



Westwood

Investing Where It Counts

Income Investors' Needs are Changing Are You Ready?

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Traditional top-down asset allocation approaches follow these steps:

- Identify asset classes they have skill managing (passive or active)
- Forecast asset class returns
- Forecast asset class volatility
- Forecast asset class correlations
- Build efficient portfolios
- Pick “best” one given an arbitrary risk tolerance (one-size-fits-all clients)



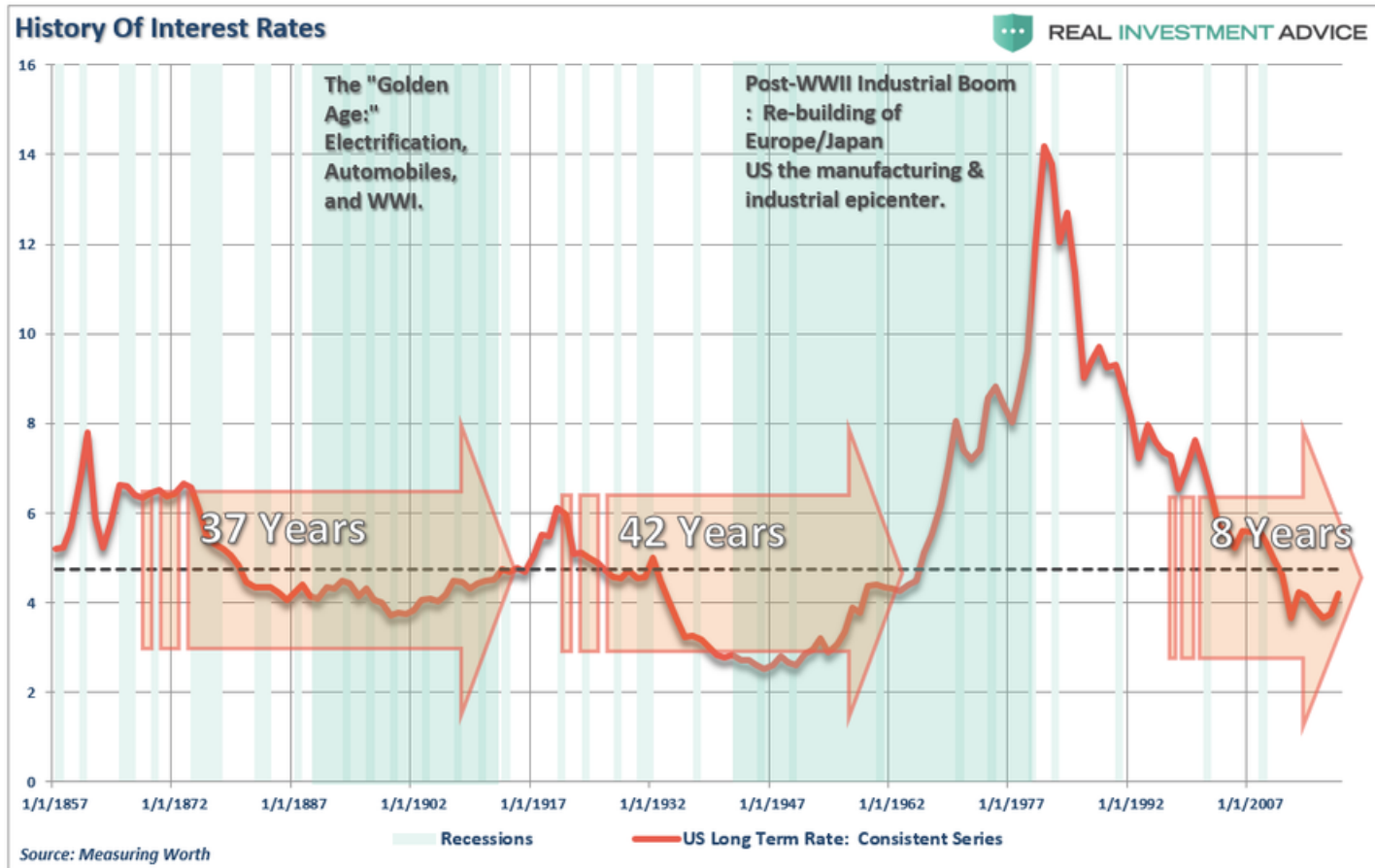
Investing by Autopilot: General Electric (GE)



Purchased over 635 million shares at a cost of \$11.8 billion, now valued at \$4.2 billion.



