



# TACTICAL ASSET CLASS ROTATION MODEL

March 30, 2018



Darius Dale

MACRO

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# COMMON SENSE RISK MANAGEMENT

- The primary function of **TACRM** is to signal to investors regime change at the primary asset class level for the purposes of risk managing a diversified global portfolio.
- **TACRM** accomplishes this goal by quantifying momentum at the individual factor exposure level within a particular asset class and then relating said momentum to the respective levels of breadth within each of the other asset classes.
- **TACRM** quantifies momentum by sequencing changes in Sharpe Ratios across multiple durations. In an era where systematic trading is increasingly dominant, investors must increasingly shun analyzing global macro risk through single-factor lens such as price, in favor of a multi-factor (e.g. price, volume and volatility), multi-duration (e.g. short-term, intermediate-term and long-term) approach that adheres to the principles of modern day risk management.

## MULTI-FACTOR, MULTI-DURATION

By sequencing changes in Sharpe Ratios, **TACRM** employs volatility as a leading indicator for price returns. **TACRM** produces a dynamic asset allocation by proportionally rotating into asset classes where its proprietary risk management signals are relatively most bullish in lieu of asset classes where they are relatively most bearish. The cash allocation is equal to the proportion of asset classes where the ratio of bearish signals exceeds bullish signals.

# NOTEWORTHY UPGRADES TO THE MODEL

## ~~TACRM 1.0~~

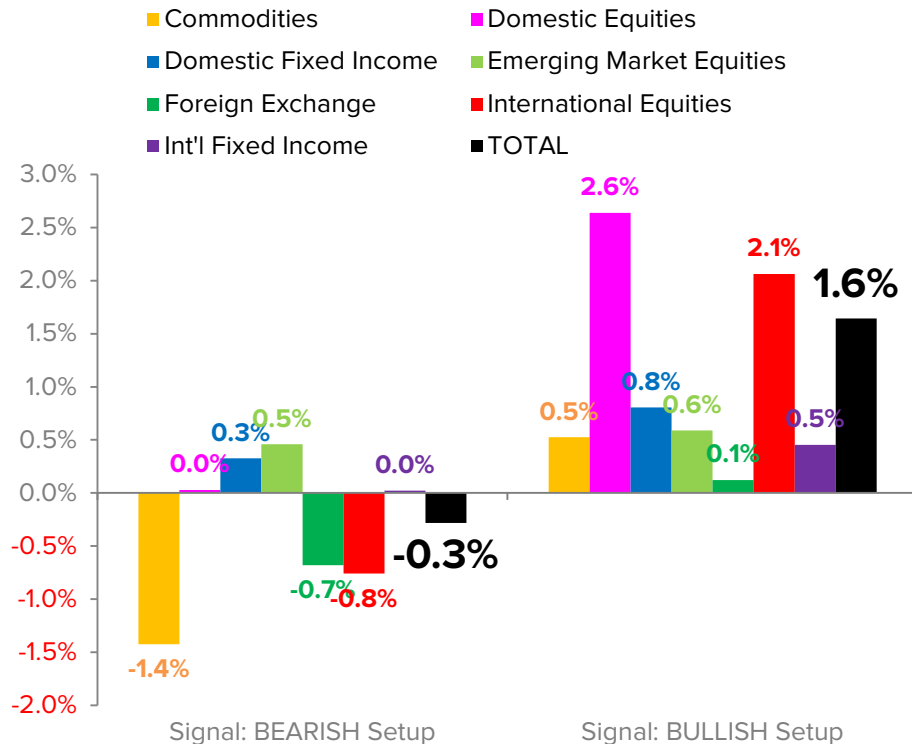
- Explicit focus on PRICE
- SEQUENCE agnostic
- No ASSET ALLOCATION;  
independent signals at the  
primary asset class level

## TACRM 2.0

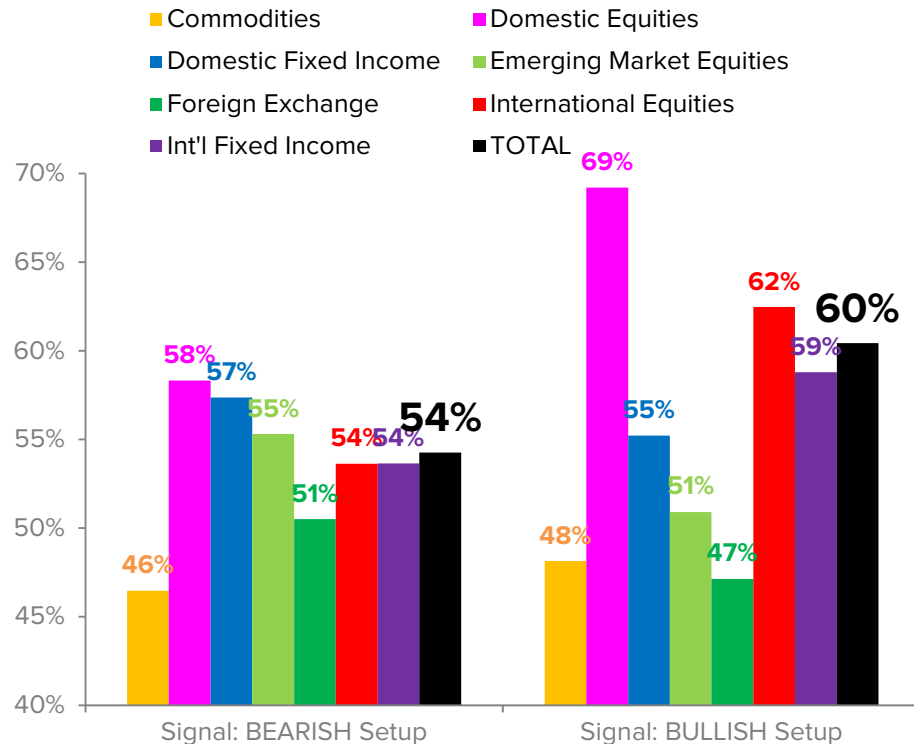
- Explicit focus on VOLATILITY as  
a leading indicator of PRICE
- Explicit focus on SEQUENCE as  
a leading indicator of RETURNS
- Proportional signals produce a  
dynamic ASSET ALLOCATION  
with an explicit focus on using  
CASH as a timely weapon

# BACKTESTING TACRM SIGNALS

## EXPECTED VALUE, 3-MONTHS FORWARD

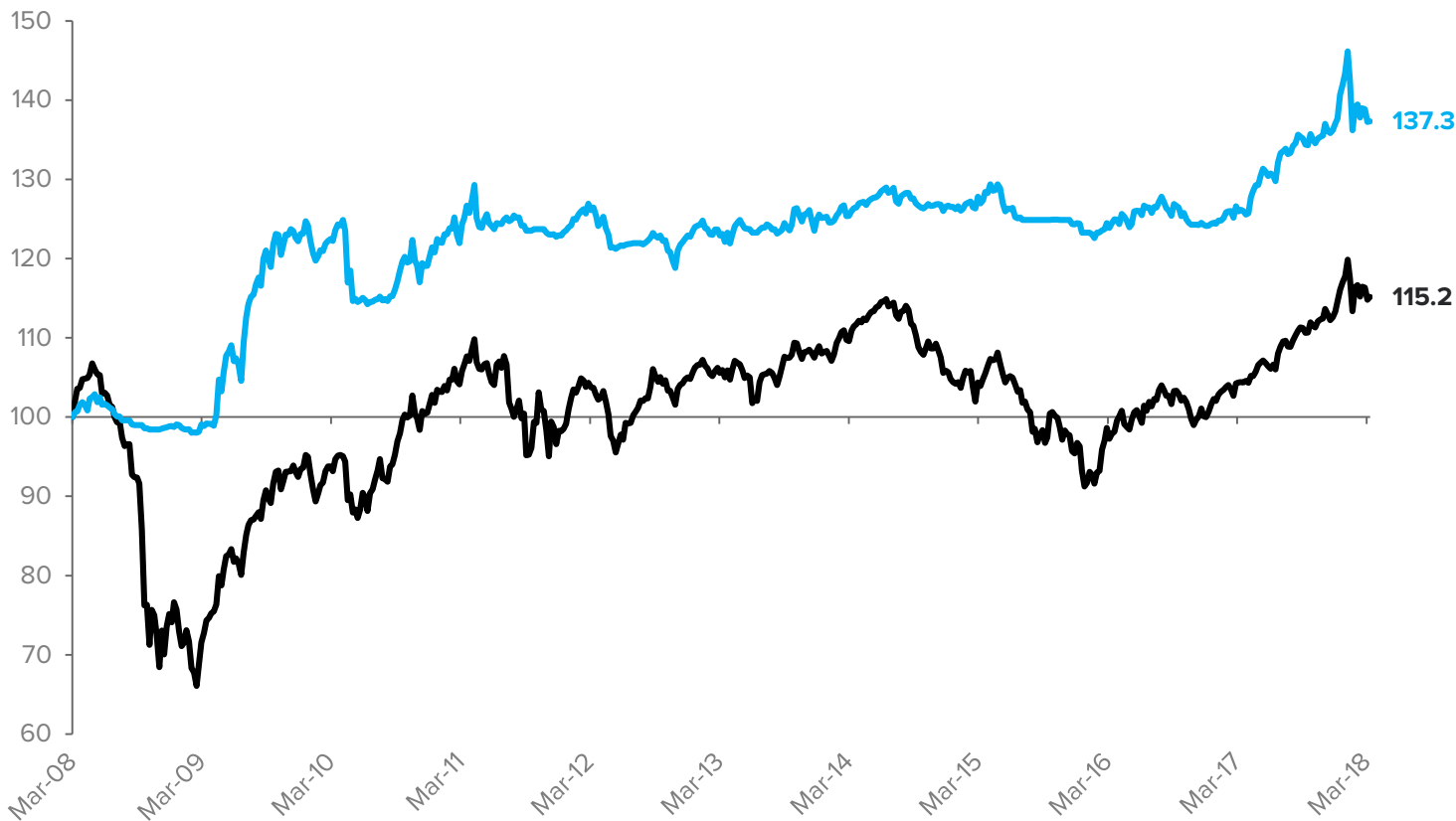


## PERCENT POSITIVE RATIO, 3-MONTHS FORWARD



# TRAILING 10-YEAR BACKTEST RESULTS

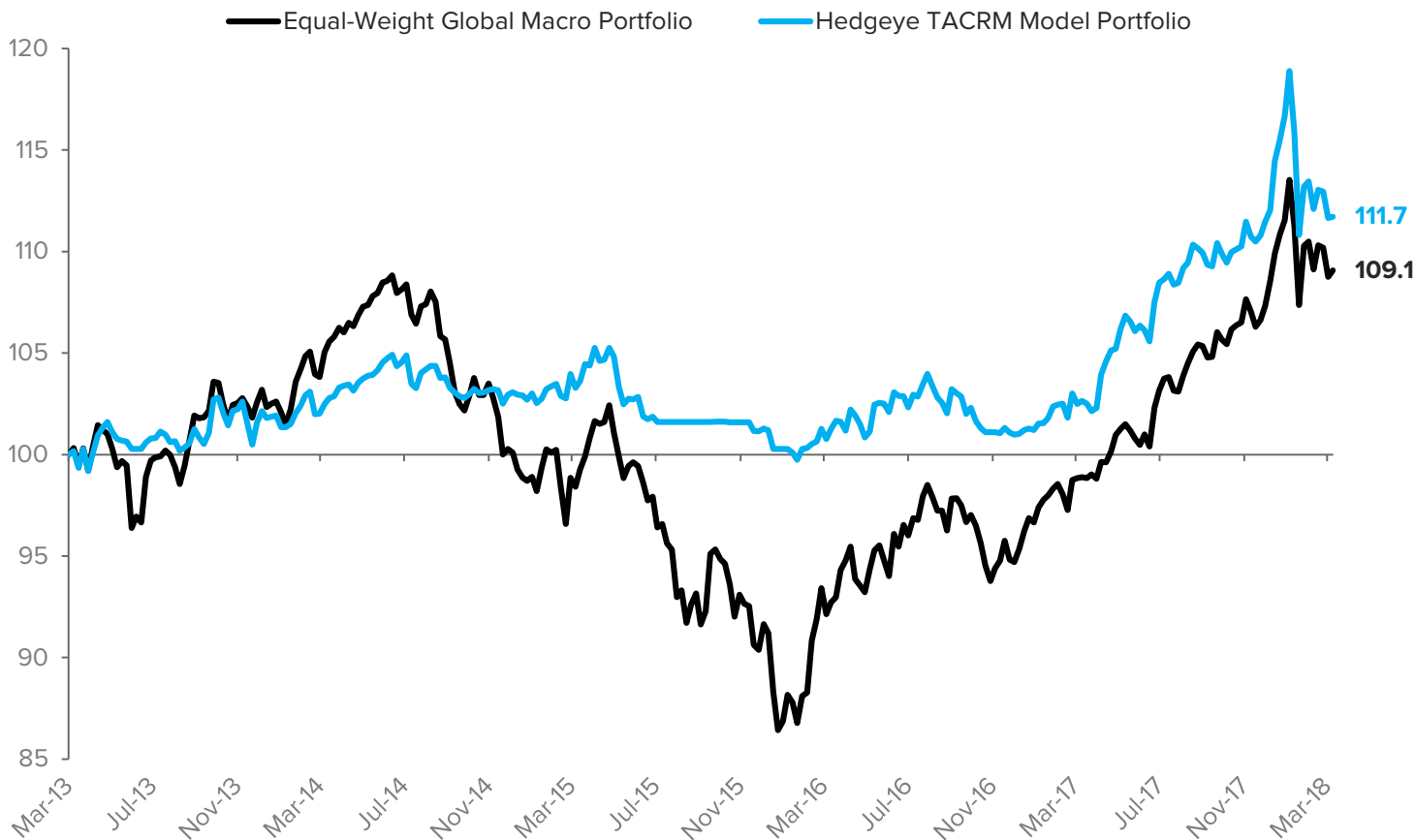
— Equal-Weight Global Macro Portfolio    — Hedgeye TACRM Model Portfolio



## Backtest Parameters: TACRM

formulates a model portfolio by going naked long each of the following asset class benchmarks in proportion to the dynamic asset allocation weights: Commodities (CRB Index), Domestic Equities (S&P 500), Domestic Fixed Income (Barclays U.S. Aggregate Index), Emerging Market Equities (MSCI EM Index), Foreign Exchange (Bloomberg Dollar Inverse Index), International Equities (MSCI All-Country World ex-U.S. Index) and International Fixed Income (Barclays Global ex-U.S. Aggregate Index). The weighting of each asset class is capped at 33% of the overall portfolio. Assets are allocated exclusively to the three asset classes with the highest ratio of bullish signals to bearish signals at the factor exposure levels and does so on a trending basis to simulate real-world trading conditions. The cash allocation is equal to the proportion of asset classes where the ratio of bearish signals exceeds bullish signals.

# TRAILING 5-YEAR BACKTEST RESULTS

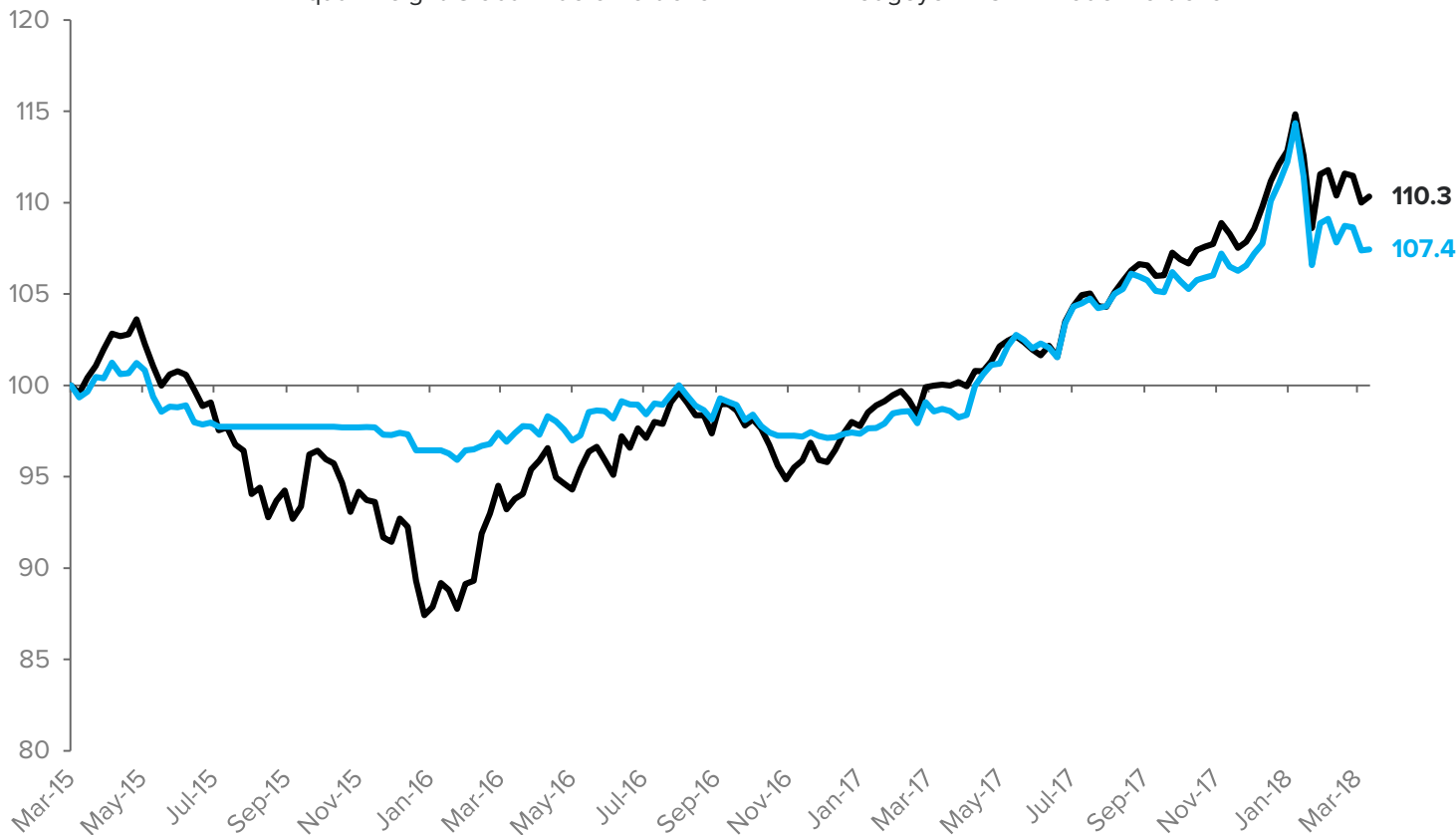


## Backtest Parameters: TACRM

formulates a model portfolio by going naked long each of the following asset class benchmarks in proportion to the dynamic asset allocation weights: Commodities (CRB Index), Domestic Equities (S&P 500), Domestic Fixed Income (Barclays U.S. Aggregate Index), Emerging Market Equities (MSCI EM Index), Foreign Exchange (Bloomberg Dollar Inverse Index), International Equities (MSCI All-Country World ex-U.S. Index) and International Fixed Income (Barclays Global ex-U.S. Aggregate Index). The weighting of each asset class is capped at 33% of the overall portfolio. Assets are allocated exclusively to the three asset classes with the highest ratio of bullish signals to bearish signals at the factor exposure levels and does so on a trending basis to simulate real-world trading conditions. The cash allocation is equal to the proportion of asset classes where the ratio of bearish signals exceeds bullish signals.

