
QUARTERLY
INVESTMENT
OUTLOOK

2Q 2021

MACRO THEMES

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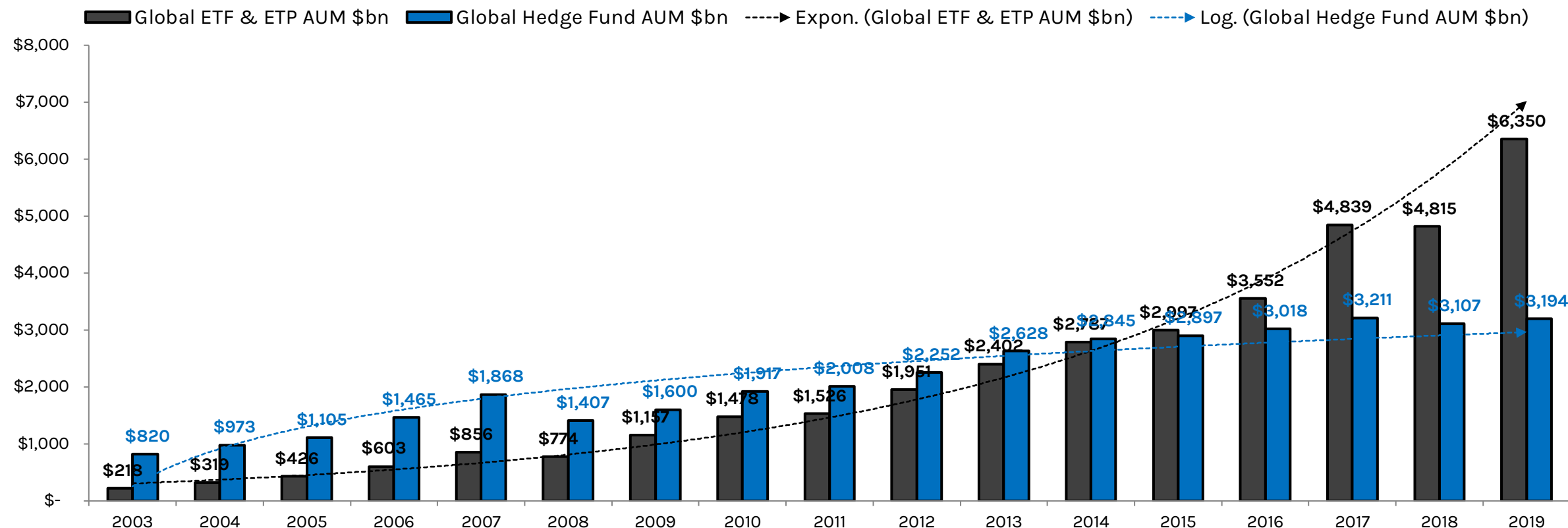
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The Investment Landscape Has Evolved Tremendously

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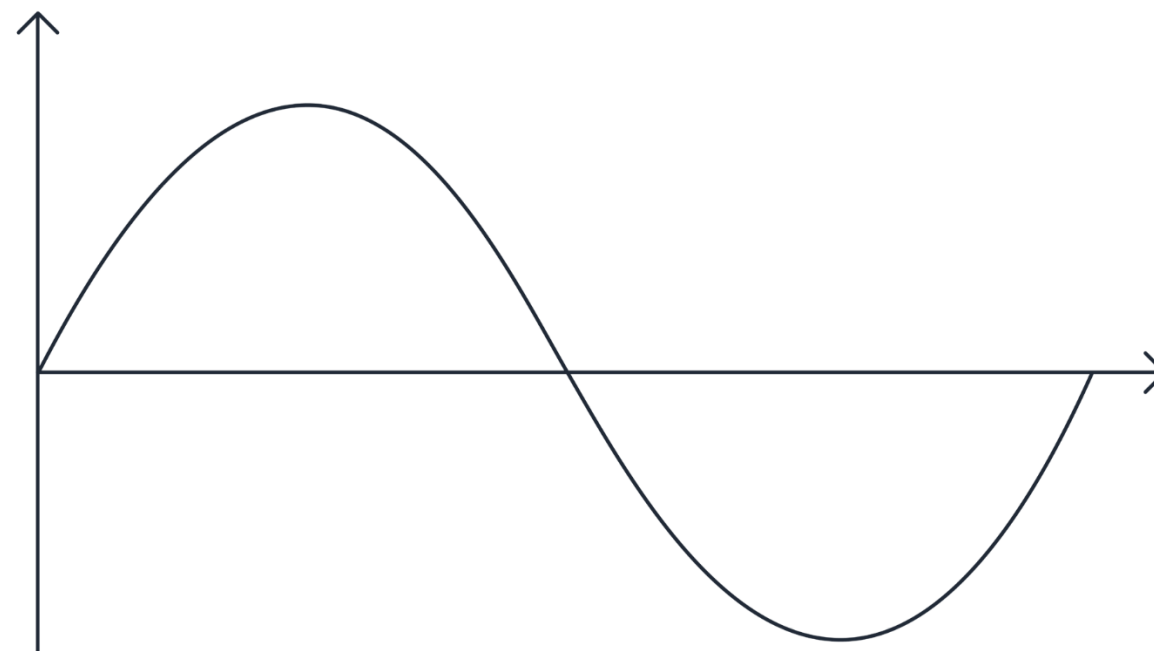
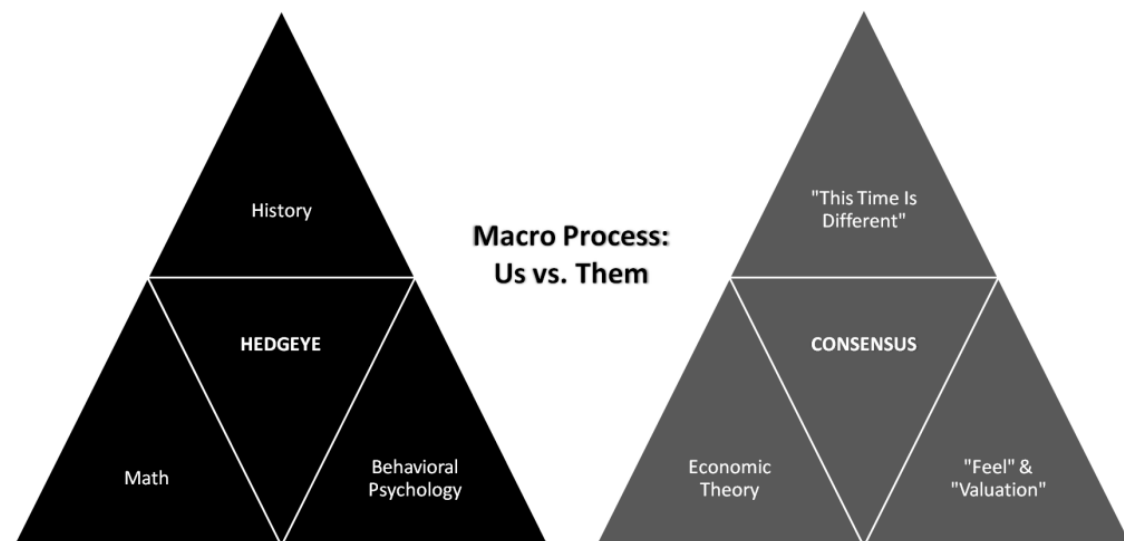
Stock-picking has given way to factor-picking and it's our job as investors to embrace this sea change, rather than fight it.



Skate To Where The Puck Is Going Within Asset Management

AUM in listed ETFs and ETPs surpassed \$6 trillion globally as of YE 2019, topping global hedge fund assets by over \$3 trillion. Moreover, BlackRock anticipates ETF/ETP AUM to double to \$12 trillion over the next 5 years. Regardless of whether you agree with this projection, you must agree that the proliferation of factor-based index investing and the concentration of hedge fund AUM at market-neutral platforms has made financial markets more sensitive to Macro risks than ever before. For example, JPM estimates systematic trading accounts for over 90% of US equity trading volume. Are your research and risk management processes equipped to compete for alpha in this new regime?

... So We Evolved Alongside It



WE ARE DIFFERENTIATED FROM THE HERD

Macroeconomic Research and **Macro Risk Management** are two very different fields. We specialize in the latter, incorporating key lessons from behavioral finance such as Prospect Theory and Bayesian Inference into our analysis. **We don't "feel" anything with regards to the markets or the economy; if we can't contextualize it with math, we don't have a view on it.**

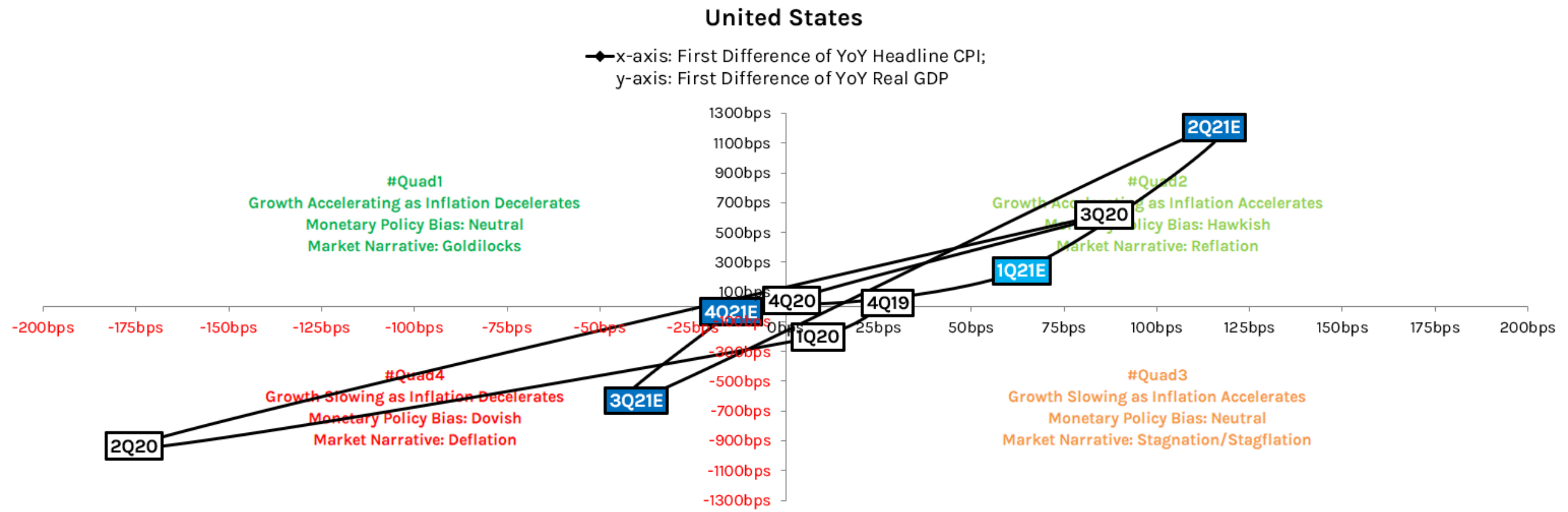
...BECAUSE WE FOCUS ON THE FACTS

Rate of change accelerations and decelerations are facts, not opinions, and our process is focused on contextualizing these facts, rather opining on the validity of **absolute levels** of growth, inflation, and/or policy. **This focus helps us consistently spot inflections in the performance of key factor exposures, across asset classes, 3-6 months ahead of investor consensus.**

What Are The Quads?

Our GIP Model is a quantitatively oriented, regime-based framework that helps investors proactively prepare for volatility phase transitions within and across asset classes by triangulating the three factors that matter most to Macro Risk Management – i.e. GROWTH, INFLATION, and POLICY.

United States	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	← Actuals Estimates →	1Q21E	2Q21E	3Q21E	4Q21E
Real GDP QoQ SAAR	3.80%	2.70%	2.10%	1.30%	2.90%	1.50%	2.60%	2.40%	-5.00%	-31.40%	33.40%	4.30%	Real GDP QoQ SAAR	3.27%	7.36%	6.14%	2.99%
Real GDP YoY	3.08%	3.33%	3.12%	2.48%	2.27%	1.96%	2.08%	2.34%	0.32%	-9.03%	-2.85%	-2.39%	Real GDP YoY	-0.33%	11.61%	5.21%	5.01%
2yr Comparative Base Effects	1.92%	1.80%	1.98%	2.39%	2.57%	2.75%	2.74%	2.59%	2.67%	2.64%	2.60%	2.41%	2yr Comparative Base Effects	1.29%	-3.53%	-0.39%	-0.05%
Headline CPI YoY	2.21%	2.71%	2.64%	2.20%	1.64%	1.81%	1.76%	2.03%	2.12%	0.36%	1.22%	1.24%	Headline CPI YoY	1.88%	3.08%	2.72%	2.58%
2yr Comparative Base Effects	1.81%	1.48%	1.54%	1.96%	2.38%	2.31%	2.30%	2.16%	1.93%	2.26%	2.20%	2.12%	2yr Comparative Base Effects	1.88%	1.09%	1.49%	1.64%



Data Source: Bloomberg. Light Blue box = Hedgeye Nowcast Model estimate. Dark Blue boxes = Hedgeye Comparative Base Effects Model estimates.

Highest/Lowest Expected Values By Quad Regime

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Quad 1: Goldilocks

Best Asset Classes:

Equities, Credit, Commodities, FX

Worst Asset Classes:

Fixed Income, USD

Best Equity Sectors:

Tech, Consumer Discretionary, Materials, Industrials, Telecom

Worst Equity Sectors:

Utilities, REITS, Consumer Staples, Financials, Energy

Best Equity Style Factors:

High Beta, Momentum, Leverage, Secular Growth, Mid Caps

Worst Equity Style Factors:

Low Beta, Defensives, Value, Dividend Yield, Small Caps

Best Fixed Income Sectors:

BDCs, Convertibles, HY Credit, EM \$ Debt, Leveraged Loans

Worst Fixed Income Sectors:

TIPS, Short Duration Treasuries, MBS, Treasury Belly, Long Bond

Quad 2: Reflation

Best Asset Classes:

Commodities, Equities, Credit, FX

Worst Asset Classes:

Fixed Income, USD

Best Equity Sectors:

Tech, Consumer Discretionary, Industrials, Energy, Financials

Worst Equity Sectors:

Telecom, Utilities, REITS, Consumer Staples, Health Care

Best Equity Style Factors:

Secular Growth, High Beta, Small Caps, Cyclical Growth, Momentum

Worst Equity Style Factors:

Low Beta, Dividend Yield, Value, Defensives, Size

Best Fixed Income Sectors:

Convertibles, BDCs, Preferreds, Leveraged Loans, HY Credit

Worst Fixed Income Sectors:

Long Bond, Treasury Belly, Munis, MBS, IG Credit

Quad 3: Stagflation

Best Asset Classes:

Gold, Commodities, Fixed Income

Worst Asset Classes:

Credit

Best Equity Sectors:

Utilities, Tech, Energy, Industrials, Consumer Discretionary

Worst Equity Sectors:

Financials, REITS, Materials, Telecom, Consumer Staples

Best Equity Style Factors:

Secular Growth, Momentum, Mid Caps, Low Beta, Quality

Worst Equity Style Factors:

Small Caps, Dividend Yield, Value, Defensives, Size

Best Fixed Income Sectors:

Munis, EM \$ Debt, Long Bond, TIPS, Treasury Belly

Worst Fixed Income Sectors:

BDCs, Preferreds, Convertibles, Leveraged Loans, HY Credit

Quad 4: Deflation

Best Asset Classes:

Fixed Income, Gold, USD

Worst Asset Classes:

Commodities, Equities, Credit, FX

Best Equity Sectors:

Consumer Staples, Utilities, REITS, Health Care, Telecom

Worst Equity Sectors:

Energy, Tech, Industrials, Financials, Materials

Best Equity Style Factors:

Low Beta, Dividend Yield, Quality, Defensives, Value

Worst Equity Style Factors:

High Beta, Momentum, Leverage, Secular Growth, Cyclical Growth

Best Fixed Income Sectors:

Long Bond, Treasury Belly, IG Credit, Munis, MBS

Worst Fixed Income Sectors:

Preferreds, EM Local Currency, BDCs, Leveraged Loans, TIPS

A | B Testing Process: Measure & Map The Volatility of Volatility

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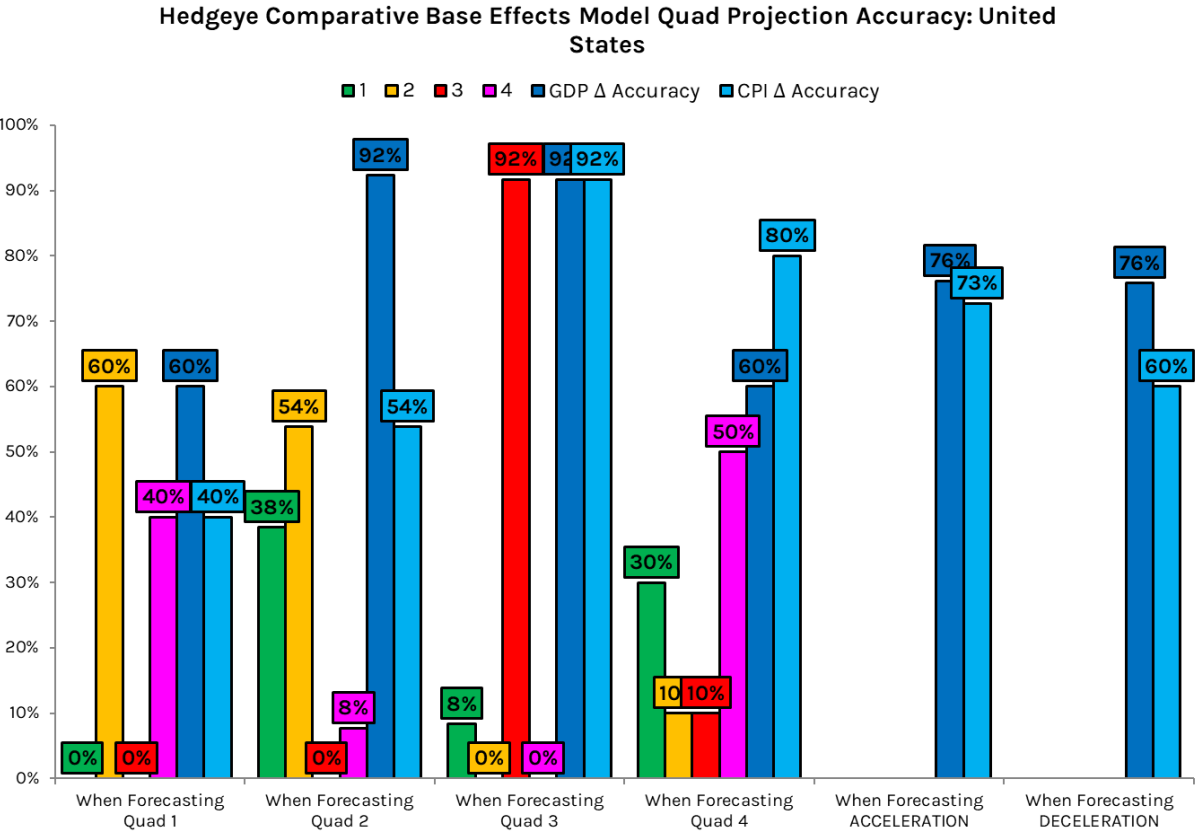
Deliberately studying the VOLATILITY OF VOLATILITY leads to high-probability decision-making opportunities. TIMING matters.

