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Maveric



Darius Dale Macro Voices Interview
Thursday, January 13, 2022

Prepared 1/10/22

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Key Takeaways 1-10-22

- **SHORT TERM (< 3wks):** REFLATION is the primary driver of dispersion within and across asset markets. This dynamic is consistent with several themes we have been discussing since early-December: 1) CACRI entering and exiting the Consensus Fear Zone; 2) our DISPERSION analysis signaling elevated risk of a #ConvergenceTrade; and 3) #Omicron crowding out more virulent variants and effectively ending the pandemic phase of the COVID-19 crisis.
- **MEDIUM TERM (1-2qtrs):** Our #math suggests INFLATION and DEFLATION are the most probable Bottom-Up Macro Regimes for the US and Global economies over the next 3-6mos. While we could see a transitory bounce in global economic activity as a positive response to #Omicron, that same #math assigns a relatively low probability to sustaining either GOLDDLOCKS or REFLATION over the medium term.
- **PORTFOLIO CONSTRUCTION:** We plan to tactically reduce our exposure to each regime not named “DEFLATION” over the next few months. The repeatable tools in our analytical toolkit that will help us time such exits include: CACRI entering and, more importantly, exiting the “Consensus Complacency Zone”; 2) the Conviction Score in associated with the nascent REFLATION regime breaching the upper quartile threshold – an indicator of crowded positioning; and 3) our DISPERSION analysis and/or our Four Horsemen of Market Risk inflecting in a manner that indicates the emergence of “risk off” market conditions.

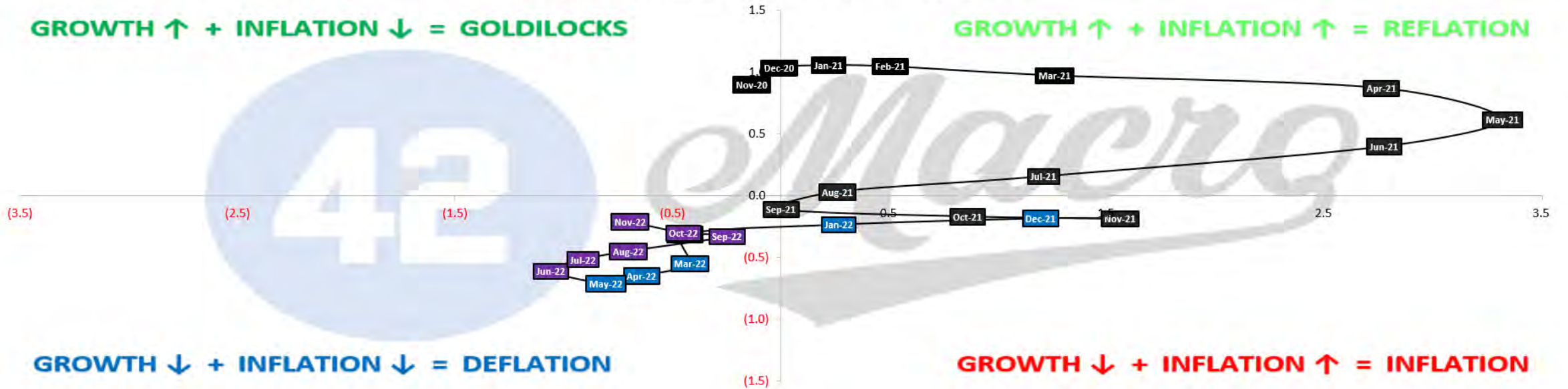
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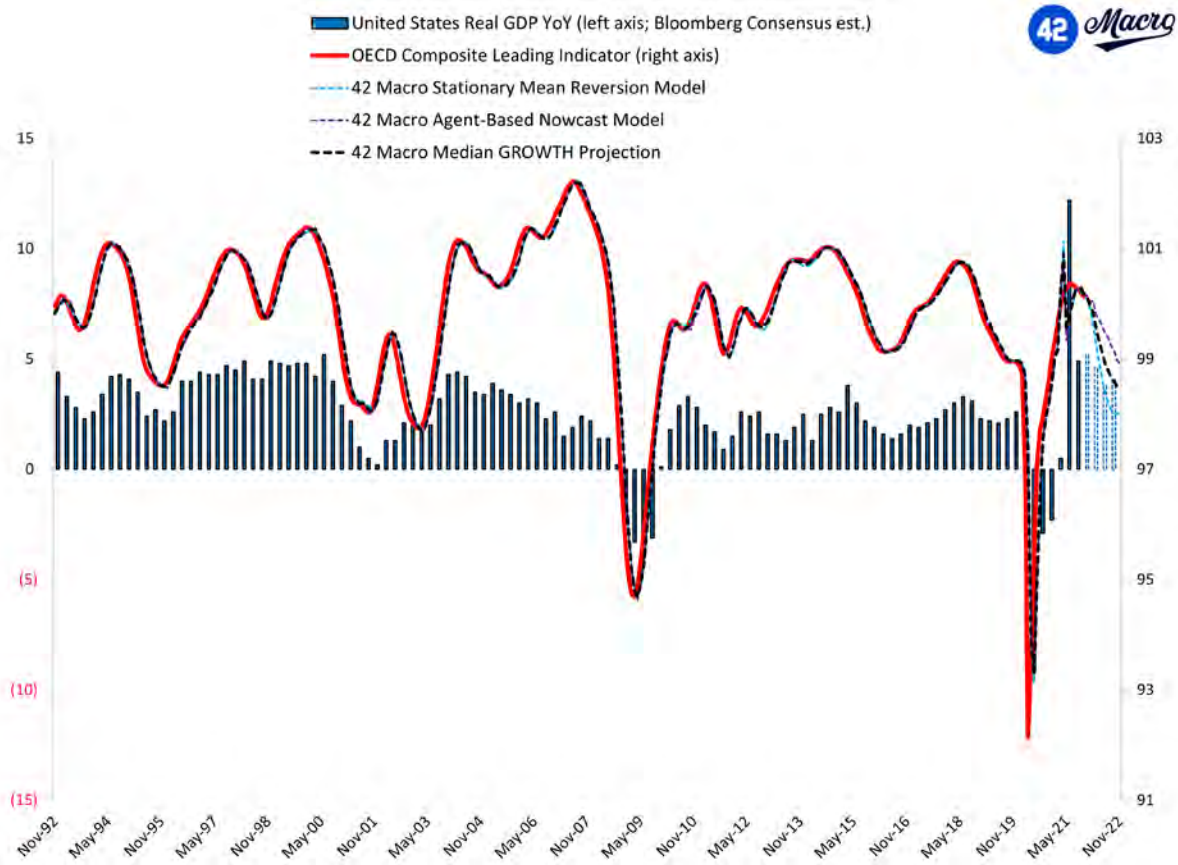
Introducing The 42 Macro GRID Framework, Which We Use To Measure And Map Bottom-Up MACRO Regime Cycles

United States		Actuals																Projections														
42 Macro GRID Framework		May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22
Macro Regime		D	D	R	R	R	R	G	G	R	R	R	R	R	R	R	R	D	D	D	D	D	D	D	D	D	D	D	D	D		
Conditional Probability of GOLDILOCKS		2%	2%	27%	4%	10%	32%	50%	51%	26%	20%	9%	2%	2%	2%	7%	22%	24%	14%	3%	1%	9%	16%	5%	5%	5%	6%	8%	9%	11%	16%	25%
Conditional Probability of REFLATION		0%	0%	70%	93%	88%	65%	41%	43%	69%	73%	88%	95%	59%	65%	60%	34%	15%	25%	32%	30%	18%	5%	2%	1%	0%	1%	1%	6%	5%	4%	
Conditional Probability of INFLATION		2%	4%	2%	2%	2%	2%	4%	3%	4%	6%	3%	2%	38%	33%	30%	27%	24%	39%	58%	65%	48%	19%	23%	14%	11%	5%	6%	12%	29%	18%	9%
Conditional Probability of DEFLATION		95%	93%	1%	0%	0%	1%	5%	4%	1%	2%	0%	0%	1%	1%	3%	18%	38%	22%	6%	3%	25%	60%	70%	80%	83%	89%	85%	78%	53%	60%	61%
OECD CLI (Real GDP YoY Proxy)		98.5	95.5	97.0	97.7	98.0	98.3	98.6	99.0	99.3	99.7	100.0	100.2	100.3	100.4	100.4	100.3	100.3	100.2	100.1	100.1	100.0	99.8	99.5	99.3	99.1	98.9	98.8	98.7	98.6	98.5	98.5
3mo Δ		-3.2	-1.4	4.5	4.2	2.5	1.2	0.9	1.0	1.1	1.0	1.0	0.9	0.6	0.4	0.2	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.5	-0.6	-0.7	-0.6	-0.5	-0.4	-0.3	-0.2	
Headline CPI YoY		0.1	0.6	1.0	1.3	1.4	1.2	1.2	1.4	1.4	1.7	2.6	4.2	5.0	5.4	5.4	5.3	5.4	6.2	6.8	6.6	6.5	6.4	6.2	5.8	5.6	5.1	4.9	4.9	4.9	4.5	4.2
3mo Δ		-2.2	-0.9	0.7	1.2	0.7	0.2	-0.1	0.0	0.2	0.5	1.3	2.8	3.3	2.8	1.2	0.3	0.0	0.9	1.6	1.2	0.3	-0.4	-0.4	-0.6	-0.8	-1.1	-0.9	-0.7	-0.2	-0.4	-0.7

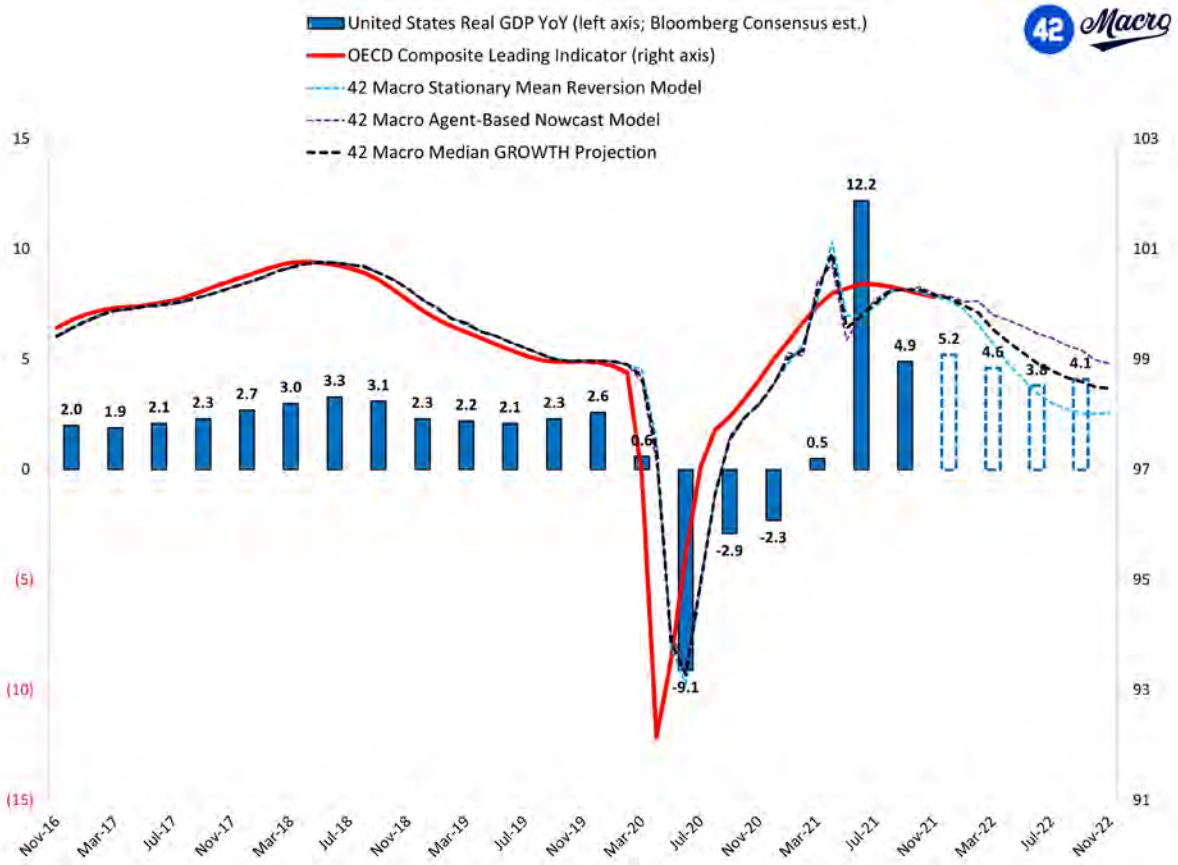
→ x-axis: 3mo Δ of Headline CPI YoY; y-axis: 3mo Δ of OECD CLI (Real GDP YoY Proxy)



US GROWTH: Secular View



US GROWTH: Cyclical View

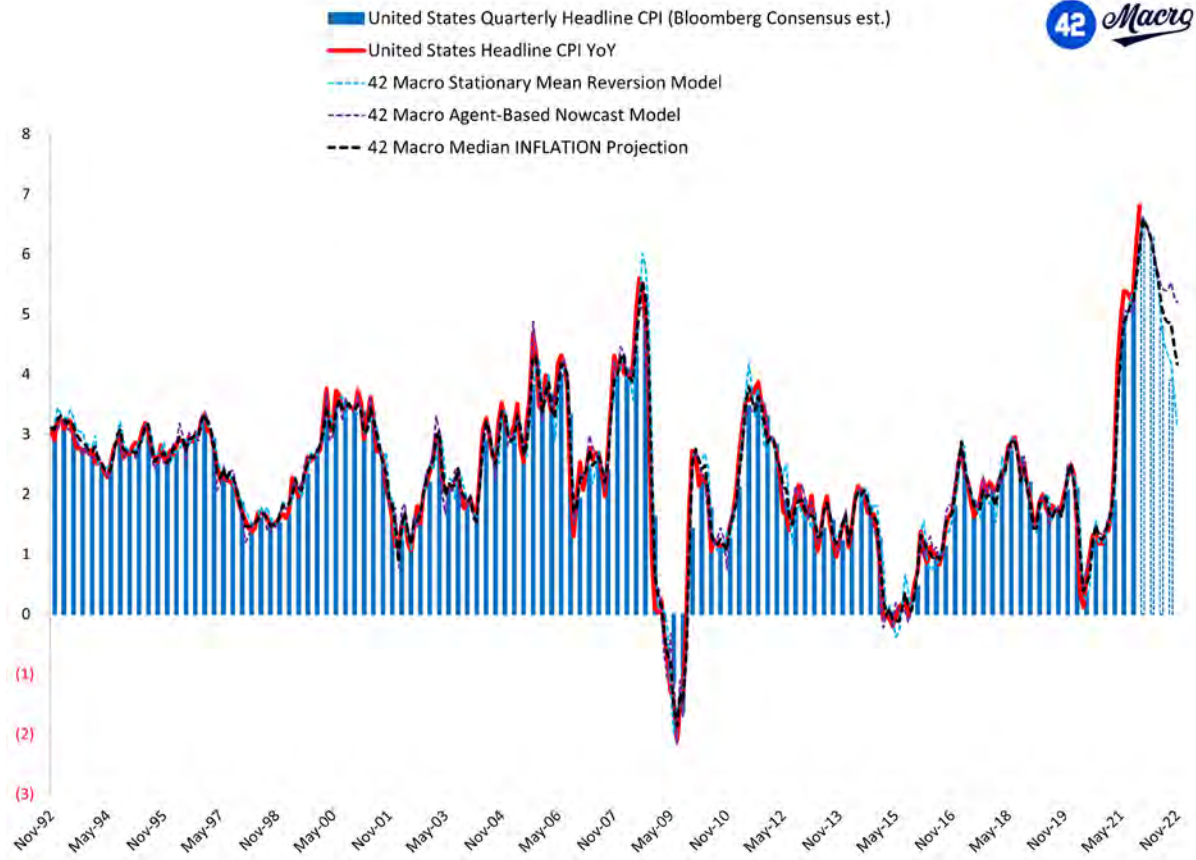


US GROWTH Agent-Based Nowcast Model

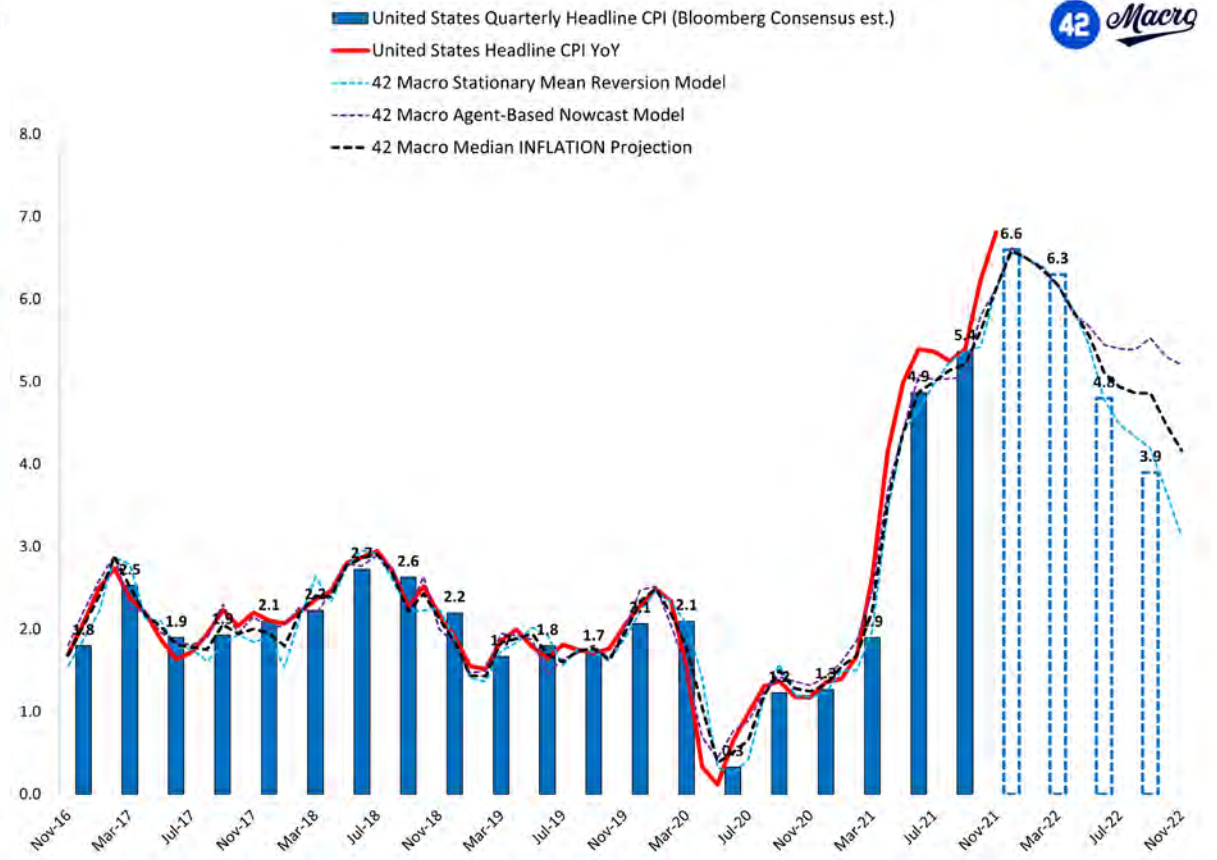
		42 Macro Agent-Based Nowcast GROWTH Model Features																														
United States		Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	
USA OECD Leading Indicators CLI Amplitude Adjusted SA		99.2	99.1	99.0	99.0	99.0	98.9	98.9	98.8	96.9	92.1	93.5	95.5	97.0	97.7	98.0	98.3	98.6	99.0	99.3	99.7	100.0	100.2	100.3	100.4	100.4	100.3	100.3	100.2	100.1		
US Industrial Production YOY SA (6%)		-0.9	-1.4	-1.4	-1.8	-2.4	-1.9	-2.2	-2.1	-1.4	-5.3	-17.7	-16.2	-11.0	-7.0	-6.6	-6.6	-4.8	-4.7	-3.3	-1.7	-4.9	1.8	17.9	16.4	10.2	6.7	5.4	4.7	5.3		
US Trade Balance of Exports YOY SA (4%)		-1.5	-0.2	-0.3	-1.9	-1.7	-0.3	1.0	-1.9	-2.5	-12.3	-28.6	-31.7	-24.6	-19.2	-17.2	-14.7	-13.0	-11.7	-9.1	-5.2	-7.0	9.3	38.3	43.4	32.6	24.3	22.3	16.1	22.5	21.1	
Retail Sales Less Food Services Auto Dealers & Building Mat& Gas Station SA YoY (4%)		4.5	4.4	4.7	4.1	3.8	2.4	6.0	3.9	4.4	6.3	-7.1	1.8	7.2	8.5	8.5	10.5	10.1	9.3	6.0	14.1	10.2	16.3	31.7	18.3	13.5	9.5	12.3	10.9	12.7	13.7	
ISM Manufacturing PMI SA (7%)		51.3	51.0	48.4	48.3	48.3	48.2	47.7	51.1	50.3	49.7	41.7	48.1	52.2	53.7	55.6	55.7	58.8	57.7	60.5	58.7	60.8	64.7	60.7	61.2	60.6	59.5	59.9	61.1	60.8	61.1	58.7
ISM Services PMI (8%)		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	62.7	64.0	60.1	64.1	61.7	61.9	66.7	69.1	62.0
USA Business Tendency Manufacturing Confidence Composite OECD Normalisd SA (4%)		-1.8	-2.0	-2.4	-2.5	-2.4	-2.2	-1.7	-1.4	-1.4	-1.7	-1.9	-1.4	-0.4	0.6	1.4	1.9	2.3	2.4	2.5	2.5	2.9	3.5	3.9	3.5	2.4	1.6	1.1	0.9	0.7	0.6	
USA Consumer Opinion Confidence Composite OECD Normalised SA (4%)		0.0	-0.2	-0.6	-0.6	-0.4	0.0	0.4	0.6	0.1	-1.2	-2.5	-3.1	-3.1	-2.8	-2.3	-2.0	-2.0	-2.3	-2.6	-2.6	-2.0	-0.5	0.9	1.4	1.2	0.7	-0.1	-0.8	-1.2	-1.5	
US Employees on Nonfarm Payrolls Total SA (6%)		1.2	1.3	1.2	1.3	1.3	1.4	1.3	1.4	1.6	0.4	-13.5	-11.7	-8.5	-7.5	-6.6	-6.3	-5.9	-5.9	-6.2	-6.2	-6.1	-4.5	10.9	9.0	5.8	5.3	4.5	4.2	4.2	4.2	4.5
US Employees on Nonfarm Payrolls Total Private SA (6%)		1.4	1.4	1.3	1.4	1.4	1.5	1.4	1.4	1.6	0.3	-15.3	-12.7	-9.1	-8.0	-7.3	-6.7	-6.1	-6.0	-6.3	-6.4	-6.1	-4.3	13.3	10.4	6.5	5.9	5.3	4.9	4.6	4.5	5.0
US Avg Weekly Hours Nonfarm Total Private Production and Nonsupervisory SA (0%)		-0.6	-0.6	-0.6	-0.3	-0.3	-0.6	-0.6	-0.6	0.3	-0.9	-0.6	1.5	0.9	1.2	1.2	1.5	1.8	2.1	2.1	2.4	0.9	3.0	2.4	0.6	0.6	0.6	0.3	0.3	-0.3	-0.3	0.0
Average Weekly Earnings Total (1%)		4.7	4.5	3.4	3.4	3.1	3.3	2.6	3.0	4.8	4.1	7.5	8.4	4.8	6.1	7.7	3.9	6.7	8.3	5.9	7.8	4.8	5.9	3.6	4.4	4.5	5.4	4.9	5.9	5.8	4.5	5.7
US Job Openings By Industry Total SA (2%)		-1.5	-1.0	-0.7	-3.4	0.6	-8.7	-9.5	-4.3	-0.7	-21.3	-36.2	-25.2	-14.7	-5.9	-9.8	-6.9	-6.4	-2.2	0.3	-0.8	7.3	43.7	98.6	74.1	66.6	65.2	64.8	60.4	61.4	56.1	
Bureau of Labor Statistics Employment Diffusion Nonfarm Payrolls +1 Month SA (3%)		58.6	55.3	54.7	58.0	55.3	67.1	55.3	58.2	55.1	12.5	4.5	63.2	76.1	61.9	69.1	70.6	70.4	64.4	61.7	50.4	61.7	73.0	60.9	64.0	69.8	70.0	71.2	65.0	71.6	69.6	59.5
US Personal Consumption Expenditures Chained 2012 Dollars SA (5%)		2.2	2.2	2.2	2.4	2.0	1.9	2.8	2.8	2.8	-4.7	-16.4	-9.6	-4.6	-3.5	-3.1	-1.9	-1.6	-2.4	-3.3	-0.8	-2.2	9.6	25.4	15.1	9.3	7.5	7.5	6.4	6.7	7.4	
Real Personal Consumption Expenditures of Goods (3%)		3.8	3.7	3.8	3.9	3.4	2.5	5.2	4.1	4.2	2.0	-10.8	1.3	6.7	8.0	7.3	9.5	9.6	7.9	5.5	12.8	9.1	21.1	37.3	17.1	11.2	6.7	8.1	6.1	7.4	7.9	
US Personal Consumption Expenditures Services Chained 2012 Dollars SAAR (6%)		1.5	1.5	1.5	1.7	1.4	1.7	1.8	2.2	2.1	-7.6	-18.9	-14.4	-9.5	-8.5	-7.7	-7.0	-6.6	-7.1	-7.2	-6.8	-7.2	4.1	19.7	14.0	8.4	7.9	7.2	6.5	6.4	7.1	
US Disposable Personal Income Chained 2012 Dollars SA (1%)		1.9	1.6	1.8	2.1	2.0	2.3	0.8	1.8	2.2	0.8	17.0	11.3	9.3	9.8	5.3	5.6	5.0	3.2	3.7	13.4	3.2	28.8	-6.0	-4.1	-2.8	-2.6	1.0	-1.2	-1.0	0.0	
Adjusted Retail & Food Services Sales Total SA (3%)		3.3	3.3	4.0	3.6	3.0	3.1	5.5	4.8	4.6	-5.9	-20.0	-5.8	2.0	2.7	3.1	5.9	5.3	3.5	2.3	9.4	6.5	29.7	53.4	28.0	18.9	15.3	15.7	14.2	16.3	18.2	
MBA US Purchase Index SA (1%)		9.7	6.3	4.8	9.6	9.9	7.8	16.7	6.6	7.6	-23.5	-19.8	16.9	14.6	18.9	27.6	21.6	21.8	27.3	24.7	17.9	1.5	40.4	32.0	-11.7	-17.3	-17.7	-16.3	-12.6	-10.0	-9.4	-13.0
US Auto Sales Total Annualized SAAR (1%)		-0.5	0.8	2.2	-1.2	-5.4	-1.8	-4.6	1.4	1.6	-35.0	-47.7	-29.4	-24.6	-13.7	-10.5	-4.9	-2.1	-9.0	-2.6	-1.2	-6.9	56.1	115.7	39.1	17.7	1.6	-14.0	-25.5	-19.9	-17.3	-23.5
US Capacity Utilization % of Total Capacity SA (6%)		-2.5	-3.0	-3.0	-3.3	-3.9	-3.2	-3.4	-3.2	-2.3	-6.0	-18.2	-16.6	-11.3	-7.2	-6.7	-6.6	-4.7	-4.6	-3.2	-1.5	-4.7	1.9	17.9	16.4	10.2	6.6	5.3	4.4	5.0	4.9	
US Manufacturers New Orders Total SA (4%)		-2.3	0.6	-3.5	-3.1	-0.9	-0.6	-0.7	-5.4	-4.3	-18.6	-26.5	-20.5	-13.8	-10.0	-7.7	-6.7	-6.8	-2.1	-2.0	3.2	4.0	21.2	34.7	31.2	22.4	16.3	15.8	15.1	15.5	15.5	
Capital Goods New Orders Nondefense Excluding Aircraft SA (4%)		-1.6	-4.3	-1.8	-1.8	-2.2	1.4	0.2	-0.1	-0.5	-3.5	-8.9	-6.1	-2.8	0.6	3.4	5.3	6.1	8.2	10.1	10.1	11.2	14.4	25.8	23.6	19.0	15.9	13.7	13.9	13.2	11.7	
US Durable Goods New Orders Industries SA (3%)		1.4	6.8	-1.0	0.1	4.7	2.1	-0.8	-9.3	-5.1	-28.5	-36.0	-25.4	-18.6	-12.4	-9.2	-7.6	-8.7	-0.1	-1.2	6.2	6.7	36.3	53.0	42.8	29.3	18.3	17.6	15.3	14.4	14.8	
US Trade Balance of Imports SA (5%)		0.9	0.0	0.0	-2.8	-5.0	-4.1	-3.1	-2.9	-4.5	-11.0	-22.0	-24.4	-19.7	-11.4	-8.8	-6.4	-2.6	0.9	0.5	3.8	4.9	18.1	34.8	38.1	35.3	22.1	20.3	19.8	18.1	20.6	
Association of American Railroads Total Traffic US Freight Carloads (1%)		-5.5	-4.4	-4.6	-7.4	-8.8	-29.0	-9.2	-2.3	-8.5	-11.9	-22.4	-17.4	-13.8	-8.7	-6.2	-2.1	1.4	3.6	8.5	2.1	1.7	16.1	30.6	34.0	12.4	3.0	-0.7	-1.3	-2.0	-4.8	-2.4
Census Bureau US Construction Spending Total SA (2%)		3.0	5.5	6.3	8.1	9.7	12.3	13.5	13.9	13.6	12.8	6.5	5.0	3.6	2.2	2.5	2.2	2.9	2.5	3.1	4.3	3.1	2.8	7.0	8.8	10.1	9.8	9.7	10.5	10.0	9.3	

Data Source: Bloomberg. Intellectual Property of 42 Macro LLC. Nowcast feature weights are dynamically retrained monthly according to the relative strength of the first difference regressions between the independent and the dependent variables.

US INFLATION: Secular View



US INFLATION: Cyclical View



US INFLATION Agent-Based Nowcast Model

42 Macro Agent-Based INFLATION Nowcast Model Features

United States	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	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	
US CPI Urban Consumers NSA YoY	1.6	1.8	1.7	1.7	1.8	2.1	2.3	2.5	2.3	1.5	0.3	0.1	0.6	1.0	1.3	1.4	1.2	1.2	1.4	1.4	1.7	2.6	4.2	5.0	5.4	5.4	5.3	5.4	6.2	6.8	
US CPI Urban Consumers Less Food & Energy YoY NSA (7%)	2.1	2.2	2.4	2.4	2.3	2.3	2.3	2.4	2.1	1.4	1.2	1.2	1.6	1.7	1.7	1.6	1.6	1.6	1.4	1.3	1.6	3.0	3.8	4.5	4.3	4.0	4.0	4.6	4.9		
US PPI Final Demand YoY NSA (8%)	1.6	1.6	1.9	1.5	1.0	1.0	1.4	2.0	1.1	0.3	-1.5	-1.1	-0.7	-0.3	-0.3	0.3	0.6	0.8	0.8	1.6	3.0	4.1	6.5	7.0	7.6	8.0	8.4	8.8	9.6		
Commodity Research Bureau BLS/US Spot All Commodities (5%)	-7.1	-6.9	-5.9	-6.6	-6.4	-7.1	-1.9	-2.1	-4.3	-13.2	-16.3	-11.7	-11.7	-6.3	2.0	4.7	5.2	10.9	10.5	13.4	23.1	36.9	50.6	49.4	54.4	48.8	41.8	36.4	39.5	31.7	30.3
Commodity Research Bureau BLS/US Spot Foodstuff (4%)	-0.3	1.7	-0.3	-3.4	-2.1	-2.7	4.4	1.6	0.3	-10.0	-17.4	-13.0	-16.5	-11.6	2.4	5.2	2.6	10.6	7.0	9.5	23.4	39.6	66.0	57.3	68.3	58.6	48.5	38.4	41.1	31.1	35.5
Commodity Research Bureau BLS/US Spot Raw Industrials (5%)	-11.6	-12.5	-9.6	-8.7	-9.3	-10.1	-6.0	-4.6	-7.3	-15.1	-15.5	-10.8	-8.2	-2.5	1.6	4.4	7.0	11.1	13.0	16.2	22.9	35.0	40.8	44.2	45.5	42.5	37.3	35.0	38.3	32.1	26.8
US CPI Urban Consumers Food NSA (5%)	1.9	1.8	1.7	1.8	2.1	2.0	1.8	1.8	1.8	1.9	3.5	4.0	4.5	4.1	4.1	3.9	3.9	3.7	3.9	3.8	3.6	3.5	2.4	2.2	2.4	3.4	3.7	4.6	5.3	6.1	
US CPI Urban Consumers Energy NSA (9%)	-3.4	-2.0	-4.4	-4.8	-4.2	-0.6	3.4	6.2	2.8	-5.7	-17.7	-18.9	-12.6	-11.2	-9.0	-7.7	-9.2	-9.4	-7.0	-3.6	2.4	13.2	25.1	28.5	24.5	23.8	25.0	24.8	30.0	33.3	
US CPI Urban Consumers Commodities Less Food & Energy NSA (5%)	0.2	0.4	0.8	0.7	0.3	0.1	0.1	-0.3	0.0	-0.2	-0.9	-1.0	-1.1	-0.5	0.4	1.0	1.2	1.4	1.7	1.7	1.3	1.7	4.4	6.5	8.7	8.5	7.7	7.3	8.4	9.4	
US CPI Household Furnishings & Supplies NSA (0%)	1.6	1.6	1.4	1.6	0.9	0.6	0.3	0.0	-0.2	-0.4	0.6	0.9	1.3	1.5	2.6	2.1	1.9	2.9	2.9	2.4	2.3	2.8	3.2	3.7	3.4	3.0	3.3	4.8	6.1	6.0	
US CPI Urban Consumers Apparel NSA (5%)	-1.3	-0.5	1.0	-0.3	-2.3	-1.6	-1.2	-1.3	-0.9	-1.6	-5.7	-7.9	-7.3	-6.5	-5.9	-6.0	-5.5	-5.2	-3.9	-2.5	-3.6	-2.5	1.9	5.6	4.9	4.2	4.2	3.4	4.3	5.0	
US CPI Transportation Commodities Less Motor Fuel NSA (3%)	0.9	0.8	1.0	1.1	0.7	-0.1	-0.1	-0.6	-0.2	-0.1	-0.5	-0.2	-1.1	0.1	2.0	4.5	5.3	5.1	5.0	4.6	4.2	4.5	9.2	13.3	20.3	19.8	17.2	14.9	16.5	19.2	
US CPI Urban Consumers Medical Care Commodities NSA (1%)	-1.5	-0.4	0.1	-0.3	1.0	0.6	2.5	1.7	1.8	1.3	0.7	0.8	1.3	1.1	0.8	0.9	-0.8	-1.1	-2.5	-2.3	-2.5	-2.4	-1.7	-1.9	-2.2	-2.1	-2.5	-1.6	-0.4	0.2	
US CPI Recreation Commodities NSA (2%)	-0.9	-1.4	-0.9	-0.2	0.7	0.8	-0.9	-1.1	-0.4	-1.1	-2.0	-2.1	-2.1	-1.3	-0.4	-0.8	-1.3	-1.0	-0.2	-0.2	0.3	0.8	2.9	3.5	3.2	3.2	3.3	3.5	4.0	3.9	
US CPI Education & Communication Commodities NSA (0%)	-6.1	-4.1	-3.4	-4.7	-5.2	-4.2	-6.0	-6.4	-5.2	-4.7	-3.8	-3.5	-3.0	-4.3	-4.8	-6.0	-5.0	-4.3	-2.5	-1.9	-2.7	-4.9	-2.2	-1.4	-1.2	-0.2	-0.5	2.6	2.5	0.9	
US CPI Urban Consumers Alcoholic Beverages NSA (2%)	1.5	1.9	2.0	1.3	1.0	0.5	0.5	0.8	0.9	1.4	1.9	2.2	2.2	1.5	1.7	1.8	2.3	3.0	2.8	2.4	2.0	2.0	1.9	1.6	1.9	2.4	2.6	2.8	2.2	1.9	
US CPI Urban Consumers Services Less Energy Services NSA (8%)	2.8	2.8	2.9	2.9	3.0	3.0	3.0	3.1	3.1	2.8	2.2	2.0	1.9	2.3	2.2	1.9	1.7	1.7	1.6	1.3	1.3	1.6	2.5	2.9	3.1	2.9	2.7	2.9	3.2	3.4	
US CPI Urban Consumers Shelter NSA (4%)	3.5	3.5	3.4	3.5	3.3	3.3	3.2	3.3	3.3	3.0	2.6	2.5	2.4	2.3	2.3	2.0	2.0	1.9	1.8	1.6	1.5	1.7	2.1	2.2	2.6	2.8	2.8	3.2	3.5	3.8	
US CPI Urban Consumers Water and Sewer and Trash Collection Services NSA (0%)	3.3	3.3	3.0	3.1	3.3	2.9	2.2	3.0	3.2	3.2	3.0	2.9	2.9	3.0	3.4	3.4	3.3	3.3	3.6	3.6	3.6	3.5	3.6	3.4	3.6	3.7	3.5	3.7	3.7	3.5	
CPI All Urban Consumers Household Operations Not Seasonally Adjusted 1997=100 (0%)	5.2	5.4	5.4	5.2	5.5	5.4	3.5	3.2	4.3	4.5	3.9	4.5	1.8	1.5	2.1	2.7	2.7	2.2	4.1	4.7	4.3	4.3	4.9	8.3	7.2	7.0	7.3	6.6	6.9	8.4	
US CPI Urban Consumers Medical Care Services NSA (1%)	2.8	3.3	4.3	4.4	5.1	5.1	5.1	5.1	5.3	5.5	5.8	5.9	6.0	5.9	5.3	4.9	3.7	3.2	2.8	2.9	3.0	2.7	2.2	1.5	1.0	0.8	1.0	0.9	1.7	2.1	
US CPI Urban Consumers Transportation Services NSA (7%)	0.9	0.7	0.9	0.8	0.8	0.8	0.6	0.7	1.2	-0.7	-5.5	-8.7	-7.0	-3.7	-4.0	-5.1	-5.1	-3.4	-3.5	-4.1	-4.4	-1.6	5.6	11.2	10.4	6.4	4.6	4.4	4.5	3.9	
US CPI Recreation Services NSA (0%)	1.7	1.7	2.2	1.6	2.3	2.4	2.7	2.6	2.3	2.4	2.4	4.3	3.4	2.1	2.2	2.7	2.6	2.6	1.6	0.3	1.1	1.2	1.8	0.6	1.9	3.7	3.5	3.5	3.8	2.8	
US CPI Education & Communication Services NSA (0%)	1.2	1.0	1.0	0.9	1.1	1.9	2.0	2.2	2.1	2.1	2.1	2.0	1.8	2.9	2.9	2.8	2.7	2.4	2.3	2.0	2.1	2.0	2.0	2.2	2.4	1.2	1.3	1.7	1.7	1.7	
US Personal Consumption Expenditures Chain Type Price Index SA (10%)	1.5	1.5	1.5	1.4	1.4	1.4	1.7	1.9	1.9	1.3	0.4	0.5	0.9	1.0	1.3	1.4	1.2	1.1	1.3	1.4	1.6	2.5	3.6	4.0	4.0	4.2	4.2	4.4	5.1	5.7	
US Personal Consumption Expenditures Ex Food & Energy Deflator SA (8%)	1.7	1.7	1.9	1.7	1.7	1.6	1.6	1.8	1.9	1.7	0.8	1.0	1.1	1.3	1.5	1.6	1.4	1.4	1.5	1.5	1.5	2.0	3.1	3.5	3.6	3.6	3.6	3.7	4.2	4.7	
ISM Manufacturing Report on Business Prices Index NSA (2%)	47.9	45.1	46.0	49.7	45.5	46.7	51.7	53.3	45.9	37.4	35.3	40.8	51.3	53.2	59.5	62.8	65.5	65.4	77.6	82.1	86.0	85.6	89.6	88.0	92.1	85.7	79.4	81.2	85.7	82.4	68.2
ISM Services PMI Report on Business Prices SA (0%)	58.6	57.0	57.8	58.5	56.3	56.8	59.1	55.8	52.3	50.9	56.1	56.4	62.1	57.6	63.4	58.0	62.7	63.9	64.4	64.2	71.8	74.0	76.8	80.6	79.5	82.3	75.4	77.5	82.9	82.3	82.5

Data Source: Bloomberg. Intellectual Property of 42 Macro LLC. Nowcast feature weights are dynamically retrained monthly according to the relative strength of the first difference regressions between the independent and the dependent variables.

Why GRID Works

- *“I knew which shifts in the environment caused asset classes to move around, and I knew that those relationships had remained essentially the same for hundreds of years. There were only two big forces to worry about: growth and inflation. Each could be rising or falling, so I saw that by finding four different investment strategies – each one of which would do well in a particular environment (rising growth with rising inflation, rising growth with falling inflation, and so on) – I could construct an asset allocation mix that was balanced to do well over time while being protected against unacceptable losses.”*
–Ray Dalio, Principles pg. 70
- *“Subjective confidence in a judgment is not a reasoned evaluation of the probability that this judgment is correct. Confidence is a feeling, which reflects the coherence of the information and the cognitive ease of processing it. It is wise to take admissions of uncertainty serious, but declarations of high confidence mainly tell you that an individual has constructed a coherent story in his mind, not necessarily that the story is true.”*
–Danny Kahneman, Thinking, Fast and Slow pg. 212
- *“You cannot beat the market, says the standard market doctrine. Granted. But you can sidestep its worst punches.”*
–Benoit Mandelbrot, The (Mis)Behavior of Markets pg. 249

GRID Asset Market Backtests: US Equities

	SPX Index																			
	ANNUALIZED EXPECTED RETURN				PERCENT POSITIVE RATIO				VOLATILITY				COVARIANCE w/ US EQUITY BETA				NUMBER OF OBSERVATIONS			
	GOLDDILOCKS	REFLECTION	INFLATION	DEFLATION	GOLDDILOCKS	REFLECTION	INFLATION	DEFLATION	GOLDDILOCKS	REFLECTION	INFLATION	DEFLATION	GOLDDILOCKS	REFLECTION	INFLATION	DEFLATION	GOLDDILOCKS	REFLECTION	INFLATION	DEFLATION
OVERALL BACKTEST	16%	15%	-5%	-3%	79%	65%	50%	58%	12%	11%	15%	20%	1.00	1.00	1.00	1.00	71	83	68	77
-2σ GROWTH Δ	-	-	13%	22%	-	-	45%	46%	-	-	17%	24%	-	-	1.00	1.00	-	-	20	28
-1σ GROWTH Δ	-	-	2%	3%	-	-	54%	73%	-	-	17%	16%	-	-	1.00	1.00	-	-	26	26
0σ GROWTH Δ	7%	5%	0%	3%	70%	68%	50%	57%	11%	11%	18%	19%	1.00	1.00	1.00	1.00	27	31	22	23
+1σ GROWTH Δ	33%	32%	-	-	85%	62%	-	-	12%	11%	-	-	1.00	1.00	-	-	33	42	-	-
+2σ GROWTH Δ	7%	4%	-	-	82%	70%	-	-	10%	11%	-	-	1.00	1.00	-	-	11	10	-	-
-2σ INFLATION Δ	9%	-	-	21%	73%	-	-	47%	12%	-	-	28%	1.00	-	-	1.00	11	-	-	17
-1σ INFLATION Δ	7%	-	-	0%	93%	-	-	62%	9%	-	-	14%	1.00	-	-	1.00	28	-	-	29
0σ INFLATION Δ	5%	3%	0%	4%	69%	64%	67%	61%	18%	11%	18%	21%	1.00	1.00	1.00	1.00	32	36	18	31
+1σ INFLATION Δ	-	3%	6%	-	-	61%	45%	-	-	11%	14%	-	-	1.00	1.00	-	-	33	44	-
+2σ INFLATION Δ	-	2%	12%	-	-	79%	33%	-	-	11%	21%	-	-	1.00	1.00	-	-	14	6	-
POLICY RATE ↓	33%	16%	12%	19%	71%	100%	53%	45%	12%	7%	16%	26%	1.00	1.00	1.00	1.00	7	3	17	22
POLICY RATE →	7%	0%	1%	3%	80%	62%	50%	65%	10%	11%	12%	14%	1.00	1.00	1.00	1.00	15	21	18	17
POLICY RATE ↑	9%	4%	3%	6%	84%	65%	50%	57%	12%	10%	16%	22%	1.00	1.00	1.00	1.00	43	62	36	35
QUANTITATIVE EASING	11%	7%	7%	0%	71%	67%	50%	60%	12%	12%	15%	19%	1.00	1.00	1.00	1.00	28	21	32	42
QUANTITATIVE TIGHTENING	9%	4%	20%	26%	89%	57%	55%	43%	7%	10%	17%	22%	1.00	1.00	1.00	1.00	9	14	11	14
FISCAL EASING	9%	4%	21%	3%	71%	77%	70%	50%	10%	12%	17%	14%	1.00	1.00	1.00	1.00	14	13	10	14
FISCAL TIGHTENING	4%	7%	9%	5%	73%	25%	50%	59%	10%	15%	19%	21%	1.00	1.00	1.00	1.00	11	4	10	61

© 42 Macro LLC. Data Source: Bloomberg. GRID Asset Market Backtests performed on monthly observations spanning the trailing 25yrs.

