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1

VIX



2

10YR YIELDS



3

CRASHES



1

VIX

This part of the risk management exercise is what we call un-investable vol - front-month VIX went out at a 39.16 and that's a higher level than 2016. Everything equities (including Bond Proxies) goes down with $VIX > 31$ so the Fed is either going to get in the game here or not (probably not today!).

2 10YR YIELDS

Best asset allocation for #Quad4 in both the USA and China = Treasuries, across the curve, and we're seeing that low-volatility asset class attract the world of flows this morning with UST 10YR Yield down another -7bps to 1.19%. In Sov Yield terms we're seeing a "credit risk" divergence between German and Italian Yields now too.

3 CRASHES

They happen when equity volatility breaks out and holds > 31 , so the broadening red on your Global Equity screen includes a crash in Russian stocks, down another -6.8% overnight (-22% since Oil/Inflation peaked in JAN), Greek Stocks -5.6% and -22.3% in the last month, etc.

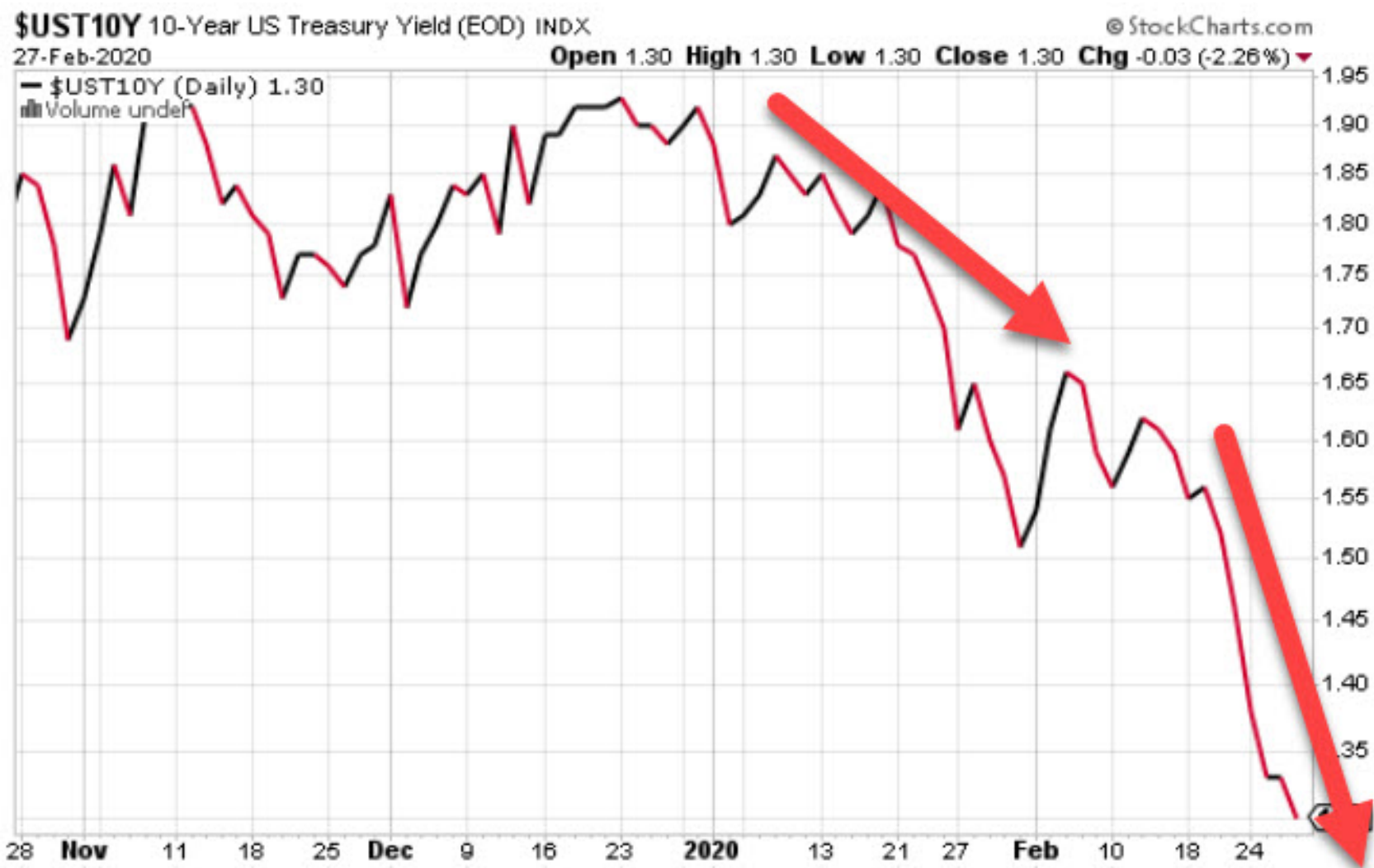
MACRO GRIND

Sovereign Bond Yields

Europe, Middle East & Africa 10-Year Gover

COUNTRY	YIELD	1 DAY	1 MONTH
Germany »	-0.60%	-6	-27
United Kingdom »	0.42%	-5	-13
France	-0.30%	-4	-22
Italy	1.15%	+8	+12
Spain	0.33%	+2	+2
Netherlands	-0.48%	-5	-23
Portugal	0.39%	+3	+6
Greece	1.34%	+14	+20
Switzerland	-0.89%	-3	-15

10-Year U.S. Treasury Yield



OVX Volatility Index – CBOE Crude Oil Index



Russian Trading System



German DAX Composite



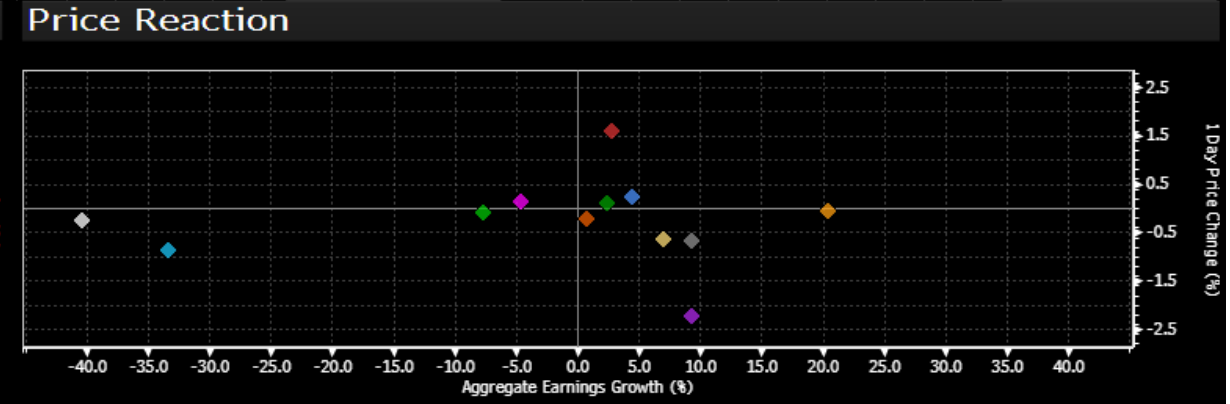
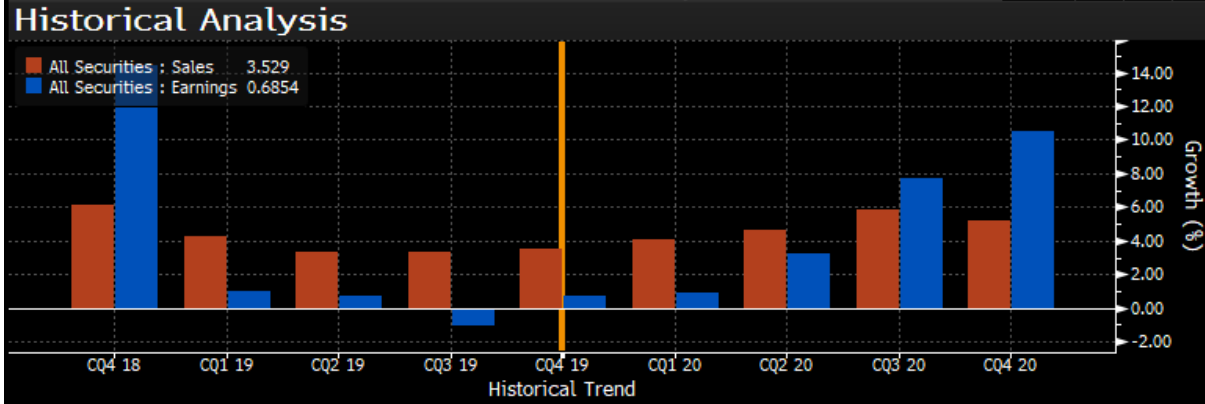
KOSPI South Korea Seoul Composite



S&P 500 Index Sales Growth & Earnings Growth

S&P 500 INDEX Range CQ4 Ending: 11/16/2019 - 2/15/2020

Surprise	Growth	Reported	Sales Growth	Earnings Growth
Sector (GICS)				
11) All Securities		480 / 500	3.53%	0.69%
12) > Energy		28 / 28	-6.18%	-40.46%
13) > Materials		28 / 28	-18.70%	-33.34%
14) > Industrials		70 / 70	-2.67%	-4.61%
15) > Consumer Discretionary		52 / 63	3.17%	-7.72%
16) > Consumer Staples		30 / 33	3.26%	2.71%
17) > Health Care		58 / 60	12.25%	9.24%
18) > Financials		66 / 66	6.34%	4.45%
19) > Information Technology		69 / 71	6.74%	6.93%
20) > Communication Services		22 / 22	8.48%	9.21%
21) > Utilities		26 / 28	-0.81%	20.33%
22) > Real Estate		31 / 31	4.27%	2.33%