TIME WINDOW SETTING: VOLATILITY_30D PUT_IMP_VOL_30D		TOTAL RETURN PERFORMANCE	IVOL PREMIUM/DISCOUNT						REALIZED VOLATILITY TRENDS			IMPLIED VOLATILITY TRENDS		
		YTD %	IVOL PREM %	Yesterday	1W Ago	1M Ago	TTM Z-Score	3Yr Z-Score	RVOL	MM %	PERCENTILE	IVOL	MM %	PERCENTILE
			IVOL / RVOL						CURRENT		10YR	CURRENT		10YR
US EQUITIES														
CURRENT														
Energy Sector SPDR ETF	XLE US EQUITY	30.97%	-10%	2%	5%	4%	-0.2	-0.4	34.3	-1%	84%	30.8	-14%	81%
Financials Sector SPDR ETF	XLF US EQUITY	18.37%	-3%	-8%	2%	2%	-0.2	-0.4	21.6	-9%	75%	21.1	-13%	73%
I-Shares Russell 2000 ETF	IWM US EQUITY	14.96%	-22%	-23%	-5%	13%	-1.1	-1.1	33.2	18%	92%	26.0	-18%	83%
Industrials Sector SPDR ETF	XLI US EQUITY	13.28%	11%	-12%	0%	20%	0.0	0.0	19.5	-5%	74%	21.6	-12%	79%
Communication Services SPDR ETF	XLC US EQUITY	13.05%	-11%	-9%	10%	0%	-0.8		21.2	1%	56%	18.8	-11%	36%
Materials Sector SPDR ETF	XLB US EQUITY	11.63%	32%	42%	-1%	22%	0.6	0.6	20.7	-8%	72%	27.4	0%	88%
Vanguard Real Estate REIT ETF	VNQ US EQUITY	11.19%	-16%	-16%	2%	32%	-0.7	-0.7	17.1	11%	66%	14.4	-29%	49%
SPDR S&P 500 ETF Trust	SPY US EQUITY	9.04%	-22%	-23%	-8%	-2%	-0.9	-0.9	17.8	-7%	78%	13.9	-26%	57%
Consumer Discretionary Sector SPDR ETF	XLY US EQUITY	7.94%	-22%	-15%	-6%	-1%	-1.0	-1.1	26.0	4%	90%	20.3	-18%	78%
Technology Sector SPDR ETF	XLK US EQUITY	6.57%	-29%	-17%	-9%	17%	-1.2	-1.1	30.1	16%	91%	21.3	-29%	76%
Power Shares QQQ Trust ETF	QQQ US EQUITY	5.65%	-29%	-32%	-16%	12%	-1.2	-1.2	29.9	17%	92%	21.1	-26%	77%
Utilities Sector SPDR ETF	XLU US EQUITY	3.93%	11%	50%	40%	35%	0.3	0.1	17.2	-10%	75%	19.1	-26%	87%
Health Care Sector SPDR ETF	XLV US EQUITY	3.67%	12%	54%	18%	14%	-0.1	0.0	13.5	-17%	51%	15.1	-19%	59%
Consumer Staples Sector SPDR ETF	XLP US EQUITY	2.62%	45%	170%	6%	35%	0.5	0.2	13.9	-6%	75%	20.2	1%	93%
INTERNATIONAL EQUITIES														
Euro Stoxx 50 Index	SXSE INDEX	11.58%	-3%	-3%	6%	28%	-0.1	-0.2	12.9	-16%	25%	12.5	-36%	16%
I-Shares MSCI Emerging Markets ETF	EEM US EQUITY	4.64%	-33%	-37%	-22%	3%	-1.3	-1.5	25.6	7%	83%	17.2	-30%	31%
I-Shares MSCI Japan ETF	EWJ US EQUITY	3.58%	23%	-5%	4%	8%	0.5	0.8	16.2	-3%	61%	20.0	10%	79%
I-Shares China Large-Cap ETF	FXI US EQUITY	2.28%	-28%	-36%	-22%	-11%	-0.9	-1.4	30.5	4%	85%	21.8	-17%	49%
CURRENCIES														
PowerShares US Dollar Index ETF	UUP US EQUITY	2.85%	-1%	-4%	7%	36%	-1.0	-0.5	6.1	8%	39%	6.0	-21%	13%
Currency Shares British Pound ETF	FXB US EQUITY	1.60%	10%	5%	12%	37%	0.2	0.0	6.7	6%	23%	7.4	-15%	29%
Currency Shares Euro Trust ETF	FXE US EQUITY	-3.51%	-5%	-14%	-7%	6%	-0.5	-0.6	6.6	7%	33%	6.3	-5%	18%
Currency Shares Japanese Yen ETF	FXJ US EQUITY	-6.44%	248%	67%	179%	94%	4.6	7.2	4.8	-14%	10%	16.8	54%	99%
COMMODITIES														
United States Oil Fund ETF	USO US EQUITY	22.02%	-20%	-26%	-11%	15%	-1.0	-1.1	49.4	73%	91%	39.3	20%	77%
PowerShares DB Base Metals Fund ETF	DBB US EQUITY	9.79%	268%	233%	331%	310%	-0.3	-0.3	27.3	16%	96%	100.6	4%	87%
PowerShares DB Agriculture Fund ETF	DBA US EQUITY	4.83%	38%	24%	54%	81%	-1.1	-0.1	12.7	13%	68%	17.6	-14%	82%
United States Natural Gas Fund ETF	UNG US EQUITY	0.54%	-14%	9%	18%	-44%	-0.5	-0.8	29.2	-46%	28%	25.2	-16%	8%
SPDR Gold Shares ETF	GLD US EQUITY	-9.22%	-10%	-17%	-7%	13%	-0.5	-0.7	16.0	3%	67%	14.3	-18%	45%
FIXED INCOME														
I-Shares IBOXx HY Corporate Bond ETF	HYG US EQUITY	0.84%	-29%	-31%	-7%	25%	-1.3	-1.3	6.3	26%	61%	4.5	-28%	16%
I-Shares J.P. Morgan USD EM Bond ETF	EMB US EQUITY	-4.84%	-4%	-16%	-14%	23%	-0.8	-0.7	12.2	46%	92%	11.7	13%	89%
I-Shares IBOXx IG Corporate Bond ETF	LOD US EQUITY	-5.35%	-19%	-38%	-22%	19%	-0.8	-1.0	9.6	15%	95%	7.8	-22%	88%
I-Shares 7-10 Year Treasury Bond ETF	IEF US EQUITY	-5.58%	-11%	-7%	0%	77%	-0.9	-0.6	7.0	12%	84%	6.2	-44%	60%
I-Shares 20+ Year Treasury Bond ETF	TLT US EQUITY	-12.88%	-16%	-17%	-9%	3%	-0.8	-0.7	17.8	13%	89%	14.9	-8%	75%
MEGA-CAP TECH														
Alphabet	GOOGL US EQUITY	26.61%	-4%	-2%	9%	-17%	-0.2	-0.2	32.1	-8%	81%	30.8	6%	83%
Facebook	FB US EQUITY	13.09%	2%	-1%	4%	14%	0.0	0.0	37.0	26%	68%	37.9	13%	68%
Microsoft	MSFT US EQUITY	12.24%	-7%	-13%	4%	13%	-0.3	-0.4	27.6	10%	75%	25.7	-10%	76%
Amazon	AMZN US EQUITY	-0.93%	5%	0%	8%	17%	-0.3	-0.2	27.9	7%	52%	29.3	-4%	53%
Apple	AAPL US EQUITY	-4.97%	-13%	-17%	-7%	9%	-0.6	-0.5	35.6	11%	84%	30.9	-11%	75%

Data Source: CBOE, CME, Bloomberg

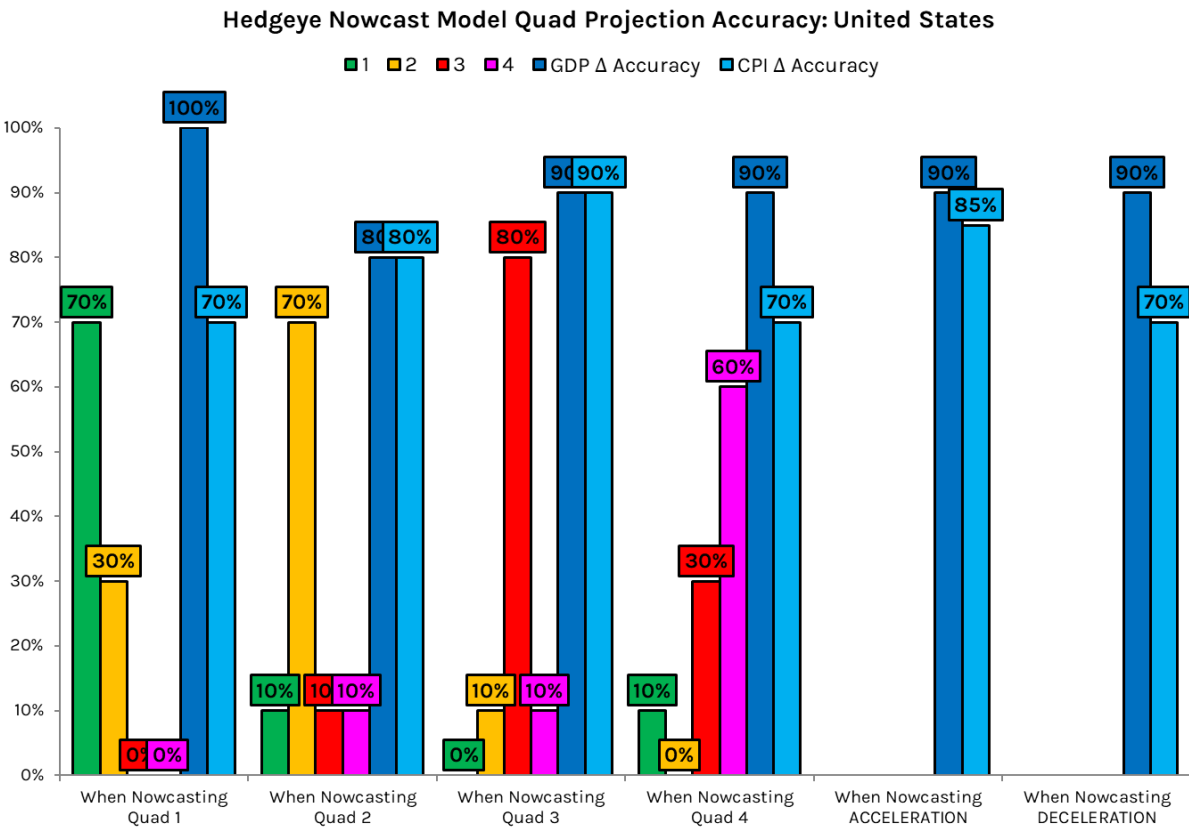
Measuring And Mapping The Quads With Precision Ex Ante Matters To Driving Ex Post Returns