GRID Asset Market Backtests: High Yield OAS

US High Yield Credit OAS																				
ANNUALIZED EXPECTED RETURN				PERCENT POSITIVE RATIO				VOLATILITY				COVARIANCE w/ US EQUITY BETA				NUMBER OF OBSERVATIONS				
	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION
OVERALL BACKTEST	39%	15%	28%	30%	29%	39%	57%	50%	25%	26%	34%	52%	-0.74	-0.57	-0.82	-0.79	21	41	23	32
-2σ GROWTH Δ	-	-	63%	55%	-	-	80%	53%	-	-	30%	72%	-	-	-0.90	-0.87	-	-	5	15
-1σ GROWTH Δ	-	-	28%	19%	-	-	50%	45%	-	-	33%	24%	-	-	-0.95	-0.70	-	-	8	13
0σ GROWTH Δ	13%	6%	5%	29%	44%	47%	50%	50%	29%	23%	37%	23%	-0.63	-0.53	-0.75	0.39	9	15	10	4
+1σ GROWTH Δ	59%	2%	-	-	17%	45%	-	-	20%	27%	-	-	-0.86	-0.55	-	-	12	20	-	-
+2σ GROWTH Δ	-	96%	-	-	-	0%	-	-	-	18%	-	-	-	-0.43	-	-	-	6	-	-
-2σ INFLATION Δ	-	-	-	12%	-	-	-	29%	-	-	-	102%	-	-	-	-0.89	-	-	-	7
-1σ INFLATION Δ	34%	-	-	99%	25%	-	-	58%	13%	-	-	34%	-0.66	-	-	-0.86	12	-	-	12
0σ INFLATION Δ	46%	19%	32%	12%	33%	60%	14%	54%	36%	26%	38%	24%	-0.77	-0.43	-0.91	-0.09	9	20	7	13
+1σ INFLATION Δ	-	47%	49%	-	-	20%	73%	-	-	24%	31%	-	-	-0.68	-0.75	-	-	15	15	-
+2σ INFLATION Δ	-	50%	96%	-	-	17%	100%	-	-	15%	-	-	-	-0.33	-	-	-	6	1	-
POLICY RATE ↓	-	-	77%	94%	-	-	33%	50%	-	-	28%	103%	-	-	0.06	-0.92	-	-	3	6
POLICY RATE →	11%	15%	28%	41%	20%	50%	60%	57%	4%	25%	20%	48%	-0.43	-0.62	-0.93	-0.87	5	10	5	7
POLICY RATE ↑	45%	11%	3%	68%	24%	37%	64%	64%	26%	25%	34%	75%	-0.76	-0.54	-0.80	-0.81	17	30	11	11
QUANTITATIVE EASING	15%	26%	43%	10%	50%	45%	50%	43%	17%	27%	34%	36%	-0.43	-0.63	-0.85	-0.79	4	11	12	21
QUANTITATIVE TIGHTENING	53%	8%	37%	146%	33%	50%	25%	63%	25%	23%	33%	82%	-0.95	-0.83	-0.95	-0.91	3	8	4	8
FISCAL EASING	5%	22%	51%	16%	60%	25%	25%	33%	35%	51%	24%	29%	-0.53	-0.95	-0.88	-0.14	5	4	4	3
FISCAL TIGHTENING	7%	38%	0%	33%	60%	75%	50%	52%	35%	36%	33%	58%	-0.80	-0.76	-0.95	-0.84	5	4	4	25

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GRID Asset Market Backtests: Global Equities

MSCI ACWI Excluding United States Index																				
ANNUALIZED EXPECTED RETURN				PERCENT POSITIVE RATIO				VOLATILITY				COVARIANCE w/ US EQUITY BETA				NUMBER OF OBSERVATIONS				
	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION
OVERALL BACKTEST	27%	11%	-15%	5%	73%	65%	38%	53%	15%	10%	16%	22%	0.76	0.71	0.87	0.91	71	83	68	77
-2σ GROWTH Δ	-	-	-27%	20%	-	-	30%	43%	-	-	16%	26%	-	-	0.85	0.89	-	-	20	28
-1σ GROWTH Δ	-	-	-11%	2%	-	-	46%	58%	-	-	18%	18%	-	-	0.91	0.91	-	-	26	26
0σ GROWTH Δ	7%	14%	-11%	13%	56%	61%	36%	61%	16%	12%	13%	19%	0.77	0.75	0.81	0.94	27	31	22	23
+1σ GROWTH Δ	39%	7%	-	-	85%	67%	-	-	14%	10%	-	-	0.70	0.71	-	-	33	42	-	-
+2σ GROWTH Δ	37%	23%	-	-	82%	70%	-	-	14%	9%	-	-	0.93	0.96	-	-	11	10	-	-
-2σ INFLATION Δ	28%	-	-	-26%	73%	-	-	47%	11%	-	-	29%	0.60	-	-	0.95	11	-	-	17
-1σ INFLATION Δ	43%	-	-	-1%	86%	-	-	59%	13%	-	-	15%	0.53	-	-	0.82	28	-	-	29
0σ INFLATION Δ	32%	13%	-7%	1%	63%	64%	56%	52%	17%	12%	19%	23%	0.85	0.78	0.89	0.90	32	36	18	31
+1σ INFLATION Δ	-	9%	-19%	-	-	64%	30%	-	-	9%	14%	-	-	0.64	0.88	-	-	33	44	-
+2σ INFLATION Δ	-	14%	-13%	-	-	71%	50%	-	-	11%	15%	-	-	0.68	0.78	-	-	14	6	-
POLICY RATE ↓	21%	23%	-14%	-26%	86%	67%	47%	41%	11%	7%	17%	28%	0.81	0.03	0.90	0.91	7	3	17	22
POLICY RATE →	36%	15%	5%	3%	93%	71%	44%	65%	7%	13%	13%	13%	0.41	0.78	0.79	0.83	15	21	18	17
POLICY RATE ↑	30%	16%	-11%	-17%	77%	69%	42%	51%	16%	9%	16%	24%	0.80	0.72	0.90	0.92	43	62	36	35
QUANTITATIVE EASING	21%	0%	-11%	1%	68%	52%	34%	55%	14%	13%	15%	20%	0.69	0.76	0.83	0.90	28	21	32	42
QUANTITATIVE TIGHTENING	30%	16%	-20%	-31%	89%	71%	36%	43%	10%	8%	18%	25%	0.94	0.76	0.93	0.91	9	14	11	14
FISCAL EASING	23%	34%	9%	4%	57%	69%	50%	50%	12%	15%	18%	14%	0.54	0.85	0.87	0.70	14	13	10	14
FISCAL TIGHTENING	3%	3%	-12%	-11%	45%	25%	50%	54%	15%	15%	17%	23%	0.80	0.99	0.90	0.92	11	4	10	61

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GRID Asset Market Backtests: Commodities

Commodity Research Bureau BLS/US Spot All Commodities																				
	ANNUALIZED EXPECTED RETURN				PERCENT POSITIVE RATIO				VOLATILITY				COVARIANCE w/ US EQUITY BETA				NUMBER OF OBSERVATIONS			
	GOLDDLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDDLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDDLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDDLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDDLOCKS	REFLECTION	INFLATION	DEFLATION
OVERALL BACKTEST	8%	13%	-1%	1%	61%	64%	46%	45%	8%	9%	8%	13%	0.27	0.34	0.07	0.38	71	83	68	77
-2σ GROWTH Δ	-	-	-8%	-13%	-	-	40%	43%	-	-	8%	16%	-	-	-0.54	0.48	-	-	20	28
-1σ GROWTH Δ	-	-	-1%	-5%	-	-	50%	42%	-	-	5%	8%	-	-	0.35	0.12	-	-	26	26
0σ GROWTH Δ	-5%	8%	1%	3%	48%	58%	45%	52%	8%	7%	7%	13%	0.10	0.29	0.18	0.30	27	31	22	23
+1σ GROWTH Δ	15%	12%	-	-	67%	62%	-	-	8%	9%	-	-	0.28	0.41	-	-	33	42	-	-
+2σ GROWTH Δ	16%	31%	-	-	73%	90%	-	-	6%	9%	-	-	0.22	0.07	-	-	11	10	-	-
-2σ INFLATION Δ	12%	-	-	-31%	73%	-	-	35%	8%	-	-	17%	0.35	-	-	0.56	11	-	-	17
-1σ INFLATION Δ	9%	-	-	-10%	46%	-	-	34%	8%	-	-	9%	0.12	-	-	-0.11	28	-	-	29
0σ INFLATION Δ	6%	12%	-4%	9%	69%	67%	56%	61%	8%	10%	9%	12%	0.32	0.44	0.33	0.35	32	86	18	31
+1σ INFLATION Δ	-	11%	-1%	-	-	58%	41%	-	-	7%	8%	-	-	0.08	-0.12	-	-	33	44	-
+2σ INFLATION Δ	-	22%	3%	-	-	71%	50%	-	-	9%	8%	-	-	0.55	0.12	-	-	14	6	-
POLICY RATE ↓	-1%	2%	13%	-22%	57%	83%	71%	36%	12%	3%	7%	18%	0.05	-0.95	-0.20	0.44	7	3	17	22
POLICY RATE →	9%	3%	-3%	-8%	60%	62%	44%	53%	7%	5%	8%	7%	-0.20	-0.05	0.17	-0.05	15	21	18	17
POLICY RATE ↑	6%	15%	-1%	-22%	53%	65%	47%	37%	9%	9%	7%	15%	0.27	0.23	-0.08	0.58	43	62	36	35
QUANTITATIVE EASING	13%	13%	-4%	5%	71%	62%	44%	52%	7%	8%	9%	10%	0.32	0.66	0.22	0.12	28	21	32	42
QUANTITATIVE TIGHTENING	13%	7%	9%	-13%	67%	50%	64%	29%	7%	8%	9%	12%	0.47	-0.26	-0.28	0.48	9	14	11	14
FISCAL EASING	-1%	25%	7%	-13%	50%	69%	50%	36%	5%	10%	12%	9%	0.03	0.49	0.11	-0.08	14	13	10	14
FISCAL TIGHTENING	-3%	-2%	2%	-13%	27%	50%	60%	39%	11%	7%	7%	12%	0.46	0.21	-0.09	0.47	11	4	10	61

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GRID Asset Market Backtests: Fixed Income

Bloomberg Barclays US Treasury 25+Y Total Return Index Value Unhedged USD																				
	ANNUALIZED EXPECTED RETURN				PERCENT POSITIVE RATIO				VOLATILITY				COVARIANCE w/ US EQUITY BETA				NUMBER OF OBSERVATIONS			
	GOLDFLOCKS	REFLATION	INFLATION	DEFLATION	GOLDFLOCKS	REFLATION	INFLATION	DEFLATION	GOLDFLOCKS	REFLATION	INFLATION	DEFLATION	GOLDFLOCKS	REFLATION	INFLATION	DEFLATION	GOLDFLOCKS	REFLATION	INFLATION	DEFLATION
OVERALL BACKTEST	1%	5%	0%	7%	58%	43%	66%	62%	11%	10%	11%	15%	-0.05	-0.09	-0.46	-0.20	71	83	68	77
-2σ GROWTH Δ	-	-	3%	9%	-	-	60%	61%	-	-	9%	21%	-	-	-0.19	-0.10	-	-	20	28
-1σ GROWTH Δ	-	-	3%	8%	-	-	65%	69%	-	-	14%	12%	-	-	-0.62	-0.26	-	-	26	26
0σ GROWTH Δ	4%	8%	2%	4%	59%	53%	73%	57%	11%	8%	10%	12%	-0.40	-0.03	-0.48	-0.44	27	31	22	23
+1σ GROWTH Δ	4%	12%	-	-	55%	36%	-	-	11%	10%	-	-	0.20	-0.17	-	-	33	42	-	-
+2σ GROWTH Δ	15%	6%	-	-	64%	50%	-	-	13%	15%	-	-	-0.11	-0.04	-	-	11	10	-	-
-2σ INFLATION Δ	1%	-	-	2%	73%	-	-	53%	12%	-	-	26%	0.11	-	-	-0.07	11	-	-	17
-1σ INFLATION Δ	4%	-	-	2%	61%	-	-	79%	11%	-	-	9%	0.04	-	-	-0.34	28	-	-	29
0σ INFLATION Δ	5%	6%	3%	0%	50%	39%	67%	52%	12%	9%	15%	13%	-0.20	-0.09	-0.65	-0.83	32	36	18	31
+1σ INFLATION Δ	-	4%	4%	-	-	42%	61%	-	-	11%	10%	-	-	-0.04	-0.35	-	-	33	44	-
+2σ INFLATION Δ	-	7%	9%	-	-	57%	100%	-	-	12%	6%	-	-	-0.21	-0.42	-	-	14	6	-
POLICY RATE ↓	31%	4%	7%	2%	43%	67%	53%	50%	15%	5%	8%	23%	-0.30	-1.00	-0.65	0.00	7	3	17	22
POLICY RATE →	4%	1%	9%	4%	53%	43%	78%	65%	9%	8%	8%	9%	0.25	-0.24	-0.11	-0.08	15	21	18	17
POLICY RATE ↑	0%	4%	9%	31%	58%	47%	56%	71%	10%	10%	10%	15%	-0.11	-0.09	-0.49	-0.17	43	62	36	35
QUANTITATIVE EASING	5%	9%	2%	8%	57%	33%	78%	55%	14%	10%	12%	15%	0.02	-0.11	-0.46	-0.23	28	21	32	42
QUANTITATIVE TIGHTENING	6%	0%	7%	37%	56%	43%	73%	86%	8%	13%	9%	15%	-0.36	-0.40	-0.83	-0.05	9	14	11	14
FISCAL EASING	6%	18%	5%	3%	43%	23%	60%	64%	10%	8%	17%	9%	0.25	-0.10	-0.23	0.27	14	13	10	14
FISCAL TIGHTENING	4%	8%	3%	2%	55%	50%	60%	66%	12%	11%	7%	16%	-0.45	-0.42	-0.40	-0.13	11	4	10	61

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GRID Asset Market Backtests: 10yr Nominal Treasury Yield

	10yr Treasury Yield																			
	ANNUALIZED EXPECTED RETURN				PERCENT POSITIVE RATIO				VOLATILITY				COVARIANCE w/ US EQUITY BETA				NUMBER OF OBSERVATIONS			
	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION
OVERALL BACKTEST	15%	37%	-2.8%	-3.2%	46%	66%	47%	44%	26%	35%	27%	36%	0.09	0.06	0.55	0.25	71	83	68	77
-2σ GROWTH Δ	-	-	-1.8%	-4.8%	-	-	40%	39%	-	-	20%	48%	-	-	0.28	0.20	-	-	20	28
-1σ GROWTH Δ	-	-	-2.9%	-3.0%	-	-	46%	54%	-	-	30%	27%	-	-	0.65	0.24	-	-	26	26
0σ GROWTH Δ	1%	9%	-3.6%	-1.3%	44%	65%	55%	39%	24%	21%	30%	27%	0.35	-0.10	0.61	0.33	27	31	22	23
+1σ GROWTH Δ	15%	53%	-	-	45%	67%	-	-	26%	35%	-	-	-0.10	0.11	-	-	33	42	-	-
+2σ GROWTH Δ	47%	61%	-	-	55%	70%	-	-	29%	58%	-	-	0.06	0.24	-	-	11	10	-	-
-2σ INFLATION Δ	0%	-	-	-5.3%	27%	-	-	41%	22%	-	-	60%	-0.19	-	-	0.24	11	-	-	17
-1σ INFLATION Δ	4%	-	-	-3.7%	43%	-	-	34%	29%	-	-	19%	0.11	-	-	0.33	28	-	-	29
0σ INFLATION Δ	29%	42%	-2.8%	-1.4%	56%	72%	56%	55%	24%	29%	31%	31%	0.21	-0.06	0.64	0.22	32	36	18	31
+1σ INFLATION Δ	-	26%	-1.8%	-	-	67%	50%	-	-	36%	25%	-	-	-0.01	0.49	-	-	33	44	-
+2σ INFLATION Δ	-	50%	-9.4%	-	-	50%	0%	-	-	45%	18%	-	-	0.36	0.55	-	-	14	6	-
POLICY RATE ↓	81%	0%	6%	-5.3%	71%	67%	65%	45%	33%	5%	24%	51%	0.35	-0.19	0.69	0.14	7	3	17	22
POLICY RATE →	15%	19%	-2.8%	-1.7%	47%	67%	39%	41%	14%	17%	19%	16%	-0.14	0.22	0.15	0.10	15	21	18	17
POLICY RATE ↑	21%	38%	-6%	-6.1%	49%	61%	53%	40%	25%	36%	28%	37%	0.11	0.09	0.65	0.25	43	62	36	35
QUANTITATIVE EASING	5%	36%	-4.3%	-6%	43%	81%	41%	48%	26%	32%	25%	34%	0.00	-0.04	0.35	0.25	28	21	32	42
QUANTITATIVE TIGHTENING	42%	16%	1%	-10.6%	67%	50%	64%	21%	17%	39%	24%	41%	0.37	0.41	0.78	0.23	9	14	11	14
FISCAL EASING	18%	52%	9%	-1.0%	50%	77%	60%	57%	22%	24%	26%	22%	-0.12	0.02	0.09	-0.25	14	13	10	14
FISCAL TIGHTENING	7%	45%	9%	-4.3%	55%	75%	60%	41%	31%	25%	16%	37%	0.41	0.73	0.50	0.19	11	4	10	61

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GRID Asset Market Backtests: Foreign Exchange

Bloomberg Dollar Index																				
ANNUALIZED EXPECTED RETURN				PERCENT POSITIVE RATIO				VOLATILITY				COVARIANCE w/ US EQUITY BETA				NUMBER OF OBSERVATIONS				
	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION
OVERALL BACKTEST	3%	0%	3%	3%	45%	52%	50%	56%	7%	6%	7%	8%	-0.50	-0.42	-0.30	-0.65	44	62	42	54
-2σ GROWTH Δ	-	-	6%	10%	-	-	46%	61%	-	-	6%	10%	-	-	0.28	-0.60	-	-	13	23
-1σ GROWTH Δ	-	-	3%	9%	-	-	47%	63%	-	-	7%	6%	-	-	-0.63	-0.74	-	-	15	16
0σ GROWTH Δ	3%	1%	0%	5%	57%	50%	57%	40%	7%	5%	7%	8%	-0.53	-0.57	-0.47	-0.67	23	22	14	15
+1σ GROWTH Δ	-1%	3%	-	-	28%	56%	-	-	6%	5%	-	-	-0.29	-0.34	-	-	18	32	-	-
+2σ GROWTH Δ	-4%	-4%	-	-	67%	38%	-	-	6%	9%	-	-	-0.99	-0.38	-	-	3	8	-	-
-2σ INFLATION Δ	-7%	-	-	15%	25%	-	-	64%	4%	-	-	12%	0.14	-	-	-0.76	4	-	-	11
-1σ INFLATION Δ	-1%	-	-	3%	30%	-	-	53%	7%	-	-	6%	-0.19	-	-	-0.38	20	-	-	19
0σ INFLATION Δ	3%	-2%	2%	2%	65%	52%	50%	54%	7%	6%	10%	7%	-0.65	-0.58	-0.60	-0.64	20	31	12	24
+1σ INFLATION Δ	-	0%	2%	-	-	48%	50%	-	-	6%	6%	-	-	-0.24	-0.02	-	-	21	18	-
+2σ INFLATION Δ	-	4%	9%	-	-	60%	50%	-	-	7%	4%	-	-	-0.48	-1.00	-	-	10	2	-
POLICY RATE ↓	-	-	3%	11%	-	-	40%	57%	-	-	5%	11%	-	-	-0.13	-0.70	-	-	10	14
POLICY RATE →	-1%	0%	1%	7%	27%	57%	44%	62%	5%	6%	4%	5%	0.26	-0.31	-0.29	-0.21	11	14	9	13
POLICY RATE ↑	1%	0%	5%	7%	50%	52%	43%	55%	8%	5%	5%	9%	-0.54	-0.35	-0.26	-0.72	30	46	21	22
QUANTITATIVE EASING	-6%	-2%	10%	4%	34%	50%	57%	56%	5%	8%	8%	8%	-0.41	-0.55	-0.30	-0.58	14	16	21	32
QUANTITATIVE TIGHTENING	8%	3%	9%	3%	25%	45%	38%	50%	5%	6%	5%	8%	-0.79	0.14	-0.47	-0.62	4	11	6	12
FISCAL EASING	6%	-5%	3%	7%	73%	44%	29%	67%	5%	7%	11%	6%	-0.34	-0.80	-0.88	-0.35	11	9	7	6
FISCAL TIGHTENING	10%	3%	3%	3%	63%	50%	50%	60%	6%	8%	8%	9%	-0.63	-0.82	-0.47	-0.67	8	4	4	40

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GRID Asset Market Backtests: Crypto

Bitcoin																				
ANNUALIZED EXPECTED RETURN				PERCENT POSITIVE RATIO				VOLATILITY				COVARIANCE w/ US EQUITY BETA				NUMBER OF OBSERVATIONS				
	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION	GOLDSLOCKS	REFLECTION	INFLATION	DEFLATION
OVERALL BACKTEST	483%	112%	150%	-10%	100%	63%	50%	35%	29%	33%	23%	19%	0.06	0.06	0.02	0.29	7	24	10	17
-2σ GROWTH Δ	-	-	-	-23%	-	-	-	44%	-	-	0%	37%	-	-	-	0.36	-	-	-	9
-1σ GROWTH Δ	-	-	319%	-2%	-	-	75%	17%	-	-	28%	16%	-	-	-0.11	0.21	-	-	4	6
0σ GROWTH Δ	-	-60%	37%	23%	-	33%	33%	50%	0%	18%	29%	6%	-	0.04	0.26	0.16	-	6	6	2
+1σ GROWTH Δ	483%	181%	-	-	100%	67%	-	-	45%	51%	-	-	0.02	0.05	-	-	7	15	-	-
+2σ GROWTH Δ	-	112%	-	-	-	100%	-	-	0%	19%	-	-	-	0.48	-	-	-	3	-	-
-2σ INFLATION Δ	-	-	-	12%	-	-	-	40%	0%	-	-	28%	-	-	-	0.52	-	-	-	5
-1σ INFLATION Δ	359%	-	-	-26%	100%	-	-	29%	28%	-	-	24%	-0.25	-	-	0.21	4	-	-	7
0σ INFLATION Δ	649%	182%	288%	-11%	100%	73%	50%	40%	36%	48%	30%	8%	0.25	-0.06	-0.32	0.10	3	11	2	5
+1σ INFLATION Δ	-	103%	115%	-	-	63%	50%	-	-	24%	23%	-	-	0.25	0.28	-	-	8	8	-
+2σ INFLATION Δ	-	-28%	-	-	-	40%	-	-	-	31%	0%	-	-	0.21	-	-	-	5	-	-
POLICY RATE ↓	-	-	-151%	29%	-	-	0%	50%	0%	0%	12%	22%	-	-	-0.36	0.51	-	-	3	6
POLICY RATE →	461%	50%	52%	-101%	100%	56%	50%	14%	53%	50%	16%	25%	-0.07	-0.04	0.13	-0.03	5	9	2	7
POLICY RATE ↑	426%	112%	-12%	55%	100%	63%	20%	60%	52%	39%	26%	26%	0.11	0.11	0.13	0.50	6	16	5	5
QUANTITATIVE EASING	823%	111%	311%	-37%	100%	63%	80%	25%	43%	70%	47%	30%	-0.03	-0.01	-0.07	0.10	1	8	5	12
QUANTITATIVE TIGHTENING	527%	-84%	-173%	-1%	100%	20%	0%	33%	54%	38%	19%	33%	0.11	0.54	-0.35	0.61	3	5	3	6
FISCAL EASING	-	-69%	-	-91%	-	0%	-	0%	0%	4%	0%	5%	-	-0.02	-	0.32	-	1	-	1
FISCAL TIGHTENING	-	-233%	-183%	16%	-	33%	0%	50%	0%	57%	16%	25%	-	-0.49	-0.32	0.32	-	3	2	12

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What Tends To **Outperform/Underperform** In Each **GRID** Regime?

GOLDILOCKS

Top 5 Equity Style Factors

High Beta
Small Caps
Mega Cap Growth
Cyclicals
Mid Caps

Bottom 5 Equity Style Factors

Low Beta
Defensives
Size
Quality
Dividends

Top 5 Equity Sectors

Consumer Discretionary
Financials
Technology
Materials
Industrials

Bottom 5 Equity Sectors

Utilities
Communication Services
Real Estate
Consumer Staples
Health Care

Top 5 Fixed Income Sectors

BDCs
Convertibles
HY Credit
EM \$ Debt
Preferreds

Bottom 5 Fixed Income Sectors

Long Bond
0-5yr TIPS
Treasury Belly
MBS
5-10yr TIPS

REFLATION

Top 5 Equity Style Factors

Mega Cap Growth
High Beta
Cyclicals
Momentum
Small Caps

Bottom 5 Equity Style Factors

Low Beta
Dividends
Defensives
Quality
Large Caps

Top 5 Equity Sectors

Technology
Industrials
Consumer Discretionary
Financials
Energy

Bottom 5 Equity Sectors

Real Estate
Consumer Staples
Utilities
Communication Services
Health Care

Top 5 Fixed Income Sectors

BDCs
Convertibles
Preferreds
HY Credit
EM Local Currency

Bottom 5 Fixed Income Sectors

Long Bond
Treasury Belly
IG Credit
MBS
Short Rates

INFLATION

Top 5 Equity Style Factors

Low Beta
Mega Cap Growth
Quality
Dividends
Defensives

Bottom 5 Equity Style Factors

High Beta
Small Caps
Cyclicals
Value
Mid Caps

Top 5 Equity Sectors

Utilities
Health Care
Real Estate
Consumer Staples
Communication Services

Bottom 5 Equity Sectors

Energy
Materials
Financials
Industrials
Consumer Discretionary

Top 5 Fixed Income Sectors

Long Bond
EM \$ Debt
5-10yr TIPS
Treasury Belly
IG Credit

Bottom 5 Fixed Income Sectors

BDCs
Convertibles
EM Local Currency
Preferreds
Leveraged Loans

DEFLATION

Top 5 Equity Style Factors

Dividends
Low Beta
Quality
Defensives
Growth

Bottom 5 Equity Style Factors

High Beta
Cyclicals
Value
Small Caps
Mid Caps

Top 5 Equity Sectors

Real Estate
Health Care
Consumer Staples
Utilities
Consumer Discretionary

Bottom 5 Equity Sectors

Financials
Industrials
Technology
Communication Services
Energy

Top 5 Fixed Income Sectors

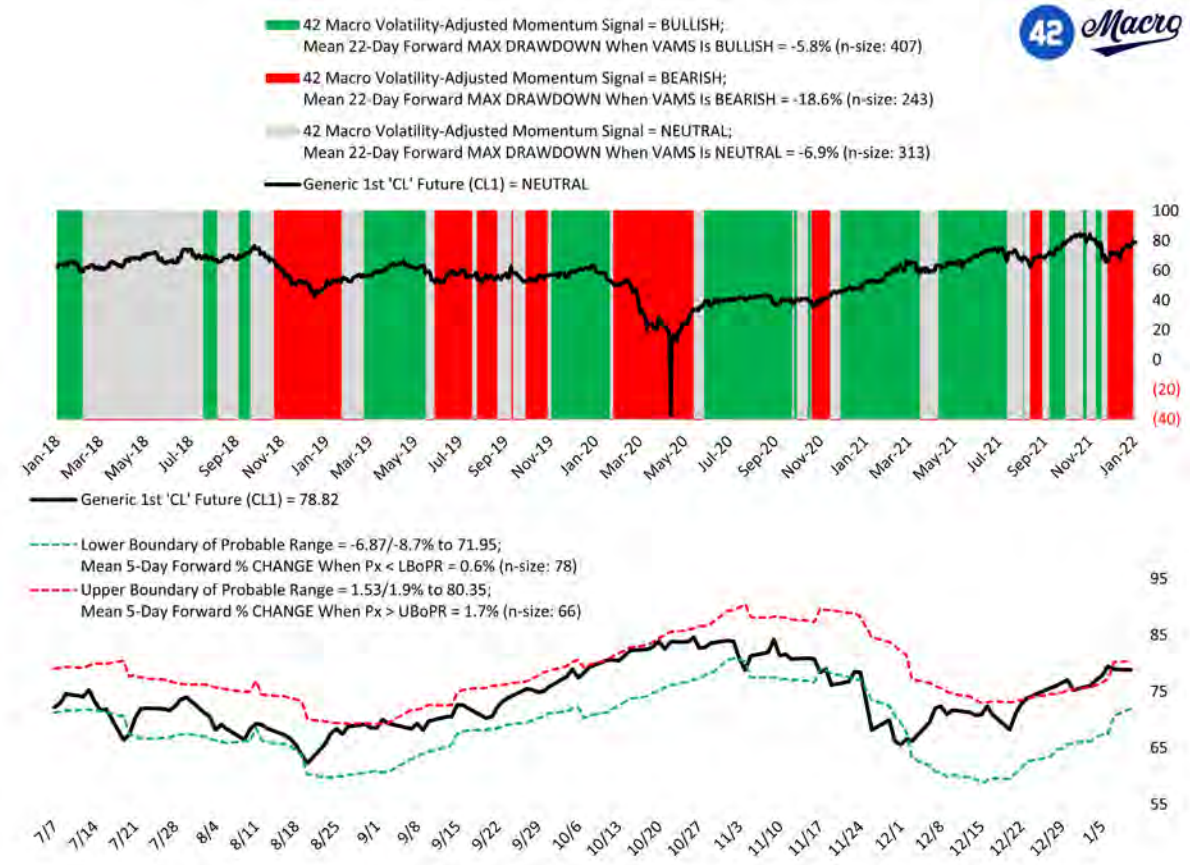
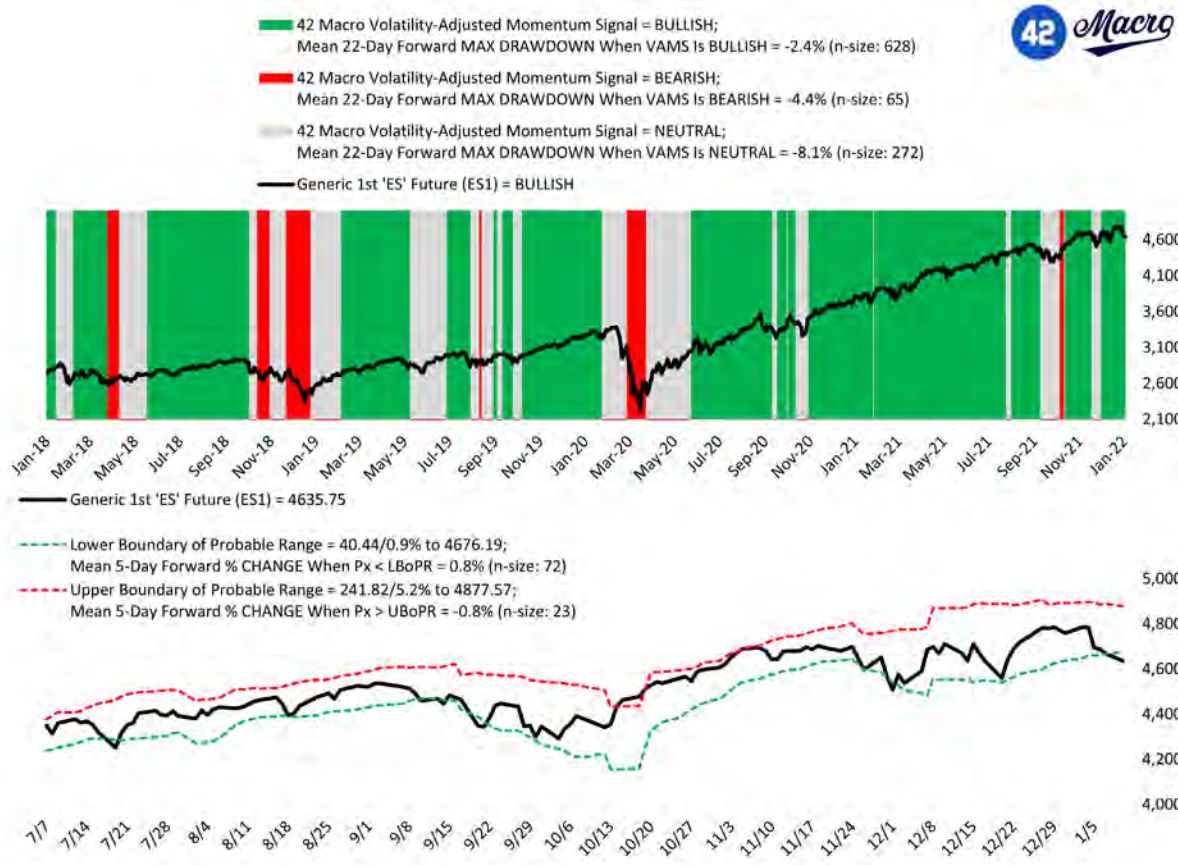
Long Bond
Treasury Belly
IG Credit
MBS
Short Rates

Bottom 5 Fixed Income Sectors

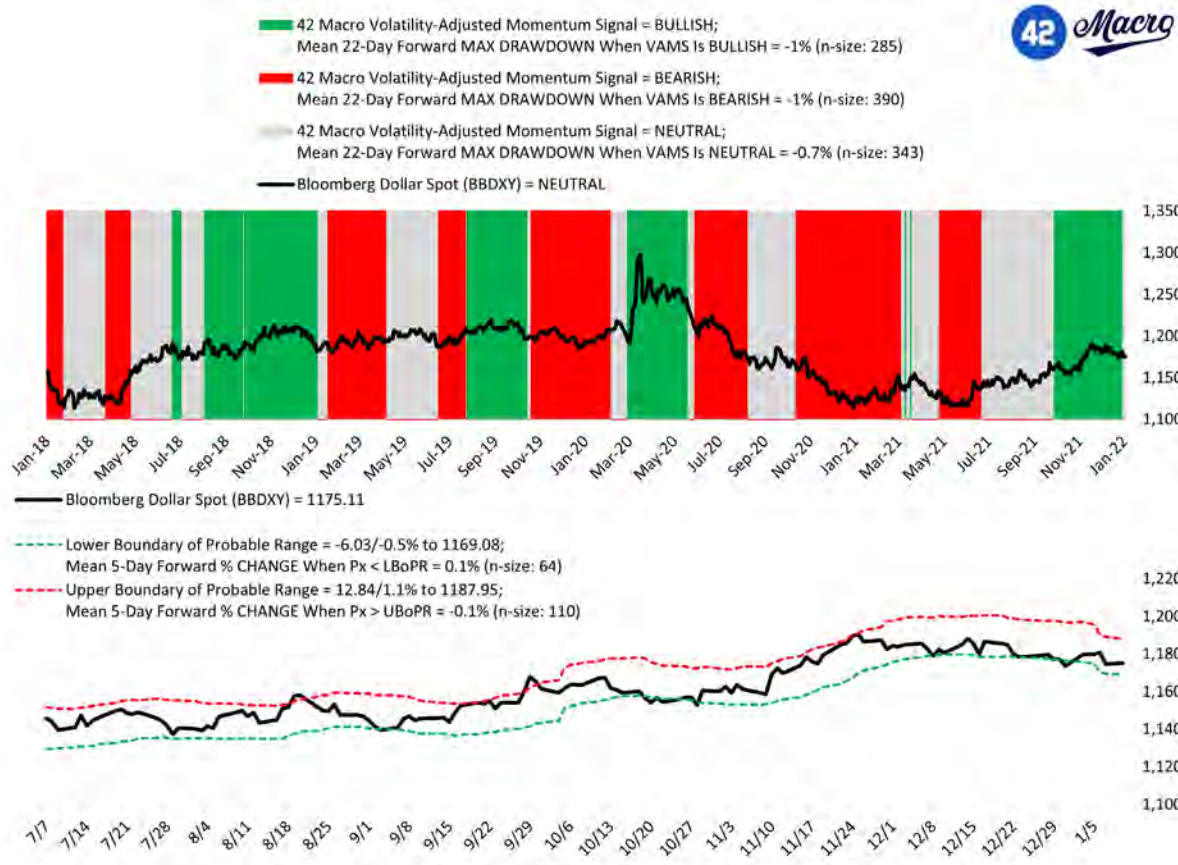
Preferreds
BDCs
Leveraged Loans
HY Credit
EM Local Currency

S&P 500 VAMS & Probable Range Model

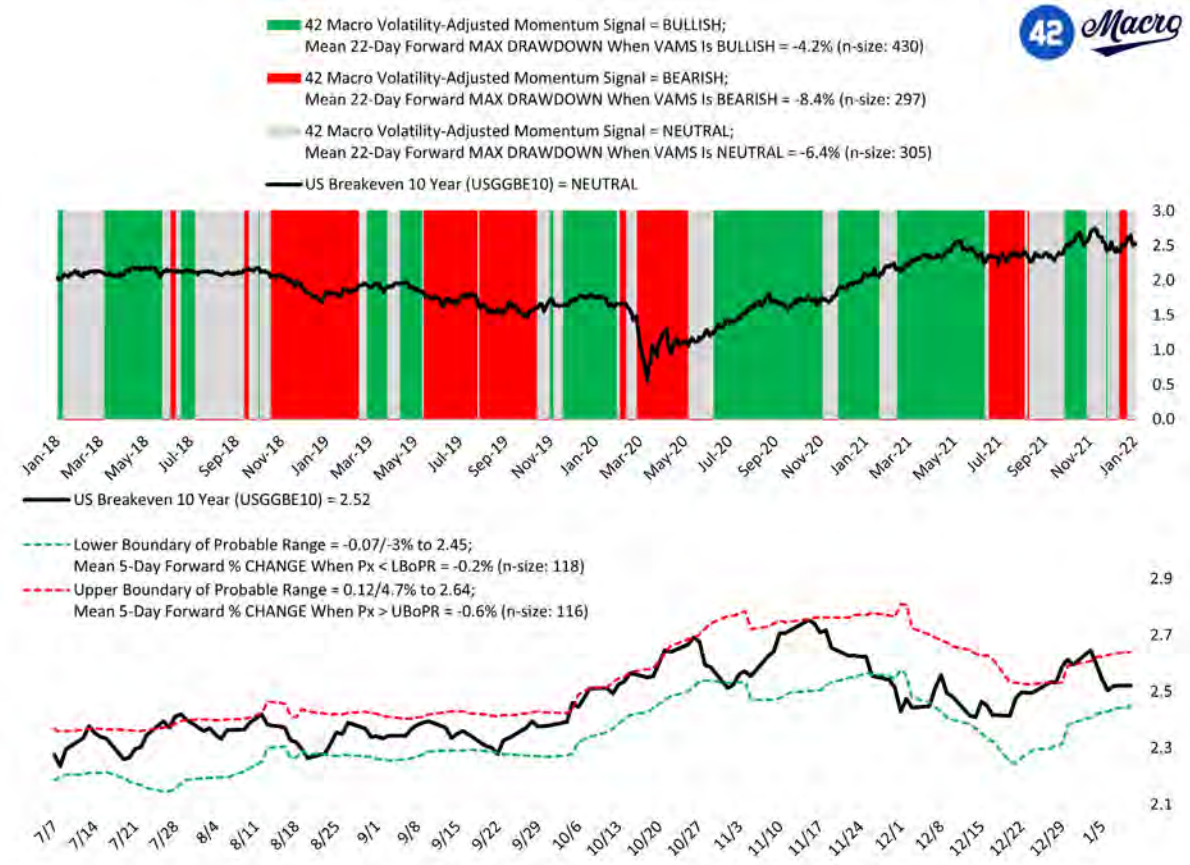
WTI VAMS & Probable Range Model



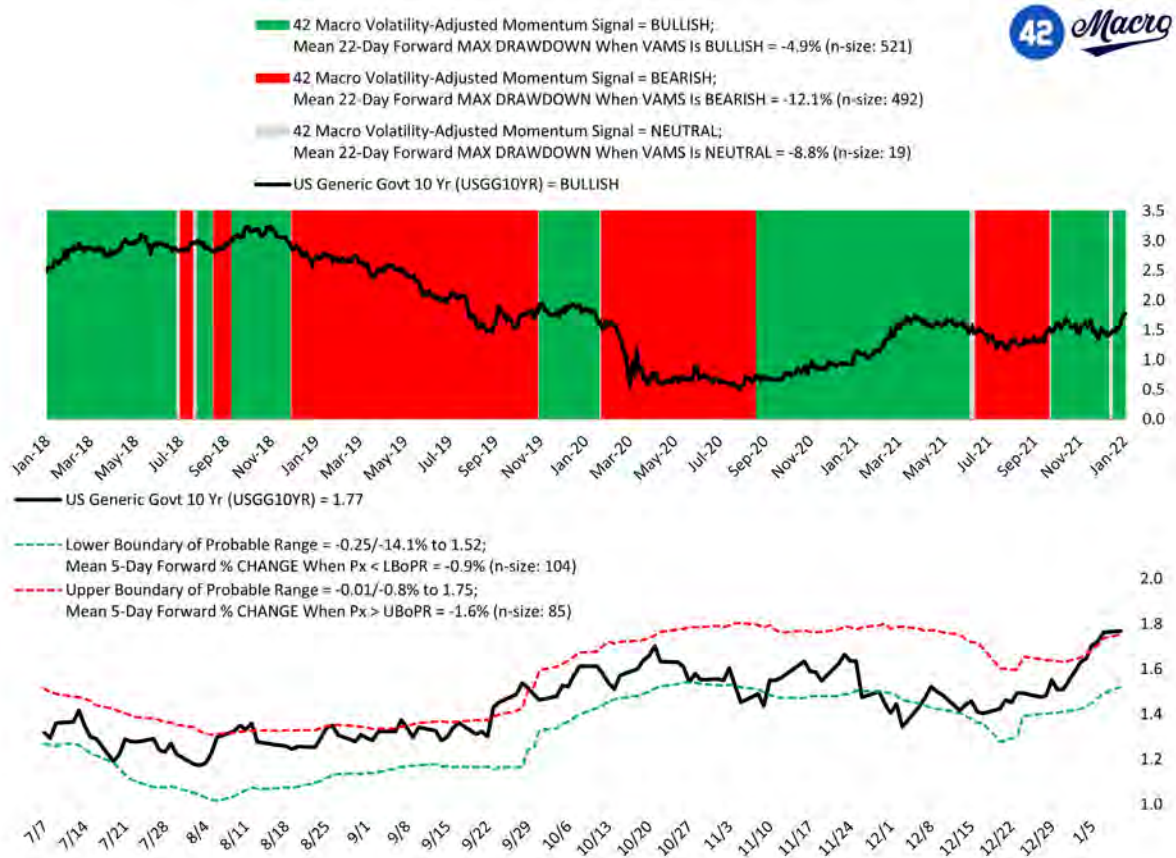
Bloomberg US Dollar Index VAMS & Probable Range Model



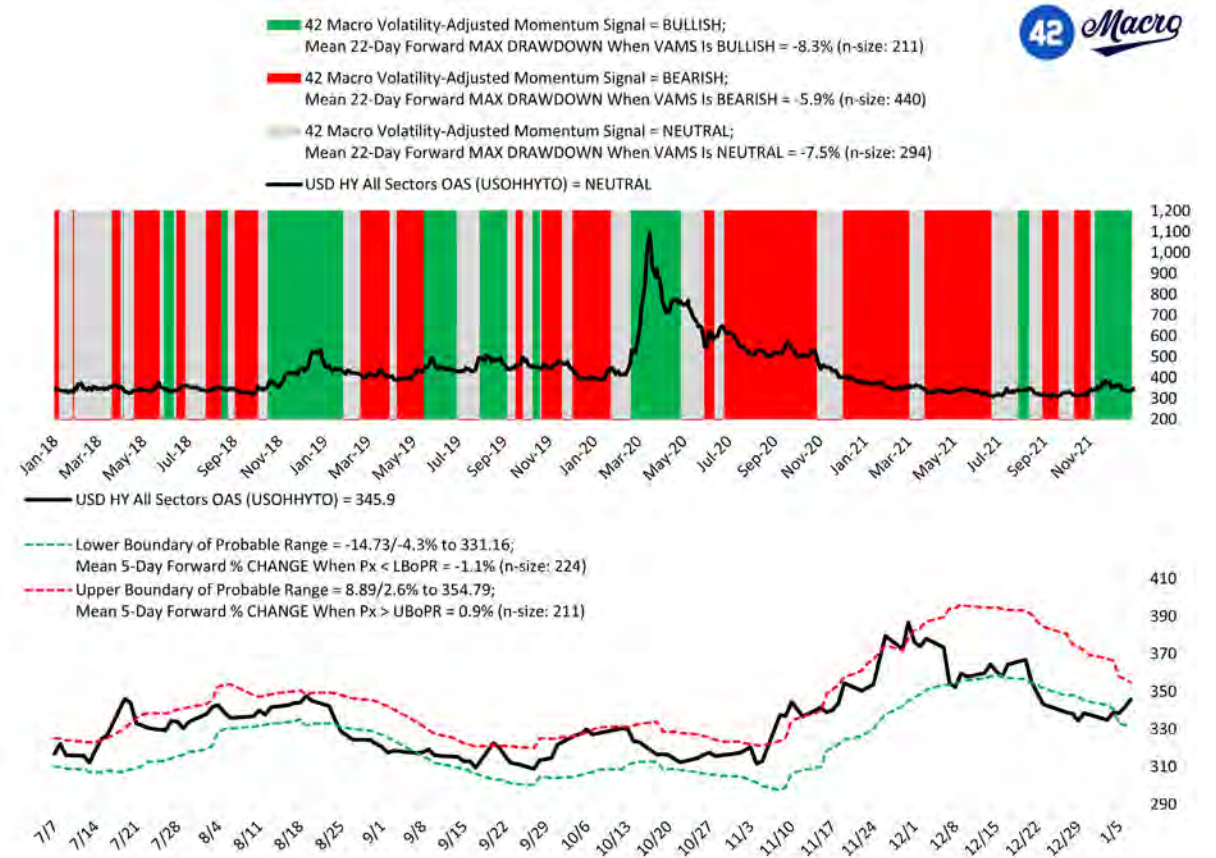
10yr TIPS Breakeven VAMS & Probable Range Model



10yr Nominal Treasury Yield VAMS & Probable Range Model

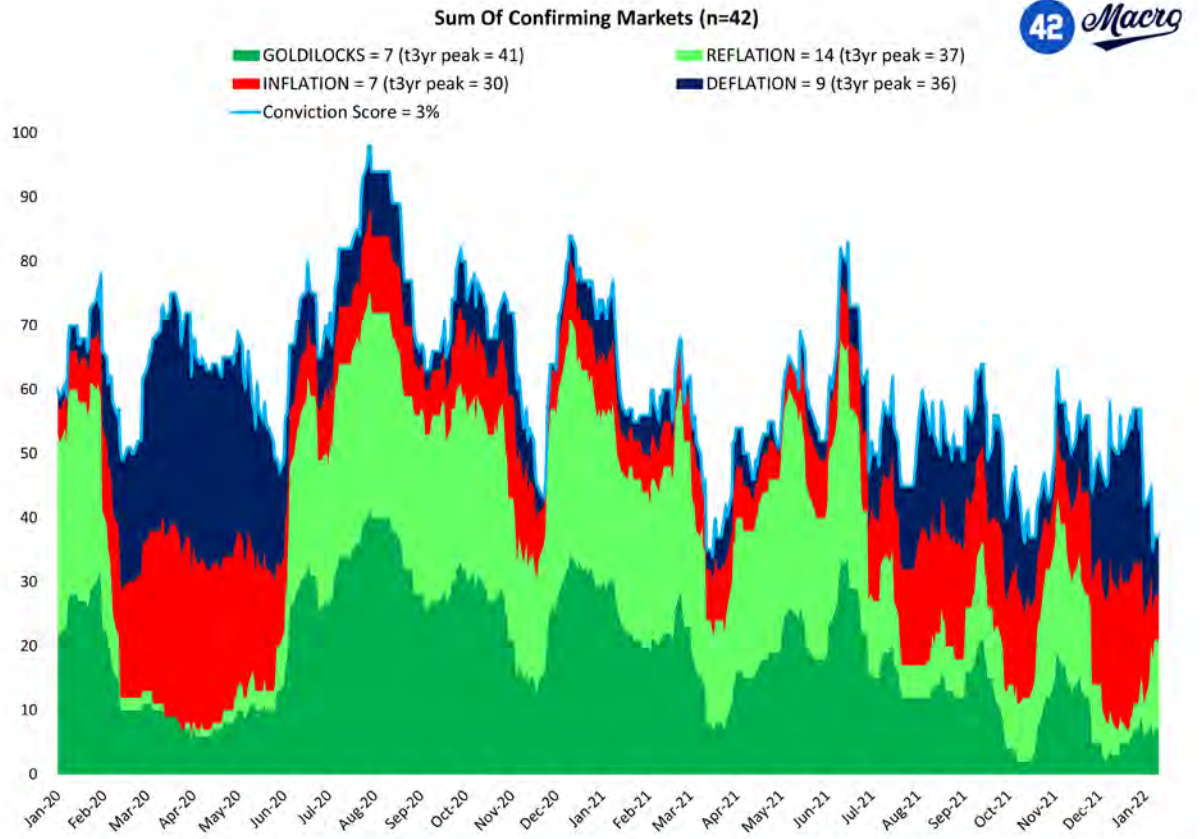
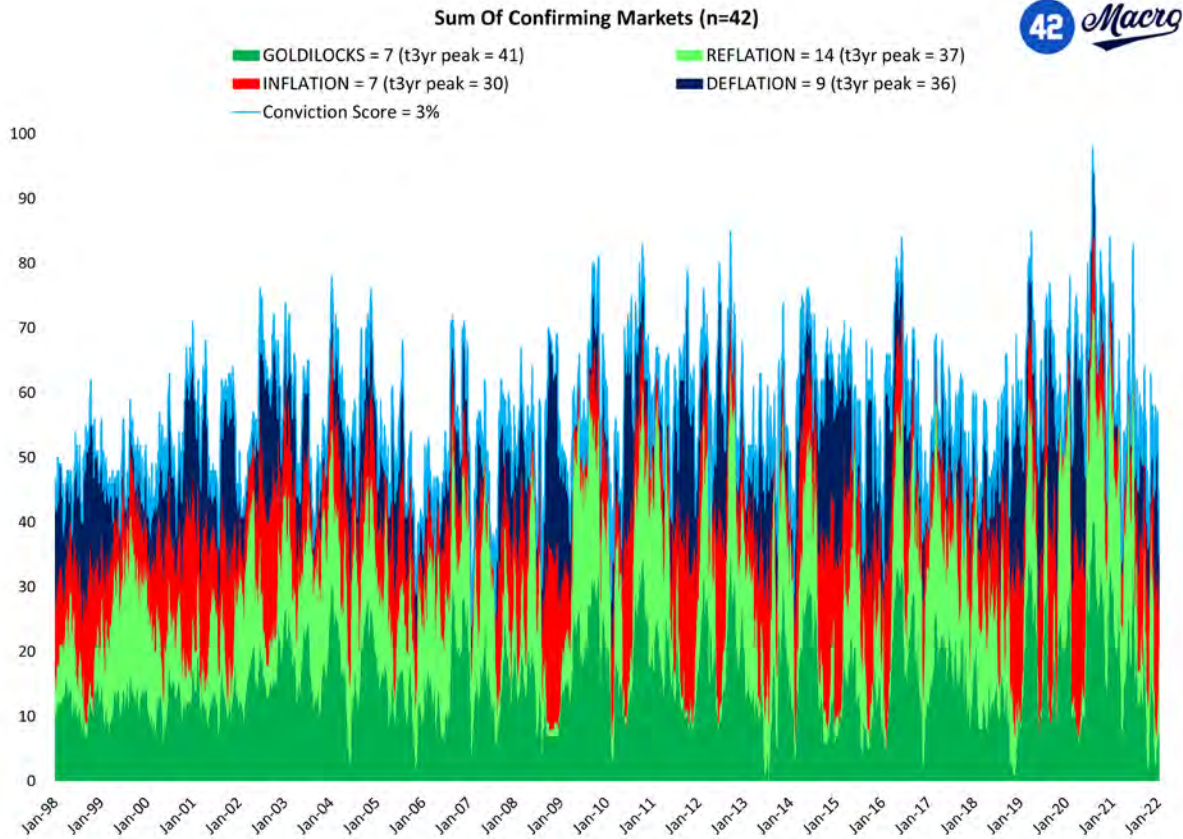