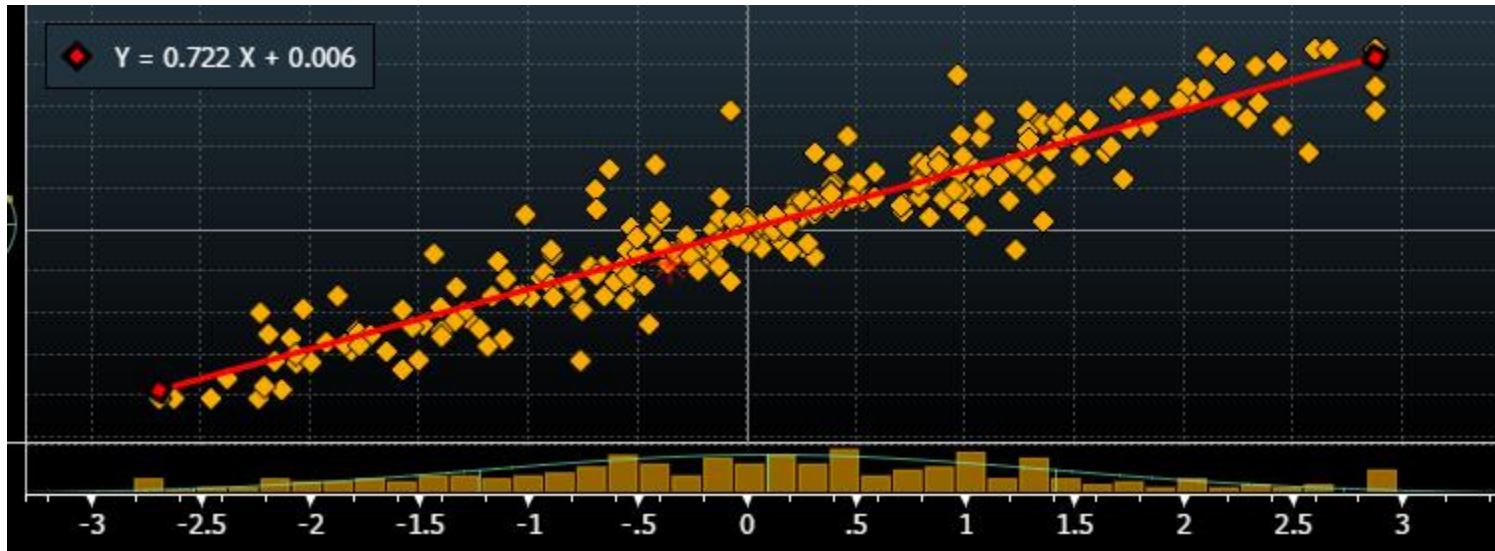
“Interest Rates Can Only Go Up from Here.”



