



McCullough: An Investment Playbook for Global Stagflation

May 16, 2018

DISCLAIMER

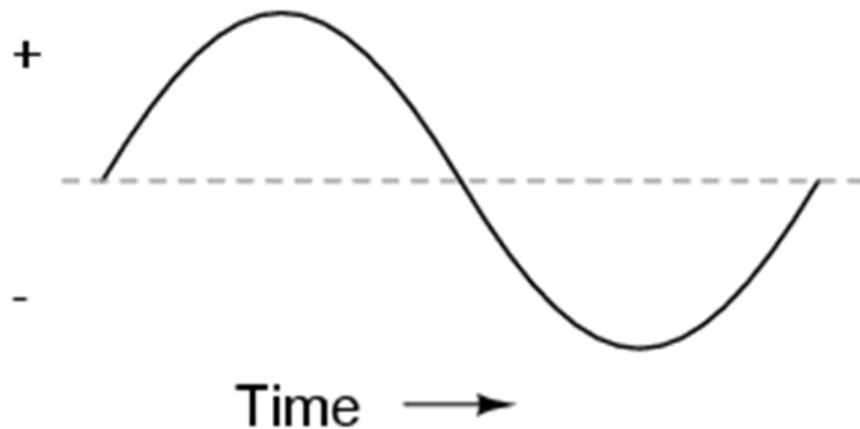
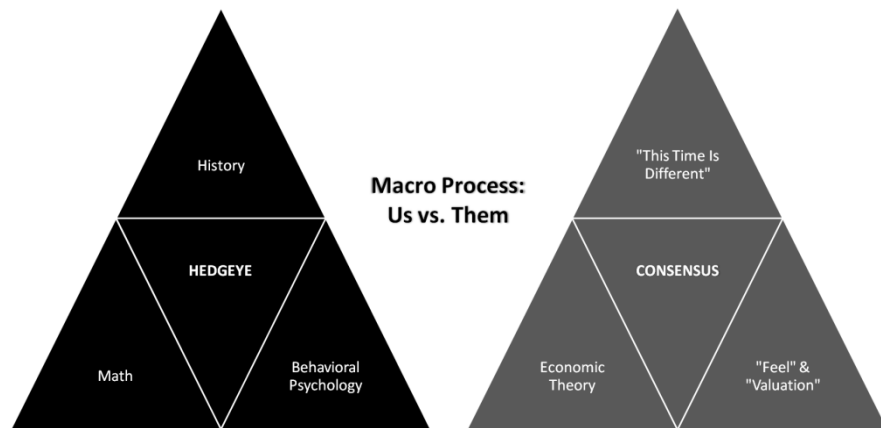
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PROCESS: RATE OF CHANGE CENTRIC



DIFFERENTIATED FROM THE HERD

Macroeconomics and Global Macro Risk Management are two very different fields. We specialize in the latter, incorporating key lessons of behavioral finance such as Prospect Theory and Bayesian Inference into our analysis.

WE FOCUS ON THE SLOPES

Everything that matters in Global Macro occurs on the margin. Our key differentiator is an ever-present focus on trending rates of change, which helps us front-run changes in sentiment among investor and policymakers – both of whom tend to overweight absolute states in their analysis.

SPECIFICALLY, OUR BACKTEST DATA SHOWS THAT A LARGE DEGREE OF INTER AND INTRA ASSET CLASS RETURNS CAN BE EXPLAINED BY CHANGES IN GROWTH, INFLATION AND POLICY RELATIVE TO IMPLIED EXPECTATIONS ACROSS MACRO MARKETS. REFER TO THE FOLLOWING SLIDE FOR MORE DETAILS.

United States

WHY DOES THE 2ND DERIVATIVE MATTER?

BECAUSE FINANCIAL ASSET RETURNS HAVE HISTORICALLY ANCHORED ON MARGINAL RATES OF CHANGE IN BOTH GROWTH AND INFLATION – ESPECIALLY WHEN THESE DELTAS ARE COUNTER TO CONSENSUS EXPECTATIONS.

Hedgeye Macro U.S. GIP Model Backtest	Expected Value, by Quadrant				Percentile of Expected Value, by Asset Class				Percentile of Expected Value, by Quadrant				Percent Positive Ratio [color-coding by Asset Class & Quadrant]				Total Quarterly Performance Observations			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Exposure																				
S&P 500 Index	5.8%	1.5%	0.3%	-1.5%	42%	53%	32%	37%	76%	56%	33%	38%	81%	75%	56%	56%	21	16	27	16
S&P 500 Consumer Discretionary Sector Index	7.2%	1.8%	0.4%	0.1%	79%	58%	47%	74%	91%	58%	42%	78%	76%	75%	48%	44%	21	16	27	16
S&P 500 Consumer Staples Sector Index	4.6%	0.6%	0.1%	0.7%	5%	26%	16%	84%	60%	29%	24%	82%	86%	63%	59%	56%	21	16	27	16
S&P 500 Energy Sector Index	4.8%	1.4%	1.8%	-1.9%	11%	47%	89%	26%	62%	53%	71%	31%	71%	75%	63%	50%	21	16	27	16
S&P 500 Financials Sector Index	5.6%	1.2%	-0.7%	-0.9%	32%	37%	0%	42%	71%	47%	4%	49%	76%	69%	56%	63%	21	16	27	16
S&P 500 Health Care Sector Index	5.6%	1.2%	0.1%	0.9%	21%	32%	21%	89%	67%	44%	27%	84%	81%	69%	52%	69%	21	16	27	16
S&P 500 Industrials Sector Index	6.4%	2.2%	0.3%	-1.7%	68%	68%	37%	32%	87%	62%	38%	33%	71%	75%	48%	44%	21	16	27	16
S&P 500 Information Technology Sector Index	7.6%	4.2%	1.6%	-2.9%	89%	95%	84%	16%	96%	84%	67%	22%	81%	81%	52%	56%	21	16	27	16
S&P 500 Materials Sector Index	6.1%	1.4%	-0.5%	0.6%	58%	42%	5%	79%	82%	51%	9%	80%	81%	75%	52%	50%	21	16	27	16
S&P 500 REITS Index	5.6%	0.3%	0.7%	0.0%	26%	16%	63%	68%	69%	22%	53%	76%	67%	62%	64%	82%	18	13	22	11
S&P 500 Utilities Sector Index	3.2%	-2.8%	2.9%	-0.8%	0%	0%	100%	47%	56%	4%	84%	53%	71%	31%	67%	50%	21	16	27	16
Russell 1000 Growth Index	6.2%	2.8%	0.5%	-2.6%	63%	84%	53%	21%	84%	69%	47%	27%	81%	75%	63%	56%	21	16	27	16
Russell 1000 Value Index	5.7%	0.2%	0.3%	-0.5%	37%	11%	26%	53%	73%	18%	31%	67%	71%	75%	56%	69%	21	16	27	16
S&P 500 Dividend Aristocrats Index	5.8%	0.4%	0.0%	1.8%	47%	21%	11%	100%	78%	24%	22%	91%	81%	63%	63%	56%	21	16	27	16
S&P 500 Low Beta Minimum Volatility Index	5.3%	-0.7%	0.7%	1.7%	16%	5%	68%	95%	64%	11%	56%	89%	71%	63%	52%	75%	21	16	27	16
S&P 500 Quality Index	6.5%	2.2%	0.6%	-0.2%	74%	63%	58%	63%	89%	60%	51%	73%	90%	81%	56%	56%	21	16	27	16
S&P 500 High Beta Index	8.3%	2.6%	0.8%	-3.0%	100%	74%	74%	5%	100%	64%	58%	18%	67%	69%	59%	50%	21	16	27	16
S&P 500 Momentum Index	7.2%	3.0%	1.3%	-4.2%	84%	89%	79%	0%	93%	73%	64%	9%	90%	63%	48%	56%	21	16	27	16
Russell 2000 Index	6.1%	2.6%	0.3%	-0.4%	53%	79%	42%	58%	80%	67%	40%	69%	76%	75%	59%	56%	21	16	27	16
NASDAQ 100 Index	8.2%	5.0%	2.6%	-3.0%	95%	100%	95%	11%	98%	89%	82%	20%	86%	75%	59%	56%	21	16	27	16
Bloomberg Barclays U.S. Agg Credit Yield To Worst	-1.1%	0.3%	2.3%	-5.9%	33%	33%	50%	17%	9%	20%	78%	4%	43%	44%	52%	25%	21	16	27	16
Bloomberg Barclays U.S. High Yield Average Yield To Worst	-2.0%	-1.6%	3.6%	-2.1%	17%	25%	58%	50%	4%	9%	87%	29%	33%	44%	59%	44%	21	16	27	16
Bloomberg Barclays U.S. Corporate Average OAS	1.7%	-2.8%	6.8%	-1.3%	83%	8%	100%	58%	49%	2%	100%	42%	33%	31%	52%	38%	21	16	27	16
Bloomberg Barclays U.S. High Yield Average OAS	-1.0%	-2.3%	6.0%	3.4%	42%	17%	92%	83%	11%	7%	98%	96%	29%	31%	48%	50%	21	16	27	16
Bloomberg Barclays U.S. Composite Convertible Cvt. Yield	-5.9%	-6.3%	5.9%	4.1%	0%	0%	83%	92%	0%	0%	96%	98%	41%	0%	60%	45%	17	11	20	11
U.S. Treasury 2Y Note Yield	3.2%	6.2%	4.4%	-7.5%	100%	92%	75%	0%	58%	96%	93%	0%	52%	69%	52%	38%	21	16	27	16
U.S. Treasury 5Y Note Yield	2.9%	5.4%	2.3%	-6.6%	92%	75%	42%	8%	53%	91%	76%	2%	52%	56%	48%	31%	21	16	27	16
U.S. Treasury 10Y Note Yield	0.6%	4.6%	0.4%	-5.4%	75%	67%	25%	25%	36%	87%	44%	7%	48%	69%	48%	31%	21	16	27	16
U.S. Treasury 30Y Bond Yield	-0.5%	2.9%	0.0%	-3.7%	58%	50%	17%	33%	16%	71%	16%	13%	48%	69%	52%	31%	21	16	27	16
Bond Buyer US 40 Municipal Bond YTM	-0.9%	1.3%	1.1%	-3.5%	50%	42%	33%	42%	13%	49%	62%	16%	33%	50%	48%	13%	18	16	25	16
U.S. Treasury 5Y Breakeven Rate	-2.5%	4.2%	-2.0%	-0.8%	8%	58%	0%	67%	2%	82%	0%	51%	43%	56%	59%	19%	21	16	27	16
U.S. Treasury 10Y Breakeven Rate	0.3%	5.5%	4.2%	77.6%	67%	83%	67%	100%	29%	93%	89%	100%	48%	69%	67%	38%	21	16	27	16
U.S. Treasury 5Y 5Y-Forward Breakeven Rate	-1.2%	6.5%	-1.0%	-0.2%	25%	100%	8%	75%	7%	98%	2%	71%	43%	75%	56%	38%	21	16	27	16
Thomson Reuters/CoreCommodity CRB Commodity Index	0.1%	3.3%	1.8%	-3.8%	25%	50%	25%	0%	22%	78%	69%	11%	57%	75%	63%	31%	21	16	27	16
Commodity Research Bureau BLS/US Spot Raw Industrials Index	1.3%	3.4%	-0.1%	-0.7%	50%	75%	0%	75%	42%	80%	13%	58%	57%	81%	44%	50%	21	16	27	16
Commodity Research Bureau BLS/US Spot Foodstuff Index	-0.2%	1.1%	2.4%	-1.0%	0%	0%	75%	50%	20%	38%	80%	44%	43%	56%	56%	50%	21	16	27	16
Front-month Brent Crude Oil	2.4%	9.4%	4.3%	-2.9%	100%	100%	100%	25%	51%	100%	91%	24%	52%	75%	52%	50%	21	16	27	16
Gold Spot	1.3%	3.2%	1.8%	2.2%	75%	25%	50%	100%	47%	76%	73%	93%	52%	75%	56%	63%	21	16	27	16
U.S. Dollar Index	-0.5%	-0.6%	0.0%	1.2%	0%	0%	29%	100%	18%	13%	18%	87%	43%	38%	52%	69%	21	16	27	16
AUD/USD	1.3%	1.1%	0.0%	-0.7%	100%	71%	43%	57%	44%	36%	20%	60%	62%	69%	67%	44%	21	16	27	16
CAD/USD	0.2%	1.2%	0.2%	-0.6%	14%	86%	57%	86%	24%	40%	29%	64%	43%	56%	52%	44%	21	16	27	16
CHF/USD	1.2%	0.9%	0.8%	-0.7%	86%	57%	100%	71%	40%	33%	60%	62%	67%	56%	59%	38%	21	16	27	16
EUR/USD	0.9%	0.6%	0.3%	-1.0%	71%	29%	71%	29%	38%	27%	36%	47%	62%	56%	56%	31%	21	16	27	16
GBP/USD	0.5%	0.8%	-0.4%	-1.4%	57%	43%	14%	14%	33%	31%	11%	40%	57%	69%	41%	31%	21	16	27	16
JPY/USD	0.3%	1.2%	0.5%	-0.7%	43%	100%	86%	43%	31%	42%	49%	56%	38%	50%	56%	44%	21	16	27	16
JPMorgan EM FX Index	0.3%	-0.3%	-0.5%	-1.6%	29%	14%	0%	0%	27%	16%	7%	36%	56%	57%	57%	44%	18	14	23	16

Data Source: Bloomberg. Trailing 20 years.