# TRAILING 3-YEAR BACKTEST RESULTS

— Equal-Weight Global Macro Portfolio      — Hedgeye TACRM Model Portfolio



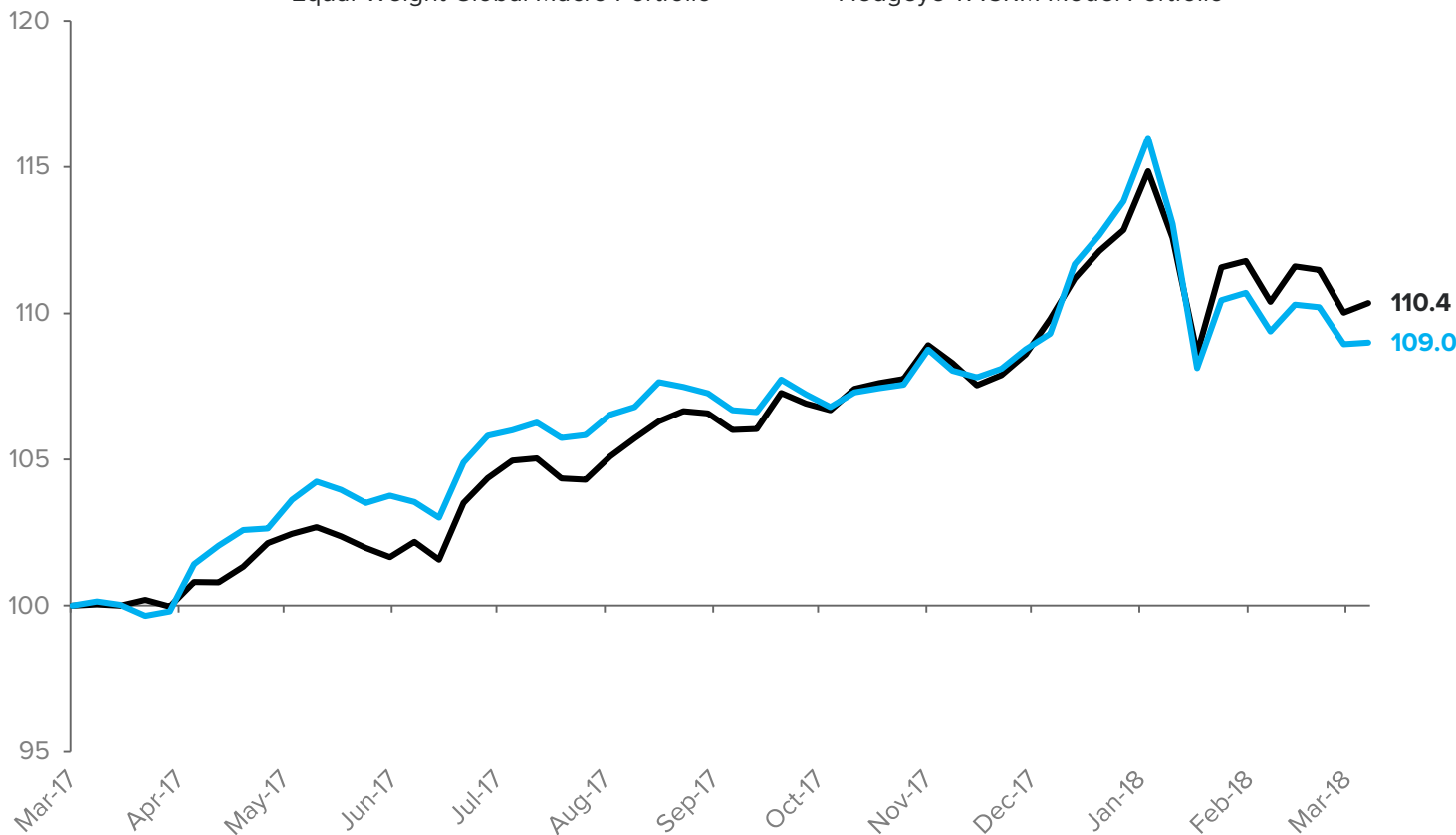
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# TRAILING 1-YEAR BACKTEST RESULTS

— Equal-Weight Global Macro Portfolio      — Hedgeye TACRM Model Portfolio



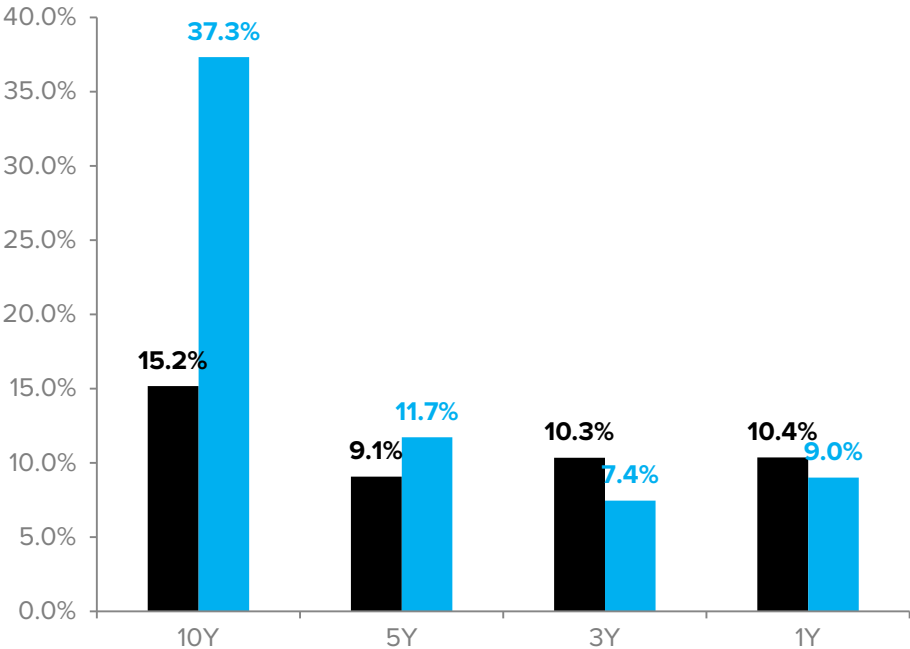
## Backtest Parameters: TACRM

formulates a model portfolio by going naked long each of the following asset class benchmarks in proportion to the dynamic asset allocation weights: Commodities (CRB Index), Domestic Equities (S&P 500), Domestic Fixed Income (Barclays U.S. Aggregate Index), Emerging Market Equities (MSCI EM Index), Foreign Exchange (Bloomberg Dollar Inverse Index), International Equities (MSCI All-Country World ex-U.S. Index) and International Fixed Income (Barclays Global ex-U.S. Aggregate Index). The weighting of each asset class is capped at 33% of the overall portfolio. Assets are allocated exclusively to the three asset classes with the highest ratio of bullish signals to bearish signals at the factor exposure levels and does so on a trending basis to simulate real-world trading conditions. The cash allocation is equal to the proportion of asset classes where the ratio of bearish signals exceeds bullish signals.

# COMPREHENSIVE BACKTEST RESULTS

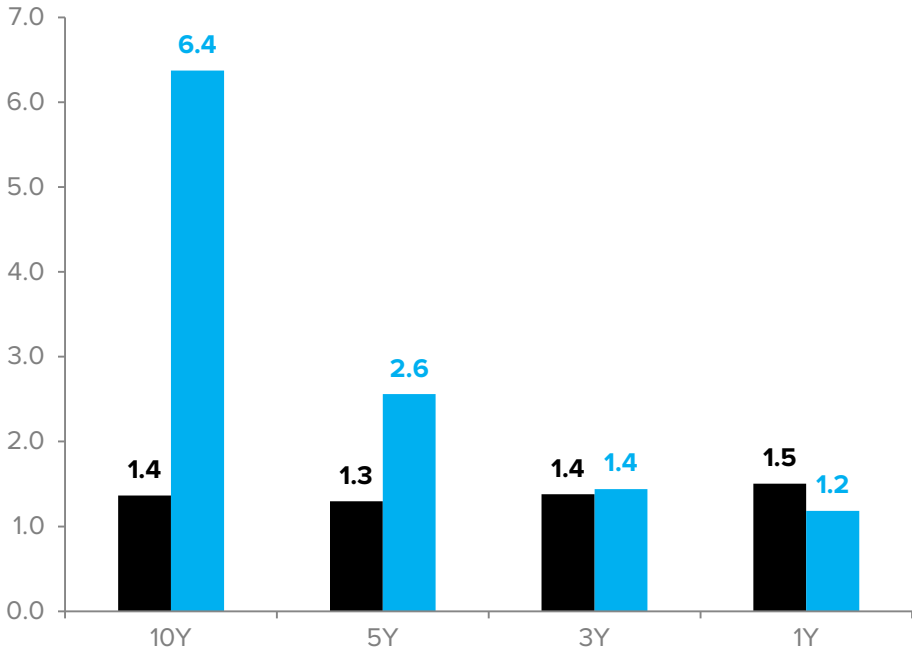
TRAILING PERFORMANCE

■ Equal-Weight Global Macro Portfolio  
■ Hedgeye TACRM Model Portfolio

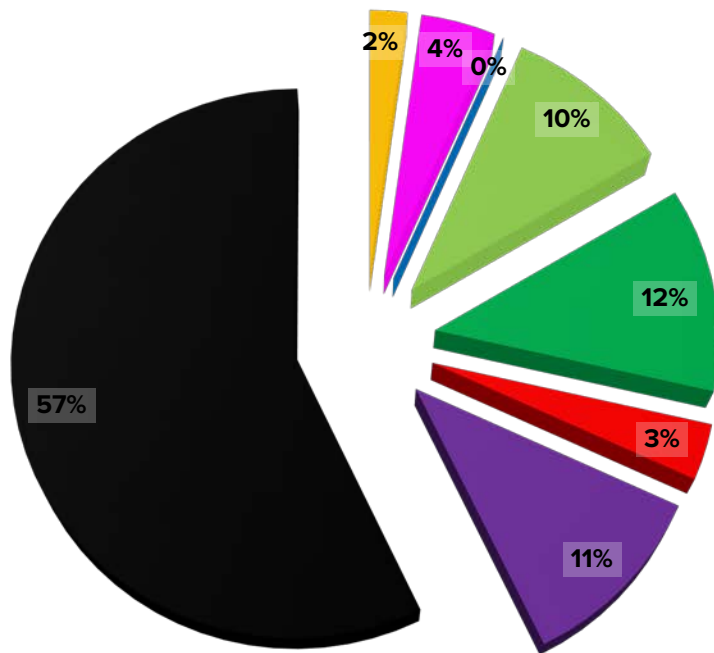
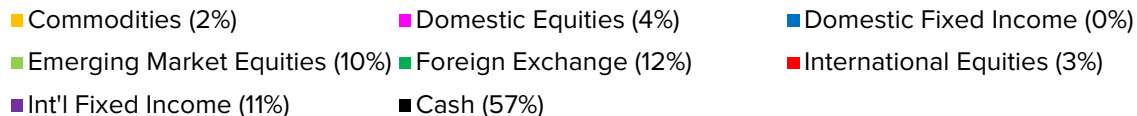


SHARPE RATIOS

■ Equal-Weight Global Macro Portfolio  
■ Hedgeye TACRM Model Portfolio



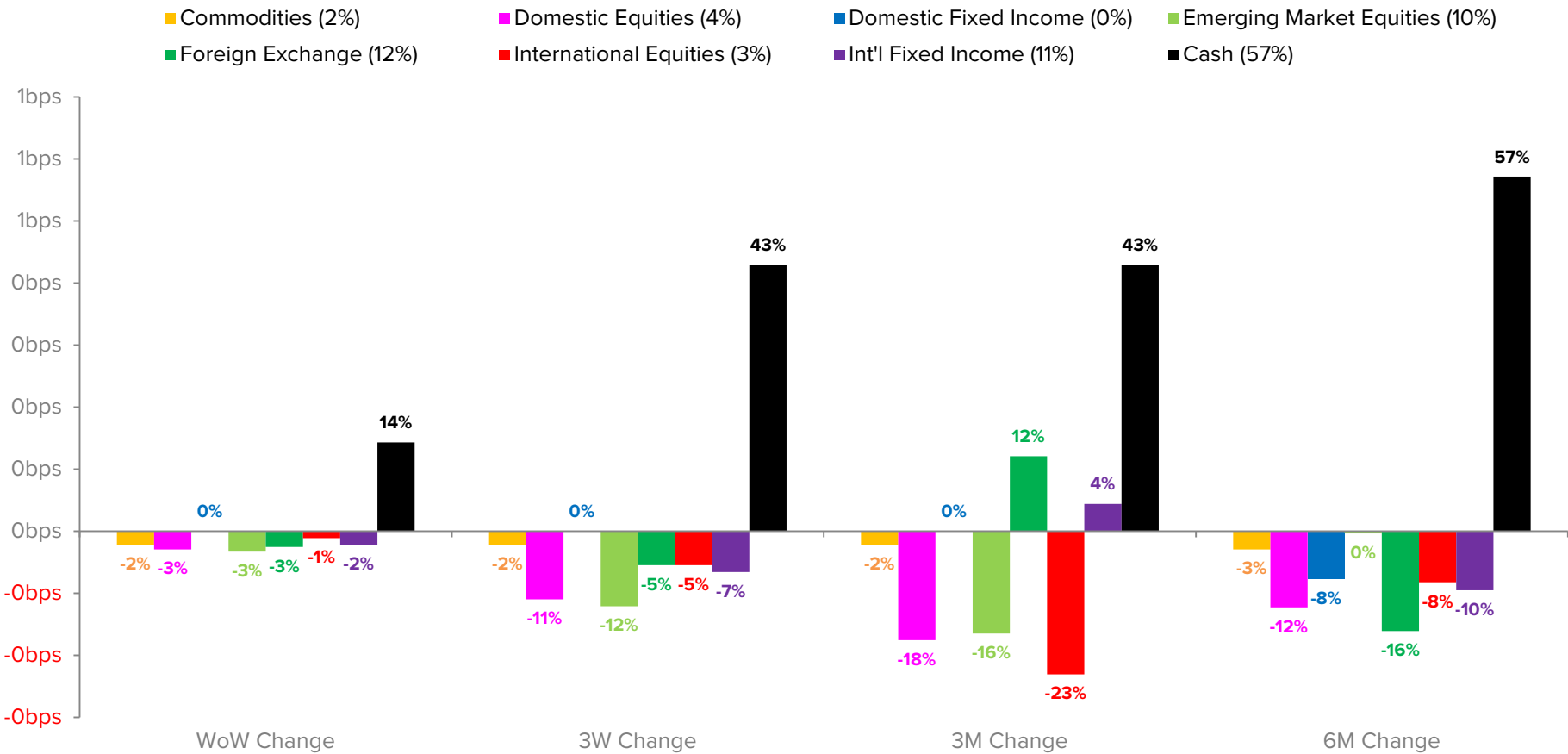
# DYNAMIC ASSET ALLOCATION SNAPSHOT



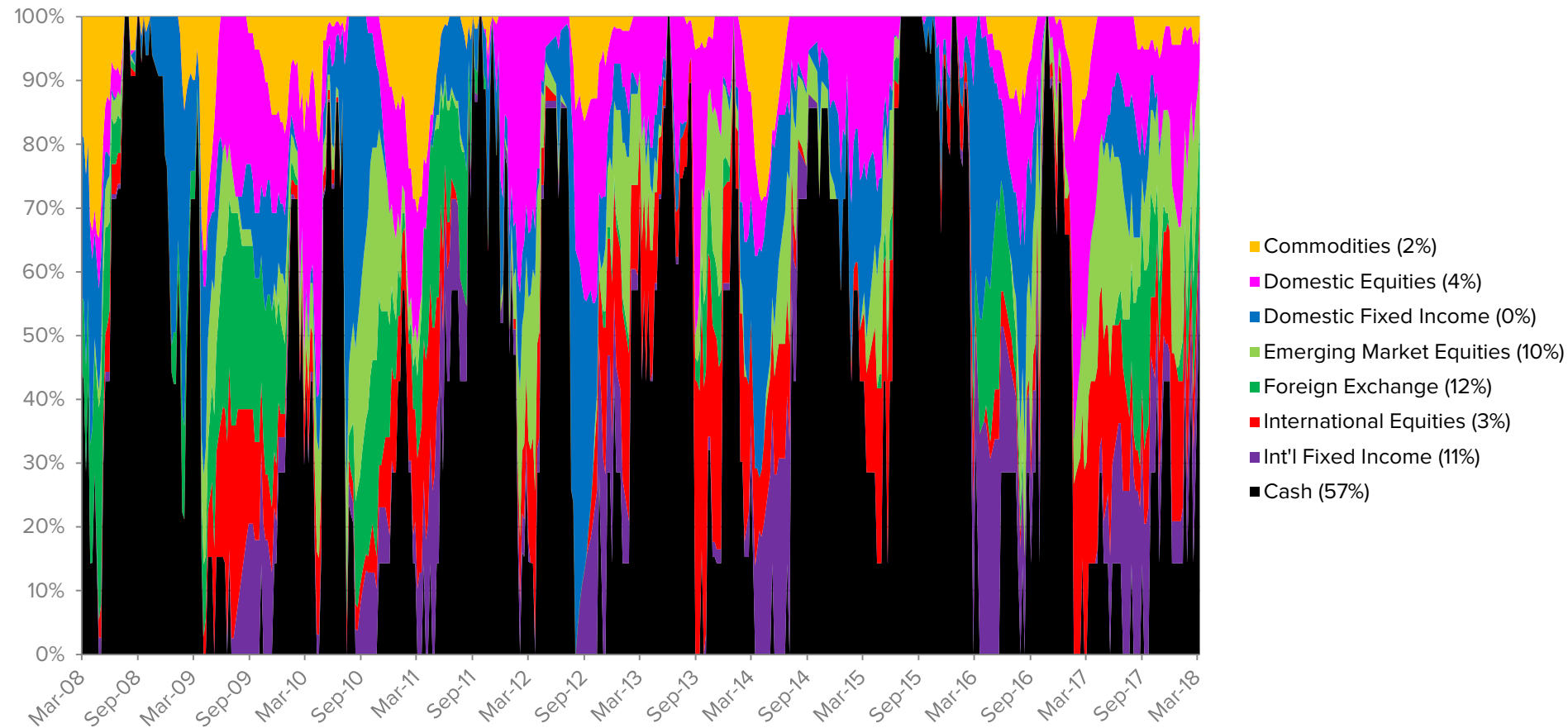
By sequencing changes in Sharpe Ratios and flagging opportunistic setups on the long and short side, **TACRM** employs volatility as a leading indicator for price returns. **TACRM** produces a dynamic asset allocation by proportionally rotating into asset classes where its proprietary risk management signals are relatively most bullish in lieu of asset classes where they are relatively most bearish.