US Comparative Base Effects Model Backtest



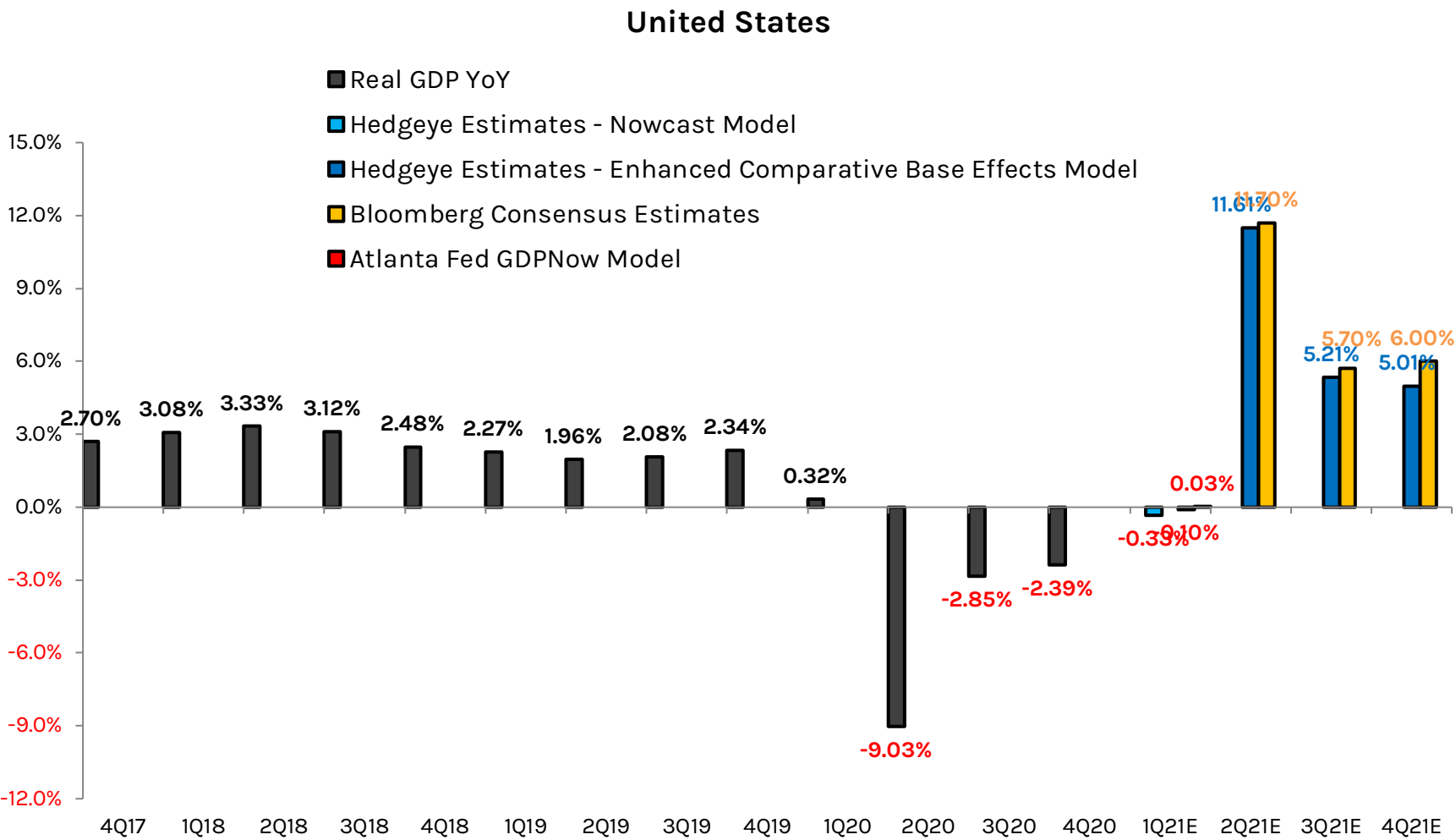
Data Source: Bloomberg

US Nowcast Model Backtest



Data Source: Bloomberg

US Real GDP YoY Projections

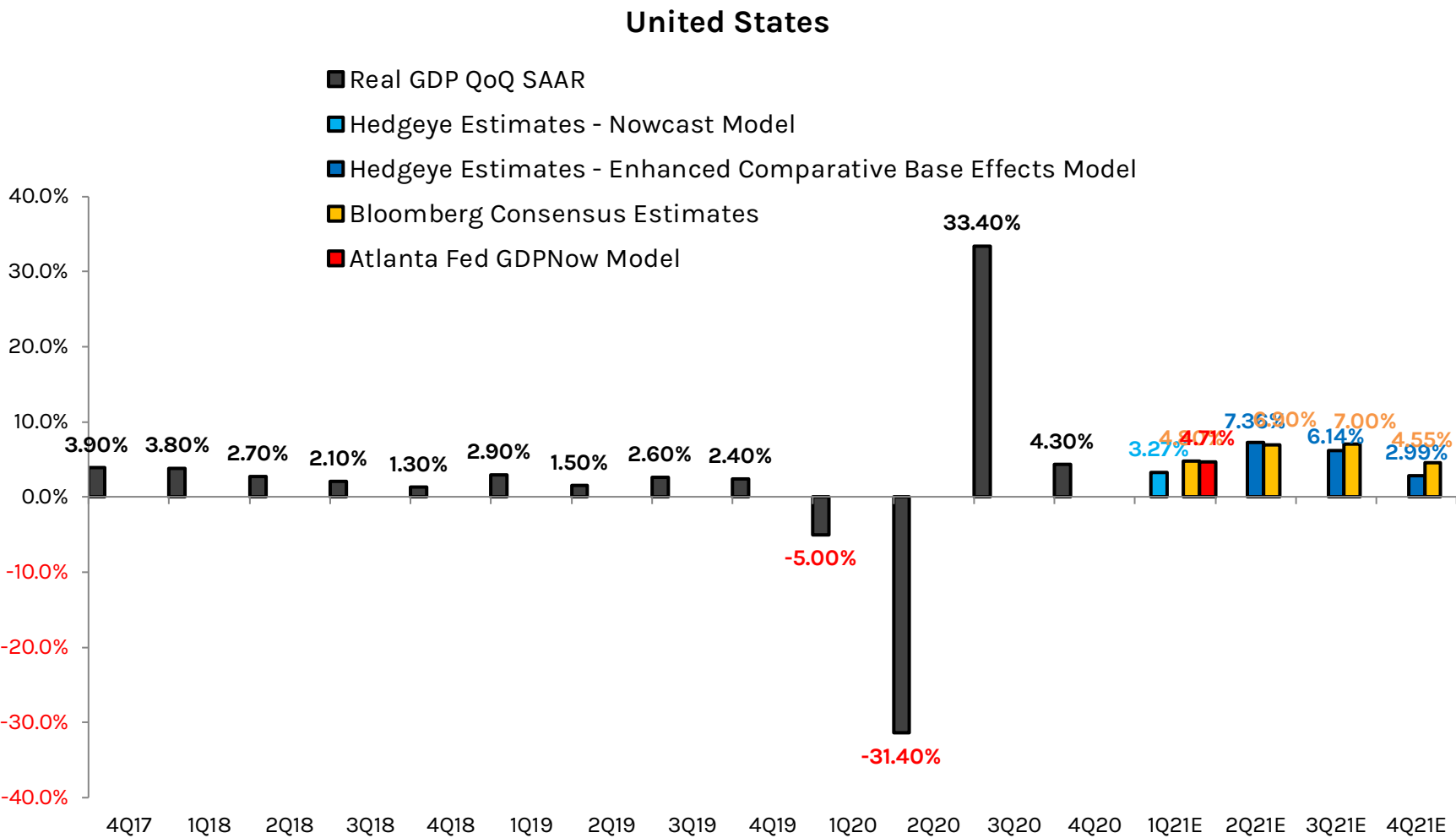


We use two distinct models to forecast the YoY growth rate of Real GDP and the combination of the two allows us to develop both a highly accurate real-time assessment of near-term economic momentum, as well as a high-probability scenario for where growth is likely to trend over the NTM.

Intra-quarter, we employ a stochastic nowcasting framework that anchors on nonlinear interpolation to relay rate of change signals from the individual features of the dynamic factor model to the base rate. In out-quarters where high-frequency data has yet to be reported, we employ a Bayesian Inference process that adjusts each of the preceding forecasted base rates inversely and proportionally to changes in the base effects.

All told, our US GDP nowcast model has an average absolute forecast error of 55bps and an 85% success rate in terms of accurately projecting the rate of change of GROWTH.

US Real GDP QoQ SAAR Projections

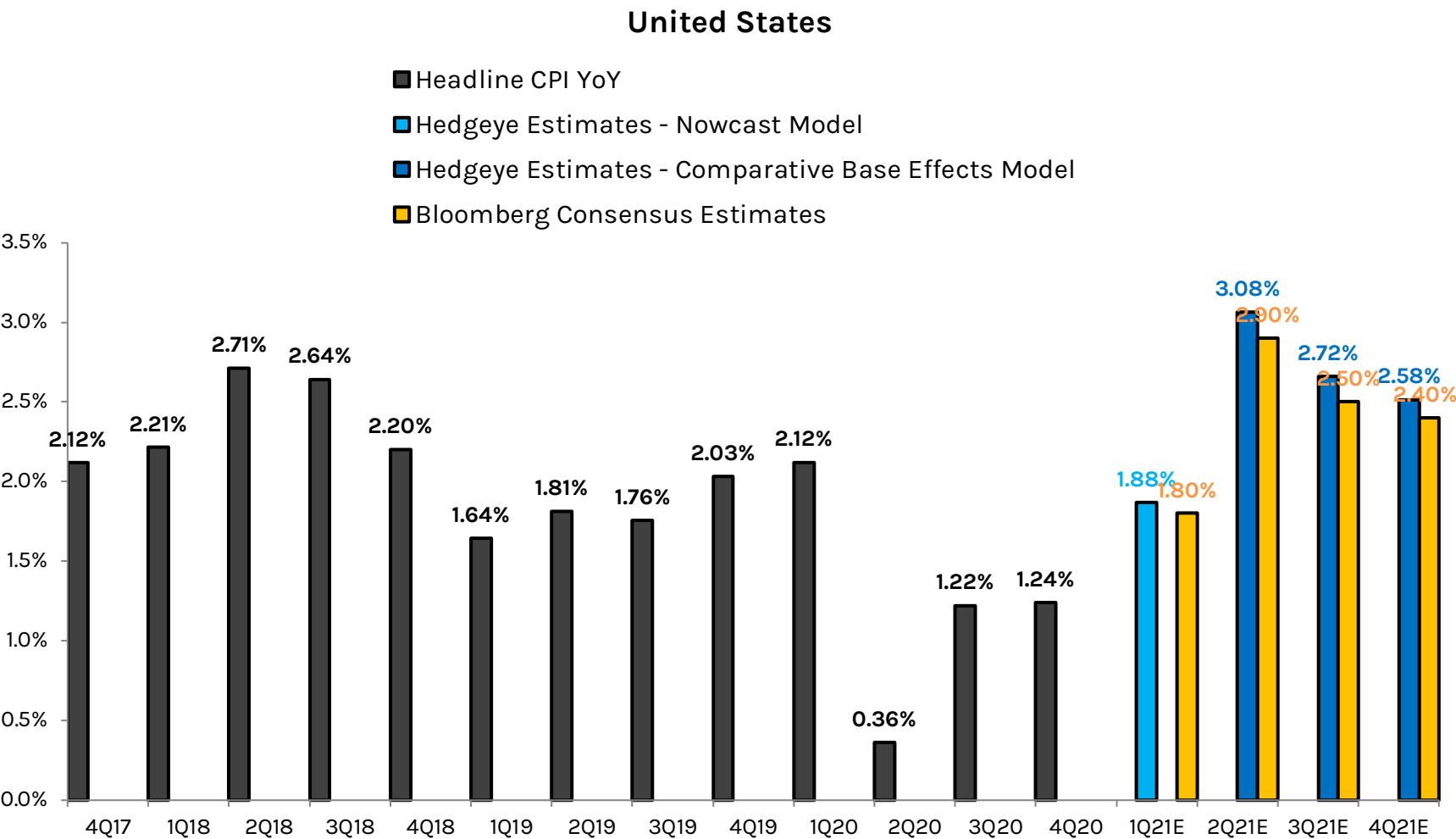


One differentiating factor of our forecasting process is that we aim to solve for where the economy is trending on a **Full Investing Cycle** basis, rather than trying to identify super short-term economic momentum.

Our rigorous study of financial market history suggests the latter to be little more than noise in the context of making accurate intermediate-to-long-term investment decisions.

As such, we are comfortable departing from the [perceived] “best” practices of economist consensus by interpolating our QoQ SAAR forecasts from our forecasted YoY growth rates. Macroeconomic Theory ≠ Macro Risk Management.

US Headline CPI YoY Projections



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

Intra-quarter, we employ a stochastic nowcasting framework that anchors on nonlinear interpolation to relay rate of change signals from the individual features of the dynamic factor model to the base rate. In out-quarters where high-frequency data has yet to be reported, we employ a Bayesian Inference process that adjusts each of the preceding forecasted base rates inversely and proportionally to changes in the base effects.

All told, our US CPI nowcast model has an average absolute forecast error of 36bps and an 85% success rate in terms of accurately projecting the rate of change of INFLATION.

US Real GDP Nowcast Model

Each of the following 30 features backtests as statistically significant with respect to predicting the rate of change of Real GDP growth and each feature's contribution to the overall signal is dynamically re-trained each quarter according to the relative strength of its first difference regression with the dependent variable.

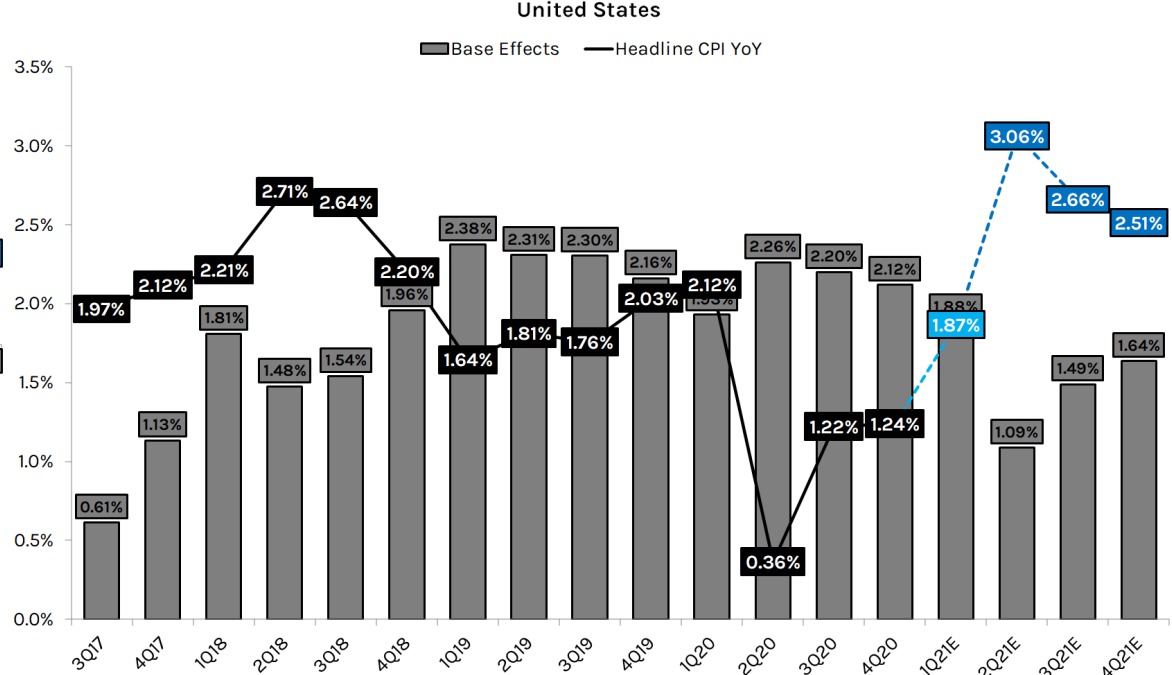
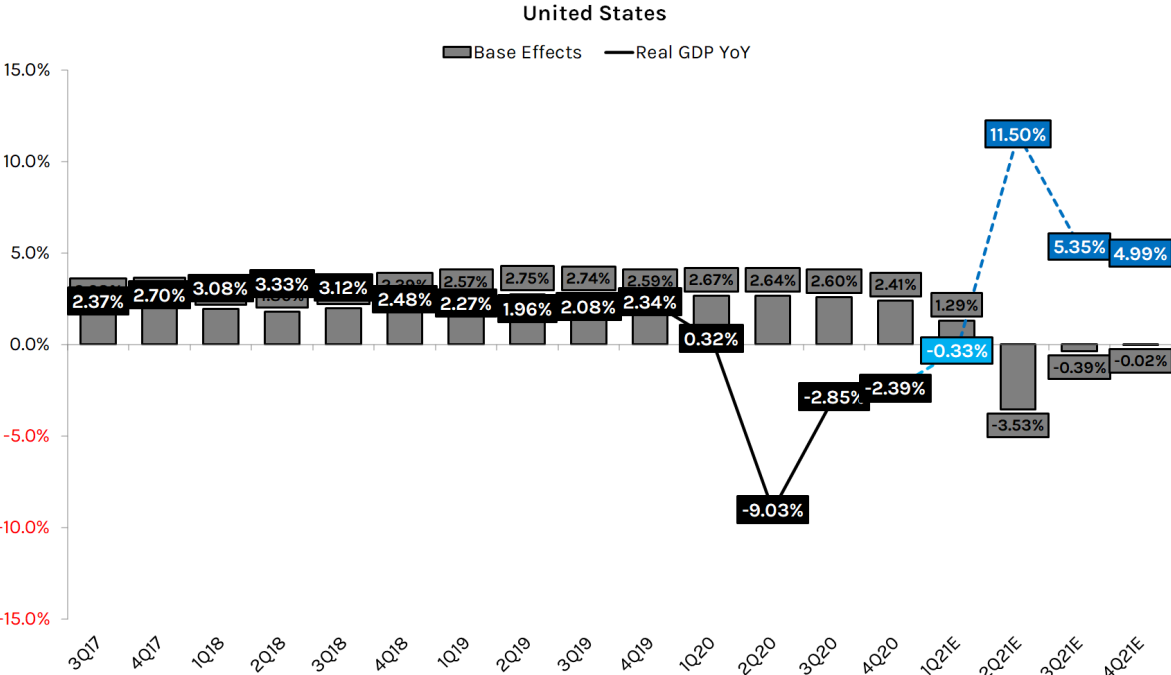
HEDGEYE US NOWCAST MODEL SUMMARY