USD High Yield OAS VAMS & Probable Range Model



Global Macro Risk Matrix: Sum Of Confirming Markets

Since Jan-20

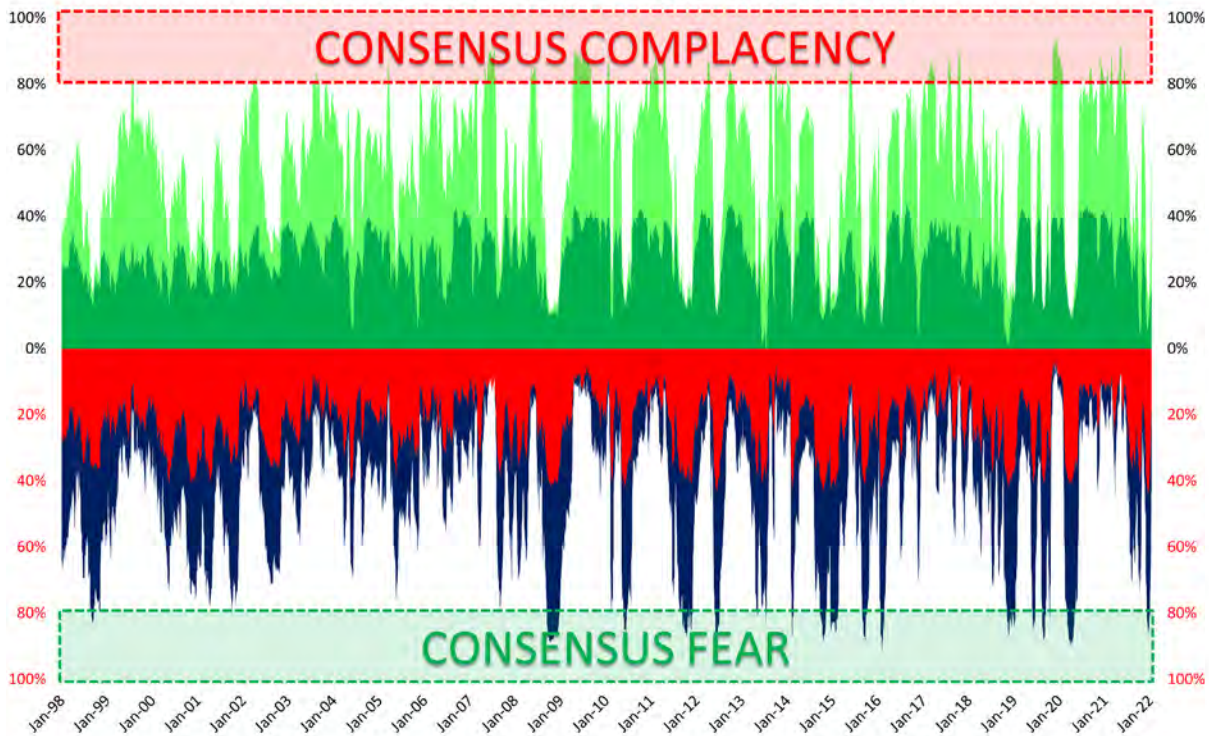


Global Macro Risk Matrix: Share Of Confirming Markets

Share Of Confirming Markets



■ GOLDILOCKS = 19% (t3yr peak = 43%)
 ■ REFLATION = 38% (t3yr peak = 55%)
■ INFLATION = 19% (t3yr peak = 44%)
 ■ DEFLATION = 24% (t3yr peak = 50%)

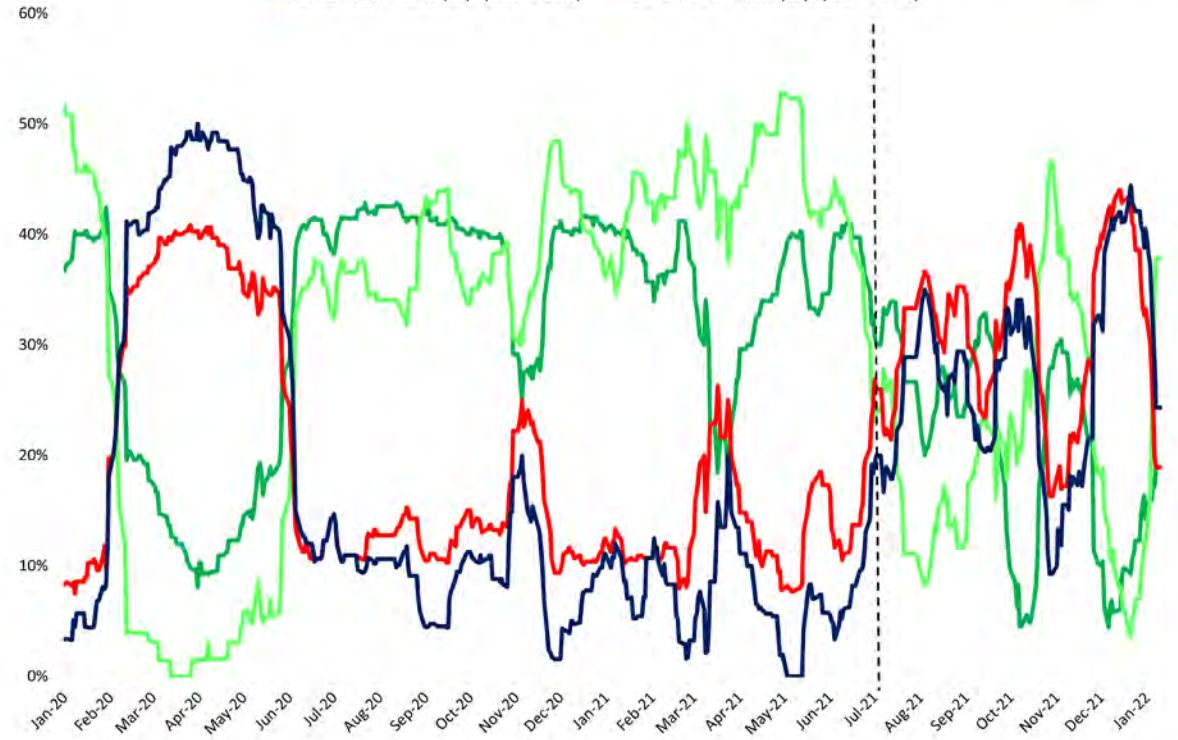


Since Jan-20

Share Of Confirming Markets

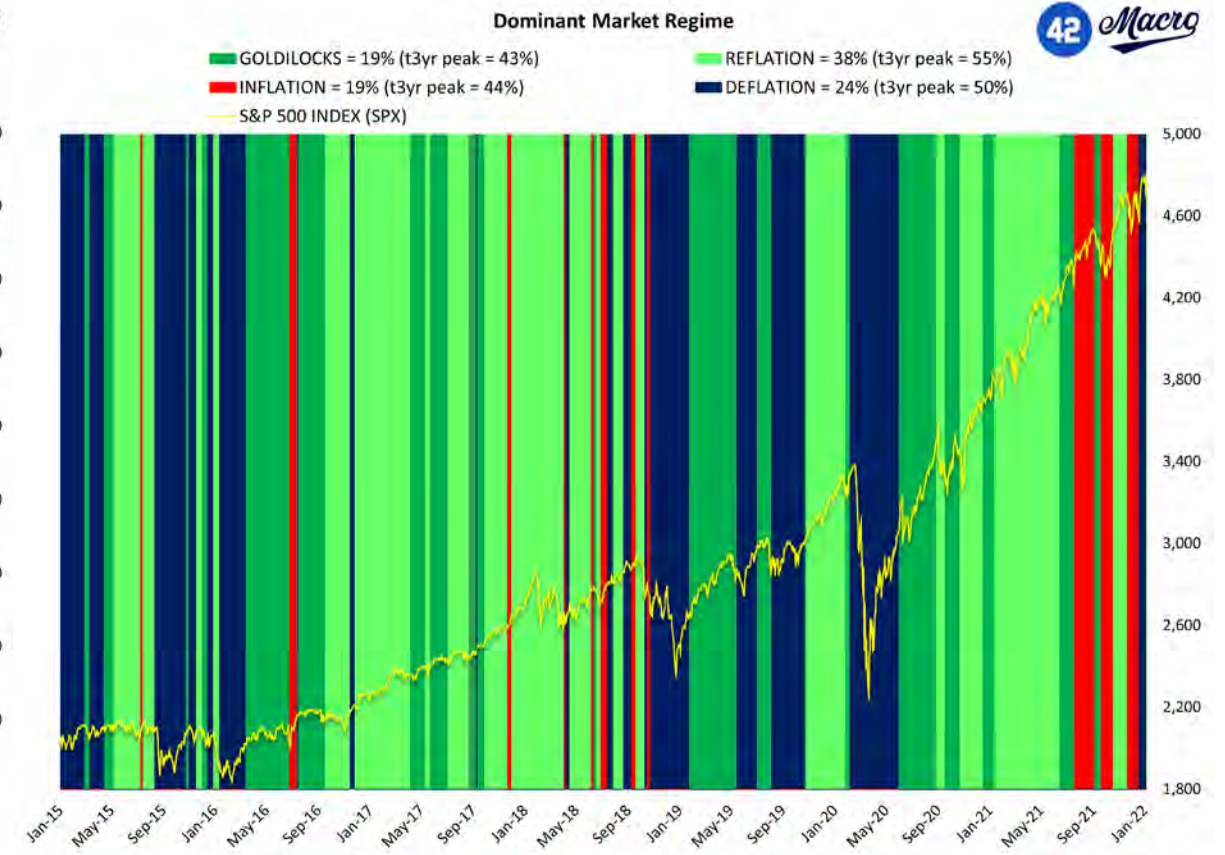
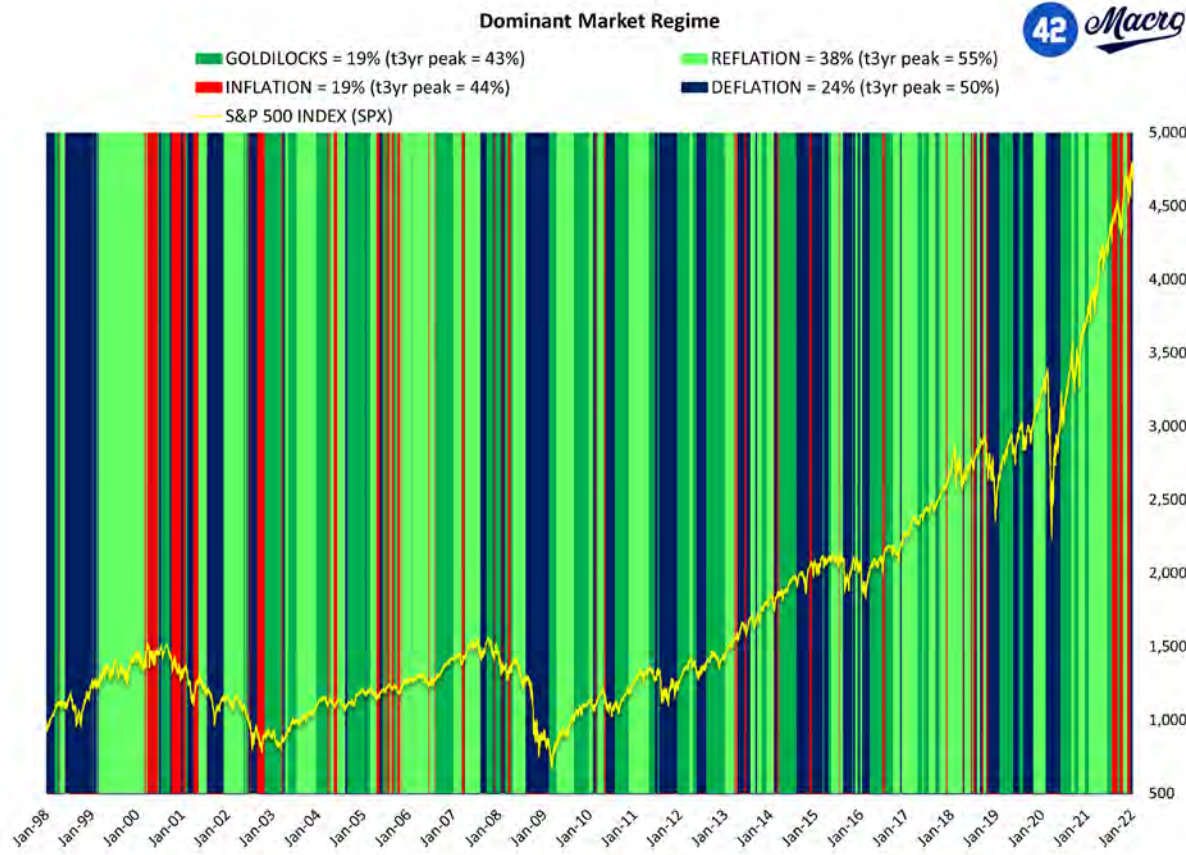


— GOLDILOCKS = 19% (t3yr peak = 43%)
 — REFLATION = 38% (t3yr peak = 55%)
— INFLATION = 19% (t3yr peak = 44%)
 — DEFLATION = 24% (t3yr peak = 50%)



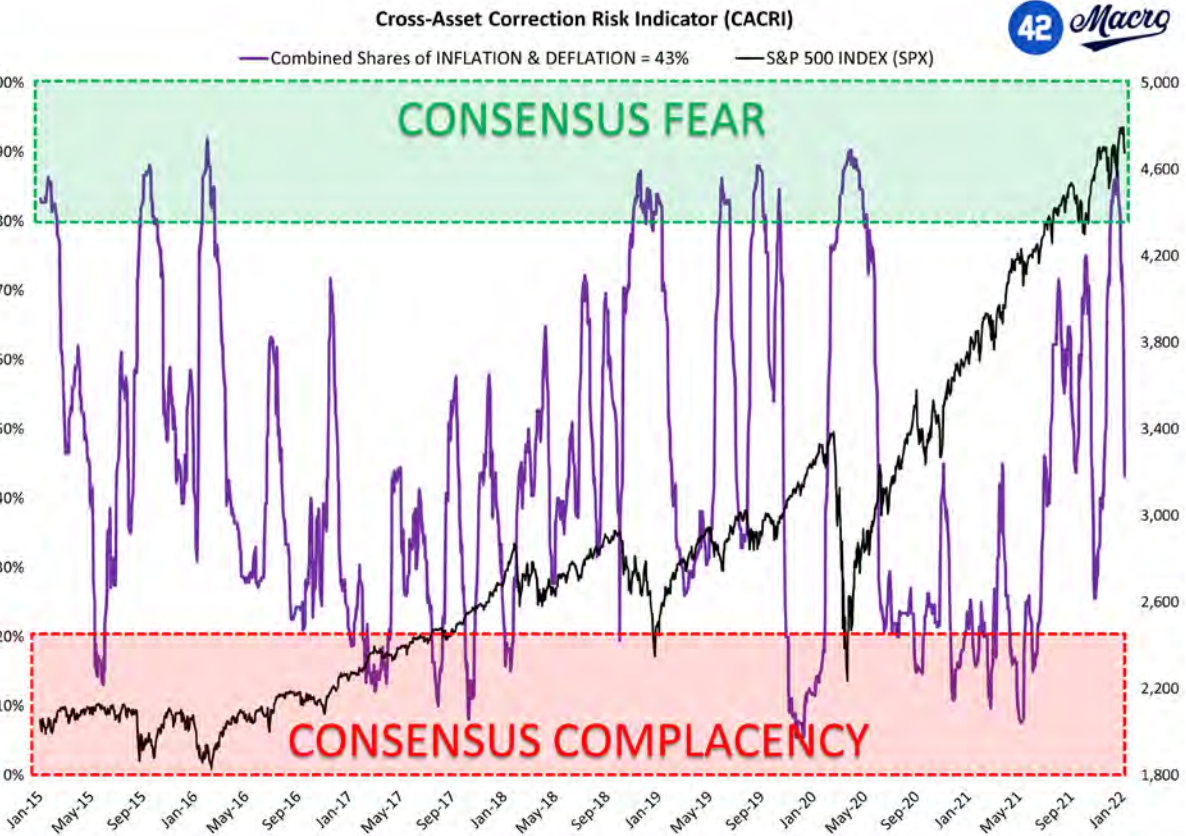
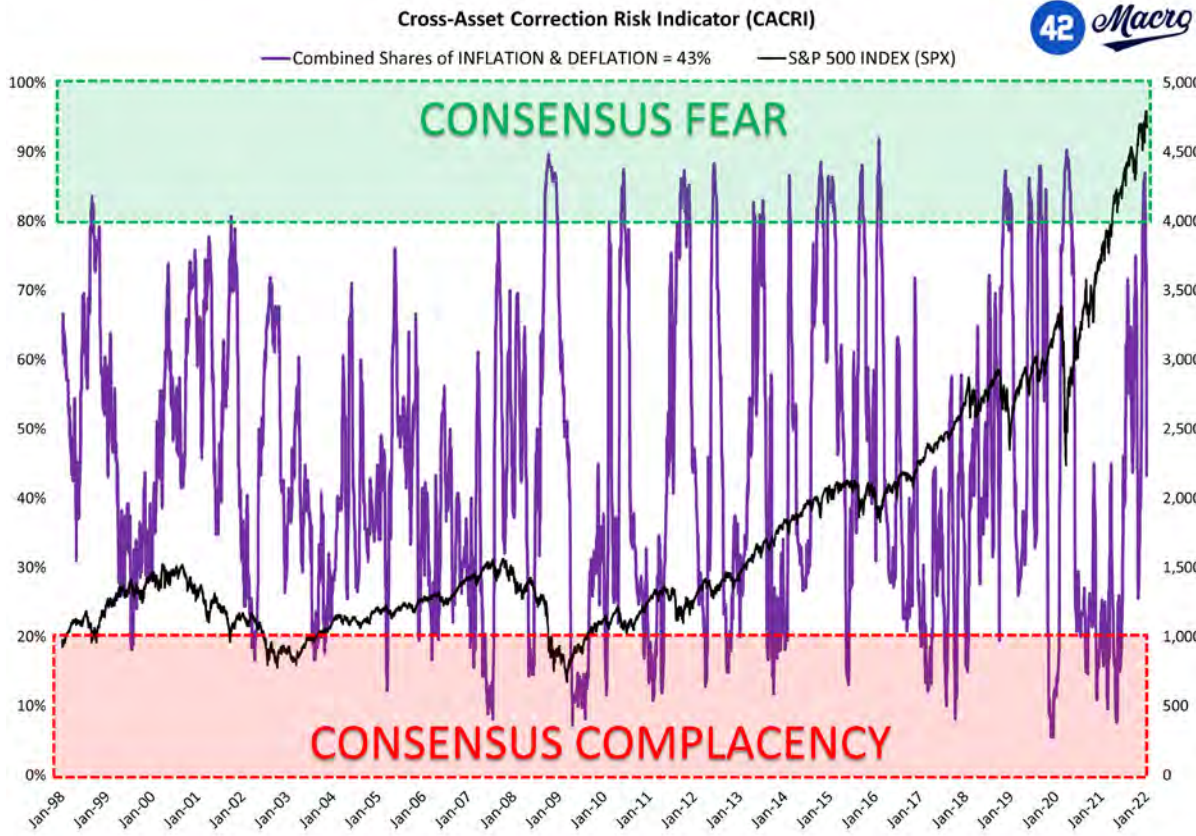
Global Macro Risk Matrix: Dominant Market Regime

Since Jan-15

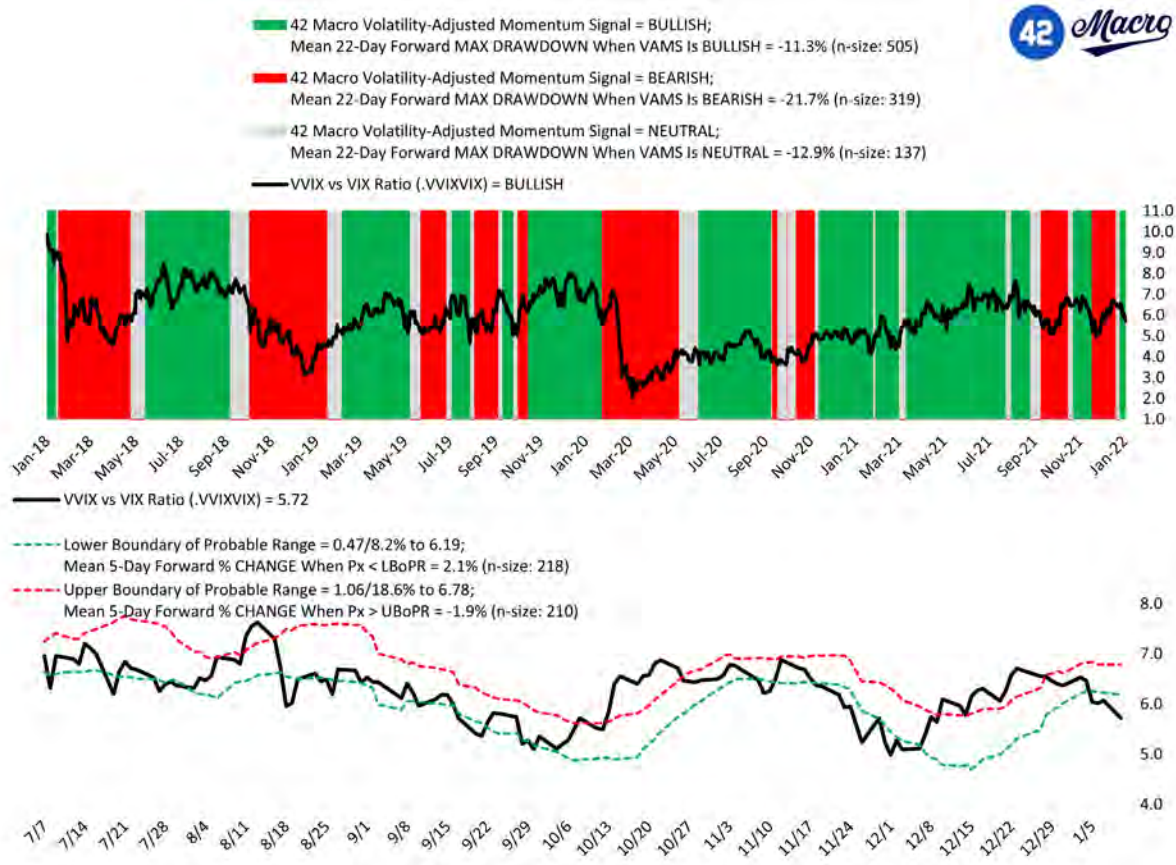


Cross-Asset Correction Risk Indicator (CACRI)

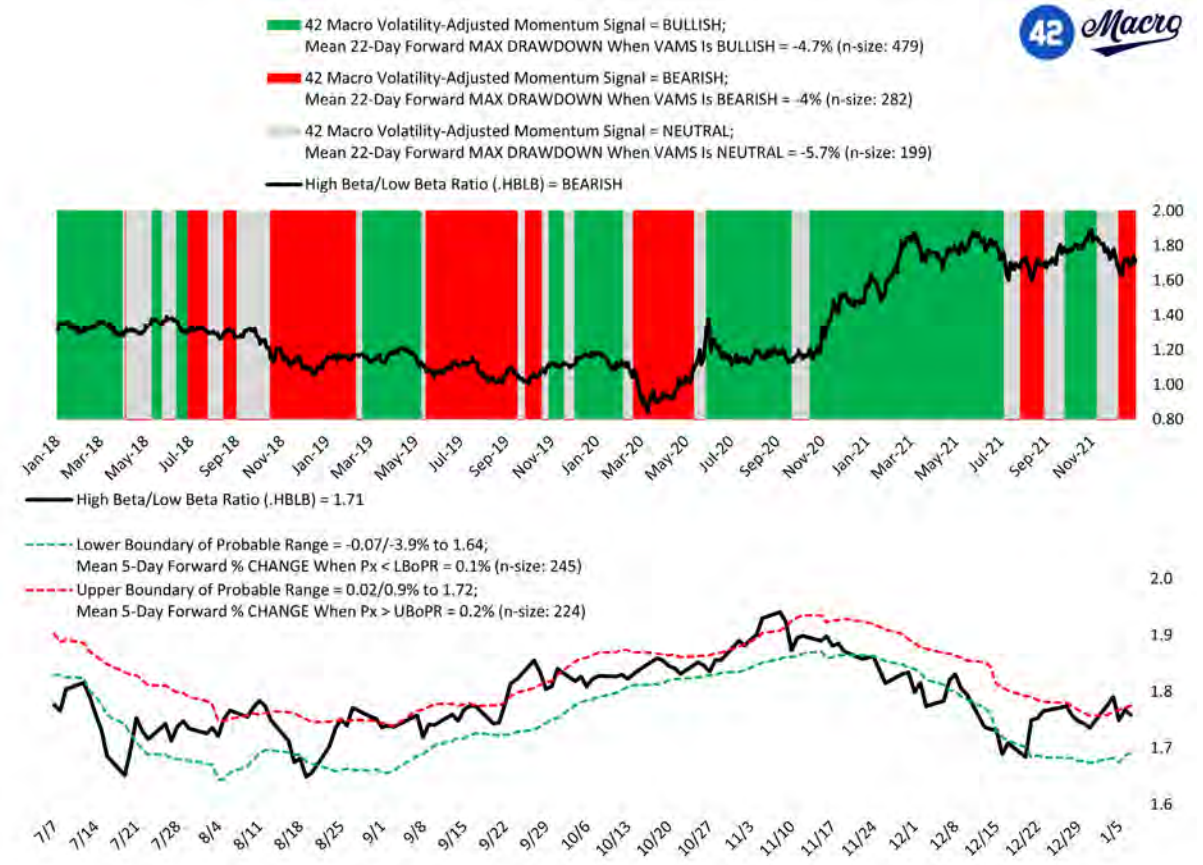
Since Jan-15



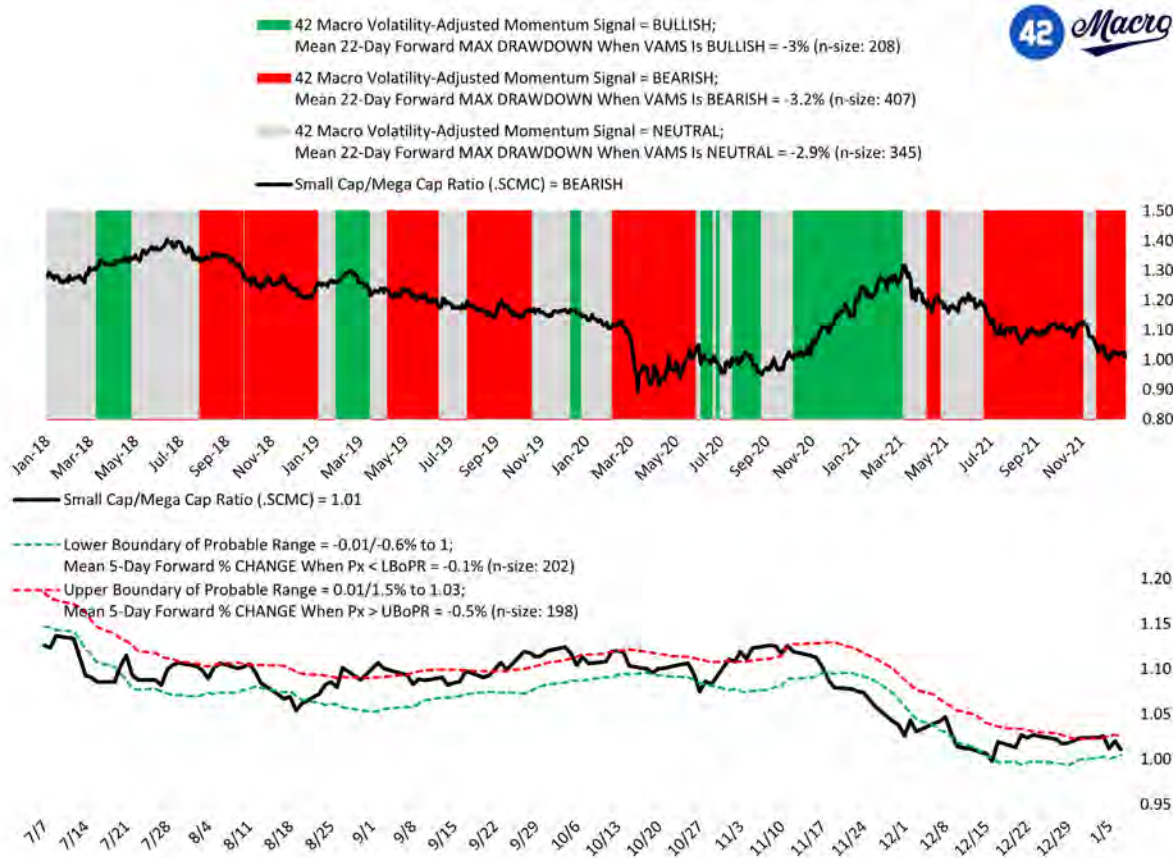
The Four Horsemen Of Market Risk: VVIX/VIX Ratio



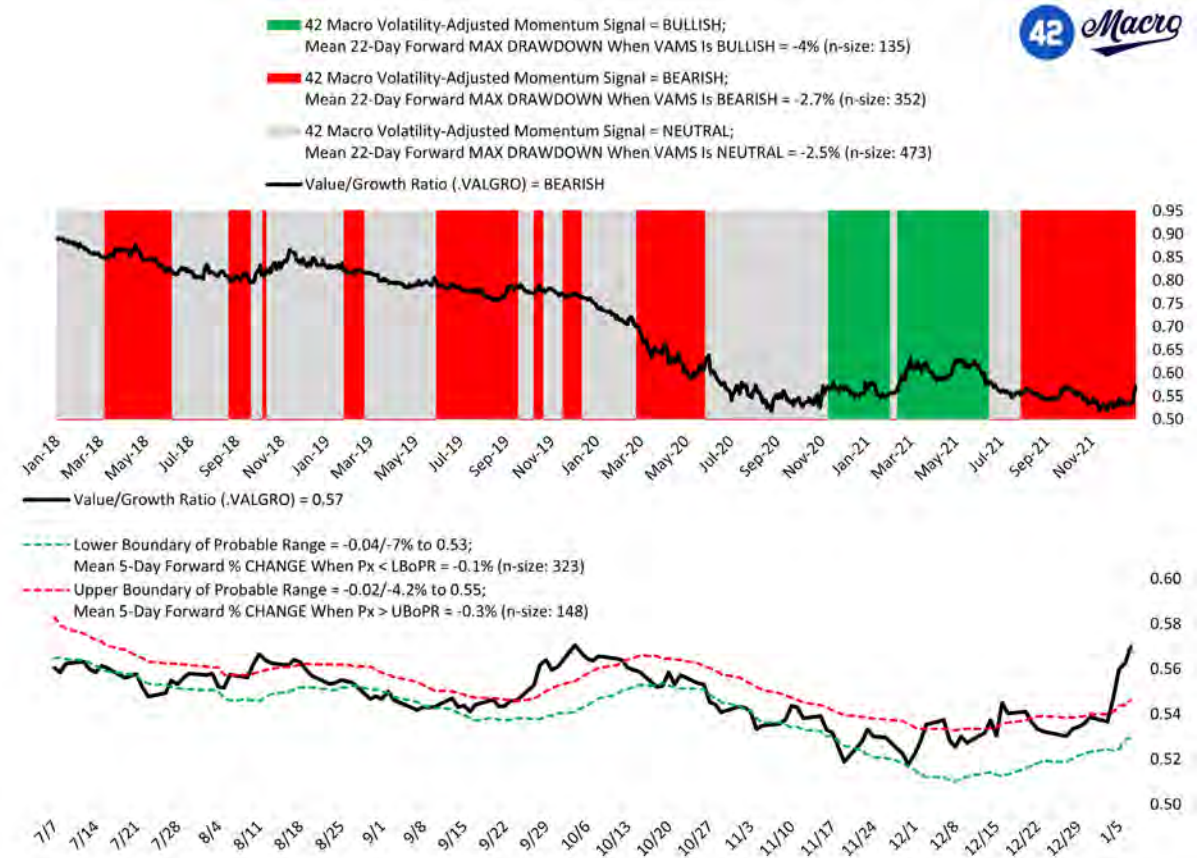
The Four Horsemen Of Market Risk: High Beta/Low Beta Ratio



The Four Horsemen Of Market Risk: Small Cap/Mega Cap Ratio



The Four Horsemen Of Market Risk: Value/Growth Ratio



Bottom-Up MACRO Regime Summary Table

Top-Down MARKET Regime Summary Table

	Actuals						Estimates							
	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Next 3mo	Next 6mo
United States	R	R	R	D	I	I	I	I	D	D	D	D	I	D
Conditional Probability of GOLDILOCKS	2%	7%	22%	24%	14%	3%	1%	9%	16%	5%	5%	5%	9%	7%
Conditional Probability of REFLATION	65%	60%	34%	15%	25%	32%	30%	18%	5%	2%	1%	1%	18%	9%
Conditional Probability of INFLATION	33%	30%	27%	24%	39%	58%	65%	48%	19%	23%	14%	11%	44%	30%
Conditional Probability of DEFLATION	1%	3%	18%	38%	22%	6%	3%	25%	60%	70%	80%	83%	29%	53%
China	I	I	D	D	I	I	I	I	D	D	I	I	I	I
Conditional Probability of GOLDILOCKS	2%	3%	5%	14%	11%	2%	2%	3%	4%	2%	3%	2%	3%	3%
Conditional Probability of REFLATION	5%	4%	3%	9%	12%	28%	34%	3%	1%	2%	26%	48%	13%	19%
Conditional Probability of INFLATION	71%	53%	36%	30%	40%	66%	60%	54%	14%	46%	62%	48%	43%	47%
Conditional Probability of DEFLATION	23%	40%	56%	46%	37%	5%	4%	40%	81%	51%	8%	2%	42%	31%
Eurozone	R	R	R	R	R	I	I	R	D	D	I	I	I	D
Conditional Probability of GOLDILOCKS	5%	16%	6%	1%	1%	1%	1%	25%	44%	34%	6%	4%	23%	19%
Conditional Probability of REFLATION	47%	64%	63%	58%	51%	49%	42%	27%	4%	6%	7%	4%	24%	15%
Conditional Probability of INFLATION	44%	16%	28%	40%	47%	49%	56%	25%	4%	9%	46%	46%	28%	31%
Conditional Probability of DEFLATION	4%	4%	3%	1%	1%	1%	1%	23%	48%	51%	42%	46%	24%	35%
Japan	G	R	R	I	I	I	I	I	D	D	I	I	I	D
Conditional Probability of GOLDILOCKS	51%	10%	11%	14%	5%	7%	8%	10%	14%	10%	4%	4%	11%	8%
Conditional Probability of REFLATION	33%	54%	39%	22%	31%	30%	28%	20%	6%	2%	6%	5%	18%	11%
Conditional Probability of INFLATION	6%	30%	39%	39%	54%	52%	50%	46%	23%	16%	55%	50%	40%	40%
Conditional Probability of DEFLATION	10%	6%	11%	25%	9%	11%	14%	23%	56%	72%	35%	41%	31%	40%
World	R	R	R	I	I	I	I	I	D	D	D	D	I	D
Conditional Probability of GOLDILOCKS	2%	17%	29%	15%	4%	5%	2%	4%	8%	5%	7%	4%	5%	5%
Conditional Probability of REFLATION	88%	48%	34%	23%	38%	29%	28%	6%	1%	2%	3%	1%	12%	7%
Conditional Probability of INFLATION	10%	25%	20%	38%	53%	57%	66%	52%	11%	30%	30%	21%	43%	35%
Conditional Probability of DEFLATION	0%	9%	17%	24%	6%	9%	4%	38%	80%	63%	60%	75%	41%	53%

Data Source: Bloomberg. Intellectual Property of 42 Macro LLC.

	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	1/10/2022
GOLDILOCKS Share of Confirming Markets	26%	24%	10%	28%	10%	14%	19%
REFLATION Share of Confirming Markets	11%	12%	23%	47%	18%	12%	38%
INFLATION Share of Confirming Markets	34%	35%	35%	16%	39%	33%	19%
DEFLATION Share of Confirming Markets	30%	29%	33%	9%	33%	40%	24%

Data Source: Bloomberg. Intellectual Property of 42 Macro LLC. BOLD = Dominant Market Regime. End of month values displayed.

CROWDING: Volatility Risk Premia vs. Skew

DISPERSION: MoM Sharpe Ratios

Options Market:
medium-term bullish;
short-term bearish

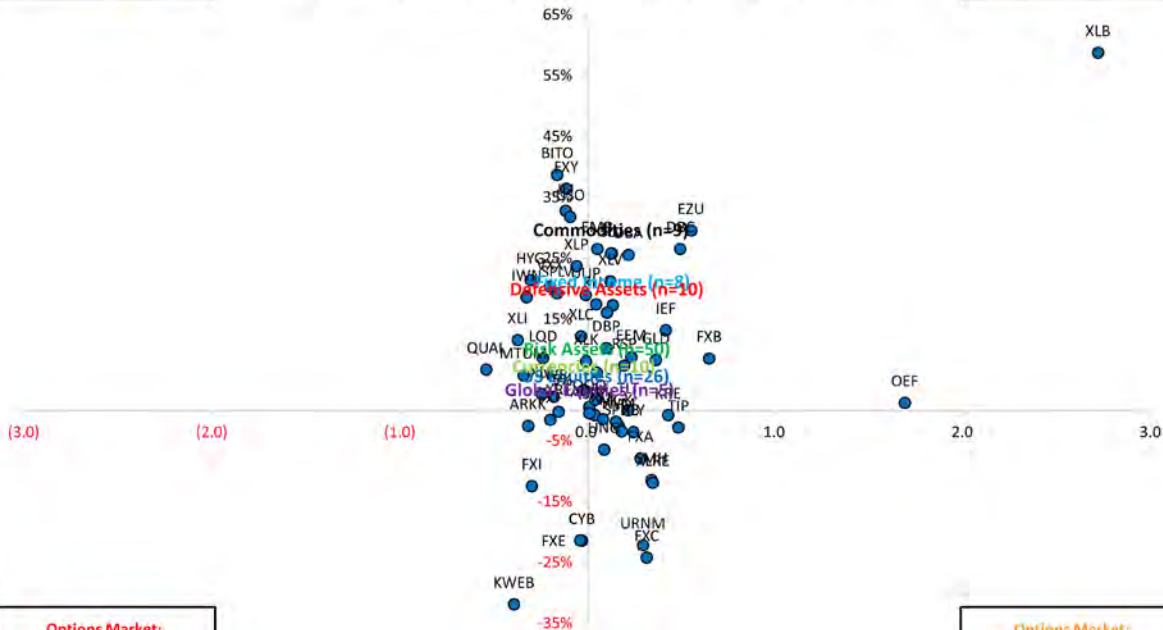
Trim Longs



x-axis: 1yr Z-Score of 2mo 25-Delta Skew;
y-axis: 30-day ATM Put Ivof/Mean(10-day, 20-day, 30-day Rvol); 1/10/2022

Options Market:
medium-term bearish;
short-term bearish

Short Squeeze Probable



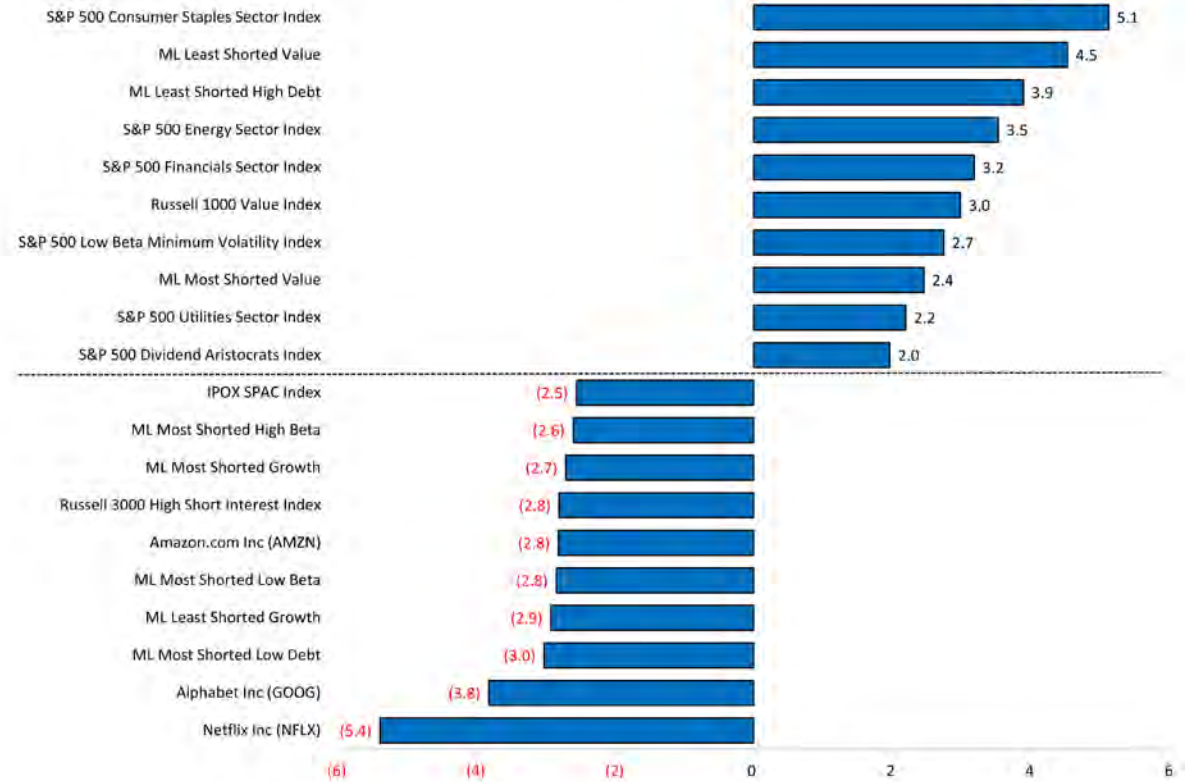
Options Market:
medium-term bullish;
short-term bullish

Correction Probable

Options Market:
medium-term bearish;
short-term bullish

Cover Shorts

US Equity Sector & Style Factor MoM Sharpe Ratio DISPERSION Study (n=50); 1/10/2022



POSITIONING

42 Macro CFTC CoT Crowding Analysis	Non- Commercial Net Length	3yr Z-Score	Mean 6mo Forward Performance <= -2σ	Mean 6mo Forward Performance />= +2σ	WoW Δ	1yr Z-Score	Mean 3wk Forward Performance <= -2σ	Mean 3wk Forward Performance />= +2σ	MoM Δ	1yr Z-Score	Mean 1mo Forward Performance <= -2σ	Mean 1mo Forward Performance />= +2σ	3mo Δ	3yr Z-Score	Mean 6mo Forward Performance <= -2σ	Mean 6mo Forward Performance />= +2σ
10yr	(196,835)	(0.8)	1.5%	-2.4%	(33,612)	(0.4)	-0.3%	0.3%	(11,154)	0.1	-0.3%	0.1%	(365,063)	(2.2)	0.5%	-0.4%
2yr	40,926	2.0	-0.1%	-0.1%	(45,860)	(0.8)	0.0%	0.0%	8,479	(0.1)	0.0%	-0.0%	82,710	0.4	0.0%	-0.1%
3mo Eurodollars	(960,972)	(1.7)	-0.1%	0.9%	(33,234)	(0.0)	0.0%	0.0%	(294,802)	(0.6)	0.0%	0.0%	(636,014)	(0.9)	-0.1%	-0.0%
5yr	(414,037)	(2.0)	0.0%	0.0%	(132,625)	(1.8)	0.0%	0.1%	(48,972)	(0.3)	-0.0%	-0.0%	(105,003)	(0.5)	-0.1%	0.7%
AUD	(94,816)	(2.2)	-0.9%	-2.8%	(9,272)	(1.4)	-0.1%	-0.2%	(8,648)	(0.2)	2.1%	-0.1%	(4,893)	(0.1)	-1.0%	-1.0%
Bitcoin	(620)	1.1	100.5%	-14.5%	(61)	(0.2)	6.1%	-1.8%	314	0.1	8.1%	2.2%	895	1.4	103.0%	36.6%
BRL	(1,077)	0.7	-12.6%	-12.2%	4,210	0.9	-0.8%	-0.6%	4,547	0.4	-1.7%	-2.8%	1,213	0.1	-14.7%	-14.1%
CAD	(11,654)	(0.3)	1.4%	-2.9%	(182)	0.0	0.9%	0.4%	(580)	0.0	0.4%	0.4%	11,637	0.3	1.1%	-2.7%
CHF	(10,841)	(0.5)	0.5%	2.0%	887	0.4	-0.4%	-1.9%	2,311	0.6	1.2%	-1.6%	6,459	0.5	0.4%	0.6%
Cocoa	(1,353)	(0.9)	-4.6%	8.2%	3,096	0.4	2.3%	-3.1%	15,354	1.2	3.6%	-1.7%	(37,896)	(1.1)	6.1%	-0.8%
Coffee	56,586	1.0	-3.5%	-6.3%	(336)	(0.1)	2.2%	-0.5%	(6,504)	(0.6)	3.3%	-0.5%	(3,335)	(0.4)	-6.7%	3.3%
Copper	19,072	0.2	-0.0%	6.0%	5,251	0.9	-0.3%	-0.8%	12,023	1.1	-1.2%	-3.1%	4,261	0.1	1.0%	-0.2%
Corn	437,270	1.1	1.0%	26.8%	(10,517)	(0.4)	-4.0%	1.6%	37,191	0.7	1.6%	1.0%	126,244	0.4	13.7%	-18.5%
Cotton	102,895	1.3	4.6%	-0.9%	6,178	0.9	0.6%	-1.5%	7,076	0.5	-0.8%	-1.1%	(25,024)	(0.9)	12.5%	5.7%
Dow Jones	7,355	0.1	10.8%	10.3%	8,434	1.5	-0.4%	0.2%	11,864	1.2	0.5%	2.8%	13,551	1.0	7.8%	8.1%
DXY	39,057	1.5	-3.4%	1.0%	2,282	0.4	0.6%	0.3%	4,190	0.1	-0.3%	0.1%	7,051	0.5	1.3%	-2.8%
EUR	(4,758)	(0.3)	-1.7%	2.9%	4,903	0.6	-0.3%	-1.0%	6,576	0.7	1.0%	-0.9%	17,641	0.2	-4.6%	7.4%
GBP	(38,298)	(0.7)	0.3%	-4.8%	13,160	1.4	-0.8%	-1.7%	1,536	0.3	-1.1%	-0.9%	(18,297)	(0.5)	2.0%	3.5%
Gold	227,200	(0.1)	1.1%	-0.9%	(707)	0.0	1.7%	-0.1%	857	0.1	2.7%	-0.8%	37,375	0.3	5.3%	1.2%
JPY	(72,619)	(1.2)	-3.1%	8.7%	(13,896)	(1.0)	1.0%	-0.8%	(6,763)	0.1	0.0%	-1.3%	832	(0.0)	0.2%	5.6%
Lean Hogs	63,771	0.3	-14.1%	10.8%	(755)	(0.2)	0.0%	5.2%	8,623	0.5	-4.1%	8.5%	(24,946)	(0.9)	7.0%	-18.4%
Long Bond	(44,559)	0.8	-3.7%	-3.0%	(25,302)	(1.6)	0.7%	0.3%	(18,984)	(0.9)	-0.7%	1.6%	67,427	1.3	-5.5%	0.8%
MXN	(9,561)	(0.8)	-3.8%	-3.8%	(479)	(0.0)	-1.1%	0.3%	54,519	3.1	1.7%	-0.6%	25,818	0.5	7.2%	-0.8%
NASDAQ	21,331	0.5	9.8%	6.5%	6,932	0.8	1.1%	-1.0%	(5,186)	(0.3)	3.1%	0.3%	24,538	0.7	13.0%	8.6%
Natural Gas	(143,670)	(0.7)	-13.3%	-8.7%	4,119	0.6	2.7%	2.7%	(8,538)	0.1	7.4%	-1.6%	(10,619)	0.0	-1.8%	11.6%
NZD	(8,845)	(0.3)	0.8%	-2.8%	(424)	(0.0)	-0.6%	0.5%	(19,550)	(2.5)	-1.0%	-0.9%	(16,875)	(1.2)	2.6%	-1.5%
Platinum	7,405	(1.0)	-1.5%	-8.9%	2,191	0.8	-1.4%	0.4%	1,145	0.4	-1.2%	0.1%	1,329	0.1	0.2%	-4.3%
Russell 2000	(16,067)	(0.1)	3.6%	-8.1%	4,404	0.6	-8.4%	3.8%	11,201	0.9	5.3%	-5.0%	42,613	1.0	-0.9%	
S&P 400	7,559	0.1	20.9%	10.2%	1,402	1.4	1.3%	1.5%	1,202	0.9	4.8%	1.1%	396	0.2	10.4%	11.6%
S&P 500	123,419	1.4	12.2%	7.9%	11,874	0.3	1.3%	2.1%	(39,499)	(1.0)	3.7%	3.9%	54,272	0.4	12.6%	9.7%
Silver	30,781	(0.5)	-1.6%	-1.6%	4,280	0.8	-0.1%	1.2%	983	0.3	4.6%	-2.8%	16,045	0.4	-3.2%	-14.9%
Soybeans	131,774	0.6	-6.1%	17.6%	5,331	0.4	2.1%	0.7%	70,393	2.6	4.6%	-1.7%	81,619	0.9	-14.4%	-1.1%
Sugar	167,055	0.4	-4.6%	7.8%	(13,278)	(0.5)	-1.4%	1.9%	(13,667)	(0.2)	0.6%	-3.2%	(78,048)	(0.8)	5.3%	-8.0%
VIX	(60,454)	0.8			(13,259)	(1.1)			(13,051)	(0.7)		4.0%	9,134	0.2		
Wheat	(5,510)	(0.6)	-6.9%	-10.4%	(5,155)	(0.5)	-0.0%	0.8%	(15,042)	(0.7)	0.0%	-2.0%	(8,685)	(0.3)		-12.4%
WTI	395,468	(1.4)	53.7%	-1.7%	(5,493)	(0.2)	-1.5%	13.1%	(19,060)	(0.2)	0.6%	20.9%	(88,043)	(1.1)	-24.1%	0.9%

Data Source: Bloomberg. Intellectual Property of 42 Macro LLC. Trailing 10yr backtests performed on the underlying front-month futures contract for each exposure.