DATA SOURCE: BLOOMBERG. THE EXPECTED VALUE DATA IS WEIGHTED BY THE DELTA INTO THE RESPECTIVE QUADRANT.

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GIP MODEL ASSET ALLOCATION PROCESS

#QUAD1

- **Maximum gross exposure, tight net exposure. Hedge downside risk to market beta. Growth investing bias.**
- **Asset Class Overweight(s):**
Equities and Credit
- **Asset Class Underweight(s):**
Fixed Income
- **Equity Sector Overweight(s):**
Tech, Consumer Discretionary and Industrials
- **Equity Sector Underweight(s):**
Utilities, Consumer Staples and Energy
- **Equity Style Factor Overweight(s):**
Momentum, High Beta and Growth
- **Equity Style Factor Underweight(s):**
Low Beta/Minimum Vol., High Dividend Yield and Value
- **Fixed Income Overweight(s):**
HY Credit, IG Credit and Convertibles
- **Fixed Income Underweight(s):**
Short Duration

#QUAD2

- **Maximum gross exposure, wide net exposure. Hedge downside risk to market beta. Inflation-hedging bias.**
- **Asset Class Overweight(s):**
Equities and Credit
- **Asset Class Underweight(s):**
Fixed Income
- **Equity Sector Overweight(s):**
Tech, Industrials and Consumer Discretionary
- **Equity Sector Underweights(s):**
Utilities, REITS and Consumer Staples
- **Equity Style Factor Overweight(s):**
Momentum, High Beta and Growth
- **Equity Style Factor Underweight(s):**
Low Beta/Minimum Vol., High Dividend Yield and Value
- **Fixed Income Overweight(s):**
TIPS, HY Credit, IG Credit and Convertibles
- **Fixed Income Underweight(s):**
Long Duration and Munis

#QUAD3

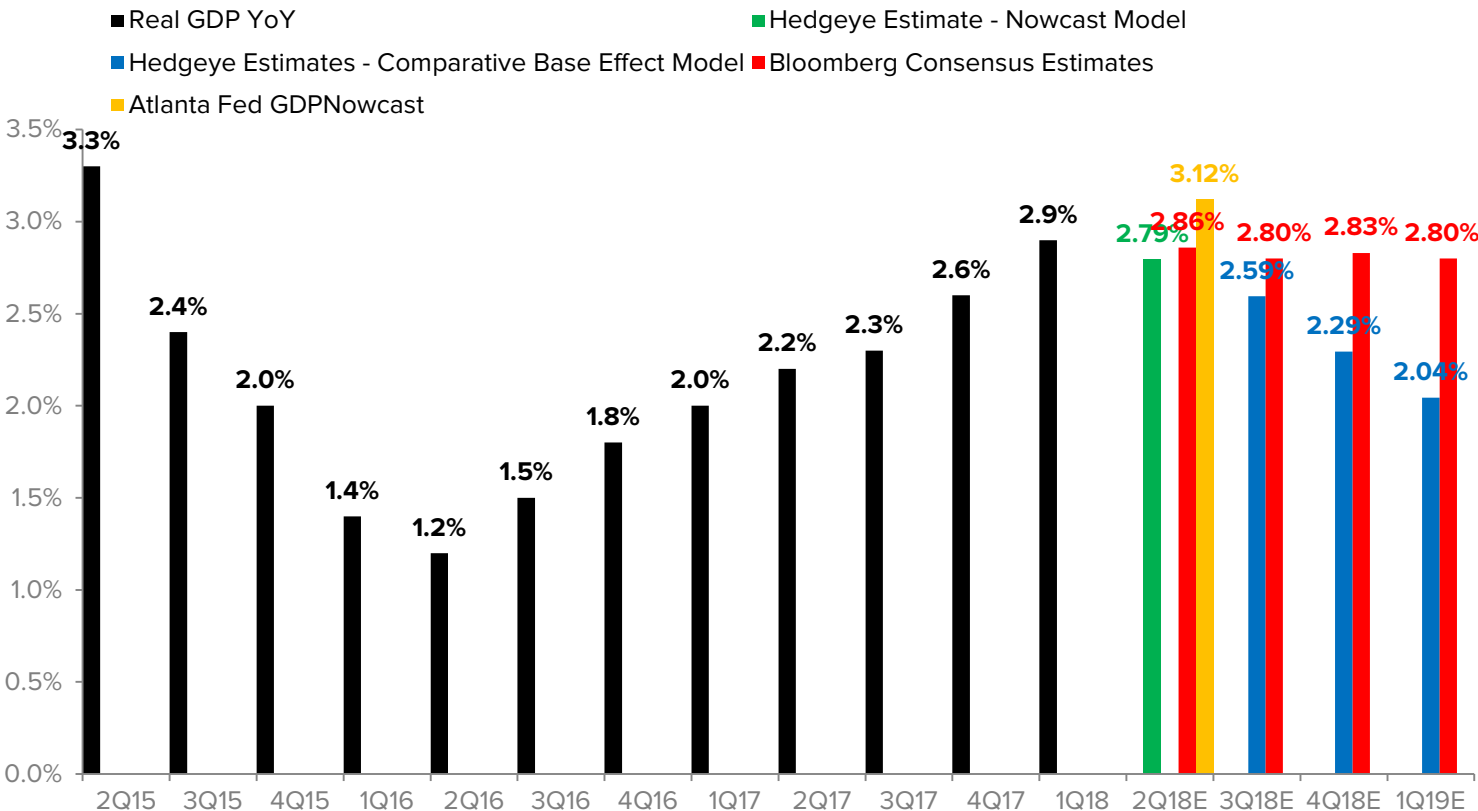
- **Low gross exposures, tight net exposure. Hedge upside risk to market beta. Defensive, yield-chasing bias.**
- **Asset Class Overweight(s):**
Fixed Income
- **Asset Class Underweight(s):**
Equities and Credit
- **Equity Sector Overweight(s):**
Utilities, REITS and Energy
- **Equity Sector Underweight(s):**
Financials, Materials and Consumer Staples
- **Equity Style Factor Overweight(s):**
Low Beta/Minimum Vol., Growth and Quality
- **Equity Style Factor Underweight(s):**
Value, High Dividend Yield and Small Caps
- **Fixed Income Overweight(s):**
Long Duration
- **Fixed Income Underweight(s):**
HY Credit, IG Credit and Convertibles

#QUAD4

- **Minimum gross exposure, net short exposure. Hedge upside risk to market beta. Deflation-hedging bias.**
- **Asset Class Overweight(s):**
Fixed Income
- **Asset Class Underweight(s):**
Equities and Credit
- **Equity Sector Overweight(s):**
Healthcare, Consumer Staples and Materials
- **Equity Sector Underweight(s):**
Tech, Energy and Industrials
- **Equity Style Factor Overweight(s):**
High Dividend Yield, Low Beta/Minimum Vol. and Value
- **Equity Style Factor Underweight(s):**
Momentum, High Beta and Growth
- **Fixed Income Overweight(s):**
Long Duration and Munis
- **Fixed Income Underweight(s):**
TIPS, HY Credit, IG Credit and Convertibles

U.S. REAL GDP FORECASTS

United States



We use two distinct models to forecast the YoY growth rate of real GDP and the combination of the two allows us to develop both a highly accurate real-time view of near-term growth momentum, as well as a high-probability scenario for where growth is likely to trend over the intermediate term.

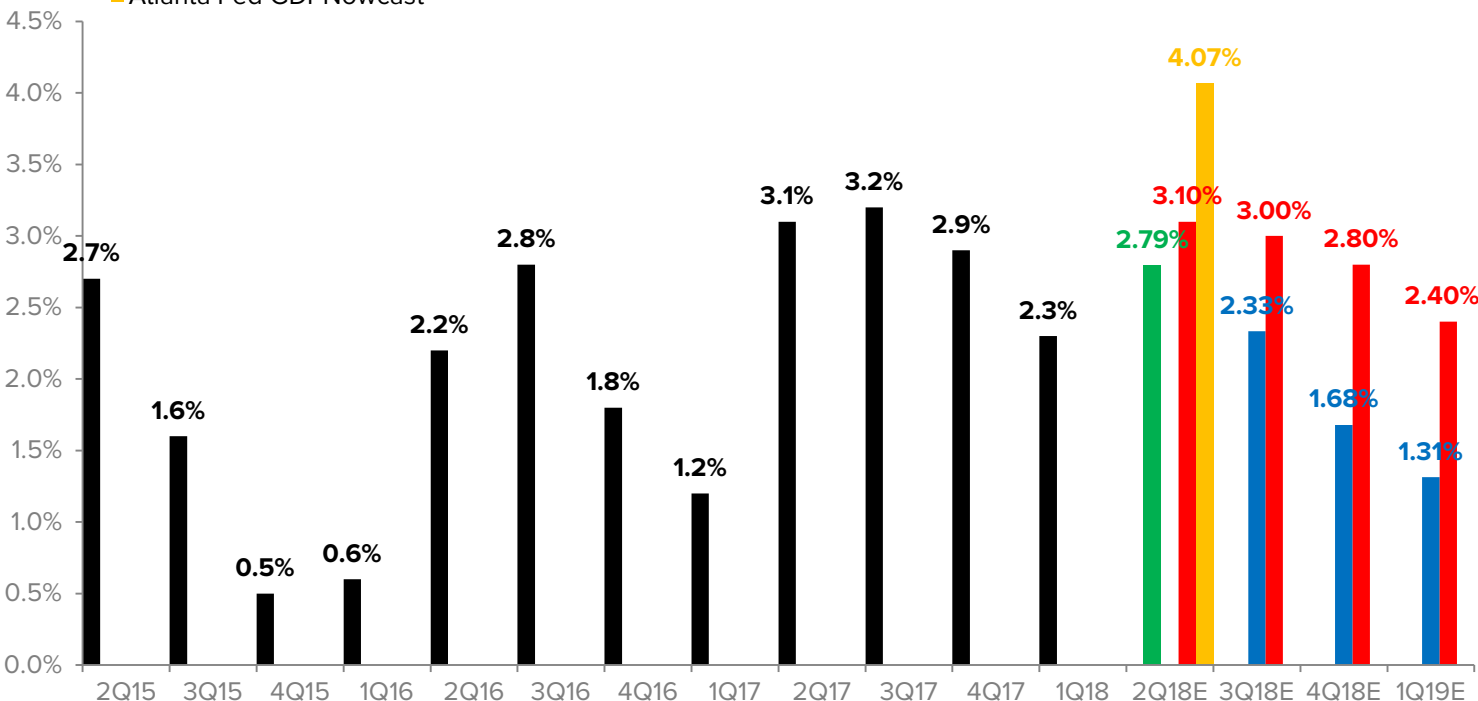
Intra-quarter, we employ a nowcasting model that adjusts the base rate by the cumulative weighted marginal rate of change of the 30 factors embedded in our predictive tracking algorithm. In out-quarters where high-frequency data has yet to be reported, we employ a stochastic Bayesian inference process that adjusts each of the preceding forecasted base rates inversely and proportionally to the marginal rates of change in the base effects. The 2Y average growth rate in the comparative base period backtests as having the most forecasting validity.

All in, our U.S. GDP model has an intra-quarter tracking error of 40bps, an average absolute forecast error of 29bps and an r-squared of 0.79 with a success rate of 93% in terms of projecting the directional outcome.

U.S. HEADLINE GDP FORECASTS

United States

- Real GDP QoQ SAAR
- Hedgeye Estimate - Nowcast Model
- Hedgeye Estimates - Comparative Base Effect Model
- Bloomberg Consensus Estimates
- Atlanta Fed GDPNowcast

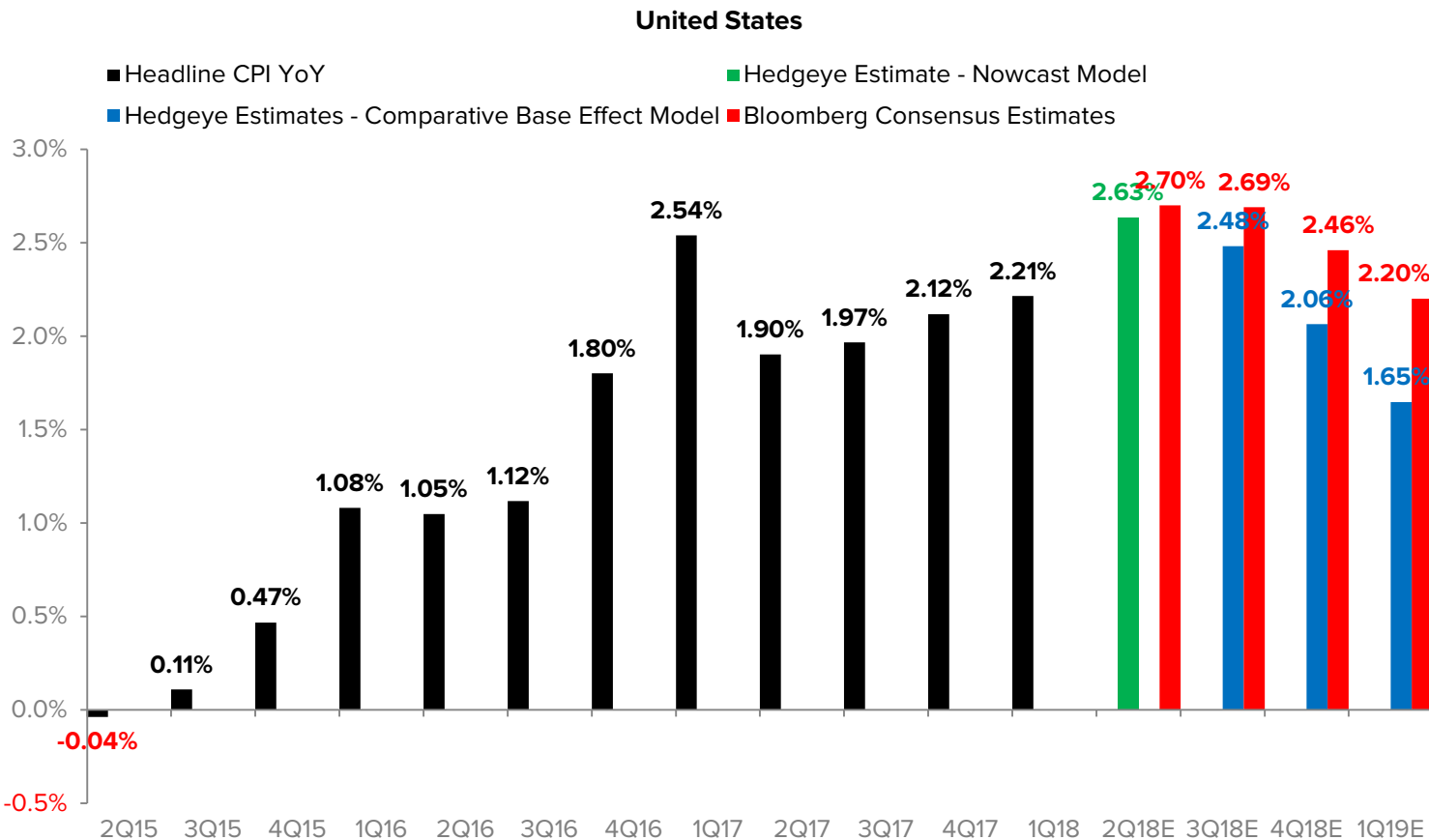


One differentiating factor of our forecasting process is that we aim to solve for cycle (i.e. where growth is trending to on a YoY basis), rather than trying to identify super short-term economic momentum. A rigorous study of financial market history suggests the latter growth rate to be little more than noise in the context of making accurate intermediate-to-long-term investment decisions.