	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
Real PCE YoY (1)	2.43	2.34	2.55	2.44	2.33	2.58	2.30	2.06	3.02	2.69	2.61	-4.69	-16.53	-9.64	-4.58	-3.61	-2.94	-1.95	-1.94	-2.61	-3.52	-1.00	-2.11	-
Real Disposable Personal Income YoY (14)	2.39	2.05	1.85	1.58	1.79	2.02	1.81	2.10	0.83	1.55	2.01	0.63	16.67	11.10	8.92	9.19	4.85	5.23	4.27	2.35	2.79	13.33	3.42	-
Personal Savings Rate % of DPI (6)	7.5	7.3	7.1	7.0	7.3	7.3	7.2	7.5	7.2	7.6	8.3	12.9	33.7	24.7	19.0	18.4	14.6	14.1	13.2	12.5	13.5	19.8	13.6	-
Headline Retail Sales YoY (9)	3.86	2.90	3.44	3.57	4.30	3.71	3.09	3.32	5.79	4.71	4.73	-5.59	-19.86	-5.55	2.23	2.70	3.61	6.09	5.44	3.79	2.28	9.51	6.27	-
Retail Sales Control Group YoY (13)	3.86	3.45	4.97	4.83	4.97	4.32	4.05	2.50	6.35	3.72	4.04	6.32	-7.46	1.50	7.01	7.76	8.66	10.29	9.55	8.90	5.54	14.12	10.20	-
Auto Sales YoY (10)	-3.93	2.91	-0.46	0.84	2.23	-1.21	-5.43	-1.78	-4.57	1.45	1.63	-35.03	-47.68	-29.42	-24.57	-13.67	-10.49	-4.94	-2.05	-9.01	-2.57	-1.25	-6.89	56.10
MBA Mortgage Purchase Index YoY (24)	5.56	5.11	8.16	6.21	5.97	10.50	9.34	11.00	9.05	9.09	10.61	-2.10	-29.85	-1.13	15.98	17.46	26.46	22.26	22.95	20.54	24.68	14.18	8.28	17.32
Total Employees On Nonfarm Payrolls YoY (7)	1.41	1.26	1.24	1.26	1.24	1.32	1.30	1.40	1.34	1.39	1.62	0.38	-13.50	-11.66	-8.55	-7.52	-6.59	-6.25	-5.93	-5.90	-6.20	-6.24	-6.11	-4.46
Aggregate Hours Worked YoY (2)	1.11	0.97	0.94	0.68	0.95	1.32	1.01	1.10	0.75	0.80	1.62	-0.78	-14.01	-10.89	-8.01	-6.71	-5.78	-5.16	-4.83	-4.53	-5.22	-4.48	-5.63	-2.10
Aggregate Labor Income YoY (4)	4.46	4.30	4.38	4.09	4.43	4.43	4.26	4.42	3.72	3.87	4.66	2.72	-6.99	-4.94	-3.44	-2.29	-1.39	-0.62	-0.52	-0.21	0.25	0.76	-0.37	2.15
Monthly Initial Jobless Claims YoY (3)	-4.20	-2.23	2.48	-3.12	0.75	0.12	-0.82	-5.95	4.62	-7.12	-7.20	1075.85	2245.45	1024.38	574.43	509.26	373.87	382.26	293.17	231.63	203.60	230.45	276.14	74.04
Bloomberg Consumer Comfort Index (12)	60.3	60.2	62.3	64.2	62.0	62.6	62.7	59.2	62.2	66.1	65.3	60.9	43.8	36.0	40.9	44.1	44.3	48.7	47.3	48.8	47.3	44.3	46.7	49.3
Industrial Production YoY (8)	0.71	1.73	1.02	0.40	0.30	-0.18	-0.81	-0.42	-0.81	-0.85	-0.24	-4.70	-16.26	-15.72	-10.50	-6.58	-6.34	-6.09	-4.75	-4.79	-3.48	-1.95	-4.25	-
Capacity Utilization (5)	77.8	77.8	77.7	77.4	77.8	77.4	77.0	77.6	77.2	76.9	76.9	73.6	64.2	64.8	68.9	71.8	72.5	72.5	73.2	73.9	74.6	75.5	73.8	-
Durable Goods New Orders YoY (22)	-1.66	-3.96	-4.41	0.38	-3.27	-5.73	-1.61	-3.95	-3.27	-3.62	1.62	-18.64	-30.29	-18.64	-12.42	-4.50	-4.54	-1.62	0.22	4.26	2.67	6.43	3.17	-
Core Capital Goods New Orders YoY (28)	2.25	0.84	0.49	-3.29	0.10	-0.12	-0.74	3.43	1.67	0.56	0.97	-2.63	-7.25	-4.34	-2.34	0.55	3.52	5.68	7.17	7.45	9.61	9.31	9.07	-
Factory Orders YoY (18)	0.84	-1.29	-2.25	0.48	-1.75	-3.28	-1.31	-1.16	0.29	-0.55	0.53	-12.43	-22.74	-16.08	-10.40	-6.01	-5.47	-3.74	-2.53	-0.18	-0.28	2.85	1.86	-
Manufacturing & Trade Inventories YoY (26)	5.29	5.29	5.10	4.77	4.01	3.39	2.83	2.62	1.71	0.61	-0.16	-0.48	-2.25	-4.80	-5.75	-5.88	-5.45	-4.55	-3.88	-3.21	-2.39	-1.84	-	-
Nonresidential Construction Spending YoY (30)	4.93	4.38	5.12	5.85	5.24	8.88	8.34	11.18	9.05	7.75	5.78	4.30	-0.10	0.83	1.41	-0.17	-2.11	-4.40	-2.83	-3.80	-4.00	-4.85	-6.07	-
Residential Construction Spending YoY (29)	-7.78	-7.49	-4.63	-2.27	0.99	1.66	4.00	6.33	9.80	11.72	13.40	12.15	6.10	1.81	3.34	6.24	11.67	11.94	16.93	18.40	23.00	22.12	21.12	-
ISM Manufacturing PMI (23)	53.6	52.2	51.3	51.0	48.4	48.3	48.3	48.2	47.7	51.1	50.3	49.7	41.7	43.1	52.2	53.7	55.6	55.7	56.8	57.7	60.5	58.7	60.8	64.7
ISM Non-Manufacturing PMI (15)	55.6	56.2	55.0	54.2	55.8	52.9	54.6	53.9	55.6	55.9	56.7	53.6	41.6	45.4	56.5	56.6	57.2	57.2	56.2	56.8	57.7	58.7	55.3	63.7
NFIB Small Business Optimism Index (19)	103.5	105.0	103.3	104.7	103.1	101.8	102.4	104.7	102.7	104.3	104.5	96.4	90.9	94.4	100.6	98.8	100.2	104.0	104.0	101.4	95.9	95.0	95.8	-
Exports YoY (11)	-1.32	-1.01	-1.55	-0.07	-0.15	-1.87	-1.83	-0.42	1.22	-1.22	-1.30	-13.16	-28.92	-32.50	-24.76	-19.28	-17.62	-15.09	-13.68	-12.69	-10.10	-7.57	-	-
Imports YoY (16)	0.67	3.09	1.58	0.12	0.03	-2.87	-4.98	-3.63	-3.08	-2.78	-4.66	-11.34	-22.09	-24.28	-19.84	-11.29	-8.35	-6.30	-3.09	0.50	-0.03	3.22	-	-
Rail Traffic YoY (17)	-2.42	-5.54	-4.59	-5.53	-5.04	-6.38	-7.91	-7.71	-9.38	-6.22	-6.74	-10.09	-20.91	-20.61	-14.29	-8.19	-5.95	-1.44	1.71	2.45	4.92	4.76	-4.40	12.90
Headline CPI YoY (25)	2.00	1.79	1.65	1.81	1.75	1.71	1.76	2.05	2.29	2.49	2.33	1.54	0.33	0.12	0.65	0.99	1.31	1.37	1.18	1.17	1.36	1.40	1.68	-
PCE Deflator YoY (27)	1.62	1.49	1.46	1.53	1.52	1.39	1.43	1.44	1.64	1.88	1.84	1.34	0.48	0.54	0.92	1.01	1.24	1.35	1.20	1.12	1.23	1.41	1.55	-
Core PCE Deflator YoY (21)	1.69	1.60	1.71	1.74	1.87	1.72	1.74	1.58	1.62	1.75	1.87	1.65	0.93	1.01	1.14	1.26	1.43	1.53	1.40	1.34	1.41	1.48	1.41	-
M2 Money Supply YoY (20)	4.06	4.21	4.59	4.94	5.15	5.54	6.33	7.04	6.66	6.67	6.73	9.62	16.43	21.67	22.77	23.33	23.00	23.93	23.59	24.30	24.70	25.58	25.67	-

Data Source: Bloomberg, Intellectual Property of Hedgeye Risk Management. Nowcast feature rank shown in parenthesis.

Ipsso Facto, Our Bayesian Inference #Process Is Built Upon Stochastic Principles

United States																
GROWTH																
Base Effects	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21E	2Q21E
Real GDP YoY	2.08%	2.13%	1.92%	1.80%	1.98%	2.39%	2.57%	2.75%	2.74%	2.59%	2.67%	2.64%	2.60%	2.41%	1.29%	-3.53%
GIP Model Quad	2	2	2	2	4	4	4	3	1	2	3	4	2	2	2	4
INFLATION																
Base Effects	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21E	2Q21E
Headline CPI YoY	0.61%	1.13%	1.81%	1.48%	1.54%	1.96%	2.38%	2.31%	2.30%	2.16%	1.93%	2.26%	2.20%	2.12%	1.88%	1.09%
GIP Model Quad	2	2	2	2	4	4	4	3	1	2	3	4	2	2	2	4
Unconditional Probability Of Forecasted Delta																
Conditional Probability Of Forecasted Delta	85%	80%	80%	80%	85%	80%	80%	80%	85%	70%	70%	70%	70%	70%	70%	70%
Conditional Probability Of Quad 1	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Conditional Probability Of Quad 2	2.4%	2.4%	2.3%	16.2%	2.4%	2.4%	2.3%	16.2%	2.4%	2.4%	2.3%	16.2%	2.4%	2.4%	2.3%	16.2%
Conditional Probability Of Quad 3	95.1%	95.1%	0.2%	8.5%	95.1%	95.1%	0.2%	8.5%	95.1%	95.1%	0.2%	8.5%	95.1%	95.1%	0.2%	8.5%
Conditional Probability Of Quad 4	2.4%	2.4%	7.4%	26.1%	2.4%	2.4%	7.4%	26.1%	2.4%	2.4%	7.4%	26.1%	2.4%	2.4%	7.4%	26.1%
Conditional Probability Of Quad 4	0.1%	0.1%	90.1%	49.2%	0.1%	0.1%	90.1%	49.2%	0.1%	0.1%	90.1%	49.2%	0.1%	0.1%	90.1%	49.2%



Data Source: Bloomberg. Light Blue box = Hedgeye Nowcast Model estimate. Dark Blue boxes = Hedgeye Comparative Base Effects Model estimates.

The Quads Are Global

G20 GIP Model Summary

3/28/2021	Hedgeye Macro GIP Model Signals													GROWTH							Strength Of Signal				INFLATION							Strength Of Signal			
	Actuals									Estimates				Real GDP YoY						NTM Δ	Conditional Probability Of Est. Δ				Headline CPI YoY						NTM Δ	Conditional Probability Of Est. Δ			
	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21E	2Q21E	3Q21E	4Q21E	COUNTRY	4Q20	1Q21E	2Q21E	3Q21E	4Q21E	4Q21E Less 1Q21E	1Q21E	2Q21E	3Q21E	4Q21E	COUNTRY	4Q20	1Q21E	2Q21E	3Q21E	4Q21E	4Q21E Less 1Q21E	1Q21E	2Q21E	3Q21E	4Q21E
Argentina	3	2	2	4	1	4	4	1	1	2	2	4	3	Argentina	-4.30	-0.20	22.55	9.70	6.45	665bps	98	98	98	98	Argentina	36.37	58.94	60.89	60.48	61.50	256bps	98	68	54	59
Australia	4	4	4	1	1	3	4	2	2	2	2	4	3	Australia	-1.12	-1.12	8.85	4.42	3.01	413bps	50	98	98	98	Australia	1.36	1.96	2.46	2.13	2.20	23bps	98	98	98	64
Brazil	4	4	2	4	2	3	4	2	2	3	2	3	4	Brazil	-1.14	-4.65	11.51	2.59	1.06	571bps	98	98	98	91	Brazil	4.25	5.96	6.27	6.59	5.69	-27bps	98	71	72	98
Canada	4	4	2	4	3	4	4	2	2	2	2	4	4	Canada	-3.23	-2.61	16.34	6.29	5.33	794bps	71	98	98	83	Canada	0.78	1.49	1.93	1.91	1.58	8bps	98	98	52	90
China	4	4	2	3	2	3	1	1	1	2	3	3	3	China	5.76	17.60	11.63	11.53	10.54	-706bps	98	98	53	75	China	0.07	0.77	3.17	3.29	3.71	295bps	92	98	57	75
Eurozone	4	1	4	1	3	3	4	1	4	3	2	3	2	Eurozone	-4.90	-5.08	15.72	2.47	3.02	810bps	58	98	98	74	Eurozone	-0.30	0.92	1.70	2.07	2.17	125bps	98	98	90	61
France	4	1	1	4	3	3	4	2	4	2	2	3	2	France	-4.94	-3.11	21.35	4.05	5.05	816bps	98	98	98	91	France	0.09	1.16	1.83	1.86	1.98	82bps	98	98	54	64
Germany	4	1	3	1	3	3	4	1	1	2	2	3	3	Germany	-2.70	1.77	12.17	2.72	2.62	85bps	98	98	98	53	Germany	-0.63	0.54	1.19	1.94	2.07	153bps	98	98	98	65
India	4	4	3	3	3	3	4	2	1	3	2	4	4	India	0.41	0.27	23.19	15.06	11.85	1158bps	52	98	98	98	India	6.38	9.02	10.21	9.85	8.93	-9bps	98	98	70	98
Indonesia	2	4	3	3	4	3	4	1	2	2	2	3	3	Indonesia	-2.19	-2.01	7.14	3.74	3.12	513bps	63	98	98	96	Indonesia	1.57	2.19	2.60	2.98	3.05	86bps	81	71	69	54
Italy	4	1	1	1	4	4	4	1	4	3	2	3	2	Italy	-6.62	-7.60	16.62	1.03	2.03	962bps	83	98	98	83	Italy	-0.40	0.73	2.28	2.60	2.70	197bps	98	98	81	60
Japan	1	1	2	1	3	4	4	2	1	3	2	3	3	Japan	-1.40	-2.55	11.45	3.85	2.85	540bps	88	98	98	83	Japan	-0.83	-0.38	0.59	0.77	1.19	157bps	86	98	65	83
Mexico	4	1	3	1	4	3	4	2	1	3	2	4	3	Mexico	-4.31	-5.24	11.58	3.12	1.26	650bps	76	98	98	98	Mexico	3.52	5.67	6.54	6.43	6.80	113bps	98	98	60	83
Russia	2	3	1	1	1	4	3	2	3	2	1	3	3	Russia	-3.84	-3.15	9.30	6.77	3.75	690bps	70	98	98	98	Russia	4.43	6.52	6.25	6.37	6.37	-15bps	98	59	54	50
South Africa	4	4	2	4	4	2	4	2	2	3	2	4	3	South Africa	-4.10	-4.72	21.93	7.53	6.78	1150bps	69	98	98	73	South Africa	3.20	4.52	5.67	5.51	5.64	112bps	98	98	61	59
South Korea	2	4	2	4	2	3	4	2	4	2	2	4	3	South Korea	-1.20	-0.61	4.29	2.04	1.94	255bps	86	98	98	56	South Korea	0.40	1.25	1.57	1.50	1.52	27bps	98	86	58	52
Spain	1	4	4	4	3	3	4	1	4	3	2	3	2	Spain	-8.90	-9.18	21.52	4.17	4.37	1355bps	58	98	98	56	Spain	-0.77	1.48	1.83	2.14	2.16	68bps	98	85	82	52
Turkey	3	1	1	1	1	3	4	2	3	3	2	3	3	Turkey	5.87	5.70	22.66	7.99	5.54	-17bps	53	98	98	95	Turkey	13.51	18.48	18.67	20.78	21.57	309bps	98	56	98	73
United Kingdom	4	1	3	4	4	3	4	1	1	2	2	3	3	United Kingdom	-7.80	-6.29	21.21	5.11	4.76	1105bps	96	98	98	61	United Kingdom	0.53	2.34	3.21	3.34	3.56	122bps	98	98	64	73
United States	4	4	3	1	2	3	4	2	2	2	2	4	4	United States	-2.39	-0.33	11.50	5.35	4.99	532bps	98	98	98	75	United States	1.24	1.87	3.06	2.66	2.51	65bps	98	98	92	65
MODE/MEDIAN	4	4	2	1	3	3	4	2	1	2	2	3	3	MODE/MEDIAN	-2.96	-2.58	13.94	4.29	4.06	664bps	79	98	98	83	MODE/MEDIAN	1.01	1.91	2.83	2.82	2.87	96bps	98	98	67	65

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

LIGHT BLUE header = Hedgeye Nowcast Model estimates. BLUE header = Hedgeye Comparative Base Effects Model estimates. GREEN/RED shading in GDP and CPI projections denotes sequential acceleration/deceleration.

Conditional probability inversely proportional to the prior base rate's percentile score within a 95% confidence interval band around the projected GROWTH or INFLATION rate in a given quarter.