GRID Asset Market Backtest Considerations: REFLATION

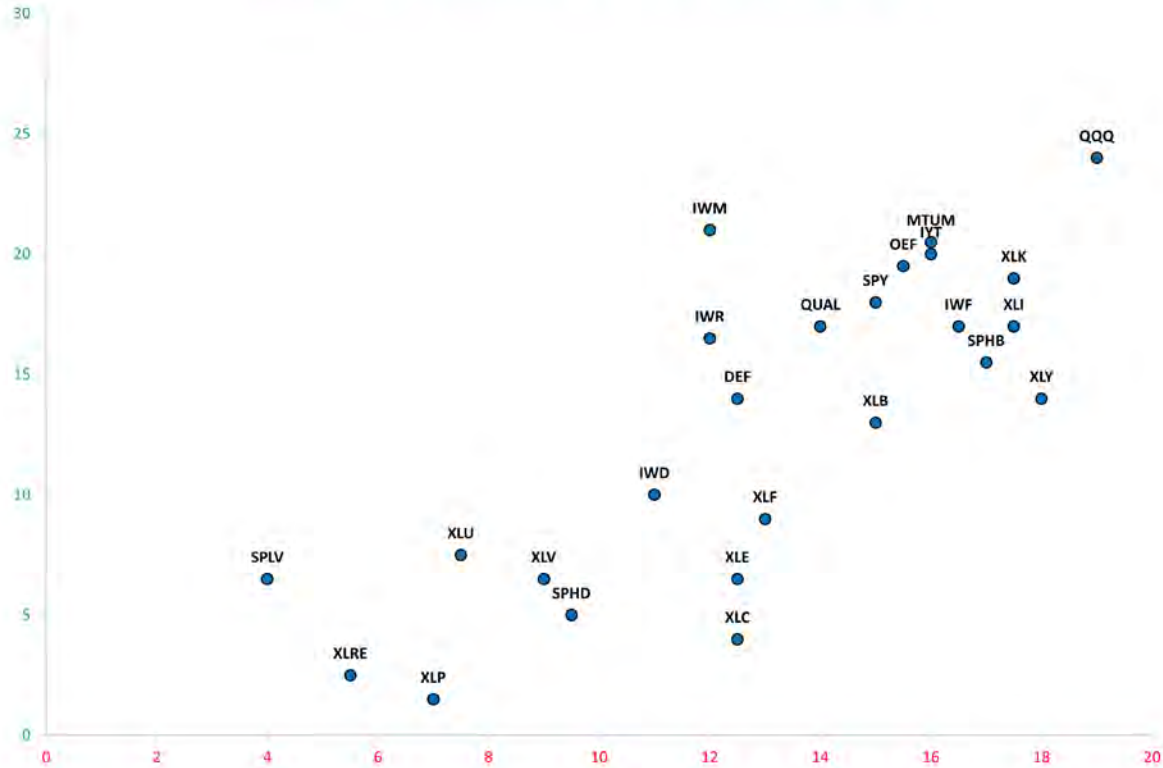
	Macro Regime	GROWTH Δ Z-Score	INFLATION Δ Z-Score	POLICY Rate	POLICY Balance Sheet	POLICY Fiscal Balance	US-World Regime	Blended Annualized Expected Return	Dynamic Macro Regime Ranking
	R	2σ	0σ	Tightening	Tightening	Tightening	R-R	R	R
SPX Index	15.1%	23.7%	12.8%	10.0%	16.9%	28.4%	18.0%	16.7%	14
S&P 100 Index	15.5%	24.7%	12.7%	13.8%	17.1%	31.2%	18.7%	17.6%	15
NASDAQ 100 Stock Index	28.2%	34.1%	22.2%	45.0%	38.7%	56.8%	28.7%	32.9%	25
S&P Midcap 400 Index	18.1%	24.4%	15.0%	8.2%	19.4%	25.3%	20.1%	18.4%	16
Russell 2000 Index	16.2%	22.4%	13.9%	11.9%	25.1%	39.3%	19.4%	19.1%	17
MSCI USA Consumer Discretionary Index	17.2%	39.1%	18.1%	14.2%	19.3%	36.2%	18.5%	20.7%	19
MSCI USA Consumer Staples Index	4.2%	18.9%	1.3%	-12.8%	-1.5%	-3.2%	6.8%	2.9%	1
MSCI USA Communication Services Index	9.3%	13.4%	9.9%	-10.2%	12.0%	24.1%	12.5%	9.8%	7
MSCI USA Energy Index	12.7%	7.5%	10.9%	-7.8%	9.5%	45.6%	15.4%	13.1%	9
MSCI USA Financials Index	14.4%	26.1%	11.8%	2.0%	17.4%	15.4%	17.7%	14.7%	12
MSCI USA Health Care Index	10.6%	0.7%	5.6%	8.8%	17.8%	1.3%	14.4%	9.3%	6
MSCI USA Industrials Index	17.6%	27.8%	18.2%	7.5%	15.2%	35.8%	23.4%	19.5%	18
MSCI USA Information Technology Index	25.9%	37.8%	21.7%	36.7%	37.5%	54.3%	25.4%	30.8%	24
MSCI USA Materials Index	13.6%	20.8%	15.9%	-3.9%	8.1%	20.8%	20.0%	13.6%	11
MSCI US Real Estate Index	7.5%	-3.3%	-5.5%	2.6%	-2.5%	30.7%	13.8%	6.7%	2
MSCI USA Utilities Index	6.4%	9.8%	4.9%	2.7%	7.4%	14.7%	13.2%	7.6%	4
S&P 500 High Beta Index	22.2%	30.4%	18.2%	15.0%	30.6%	40.2%	24.7%	24.3%	23
S&P 500 Low Volatility Index	7.9%	16.7%	5.9%	-5.1%	6.6%	6.1%	13.4%	7.6%	3
Russell 3000 Defensive	12.0%	21.8%	9.2%	5.4%	11.9%	21.3%	15.8%	13.1%	10
Russell 3000 Dynamic	19.1%	27.0%	16.8%	16.0%	24.7%	37.7%	21.3%	21.5%	20
S&P 500 Dividend Aristocrats Price Index	9.6%	13.3%	9.2%	-7.6%	8.9%	6.3%	12.9%	8.4%	5
MSCI USA Momentum USD PR	20.1%	22.7%	19.3%	24.8%	21.6%	40.6%	20.8%	22.6%	22
MSCI USA Quality Price USD Index	14.7%	23.1%	11.2%	11.6%	18.2%	23.3%	17.3%	16.1%	13
MSCI United States Growth Index	19.1%	31.2%	16.6%	22.2%	24.2%	37.6%	21.1%	22.3%	21
MSCI United States Value Index	11.6%	16.5%	10.4%	-1.6%	10.9%	21.5%	15.3%	11.9%	8

GRID Asset Market Backtest Considerations: DEFLATION

	Macro Regime	GROWTH Δ Z-Score	INFLATION Δ Z-Score	POLICY Rate	POLICY Balance Sheet	POLICY Fiscal Balance	US-World Regime	Blended Annualized Expected Return	Dynamic Macro Regime Ranking
	D	(1σ)	(1σ)	Tightening	Tightening	Tightening	D-D	D	D
SPX Index	-2.7%	8.3%	0.3%	2.7%	-0.3%	-3.2%	-4.8%	-1.1%	11
S&P 100 Index	-3.6%	10.6%	-2.5%	0.8%	-0.5%	-11.9%	-5.8%	-2.6%	8
NASDAQ 100 Stock Index	-2.1%	14.6%	-10.6%	2.2%	-3.3%	-18.2%	-7.2%	-2.9%	6
S&P Midcap 400 Index	-0.4%	6.6%	4.5%	6.4%	0.1%	11.7%	-3.1%	2.0%	16
Russell 2000 Index	-4.7%	5.4%	6.0%	7.3%	-7.1%	20.6%	-8.8%	-0.4%	12
MSCI USA Consumer Discretionary Index	0.3%	13.8%	1.2%	-0.6%	0.6%	-8.2%	-3.6%	0.4%	13
MSCI USA Consumer Staples Index	6.4%	14.4%	13.0%	11.1%	11.6%	-0.9%	7.5%	7.9%	24
MSCI USA Communication Services Index	-4.1%	1.3%	0.1%	-3.5%	-3.1%	6.1%	-2.7%	-2.2%	9
MSCI USA Energy Index	1.2%	-6.4%	4.5%	10.0%	2.1%	31.7%	-2.0%	3.9%	20
MSCI USA Financials Index	-10.2%	2.0%	4.6%	-3.0%	-8.8%	5.8%	-13.0%	-6.1%	2
MSCI USA Health Care Index	8.3%	12.6%	11.4%	14.1%	3.8%	18.0%	11.9%	10.1%	25
MSCI USA Industrials Index	-6.7%	5.1%	-3.3%	0.0%	-0.1%	-7.7%	-11.4%	-4.8%	3
MSCI USA Information Technology Index	-2.0%	20.7%	-12.5%	4.1%	0.9%	-27.8%	-7.5%	-2.8%	7
MSCI USA Materials Index	-0.9%	-2.4%	7.1%	-10.5%	7.6%	-11.2%	-6.1%	-1.7%	10
MSCI US Real Estate Index	5.1%	15.6%	1.8%	10.6%	19.5%	-20.6%	15.7%	1.1%	15
MSCI USA Utilities Index	-0.8%	-0.4%	18.8%	14.8%	-8.7%	29.9%	0.1%	4.1%	21
S&P 500 High Beta Index	-10.8%	3.4%	-13.8%	-1.2%	-8.4%	-12.3%	-18.4%	-9.6%	1
S&P 500 Low Volatility Index	1.7%	8.2%	13.0%	6.6%	1.8%	12.8%	1.3%	4.5%	22
Russell 3000 Defensive	1.0%	10.4%	6.5%	8.0%	2.1%	0.2%	0.6%	2.8%	17
Russell 3000 Dynamic	-6.4%	5.8%	-4.9%	-0.1%	-3.4%	-0.6%	-11.2%	-4.4%	4
S&P 500 Dividend Aristocrats Price Index	3.7%	7.7%	12.0%	3.1%	5.6%	0.0%	3.3%	4.5%	23
MSCI USA Momentum USD PR	0.2%	15.1%	5.2%	10.4%	4.5%	4.4%	-1.9%	3.2%	19
MSCI USA Quality Price USD Index	2.5%	11.5%	1.5%	7.3%	4.7%	-4.7%	2.1%	3.1%	18
MSCI United States Growth Index	0.4%	15.2%	-4.0%	4.5%	5.3%	-11.3%	-2.1%	0.8%	14
MSCI United States Value Index	-6.0%	1.6%	3.1%	1.3%	-5.8%	3.3%	-7.8%	-3.3%	5

REFLATION: US Equities

x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



DEFLATION: US Equities

x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



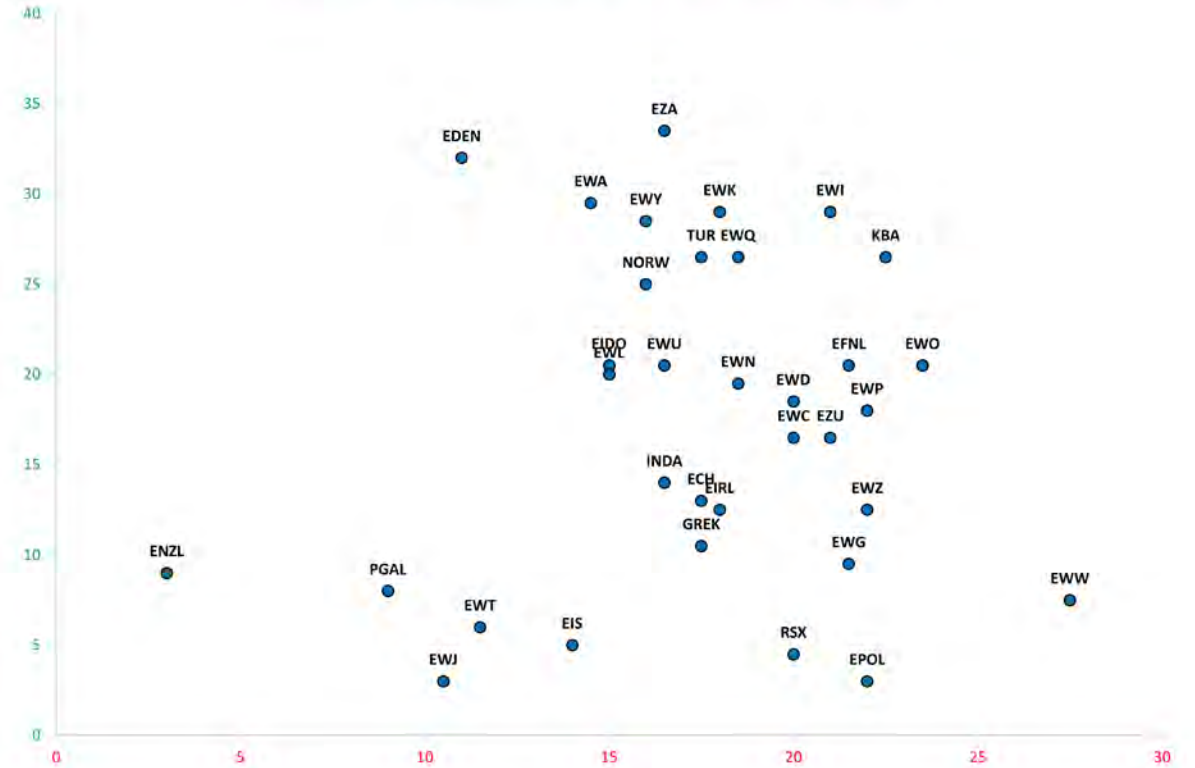
REFLATION: Global Equities

x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



DEFLATION: Global Equities

x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



REFLATION: Commodities

x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



DEFLATION: Commodities

x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



REFLATION: Fixed Income

x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



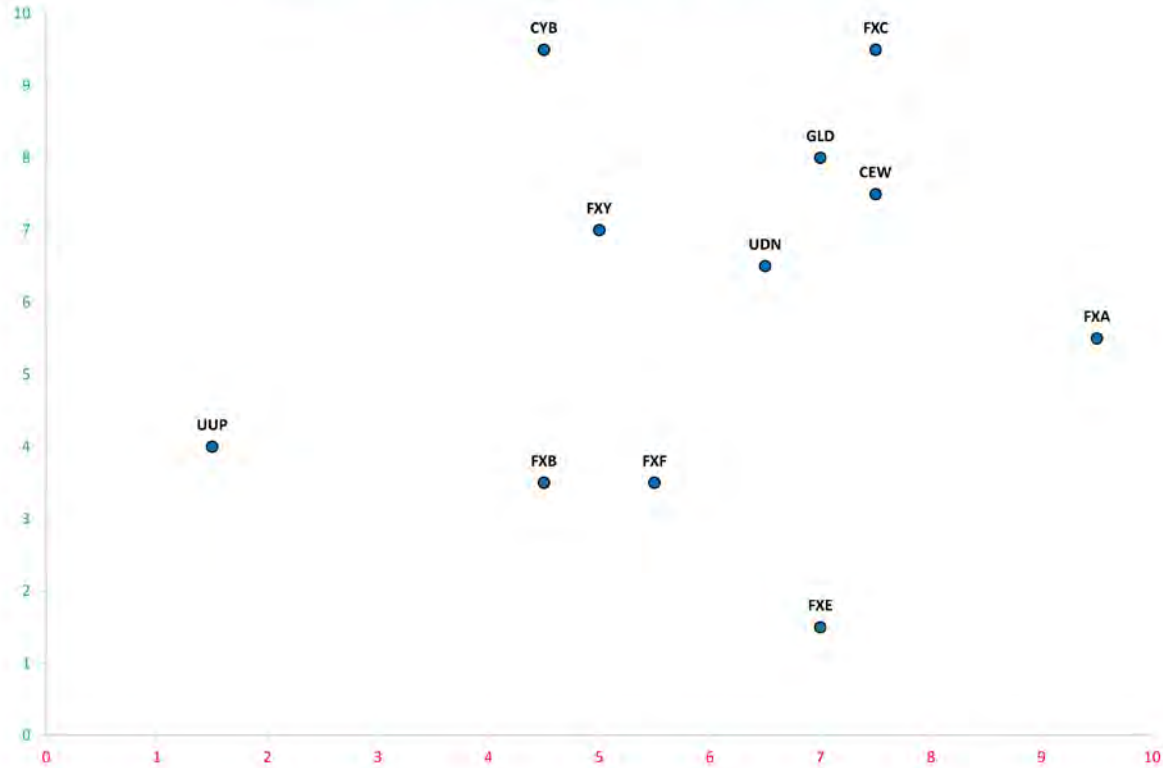
DEFLATION: Fixed Income

x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



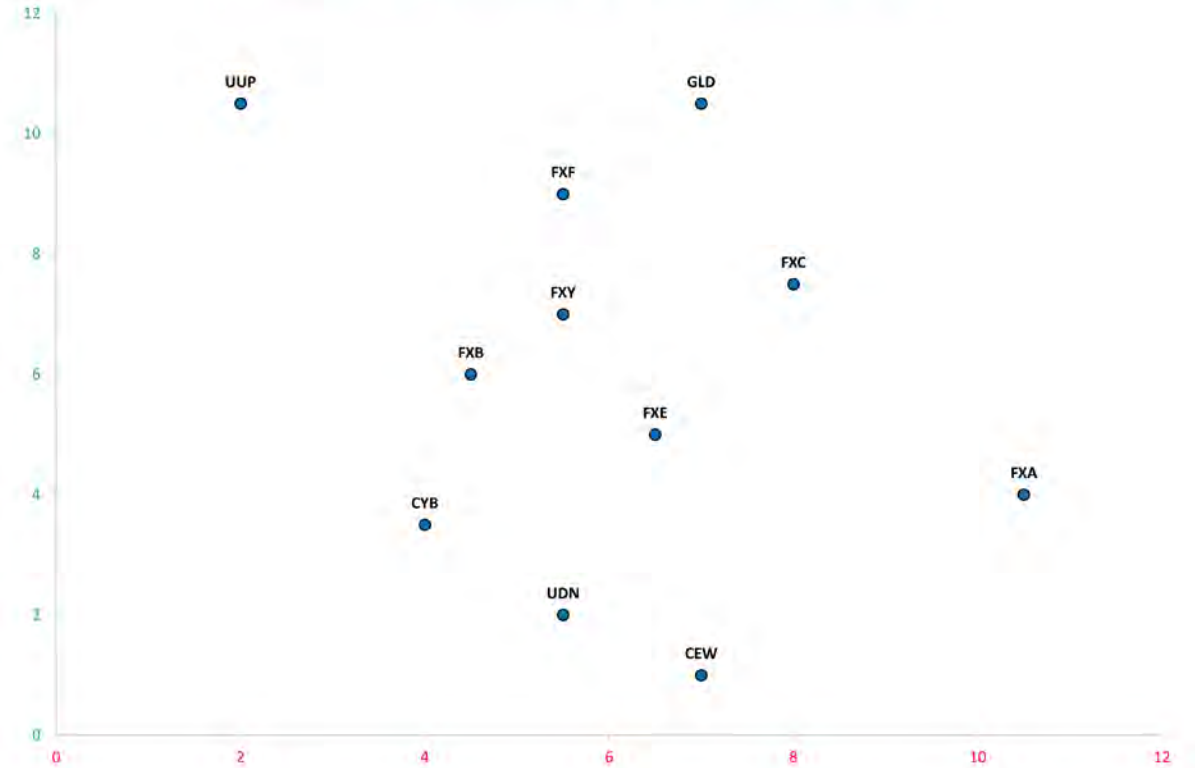
REFLATION: Foreign Exchange

x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



DEFLATION: Foreign Exchange

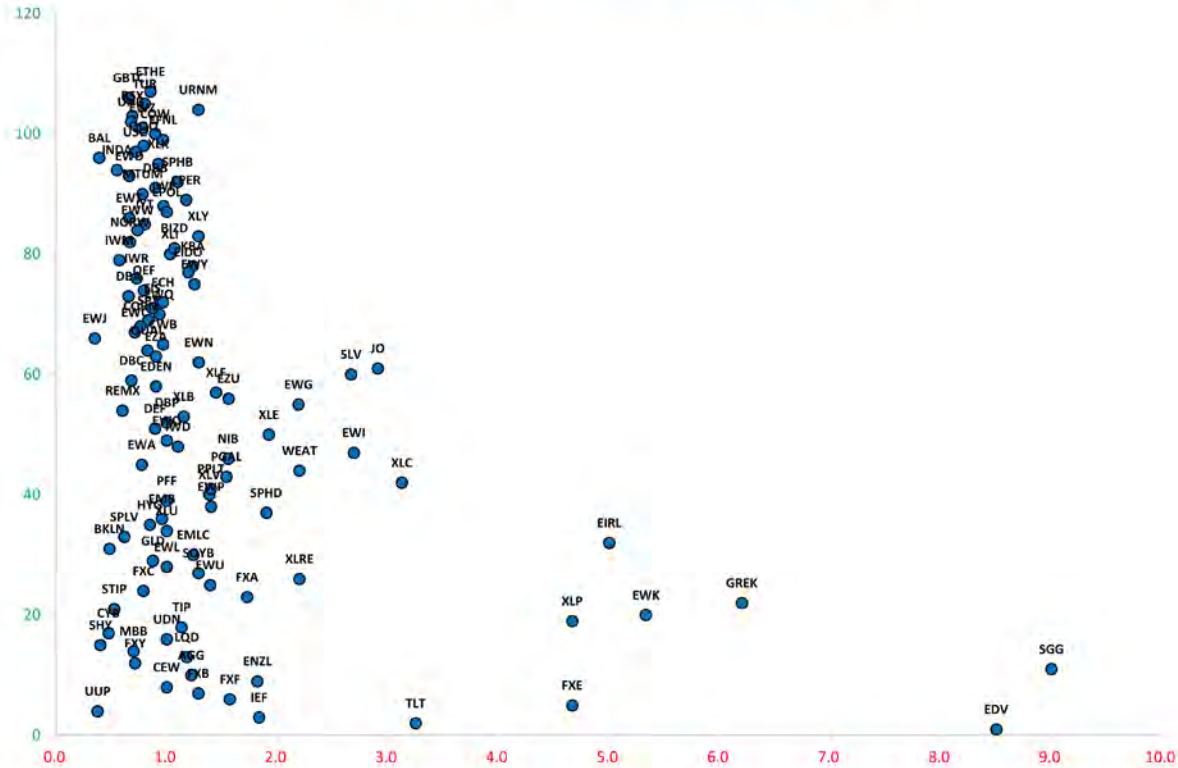
x-axis: 42 Macro Regime RISK Score (Mean Volatility & Covariance Ranking)
 y-axis: 42 Macro Regime REWARD Score (Mean Expected Return & Percent Positive Ranking)



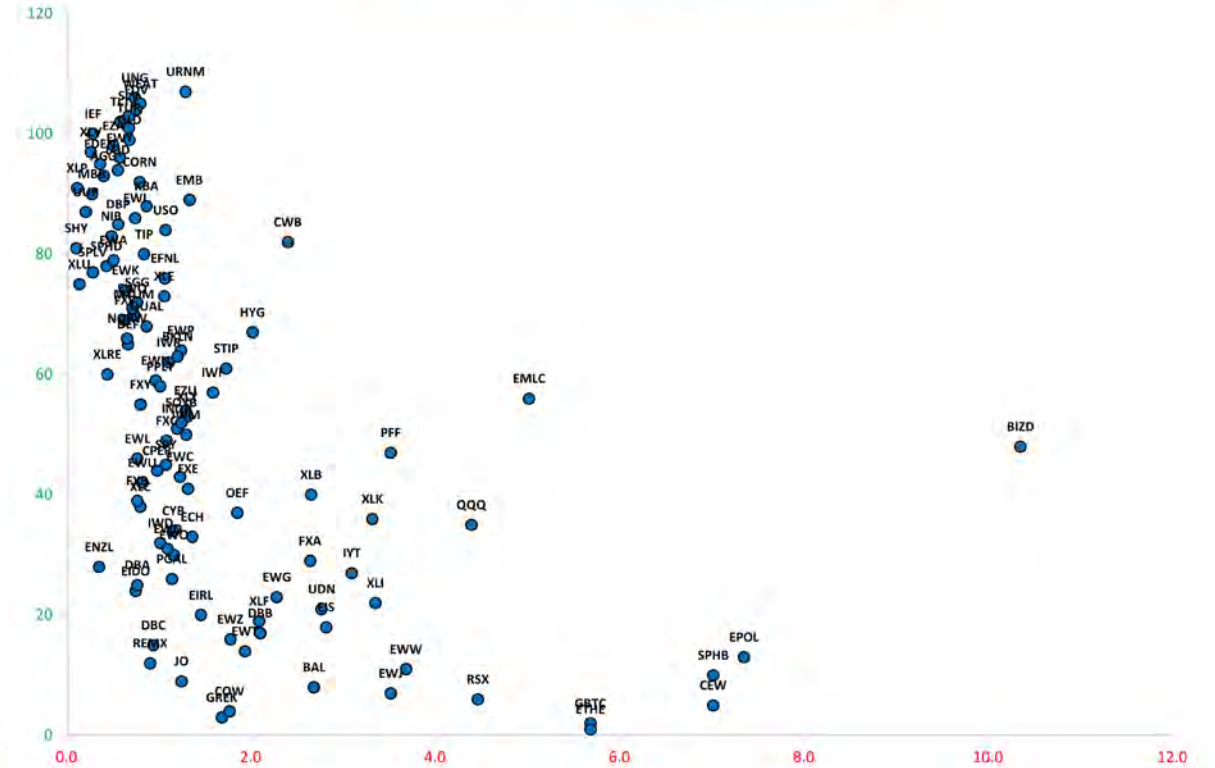
REFLATION: Global Macro

DEFLATION: Global Macro

x-axis: 42 Macro Regime RISK/REWARD Ratio
y-axis: 42 Macro Regime Blended ANNUALIZED EXPECTED RETURN Ranking

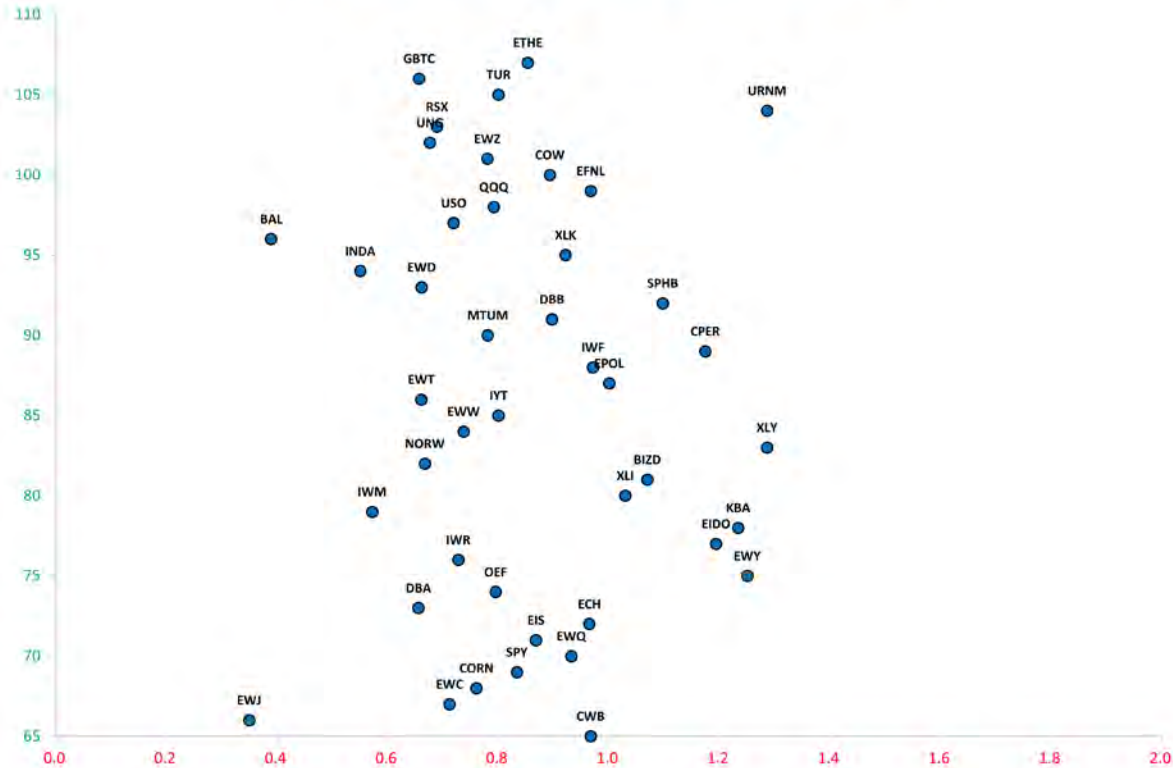


x-axis: 42 Macro Regime RISK/REWARD Ratio
y-axis: 42 Macro Regime Blended ANNUALIZED EXPECTED RETURN Ranking



REFLATION: Portfolio Construction Candidates

x-axis: 42 Macro Regime RISK/REWARD Ratio
y-axis: 42 Macro Regime Blended ANNUALIZED EXPECTED RETURN Ranking



DEFLATION: Portfolio Construction Candidates

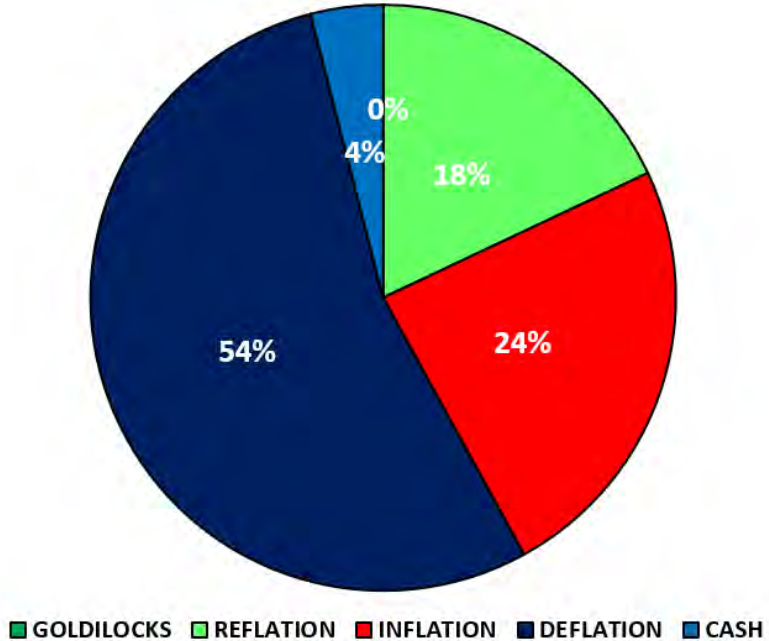
x-axis: 42 Macro Regime RISK/REWARD Ratio
y-axis: 42 Macro Regime Blended ANNUALIZED EXPECTED RETURN Ranking



Our Current Portfolio Construction

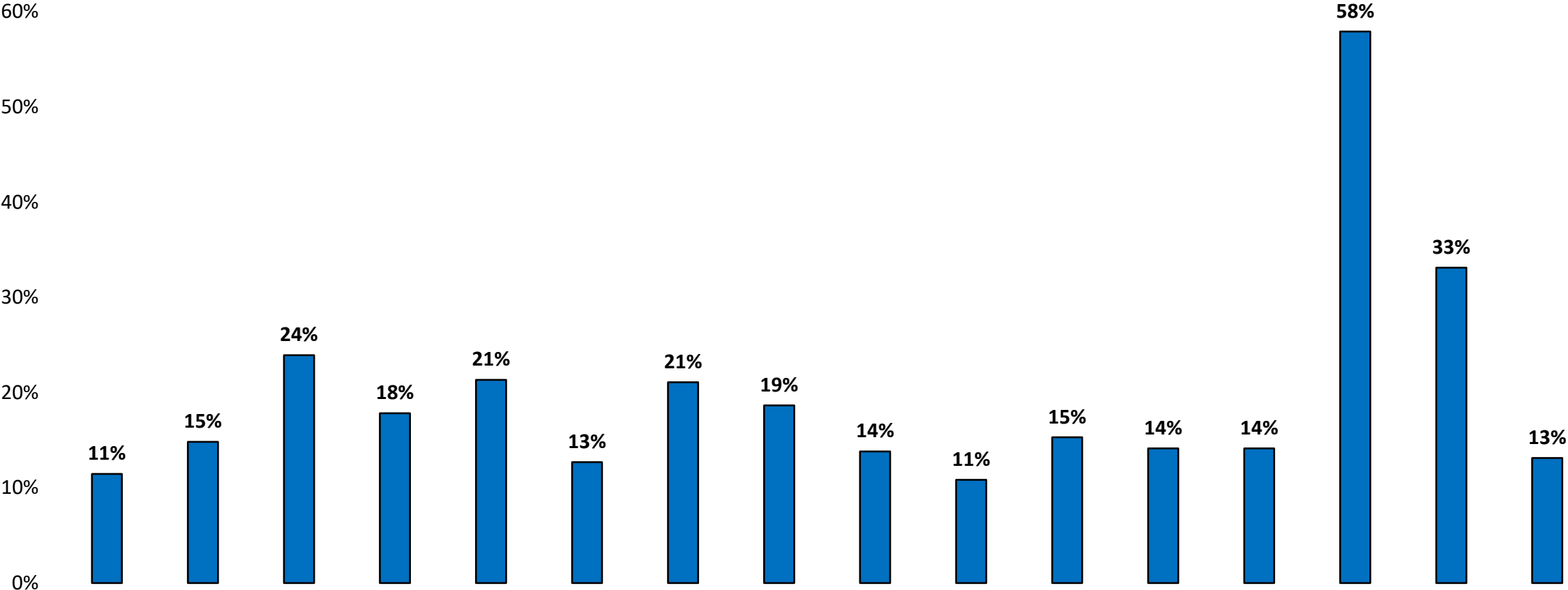
		GOLDILOCKS	REFLATION	INFLATION	DEFLATION	CASH
Jan-22	GRID REGIME ALLOCATIONS	0%	18%	24%	54%	4%
Ticker	Equity & Commodity Exposures	0%	18%	24%	33%	n/a
					9%	
			6%			
			3%			
				6%		
			3%			
					9%	
				3%		
			3%			
					9%	
					6%	
Ticker	Fixed Income & FX Exposures	0%	0%	0%	21%	n/a
					6%	
					6%	
					9%	

42 Macro Portfolio Construction: January 2022



Volatility-Adjusted Position Sizing Based On Relative 260-Day Rvol: 0th to 33rd Percentile = 9% Position; 34th to 67th Percentile = 6%; 68th to 100th Percentile = 3%

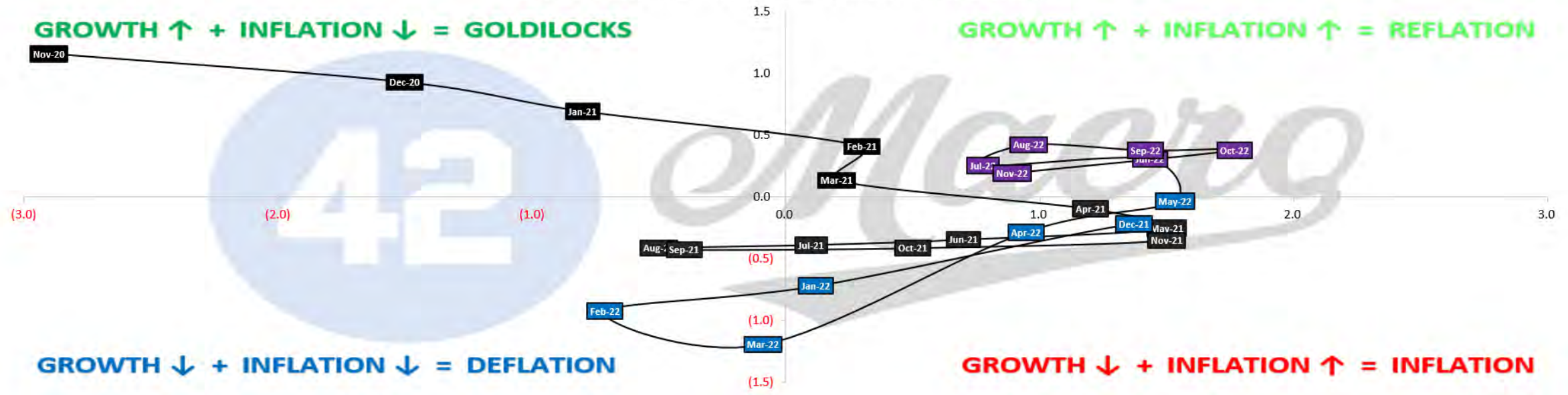
260-Day Realized Volatility



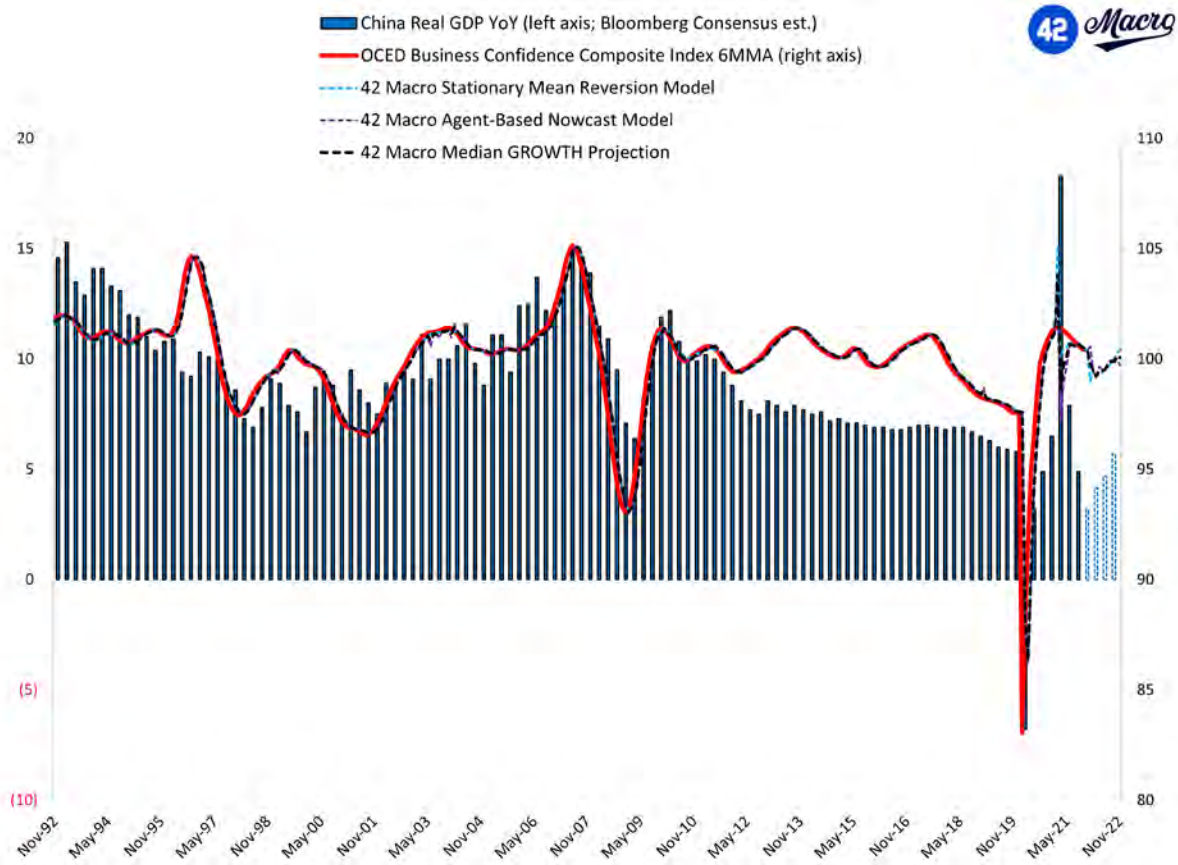
China GRID Outlook: Growth Should Find A Bottom In Late-Q1

China		Actuals												Projections																		
42 Macro GRID Framework		May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22
Macro Regime		G	G	G		G	G	G	G	G	R	R					D	D									R	R	R	R	R	R
Conditional Probability of GOLDILOCKS		95%	95%	82%	0%	88%	94%	98%	50%	67%	42%	38%	0%	0%	2%	3%	5%	14%	11%	2%	2%	3%	4%	2%	3%	2%	4%	10%	9%	4%	2%	6%
Conditional Probability of REFLATION		2%	2%	15%	0%	9%	2%	2%	3%	22%	55%	58%	3%	4%	5%	4%	3%	9%	12%	28%	34%	3%	1%	2%	26%	48%	69%	58%	77%	75%	78%	55%
Conditional Probability of INFLATION		0%	0%	0%	0%	0%	0%	0%	0%	3%	2%	2%	87%	90%	71%	53%	36%	30%	40%	66%	60%	54%	14%	46%	62%	48%	25%	28%	12%	19%	20%	35%
Conditional Probability of DEFLATION		2%	2%	2%	0%	3%	4%	4%	7%	8%	1%	1%	10%	6%	23%	40%	56%	46%	37%	5%	4%	40%	81%	51%	8%	2%	2%	5%	1%	1%	4%	
OECD CLI (Real GDP YoY Proxy)		95.0	96.7	98.3	99.8	100.3	100.7	101.0	101.3	101.4	101.4	101.3	101.2	101.0	100.9	100.8	100.6	100.5	100.4	100.4	100.4	99.8	99.5	99.2	99.5	99.5	99.5	99.7	99.9	99.9	100.1	100.1
3mo Δ		11.9	8.6	6.6	4.9	3.6	2.4	1.2	0.9	0.7	0.4	0.1	-0.1	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.3	-0.2	-0.7	-0.9	-1.2	-0.3	0.0	0.3	0.3	0.4	0.4	0.2	
Headline CPI YoY		2.4	2.5	2.7	2.4	1.7	0.5	-0.5	0.2	-0.3	-0.1	0.4	0.9	1.3	1.1	1.0	0.8	0.7	1.5	2.3	2.1	1.6	1.6	2.0	2.6	3.1	3.4	3.3	4.1	4.8	5.1	5.0
3mo Δ		-2.8	-1.8	-0.6	0.0	-0.8	-2.2	-2.9	-1.5	-0.8	0.3	0.2	1.2	1.5	0.7	0.1	-0.5	-0.4	0.5	1.5	1.4	0.1	-0.7	-0.1	0.9	1.5	1.4	0.8	1.0	1.4	0.9	

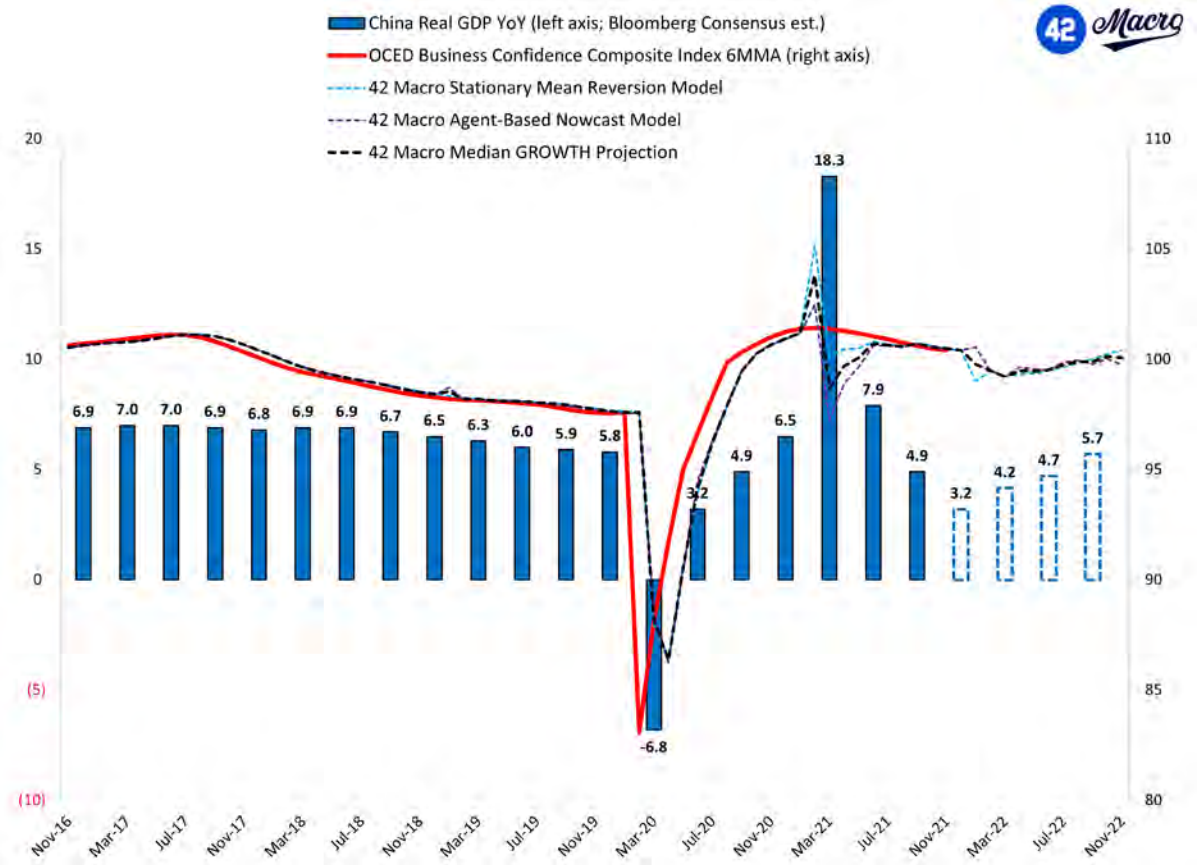
→ x-axis: 3mo Δ of Headline CPI YoY; y-axis: 3mo Δ of OECD CLI (Real GDP YoY Proxy)