Investment Grade Bonds can have a high degree of interest rate sensitivity

Regression analysis of an Investment Grade Bond vs. 10-Year U.S. Treasury

Yield of AAPL 3.25% 02/23/2026, rated Aa1/AA+, 6.6 year duration vs. yield of UST 10-Year



Source: Bloomberg LP

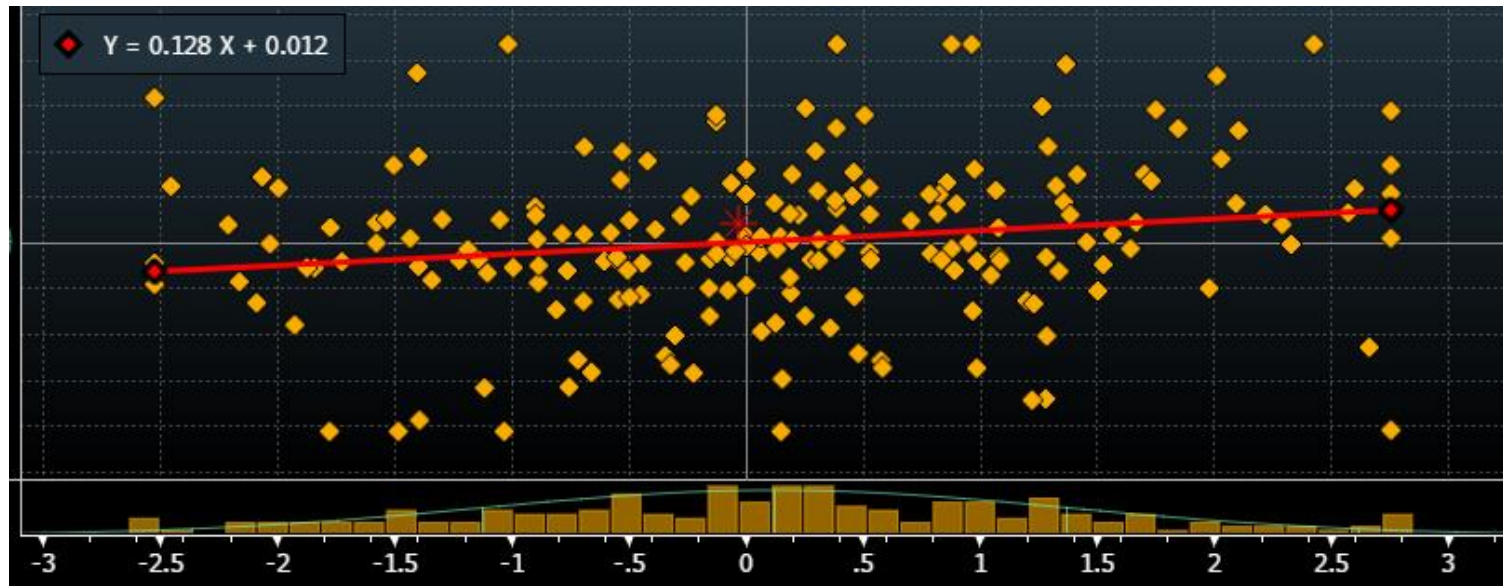
STRONGLY positive relationship, Beta +0.722, Correlation +0.939



High Yield Bonds can have less interest rate sensitivity than IG Bonds

Regression analysis of a High Yield Bond vs. U.S. 10-Year Treasury Note

Yield of ETE 5.5% 06/01/2027, rated Ba2/BB-, 6.9 year duration vs. yield of U.S. Treasury 10-Year Note