The Quads Are Global

HEDGEYE

Emerging Market GIP Model Summary

3/28/2021	Hedgeye Macro GIP Model Signals													GROWTH							Strength Of Signal				INFLATION							Strength Of Signal			
	Actuals									Estimates				Real GDP YoY						NTM Δ	Conditional Probability Of Est. Δ				Headline CPI YoY						NTM Δ	Conditional Probability Of Est. Δ			
	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21E	2Q21E	3Q21E	4Q21E	COUNTRY	4Q20	1Q21E	2Q21E	3Q21E	4Q21E	4Q21E Less 1Q21E	1Q21E	2Q21E	3Q21E	4Q21E	COUNTRY	4Q20	1Q21E	2Q21E	3Q21E	4Q21E	4Q21E Less 1Q21E	1Q21E	2Q21E	3Q21E	4Q21E
Argentina	3	2	2	4	1	4	4	1	1	2	2	4	3	Argentina	-4.30	-0.20	22.55	9.70	6.45	665bps	98	98	98	98	Argentina	36.37	58.94	60.89	60.48	61.50	256bps	98	68	54	59
Brazil	4	4	2	4	2	3	4	2	2	3	2	3	4	Brazil	-1.14	-4.65	11.51	2.59	1.06	571bps	98	98	98	91	Brazil	4.25	5.96	6.27	6.59	5.69	-27bps	98	71	72	98
Chile	1	4	2	1	3	2	4	1	2	3	2	3	4	Chile	0.00	-1.73	19.30	8.71	6.88	862bps	98	98	98	98	Chile	2.88	3.50	5.05	5.26	4.97	147bps	98	98	67	73
China	4	4	2	3	2	3	1	1	1	2	3	3	3	China	5.76	17.60	11.63	11.53	10.54	-706bps	98	98	53	75	China	0.07	0.77	3.17	3.29	3.71	295bps	92	98	57	75
Colombia	2	1	2	3	2	4	4	4	1	3	2	3	3	Colombia	-6.80	-7.28	4.47	0.72	0.07	735bps	74	98	98	82	Colombia	1.62	2.99	3.73	3.95	4.09	110bps	98	97	64	59
Czech Republic	1	3	3	2	3	3	4	2	1	3	2	4	2	Czech Republic	-4.70	-5.76	10.04	1.29	1.74	750bps	84	98	98	65	Czech Republic	2.63	4.10	4.89	4.79	5.04	93bps	98	98	58	69
Greece	3	4	1	1	3	3	4	1	2	2	2	3	4	Greece	-5.90	-3.80	18.45	6.50	6.00	980bps	97	98	98	61	Greece	-2.17	-1.37	-0.60	0.13	0.00	137bps	98	98	98	59
Hong Kong	3	4	3	3	4	4	1	1	2	2	2	4	4	Hong Kong	-3.00	-2.90	6.20	0.60	0.40	330bps	53	98	98	55	Hong Kong	-0.37	0.71	1.69	1.52	0.31	-40bps	98	98	58	98
India	4	4	3	3	3	3	4	2	1	3	2	4	4	India	0.41	0.27	23.19	15.06	11.85	1158bps	52	98	98	98	India	6.38	9.02	10.21	9.85	8.93	-9bps	98	98	70	98
Indonesia	2	4	3	3	4	3	4	1	2	2	2	3	3	Indonesia	-2.19	-2.01	7.14	3.74	3.12	513bps	63	98	98	96	Indonesia	1.57	2.19	2.60	2.98	3.05	86bps	81	71	69	54
Israel	4	2	4	1	1	4	4	2	3	3	2	3	3	Israel	-1.31	-1.77	10.55	2.97	0.37	214bps	67	98	98	98	Israel	-0.69	0.43	0.74	0.91	0.93	50bps	98	82	67	52
Malaysia	1	4	2	3	4	4	4	2	4	3	2	4	2	Malaysia	-3.40	-3.70	22.05	6.50	7.30	1100bps	57	98	98	68	Malaysia	-1.53	0.32	0.90	-0.04	0.21	-12bps	98	81	98	64
Mexico	4	1	3	1	4	3	4	2	1	3	2	4	3	Mexico	-4.31	-5.24	11.58	3.12	1.26	650bps	76	98	98	98	Mexico	3.52	5.67	6.54	6.43	6.80	113bps	98	98	60	83
Peru	2	3	3	1	4	4	4	2	2	3	2	3	4	Peru	-1.77	-2.04	15.90	4.32	1.45	350bps	55	98	98	98	Peru	1.94	3.29	4.09	4.31	4.29	100bps	98	98	68	51
Philippines	1	4	4	1	1	3	4	2	2	3	2	3	4	Philippines	-8.30	-9.60	5.65	2.45	0.70	1030bps	89	98	98	98	Philippines	3.10	4.86	6.23	6.78	6.53	167bps	98	98	89	67
Poland	4	1	3	3	3	3	4	1	4	3	2	4	2	Poland	-2.80	-3.54	9.71	2.61	3.66	720bps	81	98	98	95	Poland	2.83	5.53	5.64	5.53	5.61	8bps	98	57	57	55
Russia	2	3	1	1	1	4	3	2	3	2	1	3	3	Russia	-3.84	-3.15	9.30	6.77	3.75	690bps	70	98	98	98	Russia	4.43	6.52	6.25	6.37	6.37	-15bps	98	59	54	50
Saudi Arabia	2	4	3	3	2	3	4	2	1	2	2	4	4	Saudi Arabia	-3.92	-3.74	6.85	2.61	2.19	594bps	56	98	98	63	Saudi Arabia	5.63	8.84	10.43	7.46	7.06	-178bps	98	98	98	69
South Africa	4	4	2	4	4	2	4	2	2	3	2	4	3	South Africa	-4.10	-4.72	21.93	7.53	6.78	1150bps	69	98	98	73	South Africa	3.20	4.52	5.67	5.51	5.64	112bps	98	98	61	59
South Korea	2	4	2	4	2	3	4	2	4	2	2	4	3	South Korea	-1.20	-0.61	4.29	2.04	1.94	255bps	86	98	98	56	South Korea	0.40	1.25	1.57	1.50	1.52	27bps	98	86	58	52
Taiwan	4	4	2	1	2	4	4	2	2	2	2	4	4	Taiwan	5.09	6.08	6.67	4.48	3.89	-220bps	91	74	98	74	Taiwan	-0.04	0.95	1.00	0.95	0.59	-36bps	98	54	54	80
Thailand	1	4	3	1	4	3	4	2	2	3	2	4	4	Thailand	-4.20	-4.62	12.58	3.58	3.18	780bps	61	98	98	60	Thailand	-0.39	0.42	2.29	1.55	1.49	107bps	97	98	92	53
Turkey	3	1	1	1	1	3	4	2	3	3	2	3	3	Turkey	5.87	5.70	22.66	7.99	5.54	-17bps	53	98	98	95	Turkey	13.51	18.48	18.67	20.78	21.57	309bps	98	56	98	73
MODE/MEDIAN	4	4	2	1	4	3	4	2	2	3	2	4	3	MODE/MEDIAN	-3.00	-3.15	11.51	3.74	3.18	633bps	74	98	98	91	MODE/MEDIAN	2.63	3.50	4.89	4.79	4.97	147bps	98	98	67	64

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

LIGHT BLUE header = Hedgeye Nowcast Model estimates. BLUE header = Hedgeye Comparative Base Effects Model estimates. GREEN/RED shading in GDP and CPI projections denotes sequential acceleration/deceleration.

Conditional probability inversely proportional to the prior base rate's percentile score within a 95% confidence interval band around the projected GROWTH or INFLATION rate in a given quarter.

The Quads Are Global

Global Macro Risk Monitor

3/28/2021	GIP Model Signals												High-Frequency Economic Data Signals												3/28/2021	Structural Economic Risk Factors										Financial Market Valuation Signals					
	Actuals								Hedgeye Forecasts				Consumption		Manufacturing		Exports		Manufacturing PMI		Consumer Conf.		Business Conf.			Headline CPI		Core CPI		Hedgeye Global Macro Risk Monitor	Economic Cycle Risk				Global Capital Cycle Risk			Stock Market	Bond Market	Currency	
	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21E	2Q21E	3Q21E	4Q21E	6-12M Trend	Percentile of Latest Reading (T3Y)	6-12M Trend	Percentile of Latest Reading (T3Y)	6-12M Trend	Percentile of Latest Reading (T3Y)	6-12M Trend	Percentile of Latest Reading (T3Y)	6-12M Trend	Percentile of Latest Reading (T3Y)	6-12M Trend	Percentile of Latest Reading (T3Y)		6-12M Trend	Percentile of Latest Reading (T3Y)	6-12M Trend	Percentile of Latest Reading (T3Y)		Private Nonfinancial Sector Leverage (Z-Score; T5Y)	Private Nonfinancial Sector Debt Service Ratio (Z-Score; T5Y)	Headline Unemployment Rate	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	Twin Surplus (+)/Deficit (-) Balance as a % of Nominal GDP	MSCI Index Price-to-NTM-Earnings Ratio Spread vs. MSCI ACWI (Z-Score; T3Y)	10Y Sovereign Yield Spread vs. 10Y German Bund Yield (Z-Score; T3Y)	Broad Real Effective Exchange Rate (Z-Score; T3Y)	
Hedgeye Global Macro Risk Monitor																																									
Argentina	2	2	4	1	4	4	1	1	2	2	4	3	↑	29%	↑	97%	↑	80%	-	-	↓	43%	↑	100%	↓	34%	-	-	Argentina	0.1x	0.0x	11.0%	1.5%	-9.0%	1.7%	-	-0.2x	0.0x	-0.9x		
Australia	4	4	1	1	3	4	2	2	2	2	4	3	↗	94%	↓	55%	↗	32%	↑	97%	↑	97%	↑	97%	↓	46%	↓	0%	Australia	-0.4x	-3.2x	6.6%	1.3%	-7.8%	2.6%	-	-1.2x	0.9x	1.4x		
Austria	4	3	4	4	3	4	2	4	3	2	4	2	→	3%	↑	15%	-	-	↑	100%	↓	17%	↑	29%	→	29%	↓	14%	Austria	3.6x	0.0x	5.6%	-11%	-10.0%	3.4%	-	0.5x	-0.3x	1.5x		
Belgium	4	4	1	4	3	4	2	4	2	2	3	2	↑	88%	↑	74%	↑	9%	-	↑	77%	↑	46%	↑	17%	↓	3%	Belgium	1.0x	-0.9x	6.1%	-0.4%	-10.3%	-0.6%	-10.9%	1.0x	-0.6x	1.3x			
Brazil	4	2	4	2	3	4	2	2	3	2	3	4	↑	15%	↑	76%	↑	71%	↑	86%	↑	6%	↑	26%	↑	100%	↗	26%	Brazil	1.4x	-1.2x	13.9%	1.2%	-15.3%	-0.7%	-16.0%	-1.2x	0.3x	-1.5x		
Canada	4	2	4	3	4	4	2	2	2	2	4	4	↑	32%	↑	74%	↑	85%	↑	63%	↑	100%	↑	100%	↑	31%	→	9%	Canada	3.1x	0.5x	8.8%	0.4%	-15.0%	-1.9%	-16.9%	-2.2x	0.6x	1.1x		
Chile	4	2	1	3	2	4	1	2	3	2	3	4	↑	45%	↑	29%	↑	100%	-	-	↑	26%	↑	97%	↗	69%	↑	71%	Chile	2.9x	0.0x	10.9%	0.8%	-8.7%	1.3%	-	-1.3x	0.0x	-0.2x		
China	4	2	3	2	3	1	1	1	2	3	3	3	↑	100%	↑	74%	↑	100%	↑	49%	↑	53%	↑	85%	↓	6%	3%	China	2.9x	3.0x	5.2%	0.1%	-6.7%	1.8%	-	0.5x	0.8x	1.9x			
Colombia	1	2	3	2	4	4	4	1	3	2	3	3	↑	15%	↑	24%	↑	45%	↑	20%	↑	29%	-	-	↓	3%	↓	3%	Colombia	2.3x	0.0x	15.9%	1.0%	-8.9%	-3.4%	-12.3%	-1.0x	0.9x	-0.9x		
Czech Republic	3	3	2	3	3	4	2	1	3	2	4	2	↑	12%	↑	24%	↓	29%	↑	83%	↓	9%	↑	26%	↓	11%	↗	51%	Czech Republic	0.9x	1.3x	3.0%	0.2%	-7.4%	3.6%	-	-0.4x	2.3x	2.1x		
Denmark	2	4	1	3	4	4	2	1	2	2	4	4	↑	0%	↑	68%	↓	12%	↓	3%	↑	29%	↑	23%	↑	37%	↓	0%	Denmark	0.8x	-1.0x	6.0%	-10%	-4.1%	7.9%	-	-0.7x	2.3x	0.5x		
Emerging Markets	4	2	4	3	3	4	1	1	2	2	3	3	↑	100%	↑	49%	↑	100%	↑	83%	↑	-	↑	-	↓	9%	↗	14%	Emerging Markets	-	-	5.8%	-	-	1.3%	1.3%	-0.6x	-1.2x	0.2x		
Eurozone	1	4	1	3	3	4	1	4	3	2	3	2	↑	6%	↑	79%	↑	9%	↑	100%	↑	34%	↑	100%	→	34%	↓	60%	Eurozone	1.9x	1.7x	8.1%	-12%	-9.5%	2.3%	-	-0.6x	1.1x	0.8x		
Finland	1	2	1	4	3	4	2	1	2	2	4	3	↑	68%	↑	47%	↑	82%	-	-	↑	74%	↑	29%	↑	31%	→	66%	Finland	1.8x	0.9x	7.4%	-0.3%	-8.0%	0.8%	-	0.3x	-0.8x	0.9x		
France	1	1	4	3	3	4	2	4	2	2	3	2	↑	53%	↑	59%	↑	38%	↑	100%	↓	6%	↑	34%	→	23%	→	26%	France	3.0x	3.5x	7.7%	-0.3%	-11.1%	-2.3%	-13.4%	-0.5x	-1.1x	0.8x		
Germany	1	3	1	3	3	4	1	1	2	2	3	3	↑	0%	↑	38%	↑	18%	↑	100%	↑	15%	↑	57%	↓	80%	Germany	2.9x	2.7x	6.1%	-15%	-6.5%	7.1%	-	-2.0x	1.1x	1.0x				
Greece	4	1	1	3	3	4	1	2	2	2	3	4	↑	3%	↑	85%	↑	52%	↑	20%	↓	17%	↓	23%	↓	20%	↓	23%	Greece	-0.7x	0.0x	16.8%	-12%	-8.0%	-6.7%	-14.7%	-1.4x	-1.3x	-1.5x		
Hong Kong	4	3	3	4	4	1	1	2	2	2	4	4	↑	35%	↓	9%	↑	97%	↑	97%	-	-	-	↓	17%	-	-	Hong Kong	2.1x	1.9x	6.4%	-0.6%	-8.5%	6.6%	-	-0.4x	0.0x	-1.0x			
India	4	3	3	3	3	4	2	1	3	2	4	4	-	-	↑	26%	↑	49%	↑	94%	-	-	-	↓	63%	-	-	India	1.7x	-0.1x	-	2.1%	-4.1%	1.3%	-	2.5x	-1.0x	-0.3x			
Indonesia	4	3	3	4	3	4	1	2	2	2	3	3	-	-	↓	64%	↑	77%	↑	74%	-	-	-	↓	3%	-	-	Indonesia	-0.2x	-0.6x	7.1%	0.8%	-6.3%	-0.5%	-6.8%	-0.7x	-0.9x	-0.1x			
Ireland	1	2	1	3	4	4	1	4	3	2	3	1	↑	6%	↑	94%	↓	9%	↑	49%	↑	34%	-	-	↓	23%	↓	23%	Ireland	-1.4x	0.0x	6.8%	0.2%	-6.3%	4.6%	-	2.5x	-1.0x	0.1x		
Israel	2	4	1	1	4	4	2	3	3	2	3	3	↑	9%	↑	97%	↑	9%	-	-	↑	31%	↑	46%	↑	29%	↑	94%	Israel	0.5x	0.0x	4.7%	1.5%	-12.0%	5.0%	-	-0.3x	-0.3x	1.4x		
Italy	1	1	1	4	4	4	1	4	3	2	3	2	↑	15%	↑	32%	↑	15%	↑	100%	↗	20%	↑	63%	↗	69%	↑	97%	Italy	0.8x	-0.4x	9.0%	-19%	-11.5%	3.6%	-	-1.1x	-1.5x	0.6x		
Japan	1	2	1	3	4	4	2	1	3	2	3	3	↑	21%	↑	29%	↑	43%	↑	74%	↑	31%	↑	100%	↓	9%	↓	11%	Japan	3.3x	3.5x	3.0%	-0.9%	-12.7%	3.3%	-	2.2x	0.8x	-0.6x		
Malaysia	4	2	3	4	4	4	2	4	3	2	4	2	-	-	↑	29%	↑	74%	↑	23%	↑	0%	↗	0%	↑	37%	-	-	Malaysia	3.4x	2.7x	4.8%	0.0%	-6.3%	4.4%	-	-2.0x	0.2x	-0.9x		
Mexico	1	3	1	4	3	4	2	1	3	2	4	3	↑	15%	↑	18%	↑	31%	↑	29%	↑	56%	↑	31%	↑	43%	↗	86%	Mexico	2.9x	1.8x	4.3%	1.6%	-4.9%	2.3%	-	-1.7x	-0.7x	0.3x		
Netherlands	3	2	2	4	4	4	1	4	2	2	3	2	↓	0%	↑	32%	↑	15%	↑	86%	-	-	↑	26%	→	54%	→	74%	Netherlands	-1.1x	-1.3x	4.1%	-1.3%	-6.9%	8.8%	-	3.1x	-0.1x	1.1x		
New Zealand	4	3	1	3	3	4	1	4	3	2	3	1	↑	6%	↑	82%	↓	3%	↑	69%	↑	29%	↑	94%	↓	9%	↓	45%	New Zealand	2.4x	0.0x	4.9%	-0.3%	-8.5%	-1.6%	-10.1%	1.4x	0.7x	1.7x		
Norway	1	4	1	1	4	3	2	4	2	2	3	3	↑	76%	↑	88%	↑	80%	↑	83%	↓	17%	-	-	↑	83%	↑	60%	Norway	1.6x	1.9x	5.2%	0.2%	-2.2%	1.9%	-	-1.5x	1.3x	-0.1x		
Peru	3	3	1	4	4	4	2	2	3	2	3	4	-	-	↓	0%	↓	7%	-	-	-	-	-	↑	91%	-	-	Peru	0.0x	0.0x	15.1%	1.9%	-8.9%	0.5%	-	-0.6x	0.4x	-2.4x			
Philippines	4	4	1	1	3	4	2	2	3	2	3	4	-	-	↑	29%	↑	24%	↑	80%	-	-	↓	10%	↑	80%	↗	100%	Philippines	0.0x	0.0x	8.7%	1.7%	-8.6%	3.5%	-	-0.8x	0.0x	1.5x		
Poland	1	3	3	3	3	4	1	4	3	2	4	2	↑	14%	↑	37%	↑	18%	↑	91%	↓	23%	↑	29%	↓	40%	→	74%	Poland	-1.0x	-1.5x	3.2%	1.2%	-9.5%	2.5%	-	-0.8x	-1.2x	0.0x		
Portugal	1	4	4	2	3	4	1	4	3	2	3	1	↑	6%	↑	18%	↑	12%	-	-	↓	11%	↑	9%	↗	46%	↑	51%	Portugal	-0.7x	-0.8x	7.1%	-12%	-8.0%	-1.2%	-9.2%	-0.5x	-1.4x	-0.5x		
Russia	3	1	1	1	4	3	2	3	2	1	3	3	↑	23%	↑	20%	↑	26%	↑	89%	↗	7%	↑	100%	↑	100%	↑	100%	Russia	2.1x	-0.8x	6.1%	1.5%	-4.4%	2.7%	-	-2.0x	0.0x	-1.7x		
Singapore	2	3	4	2	4	4	2	2	2	2	3	4	↑	24%	↑	86%	↓	57%	-	-	↓	100%	↑	77%	-	-	-	Singapore	3.2x	0.0x	3.3%	-0.5%	-14.0%	17.6%	-	0.1x	-0.1x	-1.6x			
Saudi Arabia	4	3	3	2	3	4	2	1	2	2	4	4	-	-	-	-	-	-	↑	40%	-	-	-	↑	80%	-	-	Saudi Arabia	1.3x</												

