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# Mitigating Portfolio Risk

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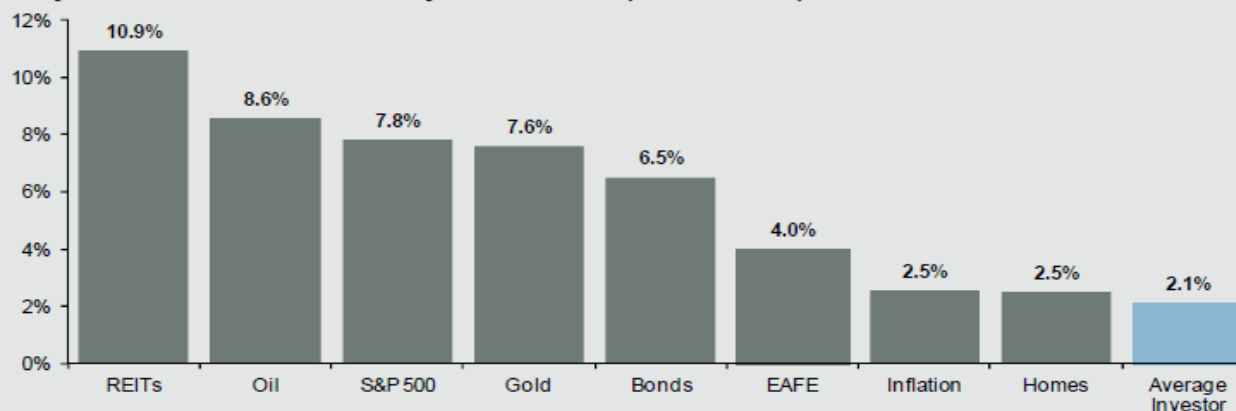
## Diversification and the Average Investor

### Maximizing the Power of Diversification (1994 – 2011)



(Top) Indexes and weights of the traditional portfolio are as follows: U.S. stocks: 55% S&P 500, U.S. bonds: 30% Barclays Capital Aggregate. International stocks: 15% MSCI EAFE. Portfolio with 25% in alternatives is as follows: U.S. stocks: 22.2% S&P 500, 8.8% Russell 2000; International Stocks: 4.4% MSCI EM, 13.2% MSCI EAFE; U.S. Bonds: 26.5% Barclays Capital Aggregate; Alternatives: 8.3% CS/Tremont Equity Market Neutral, 8.3% DJ/UBS Commodities, 8.3% NAREIT Equity REIT Index. Return and standard deviation calculated using Morningstar Direct. Charts are shown for illustrative purposes only. Past returns are no guarantee of future results. Diversification does not guarantee investment returns and does not eliminate risk of loss. Data are as of 12/31/12.

### 20-year Annualized Returns by Asset Class (1992 – 2011)



(Bottom) Indexes used are as follows: REITS: NAREIT Equity REIT Index, EAFE: MSCI EAFE, Oil: WTI Index, Bonds: Barclays Capital U.S. Aggregate Index, Homes: median sale price of existing single-family homes, Gold: USD/troy oz, Inflation: CPI. Average asset allocation investor return is based on an analysis by Dalbar Inc., which utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. Returns are annualized (and total return where applicable) and represent the 20-year period ending 12/31/11 to match Dalbar's most recent analysis.

Asset Class

- Corporate Defined Benefit Plans:
  - Focused on hedging liabilities to maintain stable funding ratio
  - However, requires large cash contributions to get there
  - Freezing and closing plans has been solution
- Public Defined Benefit Plans:
  - Focused on improving funding ratio through asset growth
  - Able to take very long term view on discount rates because tied to asset allocation policy
  - Given mean expected return at current allocations, discount rates of 7.5% and 7.75% are not unreasonable given long term historical asset class returns
- Endowments/Foundations:
  - Spending objectives lower relative to corporate and public DB plan liability funding needs
  - However, current spending must be weighed against future real asset growth ('intergenerational wealth transfer')
  - Modestly scaling back annual spending in order to continue to build wealth

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1. *Do nothing* – expectation is that capital markets will revert to levels more in line with historical norms at some point in future
  2. *Maintain current expected return objectives but at reduced risk* – prevent further funded status erosion from periods of market downside volatility
  3. *Increase growth* – focus less on return from fixed income yields
  4. *Broaden fixed income* – increased exposure to higher yield market segments
    - Can be combined with any of the remaining options