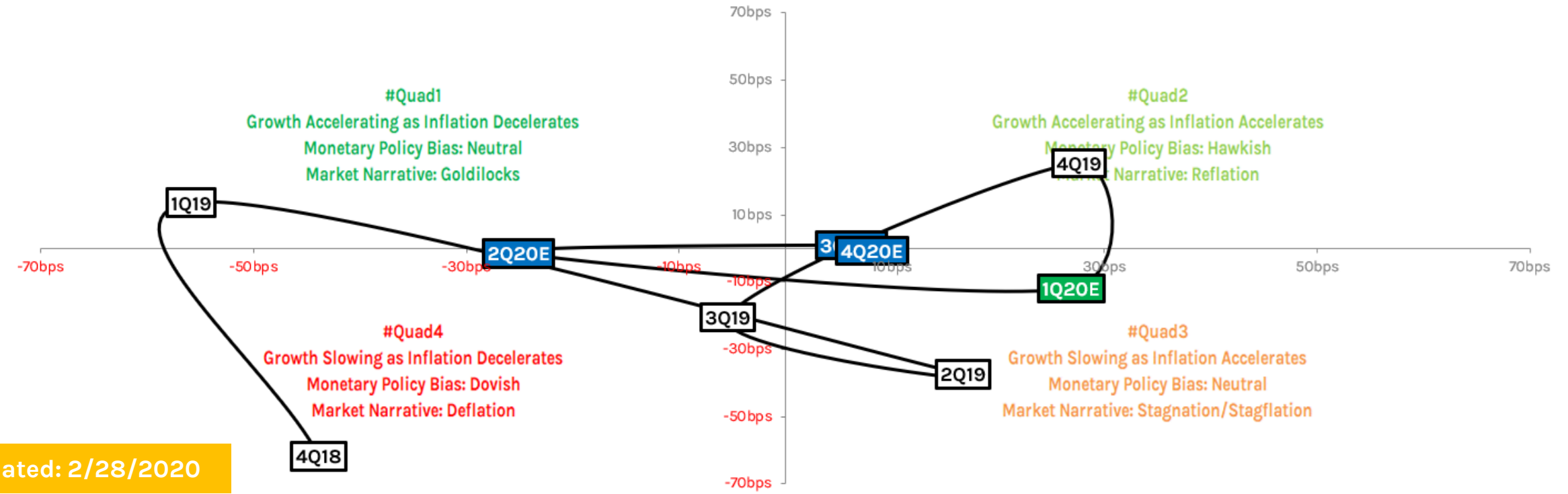


Our Research Process is REPEATABLE

United States	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	← Actuals Estimates →	1Q20E	2Q20E	3Q20E	4Q20E
Real GDP QoQ SAAR	2.30%	2.20%	3.20%	3.50%	2.50%	3.50%	2.90%	1.10%	3.10%	2.00%	2.10%	2.10%	Real GDP QoQ SAAR	2.59%	1.94%	2.12%	2.05%
Real GDP YoY	2.10%	2.16%	2.42%	2.80%	2.86%	3.20%	3.13%	2.52%	2.65%	2.28%	2.07%	2.33%	Real GDP YoY	2.21%	2.19%	2.20%	2.20%
3yr Comparative Base Effects	2.80%	2.35%	2.00%	1.97%	1.86%	1.75%	1.99%	2.41%	2.48%	2.68%	2.77%	2.66%	3yr Comparative Base Effects	2.76%	2.74%	2.60%	2.42%
Headline CPI YoY	2.54%	1.90%	1.97%	2.12%	2.21%	2.71%	2.64%	2.20%	1.64%	1.81%	1.76%	2.03%	Headline CPI YoY	2.30%	2.05%	2.11%	2.19%
2yr Comparative Base Effects	0.51%	0.50%	0.61%	1.13%	1.81%	1.48%	1.54%	1.96%	2.38%	2.31%	2.30%	2.16%	2yr Comparative Base Effects	1.93%	2.26%	2.20%	2.12%

United States

◆ x-axis: First Difference of YoY Headline CPI;
y-axis: First Difference of YoY Real GDP



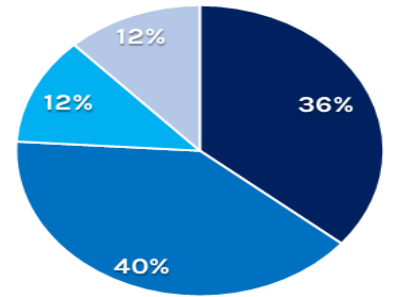
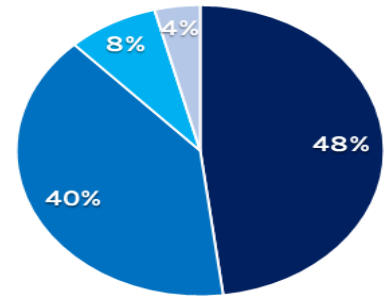
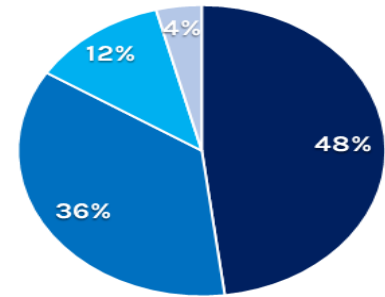
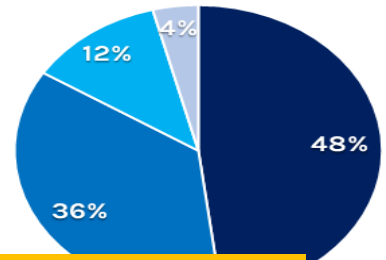
Updated: 2/28/2020

Data Source: Bloomberg. Green box = Hedgeye Predictive Tracking Algorithm nowcast. Blue boxes = Hedgeye β-Adjusted Comparative Base Effect Model estimates. © Hedgeye Risk Management

What Works In Each Quad?