As such, we interpolate our QoQ SAAR forecasts from what is being implied by our forecasted YoY growth rate.

For discussion's sake, we typically backfill a supporting narrative on why our model suggests growth is likely to come in higher or lower than consensus estimates by highlighting recent economic developments that we view as having a high probability of continuing based on our analysis of the distinct cycles throughout the various sectors of the economy, keeping in mind that we're discussing a residual value, not the underlying driver of cross-asset returns.

U.S. HEADLINE CPI FORECASTS



We use two distinct models to forecast the YoY rate of change in headline CPI and the combination of the two allows us to develop both a highly accurate real-time view of near-term inflation momentum, as well as a high-probability scenario for where inflation is likely to trend over the intermediate term.

Intra-quarter, we employ a nowcasting model that adjusts the base rate by the cumulative weighted marginal rate of change of the various inflation-oriented factors embedded in our predictive tracking algorithm. In out-quarters where high-frequency data has yet to be reported, we employ a stochastic Bayesian inference process that adjusts each of the preceding forecasted base rates inversely and proportionally to the marginal rates of change in the base effects. The 2Y average growth rate in the comparative base period backtests as having the most forecasting validity.

All in, our U.S. CPI model has an intra-quarter tracking error of 34bps, an average absolute forecast error of 21bps and an r-squared of 0.76 with a success rate of 93% in terms of projecting the directional outcome.

WE RUN MODELS FOR ~50 COUNTRIES

5/15/2018

Hedgeye Global Macro Risk Monitor	GIP Model Signals								High-Frequency Economic Data Signals								Low-Frequency Economic Data Signals				Financial Market Valuation Signals					
	Actuals				Hedgeye Forecasts				Consumption	Manufacturing	Composite PMI	Headline CPI	Core CPI	Economic Cycle Risk		Global Capital Cycle Risk		Stock Market	Bond Market	Currency						
	2Q17	3Q17	4Q17	1Q18	2Q18E	3Q18E	4Q18E	1Q19E	6MMA Trend	Percentile of Latest Reading (T10Y)	6MMA Trend	Percentile of Latest Reading (T10Y)	6MMA Trend	Percentile of Latest Reading (T10Y)	6MMA Trend	Percentile of Latest Reading (T10Y)	Private Nonfinancial Sector Leverage (Z-Score; T5Y)	Private Nonfinancial Sector Debt Service Ratio (Z-Score; T5Y)	35-54 Year-Old Population Cohort (5Y-Forward CAGR)	Sovereign Budget Balance as a % of Nominal GDP	Current Account Balance as a % of Nominal GDP	MSCI Index Price-to-NTM-Earnings Ratio Spread vs. MSCI ACWI (Z-Score; T3Y)	10Y Yield Spread vs. Barclays Global Agg. YTW (Z-Score; T3Y)	Broad Real Effective Exchange Rate (Z-Score; T3Y)		
Argentina	1	1	3	3	1	3	4	-	⬆️	34%	⬆️	66%	-	-	⬆️	60%	-	-	0.8x	-	1.9%	-1.0%	-4.6%	-0.3x	-	-0.5x
Australia	1	1	3	2	3	1	1	-	⬆️	22%	⬆️	57%	⬆️	96%	⬆️	32%	⬆️	7%	0.6x	0.4x	1.6%	-0.9%	-3.1%	1.0x	-1.7x	-0.6x
Austria	1	2	2	4	3	4	4	4	⬆️	39%	⬆️	89%	⬆️	88%	⬆️	64%	⬆️	72%	-1.2x	-	-1.3%	-0.7%	-1.9x	0.1x	-1.9x	2.0x
Belgium	4	1	2	4	3	4	4	4	⬆️	29%	⬆️	57%	-	-	⬆️	47%	⬆️	20%	1.3x	0.4x	-0.6%	-1.0%	-0.2%	-1.7x	-2.1x	1.8x
Brazil	1	1	2	4	3	4	3	-	⬆️	48%	⬆️	78%	⬆️	89%	⬆️	5%	⬆️	2%	-2.4x	-0.3x	1.7%	-7.4%	-0.5%	-1.1x	0.8x	
Canada	1	3	3	3	3	2	4	-	⬆️	77%	⬆️	61%	⬆️	81%	⬆️	68%	⬆️	64%	1.2x	0.9x	0.3%	-0.8%	-3.0%	-0.9x	1.4x	-0.5x
Chile	1	1	2	4	3	3	2	-	⬆️	23%	⬆️	85%	⬆️	55%	⬆️	19%	⬆️	18%	1.0x	-	1.0%	4.6%	-1.7%	0.6x	-	2.2x
China	4	3	3	3	4	4	4	3	⬆️	2%	⬆️	43%	⬆️	83%	⬆️	43%	⬆️	86%	1.2x	0.9x	0.1%	-3.7%	1.0%	1.1x	-0.1x	0.3x
Colombia	4	1	3	1	2	1	3	-	⬆️	39%	⬆️	41%	-	-	⬆️	53%	⬆️	66%	1.0x	-	1.3%	-3.3%	-3.4%	1.7x	-1.3x	3.2x
Czech Republic	4	2	2	4	4	1	4	-	⬆️	54%	⬆️	62%	⬆️	90%	⬆️	68%	⬆️	83%	-0.6x	-1.0x	0.3%	1.6%	1.0%	2.0x	1.2x	1.9x
Denmark	4	3	4	4	3	1	3	-	⬆️	69%	⬆️	41%	⬆️	89%	⬆️	47%	⬆️	33%	-1.7x	-1.6x	1.0%	7.6%	0.1x	-2.3x	1.5x	
Emerging Markets	1	1	2	4	3	3	3	-	⬆️	26%	⬆️	69%	⬆️	93%	⬆️	21%	⬆️	38%	1.4x	-	0.2%	-3.4%	0.7%	1.2x	1.0x	1.4x
Eurozone	1	1	1	4	4	4	4	1	⬆️	77%	⬆️	78%	⬆️	90%	⬆️	48%	⬆️	37%	-1.4x	-0.5x	-1.4%	-0.9%	3.5%	1.4x	-2.0x	2.3x
Finland	1	4	4	3	1	3	1	-	⬆️	94%	⬆️	84%	-	-	⬆️	24%	⬆️	4%	0.0x	-1.0x	-0.5%	-0.6%	0.7%	1.2x	-2.1x	1.6x
France	1	1	2	3	3	4	4	1	⬆️	56%	⬆️	83%	⬆️	93%	⬆️	63%	⬆️	34%	1.9x	1.1x	-0.4%	-2.6%	-0.5%	1.6x	-2.5x	2.4x
Germany	1	2	1	4	4	4	4	1	⬆️	64%	⬆️	78%	⬆️	83%	⬆️	55%	⬆️	62%	-0.7x	-0.4x	-1.9%	1.3%	8.0%	2.5x	-2.0x	2.0x
Greece	1	4	2	4	3	3	1	-	⬆️	72%	⬆️	65%	⬆️	93%	⬆️	46%	⬆️	46%	-2.1x	-	-1.1%	0.8%	-0.6%	-0.2x	-1.5x	1.0x
Hong Kong	3	4	4	2	4	1	3	4	⬆️	65%	⬆️	60%	⬆️	81%	⬆️	26%	-	-	1.8x	1.7x	-0.8%	7.1%	4.2%	1.6x	1.4x	-1.5x
Hungary	4	2	1	4	3	1	1	4	⬆️	95%	⬆️	59%	⬆️	94%	⬆️	43%	⬆️	39%	-1.7x	-	-2.0%	0.6%	-0.2x	-1.5x	1.2x	
India	4	2	2	3	2	4	1	-	-	-	⬆️	72%	⬆️	50%	⬆️	30%	-	-	-2.7x	-1.9x	-2.6%	-4.0%	0.3x	-0.4x	-0.4x	
Indonesia	2	1	1	4	3	2	3	1	⬆️	5%	⬆️	37%	⬆️	70%	⬆️	13%	⬆️	3%	0.5x	-	-0.3x	1.3%	-2.4%	-0.6x	-0.9x	-1.4x
Ireland	1	2	3	1	4	4	4	-	⬆️	79%	⬆️	37%	⬆️	128%	⬆️	60%	⬆️	53%	-1.5x	-	0.5%	-0.3%	12.5%	-0.5x	-1.6x	1.6x
Italy	2	1	4	4	4	4	4	-	⬆️	69%	⬆️	82%	⬆️	79%	⬆️	39%	⬆️	7%	-1.6x	-1.5x	-2.3%	-2.3%	2.8%	-0.5x	-1.4x	2.4x
Japan	2	2	2	3	4	4	4	-	⬆️	71%	⬆️	65%	⬆️	71%	⬆️	75%	⬆️	75%	0.1x	0.8x	-1.0%	-5.0%	4.0%	0.4x	-2.5x	0.1x
Malaysia	1	1	4	4	3	3	1	-	-	-	⬆️	32%	⬆️	90%	⬆️	53%	-	-	0.7x	0.4x	0.0%	-3.0%	3.0%	1.4x	-1.7x	0.8x
Mexico	3	3	3	4	1	1	4	1	⬆️	21%	⬆️	27%	⬆️	50%	⬆️	85%	⬆️	75%	1.1x	1.9x	2.1%	-1.1%	-1.6%	-1.0x	1.0x	0.2x
Netherlands	1	3	4	4	4	1	1	4	⬆️	87%	⬆️	75%	⬆️	91%	⬆️	46%	⬆️	32%	-1.8x	-2.2x	-1.7%	1.1%	10.2%	1.8x	-1.8x	1.8x
New Zealand	1	2	1	1	3	1	1	-	-	-	⬆️	50%	⬆️	60%	⬆️	53%	-	-	0.9x	-	-0.5%	1.8%	-2.7%	2.9x	-2.3x	-0.3x
Norway	4	1	4	3	2	1	3	2	⬆️	51%	⬆️	55%	⬆️	95%	⬆️	27%	⬆️	27%	1.0x	-1.2x	0.4%	4.5%	5.1%	0.6x	-0.6x	0.4x
Peru	1	4	4	1	2	4	2	3	-	-	⬆️	16%	-	-	⬆️	8%	-	-	-	-	2.4%	-0.8%	-1.3%	1.2x	-1.3x	3.6x
Philippines	1	1	3	2	3	3	1	-	-	-	⬆️	49%	-	-	⬆️	83%	⬆️	84%	-	-	2.1%	-2.7%	-0.8%	-1.3x	1.6x	-2.5x
Poland	4	2	2	4	4	4	4	4	⬆️	75%	⬆️	71%	⬆️	80%	⬆️	45%	⬆️	36%	0.9x	-1.8x	1.7%	-0.7%	0.0%	0.4x	-1.2x	1.3x
Portugal	2	4	3	4	1	4	4	3	⬆️	92%	⬆️	66%	-	-	⬆️	57%	⬆️	71%	-1.5x	-1.3x	-1.4%	-3.0%	0.5%	2.3x	-2.0x	2.9x
Russia	1	4	4	4	3	2	2	-	⬆️	46%	⬆️	28%	⬆️	73%	⬆️	2%	⬆️	3%	0.5x	-0.1x	1.6%	-2.1%	2.1%	1.1x	-1.3x	0.4x
Singapore	2	1	4	1	4	4	1	4	⬆️	63%	⬆️	71%	⬆️	92%	⬆️	32%	-	-	1.3x	-	-0.5%	-0.3%	19.3%	1.9x	-0.1x	-1.2x
South Africa	1	4	1	4	3	2	4	-	⬆️	80%	⬆️	49%	⬆️	56%	⬆️	12%	⬆️	20%	0.7x	1.7x	3.3%	-4.4%	-2.5%	0.0x	-1.7x	1.7x
South Korea	4	2	4	4	3	3	2	4	⬆️	59%	⬆️	15%	⬆️	70%	⬆️	33%	⬆️	6%	1.5x	-0.5x	-1.3%	0.8%	5.1%	-0.3x	1.1x	0.8x
Spain	1	4	4	4	3	1	1	1	⬆️	68%	⬆️	89%	⬆️	64%	⬆️	47%	⬆️	58%	-1.4x	-1.4x	-1.7%	-3.1%	1.9%	-0.3x	-2.6x	2.6x
Sweden	2	2	1	1	3	1	2	-	⬆️	45%	⬆️	82%	⬆️	76%	⬆️	72%	⬆️	70%	-0.2x	-0.8x	-0.1%	1.3%	3.2%	1.4x	-2.7x	-1.9x
Switzerland	4	2	2	4	4	3	1	-	⬆️	27%	⬆️	97%	⬆️	95%	⬆️	86%	⬆️	82%	2.0x	1.3x	-0.6%	1.2%	9.8%	-0.7x	-1.8x	-1.6x
Taiwan	4	2	1	3	3	3	4	1	⬆️	74%	⬆️	53%	⬆️	86%	⬆️	65%	-	-	-	-	0.0%	-0.3%	15.4%	1.5x	-2.6x	0.5x
Thailand	2	2	3	4	3	3	1	-	⬆️	61%	⬆️	84%	⬆️	79%	⬆️	37%	⬆️	20%	0.3x	-2.0x	-0.9%	-2.9%	10.6%	2.1x	-1.2x	1.6x
Turkey	2	1	3	1	3	3	4	-	⬆️	35%	⬆️	78%	⬆️	79%	⬆️	91%	⬆️	97%	1.4x	1.5x	1.8%	-1.5%	-5.6%	-1.2x	2.8x	-1.8x
United Kingdom	3	3	3	4	1	4	1	1	⬆️	35%	⬆️	78%	⬆️	31%	⬆️	60%	⬆️	72%	-0.3x	-0.3x	-1.9%	-4.1%	-0.3%	-1.6x	-1.3x	-0.5x
United States	1	2	2	2	3	4	4	4	⬆️	81%	⬆️	82%	⬆️	94%	⬆️	77%	⬆️	58%	2.0x	0.4x	0.3%	-3.7%	-2.4%	-0.7x	1.8x	-0.6x
MODE/MEAN	1	1	2	4	3	4	4	4	⬆️	55%	⬆️	62%	⬆️	78%	⬆️	46%	⬆️	45%	0.1x	-0.2x	0.2%	-3.7%	-0.2%	0.6x	-1.0x	0.7x