Source: Bloomberg

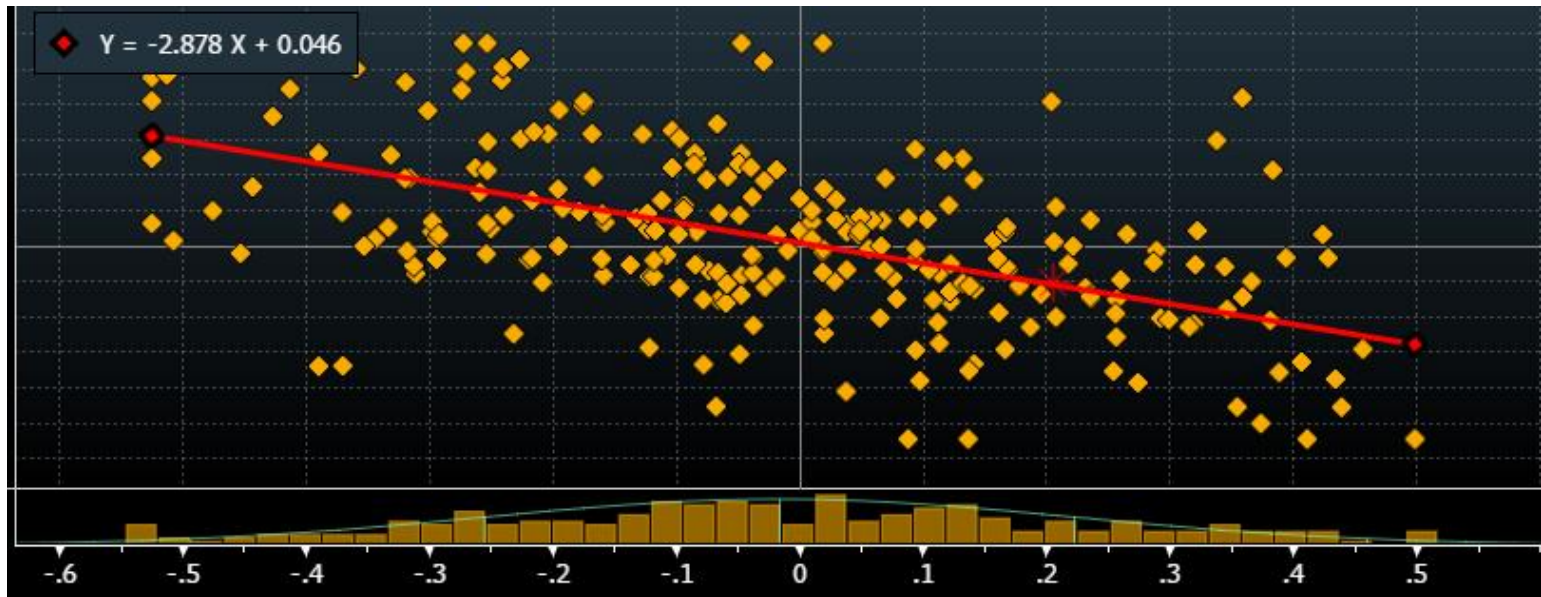
SLIGHTLY positive relationship, Beta +0.128, Correlation +0.182