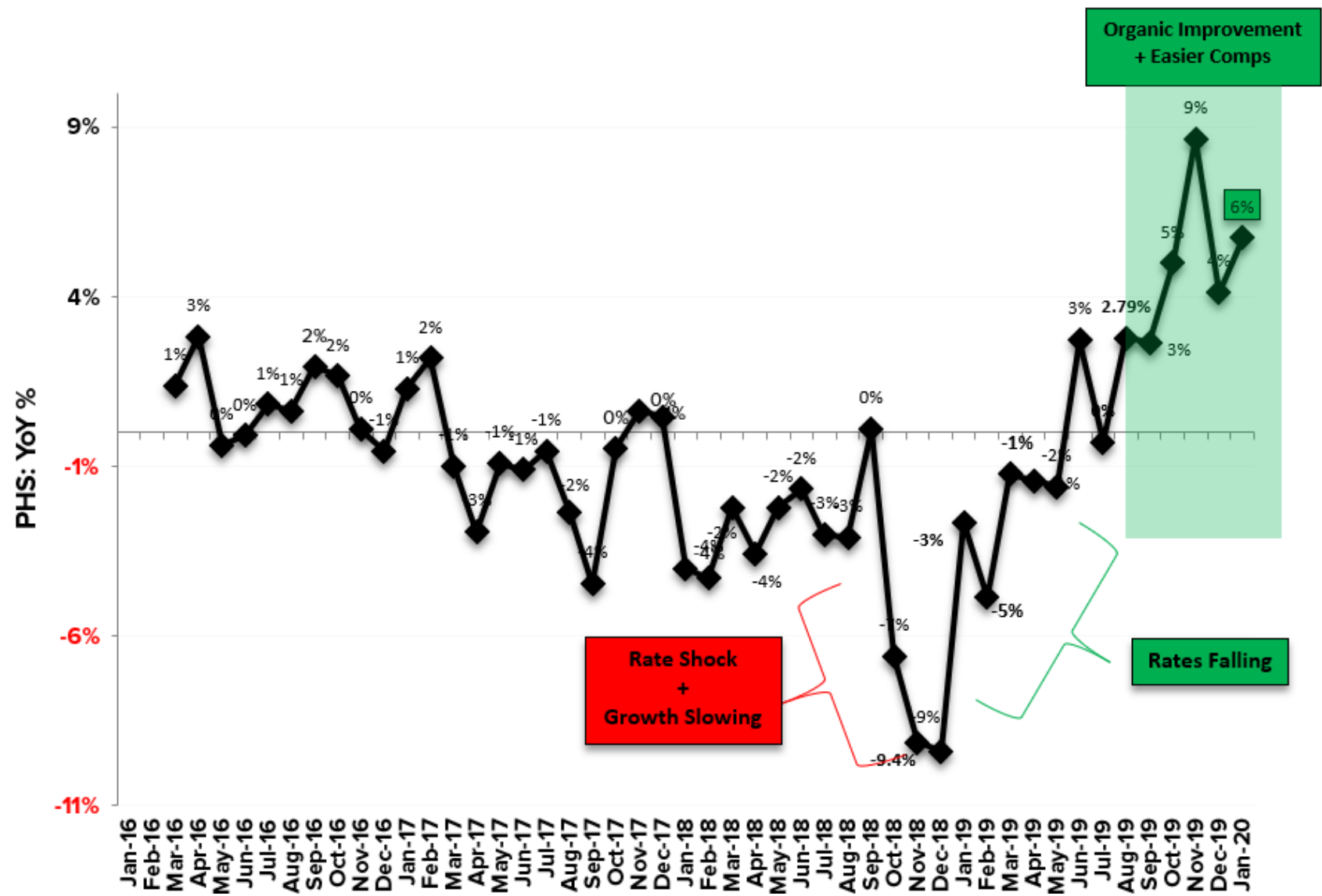
Quad 1: Goldilocks				Quad 2: Reflation				Quad 3: Stagflation				Quad 4: Deflation			
Exposure	ETF	Hypothetical Long-Only Balanced Portfolio*	Hypothetical Long-Short Market Neutral Portfolio**	Exposure	ETF	Hypothetical Long-Only Balanced Portfolio*	Hypothetical Long-Short Market Neutral Portfolio**	Exposure	ETF	Hypothetical Long-Only Balanced Portfolio*	Hypothetical Long-Short Market Neutral Portfolio**	Exposure	ETF	Hypothetical Long-Only Balanced Portfolio*	Hypothetical Long-Short Market Neutral Portfolio**
Tech	XLK	6.0%	6.0%	Tech	XLK	6.0%	6.0%	Utilities	XLU	6.0%	6.0%	Consumer Staples	XLP	4.5%	4.5%
Consumer Discretionary	XLY	6.0%	6.0%	Consumer Discretionary	XLY	6.0%	6.0%	Tech	XLK	6.0%	6.0%	Health Care	XLV	4.5%	4.5%
Industrials	XLI	6.0%	6.0%	Industrials	XLI	6.0%	6.0%	Energy	XLE	6.0%	6.0%	REITS	VNQ	4.5%	4.5%
Materials	XLB	6.0%	6.0%	Energy	XLE	6.0%	6.0%	REITS	VNQ	6.0%	6.0%	Utilities	XLU	4.5%	4.5%
Utilities	XLU	-	-5.4%	Telecom	IYZ	-	-5.4%	Financials	XLF	-	-5.4%	Tech	XLK	-	-4.1%
Consumer Staples	XLP	-	-5.4%	Utilities	XLU	-	-5.4%	Materials	XLB	-	-5.4%	Energy	XLE	-	-4.1%
Energy	XLE	-	-5.4%	Consumer Staples	XLP	-	-5.4%	Telecom	IYZ	-	-5.4%	Industrials	XLI	-	-4.1%
Health Care	XLV	-	-5.4%	REITS	VNQ	-	-5.4%	Consumer Staples	XLP	-	-5.4%	Financials	XLF	-	-4.1%
High Beta	SPHB	6.0%	6.0%	Momentum	MTUM	6.0%	6.0%	Secular Growers	QQQ	6.0%	6.0%	Low Beta	SPLV	4.5%	4.5%
Momentum	MTUM	6.0%	6.0%	Growth	IWF	6.0%	6.0%	Low Beta	SPLV	6.0%	6.0%	Dividend Yield	SPHD	4.5%	4.5%
Cyclicals	IWN	6.0%	6.0%	Small Caps	IWM	6.0%	6.0%	Quality	QUAL	6.0%	6.0%	Defensives	DEF	4.5%	4.5%
Mid Caps	MDY	6.0%	6.0%	High Beta	SPHB	6.0%	6.0%	Growth	IWF	6.0%	6.0%	Quality	QUAL	4.5%	4.5%
Low Beta	SPLV	-	-5.4%	Low Beta	SPLV	-	-5.4%	Small Caps	IWM	-	-5.4%	Momentum	MTUM	-	-4.1%
Defensives	DEF	-	-5.4%	Value	IWD	-	-5.4%	Dividend Yield	SPHD	-	-5.4%	High Beta	SPHB	-	-4.1%
Dividend Yield	SPHD	-	-5.4%	Dividend Yield	SPHD	-	-5.4%	Value	IWD	-	-5.4%	Growth	IWF	-	-4.1%
Mega Caps	DIA	-	-5.4%	Defensives	DEF	-	-5.4%	Cyclicals	IWN	-	-5.4%	Secular Growers	QQQ	-	-4.1%
Convertibles	CWB	9.0%	9.0%	BDCs	BIZD	9.0%	9.0%	Munis	MUB	10.0%	10.0%	Long Duration Treasuries	TLT	10.0%	10.0%
High Yield Credit	HYG	9.0%	9.0%	Convertibles	CWB	9.0%	9.0%	Long Duration Treasuries	TLT	10.0%	10.0%	Medium Duration Treasuries	IEF	10.0%	10.0%
Leveraged Loans	BKLN	9.0%	9.0%	Preferreds	PFF	9.0%	9.0%	TIPS	TIP	10.0%	10.0%	Munis	MUB	10.0%	10.0%
BDCs	BIZD	9.0%	9.0%	Leveraged Loans	BKLN	9.0%	9.0%	Investment Grade Credit	LQD	10.0%	10.0%	MBS	MBB	10.0%	10.0%
TIPS	TIP	-	-8.1%	Long Duration Treasuries	TLT	-	-8.1%	BDCs	BIZD	-	-9.0%	Convertibles	CWB	-	-9.0%
Short Duration Treasuries	SHY	-	-8.1%	Munis	MUB	-	-8.1%	Preferreds	PFF	-	-9.0%	TIPS	TIP	-	-9.0%
MBS	MBB	-	-8.1%	Investment Grade Credit	LQD	-	-8.1%	Convertibles	CWB	-	-9.0%	Leveraged Loans	BKLN	-	-9.0%
Medium Duration Treasuries	IEF	-	-8.1%	Medium Duration Treasuries	IEF	-	-8.1%	Leveraged Loans	BKLN	-	-9.0%	High Yield Credit	HYG	-	-9.0%
EUR/USD	FXE	12.0%	12.0%	EM FX	CEW	12.0%	12.0%	G10 FX	UDN	8.0%	8.0%	EUR/USD	FXE	-	-10.8%
DXY	UUP	-	-10.8%	DXY	UUP	-	-10.8%	EM FX	CEW	-	-7.2%	Gold	GLD	12.0%	12.0%
Copper	JJC	4.0%	4.0%	Crude Oil	USO	4.0%	4.0%	Crude Oil	USO	4.0%	4.0%	Crude Oil	USO	-	-10.8%
Agriculture	DBA	-	-3.6%	Agriculture	DBA	-	-3.6%	Base Metals	DBB	-	-3.6%				