China GROWTH: Secular View



China GROWTH: Cyclical View



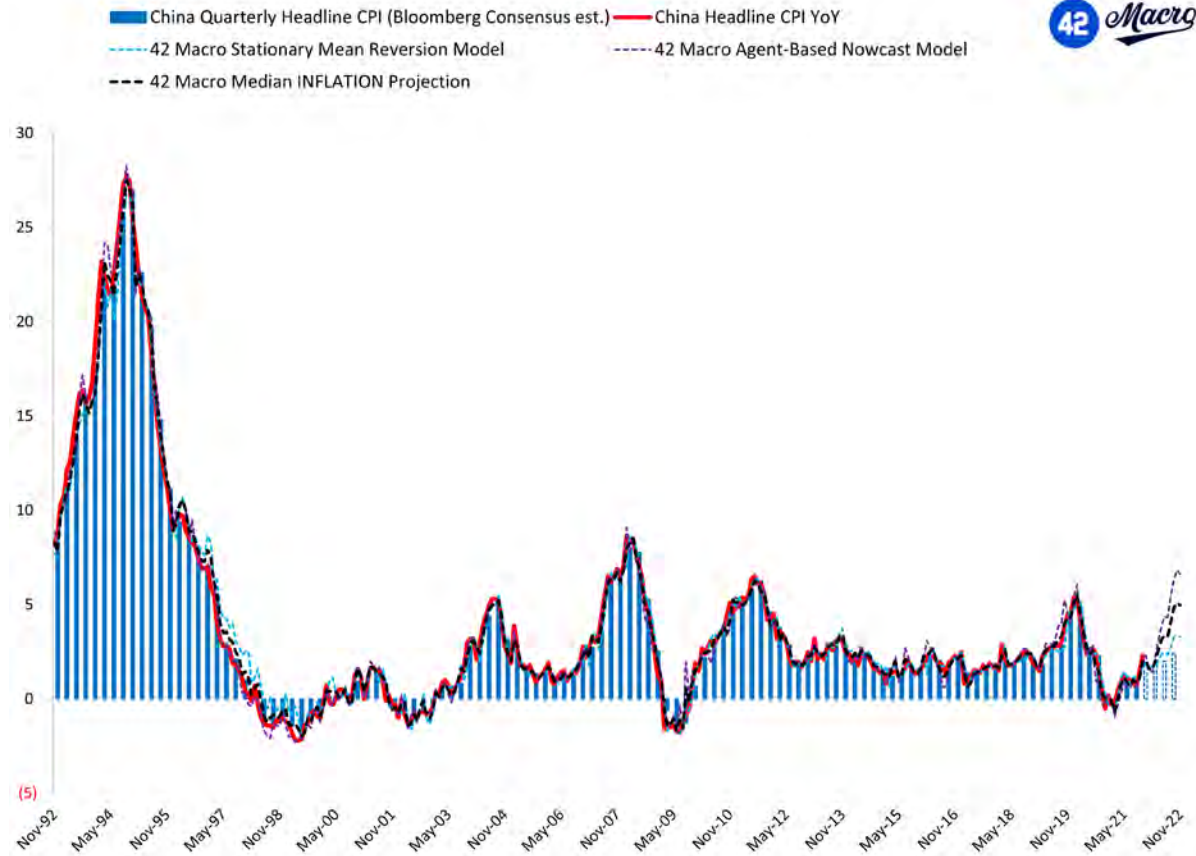
China GROWTH Agent-Based Nowcast Model

42 Macro Agent-Based Nowcast GROWTH Model Features

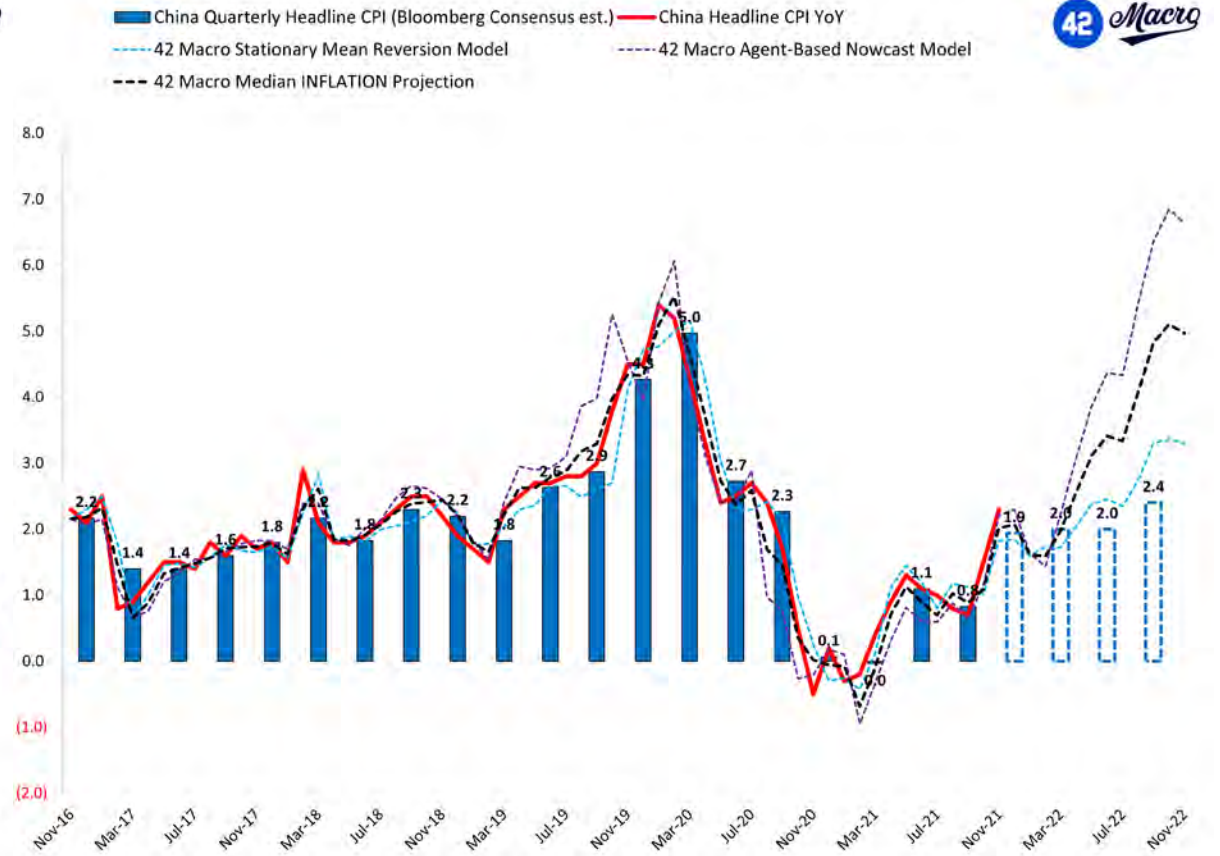
China	Jan-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
China OECD Leading Indicators CLI Amplitude Adjusted SA	98.0	97.9	97.9	97.7	97.6	97.6	97.6	97.6	85.1	88.1	91.7	95.0	96.7	98.3	99.8	100.3	100.7	101.0	101.2	101.4	101.4	101.3	101.2	101.0	100.9	100.8	100.6	100.5	100.4		
China Value Added of Industry YoY (4%)	6.3	4.8	4.4	5.8	4.7	6.2	6.9			-1.1	3.9	4.4	4.8	4.8	5.6	6.9	6.9	7.0	7.3		14.1	9.8	8.8	8.3	6.4	5.3	3.1	3.5	3.8		
China Export Trade USD YoY (1%)	-1.5	3.4	-1.0	-3.2	-0.8	-1.3	7.9	-2.9	-40.6	-6.9	3.1	-3.5	0.2	6.8	9.1	9.4	10.9	20.6	18.1	24.6	154.6	30.5	32.2	27.8	32.1	19.3	25.6	28.1	27.1	22.0	
China Retail Sales Value YoY (4%)	9.8	7.6	7.5	7.8	7.2	8.0	8.0			-15.8	-7.5	-2.8	-1.8	-1.1	0.5	3.3	4.3	5.0	4.6		34.2	17.7	12.4	12.1	8.5	2.5	4.4	4.9	3.9		
China Manufacturing PMI SA (10%)	49.4	49.7	49.5	49.8	49.3	50.2	50.2	50.0	35.7	52.0	50.8	50.6	50.9	51.1	51.0	51.5	51.4	52.1	51.9	51.3	50.6	51.9	51.1	51.0	50.9	50.4	50.1	49.6	49.2	50.1	50.3
China Non-Manufacturing PMI SA (12%)	54.2	53.7	53.8	53.7	52.8	54.4	53.5	54.1	29.6	52.3	53.2	53.6	54.4	54.2	55.2	55.9	56.2	56.4	55.7	52.4	51.4	56.3	54.9	55.2	53.5	53.3	47.5	53.2	52.4	52.3	52.7
China Leading Index (1%)	-3.8	-3.7	-3.4	-2.9	-2.7	-3.1	-3.7	-4.3	-4.2	-3.1	-1.1	1.1	3.0	4.1	4.7	5.0	5.8	7.1	8.5	9.4	9.0	7.1	4.0	0.6	-2.5	-4.9	-6.5	-7.7	-8.8		
China Coincident Index (1%)	-3.9	-3.6	-3.3	-3.1	-3.6	-5.3	-8.4	-11.7	-13.4	-12.7	-10.1	-6.7	-3.5	-1.3	0.2	2.1	5.5	11.7	20.8	30.4	35.8	34.3	27.4	18.8	11.3	6.0	2.4	-0.7	-4.2		
Bloomberg Economics China Credit Impulse (0%)	0.2	-0.6	-3.2	-0.9	2.2	7.7	7.6	1.1	2.0	9.0	19.2	22.7	23.0	29.0	35.7	38.2	41.4	39.3	35.9	31.2	34.5	11.0	-1.8	-11.8	-13.6	-17.7	-22.6	-26.4	-27.5	-26.4	
Bloomberg Economics China Credit Impulse 12 Month Net Change (0%)	0.0	-0.1	-0.8	-0.2	0.5	1.7	1.6	0.3	0.5	2.2	4.4	5.4	5.6	6.7	8.2	8.9	9.4	9.1	8.3	7.2	8.0	2.9	-0.5	-3.4	-4.1	-5.3	-7.1	-8.5	-8.8	-8.5	
China All-system Financing Aggregate YTD (0%)	27.7	19.7	15.3	14.5	13.4	14.2	13.7	8.0	5.0	29.1	38.3	45.1	42.8	41.9	44.5	43.7	44.4	41.2	36.0	2.7	16.6	-7.4	-14.6	-19.0	-14.7	-16.3	-16.4	-16.4	-15.0	-12.5	
China Social Financing New Loan in Local Currency YTD (0%)	14.3	7.8	6.8	8.6	6.9	7.2	7.7	-2.1	-2.7	15.3	23.9	24.9	23.0	23.3	21.7	20.1	20.2	19.5	18.6	9.3	22.5	9.1	3.6	1.9	5.0	3.2	1.9	0.8	1.4	0.1	
China Monthly Money Supply M0 YoY (0%)	4.3	4.5	4.8	4.0	4.7	4.8	5.4	6.6	10.9	10.8	10.2	9.5	9.5	9.9	9.4	11.1	10.4	10.3	9.2	-9.9	4.2	4.2	5.3	5.6	6.2	6.1	6.3	5.5	6.2	7.2	
China Monthly Money Supply M1 YoY (1%)	4.4	3.1	3.4	3.4	3.3	3.5	4.4	0.0	4.8	5.0	5.5	6.8	6.5	6.9	8.0	8.1	9.1	10.0	8.6	14.7	7.4	7.1	6.2	6.1	5.5	4.9	4.2	3.7	2.8	3.0	
China Monthly Money Supply M2 YoY (0%)	8.5	8.1	8.2	8.4	8.4	8.2	8.7	8.4	8.8	10.1	11.1	11.1	11.1	10.7	10.4	10.9	10.5	10.7	10.1	9.4	10.1	9.4	8.1	8.3	8.6	8.3	8.2	8.3	8.7	8.5	
China Total Loans of Financial Institutions YoY (1%)	13.0	12.6	12.4	12.5	12.4	12.4	12.3	12.1	12.1	12.7	13.1	13.2	13.2	13.0	13.0	13.0	12.9	12.8	12.8	12.7	12.9	12.6	12.3	12.2	12.3	12.3	12.1	11.9	11.9	11.7	
China PPI Manufacturing YoY (0%)	0.0	-0.2	-0.8	-1.2	-1.5	-1.6	-0.9	-0.6	-0.7	-1.2	-2.2	-2.4	-2.0	-1.8	-1.4	-1.3	-1.2	-0.8	0.0	1.0	1.7	3.4	5.4	7.4	7.4	7.5	8.0	8.9	10.8	10.1	
China Retail Sales Cumulative Value YoY (5%)	8.4	8.3	8.2	8.2	8.1	8.0	8.0		-20.5	-19.0	-16.2	-13.5	-11.4	-9.9	-8.6	-7.2	-5.9	-4.8	-3.9		33.8	33.9	29.6	25.7	23.0	20.7	18.1	16.4	14.9	13.7	
China Value Added of Industry YoY Cumulative (5%)	6.0	5.8	5.6	5.6	5.6	5.6	5.7		-13.5	-8.4	-4.9	-2.8	-1.3	-0.4	0.4	1.2	1.8	2.3	2.8		35.1	24.5	20.3	17.8	15.9	14.4	13.1	11.8	10.9	10.1	
China Fixed Assets Investment (Excluding Rural Households) Cumulative YoY (9%)	5.8	5.7	5.5	5.4	5.2	5.2	5.4		-24.5	-16.1	-10.3	-6.3	-3.1	-1.6	-0.3	0.8	1.8	2.6	2.9		35.0	25.6	19.9	15.4	12.6	10.3	8.9	7.3	6.1	5.2	
China Fixed Assets Investment (Cumulative) YoY - State-owned & State holdings (9%)	6.9	7.1	7.1	7.3	7.4	6.9	6.8		-23.1	-12.8	-6.9	-1.9	2.1	3.8	3.2	4.0	4.9	5.6	5.3		32.9	25.3	18.6	11.8	9.6	7.1	6.2	5.0	4.1	3.0	
China Fixed Assets Investment (Cumulative) YoY - Infrastructure (excluding electricity) (9%)	4.1	3.8	4.2	4.5	4.2	4.0	3.8		-30.3	-19.7	-11.8	-6.3	-2.7	-1.0	-0.3	0.2	0.7	1.0	0.9		36.6	29.7	18.4	11.8	7.8	4.6	2.9	1.5	1.0	0.5	
China Private Investments in Fixed Assets YTD YoY (8%)	5.7	5.4	4.9	4.7	4.4	4.5	4.7		-26.4	-18.8	-13.3	-9.6	-7.3	-5.7	-2.8	-1.5	-0.7	0.2	1.0		36.4	26.0	21.0	18.1	15.4	13.4	11.5	9.8	8.5	7.7	
China Completed Investment in Real Estate(Cumulative)YoY (7%)	10.9	10.6	10.5	10.5	10.3	10.2	9.9		-16.3	-7.7	-3.3	-0.3	1.9	3.4	4.6	5.6	6.3	6.8	7.0		38.3	25.6	21.6	18.3	15.0	12.7	10.9	8.8	7.2	6.0	
China Import Trade USD YoY (2%)	-6.8	-4.9	-5.5	-8.2	-6.2	0.8	16.5	-12.7	7.7	-1.3	-14.4	-16.7	2.3	-1.6	-2.3	12.7	4.4	3.9	6.5	28.7	18.9	39.2	44.0	52.0	37.3	28.3	33.0	17.5	20.6	31.7	
China Property - Land Areas Purchased YTD YoY (3%)	-27.5	-29.4	-25.6	-20.2	-16.3	-14.2	-11.4		-29.3	-22.6	-12.0	-8.1	-0.9	-1.0	-2.4	-2.9	-3.3	-5.2	-1.1		33.0	16.9	4.8	-7.5	-11.8	-9.3	-10.2	-8.5	-11.0	-11.2	
China Property - Floor Space of Newly Started Cumulative YoY (4%)	10.1	9.5	8.9	8.6	10.0	8.6	8.5		-44.9	-27.2	-18.4	-12.8	-7.6	-4.5	-3.6	-3.4	-2.6	-2.0	-1.2		64.3	28.2	12.8	6.9	3.8	-0.9	-3.2	-4.5	-7.7	-9.1	
China Property - Total Sales of Buildings YoY (3%)	5.6	6.2	6.7	7.1	7.3	7.3	6.5		-35.9	-24.7	-18.6	-10.6	-5.4	-2.1	1.6	3.7	5.8	7.2	8.7		133.4	88.5	68.2	52.4	38.9	30.7	22.8	16.6	11.8	8.5	

Data Source: Bloomberg. Intellectual Property of 42 Macro LLC. Nowcast feature weights are dynamically retrained monthly according to the relative strength of the first difference regressions between the independent and the dependent variables.

China INFLATION: Secular View



China INFLATION: Cyclical View



China INFLATION Agent-Based Nowcast Model

42 Macro Agent-Based INFLATION Nowcast Model Features

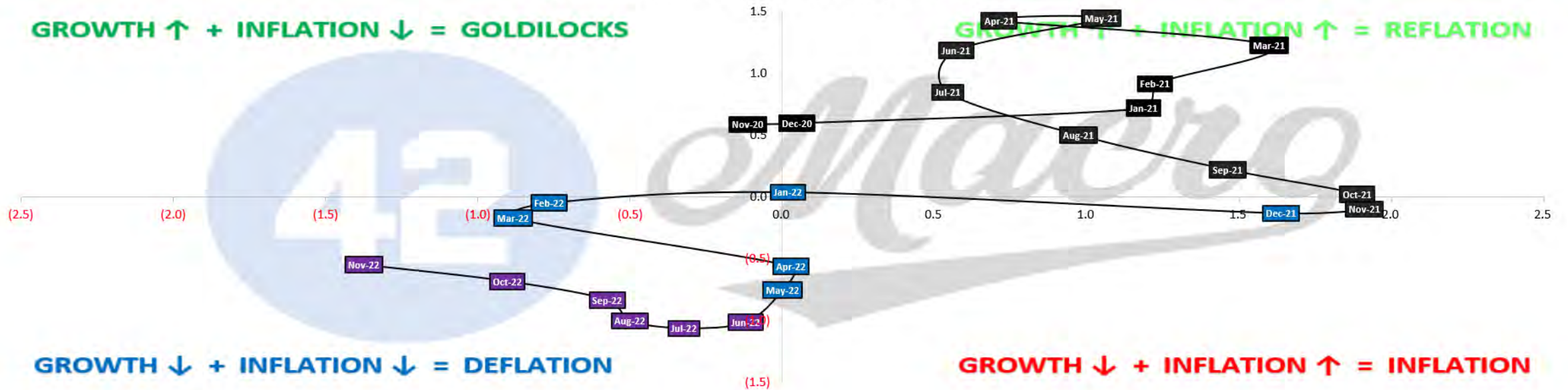
China	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	
China CPI YoY	2.7	2.8	2.8	3.0	3.8	4.5	4.5	5.4	5.2	4.3	3.3	2.4	2.5	2.7	2.4	1.7	0.5	-0.5	0.2	-0.3	-0.2	0.4	0.9	1.3	1.1	1.0	0.8	0.7	1.5	2.3	
China Core CPI (excluding Food & Energy) YoY (1%)	1.6	1.6	1.5	1.5	1.4	1.4	1.5	1.0	1.2	1.1	1.1	0.9	0.5	0.5	0.5	0.5	0.5	0.4	-0.3	0.0	0.3	0.7	0.9	0.9	1.3	1.2	1.2	1.3	1.2		
China PPI YoY (10%)	0.0	-0.3	-0.8	-1.2	-1.6	-1.4	-0.5	0.1	-0.4	-1.5	-3.1	-3.7	-3.0	-2.4	-2.0	-2.1	-2.1	-1.5	-0.4	0.3	1.7	4.4	6.8	9.0	8.8	9.0	9.5	10.7	13.5	12.9	
Commodity Research Bureau BLS/US Spot All Commodities (2%)	-3.7	-6.1	-1.5	-2.8	-5.6	-6.2	-0.6	1.0	0.0	-8.4	-12.2	-8.8	-9.2	-5.1	-2.4	-0.5	0.0	3.7	3.6	5.5	14.0	26.6	38.1	33.3	41.1	37.9	33.7	29.4	33.5	27.4	26.9
Commodity Research Bureau BLS/US Spot Foodstuff (2%)	3.4	2.6	4.4	0.5	-1.2	-1.7	5.7	4.8	4.7	-5.0	-13.4	-10.1	-14.1	-10.4	-2.0	-0.1	-2.4	3.4	0.3	1.8	14.3	29.2	52.2	40.3	53.8	46.9	40.1	31.3	35.0	26.8	31.9
Commodity Research Bureau BLS/US Spot Raw Industrials (1%)	-8.3	-11.7	-5.4	-5.0	-8.4	-9.2	-4.8	-1.6	-3.2	-10.4	-11.4	-7.9	-5.6	-1.2	-2.7	-0.8	1.7	3.9	6.0	8.1	13.8	24.9	29.1	28.7	32.9	32.0	29.5	28.2	32.4	27.8	23.5
China CPI Food YoY (41%)	8.3	9.1	10.0	11.2	15.5	19.1	17.4	20.6	21.9	18.3	14.8	10.6	11.1	13.2	11.2	7.9	2.2	-2.0	1.2	1.6	-0.2	-0.7	-0.7	0.3	-1.7	-3.7	-4.1	-5.2	-2.4	1.6	
China CPI Pork YoY (26%)	21.1	27.0	46.7	69.3	101.3	110.2	97.0	116.0	135.2	116.4	96.9	81.7	81.6	85.7	52.6	25.5	-2.8	-12.5	-1.3	-3.9	-14.9	-18.4	-21.4	-23.8	-36.5	-43.5	-44.9	-46.9	-44.0	-32.7	
China CPI Non Food YoY (9%)	1.4	1.3	1.1	1.0	0.9	1.0	1.3	1.6	0.9	0.7	0.4	0.4	0.3	0.0	0.1	0.0	0.0	-0.1	0.0	-0.8	-0.2	0.7	1.3	1.6	1.7	2.1	1.9	2.0	2.4	2.5	
China PPI Manufacturing YoY (5%)	0.0	-0.2	-0.8	-1.2	-1.5	-1.6	-0.9	-0.6	-0.7	-1.2	-2.2	-2.4	-2.0	-1.8	-1.4	-1.3	-1.2	-0.8	0.0	1.0	1.7	3.4	5.4	7.4	7.4	7.5	8.0	8.9	10.8	10.1	
China 1st Tier Cities Newly Built Commercial Residential Bldgs Price YoY Avg (1%)	4.4	4.3	4.3	4.6	4.7	4.9	3.9	3.8	3.5	3.4	2.9	2.9	3.3	3.6	3.9	3.9	4.1	3.9	4.0	4.2	4.8	5.2	5.8	5.9	6.2	6.0	5.7	5.3	5.0	4.8	
China 2nd Tier Cities Newly Built Commercial Residential Bldgs Price YoY Avg (0%)	11.0	10.2	9.4	8.9	8.4	7.4	7.0	6.5	5.9	5.4	5.2	4.9	4.8	4.6	4.4	4.2	3.8	3.7	3.5	3.6	4.0	4.4	4.5	4.6	4.4	4.3	4.1	3.8	3.4	3.1	
China 3rd Tier Cities Newly Built Commercial Residential Bldgs Price YoY Average (0%)	11.3	10.7	9.4	8.7	8.0	7.4	7.0	6.7	6.2	5.7	5.5	5.3	5.2	5.1	5.1	4.9	4.5	4.2	3.9	3.8	4.1	4.3	4.2	4.2	4.0	3.7	3.1	2.5	2.0	1.5	

Data Source: Bloomberg. Intellectual Property of 42 Macro LLC. Nowcast feature weights are dynamically retrained monthly according to the relative strength of the first difference regressions between the independent and the dependent variables.

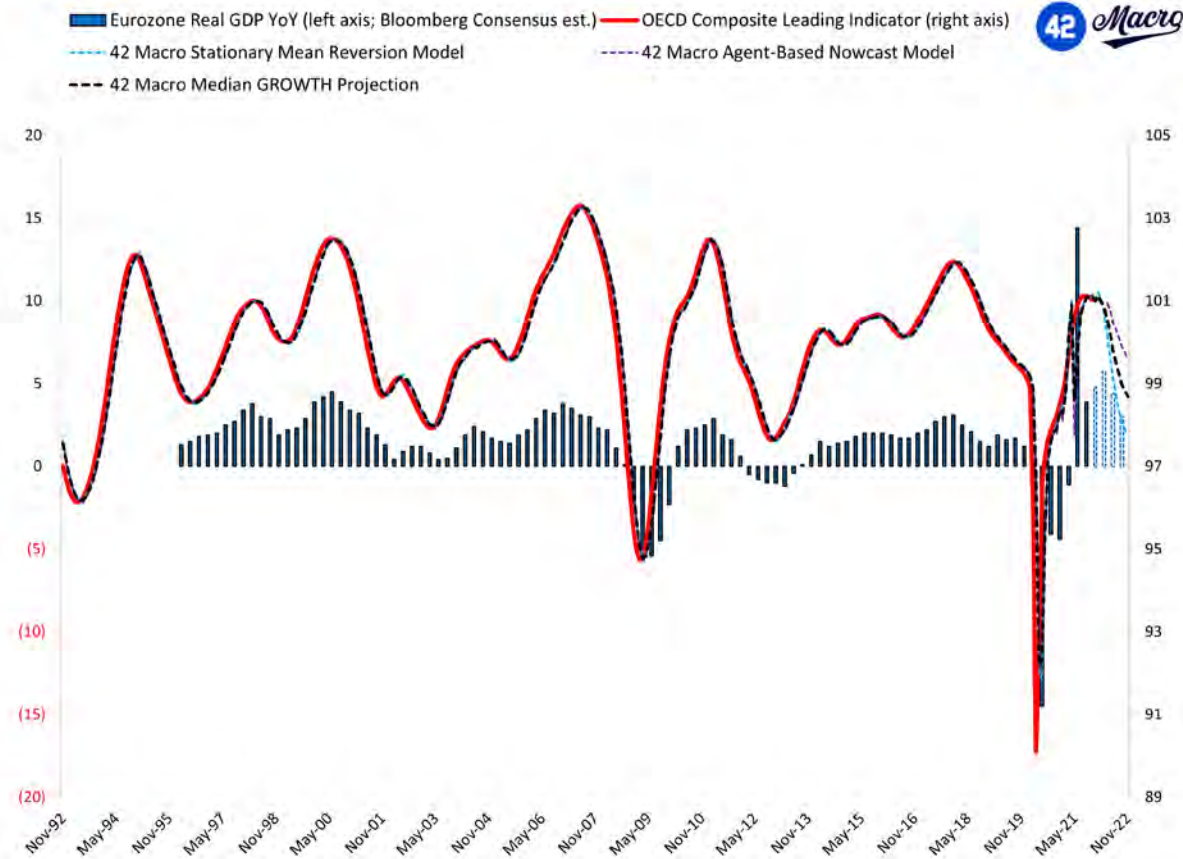
Eurozone GRID Outlook: Growth Remains Steady For Now, But Should Start To Falter In Q2

Eurozone		Actuals																			Projections											
42 Macro GRID Framework		May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22
Macro Regime		D	G	R	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	D	D	D	D	D	D	D	D		
Conditional Probability of GOLDILOCKS		2%	89%	46%	73%	78%	84%	36%	30%	12%	2%	7%	2%	5%	16%	6%	1%	1%	1%	1%	25%	44%	34%	6%	4%	3%	3%	4%	5%	8%	11%	
Conditional Probability of REFLATION		0%	9%	52%	24%	18%	5%	30%	53%	50%	83%	95%	90%	83%	47%	64%	63%	58%	51%	49%	42%	27%	4%	6%	7%	4%	2%	1%	1%	1%	0%	
Conditional Probability of INFLATION		2%	0%	1%	1%	1%	1%	16%	11%	31%	15%	2%	2%	14%	44%	16%	28%	40%	47%	49%	56%	25%	4%	9%	46%	46%	38%	26%	16%	12%	6%	2%
Conditional Probability of DEFLATION		95%	2%	1%	2%	3%	11%	19%	6%	7%	0%	0%	0%	0%	4%	4%	3%	1%	1%	1%	1%	23%	48%	51%	42%	45%	57%	70%	80%	82%	86%	86%
OECD CLI (Real GDP YoY Proxy)		92.6	96.6	97.2	97.7	97.9	98.1	98.3	98.5	98.8	99.2	99.7	100.2	100.6	100.9	101.1	101.1	101.1	101.1	101.0	101.0	101.1	101.0	100.8	100.6	100.2	99.8	99.5	99.2	99.0	98.8	98.7
3mo Δ		-6.3	0.8	7.1	5.0	1.3	0.8	0.6	0.6	0.7	0.9	1.2	1.4	1.4	1.2	0.8	0.5	0.2	0.0	-0.1	-0.1	0.0	0.0	-0.2	-0.6	-0.7	-1.0	-1.1	-1.0	-0.8	-0.7	-0.5
Headline CPI YoY		0.1	0.3	0.4	-0.2	-0.3	-0.3	-0.3	-0.3	0.9	0.9	1.3	1.6	2.0	1.9	2.2	3.0	3.4	4.1	4.9	5.0	4.1	4.1	4.1	4.1	4.1	4.0	3.8	3.6	3.4	2.9	2.2
3mo Δ		-1.1	-0.5	0.1	-0.3	-0.6	-0.7	-0.1	0.0	1.2	1.2	1.6	0.7	1.0	0.6	0.5	1.0	1.5	1.9	1.9	1.6	0.0	-0.8	-0.9	0.0	0.0	-0.1	-0.3	-0.5	-0.6	-0.9	-1.4

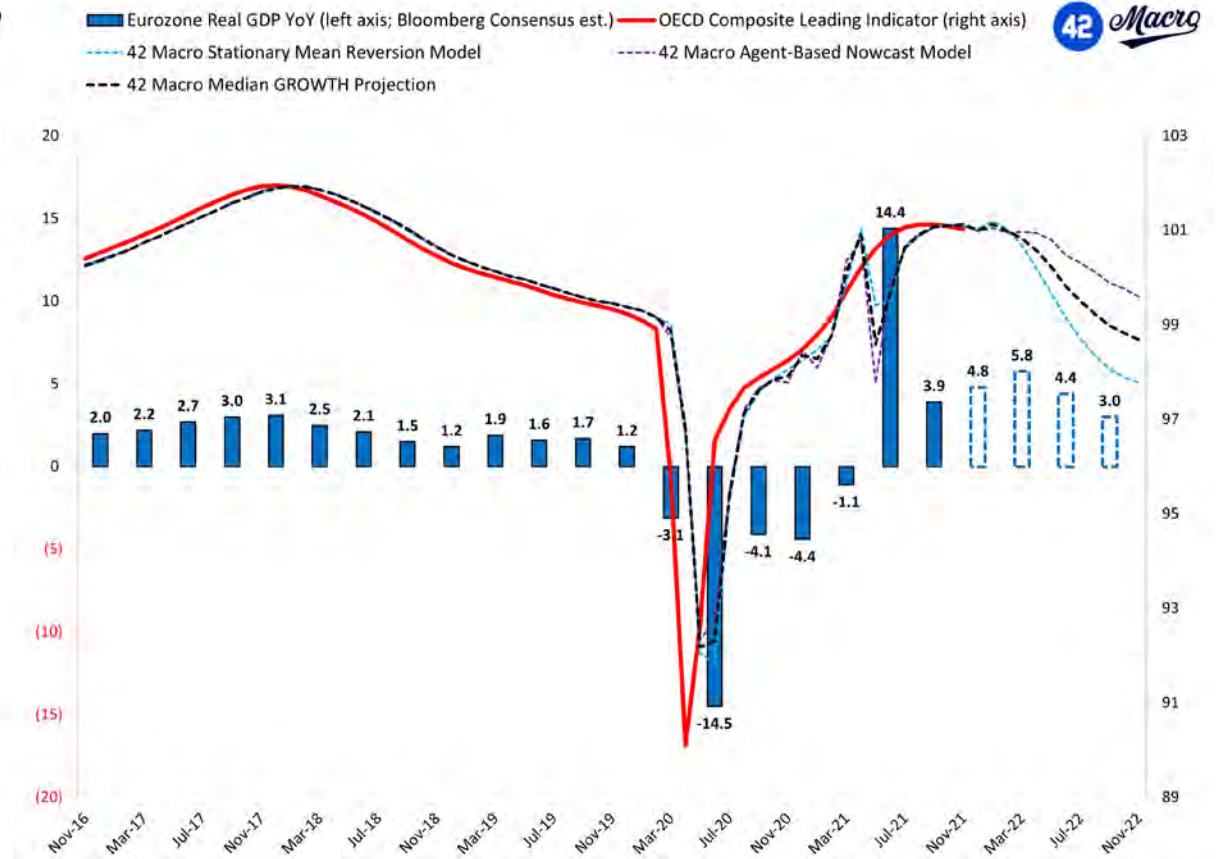
→ x-axis: 3mo Δ of Headline CPI YoY; y-axis: 3mo Δ of OECD CLI (Real GDP YoY Proxy)



Eurozone GROWTH: Secular View



Eurozone GROWTH: Cyclical View



Eurozone GROWTH Agent-Based Nowcast Model

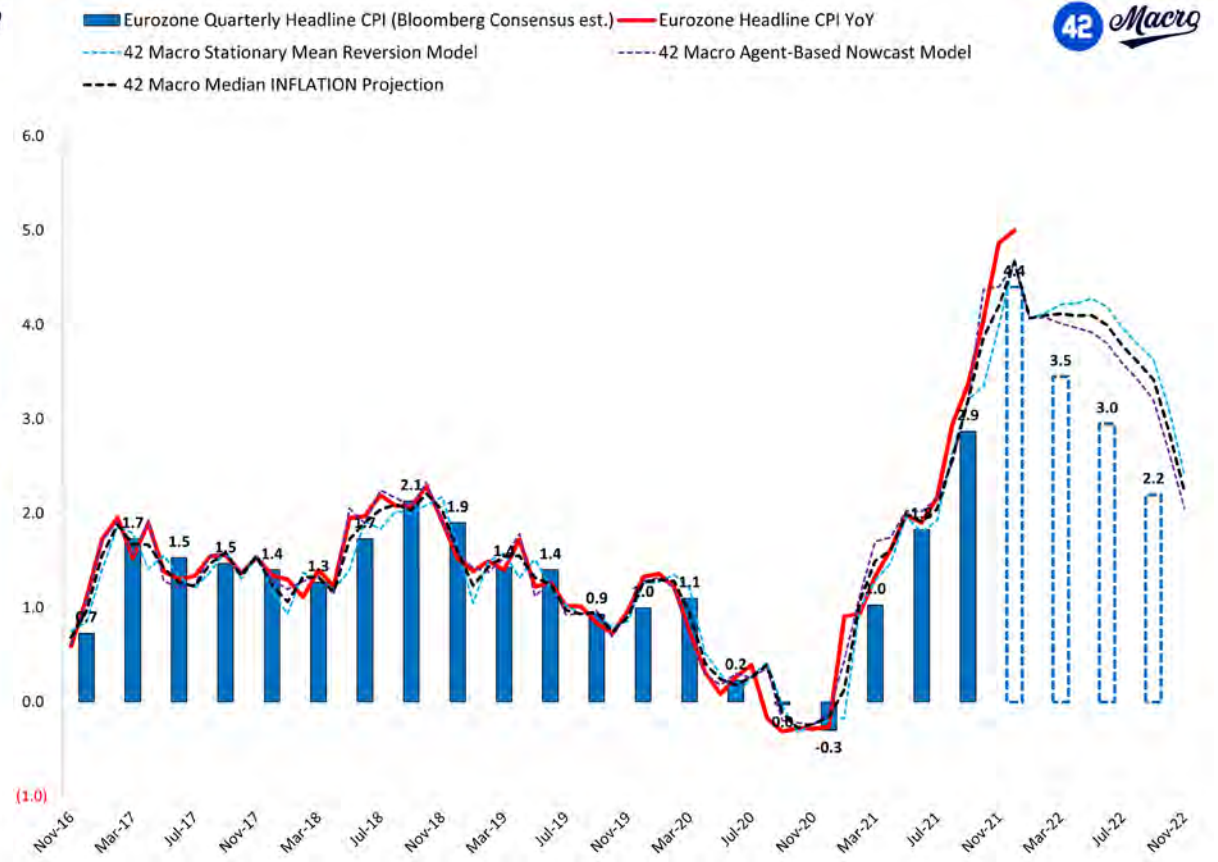
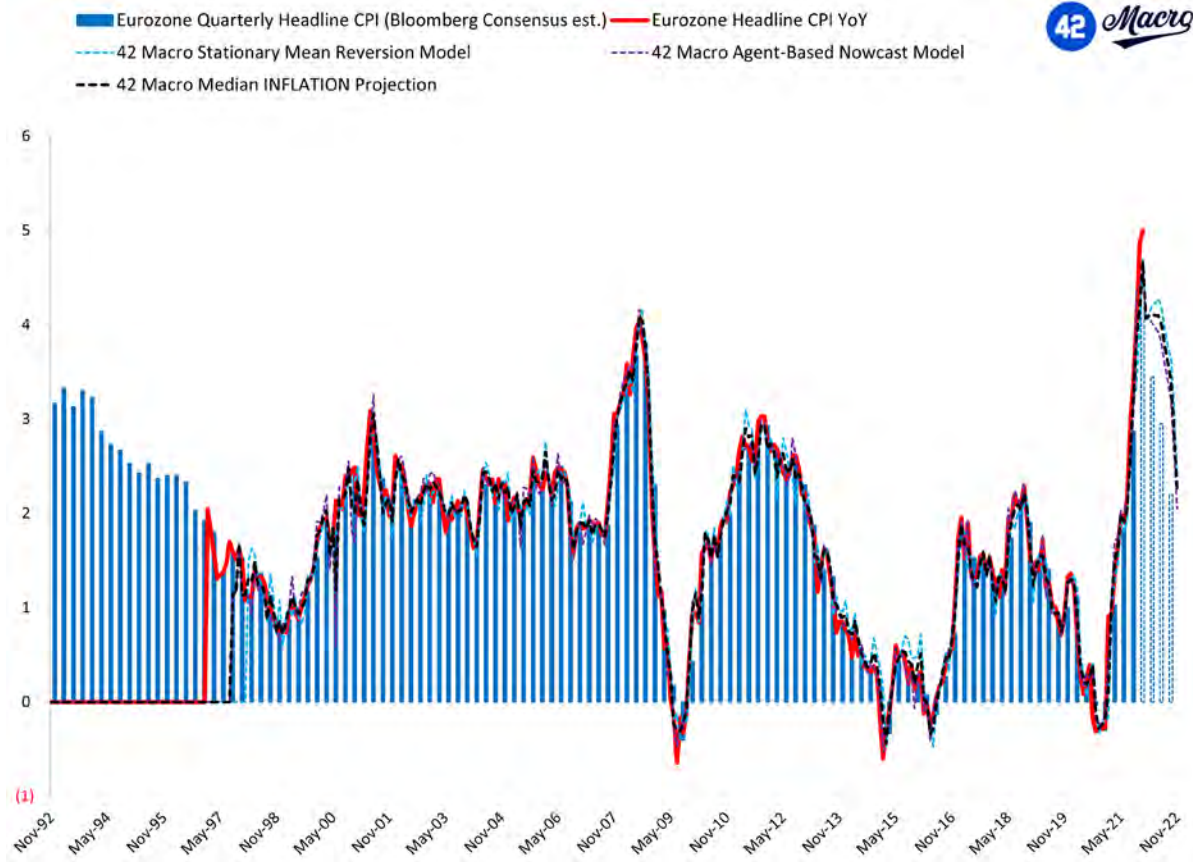
42 Macro Agent-Based Nowcast GROWTH Model Features

Eurozone	-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	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Euro Area OECD Leading Indicators CLI Amplitude Adjusted SA	99.7	99.6	99.5	99.5	99.4	99.3	99.2	99.1	98.9	95.8	90.1	92.6	96.6	97.2	97.7	97.9	98.1	98.3	98.5	98.8	99.2	99.7	100.2	100.6	100.9	101.1	101.1	101.1	101.1	101.0	
Eurostat Industrial Production Eurozone Industry Ex Construction YoY WDA (3%)	-2.3	-1.3	-2.2	-1.2	-1.7	-1.3	-3.4	-2.1	-1.8	-13.3	-28.7	-20.2	-11.7	-6.9	-7.0	-6.5	-3.6	-0.6	0.0	0.5	-1.7	12.0	39.8	20.5	10.5	7.7	4.9	5.1	3.3		
OECD Euro Area International Trade Exports Value YoY SA (3%)	-1.9	-1.3	-2.9	-3.3	0.1	-1.8	-0.3	-1.6	-1.4	-9.8	-32.5	-26.3	-16.0	-8.8	-4.1	-0.3	-1.1	4.4	6.9	6.4	7.4	16.6	60.9	50.3	29.1	19.8	14.3	9.9	9.5		
Eurostat Retail Sales Eurozone Volume YoY WDA (4%)	2.9	2.4	2.9	3.1	1.9	2.4	2.1	2.2	2.3	-7.8	-18.9	-2.4	1.7	0.4	4.5	2.5	4.6	-1.3	1.5	-4.8	-1.1	13.7	23.7	8.7	5.6	3.4	1.4	2.8	1.7	7.8	
Markit Eurozone Manufacturing PMI SA (10%)	47.6	46.5	47.0	45.7	45.9	46.9	46.3	47.9	49.2	44.5	33.4	39.4	47.4	51.8	51.7	53.7	54.8	53.8	55.2	54.8	57.9	62.5	62.9	63.1	63.4	62.8	61.4	58.6	58.3	58.4	58.0
Markit Eurozone Services PMI SA (9%)	53.6	53.2	53.5	51.6	52.2	51.9	52.8	52.5	52.6	26.4	12.0	30.5	48.3	54.7	50.5	48.0	46.9	41.7	46.4	45.4	45.7	49.6	50.5	55.2	58.3	59.8	59.0	56.4	54.6	55.9	53.1
Euro Area Business Tendency Manufacturing Confidence Composite OECD Normalised SA (3%)	-2.5	-2.6	-2.7	-2.8	-2.7	-2.5	-2.2	-1.8	-2.0	-3.0	-4.3	-4.5	-3.6	-2.4	-1.5	-0.7	-0.3	-0.1	0.1	0.5	1.7	4.1	6.9	8.0	7.7	6.8	6.0	5.4	5.1	4.9	
Euro Area Consumer Opinion Confidence Composite OECD Normalised SA (3%)	-0.7	-0.7	-0.7	-0.6	-0.5	-0.3	-0.1	-0.2	-0.8	-2.1	-3.4	-3.6	-3.2	-2.8	-2.5	-2.5	-2.7	-2.9	-2.7	-2.4	-1.4	0.7	3.0	4.1	4.1	3.7	3.4	3.4	3.4	3.2	
Europe Eurozone New Passenger Car Registrations YoY (0%)	-6.2	1.1	-9.6	19.4	10.3	5.0	21.9	-7.1	-6.8	-58.5	-79.6	-52.4	-22.6	-5.8	-17.1	1.9	-7.4	-12.5	-2.8	-24.5	-20.9	95.5	265.0	51.7	8.4	-23.6	-21.8	-24.1	-31.4	-20.8	
Europe EU 27 New Passenger Car Registrations YoY (1%)	1.4	1.4	-8.4	14.5	8.7	4.9	21.7	-7.5	-7.4	-55.1	-76.3	-52.3	-5.7	-5.7	-18.9	3.1	-7.8	-12.0	-3.3	-24.0	-19.3	87.3	218.6	53.4	10.4	-23.2	-19.1	-23.1	-30.3	-20.5	
European Commission Consumer Confidence Indicator Eurozone (8%)	-7.0	-6.4	-7.1	-6.5	-7.5	-7.1	-8.0	-7.8	-6.4	-11.5	-21.9	-18.9	-14.6	-14.9	-14.6	-13.6	-15.5	-17.6	-13.8	-15.5	-14.8	-10.8	-8.1	-5.1	-3.3	-4.4	-5.3	-4.0	-4.8	-6.8	-8.3
European Commission Economic Sentiment Indicator Eurozone (9%)	103.5	102.9	103.2	101.7	100.9	101.3	101.5	103.2	104.0	95.3	67.8	70.2	78.1	84.2	89.1	92.3	92.5	89.3	92.4	91.5	93.4	100.9	110.5	114.5	117.9	119.0	117.6	117.8	118.6	117.6	115.3
European Commission Manufacturing Confidence Eurozone Industrial Confidence (9%)	-5.4	-7.1	-5.6	-8.8	-9.3	-8.9	-9.4	-7.1	-6.2	-11.3	-32.5	-27.6	-21.7	-16.3	-12.9	-11.5	-9.3	-10.2	-6.8	-6.1	-3.2	2.1	10.9	11.5	12.8	14.5	13.8	14.1	14.2	14.3	14.9
European Commission Services Confidence Indicator Eurozone (7%)	11.1	10.6	9.2	9.6	9.1	9.3	11.4	11.1	11.2	-2.3	-38.6	-43.5	-35.4	-26.0	-17.0	-11.0	-12.0	-17.0	-17.1	-17.7	-17.0	-9.6	2.2	11.3	17.9	18.9	16.8	15.2	18.0	18.3	11.2
European Commission Euro Area Business Climate Indicator (4%)	0.2	-0.1	0.2	-0.2	-0.2	-0.2	-0.3	-0.2	-0.1	-0.3	-1.9	-2.4	-2.2	-1.8	-1.4	-1.2	-0.8	-0.7	-0.4	-0.3	-0.2	0.3	1.1	1.4	1.7	1.9	1.7	1.7	1.8	1.8	1.8
ZEW Eurozone Expectation of Economic Growth (0%)	-20.2	-20.3	-43.6	-22.4	-23.5	-1.0	11.2	25.6	10.4	-49.5	25.2	46.0	58.6	59.6	64.0	73.9	52.3	32.8	54.4	58.3	69.6	74.0	66.3	84.0	81.3	61.2	42.7	31.1	21.0	25.9	26.8
Eurostat Industrial Production Eurozone Capital Goods YoY WDA (2%)	-3.6	-1.5	-1.6	-0.3	-2.7	-1.4	-4.9	-2.2	-3.9	-22.2	-41.1	-28.2	-15.4	-9.3	-13.0	-13.2	-8.1	0.1	-1.2	1.7	-2.6	17.4	64.4	27.2	6.8	6.1	3.2	6.2	5.2		
Eurostat Industrial Production Eurozone Consumer Durables YoY WDA (2%)	-1.2	1.9	0.1	0.4	1.9	1.5	0.3	3.8	1.5	-25.9	-51.7	-25.0	-8.5	-3.2	4.5	0.5	0.4	0.2	1.3	1.2	0.7	34.3	117.5	37.7	16.1	9.6	-1.9	1.5	2.3		
Eurostat Industrial Production Eurozone Consumer Non Durables YoY WDA (4%)	1.2	0.5	-1.3	1.6	3.2	1.0	2.0	0.6	0.9	-0.2	-14.0	-12.9	-6.9	-1.8	-3.7	-1.8	-2.3	-2.8	-4.2	-3.3	-2.9	3.5	19.5	11.4	12.5	9.2	8.8	7.6	6.9		
ECB Money Aggregates M1 YoY (1%)	7.2	7.6	8.7	7.8	8.4	8.6	8.1	7.9	8.4	10.3	11.7	12.8	12.5	13.6	13.0	13.8	14.2	14.3	15.5	16.7	16.4	13.5	12.4	11.4	11.6	11.3	11.1	11.2	10.7	10.0	
ECB Money Aggregates M2 YoY (1%)	5.0	5.4	6.4	5.8	6.1	6.2	5.7	5.5	5.8	7.3	8.2	9.3	9.2	10.1	9.4	10.3	10.6	10.7	11.7	12.4	12.1	10.1	9.2	8.2	8.2	7.8	7.8	7.6	7.5	7.1	
ECB M3 Annual Growth Rate SA (1%)	4.6	5.2	5.8	5.7	5.7	5.6	4.9	5.2	5.5	7.5	8.1	8.9	9.2	10.0	9.5	10.3	10.4	10.9	12.2	12.5	12.3	10.1	9.4	8.6	8.4	7.8	8.0	7.6	7.7	7.3	
Eurostat Retail Sales Germany Volume YoY WDA (1%)	4.1	3.2	3.6	4.0	2.4	3.5	2.4	2.3	2.1	1.0	-5.0	8.1	4.1	4.7	6.7	5.1	9.0	9.9	2.3	-5.1	-2.1	7.8	7.6	0.1	5.5	0.8	0.6	-0.4	-1.9	-2.8	
Eurostat Retail Sales France Volume YoY WDA (3%)	2.6	1.0	4.3	2.7	1.6	3.3	2.8	2.6	1.4	-13.5	-29.7	-3.6	3.6	0.0	6.5	2.7	5.2	-11.4	8.2	2.3	4.2	25.1	42.8	11.2	5.7	6.6	2.5	6.2	3.8	22.7	
Eurostat Retail Sales Netherlands Volume YoY WDA (2%)	2.4	1.4	0.8	2.6	1.7	0.9	3.8	1.8	2.9	0.2	-5.3	4.2	6.1	5.6	8.1	3.8	3.0	7.0	-5.9	-9.3	-5.4	5.3	9.7	9.1	4.6	1.9	1.7	2.7	5.1	2.4	
Eurostat Retail Sales Italy Volume YoY WDA (3%)	2.8	1.7	0.2	1.7	1.0	-0.7	0.7	0.9	2.9	-22.2	-33.2	-14.6	-5.5	-7.8	0.8	-0.1	0.0	-8.5	-6.0	-10.7	-5.0	22.4	39.2	17.8	9.1	7.9	2.3	4.3	4.2		
Eurostat Retail Sales Spain Volume YoY WDA (4%)	2.5	3.2	3.3	3.6	2.6	3.1	1.3	1.7	2.0	-13.6	-29.8	-17.9	-4.5	-3.5	-3.0	-3.5	-2.0	-4.9	-0.1	-9.0	-6.2	13.5	37.2	17.6	1.1	-0.1	-1.2	0.1	-1.1	4.8	
Eurostat Retail Sales Portugal Volume YoY WDA (4%)	3.8	5.0	4.4	3.3	3.5	4.7	2.7	4.4	9.5	-4.8	-21.2	-10.8	-4.2	-2.1	-3.2	1.8	0.8	-3.9	-2.1	-9.9	-15.0	0.9	27.4	15.3	6.6	2.4	3.3	2.7	3.3	10.0	

Data Source: Bloomberg. Intellectual Property of 42 Macro LLC. Nowcast feature weights are dynamically retrained monthly according to the relative strength of the first difference regressions between the independent and the dependent variables.