Data Source: Bloomberg, BIS, World Bank, IMF. Intellectual Property of Hedgeye Risk Management.

DATA SOURCE: BLOOMBERG

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TRADE/TREND/TAIL RISK MANAGEMENT PROCESS

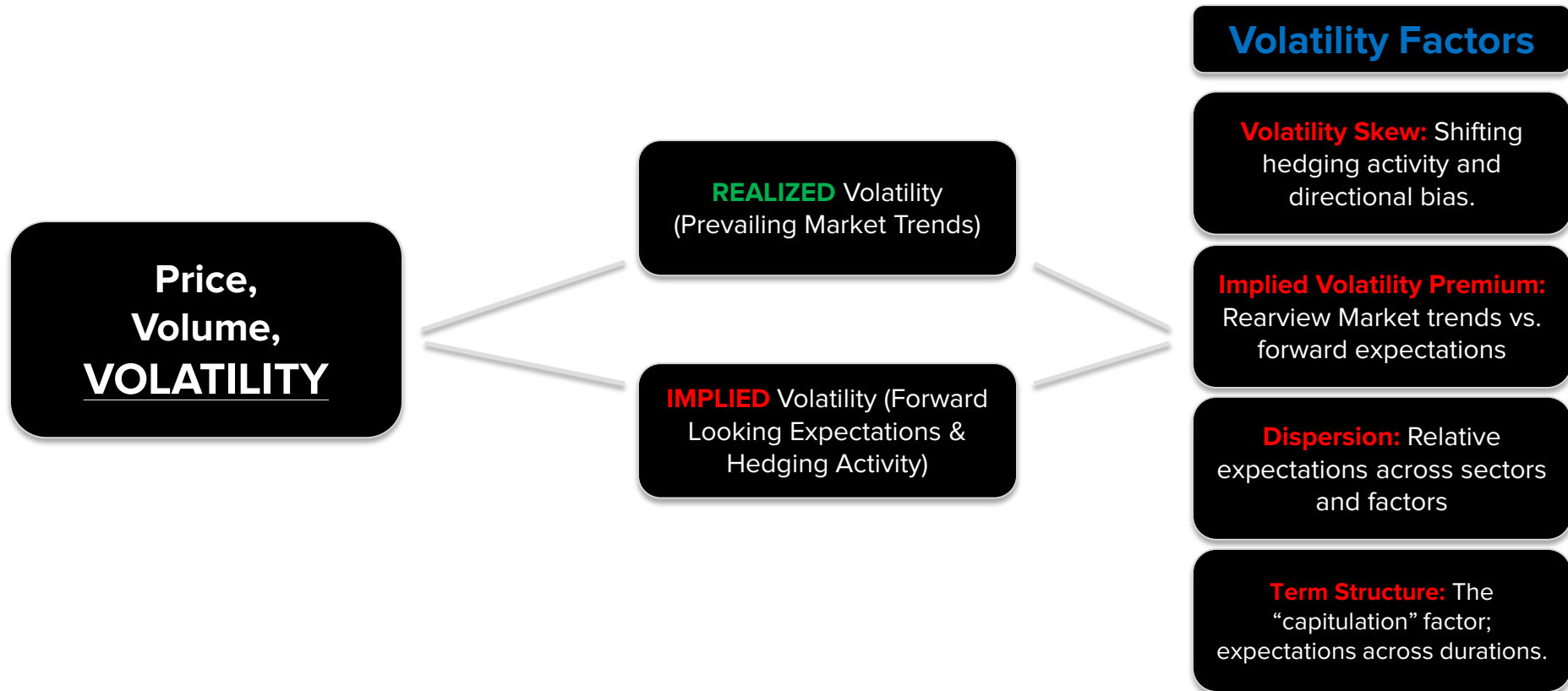


Core to the process of selecting our preferred macro factor exposures is whether or not the ticker screens well from the perspective of Keith's proprietary risk management process, which employs PRICE, VOLUME and VOLATILITY as discrete factors in the calculus of levels that backtest well as critical momentum thresholds.

Assets where last price is greater than all three (in ascending order) are said to be in a "Bullish Formation" and all dips should be bought, insomuch that assets in the converse "Bearish Formation" should be repeatedly shorted on strength.

RISK MANAGEMENT: THE VOLATILITY FACTOR

3-FACTOR MODEL: PRICE, VOLUME, VOLATILITY



VOLATILITY OVERLAY: MACRO EXPOSURES

KEY VOLATILITY METRICS	Ticker	Aggte. Realized Percentile*	Implied Volatility Percentile Reading*	30D Implied Volatility Premium %**	60D Implied Volatility Premium %	IVOL Premium (TTM Z-Score)***	IVOL Premium (3Yr Z-Score)
U.S. Equities							
Power Shares QQQ Trust ETF	QQQ	72.1%	33.8%	-20.3%	-31.9%	-1.5	-1.3
I-Shares Russell 2000 ETF	IWM	24.1%	2.0%	2.7%	-23.7%	-1.0	-0.9
SPDR S&P 500 ETF Trust	SPY	60.9%	23.0%	-16.4%	-33.0%	-1.2	-1.2
Consumer Discretionary Select Sector SPDR ETF	XLY	57.3%	29.5%	-4.8%	-22.0%	-1.2	-1.1
Financials Select Sector SPDR ETF	XLF	51.3%	27.0%	-4.7%	-25.0%	-1.1	-0.9
Health Care Select Sector SPDR ETF	XLV	74.7%	44.7%	-14.6%	-22.5%	-1.3	-1.1
Technology Select Sector SPDR ETF	XLK	74.4%	39.8%	-18.5%	-31.5%	-1.4	-1.2
Consumer Staples Select Sector SPDR ETF	XLP	77.2%	57.0%	-14.6%	-16.5%	-1.1	-1.0
Industrials Select SPDR ETF	XLI	62.7%	32.2%	-17.9%	-24.8%	-1.4	-1.3
Materials Select Sector SPDR ETF	XLB	51.2%	19.4%	-20.4%	-25.2%	-1.4	-1.4
Energy Select Sector SPDR ETF	XLE	34.4%	24.0%	7.5%	-9.0%	-0.6	-0.3
Utilities Select Sector SPDR ETF	XLU	49.9%	34.3%	-6.0%	-10.4%	-1.3	-0.7
Vanguard REIT ETF	VNQ	31.8%	19.3%	-4.7%	-10.2%	-0.8	-0.6
International Equities							
Euro Stoxx 50 Index	SX5E	11.1%	0.1%	-9.6%	-16.7%	-1.1	-0.8
I-Shares MSCI Emerging Markets ETF	EEM	27.9%	20.8%	16.0%	-11.1%	-0.2	-0.2
I-Shares MSCI Japan ETF	EWJ	19.3%	4.2%	9.6%	-27.5%	-0.9	-0.7
I-Shares China Large-Cap ETF	FXI	29.7%	17.0%	12.3%	-17.9%	-0.3	-0.4
Currencies							
PowerShares US Dollar Index Bullish Fund ETF	UUP	15.1%	28.0%	42.7%	18.8%	1.6	1.2
Currency Shares Euro Trust ETF	FXE	16.0%	19.5%	24.2%	9.4%	1.9	0.7
Currency Shares Japanese Yen Trust ETF	FXJ	14.2%	7.1%	14.7%	-3.1%	-0.2	-0.1
Currency Shares British Pound Sterling Trust ETF	FXB	24.9%	30.2%	7.6%	9.2%	0.8	0.3
Commodities							
United States Oil Fund ETF	USO	26.7%	22.8%	10.0%	11.1%	0.8	0.3
United States Natural Gas Fund ETF	UNG	0.0%	0.7%	19.4%	20.8%	0.4	0.5
SPDR Gold Shares ETF	GLD	5.6%	3.7%	9.1%	-1.4%	-0.3	-0.3
PowerShares DB Base Metals Fund ETF	DBB	40.7%	15.9%	-16.2%	3.6%	-0.6	-0.4
PowerShares DB Agriculture Fund ETF	DBA	36.1%	14.3%	-1.8%	14.9%	-1.1	-1.0
Fixed Income							
I-Shares 20+ Year Treasury Bond ETF	TLT	13.3%	11.3%	3.3%	1.1%	-0.2	0.0
I-Shares IBOX IG Corporate Bond ETF	LQD	27.9%	37.7%	24.4%	14.1%	0.3	0.0
I-Shares IBOX USD HY Corporate Bond ETF	HYG	16.8%	4.5%	29.4%	-24.1%	-0.5	-0.7
I-Shares J.P. Morgan USD EM Bond ETF	EMB	53.2%	73.8%	53.3%	53.8%	1.0	0.5
Data Source: Bloomberg, CME, CBOE							
*12yr Lookback or Max Available							
**30D IVOL relative to 30D Realized Vol							
***Average Z-score between 30D and 60D IVOL premium Z-Scores							

Q1 2018 MACRO THEMES

1

#REFLATION'S ROLLOVER II

Sequels are rarely as good as the original but with harder comps, a broad deceleration across major componentry in the CPI/PCE price baskets and the Sept-Dec reflationary impulse now largely rearview, we're likely to see our second round of Reflation's Rollover in less than a year. And with growth poised to accelerate for a 6th consecutive quarter in 1Q18, a lower deflator should help drive a GIP rotation back into #Quad1. We'll detail the growth and inflation outlook domestically and revisit why the shift between inflation accelerating and decelerating is key for picking alpha-generating sector and asset class exposures.

2

#GLOBAL DIVERGENCES

In contrast relying on financial media soundbites, idea dinners or surveys, our views on the global economy are instructed by sophisticated predictive tracking algorithms – which we run for every investable economy in the world. While investor consensus remains committed to the “globally synchronized recovery” narrative heading into 2018, our models are signaling quite the opposite and that outcome should perpetuate a number of meaningful pivots in asset allocation terms throughout the investment management landscape. We'll detail which of those you cannot afford to miss out on to start the year.

3

#UNDERWEIGHT EM

2017 was an epic year in terms of risk-adjusted returns and portfolio flows across the EM investment landscape for a variety of fundamental reasons – not the least of which was six consecutive quarters in #Quad1 at the aggregate GIP level. The first half of 2018 will likely see a pickup in volatility and credit spreads as said fundamental tailwinds are eroded, at the margins. We will detail why we believe global investors would do well to rotate out of EM and into DM, as we expect the former to underperform over the intermediate term. We will also make the case for why EM-dedicated investors would do well to high-grade their portfolios by rotating into minimum volatility securities, consumer staples and IG credit in lieu of reflation-oriented cyclical and HY credit.

Q2 2018 MACRO THEMES

1

USA: #PEAK CYCLE?

After 6 consecutive quarters of accelerating growth and bullish quantitative signaling, our model is mapping a peak and prospective negative inflection in domestic economic growth as we move into 2H18. We'll review and contextualize the recent shift in market and macro dynamics and detail the fundamental, base effect and risk management dynamics driving our expectation for a downshift to Quads 3 and 4 in the back half of the year. We'll specify the risks to the consensus outlook and how to optimize positioning for the chop associated with emergent phase transitions in growth and volatility.