- Equities
- Fixed Income
- Currencies
- Commodities/Real Assets

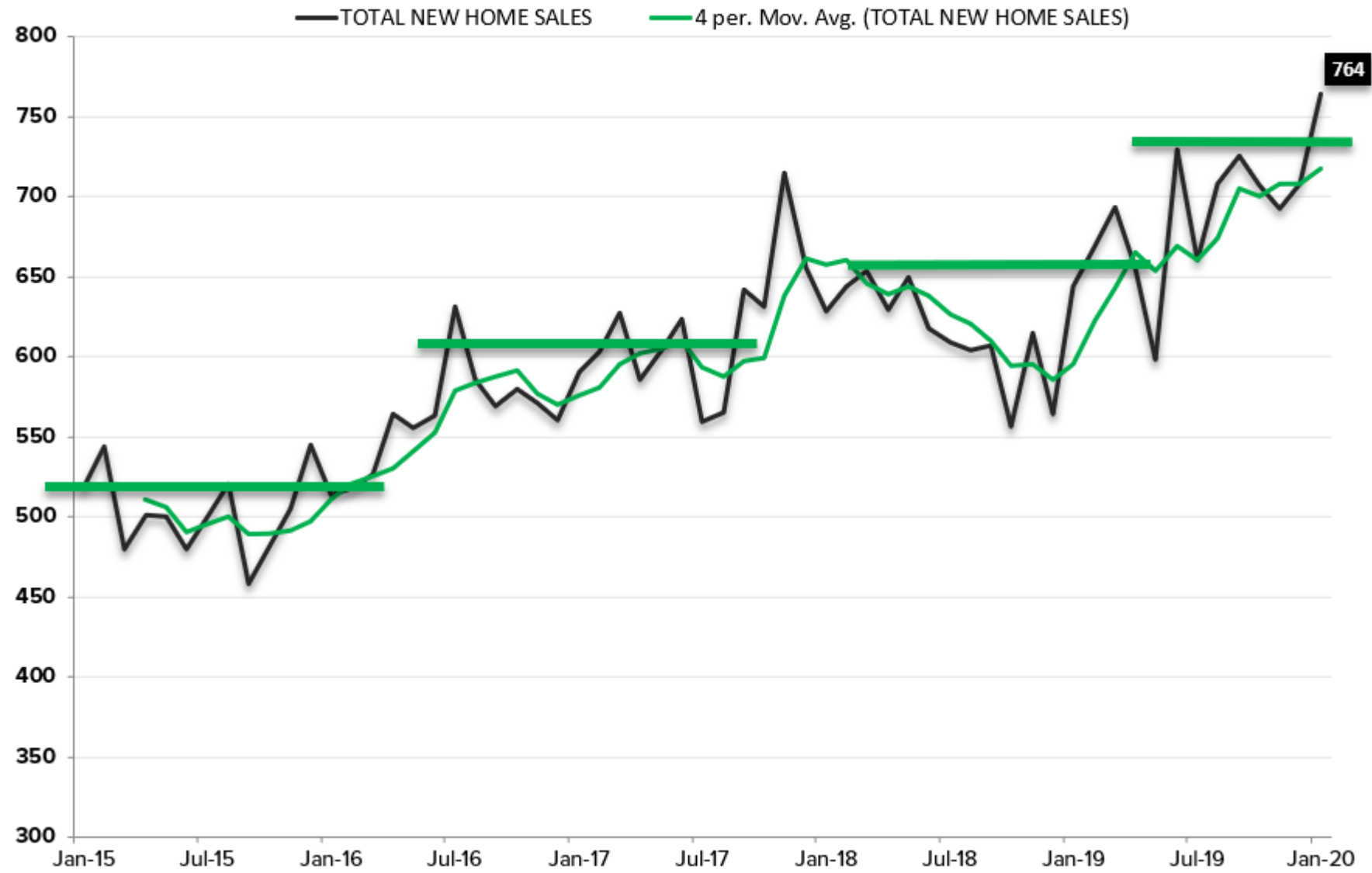


Updated: 2/24/2020

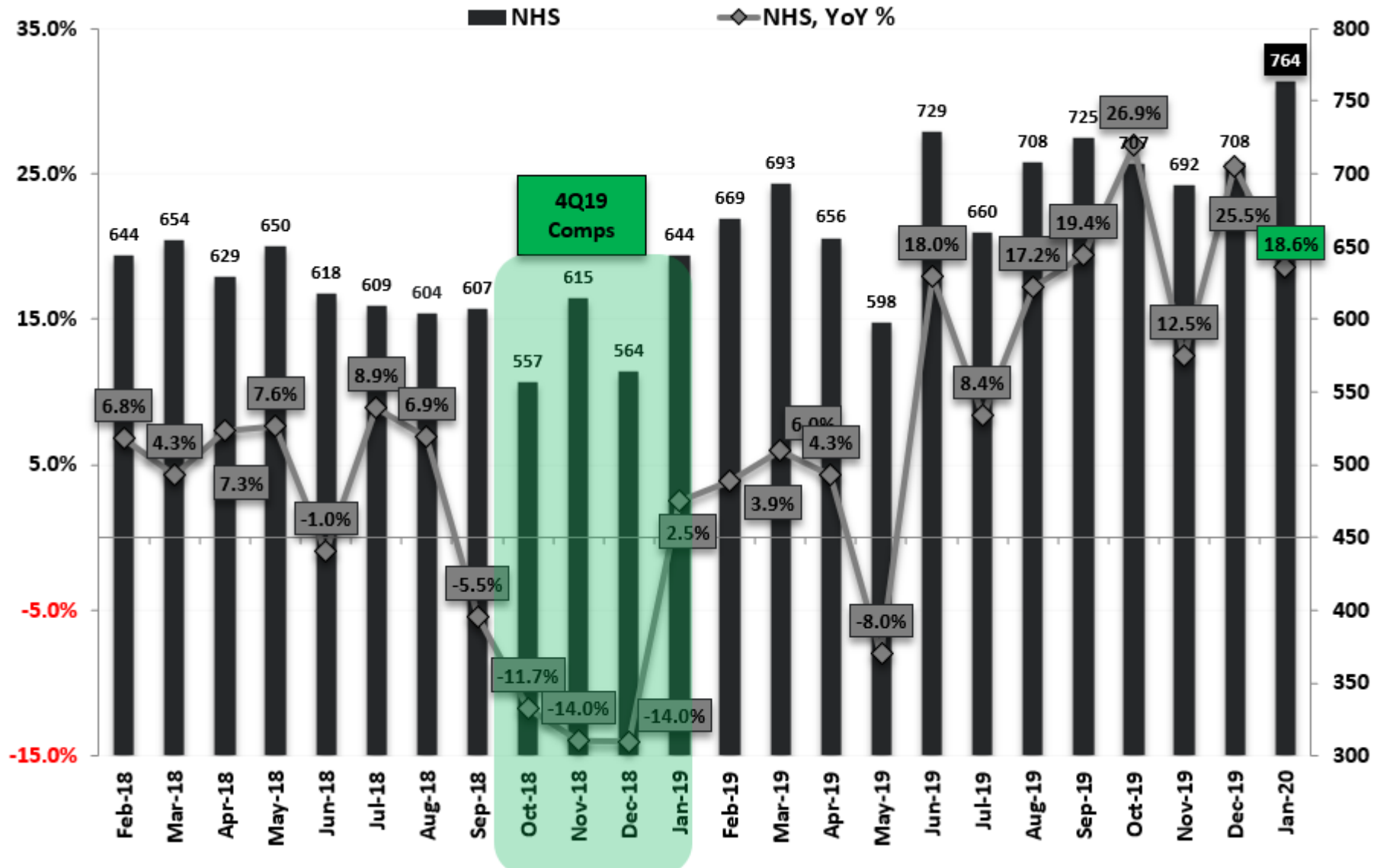
New Home Sales



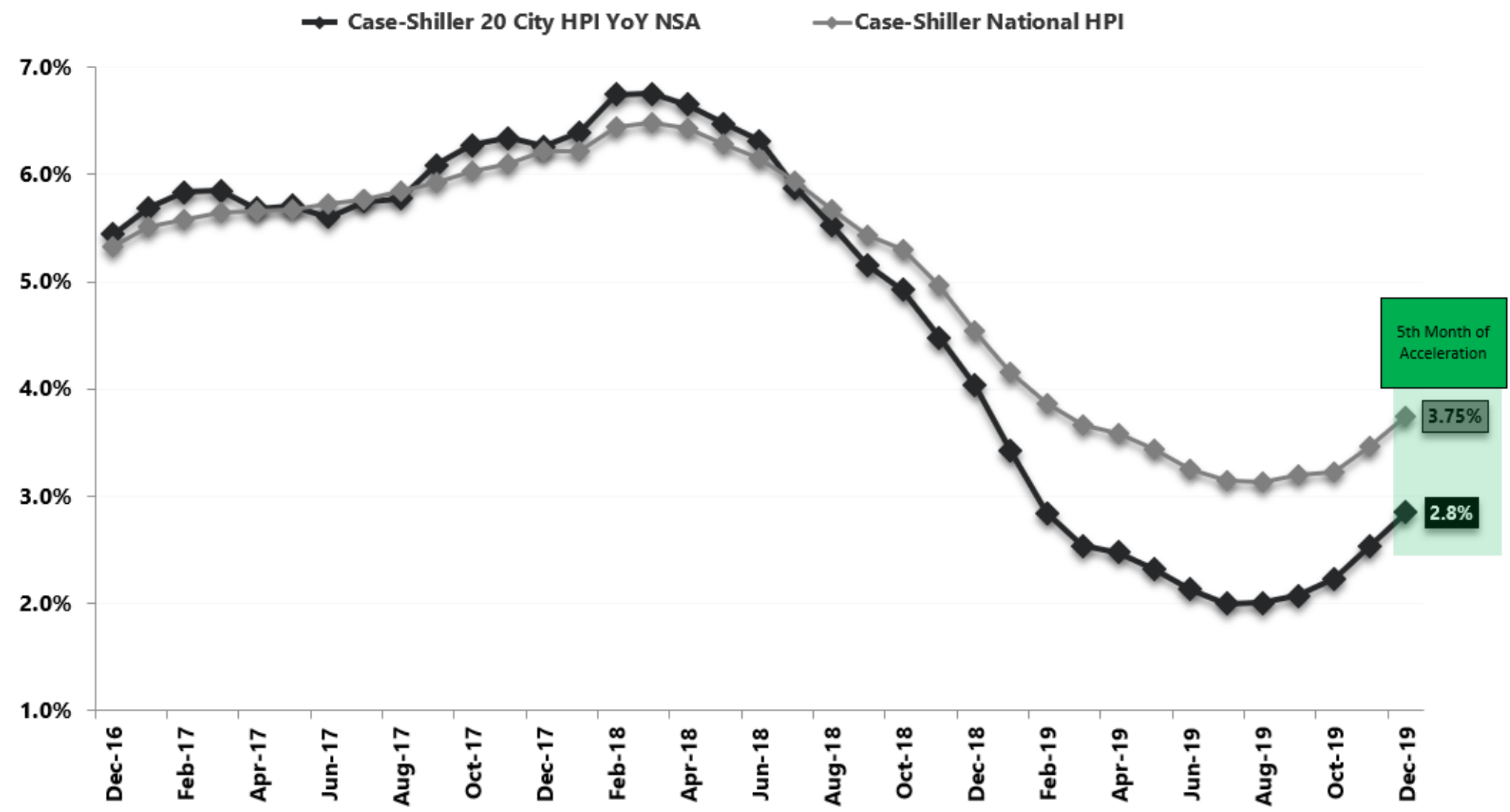
New Home Sales



New Home Sales



Case-Shiller: National vs 20-City HPI



U.S. Equity Market Style Factor Performance

MACRO	US EQUITY MARKET STYLE FACTOR PERFORMANCE (TOTAL RETURN %)										To-Date Returns		
	SECURITY	TICKER	PRICE (\$)	DD %	5D %	1Mth %	3Mth %	6Mth %	1Yr %	MTD %	QTD %	YTD %	
VALUE	iShares Russell 1000 Value ETF	IWD US Equity	\$122.59	-4.23%	-11.31%	-9.08%	-8.15%	2.17%	1.76%	-8.21%	-10.18%	-10.18%	
	Vanguard Value ETF	VTV US Equity	\$107.01	-4.22%	-11.23%	-9.41%	-8.63%	2.17%	1.63%	-8.42%	-10.71%	-10.71%	
	Alpha Architect Quantitative Value ETF	QVAL US Equity	\$25.52	-3.54%	-13.17%	-12.60%	-15.62%	1.24%	-11.90%	-10.42%	-16.11%	-16.11%	
	Invesco S&P 500 Pure Value ETF	RPV US Equity	\$57.34	-4.69%	-15.22%	-12.90%	-15.61%	-3.09%	-9.42%	-11.99%	-17.22%	-17.22%	
	iShares Edge MSCI USA Value ETF	VLUU US Equity	\$78.66	-4.20%	-12.78%	-10.62%	-9.98%	4.55%	-0.97%	-8.90%	-12.34%	-12.34%	
MOMENTUM	iShares Edge MSCI USA Momentum ETF	MTUM US Equity	\$121.90	-4.40%	-10.71%	-6.85%	-1.64%	2.99%	12.53%	-6.42%	-2.92%	-2.92%	
	Invesco DWA Momentum ETF	PDP US Equity	\$61.95	-3.86%	-11.02%	-6.63%	-2.75%	0.51%	12.93%	-6.05%	-3.74%	-3.74%	
	Alpha Architect Quantitative Momentum ETF	QMOM US Equity	\$32.02	-3.81%	-12.25%	-6.78%	-2.74%	-1.94%	8.82%	-6.79%	-1.14%	-1.14%	
	SPDR Russell 1000 Momentum ETF	ONEO US Equity	\$70.42	-3.61%	-11.82%	-9.14%	-8.61%	0.60%	0.47%	-7.86%	-9.74%	-9.74%	
	Fidelity Momentum Factor ETF	FDMO US Equity	\$34.75	-4.32%	-11.64%	-7.73%	-4.08%	-0.45%	5.31%	-7.90%	-5.26%	-5.26%	
GROWTH	iShares Russell 1000 Growth ETF	IWF US Equity	\$167.85	-4.57%	-12.17%	-6.80%	-2.22%	7.21%	14.71%	-6.70%	-4.59%	-4.59%	
	Nasdaq 100 Index	QQQ US Equity	\$205.64	-5.01%	-12.41%	-5.71%	0.02%	11.97%	19.44%	-6.13%	-3.28%	-3.28%	
	Invesco S&P 500 Pure Growth ETF	RPG US Equity	\$119.21	-3.89%	-11.76%	-7.27%	-4.18%	2.44%	5.92%	-6.74%	-5.97%	-5.97%	
	Vanguard Growth ETF	VUG US Equity	\$175.64	-4.80%	-12.33%	-6.34%	-1.10%	8.05%	16.48%	-6.51%	-3.58%	-3.58%	
	iShares North American Tech-Software ETF	IGV US Equity	\$233.54	-4.22%	-11.46%	-5.11%	0.51%	8.34%	12.24%	-6.08%	0.21%	0.21%	
LOW VOL & YIELD	iShares Edge MSCI Min Vol USA ETF	USMV US Equity	\$62.99	-4.44%	-9.30%	-6.36%	-2.55%	0.98%	12.04%	-6.18%	-3.98%	-3.98%	
	Invesco S&P 500 Low Volatility ETF	SPLV US Equity	\$55.68	-4.64%	-9.52%	-6.69%	-2.70%	0.39%	10.85%	-6.97%	-4.19%	-4.19%	
	Invesco S&P 500 High-Div Low-Vol ETF	SPHD US Equity	\$38.73	-4.35%	-10.36%	-9.17%	-9.42%	-0.10%	-3.74%	-7.66%	-11.40%	-11.40%	
	Vanguard High Dividend Yield ETF	VYM US Equity	\$83.98	-4.25%	-10.55%	-9.17%	-8.02%	1.10%	0.88%	-8.08%	-10.38%	-10.38%	