Common stocks can help offset interest rate risk

Regression analysis of a bank stock vs. IEF 7-10 year US Treasury ETF

Price of BAC vs. price of IEF 7-10 year US Treasury ETF



Source: Bloomberg LP

Strongly NEGATIVE relationship, Beta -2.878, Correlation -0.533



Westwood | Forecasting Returns

| Annual Returns | | | | | | | Monthly Returns | | | | | |
|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Jan 2018 | Feb 2018 | Mar 2018 | Apr 2018 | May 2018 | YTD 2018* |
| U.S. Fixed Income | Real Estate | Small Cap Equity | Real Estate | Large Cap Equity | Small Cap Equity | Emerging Market Equity | Emerging Market Equity | Non-U.S. Fixed Income | Real Estate | Non-U.S. Equity | Small Cap Equity | Small Cap Equity |
| 7.84% | 27.73% | 38.82% | 15.02% | 1.38% | 21.31% | 37.28% | 8.33% | -0.85% | 2.34% | 2.30% | 6.07% | 6.90% |
| High Yield | Emerging Market Equity | Large Cap Equity | Large Cap Equity | U.S. Fixed Income | High Yield | Non-U.S. Equity | Large Cap Equity | High Yield | Non-U.S. Fixed Income | Real Estate | Large Cap Equity | Large Cap Equity |
| 4.98% | 18.23% | 32.39% | 13.69% | 0.55% | 17.13% | 24.21% | 5.73% | -0.85% | 1.43% | 1.96% | 2.41% | 2.02% |
| Non-U.S. Fixed Income | Non-U.S. Equity | Non-U.S. Equity | U.S. Fixed Income | Real Estate | Large Cap Equity | Large Cap Equity | Non-U.S. Equity | U.S. Fixed Income | Small Cap Equity | Small Cap Equity | Real Estate | High Yield |
| 4.36% | 16.41% | 21.02% | 5.97% | -0.79% | 11.96% | 21.83% | 4.66% | -0.95% | 1.29% | 0.86% | 1.65% | -0.24% |
| Large Cap Equity | Small Cap Equity | High Yield | Small Cap Equity | Non-U.S. Equity | Emerging Market Equity | Small Cap Equity | Non-U.S. Fixed Income | Large Cap Equity | U.S. Fixed Income | High Yield | U.S. Fixed Income | Non-U.S. Fixed Income |
| 2.11% | 16.35% | 7.44% | 4.89% | -3.04% | 11.19% | 14.65% | 3.03% | -3.69% | 0.64% | 0.65% | 0.71% | -0.62% |
| Small Cap Equity | Large Cap Equity | Real Estate | High Yield | Small Cap Equity | Real Estate | Non-U.S. Fixed Income | Small Cap Equity | Small Cap Equity | High Yield | Large Cap Equity | High Yield | Real Estate |
| -4.18% | 16.00% | 3.67% | 2.45% | -4.41% | 4.06% | 10.51% | 2.61% | -3.87% | -0.60% | 0.38% | -0.03% | -1.05% |
| Real Estate | High Yield | U.S. Fixed Income | Emerging Market Equity | High Yield | Non-U.S. Equity | Real Estate | High Yield | Emerging Market Equity | Non-U.S. Equity | Emerging Market Equity | Non-U.S. Fixed Income | U.S. Fixed Income |
| -6.46% | 15.81% | -2.02% | -2.19% | -4.47% | 2.75% | 10.36% | 0.60% | -4.61% | -1.73% | -0.44% | -1.87% | -1.50% |
| Non-U.S. Equity | U.S. Fixed Income | Emerging Market Equity | Non-U.S. Fixed Income | Non-U.S. Fixed Income | U.S. Fixed Income | High Yield | Real Estate | Non-U.S. Equity | Emerging Market Equity | U.S. Fixed Income | Non-U.S. Equity | Non-U.S. Equity |
| -12.21% | 4.21% | -2.60% | -3.08% | -6.02% | 2.65% | 7.50% | -0.01% | -4.75% | -1.86% | -0.74% | -1.90% | -1.69% |
| Emerging Market Equity | Non-U.S. Fixed Income | Non-U.S. Fixed Income | Non-U.S. Equity | Emerging Market Equity | Non-U.S. Fixed Income | U.S. Fixed Income | U.S. Fixed Income | Real Estate | Large Cap Equity | Non-U.S. Fixed Income | Emerging Market Equity | Emerging Market Equity |
| -18.42% | 4.09% | -3.08% | -4.32% | -14.92% | 1.49% | 3.54% | -1.15% | -6.70% | -2.54% | -2.27% | -3.54% | -2.61% |