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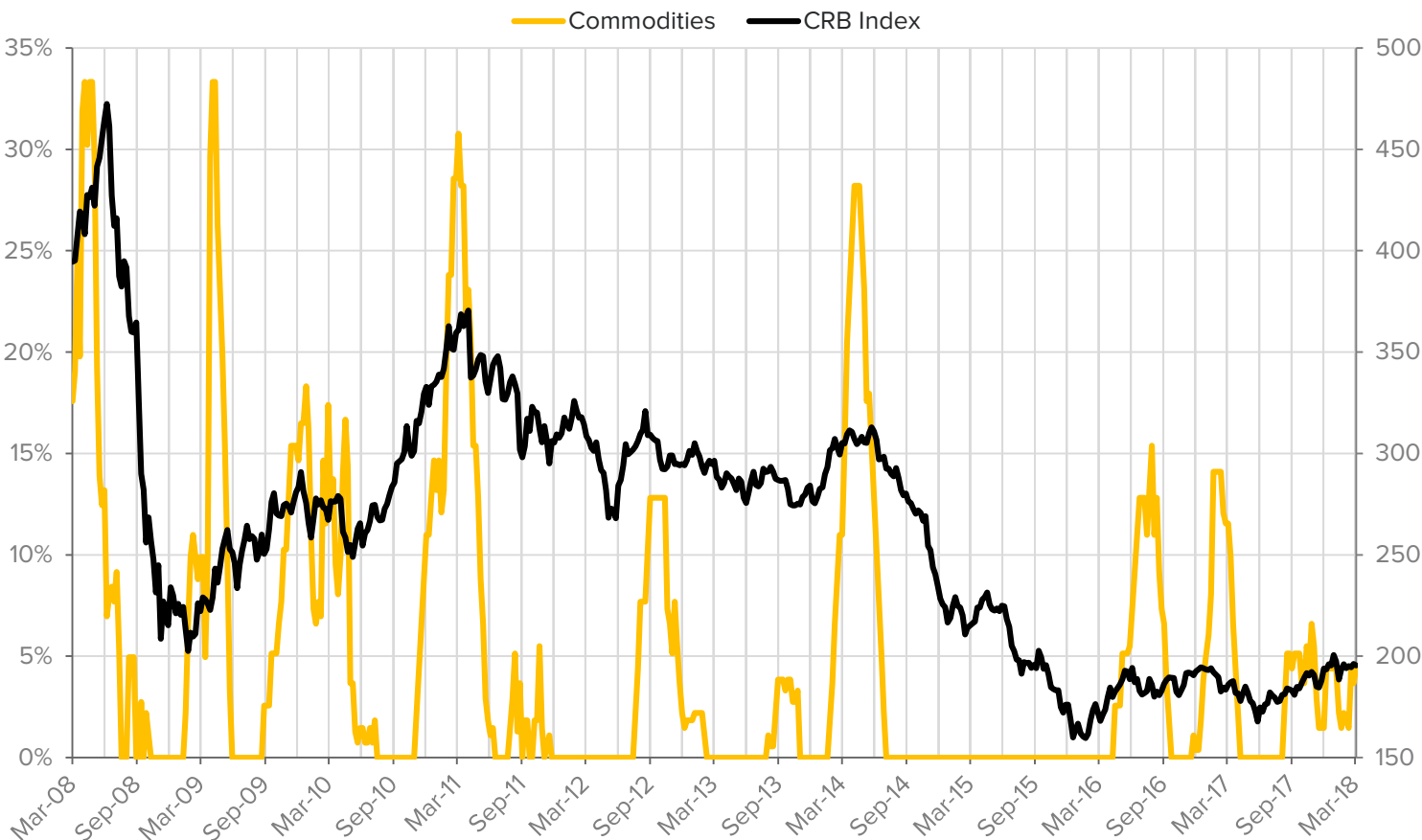
# DYNAMIC ASSET ALLOCATION TRENDS



# DYNAMIC ASSET ALLOCATION TRAILING 10Y



# DYNAMIC A/A: COMMODITIES



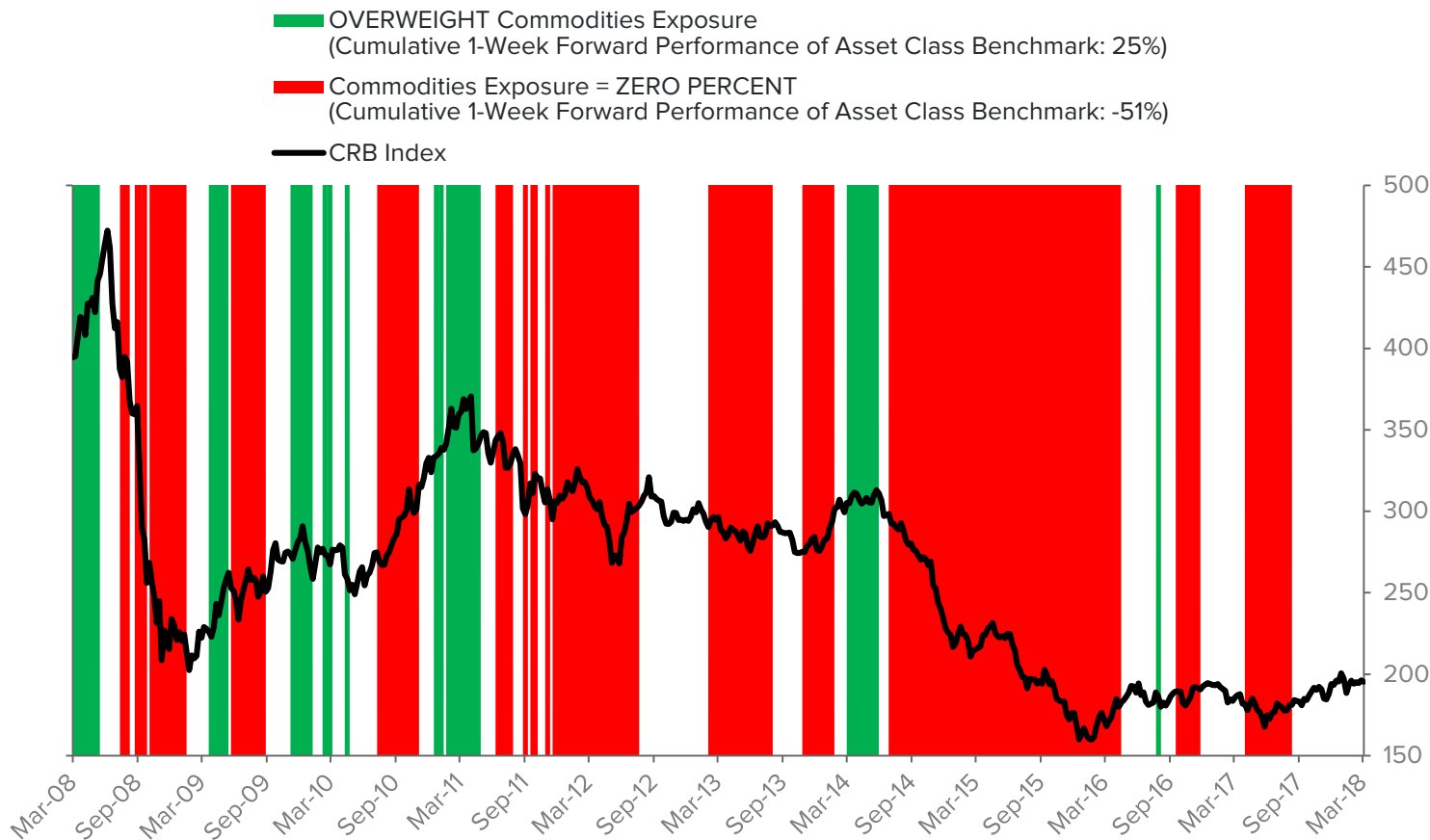
DATA SOURCE: BLOOMBERG

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By sequencing changes in Sharpe Ratios and flagging opportunistic setups on the long and short side, [TACRM](#) employs volatility as a leading indicator for price returns. [TACRM](#) produces a dynamic asset allocation by proportionally rotating into asset classes where its proprietary risk management signals are relatively most bullish in lieu of asset classes where they are relatively most bearish.

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# DYNAMIC A/A: COMMODITIES



An investor managing global macro risk with [TACRM's](#) dynamic asset allocation framework would've been:

- **OVERWEIGHT\*** Commodities from early-NOV '07 through early-JUL '08
- **ZERO PERCENT** allocated to Commodities from early-AUG '08 through early-FEB '09
- **ZERO PERCENT** allocated to Commodities from mid-JUL '11 through late-FEB '14
- **ZERO PERCENT** allocated to Commodities from early-AUG '14 through mid-MAY '16
- **ZERO PERCENT** allocated to Commodities from mid-APR '17 to early-SEP '17

# DYNAMIC A/A: COMMODITIES

EXPOSURE	SIGNAL	VALIDITY	WoW PERFORMANCE	MoM PERFORMANCE	3M PERFORMANCE	6M PERFORMANCE	YTD PERFORMANCE
Commodities (2%)	Exposure Trending HIGHER	Weaker	-0.5%	0.7%	0.8%	6.7%	0.8%
(BAL) iPath Dow Jones AIG Cotton Total Return Sub-Index ETN	Neutral Setup	N/A	0.1%	-0.2%	2.9%	18.8%	2.9%
(BNO) United States Brent Oil Fund	Neutral Setup	N/A	-0.6%	8.3%	5.7%	26.3%	5.7%
(CORN) Teucrium Corn Fund	Bullish Setup	Stronger	3.0%	0.7%	7.1%	1.8%	7.1%
(COW) iPath Dow Jones-UBS Livestock Total Return Sub-Index ETN	Bearish Setup	Unchanged	-1.3%	-8.4%	-11.8%	-8.3%	-11.8%
(DBA) PowerShares DB Agriculture Fund	Neutral Setup	N/A	-0.3%	-3.3%	0.3%	-0.9%	0.3%
(DBB) PowerShares DB Base Metals Fund	Neutral Setup	N/A	0.8%	-4.3%	-6.2%	0.5%	-6.2%
(DBC) DB Commodity Index Tracking Fund	Neutral Setup	N/A	0.1%	2.1%	2.2%	10.3%	2.2%
(DBP) PowerShares DB Precious Metals Fund	Sell Long	N/A	-1.6%	0.4%	0.4%	1.9%	0.4%
(GLD) SPDR Gold Shares	Sell Long	N/A	-1.4%	0.9%	1.7%	3.5%	1.7%
(JJC) iPath Exchange Traded Notes Dow Jones-AIG Copper Total Return Sub-Index ETN Series A	Neutral Setup	N/A	1.8%	-3.3%	-9.2%	1.6%	-9.2%
(JJN) iPath Dow Jones-UBS Nickel Total Return Sub-Index ETN	Neutral Setup	N/A	3.7%	-0.4%	5.8%	30.6%	5.8%
(JO) iPath Dow Jones-AIG Coffee Total Return Sub-Index ETN	Bearish Setup	Stronger	1.0%	-5.5%	-8.6%	-13.7%	-8.6%
(NIB) iPath Dow Jones-AIG Cocoa Total Return Sub-Index ETN	Bullish Setup	Weaker	-2.1%	14.8%	38.2%	26.9%	38.2%
(PALL) ETFs Physical Palladium Shares	Neutral Setup	N/A	-2.4%	-3.8%	-10.9%	1.0%	-10.9%
(PPLT) ETFs Physical Platinum Shares	Sell Long	N/A	-1.8%	-3.6%	0.2%	1.6%	0.2%
(RLY) SPDR Multi-Asset Real Return ETF	Neutral Setup	N/A	0.9%	0.3%	-1.8%	3.2%	-1.8%
(SGG) iPath Dow Jones AIG Sugar Total Return Sub-Index ETN	Bearish Setup	Unchanged	-2.1%	-10.8%	-20.2%	-13.9%	-20.2%
(SLV) iShares Silver Trust	Bearish Setup	Stronger	-1.1%	-0.8%	-3.6%	-2.1%	-3.6%
(SOYB) Teucrium Soybean Fund	Bullish Setup	Unchanged	1.7%	-1.3%	6.5%	3.8%	6.5%
(UGA) United States Gasoline Fund	Neutral Setup	N/A	-0.8%	6.1%	1.4%	14.7%	1.4%
(UNG) United States Natural Gas Fund	Neutral Setup	N/A	4.0%	0.4%	-3.3%	-14.2%	-3.3%
(USO) United States Oil Fund LP	Neutral Setup	N/A	-1.4%	6.0%	9.0%	25.5%	9.0%
(WEAT) Teucrium Wheat Fund	Neutral Setup	N/A	-1.3%	-11.2%	3.3%	-5.8%	3.3%

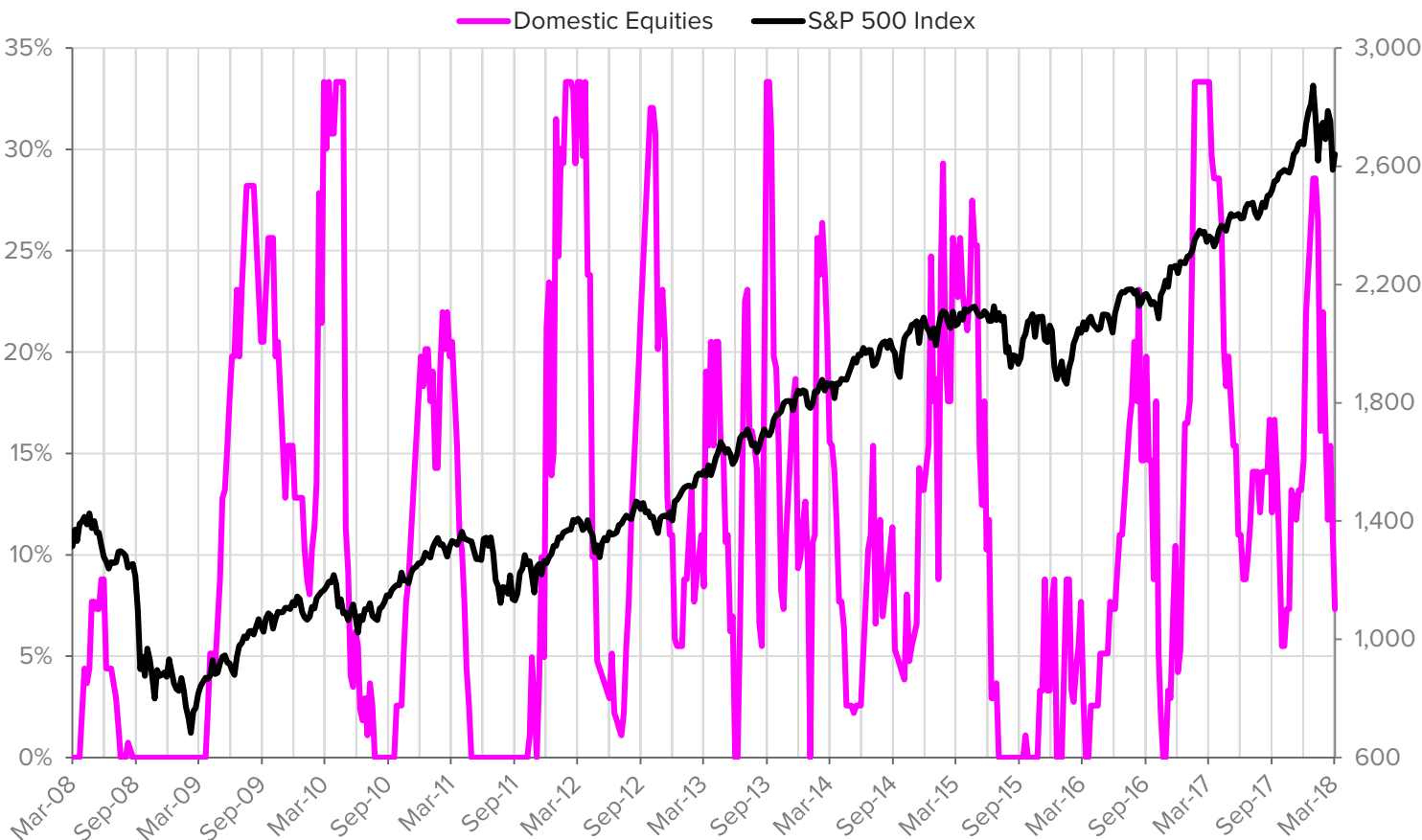
## BEST SIGNALS TTM

**LONG:** TACRM signaled **BULLISH** on Brent Crude Oil (BNO) in the week-ended 9/8/17.

**SHORT:** TACRM signaled **BEARISH** on Natural Gas (UNG) in the week-ended 12/1/17.



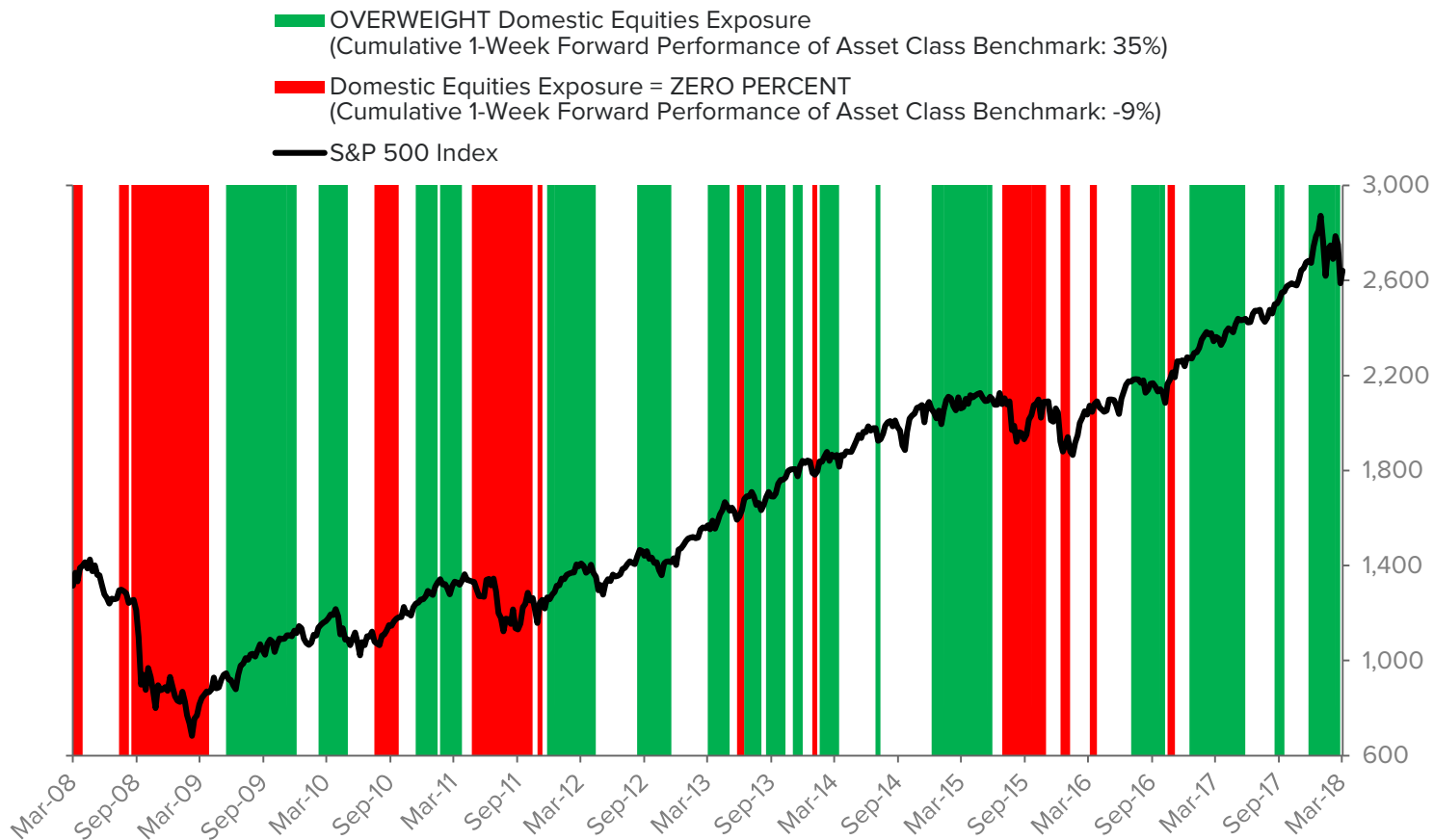
# DYNAMIC A/A: DOMESTIC EQUITIES



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# DYNAMIC A/A: DOMESTIC EQUITIES