	iShares Select Dividend ETF	DIVY US Equity	\$93.77	-4.44%	-11.73%	-10.56%	-9.22%	-0.30%	-1.12%	-9.63%	-11.25%	-11.25%	
QUALITY	iShares Edge MSCI USA Quality Factor ETF	QUAL US Equity	\$92.76	-4.25%	-11.44%	-8.57%	-5.84%	4.53%	8.59%	-7.53%	-8.16%	-8.16%	
	Invesco S&P 500 Quality Factor ETF	SPHQ US Equity	\$33.46	-4.10%	-11.18%	-9.22%	-5.68%	3.86%	8.57%	-7.59%	-8.50%	-8.50%	
	Fidelity U.S. Quality Factor ETF	FOAL US Equity	\$35.17	-4.27%	-10.92%	-7.69%	-4.60%	3.57%	6.86%	-6.81%	-6.71%	-6.71%	
	Barron's 400 ETF	BFOR US Equity	\$38.17	-3.81%	-11.72%	-9.51%	-9.07%	2.63%	-6.90%	-7.77%	-10.69%	-10.69%	
	Vanguard U.S. Quality Factor ETF	VFAQ US Equity	\$77.49	-3.40%	-11.64%	-9.01%	-8.11%	2.53%	-2.68%	-7.17%	-10.47%	-10.47%	

Sector Performance


<u>SECTOR</u>	<u>Ticker</u>	<u>Price</u>	<u>1-Day % Chg</u>	<u>MTD % Chg</u>	<u>QTD % Chg</u>	<u>YTD % Chg</u>
Consumer Discretionary	XLY	\$116.58	-4.04%	-6.97%	-7.05%	-7.05%
Financial Select Sector	XLF	\$27.33	-4.27%	-8.78%	-11.21%	-11.21%
Health Care Select Sector	XLV	\$93.82	-3.40%	-5.37%	-7.89%	-7.89%
Technology Select Sector	XLK	\$87.70	-5.39%	-8.00%	-4.33%	-4.33%
Consumer Staples Select Sector	XLP	\$59.16	-4.07%	-6.36%	-6.07%	-6.07%
Industrial Select Sector	XLI	\$74.44	-3.71%	-8.22%	-8.63%	-8.63%
Materials Select Sector	XLB	\$53.30	-4.69%	-7.51%	-13.22%	-13.22%
The Energy Select Sector	XLE	\$45.31	-5.35%	-15.21%	-24.53%	-24.53%
Utilities Select Sector	XLU	\$64.33	-4.50%	-6.74%	-0.45%	-0.45%
Real Estate Select Sector	XLRE	\$37.72	-5.65%	-3.85%	-2.46%	-2.46%
Communications Services Sector	XLC	\$50.61	-3.95%	-6.12%	-5.63%	-5.63%
S&P 500	SPX	2,978.76	-4.42%	-7.65%	-7.80%	-7.80%

Sector Relative Performance

	<u>Ticker</u>	<u>Price</u>	<u>1-Day % Chg</u>	<u>MTD % Chg</u>	<u>QTD % Chg</u>	<u>YTD % Chg</u>
Consumer Discretionary	XLY	\$116.58	0.37%	0.68%	0.75%	0.75%
Financial Select Sector	XLF	\$27.33	0.14%	-1.13%	-3.41%	-3.41%
Health Care Select Sector	XLV	\$93.82	1.02%	2.28%	-0.09%	-0.09%
Technology Select Sector	XLK	\$87.70	-0.98%	-0.35%	3.47%	3.47%
Consumer Staples Select Sector	XLP	\$59.16	0.35%	1.29%	1.74%	1.74%
Industrial Select Sector	XLI	\$74.44	0.70%	-0.57%	-0.83%	-0.83%
Materials Select Sector	XLB	\$53.30	-0.27%	0.14%	-5.42%	-5.42%
The Energy Select Sector	XLE	\$45.31	-0.93%	-7.56%	-16.73%	-16.73%
Utilities Select Sector	XLU	\$64.33	-0.08%	0.91%	7.35%	7.35%
Real Estate Select Sector	XLRE	\$37.72	-1.24%	3.80%	5.34%	5.34%
Communications Services Sector	XLC	\$50.61	0.47%	1.53%	2.17%	2.17%

Market Share Volume & Total Value Traded

<u>INDEX/SECURITY</u>	VOLUME: (2/27) vs.			
	<u>Prior Day</u>	<u>1M Ave</u>	<u>3M ave</u>	<u>1Y Ave</u>
Total Market Volume*	23%	49%	60%	57%
Total Exchange Volume**	31%	85%	107%	121%



*Total Market Volume = Total US exchange volume plus OTC and OTCBB trading volume for all security types. Calculated by Bloomberg.