[1] USA #Quad2

Aided by easy money from the Fed and generous fiscal support from Congress, the US economy is set to enter its third consecutive quarter of #Quad2 here in 1Q21E. While sequential momentum has waned in recent weeks due to covid restrictions, we don't believe GROWTH, INFLATION, and/or PROFITS can slow fast enough in JAN-FEB to offset the massive accelerations we're going to see in all three starting in MAR. In the presentation, we'll detail how investors should setup to take advantage of these trending **Positive RoC** realities.

[2] Global #Quad2

The "cheap money + fiscal support + easy comps = #Quad2" equation is not just a US phenomenon. Indeed, #Quad2 represents the modal outcome for the 96% of the ~50 countries and economic blocs we maintain GIP Models for in 1Q21E. That setup is explicitly bearish for the US dollar and bullish for assets priced in US dollars, globally. In the presentation, we'll detail which geographies offer investors the best risk/reward setups from here.

[3] Short Deflation/Duration

While the Fed has no plans to tighten monetary policy (at the margins) anytime soon, that doesn't mean #TheMachine has no plans to sell duration risk in the coming months. Indeed, Global #Quad2 means the long ends of the Bund, OAT, Gilt, JGB, etc. curves all backing up simultaneously and we don't think the Treasury curve will be immune to such selling pressure. In the presentation, we'll show the evolving POLICY mix – both domestically and globally – is likely to contribute to the ongoing breakout in INFLATION expectations we anticipated all the way back in early June.

[1] USA Still #Quad2

The U.S. is poised to enter its fourth consecutive #Quad2 quarter in Q2 with some of the easiest economic comparisons we've seen in our lifetimes. These base effect dynamics are aided by ongoing Fed-Fiscal support and promise a continuation of the historic reflationary environment that has already been on discrete display across cyclical, rate and inflation sensitive assets. We'll detail how much juice remains in Quad 2 exposures and how we'll risk manage the prospective inflection towards Quad 4. In addition, we'll look at vaccine roll-out in the U.S., which is easing the concern of increased Covid-19 restrictions on mobility.

[2] Macro Signals and Divergences

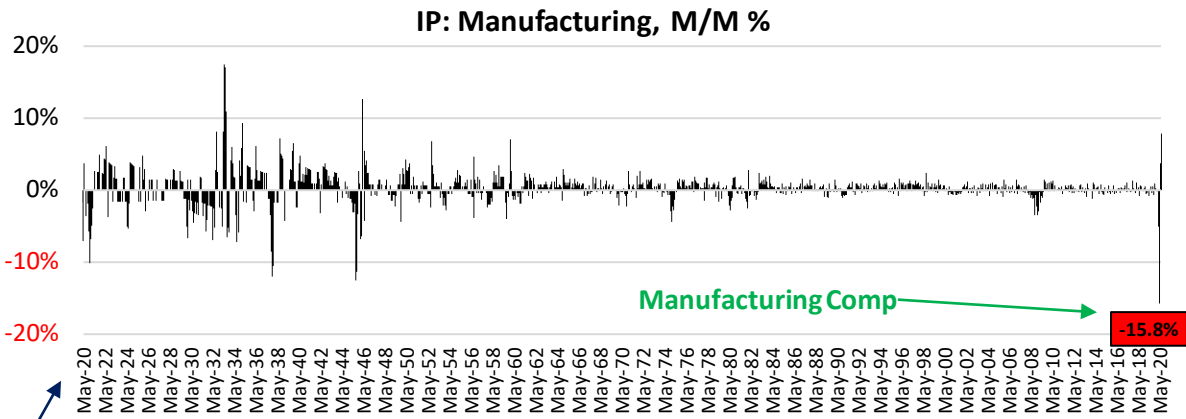
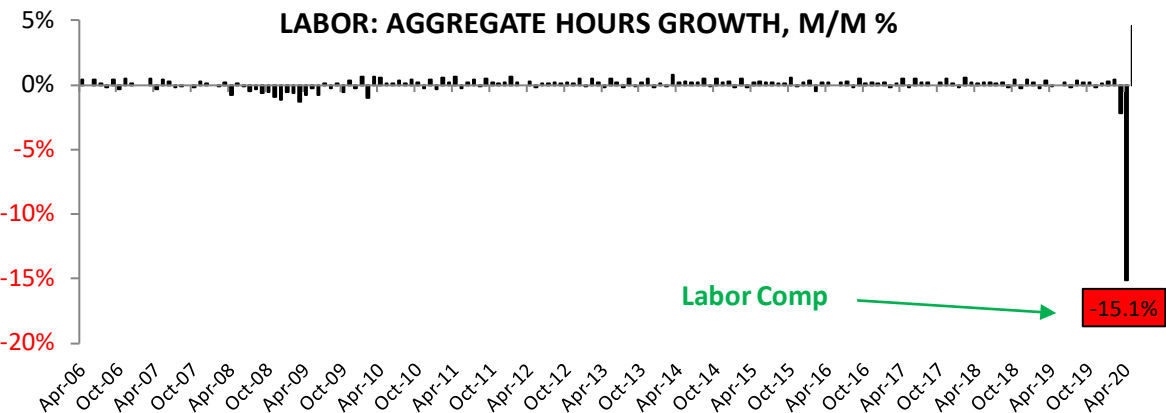
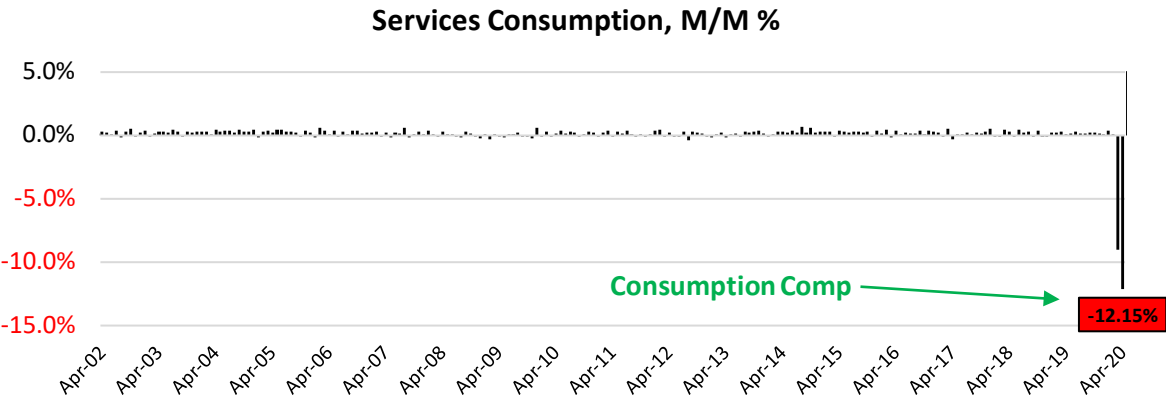
There has been a lot of price noise (Brownian Motion) in the markets in recent weeks, especially with rates breaking out and various #Quad2 exposures taking a breather. We will review what our Trade / Trend / Tail model is saying in aggregate from quantitative perspective as it relates to where we are in the cycle. Spoiler alert: not a lot of changes despite recent "noise".

[3] Rates & Housing ... Peak Cycle?

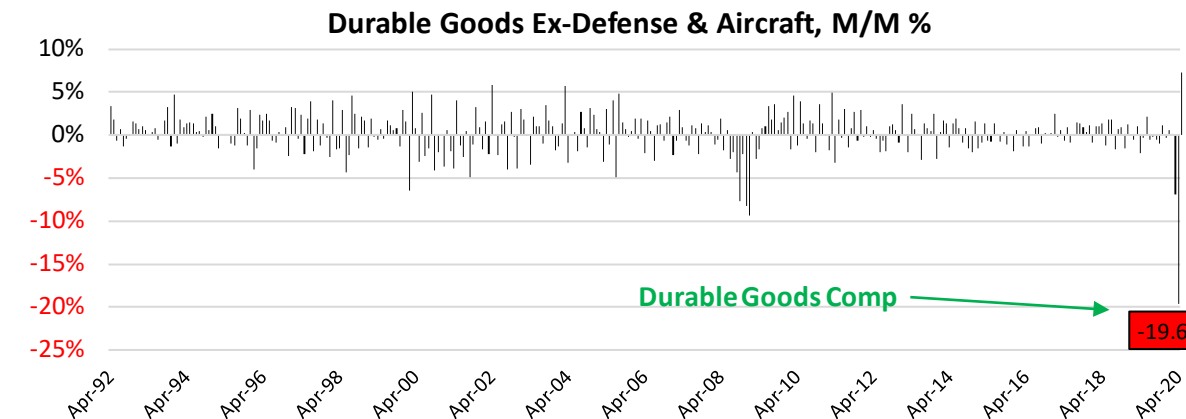
As they typically do, rates have been rising as the #Quad2 economic rate of change data accelerates. The question of course is: what will this ultimately mean for the cycle? In particular housing, which has been en fuego. Our colleague Josh Steiner will be on the call to discuss his 50 basis points rule of thumb on rates as it relates to housing, as well as his longer term views.

Quad 2 in 2Q: Don't Overthink It (yet)!

The slowest moving reflationary train in history is just now leaving the station, in reported data terms.

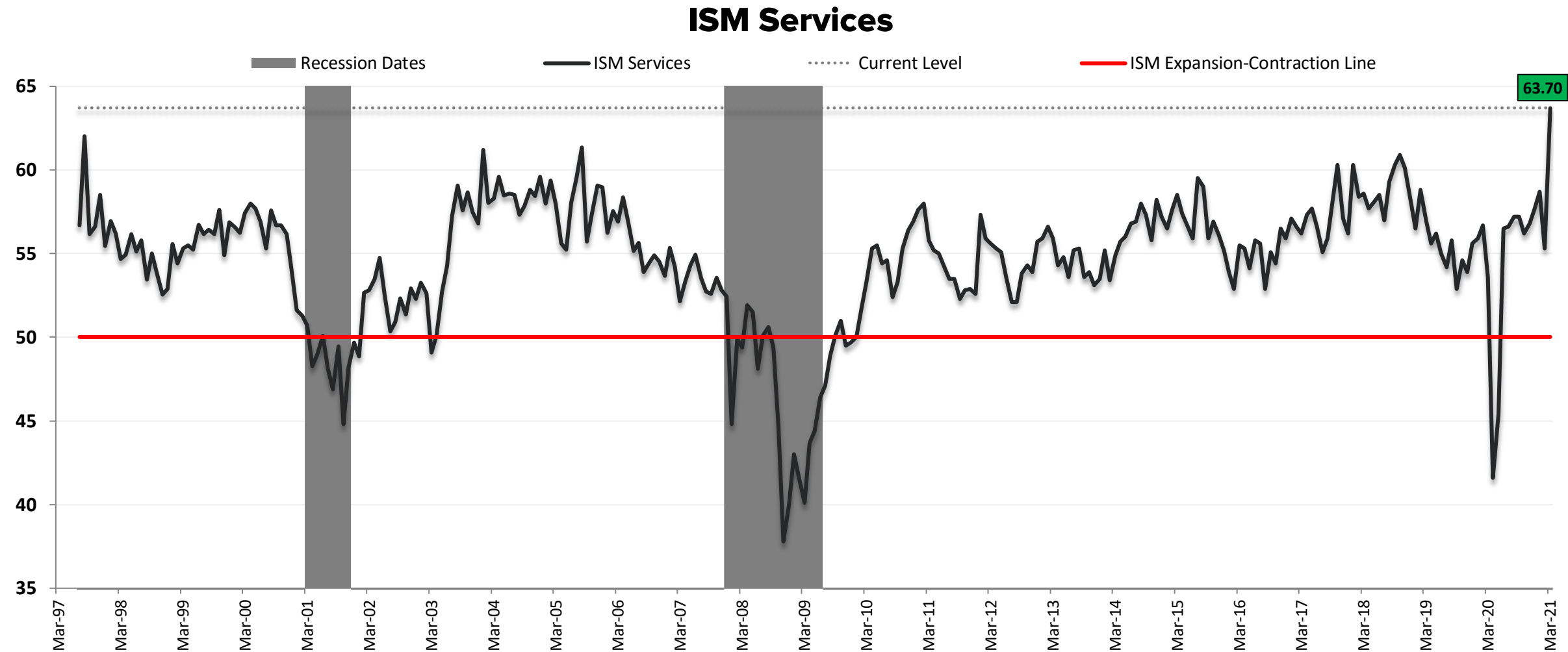


Note: This is 1920 ... 101 years ago!



In Fact, No Positive Y-Axis is Safe!

Inoculation and large-scale reopening have unleashed the sleeping Services giant. Expect the Services economy in 2Q to resemble the Goods economy (both activity and price dynamics) in 1Q with ongoing employment strength to service that demand.

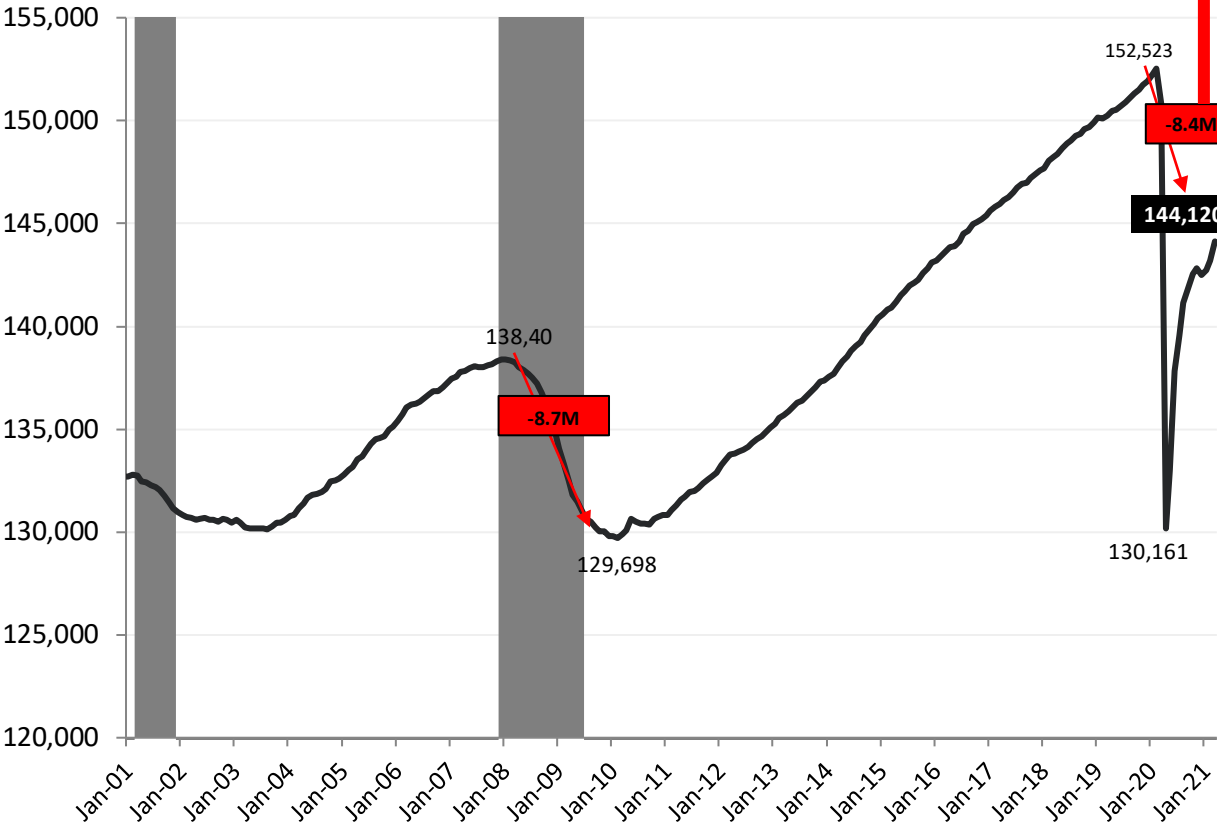


The Balance of Labor Risk Has Flipped

The 8.4M payroll deficit has flipped from structural risk to upside opportunity alongside vaccination and Services renormalization.