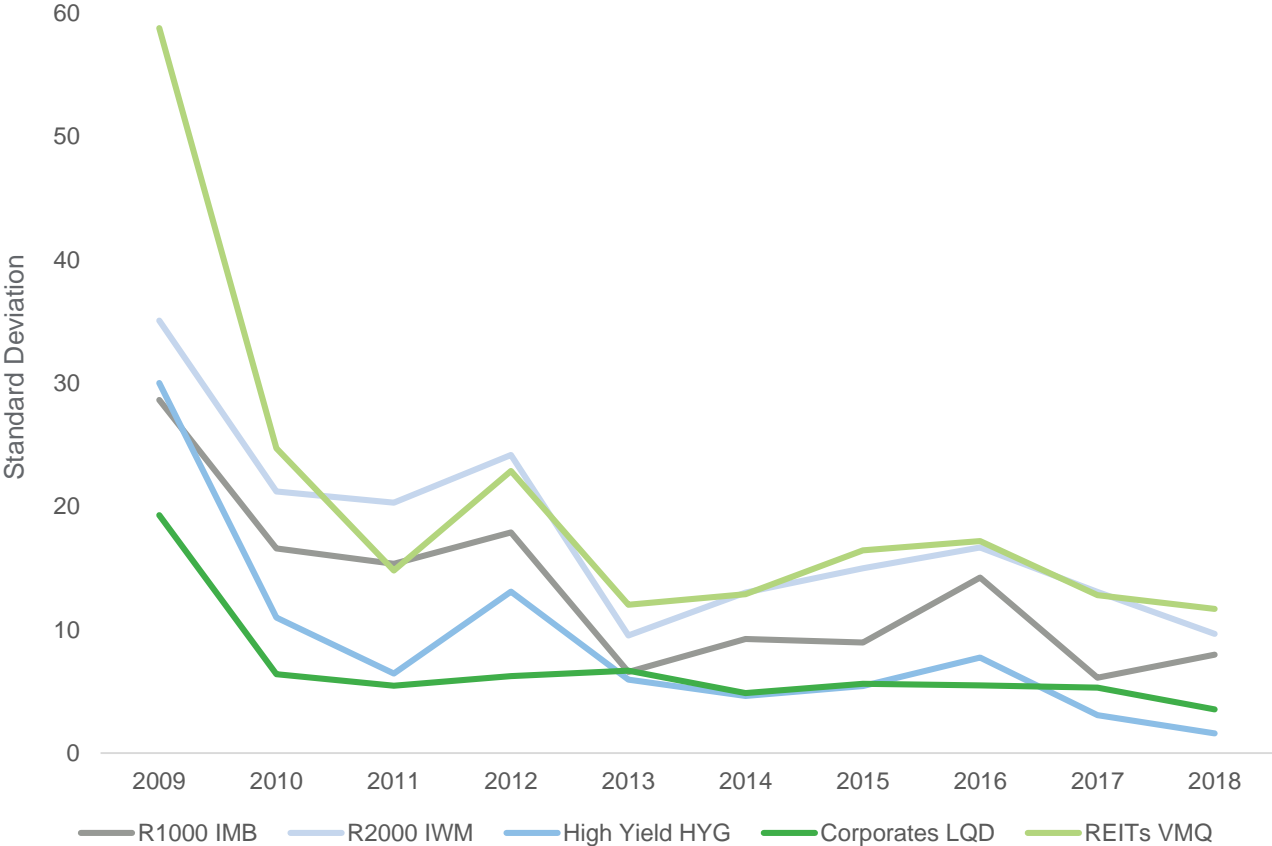
Sources: ● Bloomberg Barclays Aggregate ● Bloomberg Barclays Corp High Yield ● Bloomberg Barclays Global Aggregate ex US

● EPRA/NAREIT Developed ● MSCI World ex USA ● MSCI Emerging Markets ● Russell 2000 ● S&P500