**Tape A+B+C volume = total US exchange volume

*** Total Traded Value for Russell 3000 (total mkt proxy)

Source: Bloomberg, Hedgeye

Style Factor Performance

	FACTOR	1D % Chg	1W % Chg	1M % Chg	3M % Chg	6M % Chg	YTD % Chg
Debt	High Debt/EV	-4.2%	-13.2%	-10.6%	-9.2%	1.2%	-11.7%
	Low Debt/EV	-3.9%	-11.0%	-7.5%	-4.4%	5.1%	-6.3%
SI	High Short Interest	-3.4%	-12.6%	-10.8%	-9.4%	2.4%	-11.2%
	Low Short Interest	-4.3%	-11.4%	-8.8%	-6.7%	2.0%	-8.3%
BETA	High Beta	-3.9%	-14.0%	-10.3%	-10.3%	6.2%	-13.1%
	Low Beta	-4.1%	-8.7%	-6.7%	-3.4%	-0.8%	-4.6%
YIELD	High Yield	-4.3%	-13.0%	-12.0%	-12.9%	-3.3%	-14.6%
	Low Yield	-3.5%	-11.6%	-7.8%	-5.4%	6.1%	-6.7%
MKT CAP	MCAP Bottom 25%	-3.6%	-13.4%	-11.9%	-12.5%	-0.3%	-14.2%
	MCAP Top 25%	-4.2%	-10.9%	-7.4%	-4.5%	5.1%	-6.6%
Sales	Top 25% Sales Growth	-4.2%	-13.0%	-8.0%	-4.4%	4.1%	-7.5%
	Bottom 25% Sales Growth	-4.1%	-11.7%	-10.0%	-9.6%	0.2%	-11.3%
EPS	Top 25% EPS Growth	-4.3%	-14.2%	-10.1%	-7.6%	2.1%	-11.1%
	Bottom 25% EPS Growth	-4.1%	-10.7%	-8.4%	-8.0%	1.1%	-8.8%

**Mean Performance of Top Quartile vs. Bottom Quartile, S&P500 Companies*

Rates & Spreads

		1D	5D	1M	3M	vs. 52-Wk, Bps		vs.	vs.
	Price	Bps Chg	Bps Chg	Bps Chg	Bps Chg	High	Low	3Y Ave	5Y Ave
3M T-Bill	1.43%	-8.2	-14.6	-11	-16	-105	3	-28	31
3M LIBOR	1.61%	-2.4	-7.0	-16	-30	-102	0	-39	17
2Y T-Note	1.07%	-9.9	-32.4	-38	-56	-150	3	-91	-44
5Y T-Note	1.08%	-8.1	-28.5	-36	-55	-149	4	-110	-82
10Y T-Note	1.27%	-6.5	-24.3	-34	-49	-149	3	-114	-99
30Y T-Note	1.77%	-5.5	-19.1	-29	-42	-137	3	-104	-102
2Y-10Y Spread, Bps	20.67	3.4	8.1	4.0	7	1	0	-24	-55
IG SPREAD (AAABBB)	1.35%	1.0	8.0	5	-3	-29	11	-11	-25
HIGH YIELD	5.67%	0.0	54.0	24	6	-107	69	-36	-77
5Y BREAK EVEN	1.48%	-6.0	-16.7	-9.2	-7.2	-44.3	22.8	-30.8	-18.5

Key \$USD Correlations

METRIC	15D	30D	90D	120D	180D	52-Wk Rolling 30D Correlation			
						High	Low	% Time Pos	% Time Neg
SPX	0.47	0.19	0.23	-0.16	0.04	0.78	-0.78	53%	47%
BRENT Oil	0.84	-0.41	-0.72	-0.62	-0.56	0.79	-0.88	41%	59%
CRB Index	0.44	-0.72	-0.07	-0.62	-0.48	0.71	-0.82	30%	70%
GOLD	0.26	0.61	0.39	0.24	0.45	0.74	-0.91	34%	66%

*Days = Trading Days

CFTC Non-Commercial Net Long Positioning

	METRIC	Latest	W/W Chg	3M Ave	6M Ave	1Y Ave	3Y		Z-Score	
							Max	Min	1Y	3Y
EQUITIES	SPX (Index + E-mini)	12,925	(5,720)	10,893	16,613	25,429	249,638	(128,189)	-0.30X	-1.01X
	VIX	(130,229)	640	(159,652)	(153,988)	(136,466)	92,913	(218,362)	0.15X	-0.56X
	Russell 2000 (mini)	42,812	914	43,715	6,850	(27,228)	72,749	(117,606)	1.39X	1.15X
	Dow Jones (mini)	27,440	(1,907)	28,207	33,826	30,742	95,976	(282)	-0.31X	-0.54X
	Nasdaq (mini)	21,102	10,327	19,262	25,081	18,021	113,412	(24,815)	0.21X	-0.13X
	Nikkei Index	(5,857)	(137)	(6,918)	(7,548)	(9,104)	14,214	(16,298)	0.97X	-0.46X
RATES	10Y UST	(227,825)	58,479	(204,285)	(211,346)	(249,288)	372,991	(758,490)	0.22X	-0.19X
	2Y UST	(206,186)	5,427	(280,426)	(238,790)	(208,204)	67,767	(421,551)	0.02X	-0.25X
	5Y UST	(204,898)	(26,591)	(272,282)	(211,953)	(155,691)	6,400	(866,140)	-0.48X	0.49X
	UST Bonds	(8,158)	(5,765)	(56,600)	(58,408)	(46,489)	122,839	(142,810)	1.79X	0.07X
	30D Fed Funds	300,256	(3,978)	326,474	243,778	60,605	397,055	(286,025)	1.16X	1.92X
	Eurodollar	1,261,475	63,123	1,095,890	1,207,251	774,347	1,503,625	(3,110,209)	0.81X	1.62X
CURRENCIES	\$USD	24,228	4,749	17,168	25,476	26,844	51,014	(10,666)	-0.35X	0.24X
	JPY	(31,774)	(1,716)	(35,911)	(17,907)	(29,545)	32,039	(140,151)	-0.07X	0.61X
	EUR	(101,862)	(10,374)	(71,263)	(68,027)	(72,342)	147,318	(111,509)	-1.38X	-1.37X
	GBP	30,445	8,824	6,577	(29,231)	(35,924)	49,216	(113,271)	1.68X	1.52X
	AUD	(38,873)	(4,913)	(36,769)	(42,303)	(48,832)	77,969	(74,181)	0.89X	-0.52X
	CAD	7,304	(1,389)	19,685	20,519	(1,212)	78,001	(99,736)	0.27X	0.30X
	MXN	153,420	(3,014)	153,590	133,465	129,821	170,379	(45,496)	0.97X	1.48X
	NZD	(12,182)	(8,168)	(9,519)	(22,998)	(16,969)	35,981	(42,544)	0.33X	-0.22X
CHF	1,491	(2,242)	(6,181)	(8,210)	(16,434)	4,899	(47,216)	1.43X	1.54X	
COMMODITIES	CRUDE OIL	410,285	(3,345)	496,494	459,673	460,339	784,290	332,714	-0.84X	-0.90X
	GOLD	284,206	54,837	240,910	243,544	183,748	292,066	(103,009)	1.05X	1.59X
	COPPER	(41,362)	3,059	(15,805)	(27,909)	(21,426)	67,602	(60,135)	-0.85X	-1.64X
	Natural Gas	(226,077)	19,204	(224,509)	(189,534)	(147,889)	57,455	(262,534)	-1.11X	-1.93X
	RBOB Gasoline	118,334	3,410	108,948	85,970	84,957	129,000	29,519	1.69X	1.86X
	ULSD Heating Oil	(19,986)	3,117	(6,546)	(4,410)	(8,007)	67,696	(27,674)	-1.30X	-1.45X
	Silver	80,646	12,838	62,751	59,258	40,146	107,003	(30,158)	1.47X	1.45X
	Platinum	63,093	163	59,717	47,371	33,317	69,306	(11,540)	1.58X	2.28X
	Aluminum	163,475	(2,043)	159,128	161,735	157,727	168,292	122,356	0.55X	1.31X
	Nickel	42,230	(365)	42,658	44,005	37,006	47,708	13,508	0.60X	1.21X
	Corn	(16,186)	4,369	(31,577)	(50,771)	(20,613)	372,754	(270,560)	0.03X	-0.27X
	Soybeans	(56,409)	6,226	(26,582)	(1,000)	(28,953)	210,365	(148,817)	-0.49X	-0.77X
	Wheat	60,302	18,030	35,041	19,793	2,173	63,219	(143,292)	1.60X	1.71X
	Live Cattle	59,551	(6,738)	96,202	72,353	90,866	183,134	19,421	-0.67X	-0.96X
	Lean Hogs	28,382	1,507	27,032	39,120	54,213	97,769	(11,151)	-1.00X	-0.47X
	Sugar	202,197	15,162	82,180	(42,953)	(54,476)	202,197	(205,161)	2.38X	-2.82X
Cotton	37,489	360	25,046	6,018	(507)	132,318	(37,827)	1.45X	-0.29X	
Coffee	(5,114)	(1,488)	27,757	(2,757)	(22,902)	46,860	(106,651)	0.49X	0.85X	
Cocoa	80,931	(338)	61,955	40,290	27,372	81,269	(43,846)	1.70X	2.21X	
Orange Juice	(6,289)	423	(6,461)	(6,325)	(6,704)	5,540	(9,416)	0.47X	-0.78X	