Eurozone INFLATION: Secular View

Eurozone INFLATION: Cyclical View



Eurozone INFLATION Agent-Based Nowcast Model

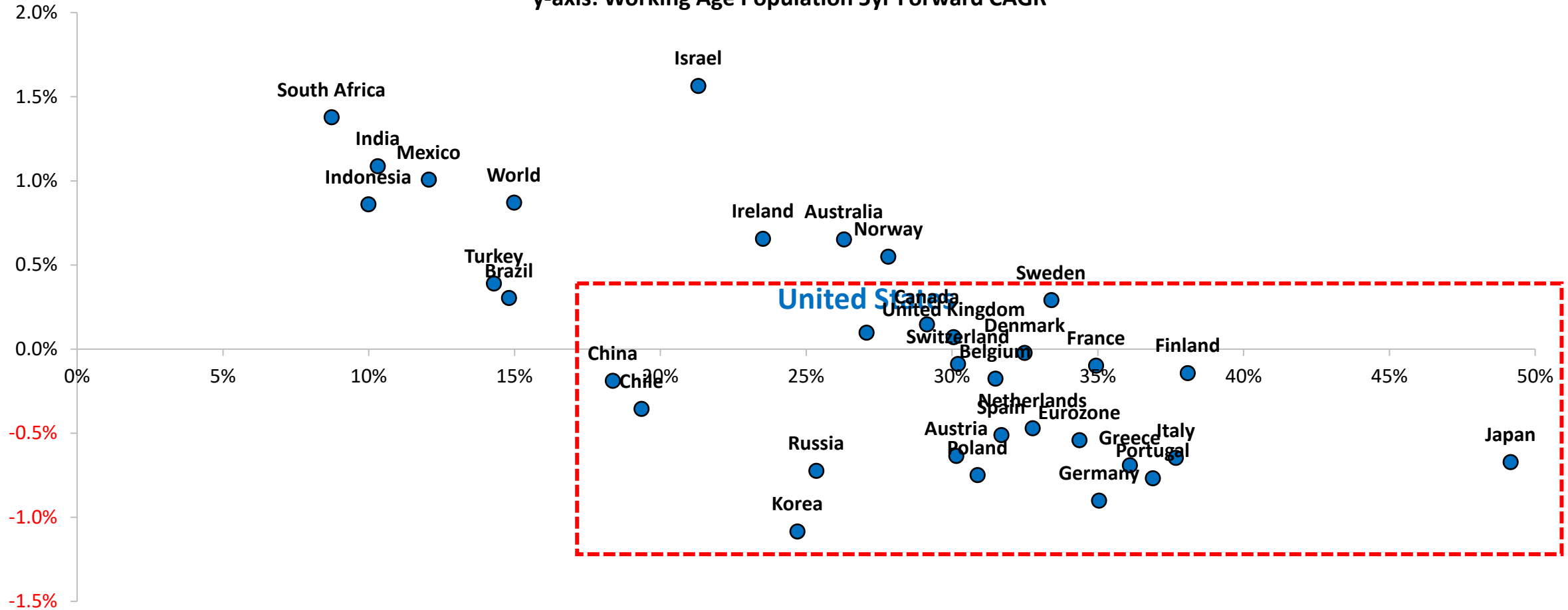
42 Macro Agent-Based INFLATION Nowcast Model Features

Eurozone	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	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	
Euro Area MUICP All Items NSA YoY	1.3	1.0	1.0	0.8	0.7	1.0	1.3	1.4	1.2	0.7	0.3	0.1	0.3	0.4	-0.2	-0.3	-0.3	-0.3	-0.3	0.9	0.9	1.3	1.6	2.0	1.9	2.2	3.0	3.4	4.1	4.9	5.0
Eurostat Eurozone Core MUICP YoY NSA (9%)	1.1	0.9	0.9	1.0	1.1	1.3	1.3	1.1	1.2	1.0	0.9	0.9	0.8	1.2	0.4	0.2	0.2	0.2	0.2	1.4	1.1	0.9	0.7	1.0	0.9	0.7	1.6	1.9	2.0	2.6	2.6
Eurostat PPI Eurozone Industry Ex Construction YoY (7%)	0.7	0.1	-0.9	-1.2	-2.0	-1.4	-0.7	-0.8	-1.4	-2.8	-4.6	-5.0	-3.7	-3.2	-2.6	-2.3	-2.0	-2.0	-1.1	0.4	1.5	4.4	7.6	9.6	10.3	12.4	13.5	16.1	21.9	23.7	
Commodity Research Bureau BLS/US Spot All Commodities (1%)	-9.5	-9.6	-9.9	-11.0	-10.6	-10.6	-2.8	-2.5	-7.0	-15.5	-19.6	-12.3	-11.7	-8.7	1.4	2.2	1.9	5.7	5.1	9.5	21.4	40.5	54.0	52.1	59.1	54.4	47.3	44.0	52.0	42.8	45.1
Commodity Research Bureau BLS/US Spot Foodstuff (0%)	2.5	7.0	5.3	2.8	-0.7	0.0	6.5	5.0	3.7	-7.9	-15.3	-12.5	-15.6	-16.6	-5.8	-2.1	-1.8	1.9	-1.7	0.0	12.4	30.4	51.0	43.1	59.7	57.7	50.2	40.2	42.4	38.5	45.5
Commodity Research Bureau BLS/US Spot Raw Industrials (3%)	-9.1	-7.9	-4.6	-2.8	-8.0	-7.7	-4.1	-1.4	-4.1	-13.1	-13.4	-10.3	-7.3	-7.9	-6.5	-2.9	2.4	2.4	3.8	6.2	12.0	26.1	28.1	31.2	38.0	41.6	38.9	36.8	39.6	36.2	
Euro Area HICP Food & non Alcoholic Beverages (0%)	1.3	1.7	1.9	1.2	1.2	1.5	1.7	1.7	1.8	2.3	3.6	3.4	3.0	1.6	1.2	1.4	1.7	1.5	0.9	1.0	0.8	0.7	0.0	0.1	0.2	1.4	1.9	1.9	1.8	2.2	
Euro Area HICP Alcoholic Beverages Tobacco & Narcotics (0%)	2.8	2.7	2.8	2.8	2.8	3.4	3.4	3.5	3.3	3.0	3.2	3.5	3.8	3.6	3.6	3.4	3.3	3.1	3.0	3.3	3.5	2.7	2.8	2.3	1.9	2.2	2.3	2.3	2.5	2.0	
Euro Area MUICP Clothing & Footwear (3%)	0.4	1.3	1.2	0.5	0.6	0.7	0.9	0.3	0.9	1.0	-0.4	-0.7	-0.9	6.3	-1.1	-1.4	-0.5	-0.9	-2.2	2.5	0.7	-1.3	-0.2	0.4	1.8	-3.3	3.6	1.7	0.9	1.4	
Euro Area MUICP Housing NSA (8%)	2.3	1.5	1.3	1.0	0.4	0.2	0.7	0.6	0.2	-0.4	-1.0	-1.3	-1.1	-1.2	-1.1	-1.2	-1.2	-1.0	-0.6	0.3	0.5	1.6	3.0	3.5	3.7	4.7	5.2	5.9	8.0	9.1	
Euro Area MUICP Furnishings & Household Equipment (5%)	0.4	0.5	0.5	0.4	0.5	0.5	0.6	0.4	0.7	0.7	0.8	0.7	0.7	0.8	0.3	0.2	0.1	0.0	0.1	1.2	0.8	0.8	0.7	0.8	1.0	1.3	2.0	2.1	2.3	2.6	
Euro Area MUICP Health NSA (0%)	0.7	0.7	0.9	0.8	0.7	0.7	0.8	0.7	0.7	0.8	0.9	0.9	0.9	0.8	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.3	0.4	0.6	0.8	0.9	
Euro Area MUICP Transport (9%)	1.1	1.0	0.6	0.0	-0.2	0.0	1.9	3.0	1.8	-0.6	-3.6	-4.5	-3.1	-3.0	-3.2	-3.2	-3.5	-3.6	-2.9	-1.1	0.4	3.5	5.1	6.6	6.0	6.8	7.4	8.5	10.6	12.2	
Euro Area MUICP Communications (1%)	-2.6	-2.5	-2.1	-1.8	-1.5	-1.3	-1.4	-1.4	-1.1	-1.3	-1.4	-0.8	-0.9	-1.7	-2.0	-2.2	-3.0	-2.5	-2.5	-1.3	-1.3	-1.7	-1.1	-1.1	-1.0	-0.1	0.1	0.2	1.0	0.5	
Euro Area MUICP Recreation & Culture (5%)	0.7	-1.0	-0.9	-0.1	-0.1	1.6	1.1	0.0	0.4	0.1	0.4	0.3	0.6	0.7	0.0	0.0	0.0	-0.3	0.1	2.7	1.9	1.7	0.7	1.4	-0.4	-1.4	-0.5	1.1	1.6	4.0	
Euro Area MUICP Education (0%)	-0.6	-0.7	0.8	0.6	1.0	1.0	0.9	0.5	0.4	0.4	0.3	0.3	0.9	1.0	1.0	1.1	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	0.3	0.2	0.2	0.2	-1.8	-1.0	-1.0	
Euro Area MUICP Restaurants & Hotels (0%)	2.4	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.7	1.5	1.5	1.1	0.6	0.8	0.2	0.5	0.8	0.9	0.8	0.7	0.7	0.4	0.2	0.6	1.7	2.1	2.6	2.9	3.3	
Euro Area MUICP Misc Goods & Services (6%)	1.6	1.6	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.6	1.7	1.5	1.7	1.4	1.3	1.4	1.4	1.3	1.3	1.8	1.7	1.7	1.7	1.7	1.9	1.9	2.0	2.1	2.0	2.1	
Euro Area MUICP Goods (13%)	1.0	0.9	0.7	0.4	0.1	0.3	1.0	1.3	0.9	0.2	-0.4	-0.9	-0.5	-0.1	-0.9	-1.1	-0.9	-1.0	-1.0	0.5	0.7	1.3	2.1	2.6	2.8	3.3	4.5	4.6	5.5	6.3	
Euro Area MUICP Food Alcohol & Tobacco (0%)	1.6	1.9	2.1	1.6	1.5	1.9	2.0	2.1	2.1	2.4	3.6	3.4	3.2	2.0	1.7	1.8	2.0	1.9	1.3	1.5	1.3	1.1	0.6	0.5	0.5	1.6	2.0	2.0	1.9	2.2	3.2
Euro Area MUICP Energy (7%)	1.7	0.5	-0.6	-1.8	-3.1	-3.2	0.2	1.9	-0.3	-4.5	-9.7	-11.9	-9.3	-8.4	-7.8	-8.2	-8.2	-8.3	-6.9	-4.2	-1.7	4.3	10.4	13.1	12.6	14.3	15.4	17.6	23.7	27.5	26.0
Euro Area MUICP Services (6%)	1.6	1.2	1.3	1.5	1.5	1.9	1.8	1.5	1.6	1.3	1.2	1.3	1.2	0.9	0.7	0.5	0.4	0.6	0.7	1.4	1.2	1.3	0.9	1.1	0.7	0.9	1.1	1.7	2.1	2.7	2.4
Euro Area CPI Services Related to Housing (2%)	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.6	1.6	
Euro Area CPI Services Related to Transport (5%)	2.2	2.1	2.3	2.1	2.4	2.4	2.5	2.0	2.0	1.2	0.7	1.4	1.1	0.2	-0.8	-0.6	-0.9	-0.6	-0.3	1.0	0.8	1.5	0.5	1.2	0.7	1.7	2.3	3.3	3.6	4.4	
Euro Area CPI Services Related to Communication (1%)	-0.9	-1.1	-0.8	-0.6	-0.4	-0.1	-0.2	0.0	0.1	-0.4	0.3	0.3	0.6	0.9	0.7	0.3	0.4	0.5	0.7	1.8	1.2	1.3	0.6	0.8	0.1	0.3	1.0	1.9	2.3	3.7	
Euro Area CPI Services Related to Recreation Incl Repairs & Pers Care (4%)	2.1	0.8	0.9	1.5	1.5	2.4	2.1	1.5	1.8	1.4	1.3	1.3	1.2	0.9	0.7	0.3	0.4	0.5	0.7	1.8	1.2	1.3	0.6	0.8	0.1	0.3	1.0	1.9	2.3	3.7	
Euro Area CPI Services Rel to Recr & Pers Care Excl Pack Holidays & Accom (0%)	2.0	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.6	1.5	1.6	1.7	1.5	1.7	1.8	1.8	2.1	2.2	2.5	
Euro Area CPI Services Related to Package Holidays & Accommodation (4%)	3.4	-0.4	-0.1	1.0	0.9	3.1	3.0	0.7	1.9	-0.2	-0.2	-0.3	-1.2	-2.2	-3.1	-4.4	-4.1	-3.2	-2.5	0.1	-0.9	-0.6	-2.4	-0.5	-3.3	-0.5	3.0	3.7	4.0	7.8	

Data Source: Bloomberg. Intellectual Property of 42 Macro LLC. Nowcast feature weights are dynamically retrained monthly according to the relative strength of the first difference regressions between the independent and the dependent variables.

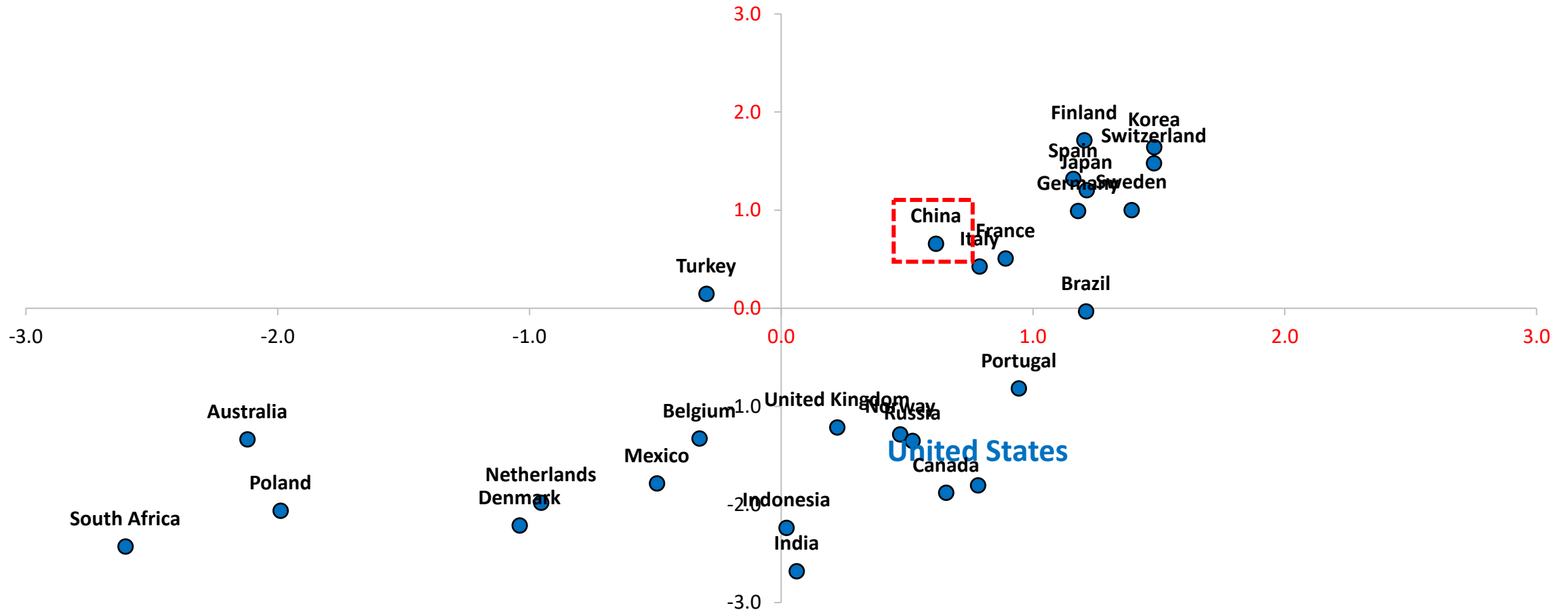
DEMOGRAPHICS: Still Outright Deflationary Across Much Of The Developed World – Particularly In Europe And Japan... China Disinflationary As Well

x-axis: 5yr Forward Old-Age Dependency Ratio
y-axis: Working Age Population 5yr Forward CAGR

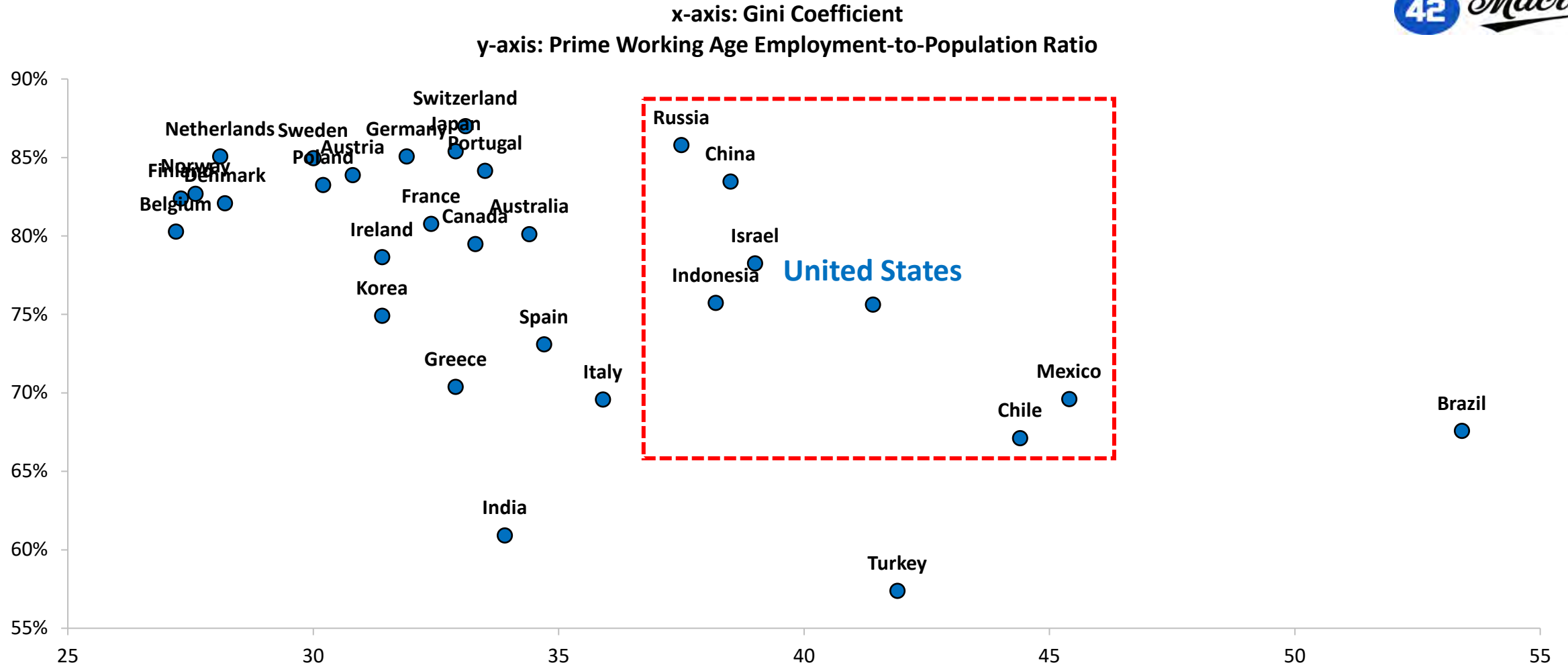


LEVERAGE: In Line With Past Crises, “Extend And Pretend” Was The Global Policy Response To The COVID-19 Pandemic As Well... Now Beijing Wants Out

x-axis: Private Nonfinancial Sector Credit/GDP Ratio 3yr Z-Score
 y-axis: Private Nonfinancial Sector Debt Service Ratio 3yr Z-Score

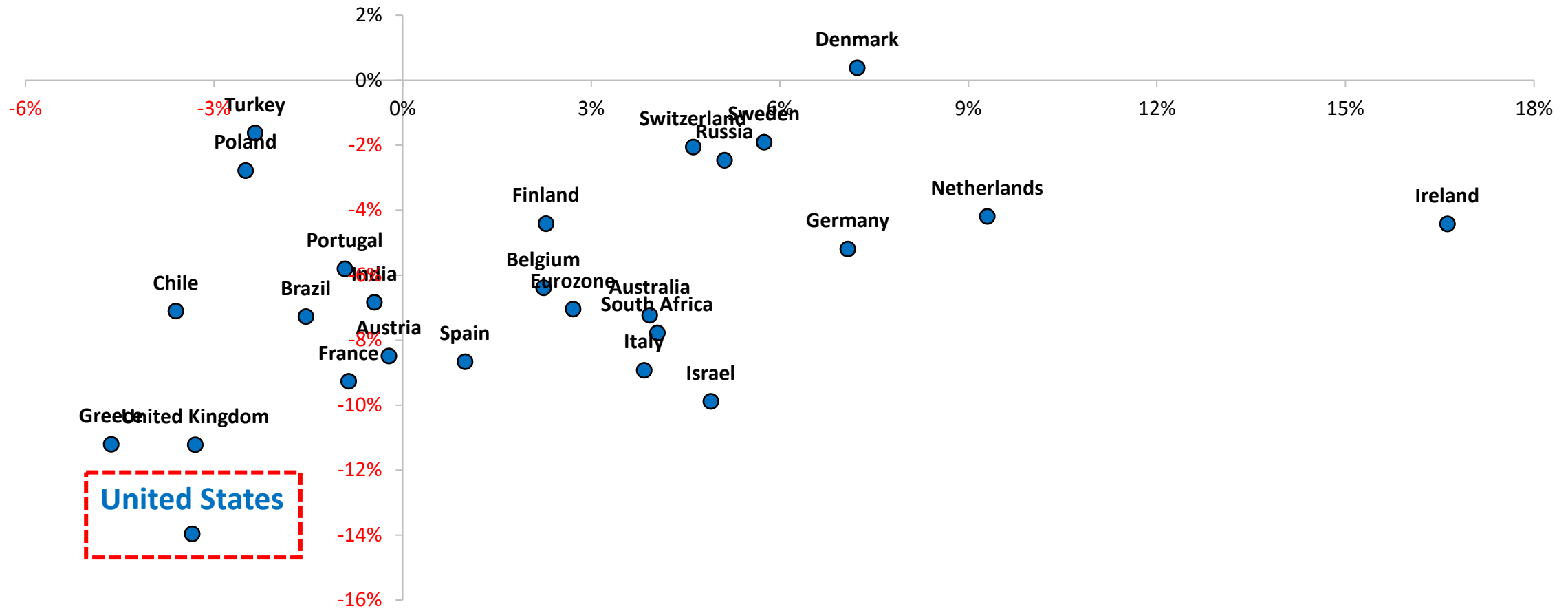


POLITICS: The Drivers Of Populism Suggest The US Has Become An Emerging Market From A Political Risk Perspective



BALANCE OF PAYMENTS: Who Or What Will Be Called Upon To Finance Bipartisan Populism In The US? Will That Process Be Smooth Or Turbulent?

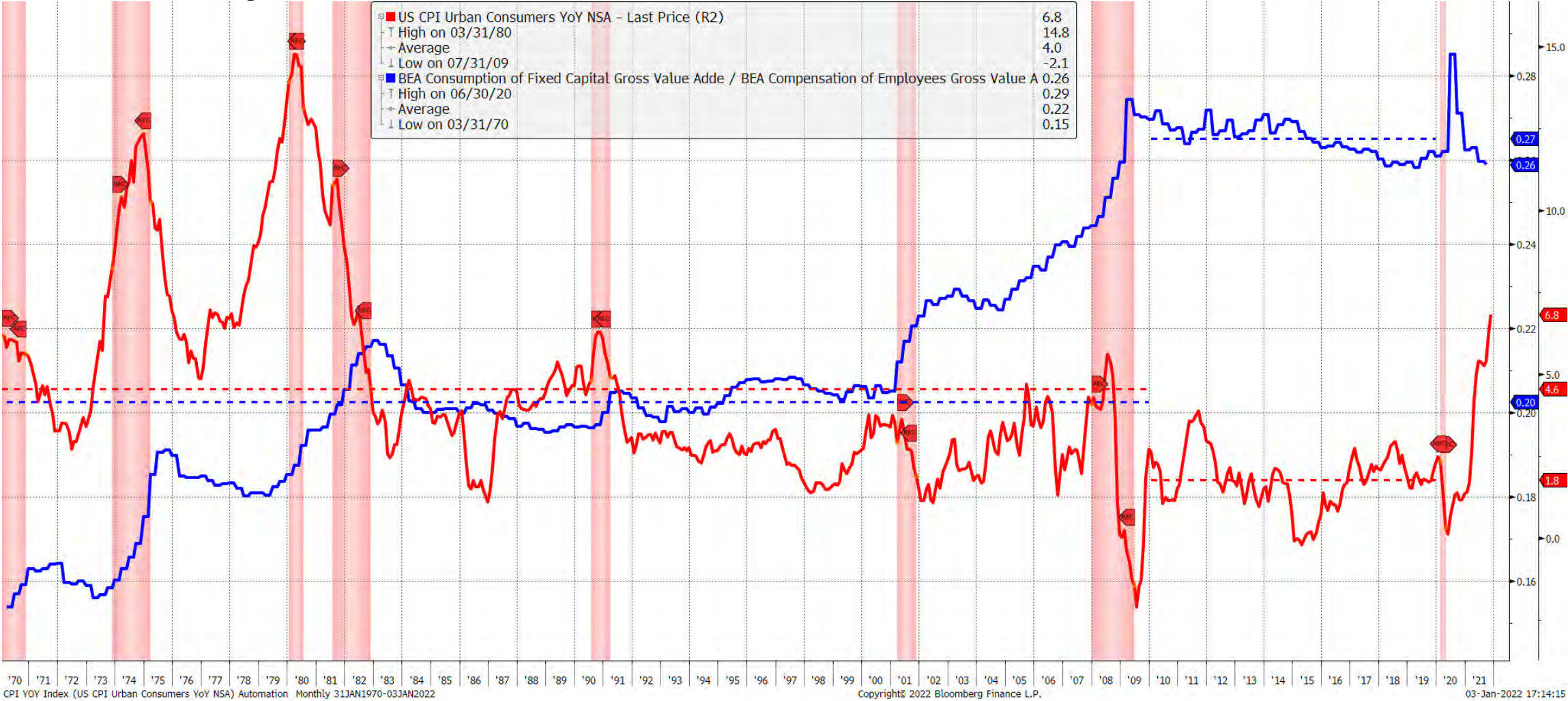
x-axis: Current Account Balance as a % of GDP
y-axis: Sovereign Fiscal Balance as a % of GDP



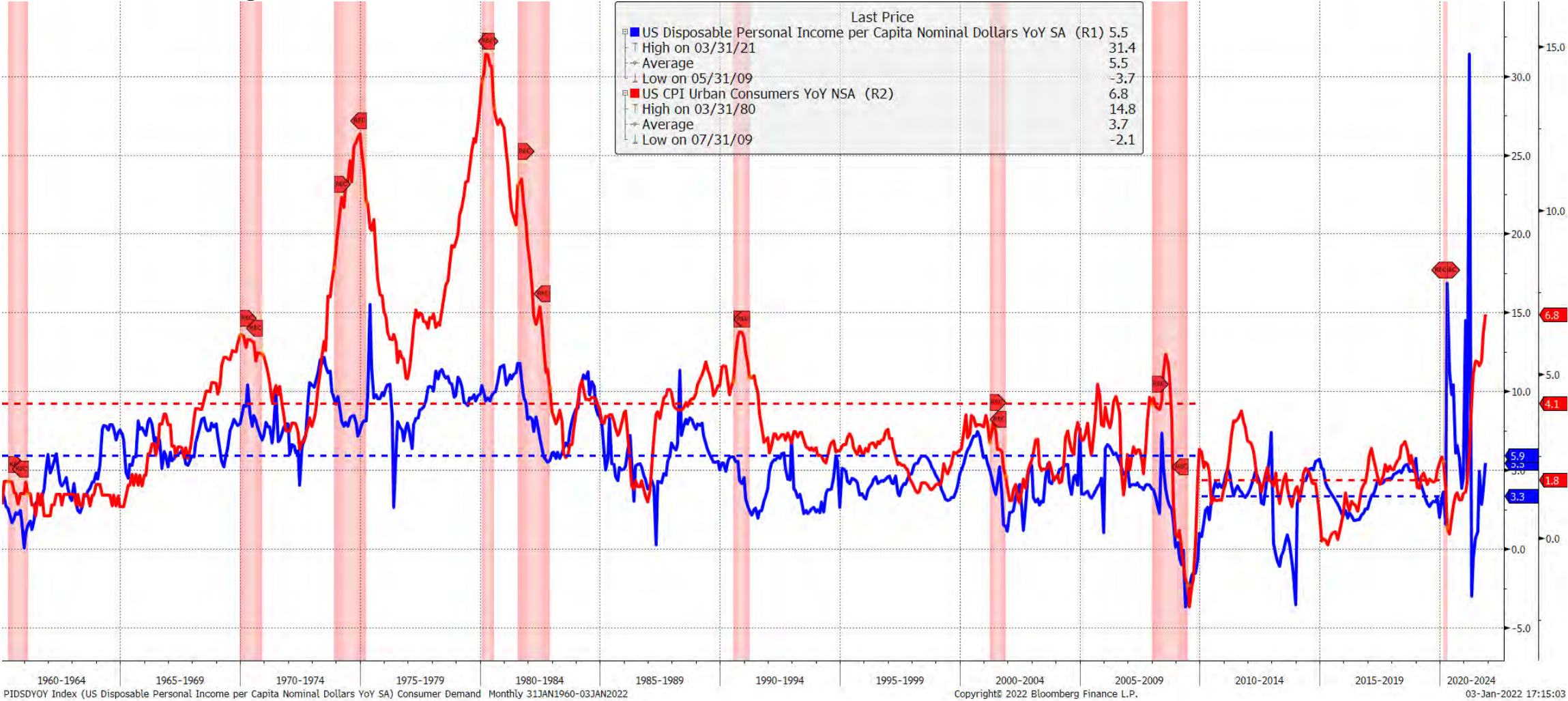
42 Macro Secular Inflation Model: Our #Math Suggests The Stationary Mean Of Headline CPI Has Already Transposed Itself 60-100bps Higher

US SECULAR INFLATION DRIVER	Δ-ADJUSTED Z-SCORE (Latest Value vs. 2010-19 Sample)
Automation: Capex/Employee Compensation (Latest Value = 26%)	1.6
Consumer Demand: Disposable Personal Income per Capita YoY (Latest Value = 5.5%)	0.8
Demographics: Share of Population ≥ 65 Years Old (Latest Value = 17%)	(2.7)
Fed Reaction Function: Fed Balance Sheet as a % of GDP (Latest Value = 38%)	5.1
Fiscal Balance: Budget Deficit as a % of GDP (Latest Value = -12%)	3.1
Globalization: Imports of Goods and Services as a % of GDP (Latest Value = 13%)	2.7
Household Formation: Net Change in Domestic Households (Latest Value = 2011)	3.2
Income Inequality: Gini Coefficient (Latest Value = 0.49)	(2.3)
Money Supply: M2 YoY (Latest Value = 13.1%)	3.5
Money Velocity: M2/Nominal GDP (Latest Value = 1.1)	(4.3)
Monopsony Power: S&P 100 Market Cap/S&P 500 Market Cap (Latest Value = 67%)	(4.4)
Public Debt: Federal Debt Held by the Public as a % of GDP (Latest Value = 116%)	8.3
Technology: NASDAQ 100 Market Cap/Russell 3000 Market Cap (Latest Value = 38%)	(3.9)
Wages: Employment Cost Index YoY (Latest Value = 3.7%)	4.5
Wealth Effect: Household Net Worth as a % of DPI (Latest Value = 796%)	3.4
Wealth Inequality: Top-10% Share of Household Wealth (Latest Value = 65%)	(2.4)
MEAN Z-SCORE MODEL	1.0
WEIGHTED Z-SCORE MODEL	1.5
2010-19 Stationary Mean of Headline CPI YoY	1.8%
2020-29 Stationary Mean Projection - MEAN Z-SCORE MODEL	2.4%
2020-29 Stationary Mean Projection - WEIGHTED Z-SCORE MODEL	2.8%

42 Macro Secular Inflation Model: Automation... Slightly Inflationary

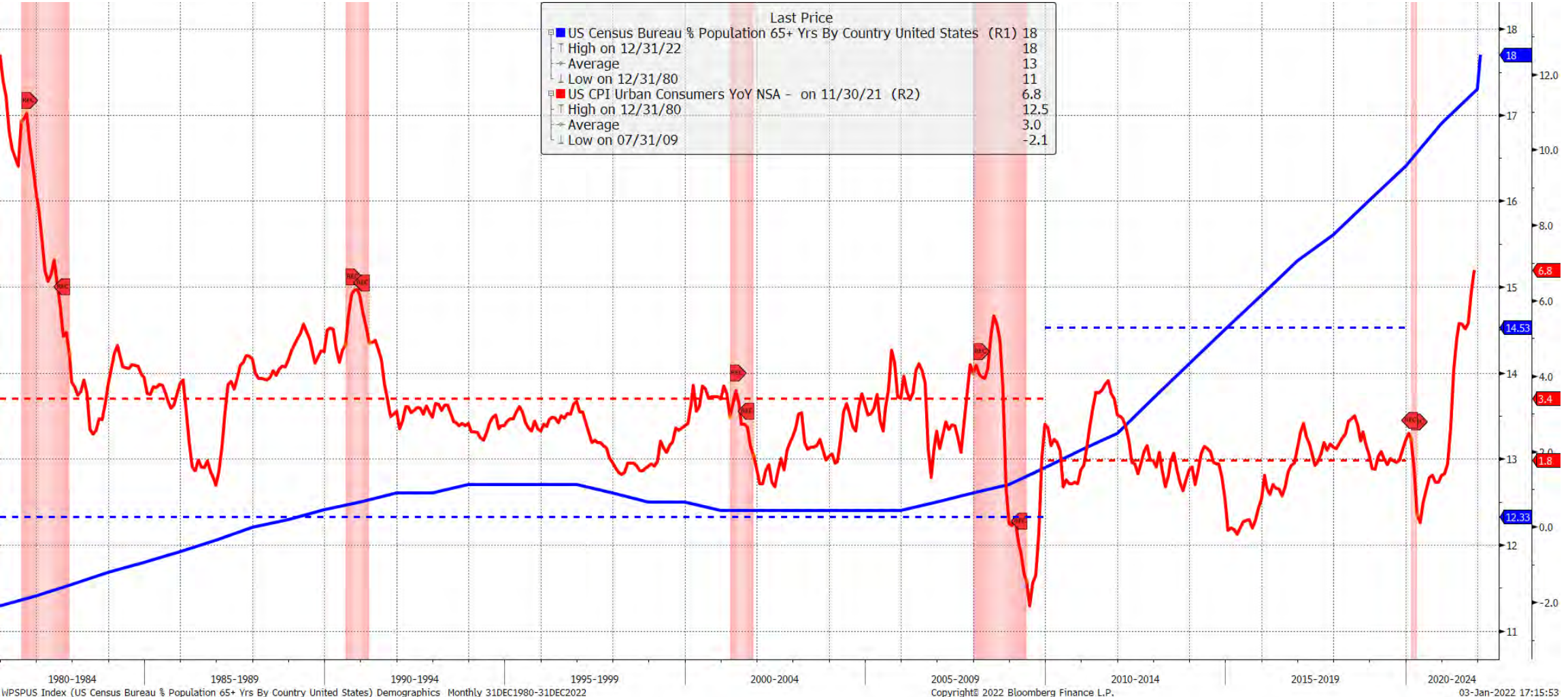


42 Macro Secular Inflation Model: Consumer Demand... Slightly Inflationary



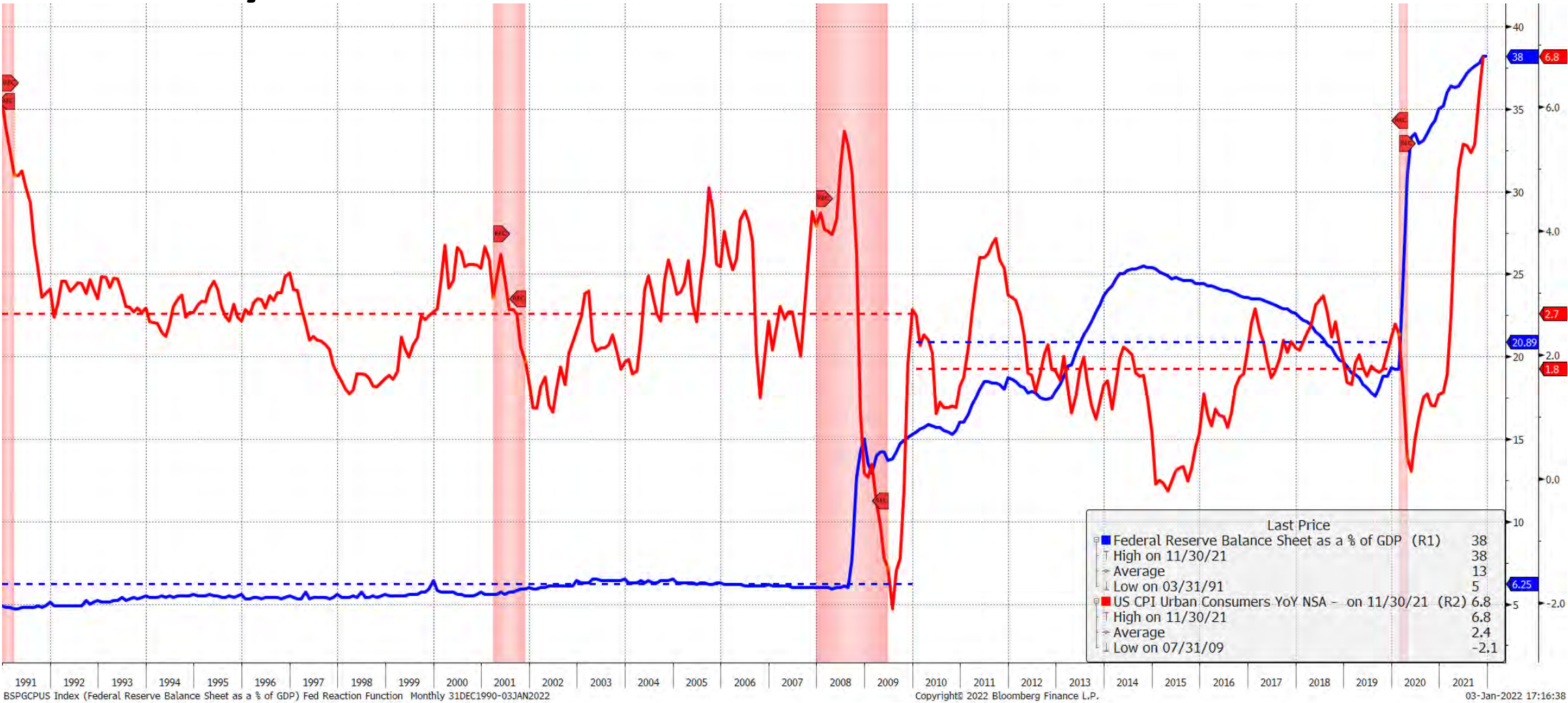
PIDSDYOY Index (US Disposable Personal Income per Capita Nominal Dollars YoY SA) Consumer Demand Monthly 31JAN1960-03JAN2022 Copyright © 2022 Bloomberg Finance L.P. 03-Jan-2022 17:15:03

42 Macro Secular Inflation Model: Demographics... Disinflationary



WPSPUS Index (US Census Bureau % Population 65+ Yrs By Country United States) Demographics Monthly 31DEC1980-31DEC2022 Copyright © 2022 Bloomberg Finance L.P. 03-Jan-2022 17:15:53

42 Macro Secular Inflation Model: Fed Reaction Function... Very Inflationary

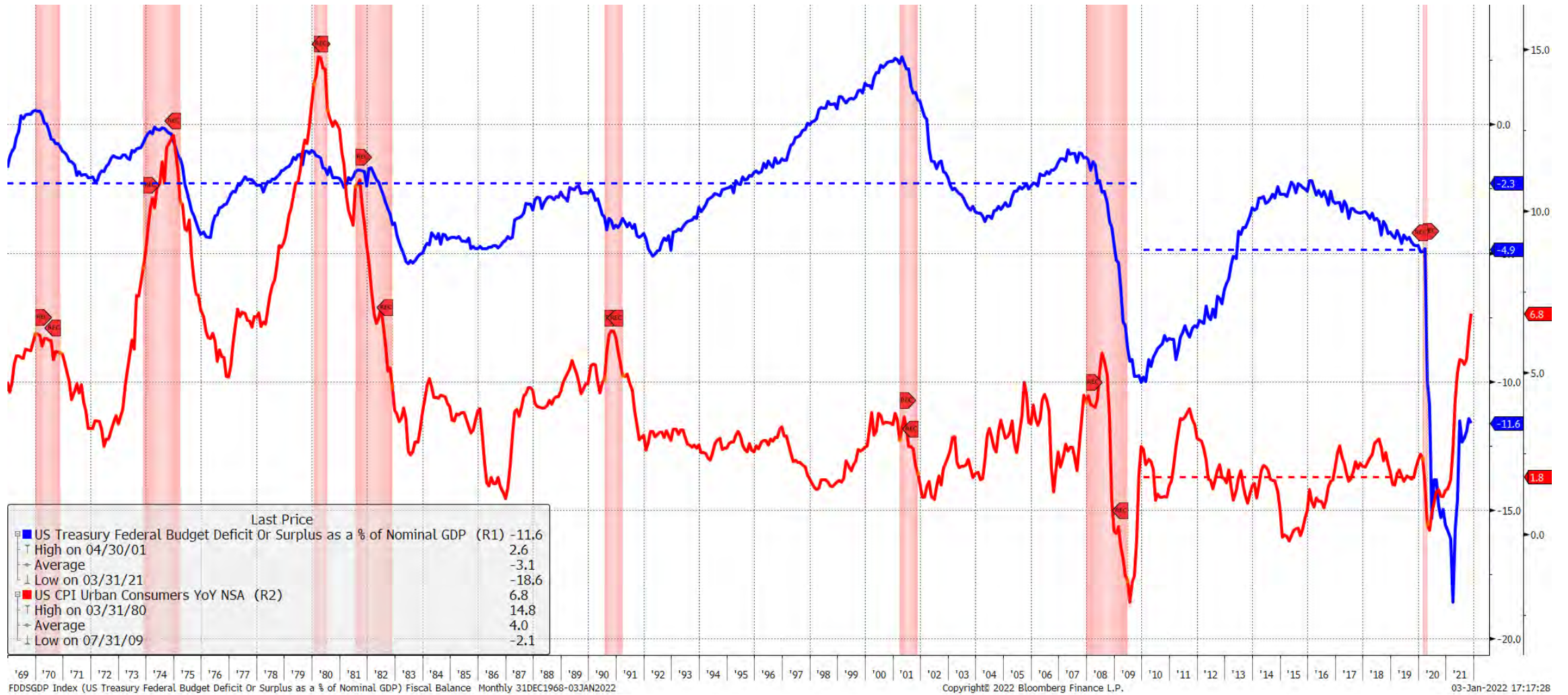


BSPGCPUS Index (Federal Reserve Balance Sheet as a % of GDP) Fed Reaction Function Monthly 31DEC1990-03JAN2022

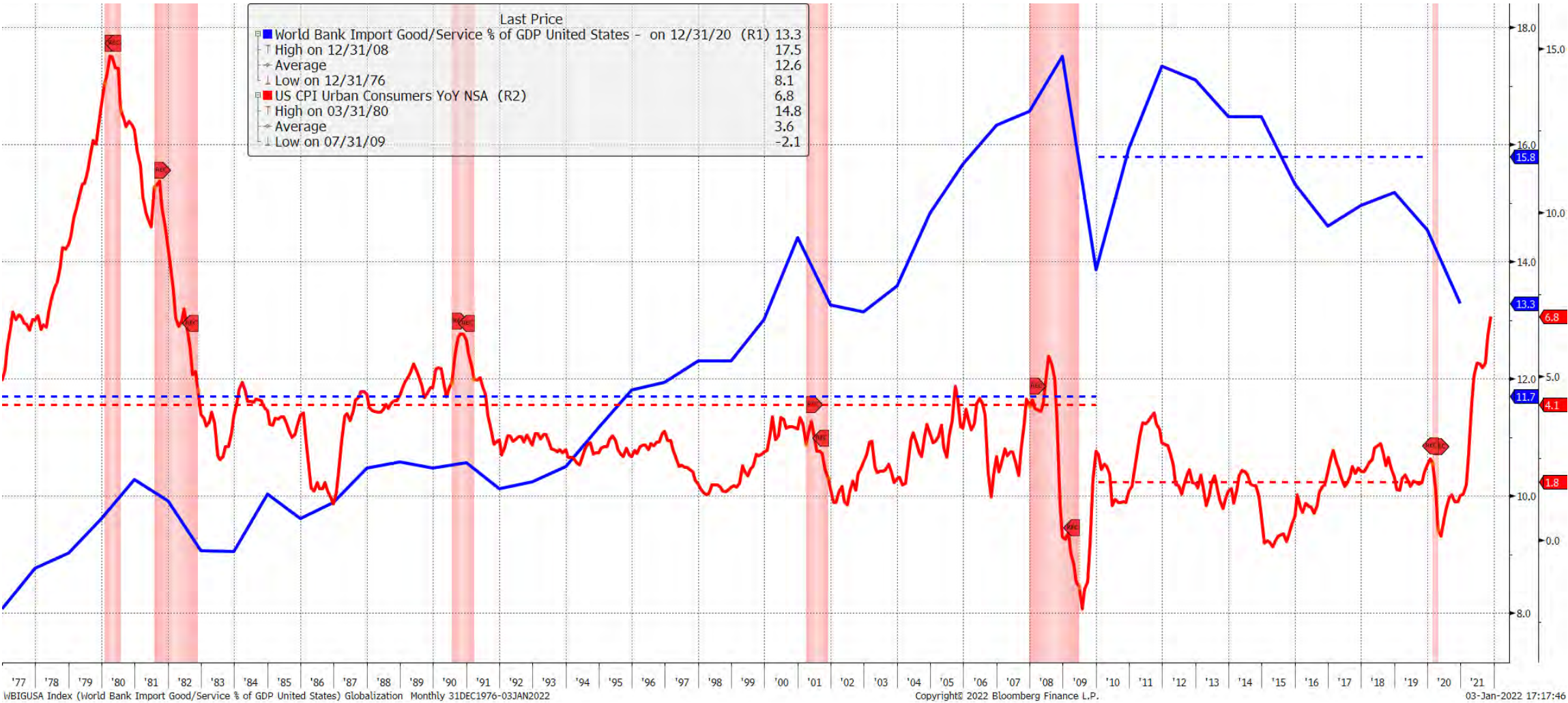
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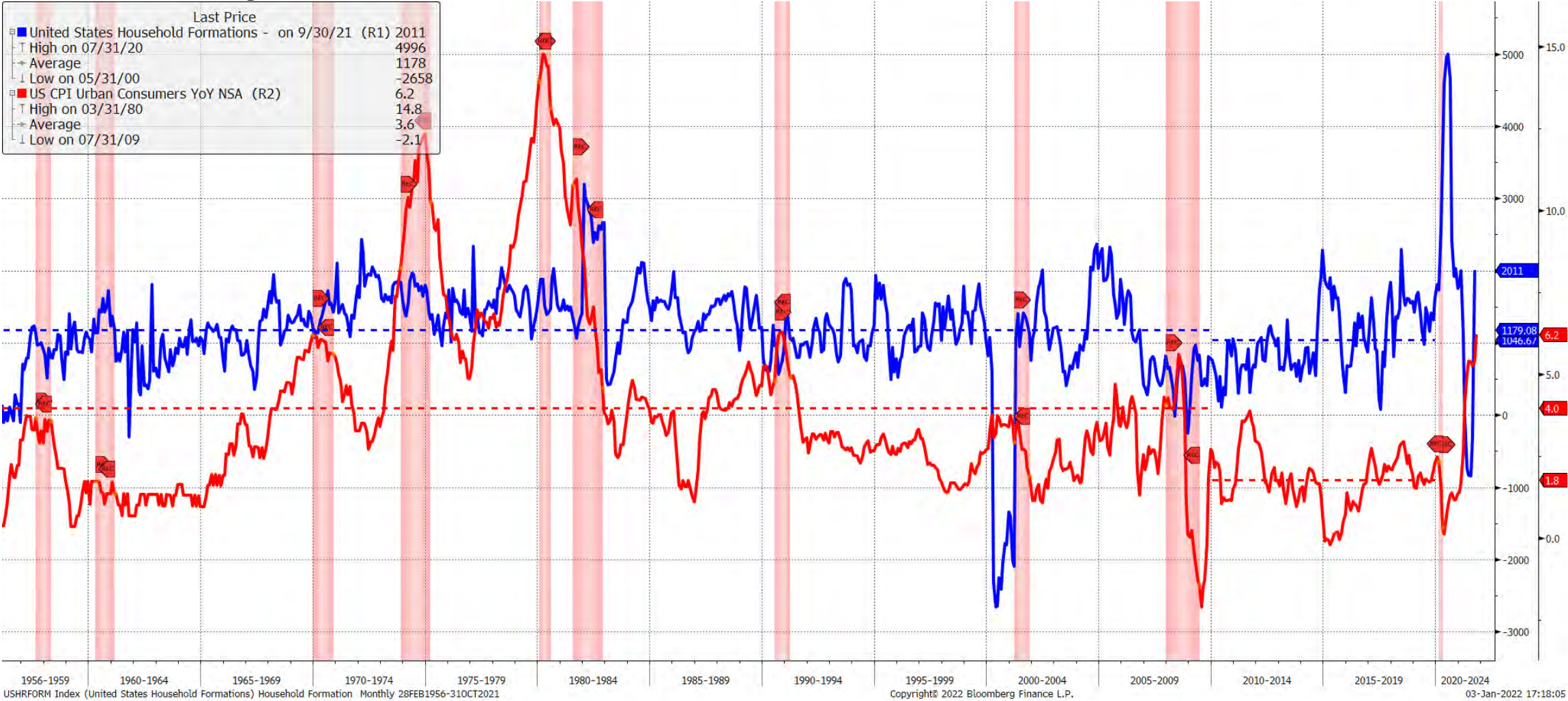
42 Macro Secular Inflation Model: Fiscal Balance... Inflationary