An investor managing global macro risk with [TACRM's](#) dynamic asset allocation framework would've been:

- **ZERO PERCENT** allocated to Domestic Equities from early-AUG '08 through mid-APR '09
- **OVERWEIGHT\*** Domestic Equities from early-JUN '09 through early-MAY '10
- **OVERWEIGHT\*** Domestic Equities from late-DEC '11 through mid-APR '14
- **ZERO PERCENT** allocated to Domestic Equities from mid-JUL '15 through early-FEB '16
- **OVERWEIGHT\*** Domestic Equities from early-AUG '16 through present

# DYNAMIC A/A: DOMESTIC EQUITIES

EXPOSURE	SIGNAL	VALIDITY	WoW PERFORMANCE	MoM PERFORMANCE	3M PERFORMANCE	6M PERFORMANCE	YTD PERFORMANCE
Domestic Equities (4%)	Exposure Trending LOWER	Stronger	2.0%	-2.7%	-1.2%	4.8%	-1.2%
(AMLP) Alerian MLP ETF	Bearish Setup	Unchanged	0.6%	-7.9%	-13.2%	-16.5%	-13.2%
(BJK) VanEck Vectors Gaming ETF	Neutral Setup	N/A	2.0%	0.1%	-1.3%	7.9%	-1.3%
(DIA) SPDR Dow Jones Industrial Average ETF Trust	Neutral Setup	N/A	2.7%	-1.9%	-2.4%	7.9%	-2.4%
(DSII) iShares MSCI KLD 400 Social ETF	Neutral Setup	N/A	2.2%	-1.1%	-0.5%	5.2%	-0.5%
(DVY) iShares Select Dividend ETF	Cover Short	N/A	2.8%	-0.4%	-3.5%	1.6%	-3.5%
(FPX) First Trust U.S. IPO Index Fund	Neutral Setup	N/A	0.9%	-1.8%	0.5%	7.4%	0.5%
(GDX) Market Vectors Gold Miners ETF	Bearish Setup	Unchanged	-0.6%	1.9%	-5.4%	-4.3%	-5.4%
(HACK) ETFMG Prime Cyber Security ETF	Neutral Setup	N/A	1.1%	1.1%	8.3%	13.9%	8.3%
(IAI) iShares U.S. Broker-Dealers ETF	Neutral Setup	N/A	3.0%	0.1%	4.2%	14.5%	4.2%
(IBB) iShares Nasdaq Biotechnology ETF	Neutral Setup	N/A	1.4%	-0.3%	0.0%	-4.0%	0.0%
(IBUY) Amplify Online Retail ETF	Neutral Setup	Unchanged	0.1%	-0.4%	10.3%	23.6%	10.3%
(IFLY) ETFMG Drone Economy Strategy ETF	Bearish Setup	Unchanged	1.2%	-2.7%	-4.2%	-3.7%	-4.2%
(IHE) iShares U.S. Pharmaceuticals ETF	Bearish Setup	Unchanged	2.2%	-0.1%	-4.4%	-5.6%	-4.4%
(IHI) iShares U.S. Medical Devices ETF	Neutral Setup	N/A	2.2%	2.7%	6.6%	10.8%	6.6%
(IPO) Renaissance IPO ETF	Neutral Setup	N/A	0.5%	1.8%	1.8%	8.0%	1.8%
(ITA) iShares U.S. Aerospace & Defense ETF	Neutral Setup	N/A	1.7%	-0.4%	5.2%	11.2%	5.2%
(ITB) iShares U.S. Home Construction ETF	Neutral Setup	N/A	1.5%	2.7%	-9.7%	8.1%	-9.7%
(IUSG) iShares Russell 3000 Growth ETF	Neutral Setup	N/A	1.7%	-1.5%	1.6%	8.2%	1.6%
(IUSV) iShares Russell 3000 Value ETF	Cover Short	N/A	2.5%	-1.3%	-4.1%	1.5%	-4.1%
(IWB) iShares Russell 1000 ETF	Neutral Setup	N/A	2.1%	-1.4%	-1.2%	5.0%	-1.2%
(IWD) iShares Russell 1000 Value ETF	Cover Short	N/A	2.5%	-1.2%	-3.5%	1.2%	-3.5%
(IWF) iShares Russell 1000 Growth ETF	Neutral Setup	N/A	1.6%	-1.6%	1.0%	8.8%	1.0%
(IWM) iShares Russell 2000 ETF	Neutral Setup	N/A	1.2%	1.3%	-0.4%	2.5%	-0.4%
(IWN) iShares Russell 2000 Value ETF	Bearish Setup	Unchanged	1.7%	0.8%	-3.1%	-1.8%	-3.1%
(IWO) iShares Russell 2000 Growth ETF	Neutral Setup	N/A	0.9%	1.7%	2.1%	6.5%	2.1%
(IWP) iShares Russell Mid-Cap Growth ETF	Neutral Setup	N/A	1.6%	0.6%	1.9%	8.6%	1.9%
(IWR) iShares Russell Mid-Cap ETF	Neutral Setup	N/A	2.1%	0.6%	-0.8%	4.7%	-0.8%
(IWS) iShares Russell Mid-Cap Value ETF	Neutral Setup	N/A	2.5%	0.4%	-3.1%	1.8%	-3.1%
(IYW) iShares Russell 3000 ETF	Neutral Setup	N/A	2.0%	-1.2%	-1.2%	4.7%	-1.2%
(IYR) iShares US Real Estate ETF	Bearish Setup	Unchanged	3.5%	3.2%	-6.8%	-5.5%	-6.8%
(IYT) iShares Transportation Average ETF	Neutral Setup	N/A	2.3%	0.2%	-2.4%	4.8%	-2.4%
(IYZ) iShares US Telecommunications ETF	Bearish Setup	Unchanged	1.1%	-3.6%	-8.1%	-11.1%	-8.1%
(KBE) SPDR S&P Bank ETF	Neutral Setup	N/A	2.4%	-2.6%	1.2%	6.2%	1.2%
(KIE) SPDR Insurance ETF	Neutral Setup	N/A	2.3%	3.3%	1.0%	3.4%	1.0%
(KRE) SPDR S&P Regional Banking ETF	Neutral Setup	N/A	2.5%	-1.9%	2.6%	6.4%	2.6%
(LRGF) iShares Edge MSCI Multifactor USA ETF	Neutral Setup	N/A	2.1%	-0.1%	-0.9%	5.2%	-0.9%
(MTUM) iShares MSCI USA Momentum Factor ETF	Neutral Setup	N/A	1.7%	-1.9%	2.7%	10.7%	2.7%

## BEST SIGNALS TTM

**LONG:** TACRM signaled **BULLISH** on Online Retail (IBUY) in the week-ended 11/17/17.

**SHORT:** TACRM signaled **BEARISH** on Telecom (IYZ) in the week-ended to 7/14/17.

# DOMESTIC EQUITES (CONTD.)

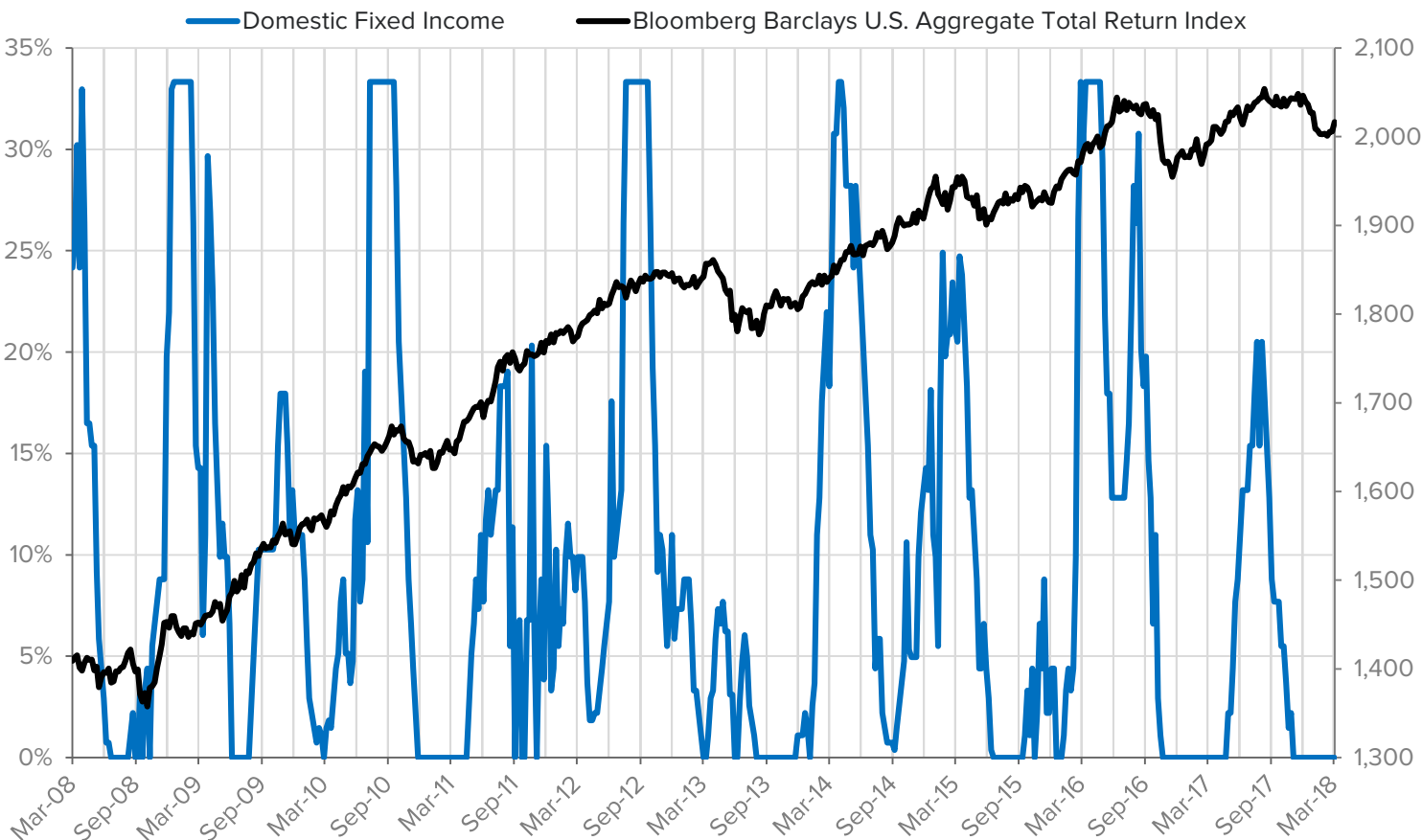
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Domestic Equities (4%)	Exposure Trending LOWER	Stronger	2.0%	-2.7%	-1.2%	4.8%	-1.2%
(OEF) iShares S&P 100 ETF	Neutral Setup	N/A	2.2%	-2.5%	-2.2%	4.2%	-2.2%
(OUSA) O'Shares FTSE US Quality Dividend ETF	Cover Short	N/A	2.6%	-0.1%	-4.4%	0.9%	-4.4%
(PBJ) Powershares Dynamic Food & Beverage Portfolio	Bearish Setup	Unchanged	2.8%	0.3%	-4.8%	-0.5%	-4.8%
(PBP) PowerShares S&P 500 BuyWrite Portfolio	Cover Short	N/A	1.8%	0.2%	-1.7%	0.4%	-1.7%
(PBS) Powershares Dynamic Media Portfolio	Bullish Setup	Stronger	-0.3%	-2.7%	4.4%	5.4%	4.4%
(PEJ) Powershares Dynamic Leisure & Entertainment Portfolio	Neutral Setup	N/A	1.9%	0.8%	0.8%	7.8%	0.8%
(PFF) iShares US Preferred Stock ETF	Neutral Setup	N/A	0.3%	0.6%	-1.3%	-3.2%	-1.3%
(PHO) PowerShares Water Resources Portfolio	Neutral Setup	N/A	2.0%	3.0%	0.7%	6.9%	0.7%
(PKW) PowerShares Buyback Achievers Portfolio	Neutral Setup	N/A	2.1%	-2.2%	-3.5%	2.4%	-3.5%
(PUTW) Wisdomtree Cboe S&P 500 Putwrite Strategy Fund	Cover Short	N/A	1.7%	-0.2%	-2.8%	-1.0%	-2.8%
(QQQ) PowerShares NASDAQ Trust (ETF)	Neutral Setup	N/A	1.0%	-2.6%	2.8%	10.1%	2.8%
(REM) iShares Mortgage Real Estate Capped ETF	Bearish Setup	Unchanged	2.6%	3.9%	-6.0%	-9.3%	-6.0%
(REZ) iShares Residential Real Estate Capped ETF	Bearish Setup	Unchanged	4.7%	4.5%	-7.4%	-9.3%	-7.4%
(ROBO) ROBO Global Robotics and Automation Index ETF	Neutral Setup	N/A	2.2%	0.3%	1.2%	8.1%	1.2%
(SHE) SPDR SSGA Gender Diversity Index ETF	Cover Short	N/A	2.2%	-0.2%	-1.1%	4.3%	-1.1%
(SMH) Market Vectors Semiconductor ETF	Neutral Setup	N/A	0.2%	-0.5%	6.6%	11.7%	6.6%
(SMLF) iShares Edge MSCI Multifactor USA Small-Cap ETF	Neutral Setup	N/A	1.4%	1.3%	-1.0%	2.7%	-1.0%
(SPHB) PowerShares S&P 500 High Beta Port ETF	Neutral Setup	N/A	1.7%	-0.5%	0.0%	7.8%	0.0%
(SPY) SPDR S&P 500 ETF Trust	Neutral Setup	N/A	2.0%	-1.7%	-1.4%	4.7%	-1.4%
(TAN) Guggenheim Solar ETF	Neutral Setup	N/A	-0.3%	0.9%	-2.3%	13.4%	-2.3%
(USMV) iShares MSCI USA Minimum Volatility ETF	Neutral Setup	N/A	2.4%	0.4%	-1.6%	3.2%	-1.6%
(VIG) Vanguard Dividend Appreciation ETF	Neutral Setup	N/A	2.2%	-0.5%	-1.0%	6.6%	-1.0%
(VLUE) iShares MSCI USA Value Factor ETF	Neutral Setup	N/A	2.6%	-1.5%	-1.9%	6.1%	-1.9%
(VNQ) Vanguard REIT ETF	Bearish Setup	Unchanged	2.9%	2.8%	-9.1%	-9.2%	-9.1%
(WSKY) Spirited Funds and ETFMG Whiskey & Spirits ETF	Neutral Setup	N/A	-0.6%	0.6%	-4.1%	8.4%	-4.1%
(XES) SPDR S&P Oil & Gas Equipment & Services ETF	Bearish Setup	Stronger	-2.9%	-1.1%	-15.0%	-12.2%	-15.0%
(XLB) Materials Select Sector SPDR Fund	Cover Short	N/A	1.6%	-3.5%	-5.9%	0.2%	-5.9%
(XLE) Energy Select Sector SPDR Fund	Bearish Setup	Stronger	1.0%	1.2%	-6.7%	-1.6%	-6.7%
(XLF) Financial Select Sector SPDR Fund	Neutral Setup	N/A	2.8%	-2.8%	-1.2%	6.6%	-1.2%
(XLI) Industrial Select Sector SPDR Fund	Neutral Setup	N/A	2.1%	-1.1%	-1.8%	4.6%	-1.8%
(XLK) Technology Select Sector SPDR Fund	Neutral Setup	N/A	1.8%	-2.4%	2.3%	10.7%	2.3%
(XLP) Consumer Staples Select Sector SPDR Fund	Bearish Setup	Unchanged	3.5%	-1.2%	-7.5%	-2.5%	-7.5%
(XLU) Utilities Select Sector SPDR Fund	Bearish Setup	Unchanged	3.0%	3.0%	-4.1%	-4.8%	-4.1%
(XLV) Health Care Select Sector SPDR Fund	Bearish Setup	Unchanged	2.2%	-1.7%	-1.5%	-0.4%	-1.5%
(XLY) Consumer Discretionary Select Sector SPDR Fund	Neutral Setup	N/A	1.1%	-1.6%	2.6%	12.4%	2.6%
(XME) SPDR Metals & Mining ETF	Neutral Setup	N/A	1.0%	-7.9%	-6.4%	5.8%	-6.4%
(XRT) SPDR Retail ETF	Neutral Setup	N/A	3.1%	-1.2%	-1.9%	6.1%	-1.9%
(XOP) SPDR S&P Oil & Gas Exploration & Production ETF	Neutral Setup	N/A	1.5%	5.4%	-5.3%	3.3%	-5.3%