Volatility

TIME WINDOW SETTING:		TOTAL RETURN							REALIZED VOLATILITY TRENDS			IMPLIED VOLATILITY TRENDS		
VOLATILITY_30D		PERFORMANCE		IVOL PREMIUM/DISCOUNT					RVOL		PERCENTILE	IVOL		PERCENTILE
PUT_IMP_VOL_30D		YTD %	IVOL / RVOL	Yesterday	1W Ago	1M Ago	TTM Z-Score	3Yr Z-Score	CURRENT	MM %	10YR	CURRENT	MM %	10YR
TICKER		CURRENT												
US EQUITIES														
Utilities Sector SPDR ETF	XLU US EQUITY	-0.45%	24%	119%	13%	35%	0.0	0.3	18.6	110%	87%	23.0	93%	98%
Power Shares QQQ Trust ETF	QQQ US EQUITY	-3.28%	41%	27%	15%	64%	0.8	1.0	26.6	124%	89%	37.5	93%	99%
Vanguard Real Estate REIT ETF	VNQ US EQUITY	-3.56%	10%	19%	2%	22%	0.3	0.4	22.1	110%	86%	24.4	90%	90%
Technology Sector SPDR ETF	XLK US EQUITY	-4.33%	36%	23%	4%	80%	0.5	0.6	30.4	129%	95%	41.2	72%	100%
Communication Services SPDR ETF	XLC US EQUITY	-5.63%	51%	37%	16%	60%	1.0		22.1	90%	75%	33.3	78%	98%
Consumer Staples Sector SPDR ETF	XLP US EQUITY	-6.07%	55%	117%	31%	314%	-0.1	0.4	16.8	149%	88%	26.0	-7%	99%
Consumer Discretionary Sector SPDR ETF	XLY US EQUITY	-7.05%	61%	48%	0%	89%	1.2	1.3	21.8	117%	85%	35.0	84%	99%
SPDR S&P 500 ETF Trust	SPY US EQUITY	-7.57%	65%	31%	0%	82%	1.6	1.7	22.5	154%	90%	37.1	130%	100%
Health Care Sector SPDR ETF	XLV US EQUITY	-7.89%	42%	30%	5%	63%	1.0	1.0	20.8	113%	88%	29.5	85%	99%
Industrials Sector SPDR ETF	XLI US EQUITY	-8.63%	49%	34%	3%	61%	0.9	1.1	23.4	105%	88%	34.8	89%	98%
I-Shares Russell 2000 ETF	IWM US EQUITY	-10.03%	73%	35%	5%	108%	2.2	2.4	22.2	161%	83%	38.3	118%	97%
Financials Sector SPDR ETF	XLF US EQUITY	-11.21%	42%	35%	6%	72%	1.3	1.3	23.4	126%	82%	33.2	86%	95%
Materials Sector SPDR ETF	XLB US EQUITY	-13.22%	61%	20%	-6%	213%	1.0	1.5	26.0	117%	89%	41.8	11%	99%
Energy Sector SPDR ETF	XLE US EQUITY	-24.53%	36%	13%	-5%	30%	1.6	1.4	31.6	86%	90%	43.0	95%	99%
INTERNATIONAL EQUITIES														
I-Shares China Large-Cap ETF	FXI US EQUITY	-7.38%	9%	-7%	-27%	2%	0.3	0.4	28.1	13%	82%	30.6	21%	91%
Euro Stoxx 50 Index	SXSE INDEX	-7.44%	28%	2%	-22%	19%	1.1	0.5	22.5	76%	79%	28.9	89%	92%
I-Shares MSCI Emerging Markets ETF	EEM US EQUITY	-9.36%	33%	8%	-20%	13%	0.7	1.2	24.7	32%	83%	32.8	56%	94%
I-Shares MSCI Japan ETF	EWJ US EQUITY	-10.50%	48%	31%	0%	33%	2.0	1.5	18.6	99%	71%	27.6	122%	96%
CURRENCIES														
PowerShares US Dollar Index ETF	UUP US EQUITY	2.50%	77%	69%	56%	-37%	1.7	1.2	4.5	-37%	9%	7.9	75%	53%
Currency Shares Japanese Yen ETF	FXJ US EQUITY	-1.21%	7%	-2%	0%	37%	-0.1	-0.2	7.0	75%	32%	7.4	36%	26%
Currency Shares Euro Trust ETF	FXE US EQUITY	-2.14%	36%	40%	43%	2%	1.7	1.9	5.2	28%	11%	7.1	69%	27%
Currency Shares British Pound ETF	FXB US EQUITY	-2.68%	-17%	-19%	-23%	-29%	-0.9	-1.1	8.5	-9%	57%	7.1	6%	23%
COMMODITIES														
SPDR Gold Shares ETF	GLD US EQUITY	7.77%	46%	33%	32%	44%	2.2	2.4	11.1	41%	31%	16.2	43%	64%
PowerShares DB Agriculture Fund ETF	DBA US EQUITY	-7.31%	10%	29%	1%	-2%	-0.6	-0.8	11.5	-14%	46%	12.6	-4%	20%
United States Natural Gas Fund ETF	UNG US EQUITY	-20.11%	10%	4%	3%	33%	-0.4	-0.1	36.7	29%	60%	40.3	6%	59%
United States Oil Fund ETF	USO US EQUITY	-23.65%	54%	45%	24%	58%	2.0	2.5	30.7	35%	64%	47.2	31%	93%
FIXED INCOME														
I-Shares 20+ Year Treasury Bond ETF	TLT US EQUITY	12.29%	37%	28%	8%	4%	3.0	2.4	12.6	6%	52%	17.3	40%	92%
I-Shares 7-10 Year Treasury Bond ETF	IEF US EQUITY	5.35%	56%	39%	18%	19%	1.1	0.7	5.4	15%	47%	8.5	51%	90%
I-Shares IBOX IG Corporate Bond ETF	LQD US EQUITY	2.41%	58%	55%	34%	30%	3.3	2.3	3.8	-6%	12%	6.0	14%	63%
I-Shares J.P. Morgan USD EM Bond ETF	EMB US EQUITY	0.11%	47%	40%	50%	70%	2.0	1.2	5.6	46%	50%	8.2	27%	69%
I-Shares IBOX HY Corporate Bond ETF	HYG US EQUITY	-2.15%	54%	45%	-15%	62%	1.5	1.2	7.4	97%	73%	11.3	88%	90%

Data Source: CBOE, CME, Bloomberg

Macro Data Callouts

1. Recall that our outlooks for the growth rates of S&P 500 Sales and EPS materially diverged from consensus in calling for L-Shaped “non-recoveries” in 2020E well in advance of the Corona Virus outbreak. Yesterday’s Durable Goods New Orders (-67bps to -3.88% YoY in JAN) and Core Capital Goods New Orders (-36bps to 0.91% YoY in JAN) prints were both confirming of that view. The 6MMA for both these indicators remains in negative territory upon the advent of these data. The sequential weakness in Capex is particularly disturbing in light of the surge in “geopoliticonomic” uncertainty that I presaged in my note a few weeks back (attached), as well as in the context of Deloitte’s Q4 CFO Survey I highlighted two months ago in which 97% of US CFOs believe a slowdown has already begun or will commence in 2020. 82% of respondents anticipated taking more defensive actions - like reducing discretionary spending and headcount - as a way to stave off the looming headwinds. It’s fast become consensus among investors that COVID-19 is both a catalyst to pull forward such actions and an amplifier of the severity of any cuts.
2. On that front, we also received Jobless Claims data yesterday, which showed a uneventful divergence between Initial Claims (+8k to 219k) and Continuing Claims (-9k to 1,724k). Both indicators remain healthy from a rate of change perspective as well: Monthly Average Initial Jobless Claims decelerated -71bps to -5.57% YoY in FEB and Monthly Average Continuing Jobless Claims also decelerated in FEB by -124bps to 0.88% YoY. Recall that Initial and Continuing Claims are currently the 16th and 3rd highest-weighted features in our nowcast model for US Real GDP growth, so these signals are buttressing the near-term GROWTH outlook for now - which also implies the delta on any recorded slowdown from here could be sizeable. Per the advent of these data and the aforementioned Durable Goods and Capex data, our model still has domestic economic growth slowing here in 1Q20E at 2.21% YoY/2.59% QoQ SAAR. That compares to 2.24% YoY/2.71% QoQ SAAR for the Atlanta Fed’s GDPNow model. A full visual summary US and global GIP dynamics is provided below.
3. Japan is the #1 destination for Chinese tourists and China is South Korea’s largest source of external demand at 25% of total exports. Given these figures, it makes sense to dutifully monitor their high-frequency releases as well to gauge for regional impact of COVID-19. Japanese Retail Sales accelerated +220bps to -0.4% YoY in JAN, while Industrial Production accelerated +60bps to -2.5% YoY. Is this as good as it gets for an economy already mired in deep recession? Keith market signals on the Nikkei and JGB yields would seem to suggest that is the case. South Korean Industrial Production on the other hand crashed -870bps to -2.4% YoY in JAN. The FEB releases of these data are highly likely to be far worse across the board.