42 Macro Secular Inflation Model: Globalization... Inflationary

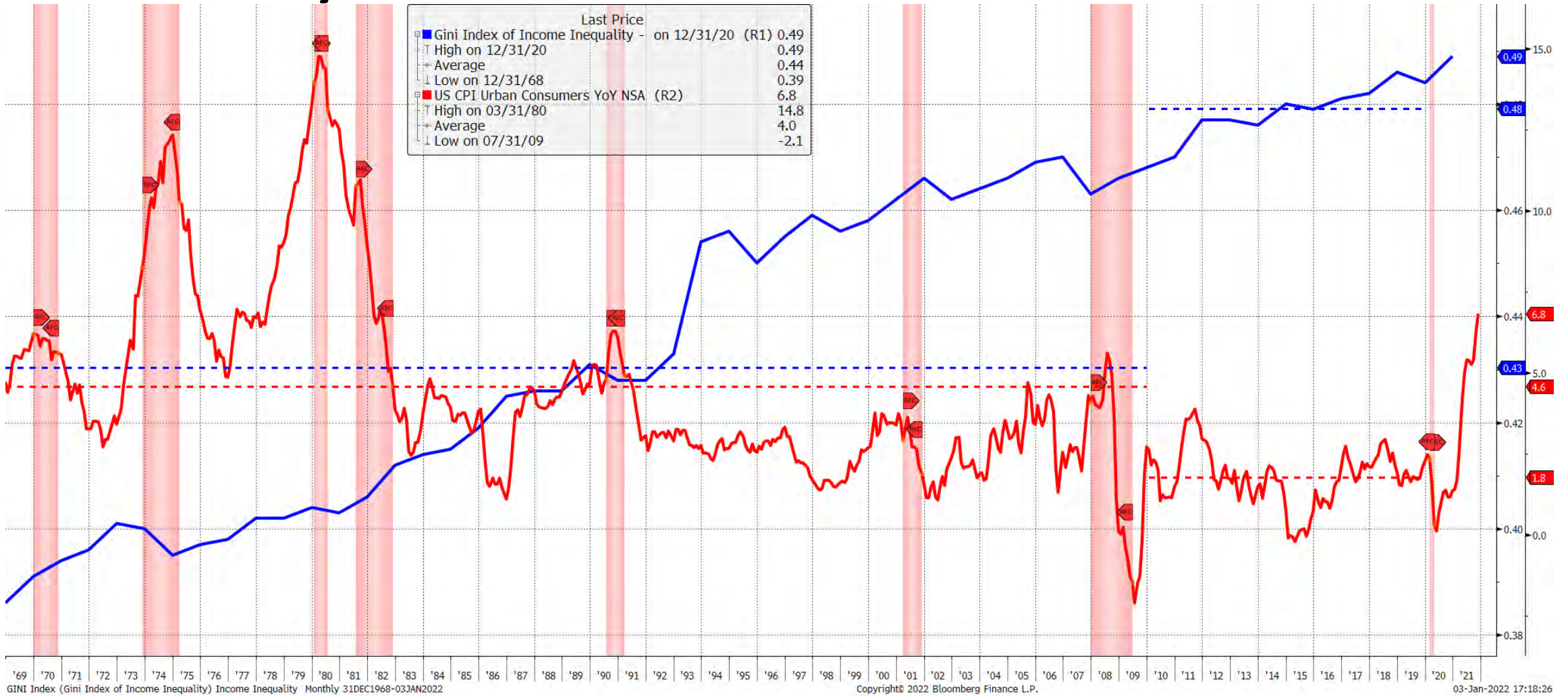


42 Macro Secular Inflation Model: Household Formation... Inflationary

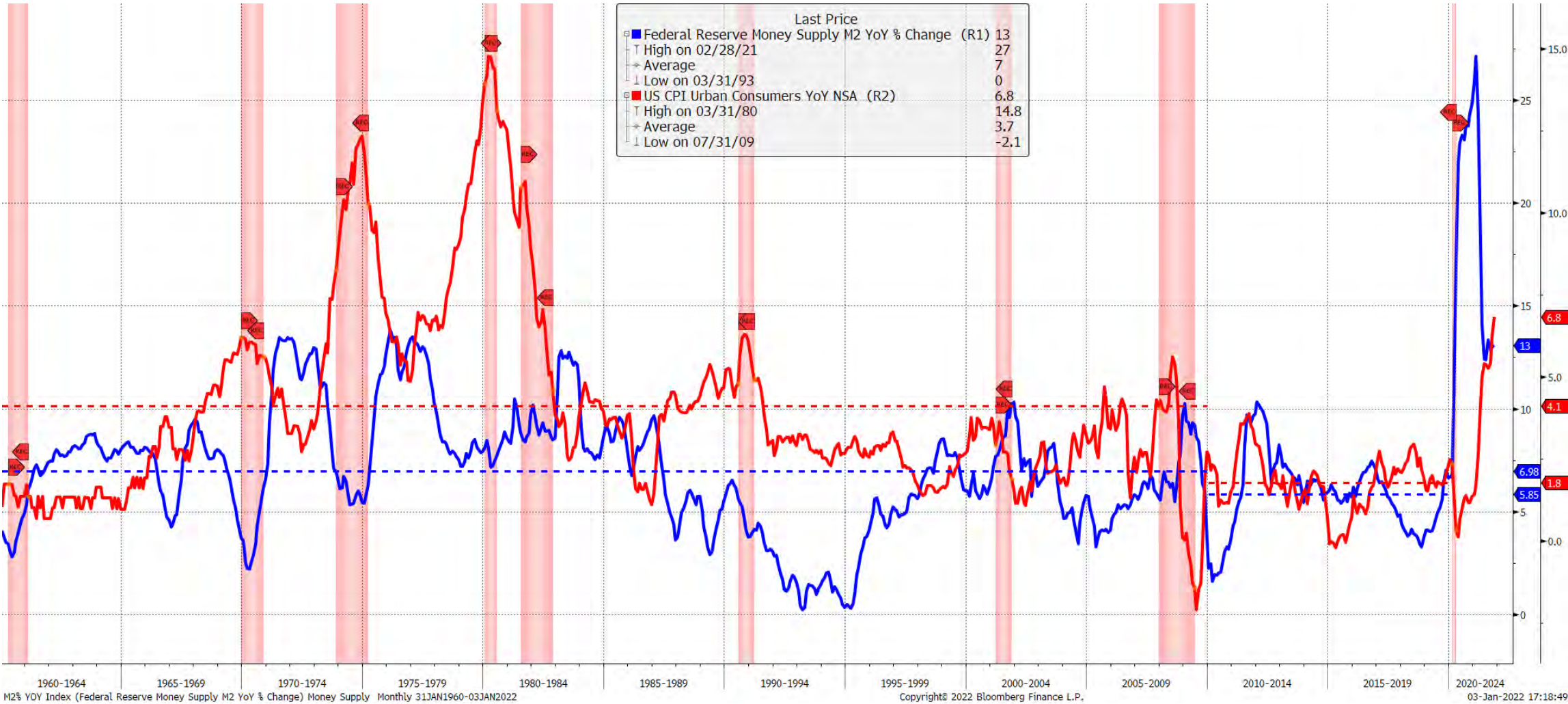


USHRFORM Index (United States Household Formations) Household Formation Monthly 28FEB1956-31OCT2021 Copyright© 2022 Bloomberg Finance L.P. 03-Jan-2022 17:18:05

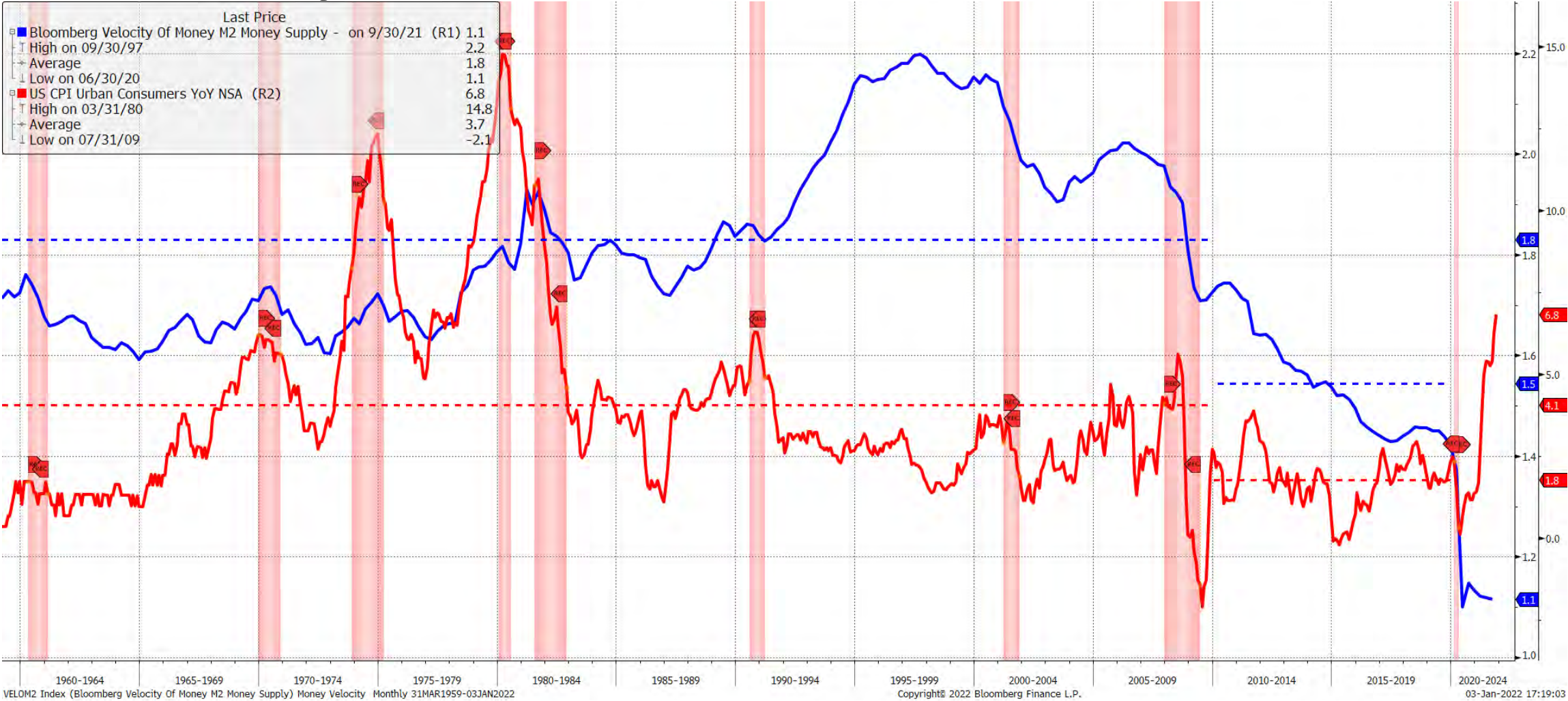
42 Macro Secular Inflation Model: Income Inequality... Disinflationary



42 Macro Secular Inflation Model: Money Supply... Inflationary

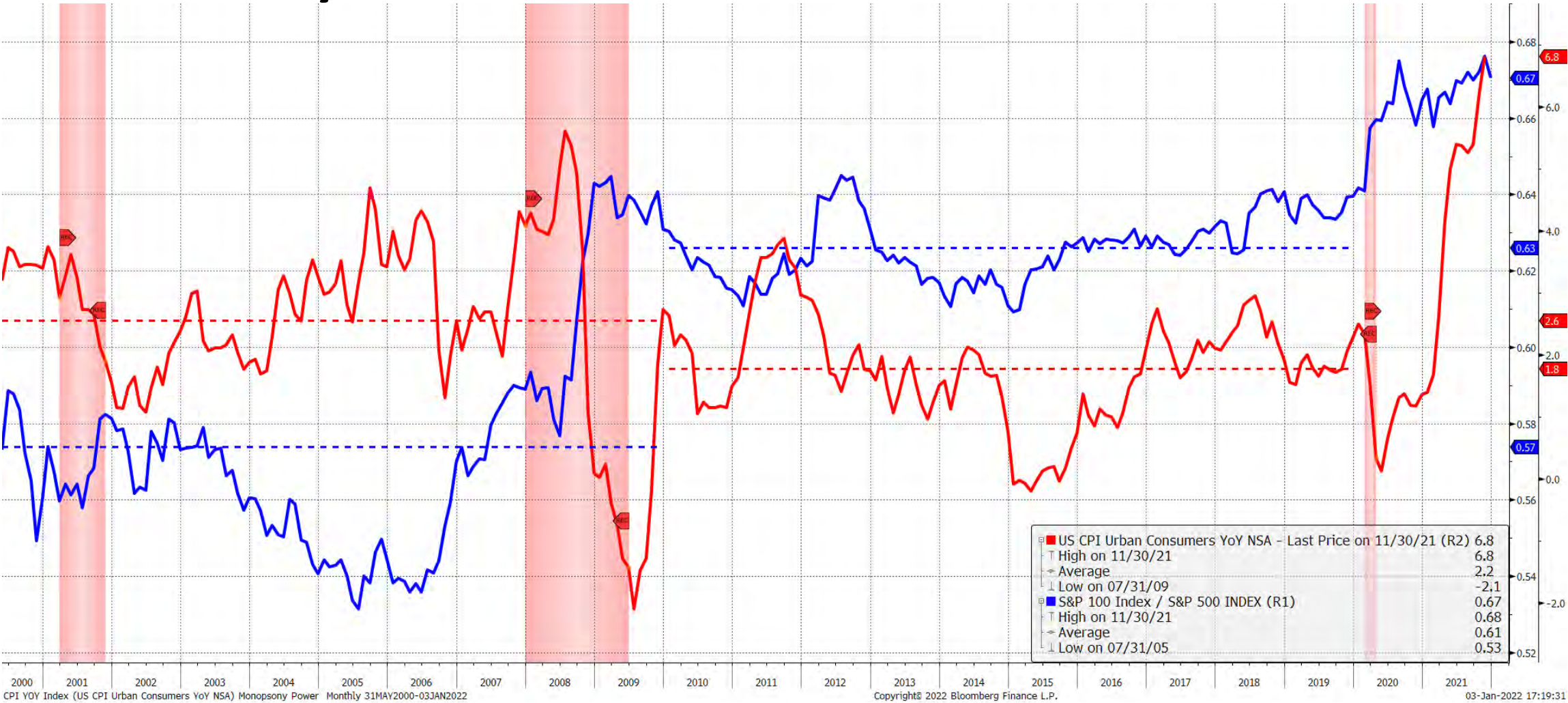


42 Macro Secular Inflation Model: Money Velocity... Very Disinflationary

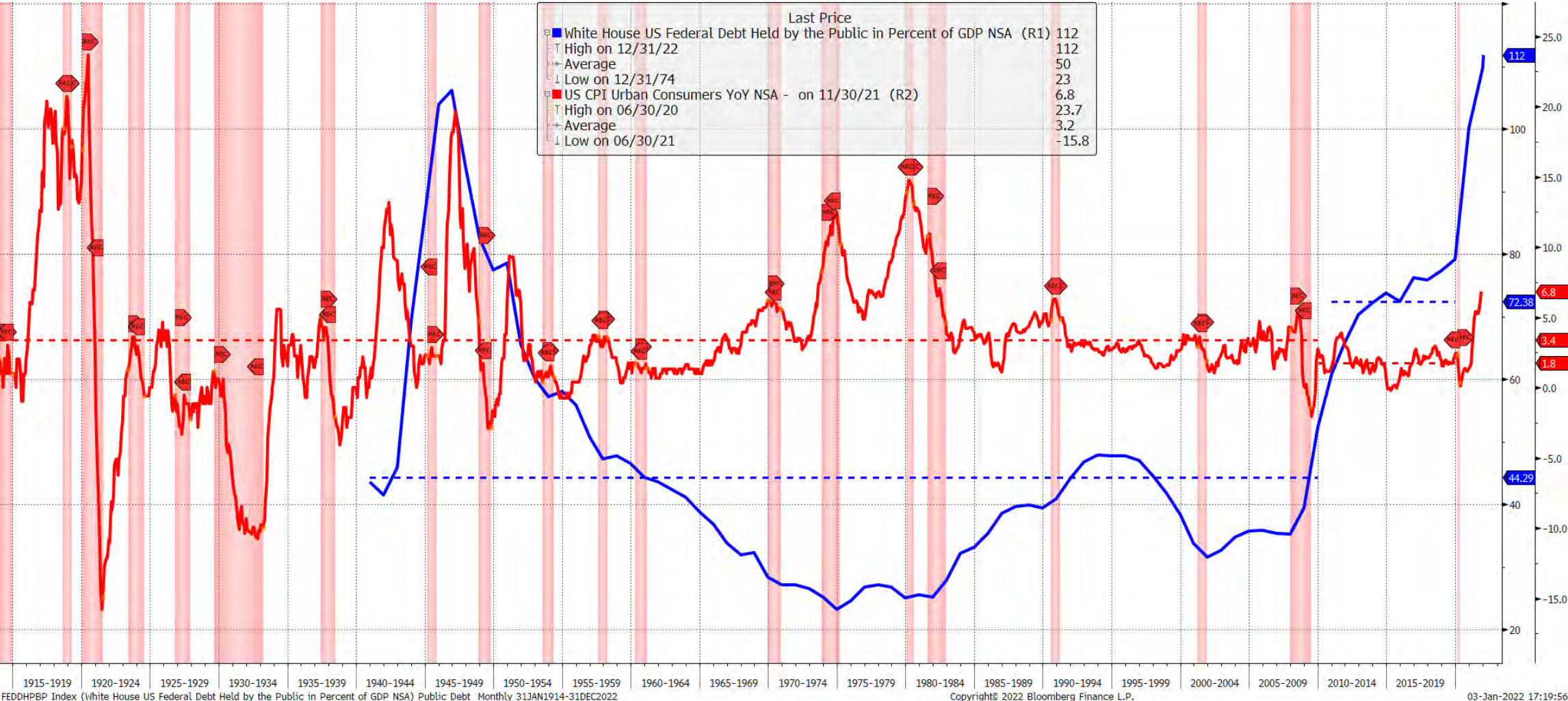


VELDM2 Index (Bloomberg Velocity Of Money M2 Money Supply) Money Velocity Monthly 31MAR1959-03JAN2022 Copyright© 2022 Bloomberg Finance L.P. 03-Jan-2022 17:19:03

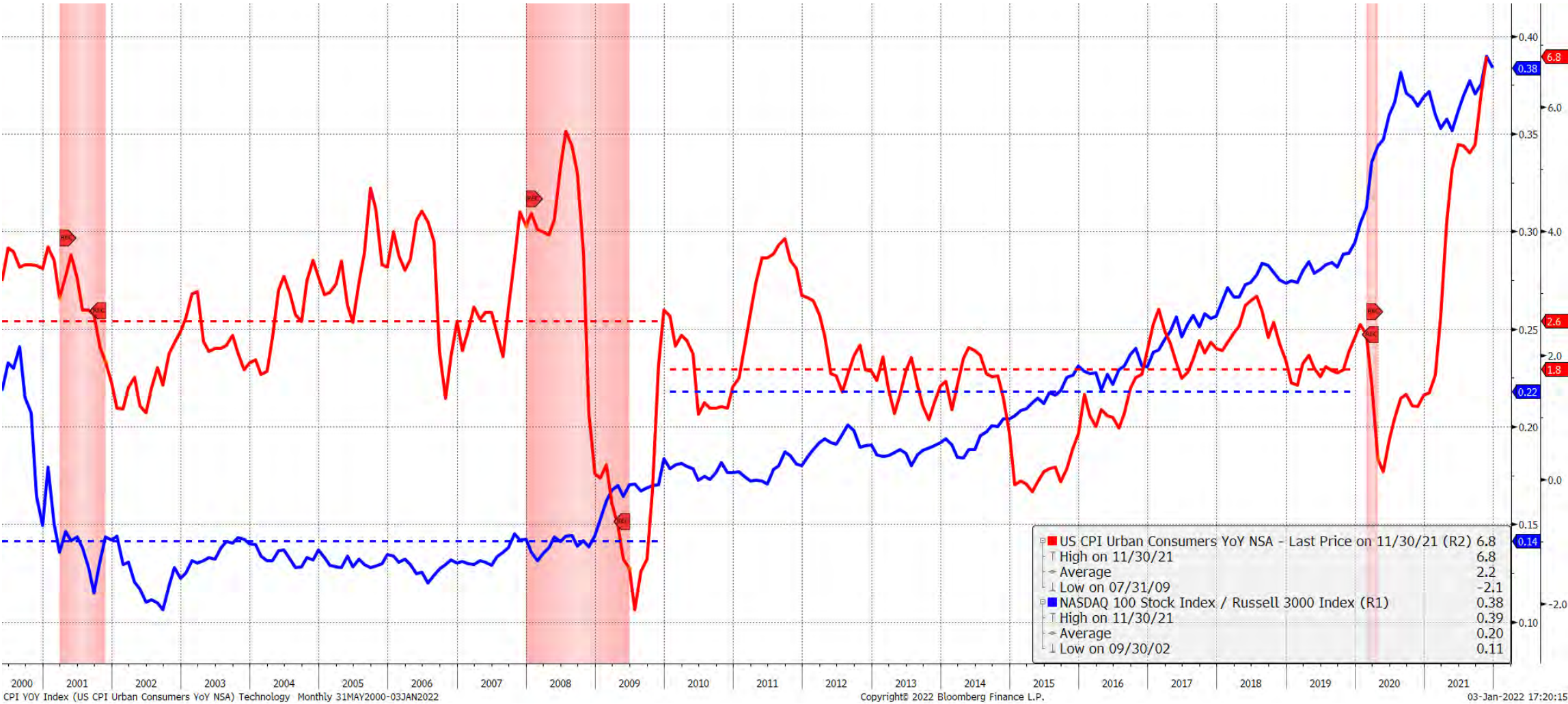
42 Macro Secular Inflation Model: Monopsony Power... Very Disinflationary



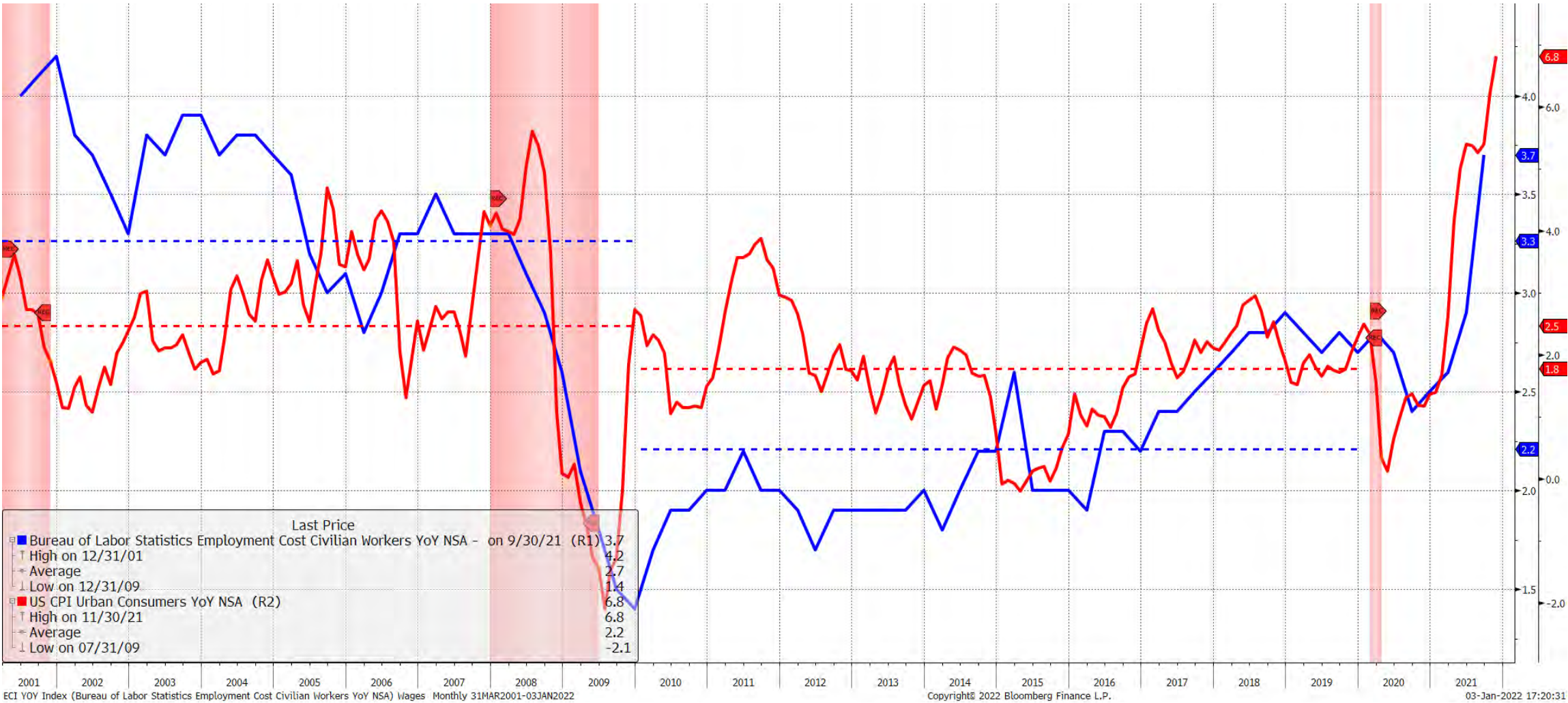
42 Macro Secular Inflation Model: Public Debt... Very Inflationary



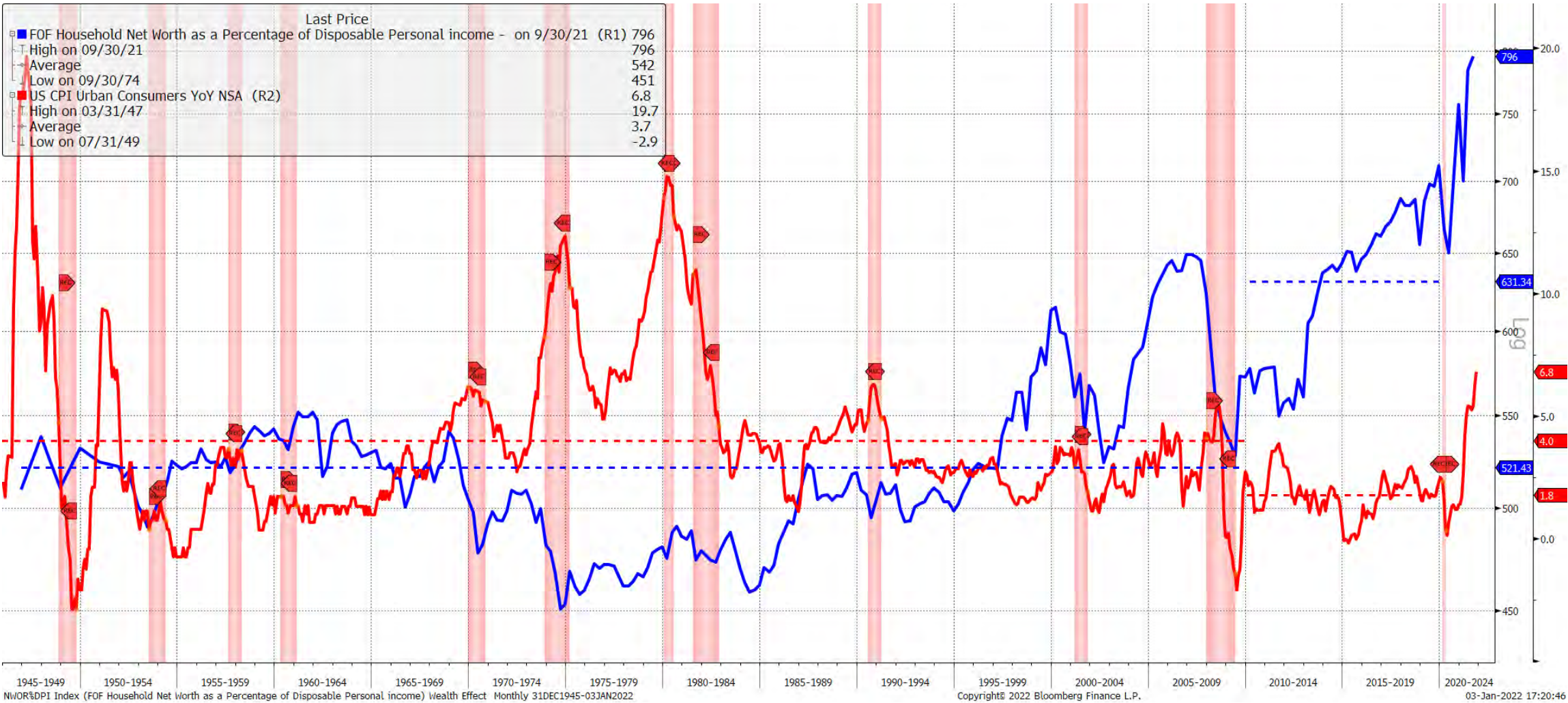
42 Macro Secular Inflation Model: Technology... Disinflationary



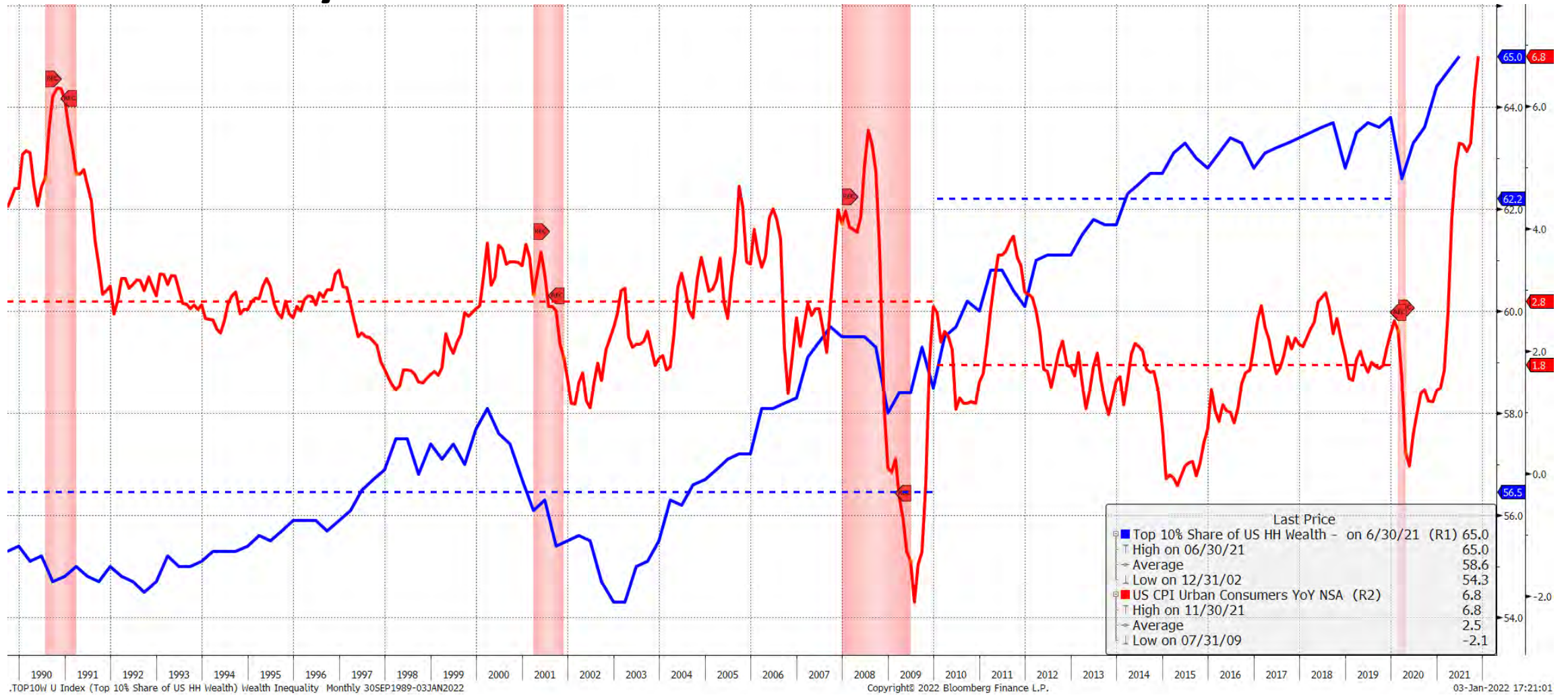
42 Macro Secular Inflation Model: Wages... Very Inflationary



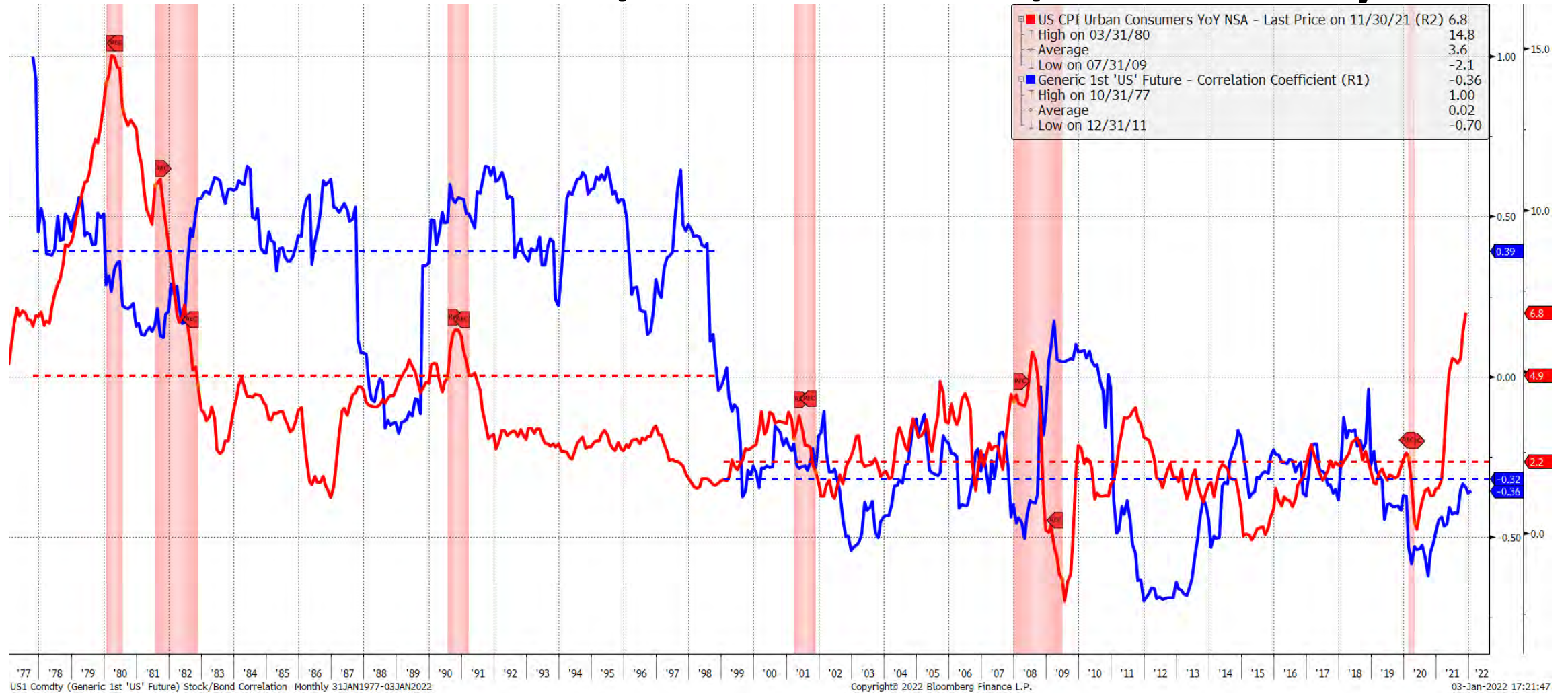
42 Macro Secular Inflation Model: Wealth Effect... Inflationary



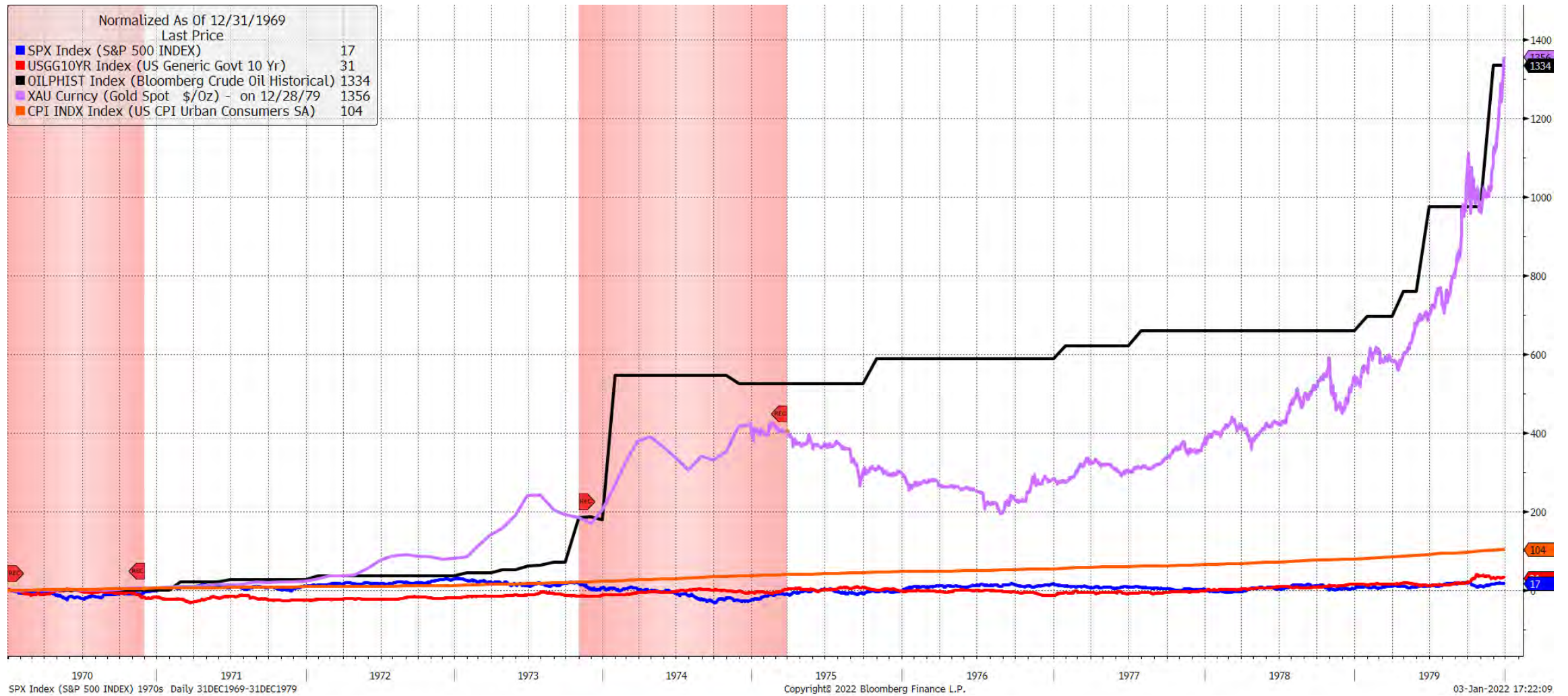
42 Macro Secular Inflation Model: Wealth Inequality... Disinflationary



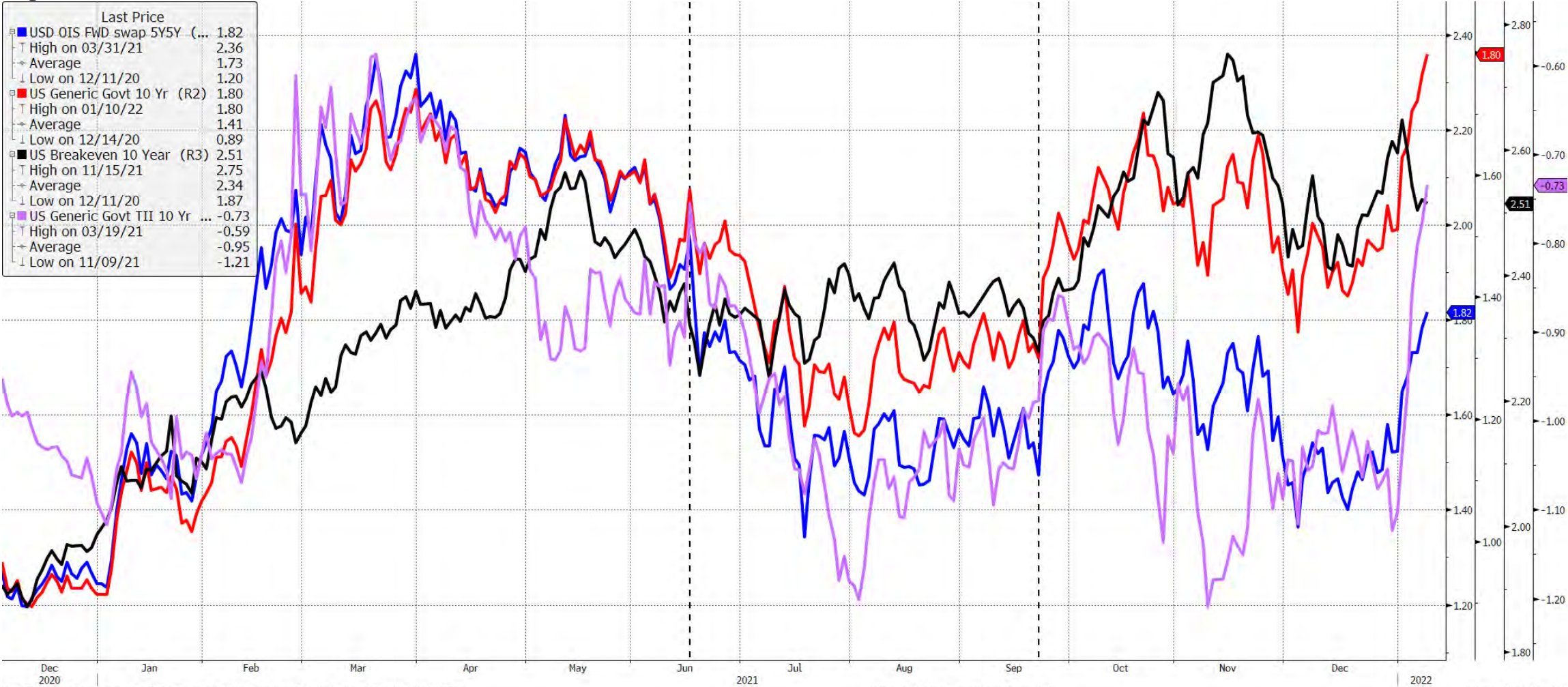
Headline CPI Likely Needs To Average A Lot More Than 2.4-2.8% For The “Death” Of The 60/40 Portfolio And/Or Risk Parity



If Anything, Investors Should Focus On The 60 (Or 70), Not The 40



The Bond Market Agrees With Our #Math On Secular Inflation Dynamics



S0042FS 5Y5Y BLC Curncy (USD OIS Fwd swap 5Y5Y) Terminal FFR 10yr Daily 04DEC2020-10JAN2022