## BEST SIGNALS TTM (CONTD.)

**LONG:** TACRM signaled **BULLISH** on Retail (XRT) in the week-ended 11/17/17.

**SHORT:** TACRM signaled **BEARISH** on Residential Real Estate (REZ) in the week-ended 10/6/17.

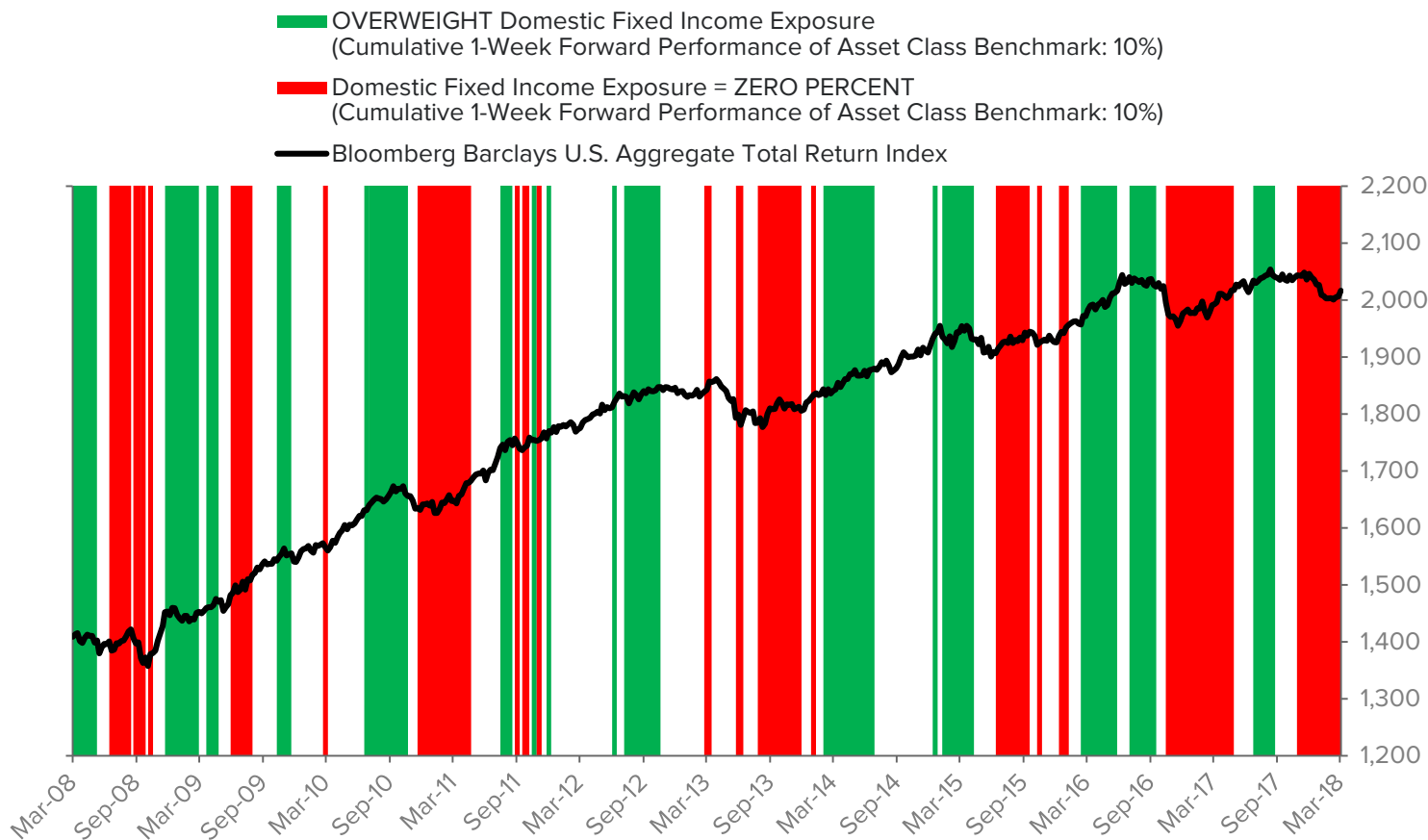
# DYNAMIC A/A: DOMESTIC FIXED INCOME



By sequencing changes in Sharpe Ratios and flagging opportunistic setups on the long and short side, [TACRM](#) employs volatility as a leading indicator for price returns. [TACRM](#) produces a dynamic asset allocation by proportionally rotating into asset classes where its proprietary risk management signals are relatively most bullish in lieu of asset classes where they are relatively most bearish.

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# DYNAMIC A/A: DOMESTIC FIXED INCOME



An investor managing global macro risk with **TACRM's** dynamic asset allocation framework would've been:

- **ZERO PERCENT** allocated to Domestic Fixed Income from early-APR '13 through peak of reflation through mid-JAN '14 – effectively sidestepping the “Taper Tantrum”
- **OVERWEIGHT\*** Domestic Fixed Income from early-FEB '16 through late-OCT '16, effectively capturing the move to all-time lows in U.S. interest rates while starting to de-risk exposure ahead of Trump's surprise Presidential victory and subsequent reflation trade

# DYNAMIC A/A: DOMESTIC FIXED INCOME

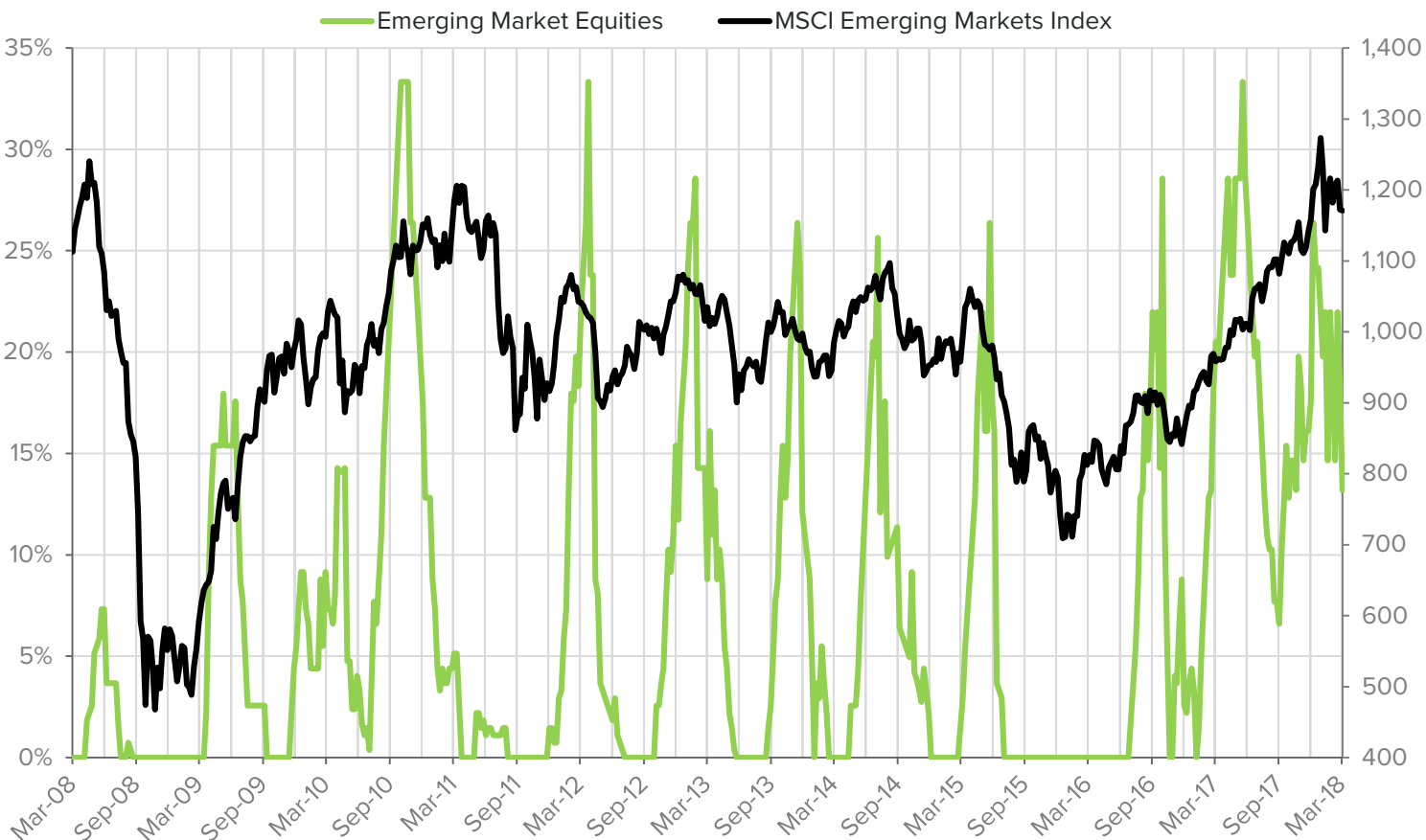
EXPOSURE	SIGNAL	VALIDITY	WoW PERFORMANCE	MoM PERFORMANCE	3M PERFORMANCE	6M PERFORMANCE	YTD PERFORMANCE
Domestic Fixed Income (0%)	Exposure STABILIZING	Unchanged	0.5%	0.6%	-1.5%	-1.1%	-1.5%
(AGG) iShares Core US Aggregate Bond ETF	Bearish Setup	Unchanged	0.6%	0.6%	-1.9%	-2.1%	-1.9%
(BKLN) Senior Loan Portfolio ETF	Neutral Setup	N/A	0.3%	0.0%	0.4%	-0.1%	0.4%
(BSV) Vanguard Short-Term Bond ETF	Neutral Setup	N/A	0.1%	0.1%	-0.8%	-1.7%	-0.8%
(CWB) SPDR Bloomberg Barclays Convertible Securities ETF	Bullish Setup	Unchanged	0.4%	0.9%	2.1%	1.2%	2.1%
(EDV) Vanguard Extended Duration Treasury ETF	Bearish Setup	Unchanged	2.1%	2.3%	-5.3%	-1.6%	-5.3%
(FLAT) iPath US Treasury Flatteners ETN	Bullish Setup	Stronger	0.3%	0.1%	1.2%	1.6%	1.2%
(IEF) iShares 7-10 Year Treasury Bond ETF	Bearish Setup	Unchanged	0.5%	0.7%	-2.3%	-3.1%	-2.3%
(IEI) iShares 3-7 Year Treasury Bond ETF	Bearish Setup	Stronger	0.2%	0.3%	-1.3%	-2.3%	-1.3%
(JNK) SPDR Barclays High Yield Bond ETF	Neutral Setup	N/A	0.6%	-0.1%	-2.4%	-3.9%	-2.4%
(LQD) iShares iBoxx \$ Investment Grade Corporate Bond ETF	Bearish Setup	Unchanged	1.4%	0.7%	-3.4%	-3.2%	-3.4%
(MUB) iShares National AMT-Free Muni Bond ETF	Bearish Setup	Unchanged	0.3%	0.2%	-1.6%	-1.7%	-1.6%
(SHV) iShares Short Treasury Bond ETF	Neutral Setup	N/A	0.1%	0.1%	0.1%	0.0%	0.1%
(SHY) iShares 1-3 Year Treasury Bond ETF	Neutral Setup	N/A	0.1%	0.1%	-0.3%	-1.1%	-0.3%
(SJNK) SPDR Barclays Short Term High Yield Bond ETF	Neutral Setup	N/A	0.6%	0.1%	-0.7%	-2.1%	-0.7%
(SPSB) SPDR Barclays Short Term Corporate Bond ETF	Cover Short	N/A	0.2%	0.0%	-0.7%	-1.5%	-0.7%
(STPP) iPath US Treasury Steepener ETN	Neutral Setup	N/A	0.0%	-3.7%	1.8%	-2.1%	1.8%
(TIP) iShares TIPS Bond ETF	Bearish Setup	Stronger	0.4%	0.7%	-0.9%	-0.5%	-0.9%
(TLH) iShares 10-20 Year Treasury Bond ETF	Bearish Setup	Unchanged	0.9%	1.3%	-2.7%	-3.0%	-2.7%
(TLT) iShares 20+ Year Treasury Bond ETF	Bearish Setup	Unchanged	1.4%	2.2%	-3.9%	-2.3%	-3.9%
(ZROZ) PIMCO 25+ Year Zero Coupon US Treasury Bond ETF	Bearish Setup	Unchanged	2.6%	3.6%	-5.3%	-1.4%	-5.3%

## BEST SIGNALS TTM

**LONG:** TACRM signaled **BULLISH** on Treasury Yield Curve Flatteners (FLAT) in the week-ended 5/9/17.

**SHORT:** TACRM signaled **BEARISH** on 1-3Y Treasury Notes (IEI) in the week-ended 8/11/17.

# DYNAMIC A/A: EMERGING MKT. EQUITIES

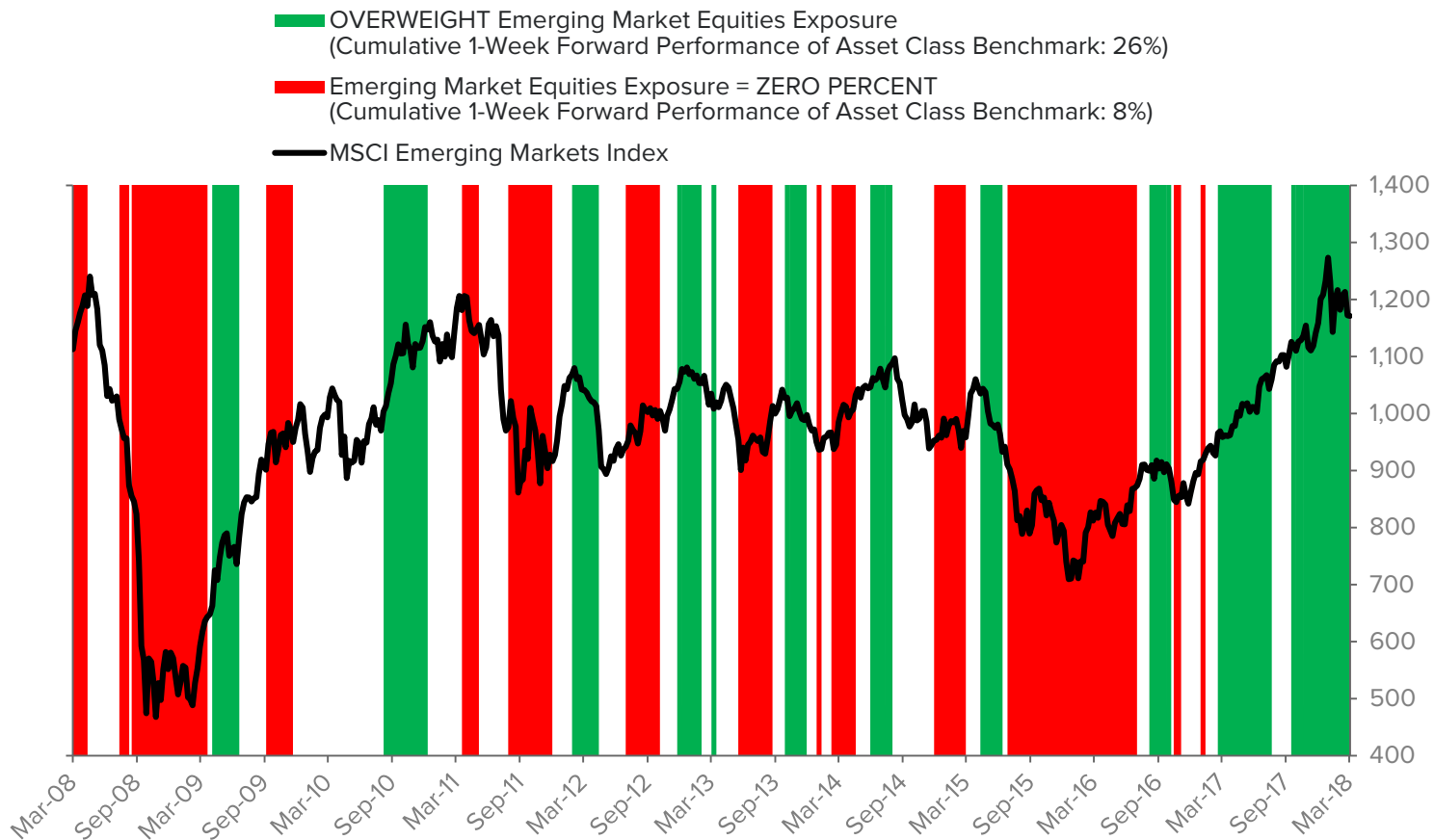


By sequencing changes in Sharpe Ratios and flagging opportunistic setups on the long and short side, [TACRM](#) employs volatility as a leading indicator for price returns. [TACRM](#) produces a dynamic asset allocation by proportionally rotating into asset classes where its proprietary risk management signals are relatively most bullish in lieu of asset classes where they are relatively most bearish.