NONFARM EMPLOYMENT

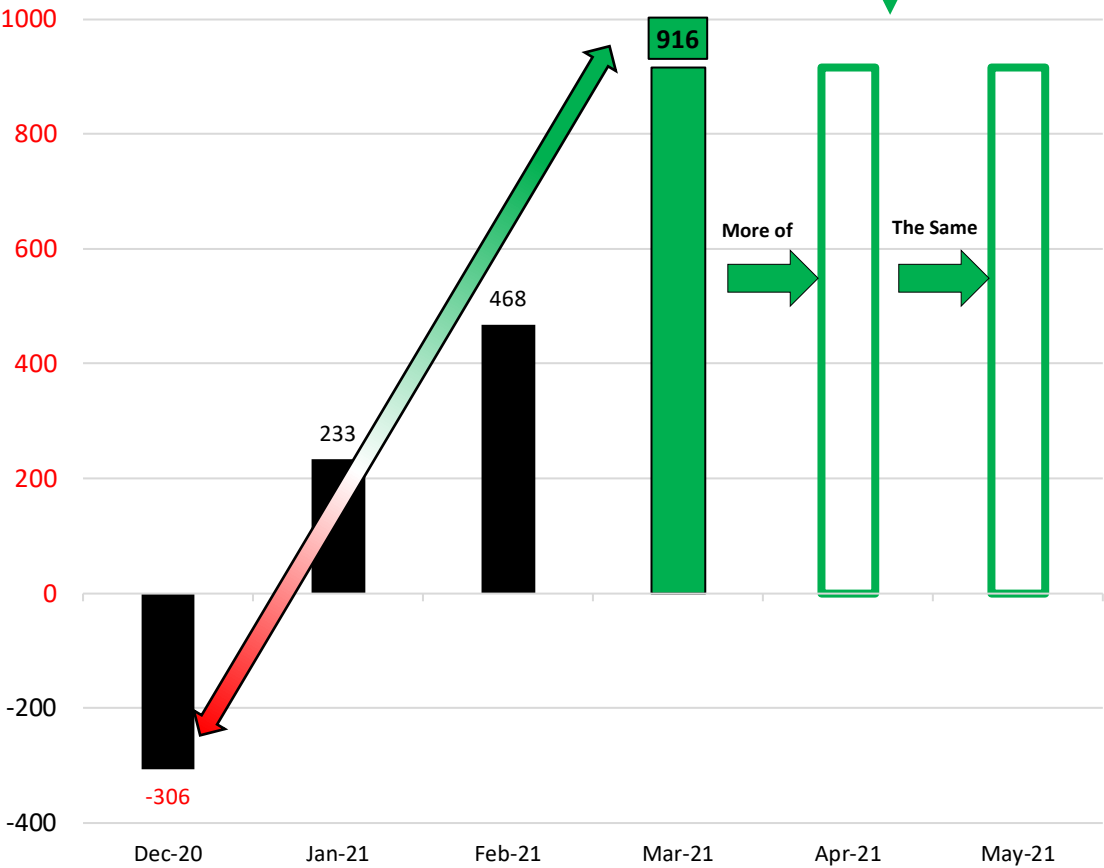
Recession Dates NFP Total



What was structural downside risk

Is Now Upside Opportunity

NFP T INDEX



FED-FISCAL = Moar + Brrr!

HEDGEYE

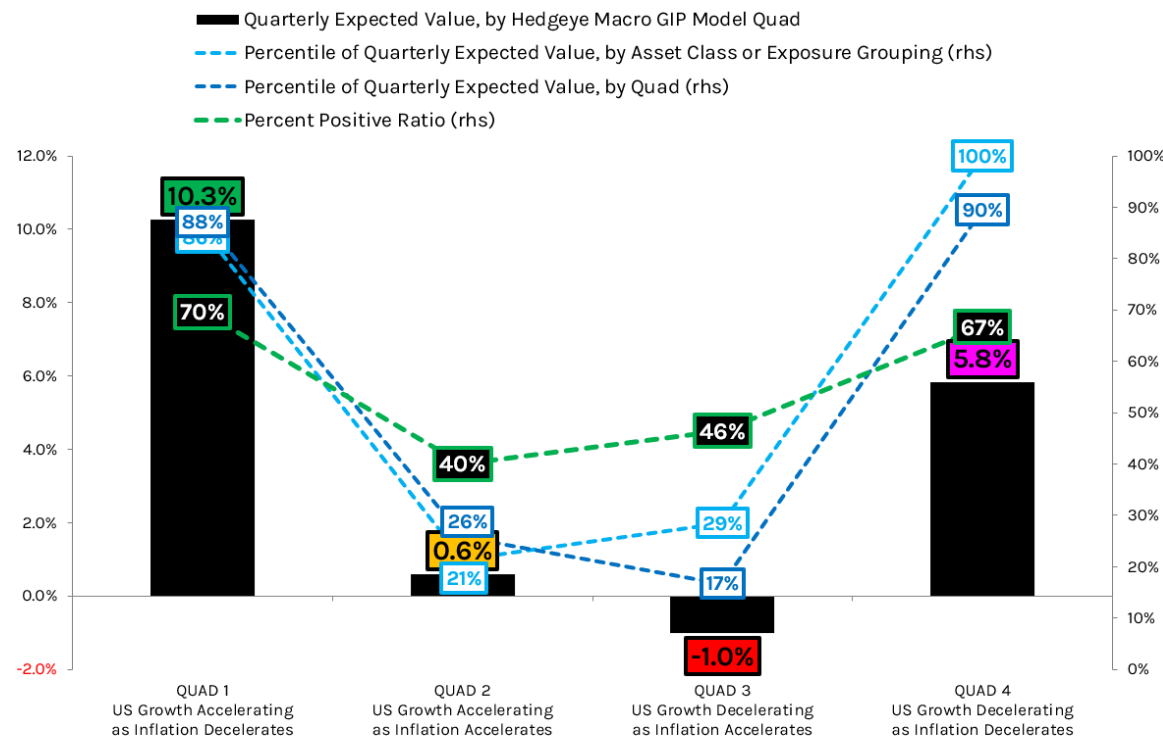
NEW QUARTER, SAME “INCLUSIVE” AGENDA & REFLATIONARY MISSION



- ** March Stimulus Checks Aren't In The Data Yet
- ** The “Checks” will continue, monthly, as households begin receiving direct and enhanced CTC (Child Tax Credit) payments beginning ~July.
- ** \$4T In Infrastructure in the Queue
- ** Student loan forgiveness and 1st-time homebuyer tax credits on the policy priority list

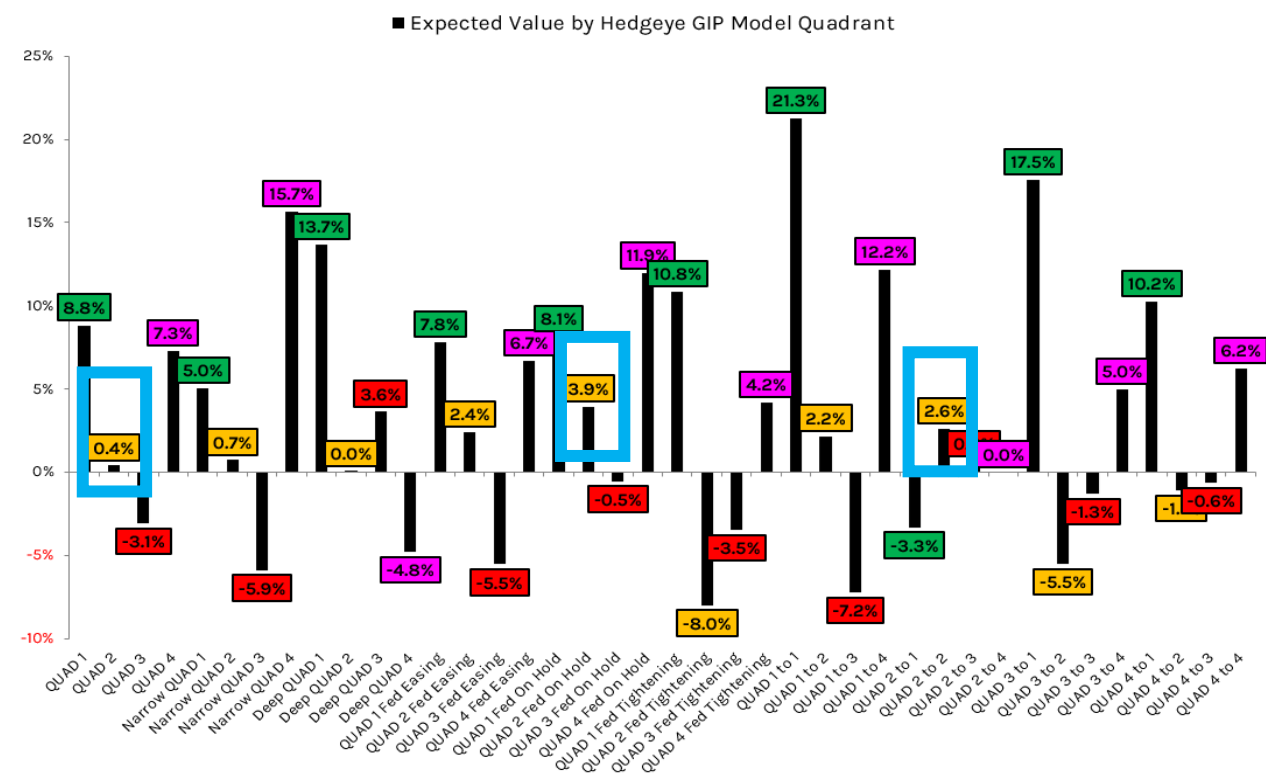
Housing | Quad 2 Performance

S&P 500 Homebuilding Sub Industry GICS Level 4 Index



Data Source: Bloomberg. Asset classes include equities, fixed income, currencies and commodities. Quarterly observations starting in 1Q98.

S&P 500 Homebuilding Sub Industry GICS Level 4 Index



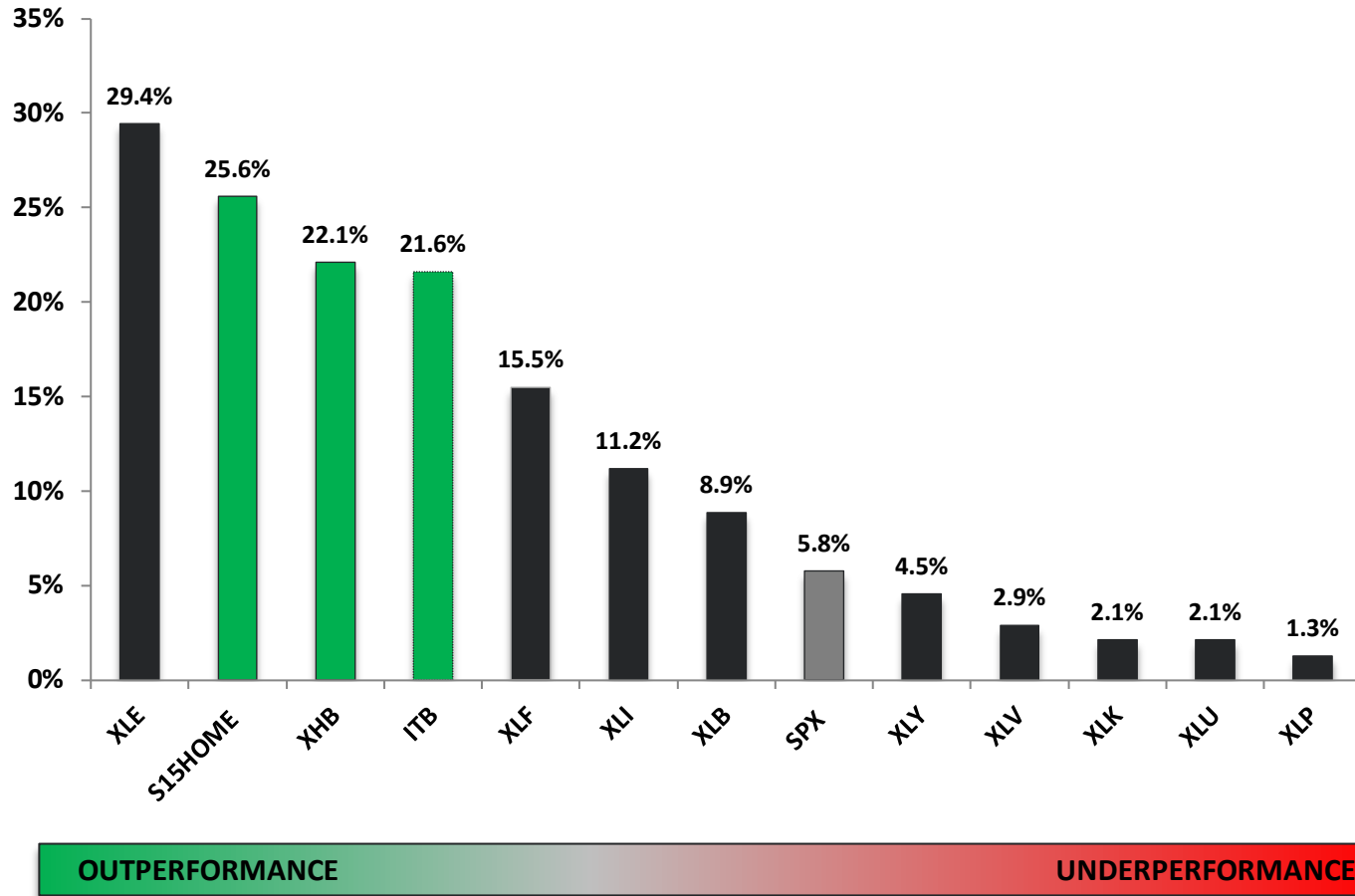
Data Source: Bloomberg. Asset classes include equities, fixed income, currencies and commodities. Quarterly observations starting in 1Q98.

Quad 2 (+0.6%) has historically been lackluster/unremarkable for Housing equities, but Quad 2 Fed on Hold (+3.9%) and Quad 2 to Quad 2 (+2.6%) transitions have been modestly supportive environments. Where Housing equities shine is in Quad 1 and Quad 4. Given the 2H21 Quad 4 backdrop, Housing weakness may set up well on the long side heading into 2H.

2021: A Strong Start

Housing equities have largely shrugged off the rise in rates so far in 2021, trailing only Energy in sector performance.