2

GLOBAL #DIVERGENCES, REITERATED

Cross-asset volatility has conspicuously emerged amid consensus calls for an ongoing “globally synchronized recovery” and an extrapolation of cycle-peak GDP growth rates in the U.S. through year-end. As such, we feel compelled to reiterate our non-consensus view that global growth momentum has broadly dissipated. The only strategist that seems to agree with our view is *Mr. Market* himself.

3

DOLLAR #BOTTOMING?

We have recently asked the rhetorical question, “Is the [U.S.] dollar the new VIX?” Peak dollar bearishness came midway through Q1 which was driven by carry trades and fund flows associated with the low-volatility, global growth accelerating backdrop of 2017. We'll outline reasons and provide specific set-ups to exemplify why a reversal in the U.S. dollar continues to be a major risk to aging consensus fund flow narratives.



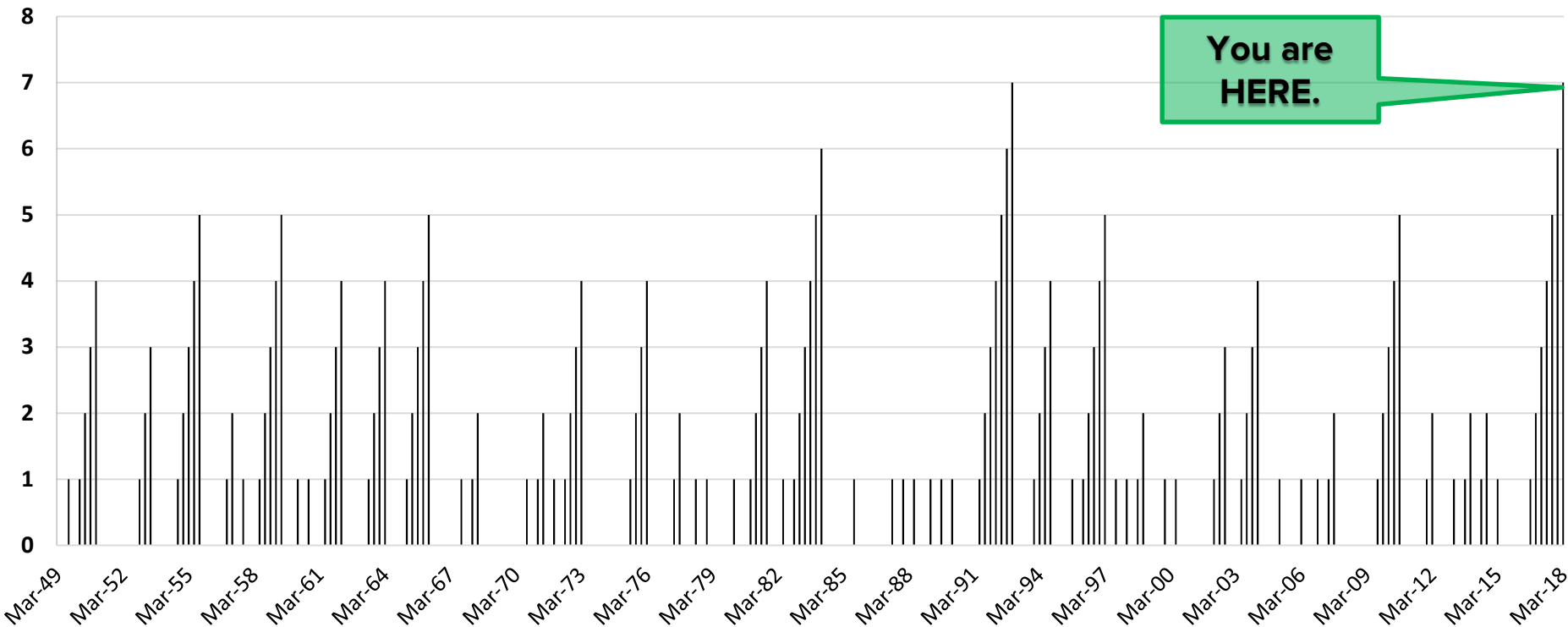
USA: #PEAK CYCLE?

GROWTH: IT'S BEEN A HISTORIC RUN

1Q18 MARKS 7 CONSECUTIVE QUARTERS OF ACCELERATING YEAR-OVER-YEAR GROWTH, MATCHING THE LONGEST STREAK EVER

Consecutive Quarters of Accelerating Growth

GDP Y/Y %, 1948-Present

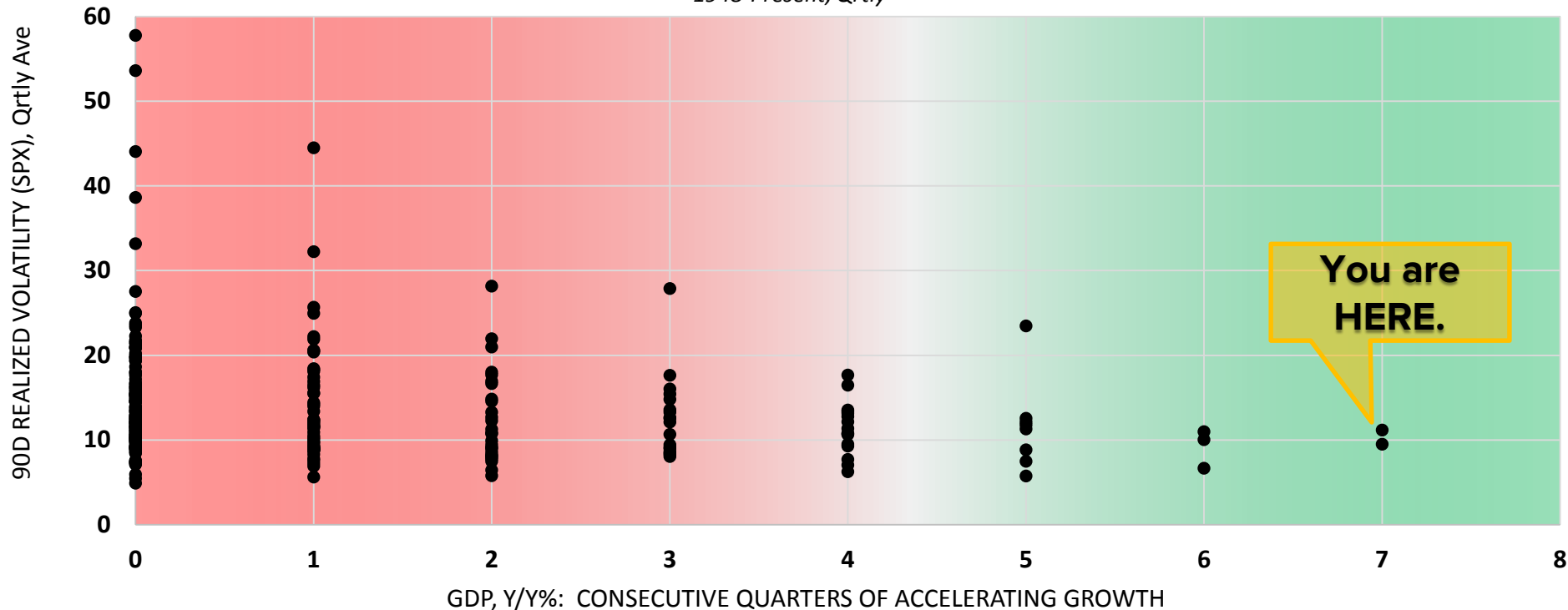


GOLDILOCKS: GROWTH IS CAUSAL

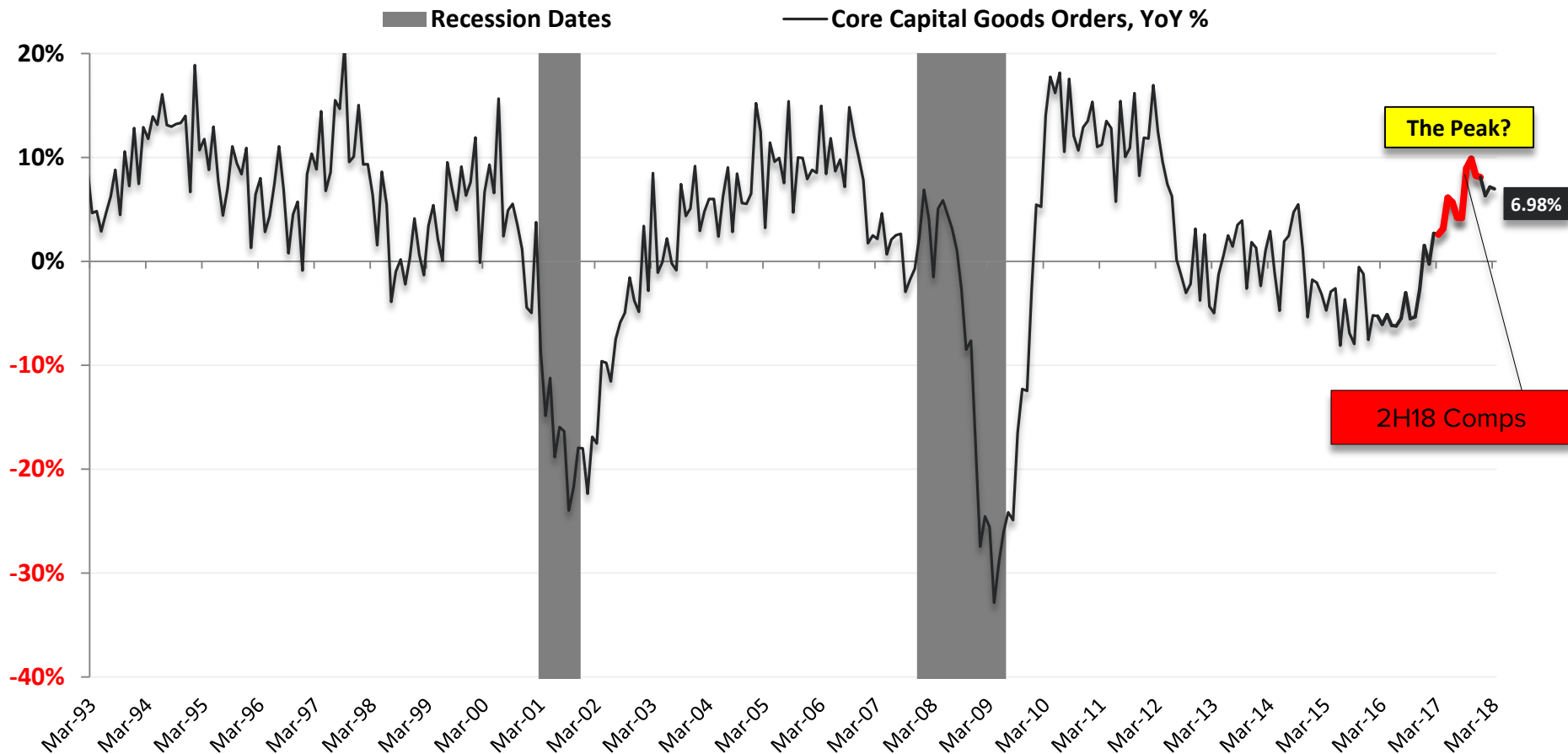
PROTRACTED ACCELERATIONS IN GROWTH PERPETUATE A POSITIVE, SELF-REINFORCING CYCLE OF PASSIVE INVESTMENT AND LOW VOLATILITY. IMBALANCES CAN BUILD AND RISKS CAN CUMULATE LATENTLY UNTIL THE GROWTH CYCLE INFLECTS.

Consecutive Quarters of Accelerating Growth vs. Realized Volatility

1948-Present, Qrtly



THE #PEAK? CAPITAL GOODS

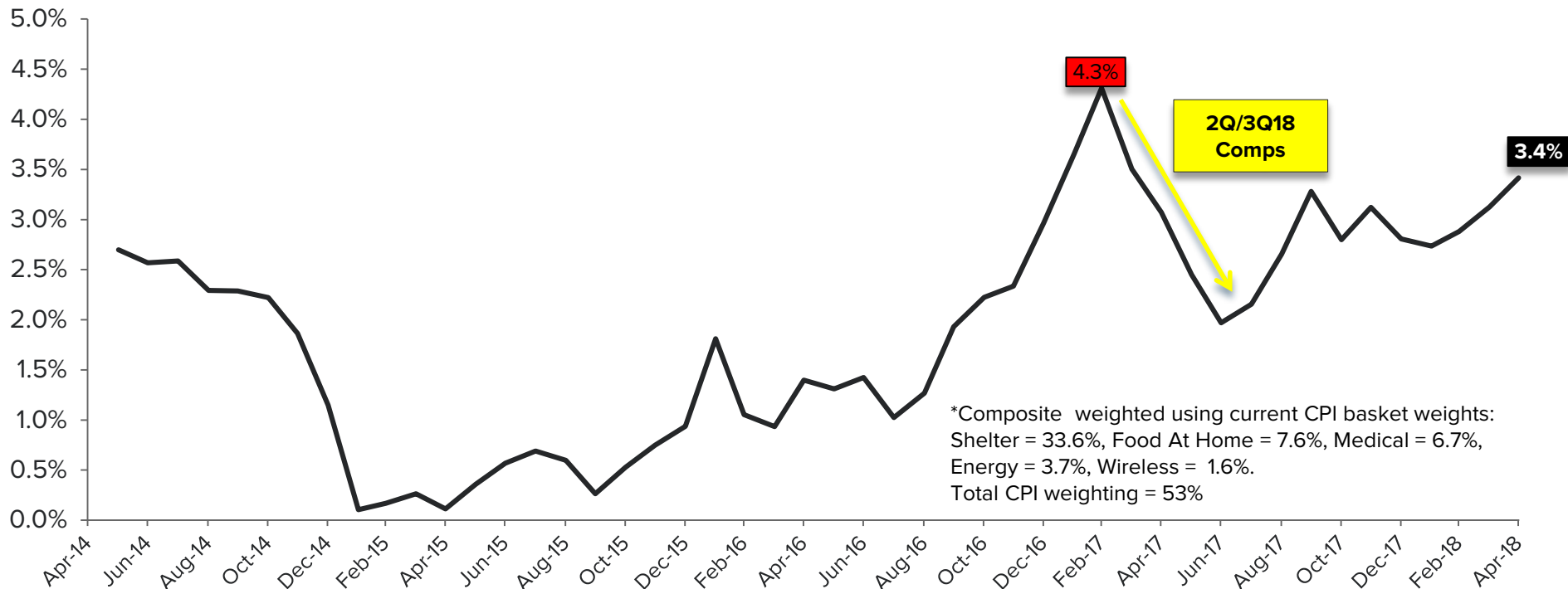


LATE CYCLE PRICING IN CORE?