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# DYNAMIC A/A: EMERGING MKT. EQUITIES



An investor managing global macro risk with [TACRM's](#) dynamic asset allocation framework would've been:

- **ZERO PERCENT** allocated to Emerging Market Equities from early-AUG '08 through late-APR '09
- **ZERO PERCENT** allocated to Emerging Market Equities from late-APR '13 through early-JAN '12
- **ZERO PERCENT** allocated to Emerging Market Equities from mid-JUL '15 through early-JUN '16
- **OVERWEIGHT\*** Emerging Market Equities from early-FEB '17 through present

# DYNAMIC A/A: EMERGING MKT. EQUITIES

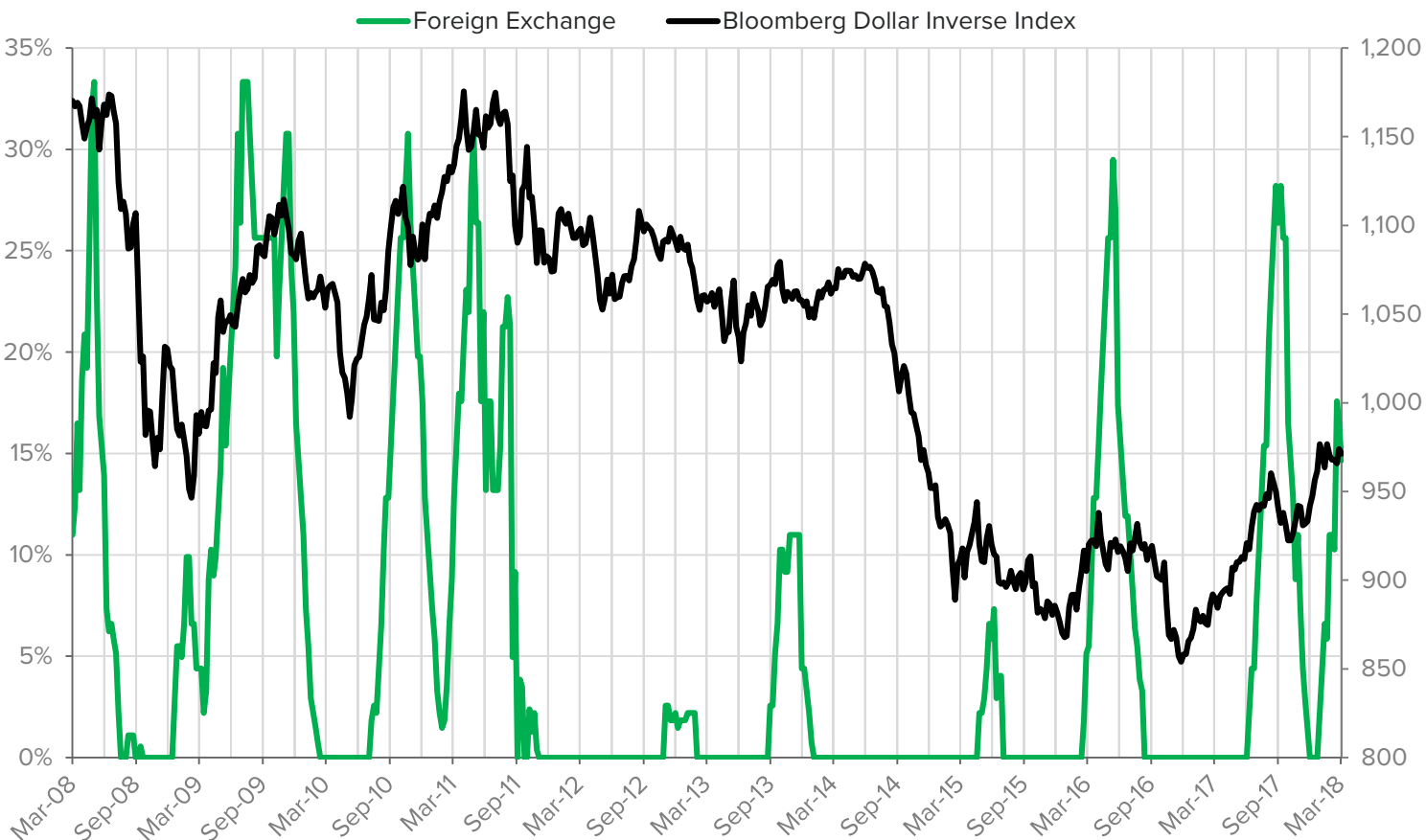
EXPOSURE	SIGNAL	VALIDITY	WoW PERFORMANCE	MoM PERFORMANCE	3M PERFORMANCE	6M PERFORMANCE	YTD PERFORMANCE
Emerging Market Equities (10%)	Exposure Trending LOWER	Stronger	-0.1%	-0.9%	-0.6%	8.1%	1.1%
(AAXJ) iShares MSCI All Country Asia ex Japan ETF	Neutral Setup	N/A	3.1%	1.2%	1.6%	7.4%	1.6%
(ARGT) Global X FTSE Argentina 20 ETF	Neutral Setup	N/A	1.9%	-2.8%	1.0%	12.2%	1.0%
(CAF) Morgan Stanley China A Share Fund Inc.	Bullish Setup	Unchanged	3.9%	0.0%	6.5%	9.7%	6.5%
(CHIM) Global X China Materials ETF	Neutral Setup	N/A	2.3%	-4.3%	0.7%	-1.1%	0.7%
(CHIQ) Global X China Consumer ETF	Neutral Setup	N/A	1.7%	-2.1%	0.2%	9.0%	0.2%
(CHIX) Global X China Financials ETF	Neutral Setup	N/A	2.3%	0.1%	2.8%	9.2%	2.8%
(CQQQ) Guggenheim China Technology ETF	Neutral Setup	N/A	-0.6%	-3.3%	-1.3%	4.6%	-1.3%
(DGS) WisdomTree Emerging Markets SmallCap Dividend Fund	Sell Long	N/A	3.1%	0.8%	3.6%	10.2%	3.6%
(ECH) iShares MSCI Chile Capped ETF	Neutral Setup	N/A	3.3%	0.1%	1.6%	9.0%	1.6%
(ECNS) iShares MSCI China Small-Cap ETF	Bullish Setup	Stronger	4.6%	3.4%	4.8%	3.9%	4.8%
(ECON) Columbia Emerging Markets Consumer ETF	Bearish Setup	Unchanged	1.4%	-3.4%	-5.9%	-3.8%	-5.9%
(EEM) iShares MSCI Emerging Markets ETF	Neutral Setup	N/A	3.0%	0.7%	2.5%	7.7%	2.5%
(EEMO) PowerShares S&P Emerging Markets Momentum Portfolio	Cover Short	N/A	3.4%	1.2%	1.7%	8.9%	1.7%
(EGPT) Market Vectors Egypt Index ETF	Neutral Setup	N/A	5.6%	14.1%	19.3%	33.9%	19.3%
(EIDO) iShares MSCI Indonesia ETF	Cover Short	-	2.4%	-5.5%	-5.2%	1.0%	-5.2%
(EMIF) iShares Emerging Markets Infrastructure ETF	Neutral Setup	N/A	2.8%	-0.5%	-1.8%	-4.4%	-1.8%
(EMXC) iShares MSCI Emerging Markets ex-China ETF	Neutral Setup	N/A	1.4%	0.5%	1.7%	7.5%	1.7%
(EPHE) iShares MSCI Philippines ETF	Bearish Setup	Unchanged	4.0%	-2.9%	-10.0%	-5.5%	-10.0%
(EPOL) iShares MSCI Poland Capped ETF	Bearish Setup	Unchanged	0.2%	-3.5%	-7.3%	-5.4%	-7.3%
(EPU) iShares MSCI All Peru Capped ETF	Neutral Setup	N/A	2.0%	1.1%	3.9%	9.7%	3.9%
(EWH) iShares MSCI Hong Kong ETF	Neutral Setup	N/A	1.9%	-1.1%	-0.4%	2.5%	-0.4%
(EWM) iShares MSCI Malaysia ETF	Bullish Setup	Stronger	3.2%	3.8%	9.6%	11.6%	9.6%
(EWT) iShares MSCI Taiwan ETF	Bullish Setup	Unchanged	3.3%	4.2%	5.9%	6.2%	5.9%
(EWW) iShares MSCI Mexico Capped ETF	Neutral Setup	N/A	3.1%	2.7%	4.5%	-5.7%	4.5%
(EWY) iShares MSCI South Korea Capped ETF	Neutral Setup	N/A	5.0%	5.2%	0.7%	9.3%	0.7%
(EWZ) iShares MSCI Brazil Capped ETF	Bullish Setup	Unchanged	2.3%	-1.3%	11.0%	7.8%	11.0%
(EWZS) iShares MSCI Brazil Small-Cap ETF	Bullish Setup	Stronger	0.1%	-2.1%	5.3%	1.4%	5.3%
(EZA) iShares MSCI South Africa ETF	Neutral Setup	N/A	0.4%	-3.5%	-1.8%	16.9%	-1.8%
(FXI) iShares China Large-Cap ETF	Neutral Setup	N/A	2.8%	0.0%	2.3%	7.3%	2.3%
(ICOL) iShares MSCI Colombia Capped ETF	Bullish Setup	Stronger	2.0%	2.5%	3.6%	2.2%	3.6%
(INCO) Columbia India Consumer ETF	Neutral Setup	N/A	3.8%	0.7%	-6.7%	8.9%	-6.7%
(INDA) iShares MSCI India ETF	Cover Short	N/A	3.5%	-0.4%	-5.4%	3.9%	-5.4%
(KSA) iShares MSCI Saudi Arabia Capped ETF	Bullish Setup	Unchanged	2.2%	9.4%	11.9%	12.1%	11.9%
(NGE) Global X Nigeria Index ETF	Bullish Setup	Stronger	4.3%	0.6%	9.3%	12.2%	9.3%
(QEEM) SPDR MSCI Emerging Markets StrategicFactors ETF	Neutral Setup	N/A	1.7%	0.4%	1.6%	7.3%	1.6%
(RSX) Market Vectors Russia ETF	Bullish Setup	Unchanged	1.1%	-1.8%	7.2%	2.0%	7.2%
(SMIN) iShares MSCI India Small-Cap ETF	Cover Short	N/A	4.3%	-9.7%	-9.7%	3.8%	-9.7%
(THD) iShares MSCI Thailand Capped ETF	Neutral Setup	N/A	1.0%	-0.5%	7.8%	15.3%	7.8%
(TUR) iShares MSCI Turkey ETF	Neutral Setup	N/A	3.3%	-3.9%	-2.4%	1.5%	-2.4%
(UAE) iShares MSCI UAE Capped ETF	Neutral Setup	N/A	2.1%	0.1%	-0.4%	-3.6%	-0.4%
(VNM) Market Vectors Vietnam ETF	Neutral Setup	N/A	5.1%	6.8%	9.4%	31.4%	9.4%

## BEST SIGNALS TTM

**LONG:** TACRM signaled **BULLISH** on Egypt (EGPT) in the week-ended 9/22/17.

**SHORT:** TACRM signaled **BEARISH** on the Mexico (EWW) in the week-ended 10/27/17.

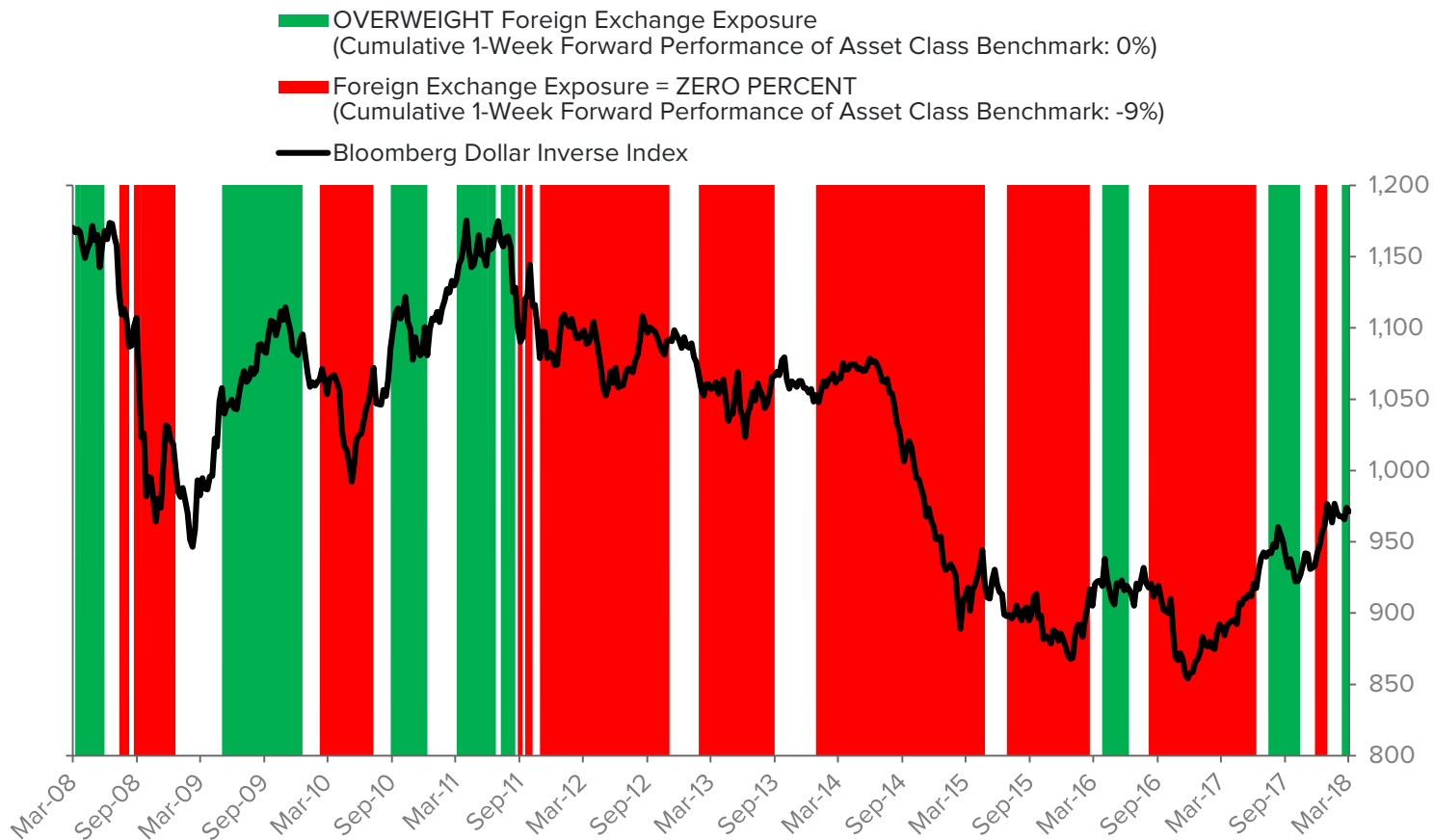
# DYNAMIC A/A: FOREIGN EXCHANGE



By sequencing changes in Sharpe Ratios and flagging opportunistic setups on the long and short side, **TACRM** employs volatility as a leading indicator for price returns. **TACRM** produces a dynamic asset allocation by proportionally rotating into asset classes where its proprietary risk management signals are relatively most bullish in lieu of asset classes where they are relatively most bearish.

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# DYNAMIC A/A: FOREIGN EXCHANGE



An investor managing global macro risk with **TACRM's** dynamic asset allocation framework would've been:

- OVERWEIGHT\* Foreign Exchange from early-NOV '07 through early-JUL '08
- ZERO PERCENT allocated to Foreign Exchange from early-AUG '08 through mid-JAN '09
- OVERWEIGHT\* Foreign Exchange from early-MAY '09 through early-JAN '10
- ZERO PERCENT allocated to Foreign Exchange from mid-MAR '10 through mid-AUG '10
- OVERWEIGHT\* Foreign Exchange from mid-SEP '10 through early-SEP '11
- ZERO PERCENT allocated to Foreign Exchange from mid-SEP '11 through mid-MAR '16
- ZERO PERCENT allocated to Foreign Exchange from early-SEP '16 through mid-JUN '17

# DYNAMIC A/A: FOREIGN EXCHANGE

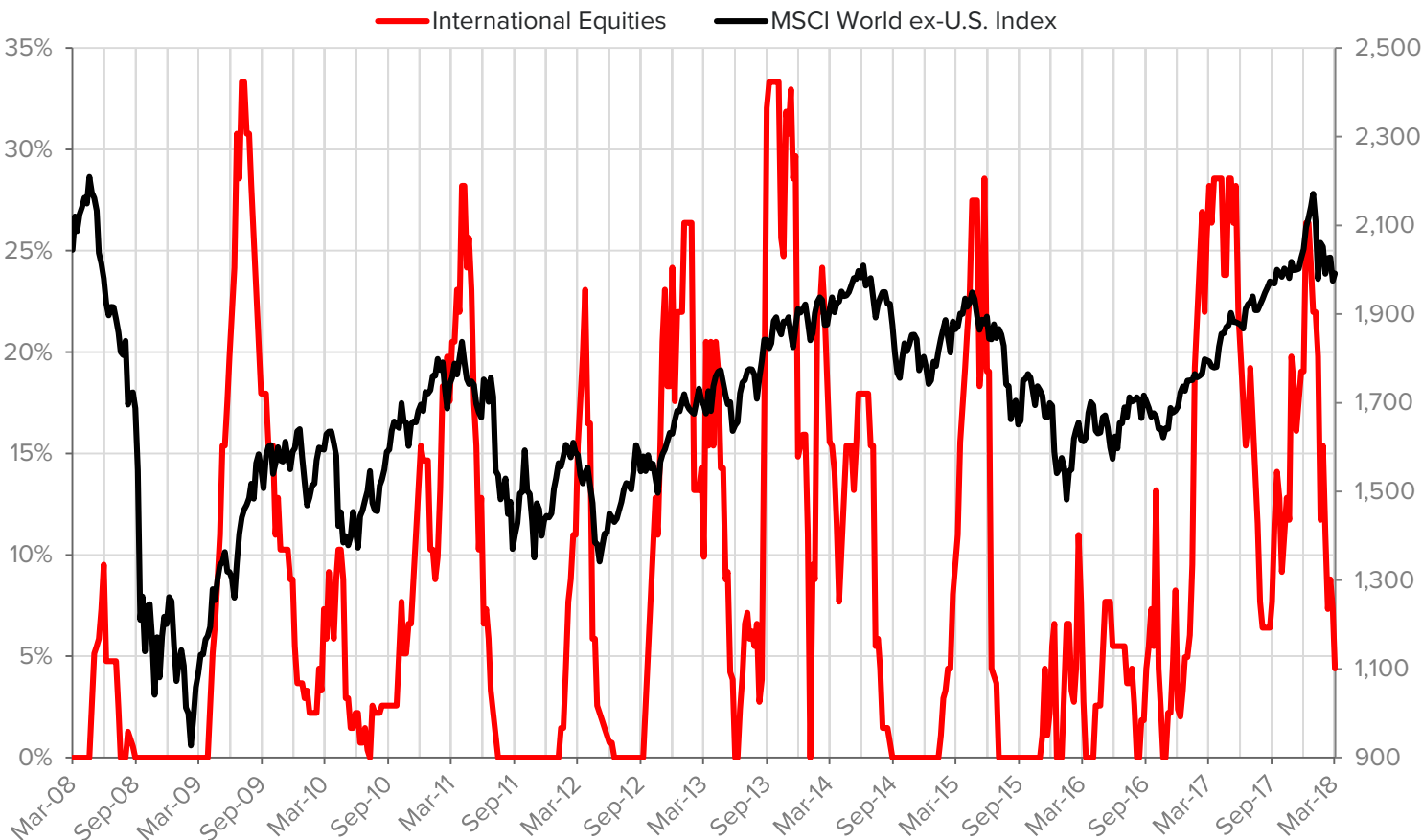
EXPOSURE	SIGNAL	VALIDITY	WoW PERFORMANCE	MoM PERFORMANCE	3M PERFORMANCE	6M PERFORMANCE	YTD PERFORMANCE
Foreign Exchange (12%)	Exposure Trending HIGHER	Weaker	-0.3%	0.9%	3.1%	3.3%	3.1%
(BZF) WisdomTree Brazilian Real Fund	Cover Short	N/A	-0.3%	-1.8%	1.2%	-2.6%	1.2%
(CEW) WisdomTree Emerging Currency Fund	Sell Long	N/A	0.8%	0.9%	2.4%	4.9%	2.4%
(CYB) WisdomTree Chinese Yuan Strategy Fund	Bullish Setup	Unchanged	0.2%	1.6%	4.6%	7.1%	4.6%
(FXA) CurrencyShares Australian Dollar Trust	Bearish Setup	Stronger	-0.2%	-0.9%	-1.5%	-2.0%	-1.5%
(FXB) CurrencyShares British Pound Sterling Trust	Bullish Setup	Unchanged	-0.8%	1.8%	3.9%	4.6%	3.9%
(FXC) CurrencyShares Canadian Dollar Trust	Bearish Setup	Stronger	-0.2%	-0.5%	-2.5%	-3.2%	-2.5%
(FXE) CurrencyShares Euro Trust	Bullish Setup	Unchanged	-0.5%	0.3%	2.4%	3.7%	2.4%
(FXF) CurrencyShares Swiss Franc Trust	Bullish Setup	Unchanged	-1.1%	-1.5%	1.6%	0.7%	1.6%
(FXS) CurrencyShares Swedish Krone Trust	Bearish Setup	Stronger	-1.4%	-0.8%	-2.4%	-3.1%	-2.4%
(FXSG) CurrencyShares Singapore Dollar Trust	Bullish Setup	Unchanged	0.1%	0.7%	2.3%	3.3%	2.3%
(FXY) CurrencyShares Japanese Yen Trust	Bullish Setup	Unchanged	-1.5%	-0.2%	5.8%	5.6%	5.8%
(INR) Market Vectors Rupee/USD ETN	Sell Long	N/A	1.2%	1.4%	-2.7%	2.4%	-2.7%
(UDN) Powershares DB US Dollar Index Bearish Fund	Bullish Setup	Unchanged	-0.7%	0.1%	2.1%	2.6%	2.1%
(UUP) PowerShares DB US Dollar Index Bullish Fund	Bearish Setup	Unchanged	0.8%	0.0%	-1.7%	-2.3%	-1.7%

