55ip Risk Management Capabilities

55ip provides portfolio construction and rebalancing algorithms aimed at protecting investors from extreme losses through increased diversification in various market conditions.

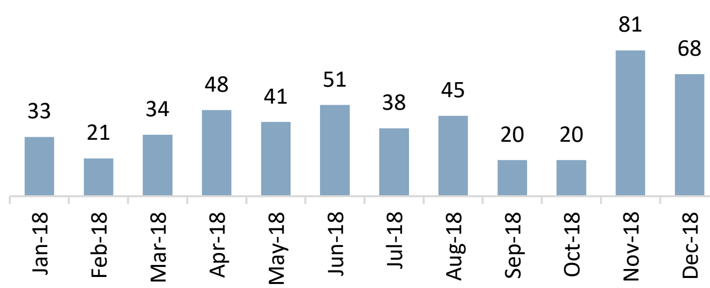
55ip believes asset class diversification is a necessary step to capital preservation. Yet, it is not sufficient. The effectiveness of diversification is limited in market conditions when there is a high degree of correlation among asset classes. We help advisors build broadly diversified portfolios and leverage investment science to address the limitations of diversification by dynamically adjusting asset allocation from higher volatility assets such as equities to lower volatility assets such as short duration fixed income.

55ip Market Risk Indicator (MRI) – Overview and 2018 Trends

55ip MRI guides allocation among global equities and a shelter basket (cash equivalents and other stable asset classes) to protect investors from extreme losses due to correlated and down markets. Based on the 55ip MRI score, exposure is dynamically adjusted to minimize the drag due to such allocation while aiming to provide protection when most needed. This becomes significantly important for investors who are averse to losses because of income or other needs.

55ip Market Risk Indicator (MRI) score ranged from 20 (in September and October) to 81 (in November) in 2018, averaging 41.5 through the year. At the beginning of the year, MRI was in the low-medium range of 20-30 and trended higher over the course of the year to end at a value of 68.

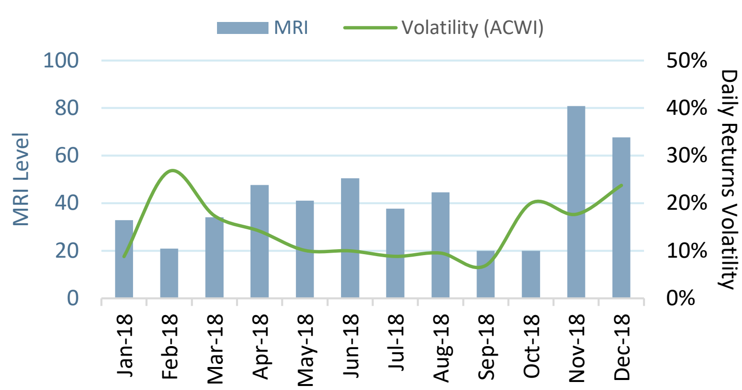
55ip MRI in 2018



Equity Volatility & MRI

Higher MRI levels are expected to predict the increased likelihood of bigger moves in markets. This was seen in 2018. Using daily moves in the broad-based global equity markets ETF "ACWI" during a month, the monthly volatility tracked with the varying levels of MRI as seen in the chart. As a result, on an average, the use of MRI helped to shield investors from higher risk by decreasing allocations from equity markets to safer short duration fixed income assets when volatility increased in equity markets.

55ip MRI vs Volatility of ACWI
Jan 2018 to Dec 2018



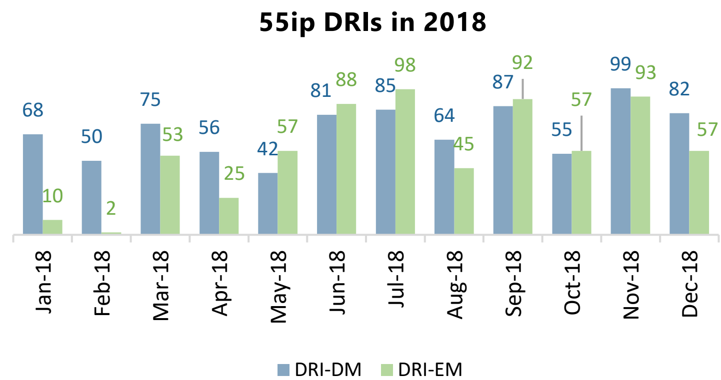
Source: ACWI ETF daily returns from Thomson Reuters. Volatility (ACWI) is the annualized standard deviation of ACWI daily returns.

In 2018, higher volatility ended up resolving with a decline in equity markets. De-allocation to equities by employing MRI helped to protect investors from this volatility and enhanced returns by lowering the compounding effect of negative returns.

55ip Diversification Risk Indicators (DRI) – Overview and 2018 Trends

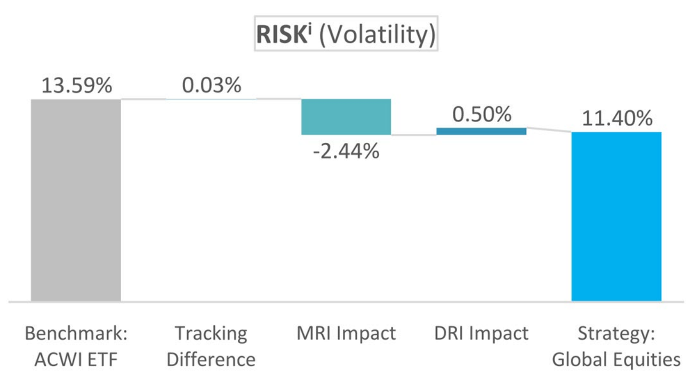
55ip DRI guides allocation among US and non-US equities to protect from times when international exposure could lead to increased risk instead of diversification and risk reduction. This score is comprised of two regional components. DRI for Emerging Markets (DRI-EM) guides allocation between emerging market equities and US domestic markets. DRI for Developed Markets (ex-US) (DRI-DM) guides allocation between developed market equities and US domestic markets.