CORE & NONDISCRETIONARY PRICE PRESSURES HAVE BEEN PERCOLATING IN RECENT MONTHS. THE NEXT FEW MONTHS HOLD THE POTENTIAL FOR FURTHER ACCELERATION AS BASE EFFECTS CONTINUE TO EASE.

PRICE GROWTH IN KEY CONSUMER COST CENTERS

— Consumer Price Basket: Weighted Basket of CPI Price Growth in Shelter, Medical Care, Food At Home, Energy Commodities and Wireless Services

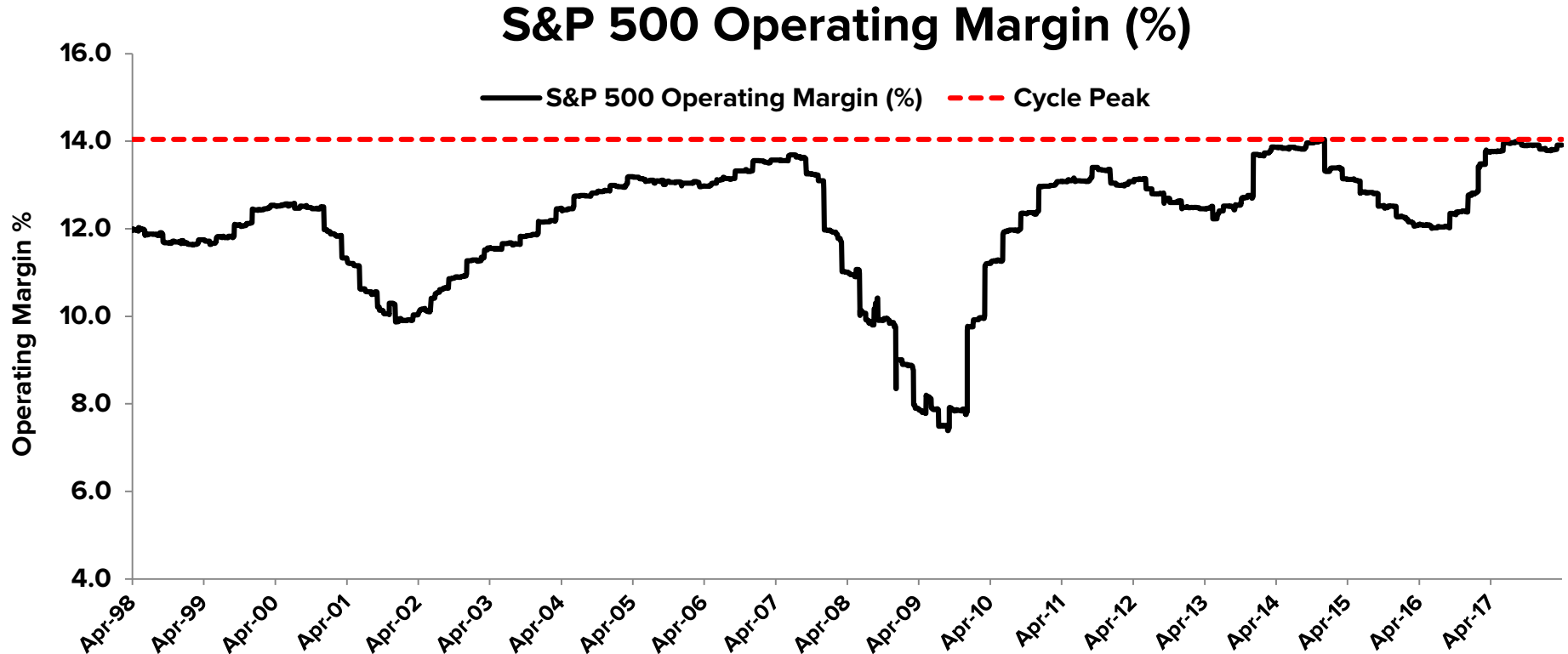


GROWTH ACCELERATING CREATES LOFTY EXPECTATIONS

S&P 500 Index														Estimates			
SALES GROWTH (%)	CQ1 15	CQ2 15	CQ3 15	CQ4 15	CQ1 16	CQ2 16	CQ3 16	CQ4 16	CQ1 17	CQ2 17	CQ3 17	CQ4 17	CQ1 18*	CQ2 18	CQ3 18	CQ4 18	CQ1 19
S&P 500 Aggregate	-2.7%	-3.4%	-3.7%	-4.0%	-1.9%	-0.3%	2.4%	4.9%	7.8%	5.3%	5.3%	7.8%	8.2%	7.8%	7.1%	5.1%	5.7%
Energy	-34.0%	-31.8%	-34.4%	-34.4%	-29.3%	-24.2%	-14.2%	4.2%	34.1%	15.8%	17.9%	19.9%	13.8%	22.5%	19.2%	6.2%	13.6%
Materials	-9.8%	-10.1%	-14.0%	-15.5%	-8.8%	-7.3%	-2.4%	2.7%	9.1%	7.2%	8.6%	12.9%	10.6%	12.7%	8.5%	5.3%	7.2%
Industrials	-2.0%	-3.2%	-6.1%	-7.2%	-2.0%	-1.3%	2.2%	2.6%	4.2%	4.8%	6.6%	8.5%	9.9%	7.4%	5.7%	5.5%	4.0%
Consumer Discretionary	1.8%	2.1%	3.7%	4.4%	6.3%	8.5%	8.2%	7.8%	8.4%	3.8%	3.0%	7.1%	7.8%	7.9%	8.1%	5.9%	5.5%
Consumer Staples	2.5%	0.6%	0.5%	-0.4%	1.2%	0.7%	1.7%	2.7%	2.1%	2.5%	4.5%	5.1%	5.5%	3.8%	3.1%	3.1%	4.1%
Health Care	10.3%	8.9%	9.5%	9.6%	9.2%	8.8%	7.0%	5.4%	5.7%	4.0%	4.5%	6.1%	7.5%	6.3%	6.7%	6.1%	5.7%
Financials	2.0%	1.6%	0.1%	1.0%	-1.7%	0.7%	5.6%	5.5%	9.3%	4.5%	1.7%	3.2%	3.3%	3.4%	3.8%	4.3%	4.5%
Information Technology	6.0%	3.1%	1.1%	-5.3%	-6.8%	-3.9%	0.4%	7.2%	8.2%	8.7%	8.7%	11.7%	15.0%	12.1%	9.9%	6.9%	6.7%
Telecom	2.6%	2.4%	11.8%	12.0%	11.2%	9.6%	-0.8%	-2.9%	-4.8%	-1.3%	-1.0%	3.2%	3.2%	2.2%	2.2%	-0.3%	2.8%
Utilities	-3.6%	-4.9%	-2.1%	-12.6%	-10.5%	-2.4%	3.5%	8.1%	7.2%	6.4%	-2.7%	2.5%	3.0%	-0.3%	2.9%	-1.9%	2.5%
Real Estate	4.4%	6.4%	7.5%	10.8%	11.4%	7.4%	7.5%	3.7%	4.5%	7.3%	5.2%	7.1%	12.9%	7.8%	7.6%	7.5%	3.9%
EPS GROWTH (%)	CQ1 15	CQ2 15	CQ3 15	CQ4 15	CQ1 16	CQ2 16	CQ3 16	CQ4 16	CQ1 17	CQ2 17	CQ3 17	CQ4 17	CQ1 18*	CQ2 18	CQ3 18	CQ4 18	CQ1 19
S&P 500 Aggregate	1.5%	-1.2%	-3.8%	-6.8%	-8.0%	-3.9%	3.2%	6.4%	14.6%	10.0%	7.1%	14.4%	23.7%	19.9%	21.5%	18.2%	7.3%
Energy	-56.7%	-56.5%	-57.5%	-72.6%	-109.6%	-81.6%	-63.7%	-1.5%	690.1%	210.0%	138.0%	111.3%	93.3%	133.2%	91.7%	68.9%	24.2%
Materials	-0.4%	6.3%	-15.6%	-17.9%	-16.0%	-9.1%	3.2%	-1.1%	19.6%	7.4%	10.7%	41.0%	25.8%	32.4%	29.4%	15.8%	7.2%
Industrials	11.3%	-3.0%	-0.7%	-5.4%	-7.3%	-1.9%	-1.5%	-5.3%	1.5%	6.6%	0.3%	6.0%	24.9%	14.1%	19.3%	22.0%	8.9%
Consumer Discretionary	9.3%	9.0%	13.9%	9.4%	17.8%	10.3%	6.5%	4.7%	7.0%	1.9%	1.8%	9.2%	10.6%	14.0%	18.5%	17.2%	8.6%
Consumer Staples	3.6%	0.1%	-2.1%	-0.7%	1.2%	0.0%	4.4%	4.0%	2.9%	4.1%	3.1%	8.0%	10.6%	9.1%	12.1%	10.2%	6.3%
Health Care	18.2%	15.1%	14.5%	11.0%	8.1%	4.8%	5.9%	4.8%	5.4%	6.6%	7.1%	7.9%	15.0%	10.4%	10.4%	12.7%	7.4%
Financials	7.1%	2.7%	-8.6%	-5.3%	-14.2%	-7.0%	12.8%	6.6%	17.9%	9.5%	-8.9%	7.7%	27.9%	18.7%	39.6%	30.1%	6.0%
Information Technology	10.0%	6.6%	4.5%	-3.8%	-7.4%	-2.7%	6.1%	12.0%	21.7%	15.8%	23.7%	22.9%	30.3%	27.6%	15.4%	12.0%	6.0%
Telecom	8.5%	10.2%	23.7%	27.8%	16.1%	3.5%	-0.2%	-1.0%	-4.7%	4.8%	-2.2%	7.8%	18.1%	15.7%	19.6%	12.8%	3.2%
Utilities	1.3%	3.0%	0.8%	-49.6%	-1.9%	8.9%	12.6%	110.6%	3.5%	5.1%	-3.5%	11.6%	17.2%	2.1%	7.5%	8.1%	0.2%
Real Estate	12.6%	11.7%	12.5%	14.5%	8.3%	7.1%	8.7%	3.1%	6.5%	7.1%	7.6%	10.7%	8.0%	5.8%	7.4%	7.4%	6.2%
Data Source: BBG	*456/500 Reported																

MORE CONTEXT ON FORWARD ESTIMATES...

S&P 500 CONSTITUENTS IN AGGREGATE ARE AT CYCLE-PEAK MARGINS. FIXED COST LEVERAGE COMES FROM VOLUME & PRICING ON THE TOP LINE WHICH IS HARD TO FORECAST WITHOUT A CONTINUED ACCELERATION IN GROWTH & DEMAND.