## BEST SIGNALS TTM

**LONG:** TACRM signaled **BULLISH** on the Euro (FXE) in the week-ended 5/12/17.

**SHORT:** TACRM signaled **BEARISH** on the U.S. Dollar Index (UUP) in the week-ended 5/19/17.

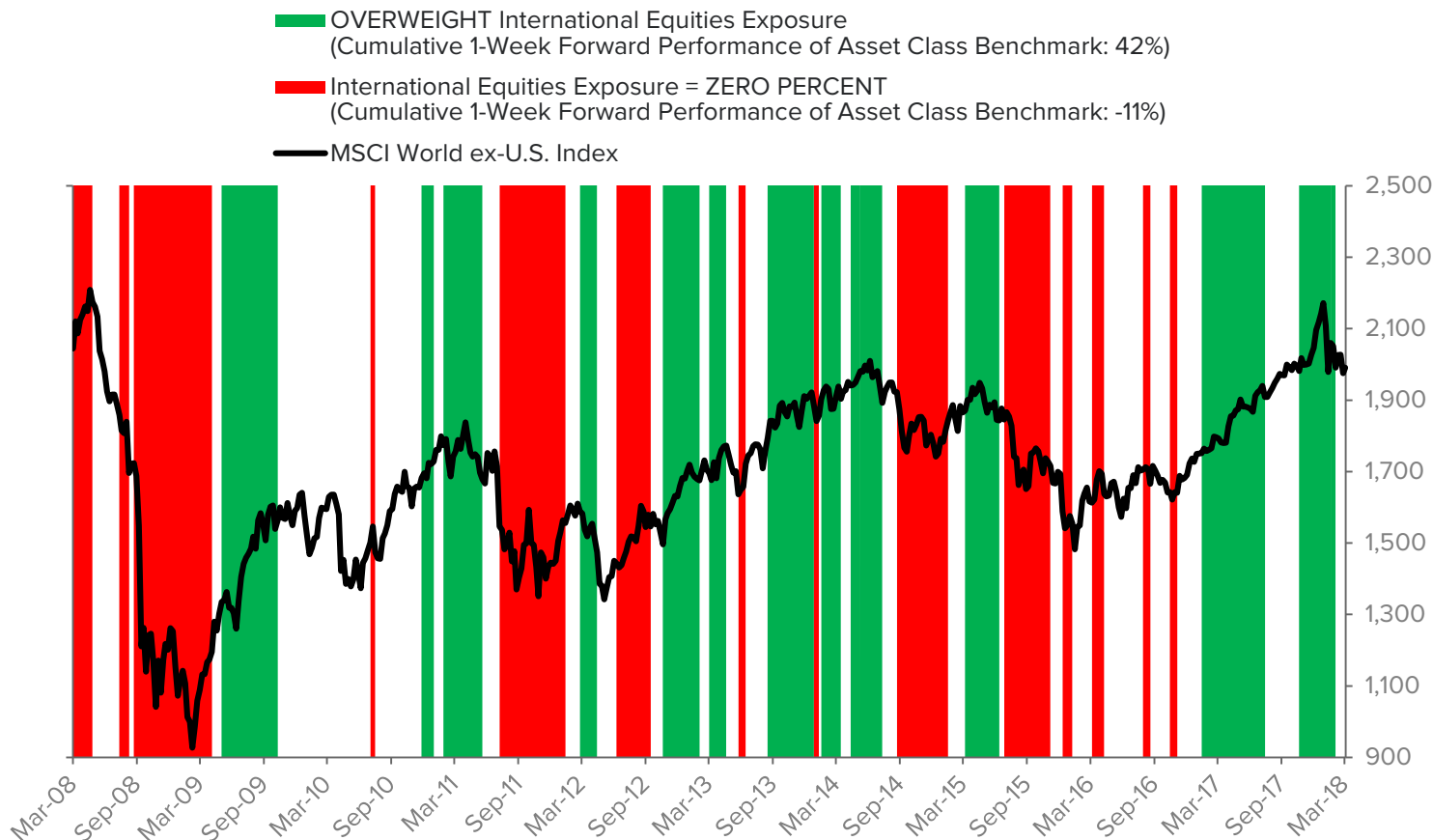
# DYNAMIC A/A: INTERNATIONAL EQUITIES



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# DYNAMIC A/A: INTERNATIONAL EQUITIES



An investor managing global macro risk with TACRM's dynamic asset allocation framework would've been:

- **ZERO PERCENT** allocated to International Equities from early-AUG '08 through early-APR '09
- **OVERWEIGHT\*** International Equities from early-JUN '09 through mid-NOV '09
- **OVERWEIGHT\*** International Equities from mid-NOV '12 through mid-AUG '14
- **ZERO PERCENT** allocated to International Equities from late-JUL '15 through mid-NOV '16
- **OVERWEIGHT\*** International Equities from mid-FEB '17 through mid-AUG '17

# DYNAMIC A/A: INTERNATIONAL EQUITIES

EXPOSURE	SIGNAL	VALIDITY	WoW PERFORMANCE	MoM PERFORMANCE	3M PERFORMANCE	6M PERFORMANCE	YTD PERFORMANCE
International Equities (3%)	Exposure Trending LOWER	Stronger	0.8%	0.0%	-3.0%	1.2%	-2.1%
(ACWX) iShares MSCI All-Country World Index ex-U.S. ETF	Neutral Setup	N/A	2.3%	0.5%	-0.5%	2.8%	-0.5%
(BOTZ) Global X Robotics & Artificial Intelligence ETF	Neutral Setup	N/A	9.6%	1.0%	2.1%	11.2%	-2.1%
(CGW) Guggenheim S&P Global Water Index ETF	Bearish Setup	Stronger	2.4%	2.6%	-4.1%	-1.0%	-4.1%
(CRBN) iShares MSCI ACWI Low Carbon Target ETF	Neutral Setup	N/A	2.2%	-0.1%	-0.1%	3.9%	-0.1%
(DXJ) WisdomTree Japan Hedged Equity Fund	Cover Short	N/A	5.9%	1.5%	-5.6%	2.4%	-5.6%
(DXIS) WisdomTree Japan Hedged Small-Cap Equity Fund	Neutral Setup	N/A	6.5%	2.9%	-4.0%	3.7%	-4.0%
(EDEN) iShares MSCI Denmark Capped ETF	Bullish Setup	Stronger	1.7%	1.9%	1.6%	1.1%	1.6%
(EFNL) iShares MSCI Finland Capped ETF	Bullish Setup	Unchanged	1.5%	0.0%	6.4%	3.6%	6.4%
(EIRL) iShares MSCI Ireland Capped ETF	Neutral Setup	N/A	1.2%	1.5%	-2.6%	1.0%	-2.6%
(EIS) iShares MSCI Israel Capped ETF	Bearish Setup	Unchanged	-1.2%	-3.1%	-3.4%	-0.9%	-3.4%
(ENOR) iShares MSCI Norway Capped ETF	Bullish Setup	Unchanged	1.9%	1.8%	5.1%	4.1%	5.1%
(ENZL) iShares MSCI New Zealand Capped ETF	Bullish Setup	Weaker	-1.4%	0.8%	2.8%	3.6%	2.8%
(ESGD) iShares Trust iShares MSCI EAFE ESG Optimized ETF	Cover Short	N/A	2.5%	0.8%	-0.8%	1.6%	-0.8%
(EUFN) iShares MSCI Europe Financials ETF	Cover Short	N/A	1.9%	-2.6%	-0.9%	-1.6%	-0.9%
(EWA) iShares MSCI Australia ETF	Bearish Setup	Unchanged	0.7%	-2.9%	-5.0%	-1.9%	-5.0%
(EWC) iShares MSCI Canada ETF	Bearish Setup	Stronger	1.4%	-0.2%	-7.0%	-4.8%	-7.0%
(EWD) iShares MSCI Sweden ETF	Neutral Setup	N/A	2.1%	0.0%	-1.2%	-6.7%	-1.2%
(EWG) iShares MSCI Germany ETF	Bearish Setup	Unchanged	2.3%	0.7%	-3.0%	-1.2%	-3.0%
(EWGS) iShares MSCI Germany Small-Cap ETF	Neutral Setup	N/A	0.6%	1.0%	0.4%	6.5%	0.4%
(EWI) iShares MSCI Italy Capped ETF	Bullish Setup	Unchanged	1.7%	1.8%	5.6%	2.5%	5.6%
(EWJ) iShares MSCI Japan ETF	Neutral Setup	N/A	4.1%	2.3%	1.3%	8.9%	1.3%
(EWK) iShares MSCI Belgium Capped ETF	Bullish Setup	Unchanged	1.3%	-1.8%	1.6%	0.8%	1.6%
(EWL) iShares MSCI Switzerland Capped ETF	Bearish Setup	Unchanged	2.3%	0.2%	-3.4%	-1.9%	-3.4%
(EWN) iShares MSCI Netherlands ETF	Neutral Setup	N/A	1.9%	1.5%	0.8%	1.8%	0.8%
(EWO) iShares MSCI Austria Capped ETF	Neutral Setup	N/A	0.8%	1.2%	2.9%	8.3%	2.9%
(EWP) iShares MSCI Spain Capped ETF	Neutral Setup	N/A	3.0%	-0.1%	-0.8%	-3.6%	-0.8%
(EWQ) iShares MSCI France ETF	Cover Short	N/A	2.1%	0.0%	0.6%	1.6%	0.6%
(EWS) iShares MSCI Singapore ETF	Neutral Setup	N/A	2.5%	0.3%	2.9%	9.2%	2.9%
(EWU) iShares MSCI United Kingdom ETF	Bearish Setup	Unchanged	2.4%	1.3%	-3.0%	-0.3%	-3.0%
(EWUS) iShares MSCI United Kingdom Small-Cap ETF	Neutral Setup	N/A	0.3%	1.2%	-0.9%	3.6%	-0.9%
(EZU) iShares MSCI EMU ETF	Cover Short	N/A	2.2%	0.5%	-0.1%	0.1%	-0.1%
(FILL) iShares MSCI Global Energy Producers ETF	Neutral Setup	N/A	1.3%	1.5%	-3.3%	3.5%	-3.3%
(FLM) First Trust Global Engineering and Construction ETF	Cover Short	N/A	2.4%	0.4%	-4.5%	0.1%	-4.5%
(HEDJ) WisdomTree Europe Hedged Equity Fund	Cover Short	N/A	3.2%	0.8%	-1.6%	-3.1%	-1.6%
(IGF) iShares Global Infrastructure ETF	Bearish Setup	Stronger	2.1%	0.7%	-5.2%	-5.3%	-5.2%
(INTF) iShares Edge MSCI Multifactor International ETF	Neutral Setup	N/A	2.5%	0.3%	0.1%	3.0%	0.1%
(MXI) iShares Global Materials ETF	Neutral Setup	N/A	1.6%	-1.4%	-3.5%	3.4%	-3.5%
(PAVE) Global X U.S. Infrastructure Development ETF	Neutral Setup	N/A	2.8%	-1.2%	-4.4%	4.2%	-4.4%
(PGAL) Global X FTSE Portugal 20 ETF	Neutral Setup	N/A	1.6%	3.5%	3.1%	-2.2%	3.1%
(PICK) iShares MSCI Global Metals & Mining Producers ETF	Neutral Setup	N/A	1.3%	-3.7%	-3.2%	8.3%	-3.2%
(RWX) SPDR Dow Jones International Real Estate ETF	Neutral Setup	N/A	2.2%	2.3%	-1.2%	4.3%	-1.2%
(URTH) iShares MSCI World Index ETF	Neutral Setup	N/A	2.2%	-0.4%	-1.1%	3.6%	-1.1%
(VEGI) iShares MSCI Global Agriculture Producers ETF	Neutral Setup	N/A	1.8%	-1.6%	-1.6%	2.7%	-1.6%
(VNQI) Vanguard Global ex-U.S. Real Estate ETF	Neutral Setup	N/A	2.5%	3.0%	0.7%	2.5%	0.7%

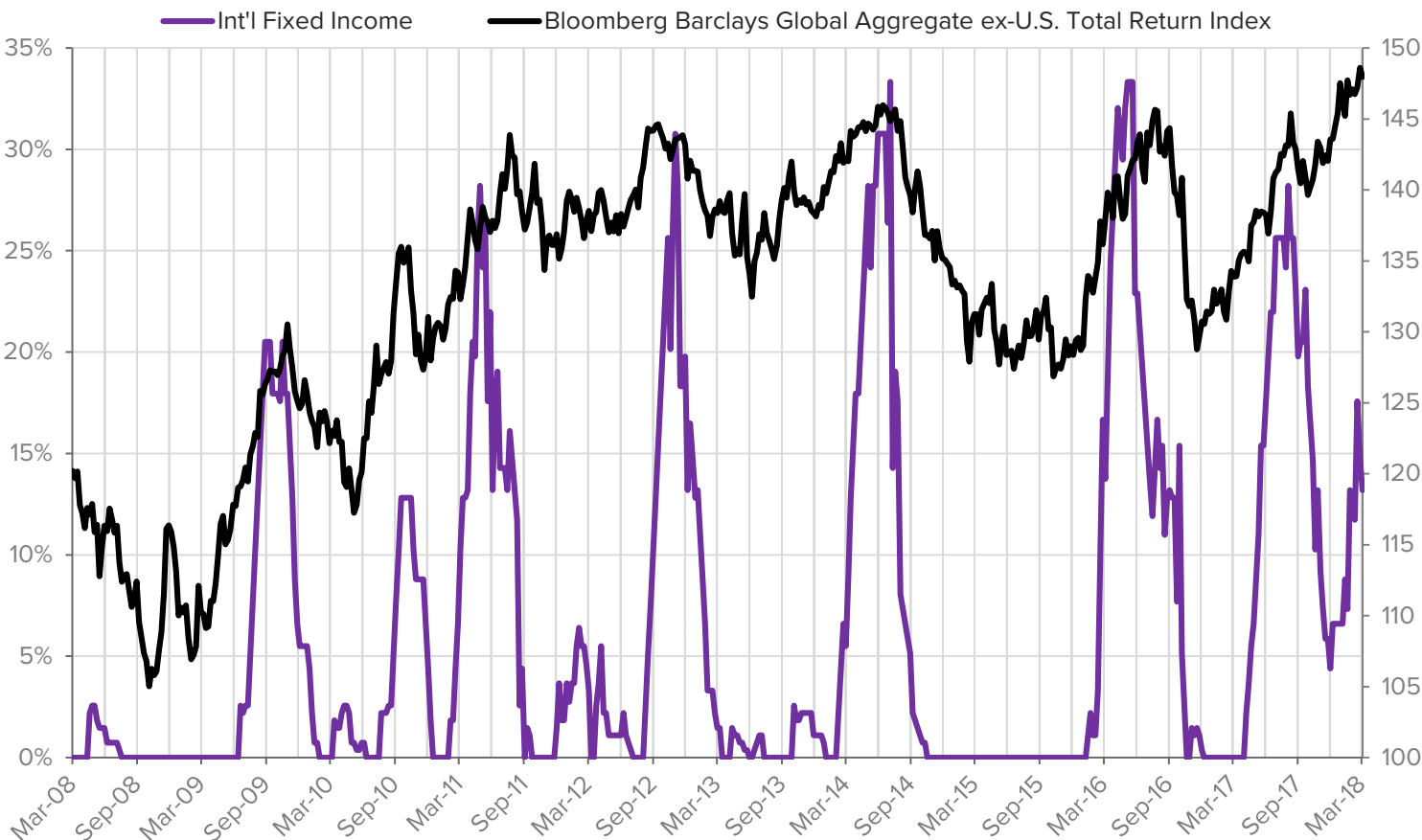
## BEST SIGNALS TTM

**LONG:** TACRM signaled **BULLISH** on Int'l Metals & Mining Producers (PICK) in the week-ended 7/14/17.

**SHORT:** TACRM signaled **BEARISH** on Global Infrastructure (IGF) in the week-ended 2/2/18.



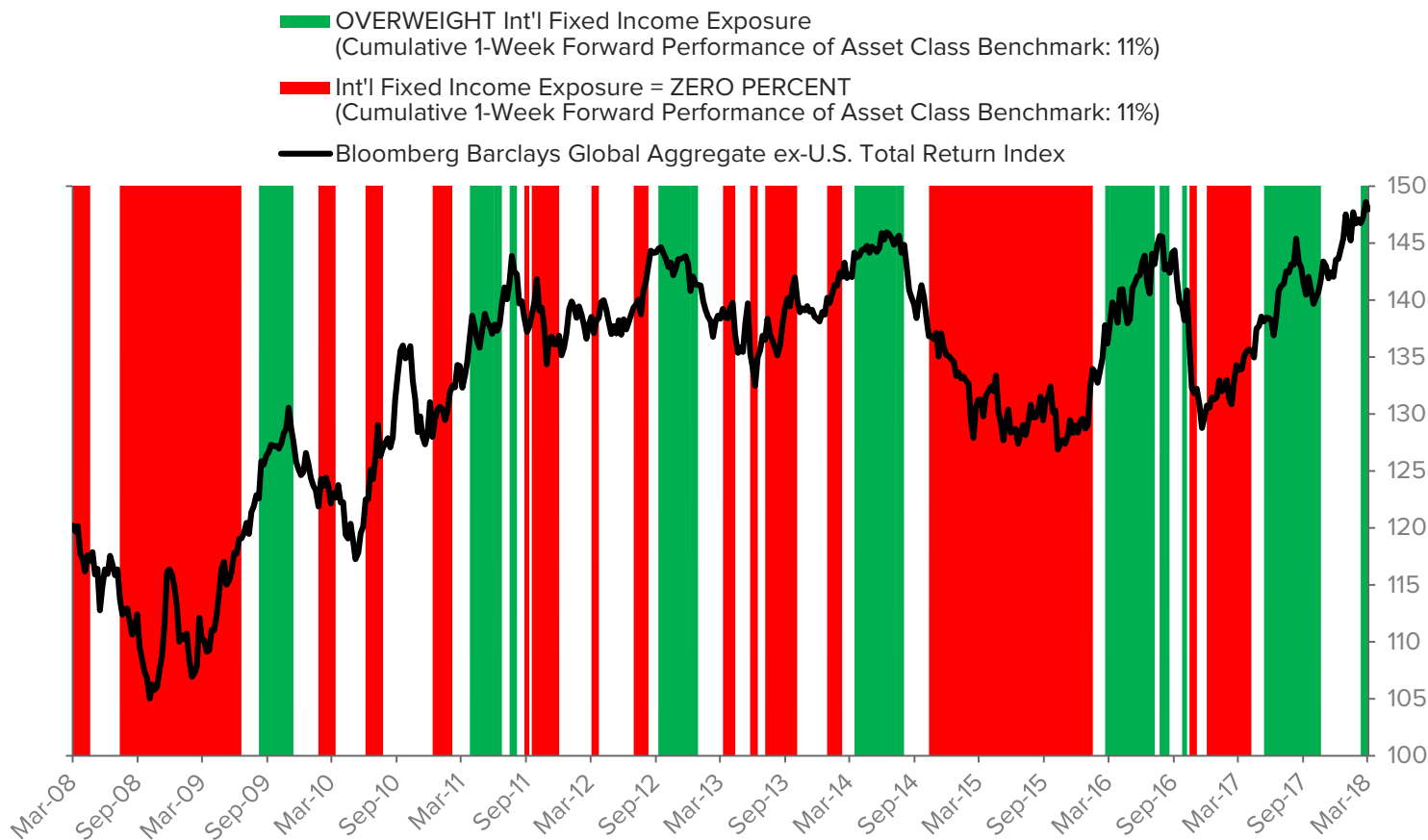
# DYNAMIC A/A: INT'L FIXED INCOME



By sequencing changes in Sharpe Ratios and flagging opportunistic setups on the long and short side, **TACRM** employs volatility as a leading indicator for price returns. **TACRM** produces a dynamic asset allocation by proportionally rotating into asset classes where its proprietary risk management signals are relatively most bullish in lieu of asset classes where they are relatively most bearish.