Macro Daily Data Dump

Date Time	Country/Region	C	Event	Period	Surv(M)	Actual	Prior	Revised	Ticker
43888.35417	United States	US	GDP Annualized QoQ	4Q S	2.10%	2.10%	2.10%	--	GDP CQOQ Index
43888.35417	United States	US	Durable Goods Orders	Jan P	--	-3.88%	-3.21%	--	DGNOCHNG Index
43888.35417	United States	US	Cap Goods Orders Nondef Ex Air	Jan P	--	0.91%	1.27%	--	CGNOXAI% Index
43888.35417	United States	US	Initial Jobless Claims	22-Feb	212k	219k	210k	211k	INJCJC Index
43888.35417	United States	US	Continuing Claims	15-Feb	1711k	1724k	1726k	1733k	INJCSP Index
43888.41667	United States	US	Pending Home Sales NSA YoY	Jan	2.10%	6.70%	6.80%	--	USPHTYOY Index
43888.45833	United States	US	Kansas City Fed Manf. Activity	Feb	-1	5	-1	--	KCLSSACI Index
43888.75	South Korea	SK	Industrial Production YoY	Jan	0.10%	-2.40%	4.20%	--	KOIIPIY Index
43888.78472	Japan	JN	Retail Sales YoY	Jan	-1.30%	-0.40%	-2.60%	--	JNNETYOY Index
43888.78472	Japan	JN	Industrial Production YoY	Jan P	-3.10%	-2.50%	-3.10%	--	JNIPYOY Index
43888.79236	United Kingdom	UK	GfK Consumer Confidence	Feb	-8	-7	-9	--	UKCCI Index
43888.79236	United Kingdom	UK	Lloyds Business Barometer	Feb	--	23	23	--	LTSBBSBX Index
43889.08333	Turkey	TU	GDP YoY	4Q	5.00%	6.00%	0.90%	1.00%	TUGPIGDY Index
43889.11458	France	FR	CPI EU Harmonized YoY	Feb P	1.60%	1.60%	1.70%	--	FRCPEECY Index
43889.11458	France	FR	CPI YoY	Feb P	1.50%	1.40%	1.50%	--	FRCPIYOY Index
43889.11458	France	FR	PPI YoY	Jan	--	0.20%	0.30%	0.60%	FRPIYOY Index
43889.11458	France	FR	Consumer Spending YoY	Jan	0.30%	-0.90%	2.00%	2.10%	FRSNTTLY Index
43889.11458	France	FR	GDP QoQ	4Q F	-0.10%	-0.10%	-0.10%	--	FRGEGDPQ Index
43889.11458	France	FR	GDP YoY	4Q F	0.80%	0.90%	0.80%	--	FRGEGDPY Index
43889.125	Germany	GE	CPI Saxony YoY	Feb	--	2.00%	1.80%	--	GRCP2SAY Index
43889.20833	Italy	IT	CPI EU Harmonized YoY	Feb P	0.40%	0.30%	0.40%	--	ITCPEY Index
43889.20833	Italy	IT	CPI NIC incl. tobacco YoY	Feb P	0.60%	0.40%	0.60%	0.50%	ITCPNICY Index

Hedgeye Macroeconomic Data Sequencer

HEDGEYE MACROECONOMIC DATA SEQUENCER	QUARTERLY AVERAGE DELTA		TRENDING DELTA		SEQUENTIAL DELTA		PERCENTILE BASIS (TIOY)	RoC	HISTORICAL CONTEXT	
	Sep-19	Dec-19	12MMA	6MMA (4Q19)	Prior	Latest (4Q19)	Latest Reading	4Q19	Best Since	Worst Since
GDP US Chained 2012 Dollars QoQ SAAR	2.10	2.10	2.33	2.10	2.10	2.10	41%	0.00	3/31/2019	6/30/2019
Durable Goods New Orders YoY YoY % Change	Dec-19	Mar-20	12MMA	6MMA (JAN)	Prior	Latest (JAN)	Latest Reading	JAN	Best Since	Worst Since
	-3.10	-3.88	-2.17	-3.65	-3.21	-3.88	13%	-0.67	12/31/2019	11/30/2019
Core Capital Goods New Orders YoY YoY % Change	Dec-19	Mar-20	12MMA	6MMA (JAN)	Prior	Latest (JAN)	Latest Reading	JAN	Best Since	Worst Since
	0.16	0.91	0.69	-0.06	1.27	0.91	39%	-0.36	12/31/2019	11/30/2019
US Pending Home Sales Index YoY NSA	Dec-19	Mar-20	12MMA	6MMA (JAN)	Prior	Latest (JAN)	Latest Reading	JAN	Best Since	Worst Since
	5.60	6.70	1.95	5.13	6.80	6.70	71%	-0.10	12/31/2019	11/30/2019
Kansas City Federal Reserve SA Composite Index	Dec-19	Mar-20	12MMA	6MMA (FEB)	Prior	Latest (FEB)	Latest Reading	FEB	Best Since	Worst Since
	-3.00	2.00	0.25	-1.00	-1.00	5.00	49%	6.00	3/31/2019	1/31/2020
South Korea IP-Mining/Manufacturing/Electricity&Gas NSA YoY	Dec-19	Mar-20	12MMA	6MMA (JAN)	Prior	Latest (JAN)	Latest Reading	JAN	Best Since	Worst Since
	2.43	-2.40	-0.43	0.38	6.30	-2.40	15%	-8.70	12/31/2019	8/31/2019
Japan Retail Trade YoY NSA	Dec-19	Mar-20	12MMA	6MMA (JAN)	Prior	Latest (JAN)	Latest Reading	JAN	Best Since	Worst Since
	-3.90	-0.40	0.06	-0.18	-2.60	-0.40	23%	2.20	9/30/2019	12/31/2019
Japan Indices of Industrial Production: Production YoY NSA	Dec-19	Mar-20	12MMA	6MMA (JAN)	Prior	Latest (JAN)	Latest Reading	JAN	Best Since	Worst Since
	-6.33	-2.50	-3.05	-4.15	-3.10	-2.50	21%	0.60	9/30/2019	12/31/2019
GFK UK Consumer Confidence Indicator	Dec-19	Mar-20	12MMA	6MMA (FEB)	Prior	Latest (FEB)	Latest Reading	FEB	Best Since	Worst Since
	-13.00	-8.00	-11.75	-11.17	-9.00	-7.00	65%	2.00	5/31/2017	1/31/2020
Lloyds Bank Business Barometer Summary Indicator % Balance	Dec-19	Mar-20	12MMA	6MMA (FEB)	Prior	Latest (FEB)	Latest Reading	FEB	Best Since	Worst Since
	8.33	23.00	11.17	12.17	23.00	23.00	29%	0.00	11/30/2018	12/31/2019
Germany Import Prices YoY	Dec-19	Mar-20	12MMA	6MMA (JAN)	Prior	Latest (JAN)	Latest Reading	JAN	Best Since	Worst Since
	-2.10	-0.90	-1.00	-2.07	-0.70	-0.90	43%	-0.20	12/31/2019	11/30/2019
Turkey GDP Chain Linked YoY	Sep-19	Dec-19	12MMA	6MMA (4Q19)	Prior	Latest (4Q19)	Latest Reading	4Q19	Best Since	Worst Since
	0.96	5.96	0.75	3.46	0.96	5.96	51%	5.00	3/31/2018	9/30/2019
Turkey GDP Chain Linked Index SWDA QoQ	Sep-19	Dec-19	12MMA	6MMA (4Q19)	Prior	Latest (4Q19)	Latest Reading	4Q19	Best Since	Worst Since
	0.76	1.94	1.45	1.35	0.76	1.94	67%	1.18	3/31/2019	9/30/2019
France CPI 2015=100 YoY	Dec-19	Mar-20	12MMA	6MMA (FEB)	Prior	Latest (FEB)	Latest Reading	FEB	Best Since	Worst Since
	1.10	1.45	1.14	1.18	1.50	1.40	62%	-0.10	1/31/2020	11/30/2019
France PPI 2010=100 YoY	Dec-19	Mar-20	12MMA	6MMA (JAN)	Prior	Latest (JAN)	Latest Reading	JAN	Best Since	Worst Since
	-0.40	0.20	0.33	-0.40	0.60	0.20	39%	-0.40	12/31/2019	11/30/2019
France European Harmonised CPI YoY	Dec-19	Mar-20	12MMA	6MMA (FEB)	Prior	Latest (FEB)	Latest Reading	FEB	Best Since	Worst Since
	1.23	1.65	1.33	1.35	1.70	1.60	61%	-0.10	1/31/2020	11/30/2019
France Households Consumption Goods Expenditure Total YoY	Dec-19	Mar-20	12MMA	6MMA (JAN)	Prior	Latest (JAN)	Latest Reading	JAN	Best Since	Worst Since
	0.93	-0.90	-0.23	0.35	2.10	-0.90	15%	-3.00	12/31/2019	3/31/2019
France GDP Chain Linked Prices YoY	Sep-19	Dec-19	12MMA	6MMA (4Q19)	Prior	Latest (4Q19)	Latest Reading	4Q19	Best Since	Worst Since
	1.50	0.90	1.30	1.20	1.50	0.90	26%	-0.60	9/30/2019	9/30/2016
Italy CPI NIC All Items YoY NSA	Dec-19	Mar-20	12MMA	6MMA (FEB)	Prior	Latest (FEB)	Latest Reading	FEB	Best Since	Worst Since
	0.30	0.45	0.54	0.35	0.50	0.40	28%	-0.10	1/31/2020	11/30/2019
Italy HICP YoY NSA	Dec-19	Mar-20	12MMA	6MMA (FEB)	Prior	Latest (FEB)	Latest Reading	FEB	Best Since	Worst Since
	0.30	0.35	0.54	0.30	0.40	0.30	23%	-0.10	1/31/2020	11/30/2019