GLOBAL #DIVERGENCES, REITERATED

SEQUENCE THE DATA: THEN

...AT THE YTD HIGH IN GLOBAL EQUITIES

1/26/2018	Hedgeye Macro GIP Model Signals												High-Frequency Economic Data Signals									
	Actuals								Hedgeye Forecasts				Consumption		Manufacturing		Composite PMI		Headline CPI		Core CPI	
	1Q16	2Q16	3Q16	4Q16	1Q17	2Q17	3Q17	4Q17	1Q18E	2Q18E	3Q18E	4Q18E	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)
Argentina	-	-	1	2	2	1	1	3	2	1	3	4	🔻	27%	🔻	66%	-	-	🔼	55%	-	-
Australia	1	1	3	2	3	1	1	3	4	3	1	1	🔼	18%	🔼	54%	🔼	92%	👉	27%	👉	6%
Brazil	1	1	1	1	1	1	1	2	4	3	4	4	🔻	43%	🔼	77%	🔻	89%	🔼	2%	👉	4%
Canada	2	3	1	2	2	1	3	3	3	3	2	4	🔻	87%	🔼	61%	🔻	85%	👉	56%	🔼	60%
China	3	1	1	2	1	4	3	-	3	4	3	4	🔻	4%	🔻	63%	🔼	71%	👉	31%	👉	90%
Eurozone	4	2	2	2	2	1	1	1	4	3	4	4	🔻	85%	🔼	83%	🔼	87%	👉	52%	👉	46%
France	1	3	3	2	2	1	1	2	3	4	4	4	🔻	71%	👉	85%	🔼	94%	👉	49%	👉	9%
Germany	1	4	3	2	2	1	2	1	4	3	4	4	🔻	82%	🔼	79%	🔼	85%	👉	61%	👉	78%
India	1	3	4	4	4	4	2	2	3	2	4	1	-	-	🔼	59%	🔼	18%	🔼	19%	-	-
Indonesia	4	1	4	3	2	2	1	1	4	3	1	4	🔻	3%	🔻	56%	🔻	58%	👉	21%	👉	5%
Italy	1	4	2	2	2	2	1	4	4	3	4	4	🔻	70%	🔼	86%	🔼	83%	👉	46%	🔻	25%
Japan	4	1	1	2	2	2	2	2	3	4	4	4	👉	70%	🔼	66%	🔼	56%	👉	70%	👉	73%
Mexico	2	1	3	2	3	3	3	2	1	1	1	4	🔻	23%	🔼	28%	🔻	36%	🔼	98%	👉	87%
Russia	1	1	1	1	1	1	4	4	1	3	4	1	👉	43%	🔻	25%	🔼	68%	🔻	2%	🔻	2%
South Africa	3	1	1	2	1	1	4	1	4	3	2	4	🔻	77%	🔼	46%	👉	34%	🔻	22%	🔻	26%
South Korea	4	1	4	3	2	4	2	4	1	3	4	1	🔻	50%	🔻	33%	🔻	86%	🔻	49%	👉	19%
Turkey	3	1	3	1	2	2	1	3	4	3	4	4	🔼	35%	🔻	87%	🔼	91%	🔼	94%	🔼	98%
United Kingdom	3	3	2	2	2	3	3	3	4	1	4	1	👉	45%	🔻	81%	🔼	46%	👉	64%	👉	77%
United States	3	4	2	2	2	1	2	2	2	2/3	4	4	🔼	77%	🔼	54%	🔻	89%	👉	66%	👉	34%
MODE/MEAN	1	1	1	2	2	1	1	2	4	3	4	4	🔻	52%	🔼	63%	🔼	70%	👉	46%	👉	43%

Data Source: Bloomberg, BIS, World Bank, IMF. Intellectual Property of Hedgeye Risk Management.

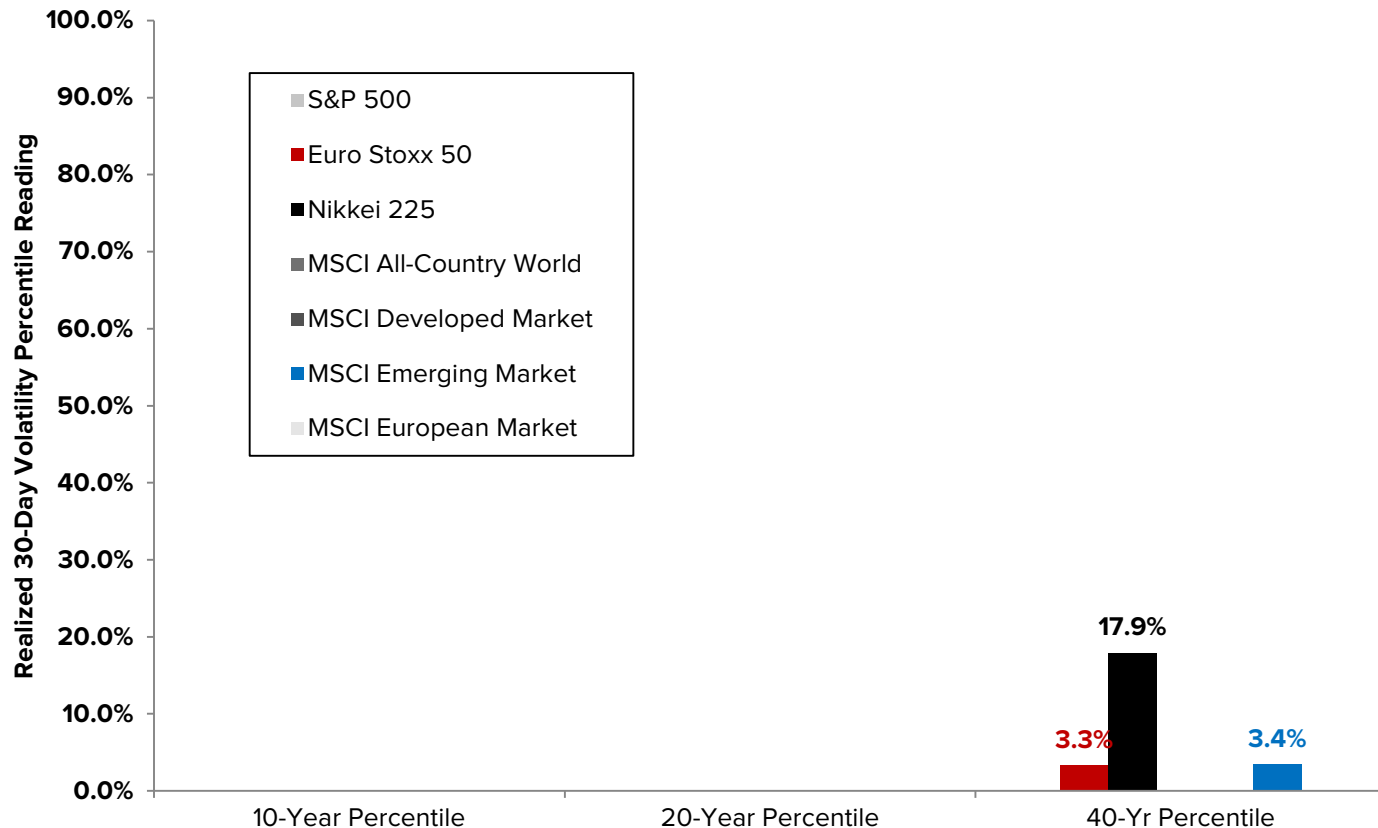
SEQUENCE THE DATA: NOW

5/15/2018	Hedgeye Macro GIP Model Signals												High-Frequency Economic Data Signals									
	Actuals								Hedgeye Forecasts				Consumption		Manufacturing		Composite PMI		Headline CPI		Core CPI	
	2Q16	3Q16	4Q16	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18E	3Q18E	4Q18E	1Q19E	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)
Argentina	-	1	2	2	1	1	3	3	2	3	4	-	⬆️	34%	⬇️	66%	-	-	⬇️	60%	-	-
Australia	1	3	2	3	1	1	3	2	3	1	1	-	➡️	22%	⬆️	57%	⬆️	96%	➡️	32%	➡️	7%
Brazil	1	1	1	1	1	1	2	4	3	4	3	-	⬆️	43%	⬇️	78%	⬆️	89%	➡️	5%	⬇️	2%
Canada	3	1	2	2	1	3	3	3	3	2	4	-	⬇️	77%	⬇️	61%	⬆️	81%	➡️	68%	➡️	64%
China	1	1	2	1	4	3	3	3	4	4	4	3	⬇️	2%	⬇️	43%	⬇️	83%	➡️	43%	➡️	86%
Eurozone	2	2	2	2	1	1	1	4	4	4	4	1	⬇️	77%	⬇️	78%	⬇️	90%	➡️	43%	➡️	37%
France	3	3	2	2	1	1	2	3	3	4	4	1	➡️	56%	⬇️	83%	⬇️	93%	⬆️	63%	➡️	34%
Germany	4	3	2	2	1	2	1	4	4	4	4	1	⬇️	64%	⬇️	78%	⬇️	83%	➡️	55%	➡️	62%
India	3	4	4	4	4	2	2	3	2	4	1	-	-	-	⬇️	72%	⬇️	50%	⬇️	30%	-	-
Indonesia	1	4	3	2	2	1	1	4	3	2	3	1	⬆️	5%	⬇️	37%	⬆️	70%	➡️	13%	➡️	3%
Italy	4	2	2	2	2	1	4	4	4	4	4	-	⬆️	69%	➡️	82%	⬇️	79%	➡️	39%	➡️	7%
Japan	1	1	2	3	2	2	2	3	4	4	4	-	⬇️	71%	⬇️	65%	⬆️	71%	⬆️	75%	➡️	75%
Mexico	1	3	2	3	3	3	3	4	1	1	4	1	⬆️	21%	⬇️	27%	➡️	50%	⬇️	85%	⬇️	75%
Russia	1	1	1	1	1	4	4	4	3	2	2	-	⬇️	46%	⬆️	28%	⬇️	73%	➡️	2%	➡️	3%
South Africa	1	1	2	1	1	4	1	4	3	2	4	-	⬆️	80%	⬇️	49%	⬆️	56%	⬇️	12%	➡️	20%
South Korea	1	4	3	2	4	2	4	4	3	3	2	4	⬆️	59%	⬇️	15%	⬇️	70%	➡️	33%	➡️	6%
Spain	4	3	3	2	1	4	4	4	3	1	1	1	⬇️	68%	⬆️	89%	➡️	64%	➡️	47%	➡️	58%
Turkey	1	3	1	2	2	1	3	1	3	3	4	-	⬆️	35%	⬇️	78%	⬇️	79%	⬇️	91%	➡️	97%
United Kingdom	3	2	2	2	3	3	3	4	1	4	1	1	➡️	35%	⬆️	78%	⬇️	31%	⬇️	60%	⬇️	72%
United States	4	2	2	2	1	2	2	2	3	4	4	4	⬇️	81%	⬆️	82%	⬆️	94%	⬆️	77%	➡️	58%
MODE/MEAN	1	3	2	2	1	1	3	4	3	4	4	1	⬇️	51%	⬇️	62%	⬇️	74%	➡️	46%	➡️	42%

Data Source: Bloomberg, BIS, World Bank, IMF. Intellectual Property of Hedgeye Risk Management.

2017 VOLATILITY = ALL-TIME LOWS

BELOW WE SHOW AVERAGE 30D REALIZED VOLATILITY FOR 2017 AS A PERCENTILE READING FOR THE LAST 10, 20, AND 40 YEARS... AND IT'S MOSTLY ZEROS ALL AROUND.



“When a Long-Term Trend Loses Momentum, short-term volatility tends to rise. It is easy to see why this should be so: the trend following crowd is disoriented.”
– George Soros

2018 ≠ 2017

WHAT A DIFFERENCE A YEAR MAKES IN REPORTED DATA AND ASSET PERFORMANCE TERMS!

GLOBAL EQUITY MARKET PERFORMANCE YTD (2017 VS. 2018)

2017 YTD

INDEX	YTD Perf. (%)	90-Day Volatility (%)
S&P 500 Index	7.30%	6.5
MSCI All-Country World Index	9.49%	5.9
MSCI Developed Market Index	8.59%	6.1
MSCI Emerging Market Index	17.16%	8.9
MSCI European Market Index	13.56%	8.4

2018 YTD

INDEX	YTD Perf. (%)	90-Day Volatility (%)
S&P 500 Index	1.42%	19.0
MSCI All-Country World Index	0.61%	13.1
MSCI Developed Market Index	0.79%	13.6
MSCI Emerging Market Index	-0.71%	14.8
MSCI European Market Index	0.82%	13.0

Data Source: Bloomberg



DOLLAR #BOTTOMING?

GLOBAL GIP MODEL SUMMARY

Q4 WAS THE LAST QUARTER WHERE GLOBAL GROWTH MOMENTUM WAS BROADLY POSITIVE. FURTHERMORE, OUR MODELS SUGGEST THE NOW-CONSENSUS “SYNCHRONIZED GLOBAL RECOVERY” THEME HAS OFFICIALLY CULMINATED.