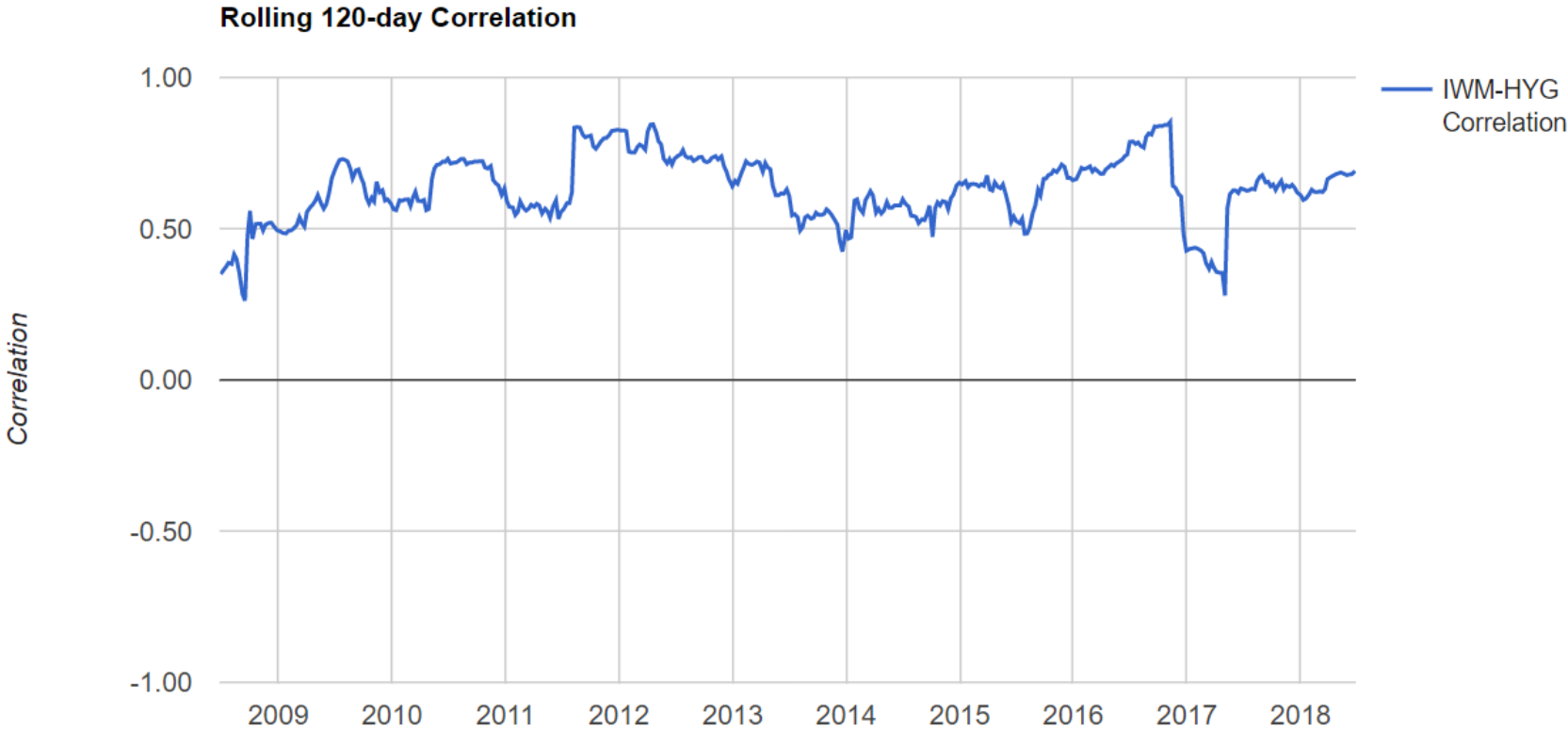
*As of 6/30/2018 © 2018 Callan LLC



Risk Changes Over Time
Annualized Standard Deviation



Correlations Change Over Time Small Cap Stocks vs. High Yield Corporates



Portfolio risk can be managed through:

Research / Diversification

- Research companies thoroughly; monitor positions in real time.
- Reassess securities that have dropped by 10%+.
- Encourage all members of Westwood's investment teams to contribute.
- Diversify the portfolio across industries and asset classes.
- Limit single-issuer exposure to 5% or less.

Investment Process

- Add, trim or eliminate positions when risk / reward balance changes.
- Take measures to reduce interest-rate risk.
- Act when a security reaches intrinsic value or on investment thesis change.

Maintaining Liquidity

- Hold multiple securities of a single issuer.
- Limit position size to 10% or less of any single issue.
- Invest in securities that are publicly traded.