ABSOLUTE SECTOR PERFORMANCE: 1Q21



Seasonality in Housing Returns

\$15Home Index, Qtrly Performance

Year	1Q	2Q	3Q	4Q	Full Year
1999	-21.4%	6.2%	-24.2%	-0.8%	-37%
2000	-3.4%	-5.5%	37.1%	22.7%	54%
2001	5.5%	7.5%	-17.2%	45.5%	37%
2002	8.8%	10.2%	-21.1%	1.1%	-4%
2003	3.5%	38.1%	8.9%	26.6%	97%
2004	13.5%	-13.0%	13.8%	21.3%	36%
2005	4.3%	20.5%	-4.4%	-4.3%	15%
2006	-5.1%	-26.3%	0.8%	13.2%	-20%
2007	-19.2%	-9.3%	-34.8%	-6.9%	-56%
2008	15.6%	-29.4%	24.0%	-32.7%	-32%
2009	-4.3%	3.6%	24.7%	-4.5%	18%
2010	13.7%	-21.0%	8.4%	5.2%	2%
2011	-0.3%	-1.6%	-28.7%	34.4%	-6%
2012	24.3%	20.5%	15.7%	6.4%	84%
2013	13.4%	-9.6%	-5.2%	14.0%	11%
2014	-2.8%	5.4%	-12.3%	15.3%	4%
2015	11.6%	-2.9%	-3.4%	1.1%	6%
2016	-2.2%	1.6%	-1.7%	-2.5%	-5%
2017	20.4%	7.3%	9.2%	23.9%	75%
2018	-11.2%	-4.9%	-10.1%	-11.9%	-33%
2019	18.4%	8.7%	17.5%	0.5%	52%
2020	-37.7%	57.8%	33.7%	-5.8%	24%
2021	25.6%				
Ave	3.1%	2.9%	1.4%	7.4%	14.6%
Median	4.3%	2.6%	-0.5%	3.1%	8.3%
% Time (+)	59%	48%	55%	70%	70%
% Time (-)	41%	52%	45%	30%	30%

Housing Data – Hedgeye Housing Compendium

Fundamentally, the last few months have seen our Housing Compendium transition from effectively all green to mostly red. The exception remains prices – both fundamental home prices, which are lagging, and Sector ETF ITB/XHB prices, which continue to grind higher.

HEDGEYE HOUSING COMPENDIUM

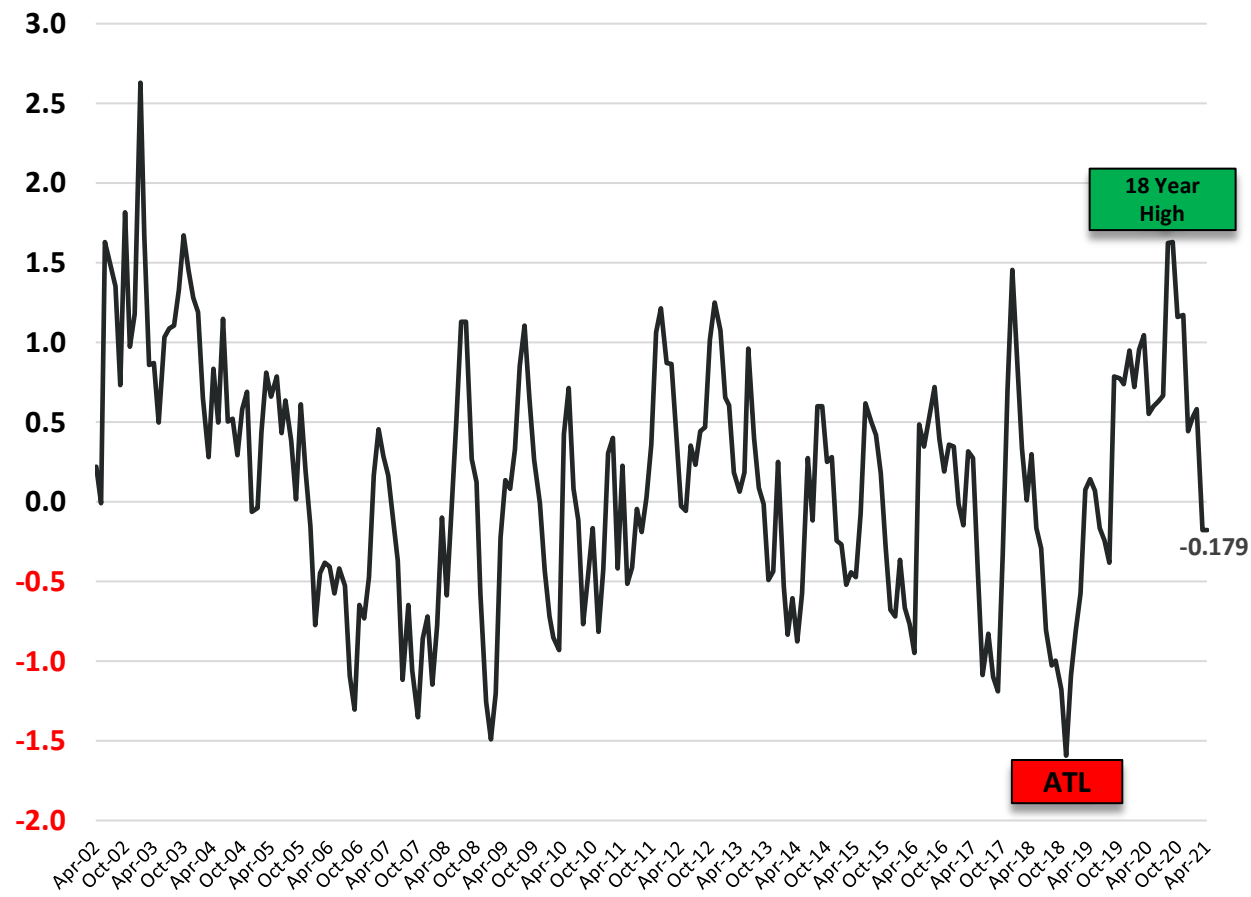
					TRADE/TREND/TAIL			Rate of Change		
					Most Recent Data			Short Term	Intmed Term	Long Term
					Period	Latest Data	Last Price	Prior Period	3M Ago	12M Ave
								MoM Chg	3M Chg	vs 12M Avg
Home Prices	Case-Shiller 20 City HPI YoY NSA	Jan-21	Better	11.1%	10.2%	8.1%	5.8%	1.0%	3.0%	5.3%
	Case-Shiller 20 City HPI MoM SA	Jan-21	Worse	1.2%	1.3%	1.6%	0.8%	-0.1%	-0.4%	0.4%
	Corelogic HPI - NSA YoY % Chg	Dec-20	Better	9.3%	8.3%	6.8%	5.7%	1.0%	2.5%	3.6%
	Corelogic (Ex-Dist.) HPI - NSA YoY % Chg	Dec-20	Better	8.7%	8.0%	6.5%	5.3%	0.8%	2.2%	3.4%
	FHFA HPI - NSA YoY % Chg	Jan-21	Better	11.9%	11.2%	10.1%	7.4%	0.7%	1.8%	4.5%
Supply & Demand: Existing	MBA Purchase Apps Index (Mo. Ave)	Mar-21	Better	295.6	288.2	323.1	293.7	2.6%	-8.5%	0.7%
	NAR: Pending Home Sales (Index)	Feb-21	Worse	110.3	122.8	125.8	113.5	-10.2%	-12.3%	-2.8%
	NAR: Existing Home Sales (SAAR)	Feb-21	Worse	6.22	6.66	6.59	5.80	-6.6%	-5.6%	7.3%
	NAR: Existing Home Inv. (millions units)	Feb-21	Worse	1.03	1.03	1.28	1.37	0.0%	-19.5%	-24.6%
	NAR: Existing Home Inv: Months Supply	Feb-21	Worse	1.99	1.86	2.33	2.95	7.1%	-14.7%	-32.6%
Supply & Demand: New Homes	NAHB: HMI	Mar-21	Worse	82	84	86	72	-2.0	-4.0	0.1
	Census: Total Starts	Feb-21	Worse	1421	1584	1553	1394	-10.3%	-8.5%	1.9%
	Census: SF Starts	Feb-21	Worse	1040	1136	1181	1014	-8.5%	-11.9%	2.6%
	Census: Total Permits	Feb-21	Worse	1682	1886	1635	1484	-10.8%	2.9%	13.4%
	Census: SF Permits	Feb-21	Worse	1143	1270	1137	1012	-10.0%	0.5%	12.9%
	Resi Construction Spending (in Billions)	Feb-21	Worse	727	729	680	633	-0.2%	7.0%	15.0%
	Census: New Home Sales	Feb-21	Worse	775	948	857	832	-18.2%	-9.6%	-6.9%
	Census: New Home Inventory (000)	Feb-21	Worse	310	302	290	302	2.6%	6.9%	2.6%
Miscellaneous	Interest Rates (30 Year FRM)	Mar-21	Worse	3.26%	3.06%	2.88%	3.17%	0.2%	0.4%	0.1%
	ITB Price (EOP)	Mar-21	Better	62.53	62.23	56.01	50.59	0.5%	11.6%	23.6%
	XHB Price (EOP)	Mar-21	Better	64.51	63.36	57.69	50.59	1.8%	11.8%	27.5%

Source: Hedgeye Risk Management, S&P, Corelogic, FHFA, MBA, NAR, NAHB, Census Dept., Factset, Bloomberg

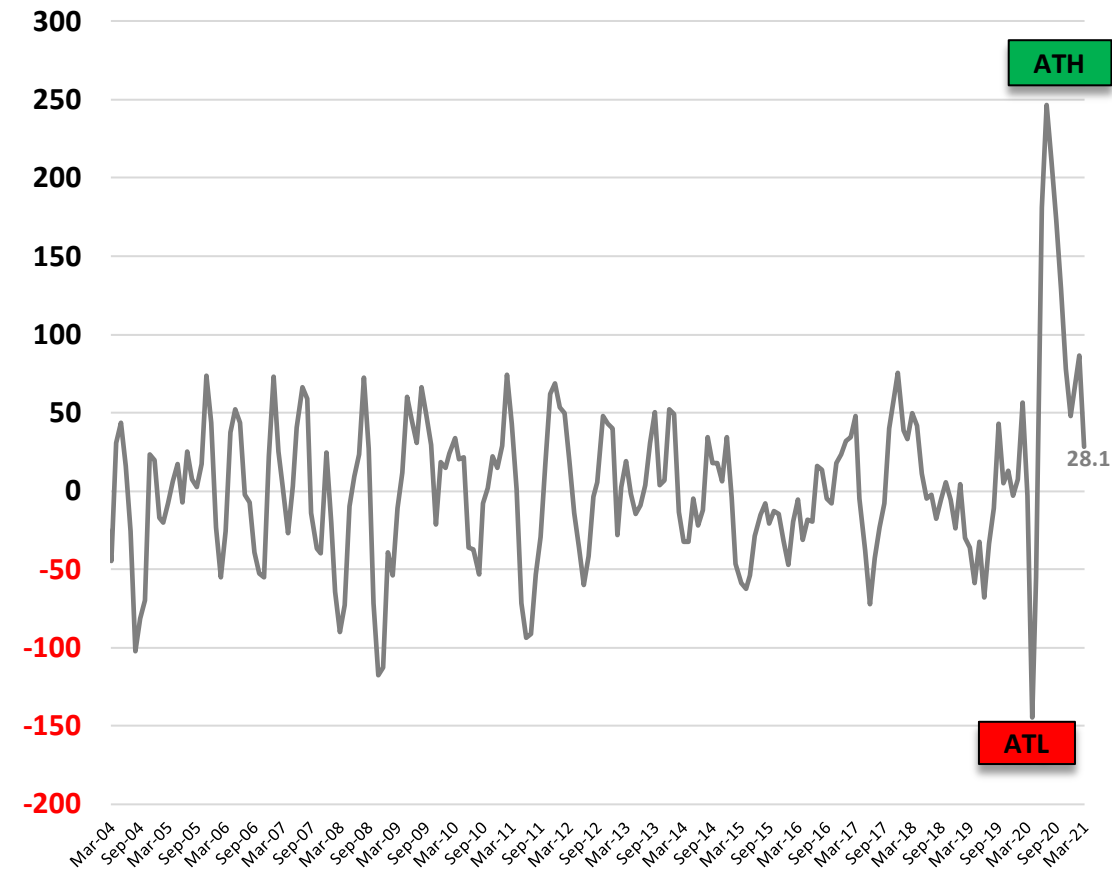
Housing & Macro Data vs Expectations

“worst ever” and “best ever” sequential prints have characterized the last year in the CESI while a similar evolution has defined the move in the HSI as the ATL In December 2018 progressively transitioned to a fresh 18Y high in September 2020. Each gauge has begun to moderate over the last two quarters alongside an ebbing in macro volatility. The HSI is currently just barely below zero suggesting conditions at present are not extreme in either direction.

Housing Surprise Index



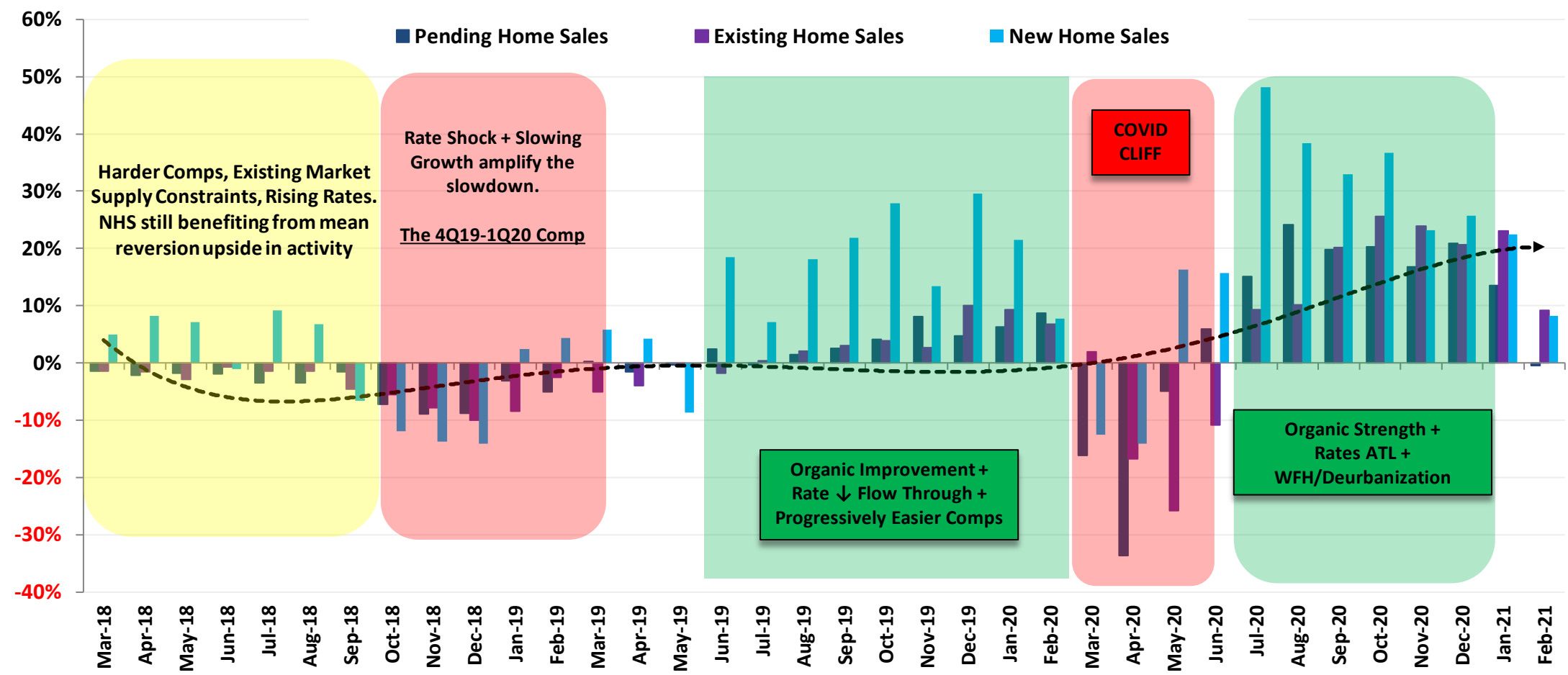
Citi Economic Surprise Index



Housing Data → Mapping the Evolution

Housing volume progressively accelerated from 1Q19 through early 2020 as housing demand indicators moved back to/near cycle highs before careening off the COVID cliff into 2Q20. We have fully re-scaled the cliff amidst a dramatic reacceleration through 3Q/4Q. YTD has seen a cooling in volume due to both rates rising and inventory limitations curbing activity. The RoC path will accelerate in the near-term as we comp the Covid Cliff but then decelerate over 2H21.

Rate of Change (Y/Y) In Housing Demand: New Home Sales, Existing Home Sales & Pending Home Sales (2016 - Present)



[1] Immediate-term TRADE (introduced at the start of this quarter)

LONGS: Materials (XLB), Energy E&P (XOP), Inflation Beneficiaries (INFL), Germany (EWG), Switzerland (EWL), Spain (EWP)

SHORTS: China (FXI), Brazil (EWZ), Short-term Treasuries (SHY), Extended Duration Treasuries (EDV)

[2] Intermediate-term TREND (introduced in prior quarters)

LONGS: Energy (XLE), Cannabis (MSOS), India (INDA), Australia (EWA), Curve Steepener (IVOL), Corn (CORN), Livestock (COW), Financials (XLF), Industrials (XLI), Russell 2000 (IWM), Canada (EWC), Russia (RSX), Saudi Arabia (KSA)

SHORTS: US Dollar (UUP), Gold (GLD), Long-term Treasuries (TLT), Utilities (XLU), Gold Miners (GDX)

[3] Long-term TAIL (introduced < 3yrs ago)

LONGS: New Cycle Not Old Enough

SHORTS: New Cycle Not Old Enough

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