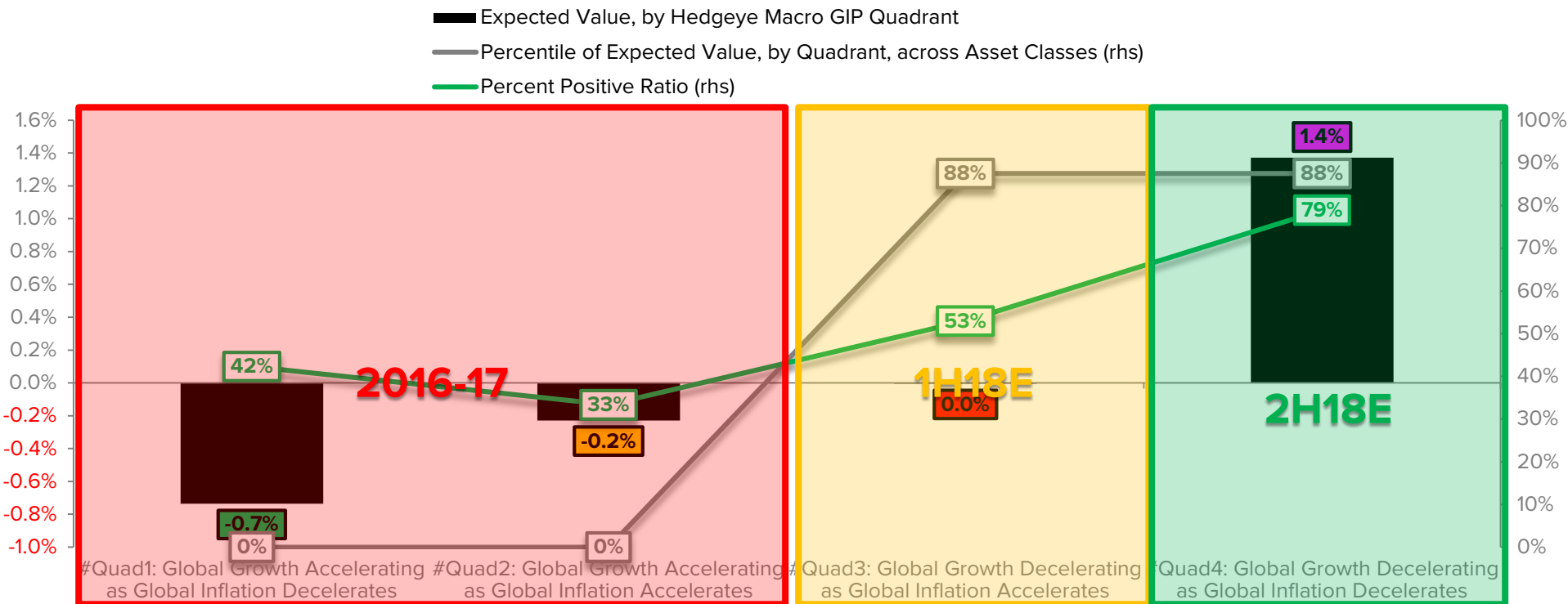
5/15/2018	Hedgeye Macro GIP Model Signals												High-Frequency Economic Data Signals									
	Actuals								Hedgeye Forecasts				Consumption		Manufacturing		Composite PMI		Headline CPI		Core CPI	
	2Q16	3Q16	4Q16	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18E	3Q18E	4Q18E	1Q19E	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)	3MMA Trend	Percentile of Latest Reading (T10Y)
Argentina	-	1	2	2	1	1	3	3	2	3	4	-	⬆️	34%	⬇️	66%	-	-	⬇️	60%	-	-
Australia	1	3	2	3	1	1	3	2	3	1	1	-	➡️	22%	⬆️	57%	⬆️	96%	➡️	32%	➡️	7%
Brazil	1	1	1	1	1	1	2	4	3	4	3	-	⬆️	43%	⬇️	78%	⬆️	89%	➡️	5%	⬇️	2%
Canada	3	1	2	2	1	3	3	3	3	2	4	-	⬇️	77%	⬇️	61%	⬆️	81%	➡️	68%	➡️	64%
China	1	1	2	1	4	3	3	3	4	4	4	3	⬇️	2%	⬇️	43%	⬇️	83%	➡️	43%	➡️	86%
Eurozone	2	2	2	2	1	1	1	4	4	4	4	1	⬇️	77%	⬇️	78%	⬇️	90%	➡️	48%	➡️	37%
France	3	3	2	2	1	1	2	3	3	4	4	1	➡️	56%	⬇️	83%	⬇️	93%	⬆️	63%	➡️	34%
Germany	4	3	2	2	1	2	1	4	4	4	4	1	⬇️	64%	⬇️	78%	⬇️	83%	➡️	55%	➡️	62%
India	3	4	4	4	4	2	2	3	2	4	1	-	-	-	⬇️	72%	⬇️	50%	⬇️	30%	-	-
Indonesia	1	4	3	2	2	1	1	4	3	2	3	1	⬆️	5%	⬇️	37%	⬆️	70%	➡️	13%	➡️	3%
Italy	4	2	2	2	2	1	4	4	4	4	4	-	⬆️	69%	➡️	82%	⬇️	79%	➡️	39%	➡️	7%
Japan	1	1	2	3	2	2	2	3	4	4	4	-	⬇️	71%	⬇️	65%	⬆️	71%	⬆️	75%	➡️	75%
Mexico	1	3	2	3	3	3	3	4	1	1	4	1	⬆️	21%	⬇️	27%	➡️	50%	⬇️	85%	⬇️	75%
Russia	1	1	1	1	1	4	4	4	3	2	2	-	⬇️	46%	⬆️	28%	⬇️	73%	➡️	2%	➡️	3%
South Africa	1	1	2	1	1	4	1	4	3	2	4	-	⬆️	80%	⬇️	49%	⬆️	56%	⬇️	12%	➡️	20%
South Korea	1	4	3	2	4	2	4	4	3	3	2	4	⬆️	59%	⬇️	15%	⬇️	70%	➡️	33%	➡️	6%
Spain	4	3	3	2	1	4	4	4	3	1	1	1	⬇️	68%	⬆️	89%	➡️	64%	➡️	47%	➡️	58%
Turkey	1	3	1	2	2	1	3	1	3	3	4	-	⬆️	35%	⬆️	78%	⬇️	79%	⬇️	91%	➡️	97%
United Kingdom	3	2	2	2	3	3	3	4	1	4	1	1	➡️	35%	⬆️	78%	⬇️	31%	⬇️	60%	⬇️	72%
United States	4	2	2	2	1	2	2	2	3	4	4	4	⬇️	81%	⬆️	82%	⬆️	94%	⬆️	77%	➡️	58%
MODE/MEAN	1	3	2	2	1	1	3	4	3	4	4	1	⬇️	51%	⬇️	62%	⬇️	74%	➡️	46%	➡️	42%

Data Source: Bloomberg, BIS, World Bank, IMF. Intellectual Property of Hedgeye Risk Management.

U.S. DOLLAR GLOBAL GIP MODEL BACKTEST

AFTER NEARLY 2YRS IN PURGATORY FROM THE PERSPECTIVE OF THE CAUSAL FACTORS THAT HAVE PERPETUATED THE DOLLAR'S CRASH TO MULTI-YEAR LOWS, THE GLOBAL ECONOMIC BACKDROP IS TRANSITIONING TO FAR LESS SUPPORTIVE STATE FOR A CONTINUED PLUNGE.

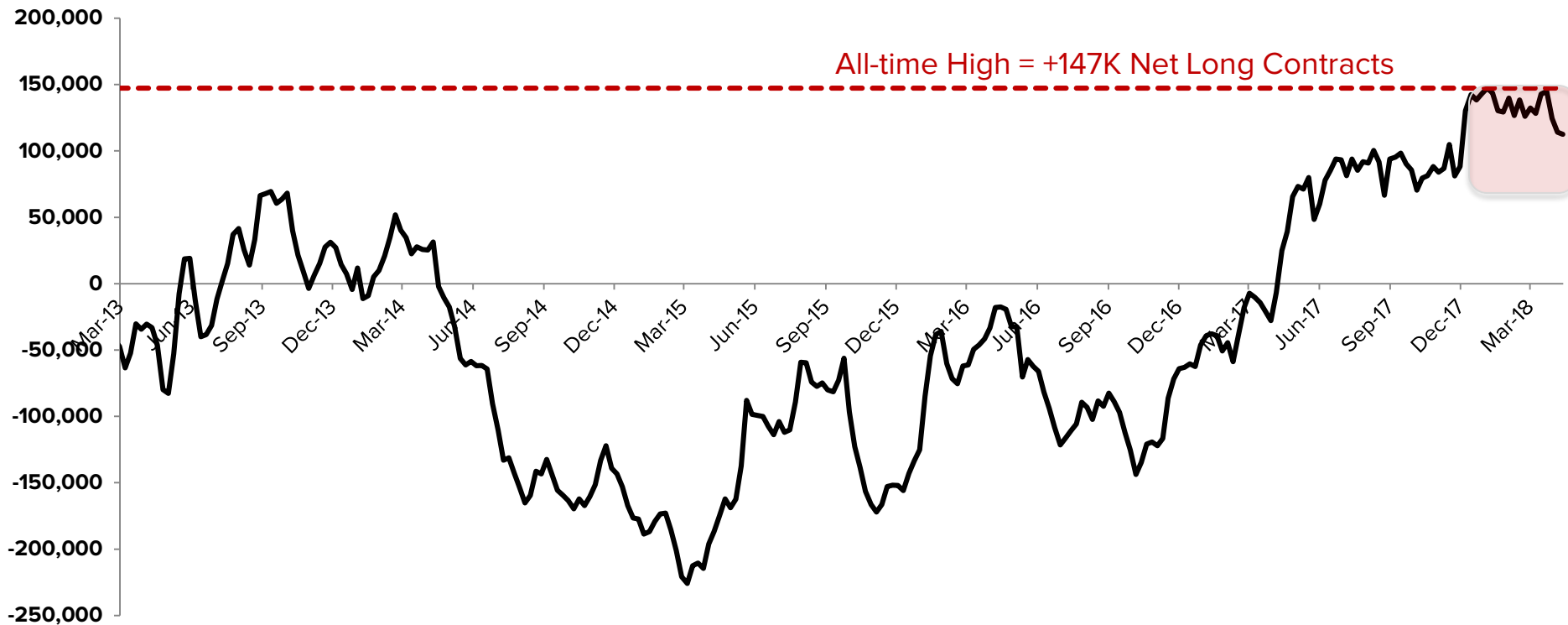
U.S. Dollar Index



SPECULATIVE POSITIONING IN THE EURO REMAINS NEAR ALL-TIME HIGHS

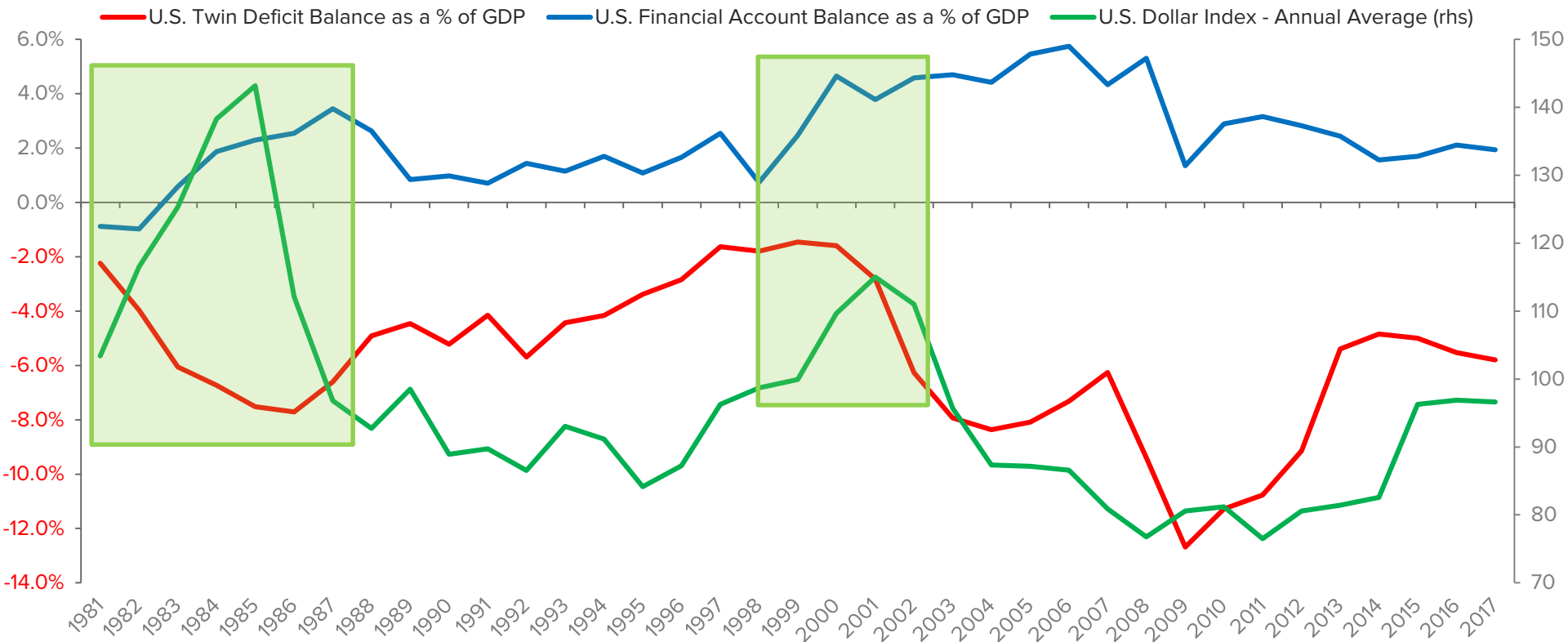
THE NET LONG POOL OF SPECULATIVE MARKET PARTICIPANTS CONTINUES TO HOVER NEAR ALL-TIME HIGHS.

Net Non-Commercial Futures & Options Positioning (Euro Currency)



EXERCISING EXORBITANT PRIVILEGE

THE U.S. DOLLAR REMAINS THE WORLD'S PRIMARY RESERVE CURRENCY AND U.S. TREASURIES REMAIN THE WORLD'S PRIMARY RESERVE ASSET, WHICH MEANS IF THE U.S. NEEDS CAPITAL, IT GETS CAPITAL. THE DOLLAR HAS HISTORICALLY LED MEANINGFUL CHANGES IN THE CAPITAL ACCOUNT AS A RESULT.



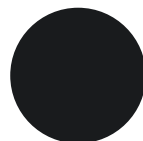
THEMATIC INVESTMENT CONCLUSIONS



TRADE (3 WEEKS OR LESS)

LONGS: Energy (XLE), Consumer Discretionary (XLY), Japan (EWJ), Int'l Long-Duration Sovereign Debt (BWX), U.S. Dollar (UUP), Corn (CORN), Soybeans (SOYB)

SHORTS: Industrials (XLI), Consumer Staples (XLP), Germany (DAX), Italy (EWI), European Financials (EUFN), South Korea (XLY), Emerging Market Local Currency Bonds (EMLC), Euro (FXE), Base Metals (DBB)



TREND (3 MONTHS OR MORE)

LONGS: Consumer Discretionary (XLY; added 1/11/17), Energy (XLE; added 5/2/18), U.S. Dollar (UUP; added 4/3/18)

SHORTS: Industrials (XLI; added 1/5/18), Consumer Staples (XLP; added 4/3/18), Euro (FXE; added 4/3/18)



TAIL (3 YEARS OR LESS)

LONGS: U.S. Dollar (UUP; added 4/6/13)

SHORTS: Euro (FXE; added 7/7/15)

FOR MORE INFORMATION CONTACT:

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