The weighting of each asset class is capped at 33% of the overall portfolio. Assets are allocated exclusively to the three asset classes with the highest ratio of bullish signals to bearish signals at the factor exposure levels and does so on a trending basis to simulate real-world trading conditions. The cash allocation is equal to the proportion of asset classes where the ratio of bearish signals exceeds bullish signals.

# DYNAMIC A/A: INT'L FIXED INCOME



An investor managing global macro risk with [TACRM's](#) dynamic asset allocation framework would've been:

- **ZERO PERCENT** allocated to International Fixed Income throughout the low Sharpe Ratio era persisting from early-NOV 2007 through late-JUL '09
- **ZERO PERCENT** allocated to International Fixed Income from late-SEP '14 through early-FEB '16
- **OVERWEIGHT\*** International Fixed Income from mid-MAR '16 through early-OCT '16

# DYNAMIC A/A: INT'L FIXED INCOME

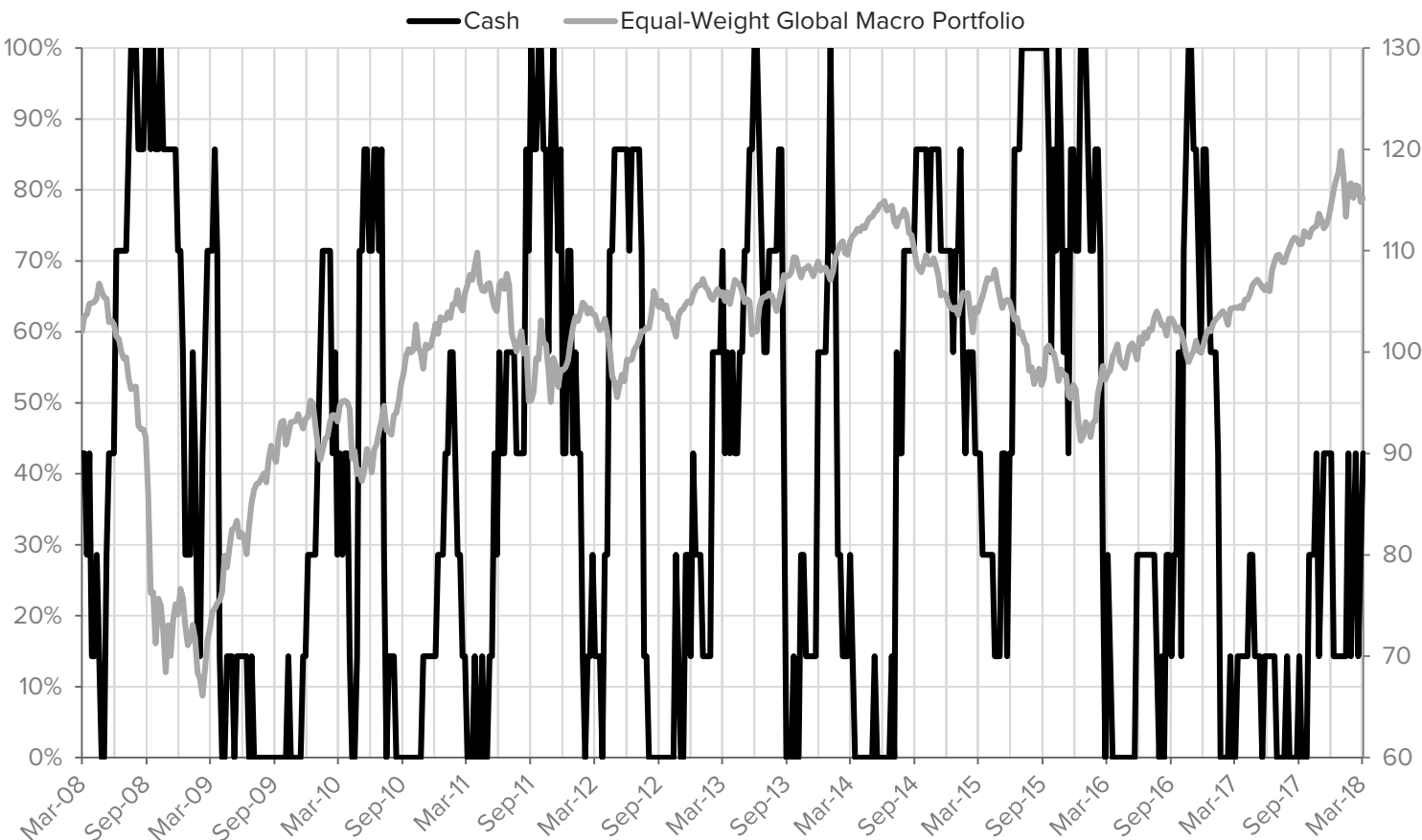
EXPOSURE	SIGNAL	VALIDITY	WoW PERFORMANCE	MoM PERFORMANCE	3M PERFORMANCE	6M PERFORMANCE	YTD PERFORMANCE
Int'l Fixed Income (11%)	Exposure Trending HIGHER	Weaker	-0.4%	0.6%	2.9%	5.1%	3.1%
(ALD) WisdomTree Asia Local Debt Fund	Neutral Setup	N/A	0.8%	0.6%	0.9%	1.5%	0.9%
(BNDX) Vanguard Total International Bond Market ETF	Bullish Setup	Stronger	0.3%	1.0%	0.7%	0.3%	0.7%
(BWZ) SPDR Barclays International Long-term Treasury Bond ETF	Bullish Setup	Unchanged	0.1%	1.5%	3.8%	5.1%	3.8%
(BWZ) SPDR Barclays International Short-term Treasury Bond ETF	Bullish Setup	Weaker	-0.6%	0.6%	3.0%	3.4%	3.0%
(EMB) iShares JP Morgan USD Emerging Markets Bond ETF	Bearish Setup	Weaker	1.6%	0.9%	-2.8%	-3.1%	-2.8%
(EMCB) WisdomTree Emerging Markets Corporate Bond Fund	Bearish Setup	Unchanged	0.4%	-0.9%	-2.9%	-2.8%	-2.9%
(EMLC) Market Vectors Emerging Markets Local Currency Bond ETF	Bullish Setup	Stronger	1.2%	1.4%	3.3%	2.1%	3.3%
(IBND) SPDR Barclays International Investment Grade Bond ETF	Sell Long	N/A	-0.5%	0.4%	1.9%	4.2%	1.9%
(IHY) Market Vectors International High Yield Bond ETF	Neutral Setup	N/A	0.3%	0.0%	-0.6%	-1.0%	-0.6%
(WIP) SPDR DB International Government Inflation-Protected Bond ETF	Bullish Setup	Stronger	0.9%	1.7%	3.5%	4.8%	3.5%

## BEST SIGNALS TTM

**LONG:** TACRM signaled **BULLISH** on International IG Corporate Bonds (IBND) in the week-ended 5/12/17.

**SHORT:** TACRM signaled **BEARISH** on EM USD Bonds (EMB) in the week-ended 11/10/17.

# DYNAMIC A/A: CASH

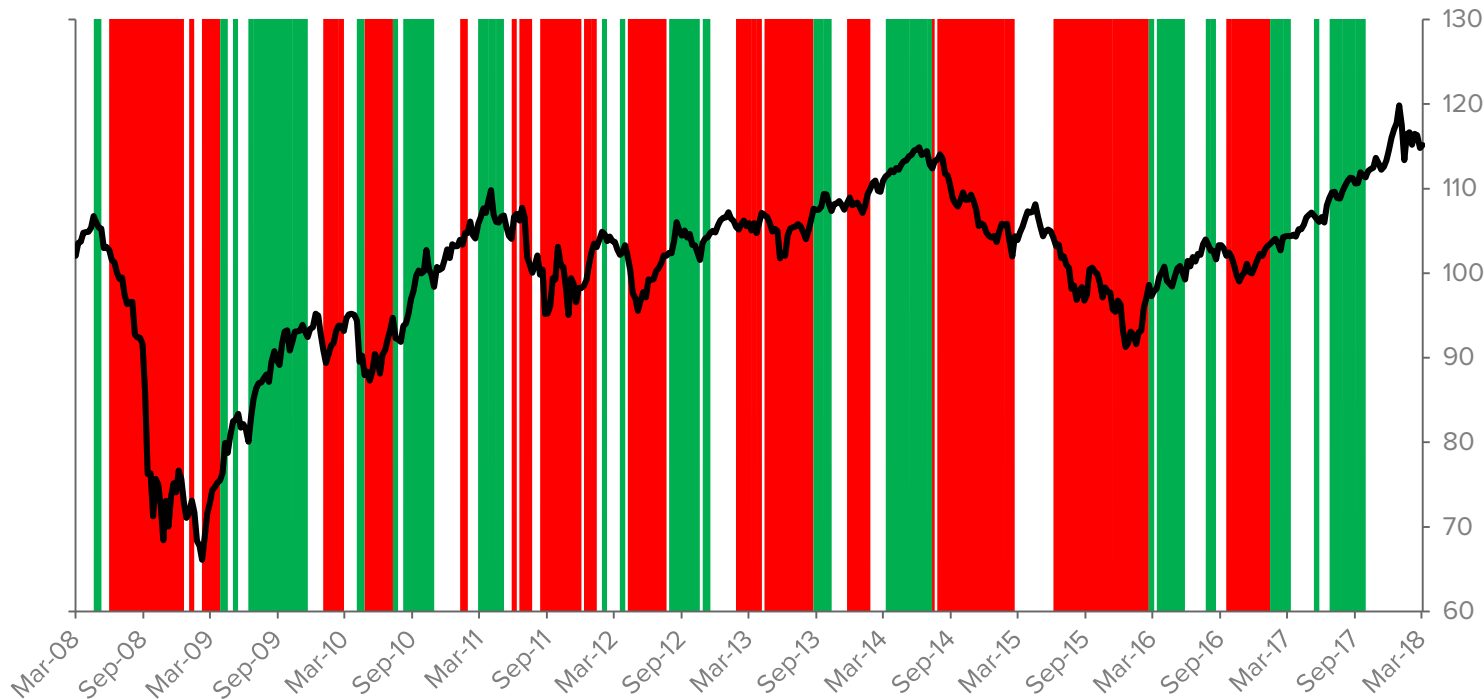


By sequencing changes in Sharpe Ratios and flagging opportunistic setups on the long and short side, **TACRM** employs volatility as a leading indicator for price returns. **TACRM** produces a dynamic asset allocation by proportionally rotating into asset classes where its proprietary risk management signals are relatively most bullish in lieu of asset classes where they are relatively most bearish.

The weighting of each asset class is capped at 33% of the overall portfolio. Assets are allocated exclusively to the three asset classes with the highest ratio of bullish signals to bearish signals at the factor exposure levels and does so on a trending basis to simulate real-world trading conditions. The cash allocation is equal to the proportion of asset classes where the ratio of bearish signals exceeds bullish signals.

# DYNAMIC A/A: CASH

- Cash Exposure > 50%  
(Cumulative 1-Week Forward Performance of Asset Class Benchmark: -14%)
- Cash Exposure = ZERO PERCENT  
(Cumulative 1-Week Forward Performance of Asset Class Benchmark: 18%)
- Equal-Weight Global Macro Portfolio



An investor managing global macro risk with **TACRM's** dynamic asset allocation framework would've been:

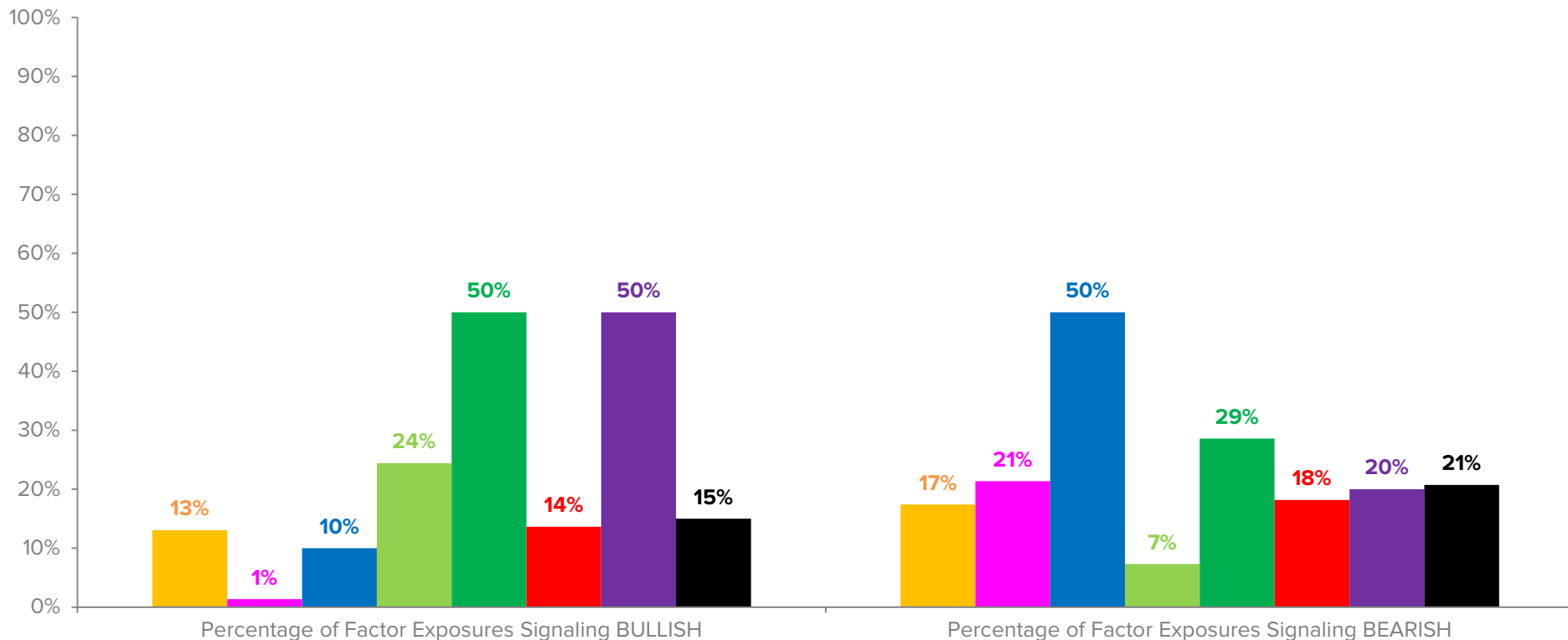
- An average of **73% allocated to Cash** from late-JUN '08 through mid-APR '09
- An average of **92% allocated to Cash** from early-AUG '08 through mid-DEC '08
- **ZERO PERCENT** allocated to Cash from late-MAY '09 through early-JAN '10
- An average of **71% allocated to Cash** from late-JUL '11 through early-FEB '12
- An average of **71% allocated to Cash** from mid-SEP '14 through mid-MAR '16
- **ZERO PERCENT** allocated to Cash from mid-FEB '17 through present

# DYNAMIC A/A: CASH

EXPOSURE	SIGNAL	VALIDITY	WoW PERFORMANCE	MoM PERFORMANCE	3M PERFORMANCE	6M PERFORMANCE	YTD PERFORMANCE
Cash (57%)	Exposure Trending HIGHER	Stronger	N/A	N/A	N/A	N/A	N/A
CBOE S&P 500 Volatility Index (VIX)	N/A	N/A	-19.7%	f	80.9%	110.0%	80.9%
CBOE NASDAQ Volatility Index (VXN)	N/A	N/A	-5.9%	21.2%	70.2%	92.6%	70.2%
CBOE Russell 2000 Volatility Index (RVX)	N/A	N/A	-16.9%	-3.8%	40.3%	50.0%	40.3%
EuroStoxx 50 Volatility Index (V2X)	N/A	N/A	-17.3%	-3.1%	29.0%	43.9%	29.0%
CBOE Emerging Markets Volatility Index (VXEEM)	N/A	N/A	-11.9%	1.7%	61.6%	63.8%	61.6%
JPMorgan Global FX Volatility Index (VXY)	N/A	N/A	-0.6%	-6.7%	3.9%	-5.2%	4.8%
JPMorgan G7 FX Volatility Index (G7-VXY)	N/A	N/A	-1.4%	-8.0%	5.1%	-7.2%	6.0%
JPMorgan EM FX Volatility Index (EM-VXY)	N/A	N/A	1.9%	-2.3%	0.4%	1.7%	1.5%
Merrill Lynch Yield Curve Weighted US Treasury Option Volatility Estimate Index (MOVE)	N/A	N/A	4.2%	-7.0%	25.6%	10.7%	25.6%
CBOE 10Y Treasury Note Volatility Index (TYVIX)	N/A	N/A	1.2%	-13.7%	18.5%	-1.7%	18.5%
CBOE High Yield Corporate Bond Volatility Index (VXHYG)	N/A	N/A	-16.6%	-13.7%	-0.5%	26.9%	-0.5%
CBOE Crude Oil Volatility Index (OVX)	N/A	N/A	-9.0%	2.3%	-12.9%	-15.8%	-18.7%
CBOE Gold Volatility Index (GVZ)	N/A	N/A	-17.8%	-5.8%	0.9%	-6.0%	0.9%

# FACTOR EXPOSURE BREADTH SNAPSHOT

Commodities (23) Domestic Equities (75) Domestic Fixed Income (20) Emerging Market Equities (41)  
Foreign Exchange (14) International Equities (44) Int'l Fixed Income (10) TOTAL (227)



FOR MORE INFORMATION CONTACT:

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