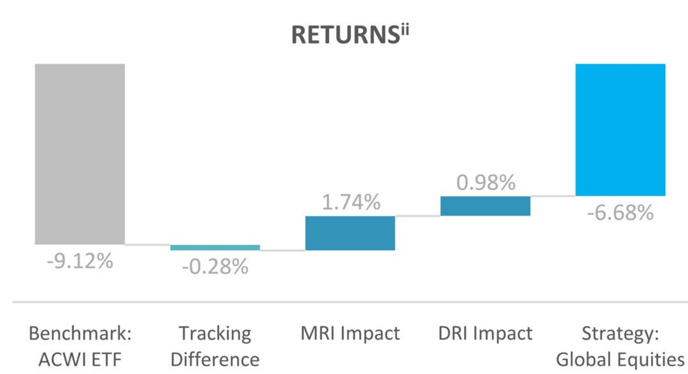
55ip Diversification Risk Indicator (DRI) for Developed markets (DRI-DM) score ranged from 42 (in May) to 99 (in November) in 2018, averaging 70.2 through the year.
For Emerging markets, the DRI score (DRI-EM) ranged from 2 (in February) to 98 (in July) in 2018, averaging 56.4 though the year.



GLOBAL EQUITIES Strategy - powered by 55ip[1]

Risk Managment Impact for 2018



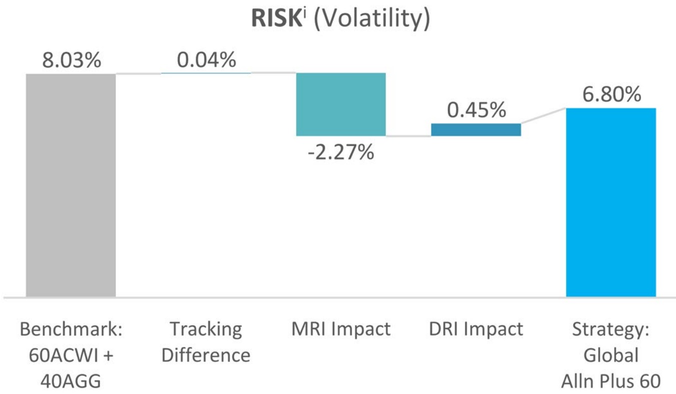


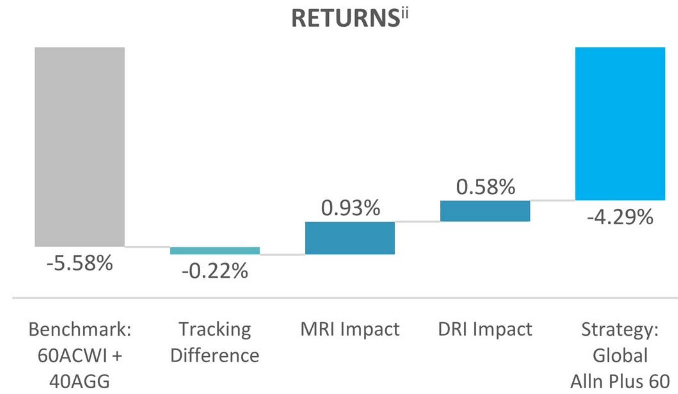
For the standard Global Equities strategy, 55ip's Risk indicators delivered lower volatility and superior risk-adjusted returns compared to the benchmark ACWI ETF. **Compared to ACWI, the strategy delivered 16.1% lower volatility** (11.40% vs 13.59%) and **27% improved returns**, net of fees (-6.68% vs -9.12%) for the year**.** The static strategy (without MRI and DRI) tracked the benchmark closely, with 0.28% lower return and similar volatility. Employing 55ip's MRI enhanced returns by 1.74% and reduced volatility by 18%. 55ip DRIs further increased return by 0.98% with slight increase in volatility (~4%).

[i] Risk is measured as volatility of returns - the annualized standard deviation of monthly returns for the year 2018.
[ii] Returns are the total returns for the calendar year 2018, net of fees. Trading costs and slippages, which vary by account size, are not considered.

GLOBAL ALLOCATION PLUS 60 Strategy - powered by 55ip[1]

Risk Management Impact for 2018





For the standard Global Allocation Plus 60 strategy – with Equities and Fixed Income sleeves at weights of 60% and 40% respectively, 55ip's Risk indicators similarly delivered lower volatility and superior risk-adjusted returns compared to the benchmark 60% ACWI + 40% AGG ETFs. **The strategy delivered 15.3% lower volatility** (6.8% vs. 8.03%) **and 23% improved returns, net of fees** (-4.29% vs. -5.58) compared to the benchmark for the year. While 55ip's MRI enhanced returns by 0.93% and reduced volatility by ~17%, 55ip DRIs further increased return by 0.58% with slight increase in volatility (~3%). The static strategy (without MRI and DRI) tracked the benchmark closely with 0.22% lower return and similar volatility through the year.

Please contact us with any questions at 617.960.9559.

[1] Results represent model returns of a 100% global equities strategy and 60% equities/40% bonds strategy, powered by 55ip. It does not represent actual returns for any particular client account, as investment fees, trading costs and returns might differ. Past performance does not guarantee future results.

[i] Risk is measured as volatility of returns - the annualized standard deviation of monthly returns for the year 2018.
[ii] Returns are the total returns for the calendar year 2018, net of fees. Trading costs and slippages, which vary by account size, are not considered.