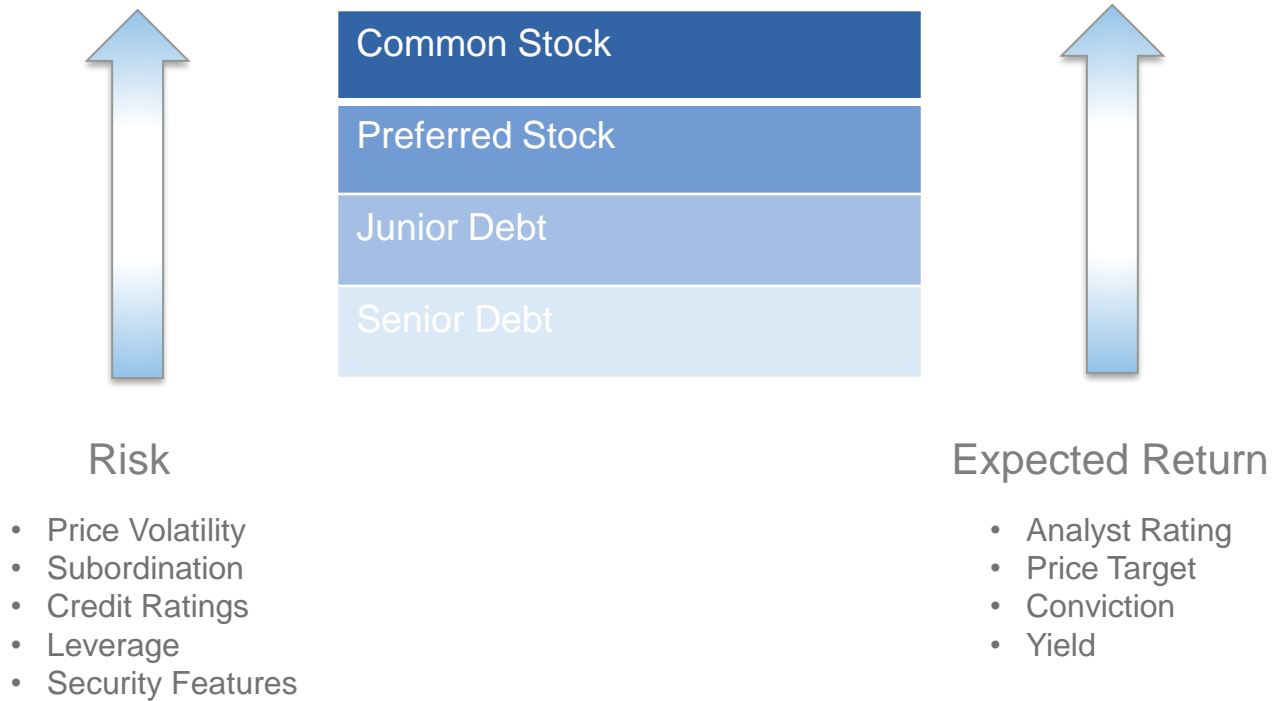


Interest rate risk can be reduced through holding securities with:

- Fixed-rate to floating-rate features
- Higher coupons
- Shorter durations
- Low, or *negative* interest-rate betas and correlations



Weighing Risk and Reward



- *Holistic Investing* – Combines Fixed Income (credit risk, spreads and interest rates) and Equity (company and industry analysis) investment disciplines.
- *Capital Structure Analysis* – Invests in the optimal part of a firm's capital structure based upon a review of expected returns, volatility and subordination.
- *Risk-Efficient* – Seeks to invest in securities that demonstrate the best risk / reward opportunities.
- *Dual Valuation Test* – At the asset class (Equity, HY, IG) **and** capital structure (Senior, Junior, Equity) level.
- *Factor Analysis* – Uses beta and correlation measures to manage portfolio sensitivity to interest rates and other risks.