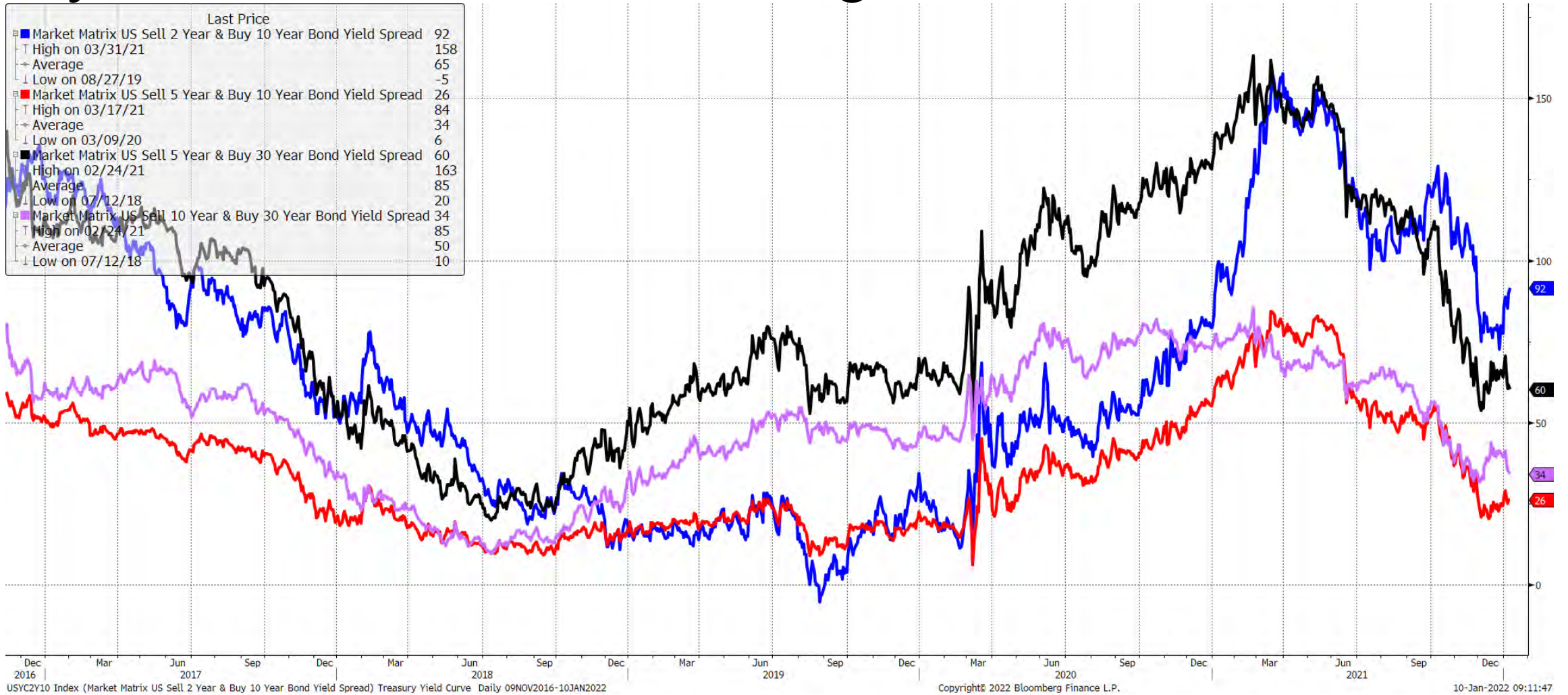
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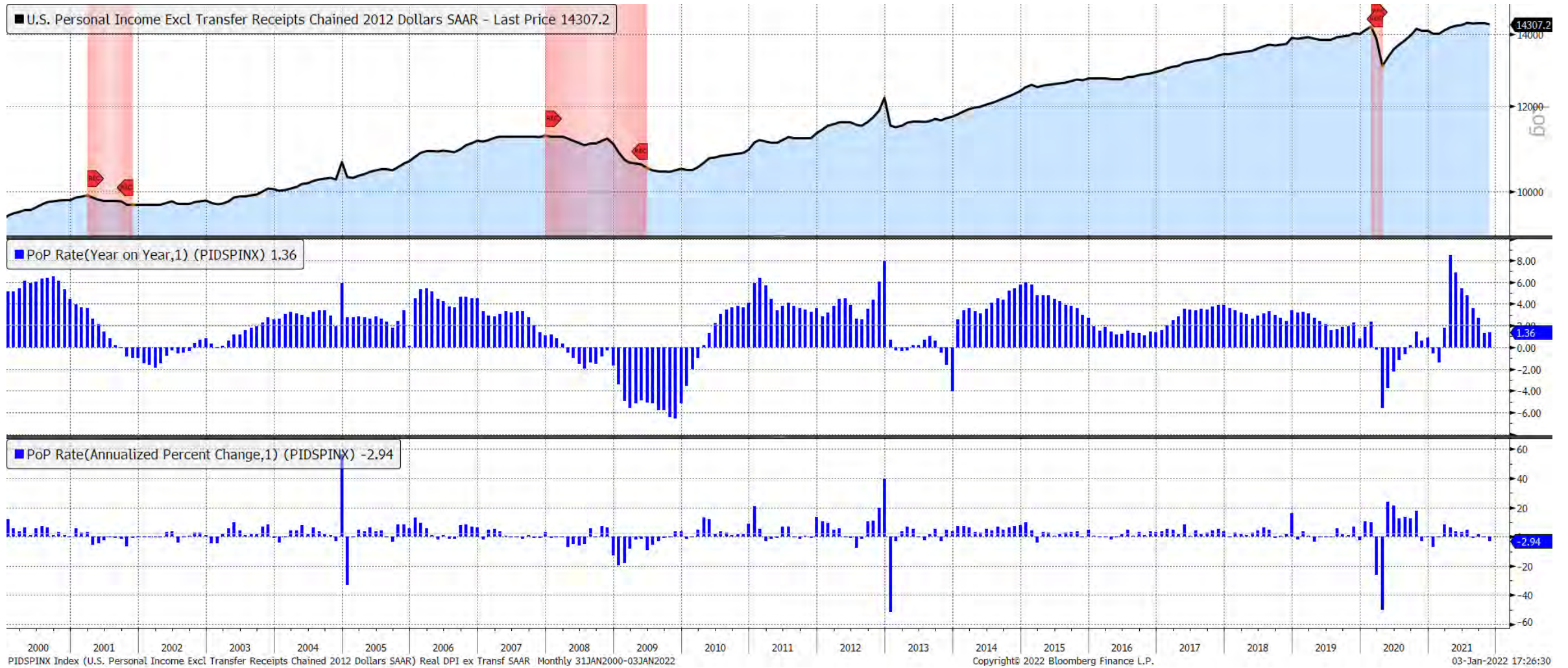
Cyclically Speaking, However, The Fed Will Be Forced To Atone For Its Recent Policy Mistakes



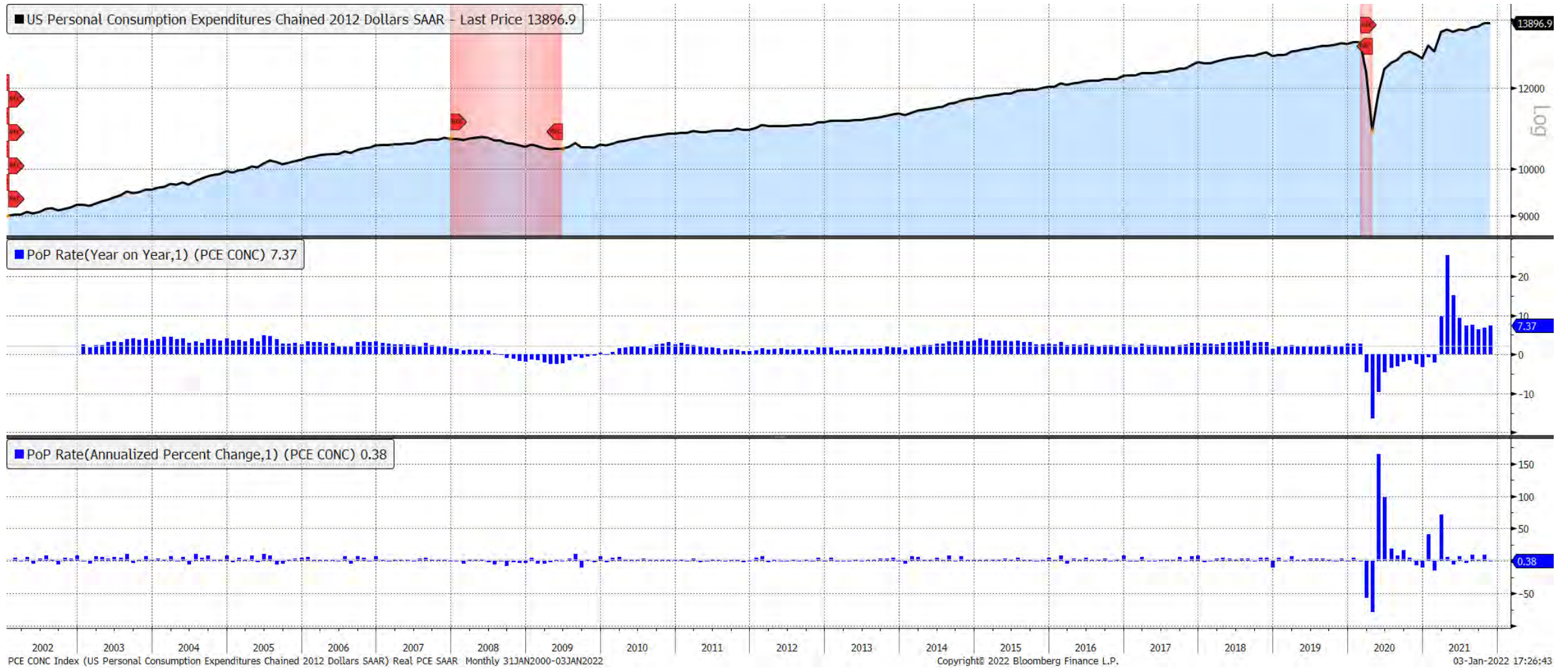
Bear Flattening Is Appropriate As Per Our Global GRID Model Projections For A Sea Of “Ds” Throughout 2022



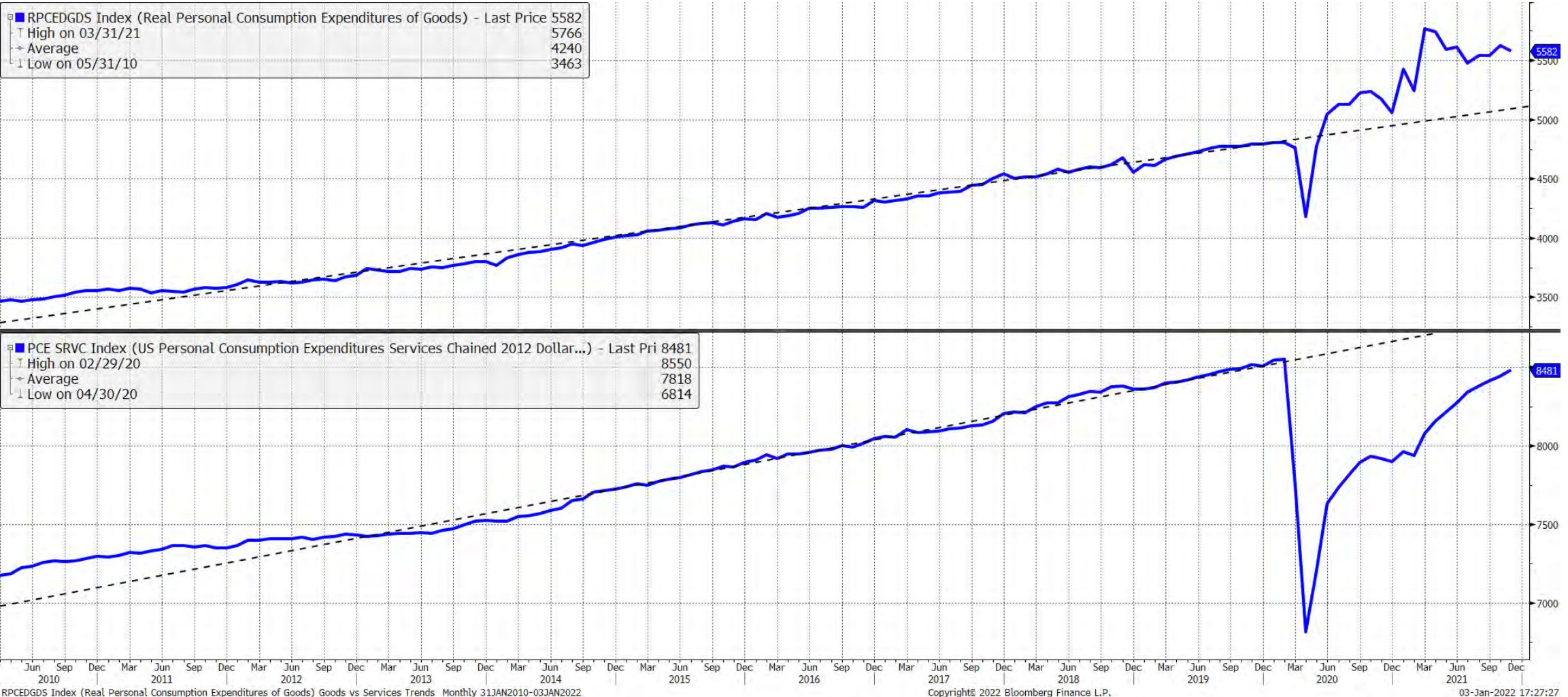
Rampant Inflation May Begin To Stifle Domestic Consumption Growth



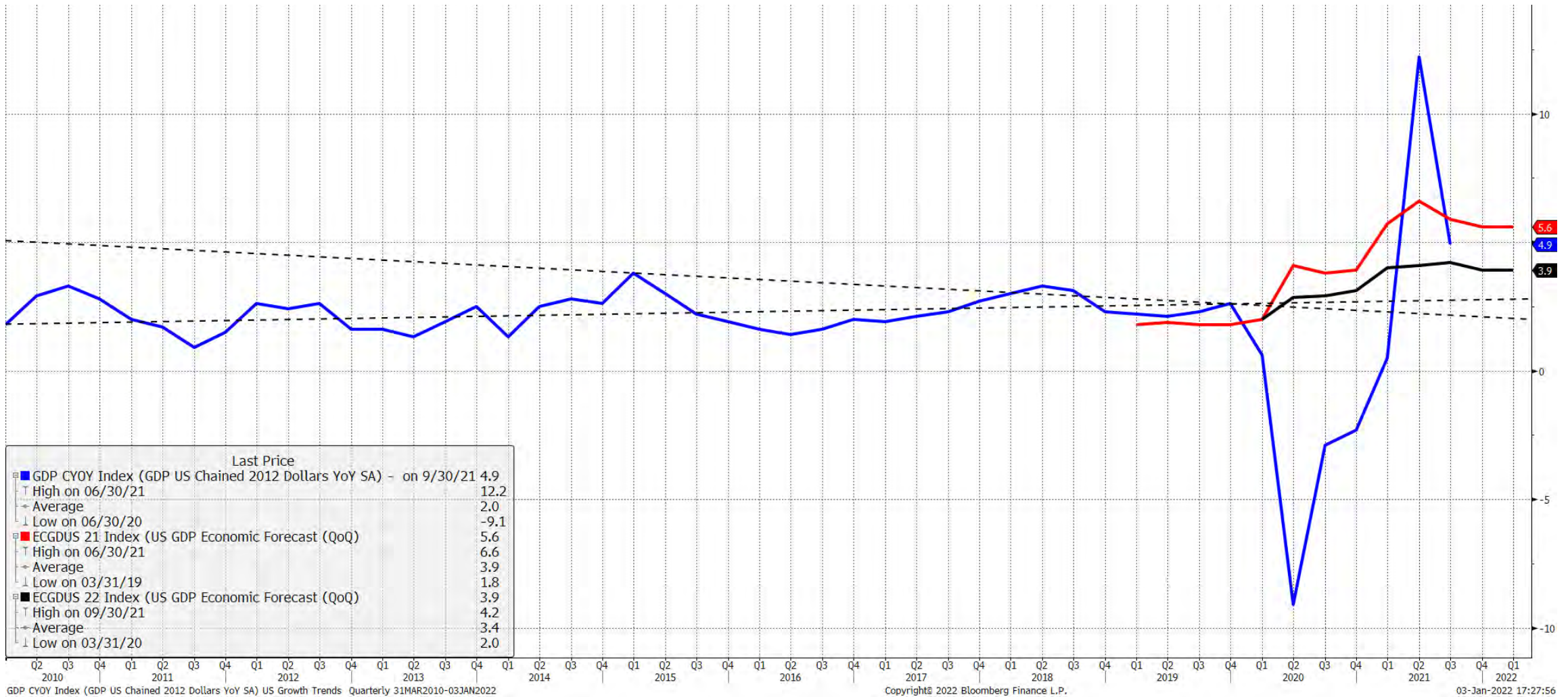
Was The November PCE Report A Harbinger Of Things To Come?



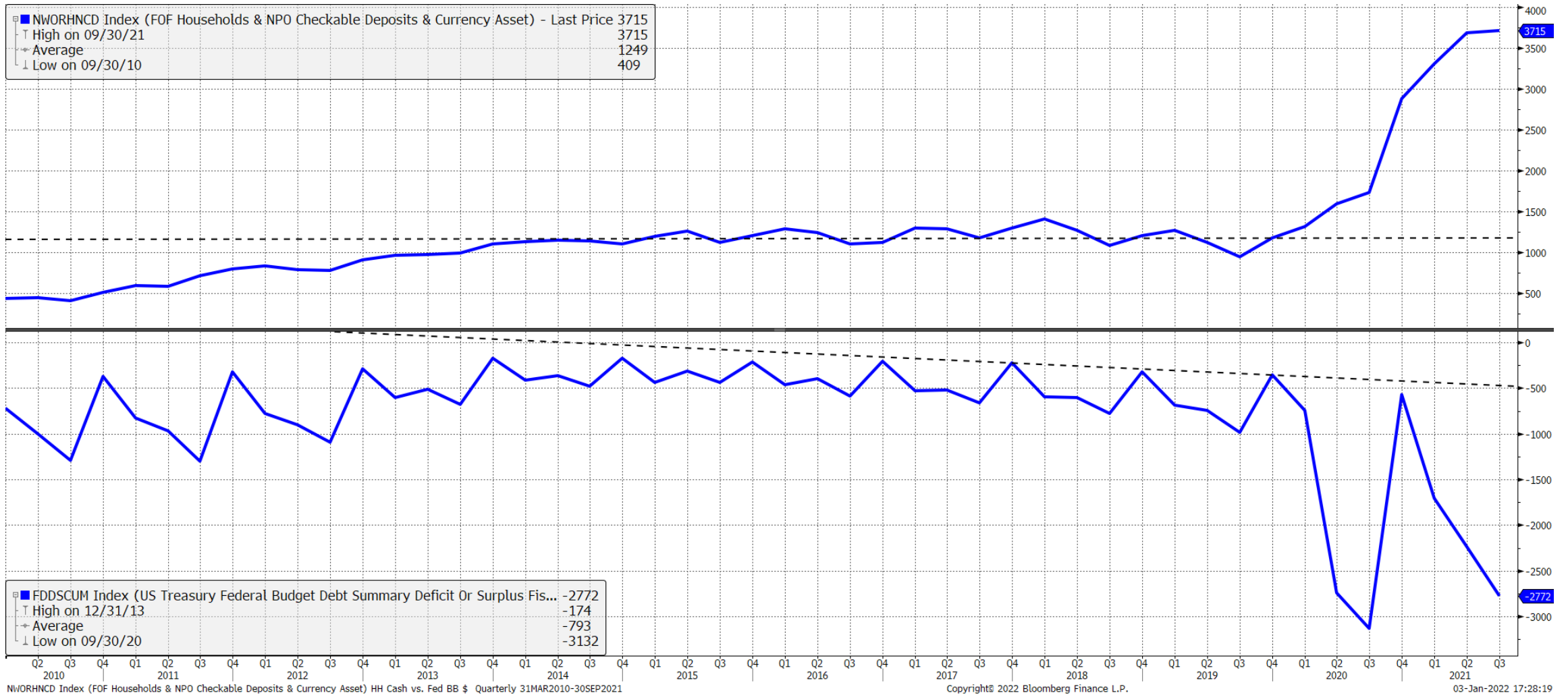
The **-\$492bn Δ** To The Goods Consumption 5yr Trend Line Though 2019 And The **+328bn Δ** To The Services Consumption Trend Line Nets Out To **-\$164bn**



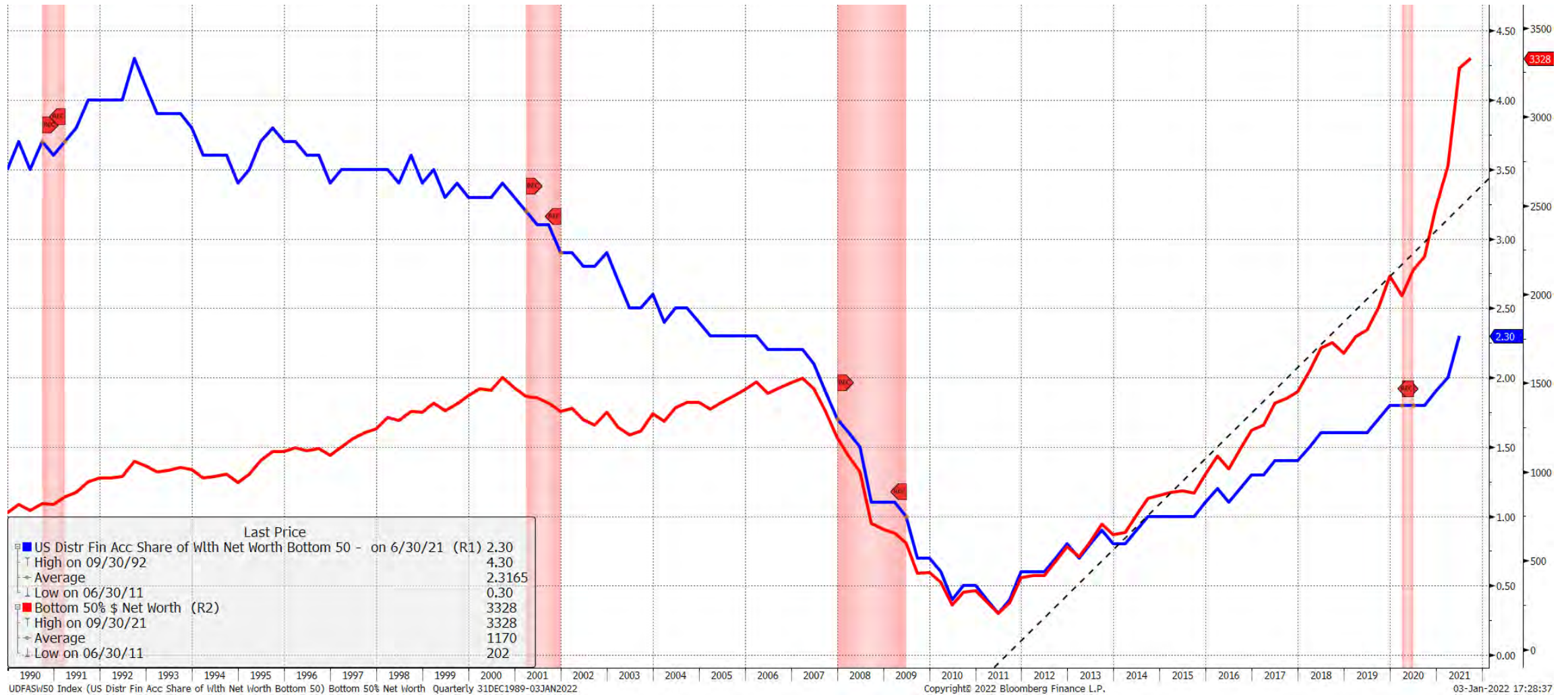
US Real GDP: Bloomberg Consensus Is Calling For 3.9% Growth In 2022; That Figure Is +170bps North Of The 5yr Trend Line Through 2019



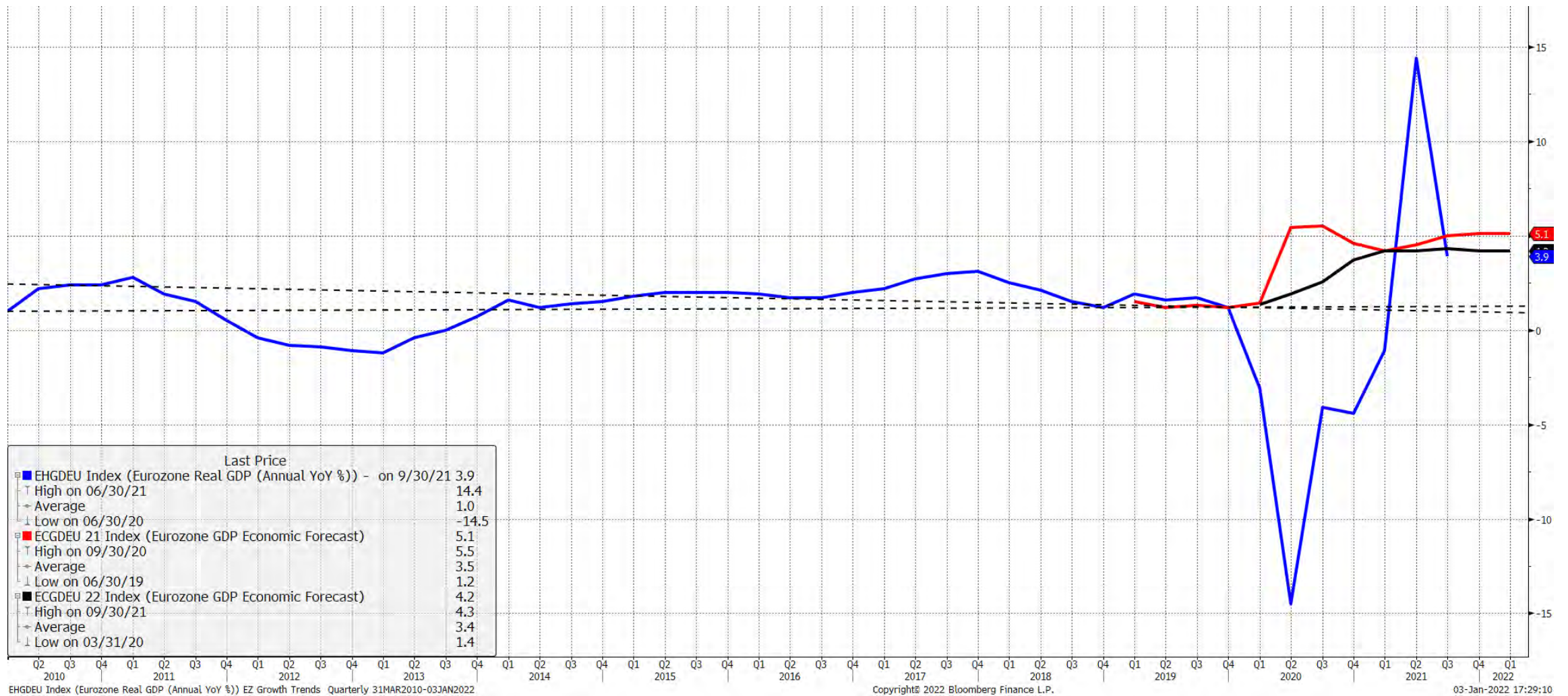
The US Consumer Has **\$2.6tn In Excess Savings** Relative To The 5yr Trend Through 2019; Meanwhile The Federal Gov't Has **\$2.3tn In Excess Budget Deficits**... That Nets Out To **+\$300bn**



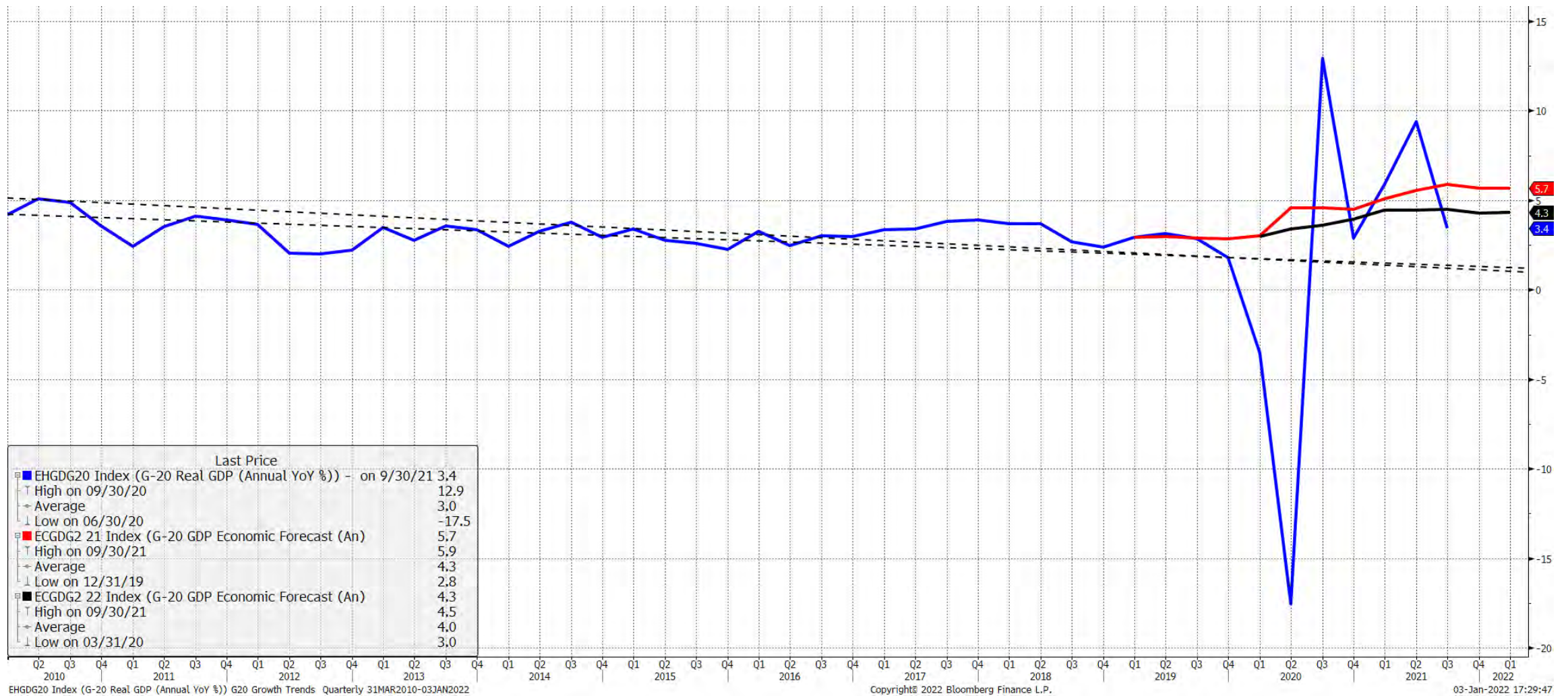
If You Assume 100% Of The Rise In The Net Worth Of The Bottom-50% Of Households By Wealth Distribution Is Cash, That = **\$777bn**... Projected PCE Inflation In 2022 = **~\$800bn***



Eurozone Real GDP: Bloomberg Consensus Is Calling For 4.2% Growth In 2022; That Figure Is +330bps North Of The 5yr Trend Line Through 2019



World Real GDP: Bloomberg Consensus Is Calling For 4.3% Growth In 2022; That Figure Is +320bps North Of The 5yr Trend Line Through 2019

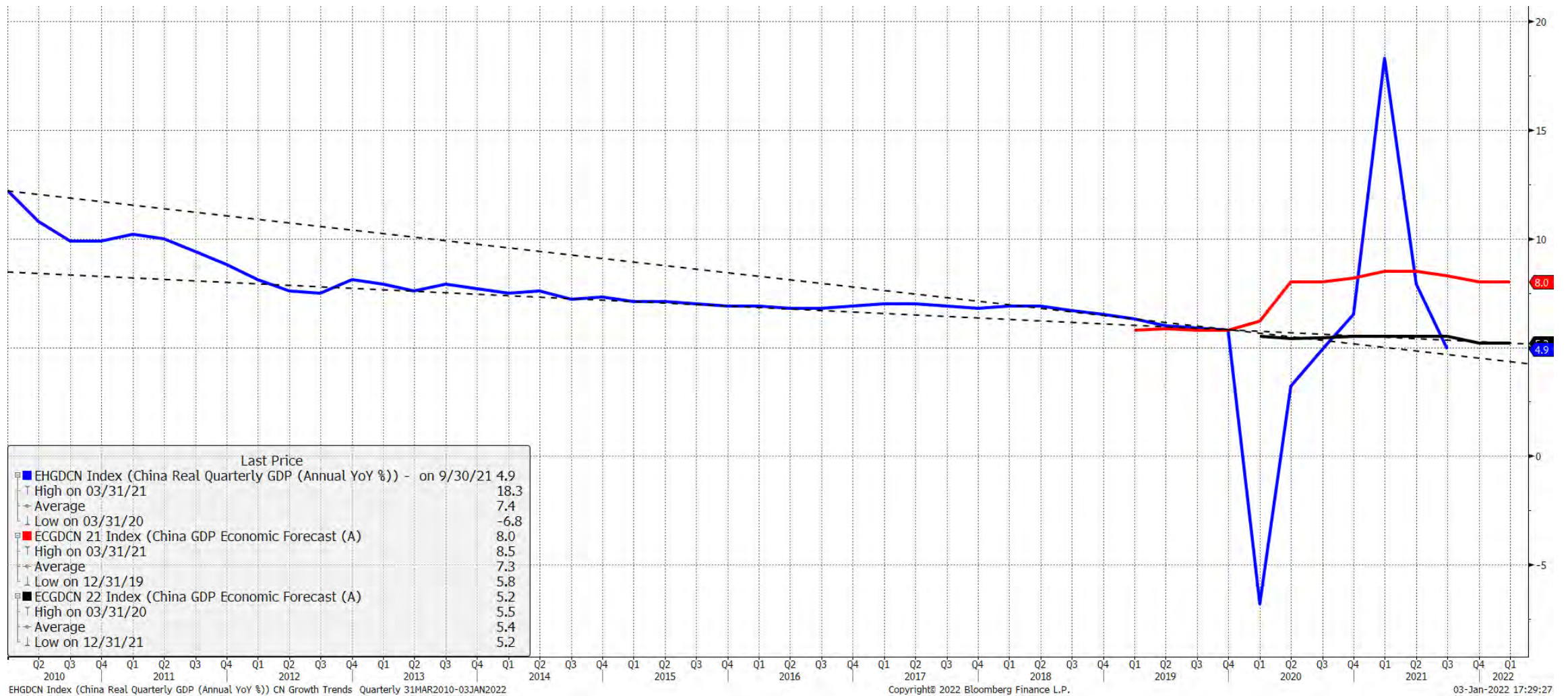


EHGDG20 Index (G-20 Real GDP (Annual YoY %)) G20 Growth Trends Quarterly 31MAR2010-03JAN2022

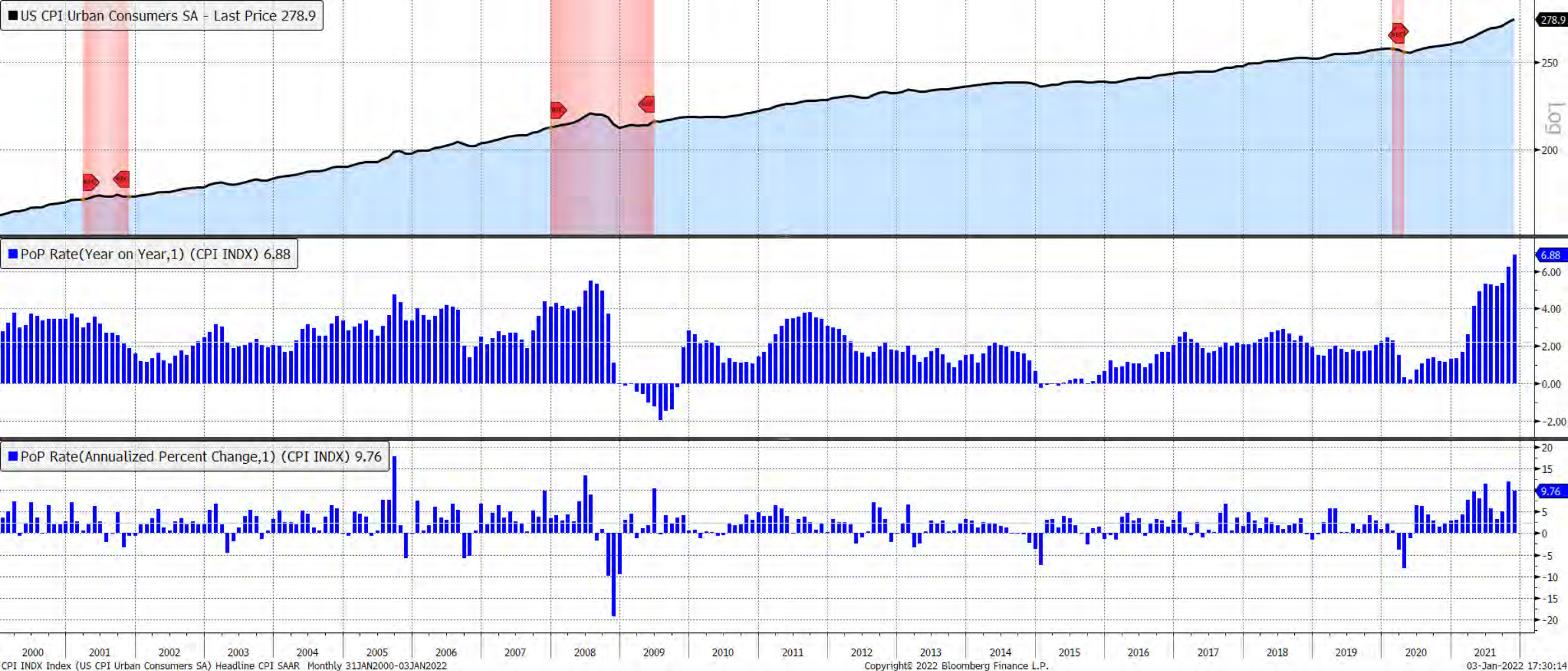
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03-Jan-2022 17:29:47

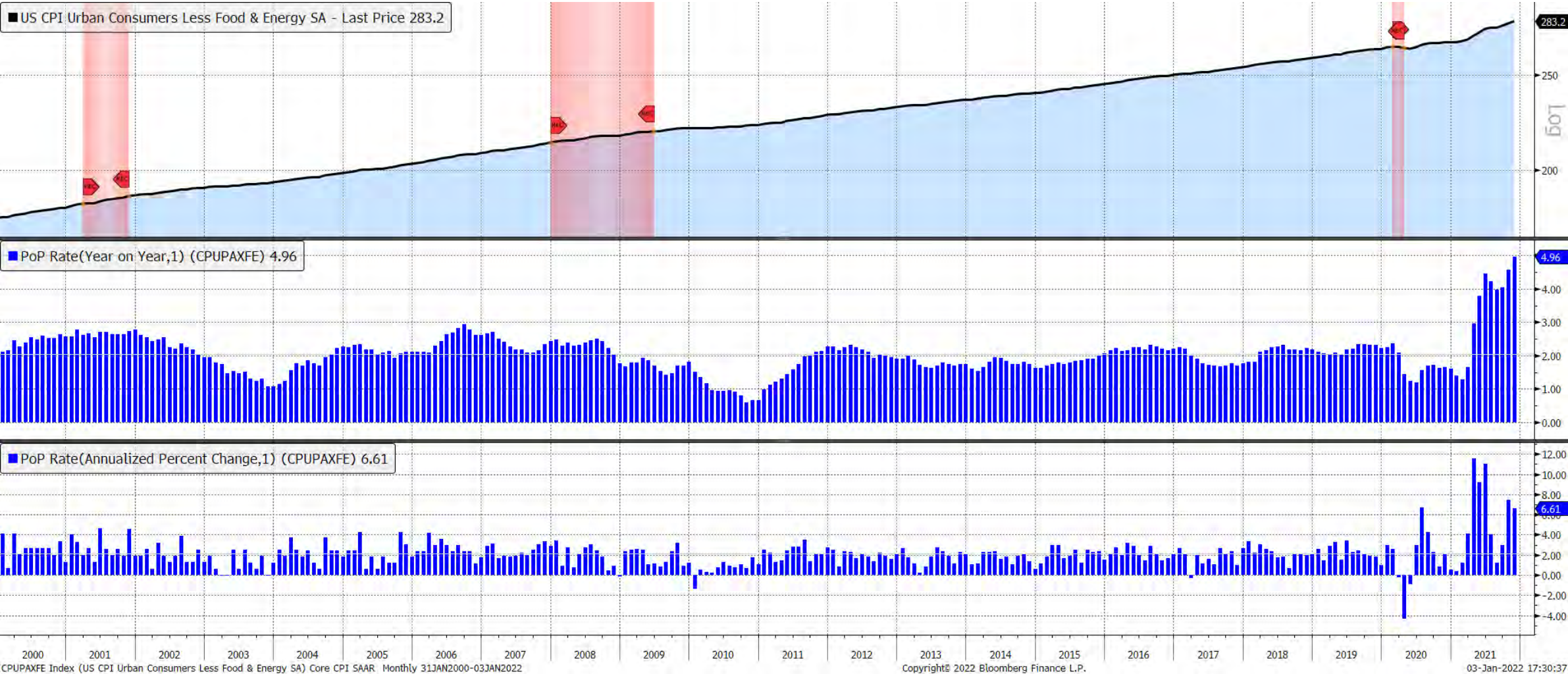
China Real GDP: Bloomberg Consensus Is Calling For 5.2% Growth In 2022; That Figure Is Right Around The 5yr Trend Line Through 2019



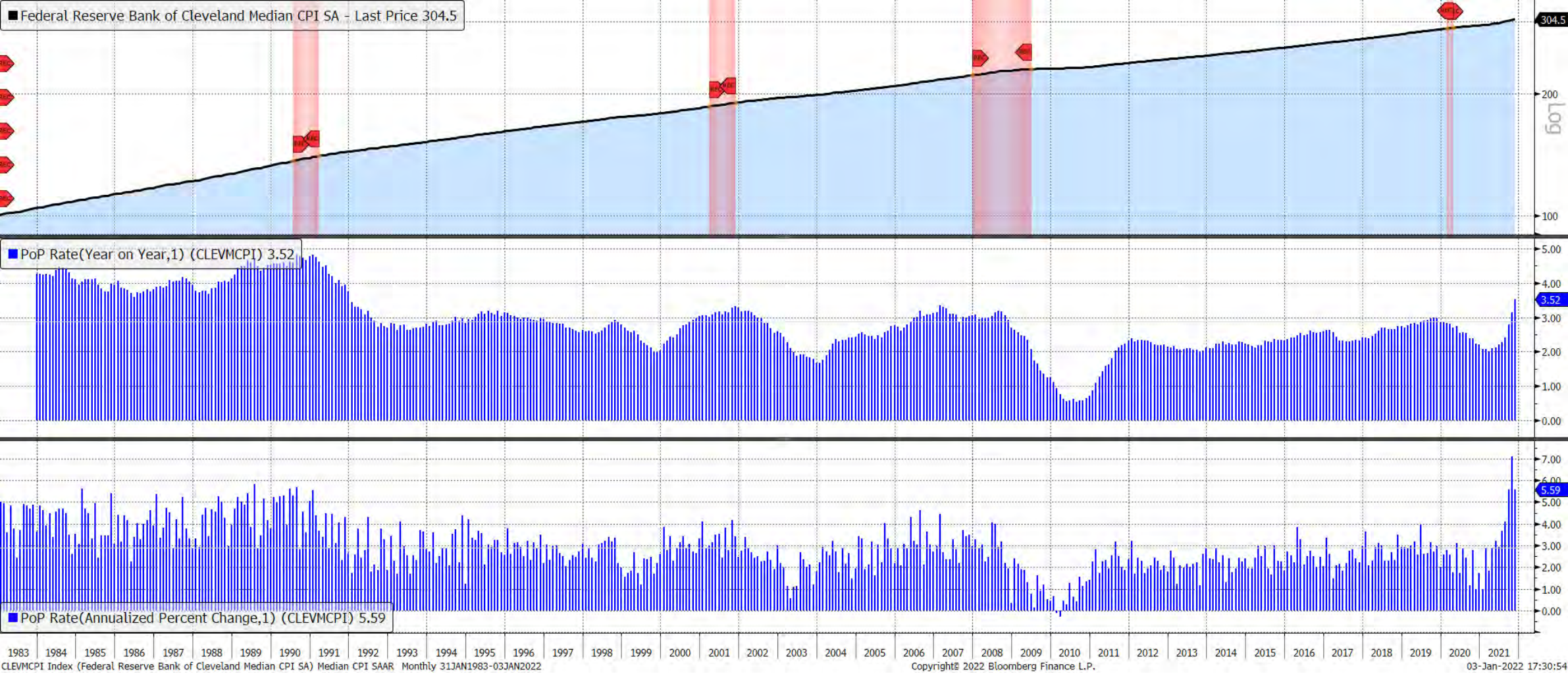
The Noise: Headline CPI Momentum Is Running Just Shy Of 10%



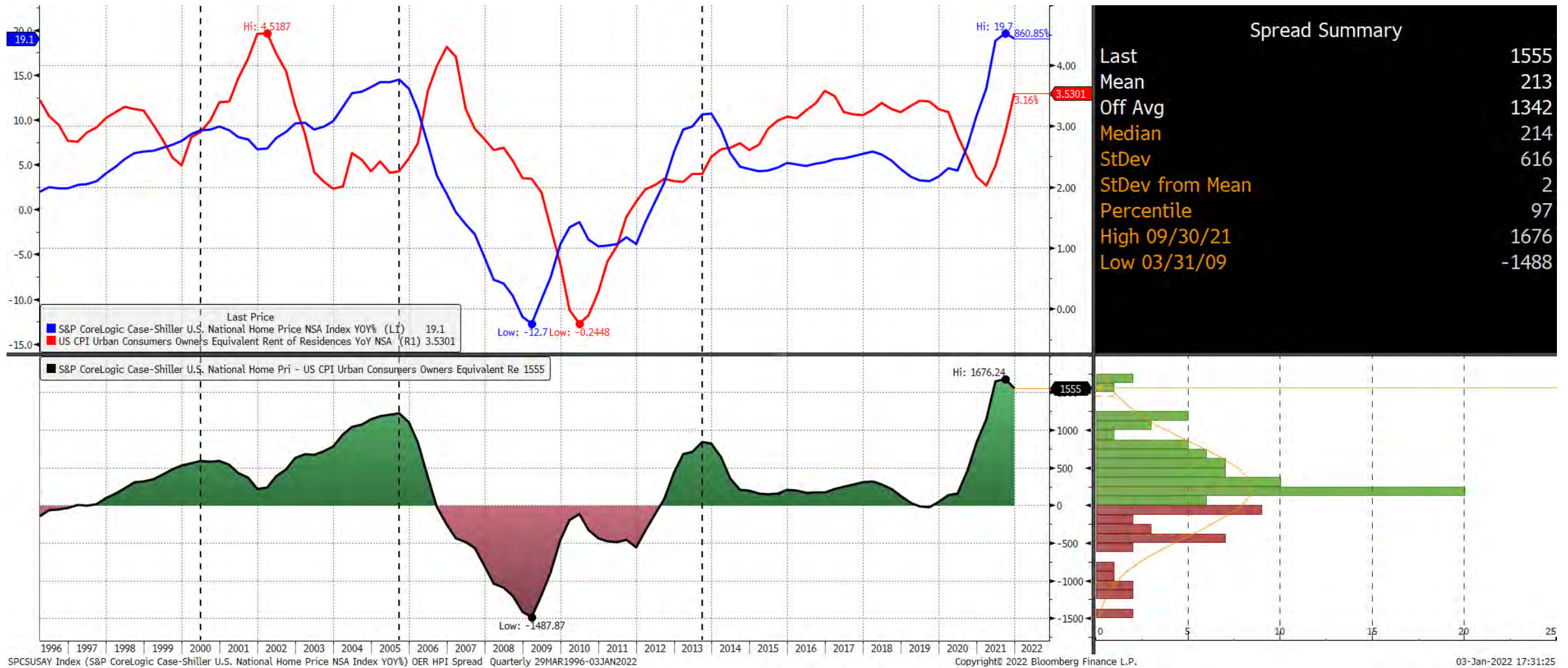
The Signal: Core CPI Momentum Has Declined By 40%, However



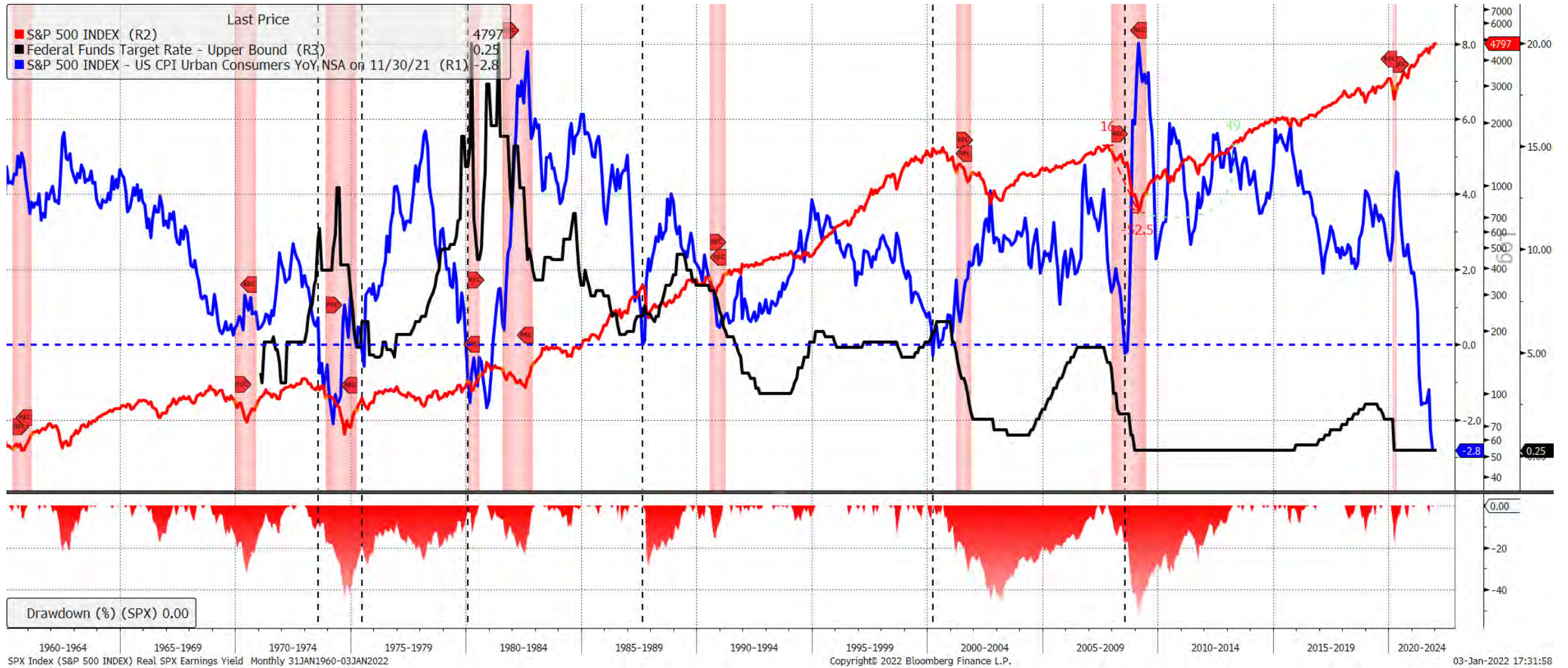
The Signal: Median CPI Momentum Appears To Have Finally Peaked



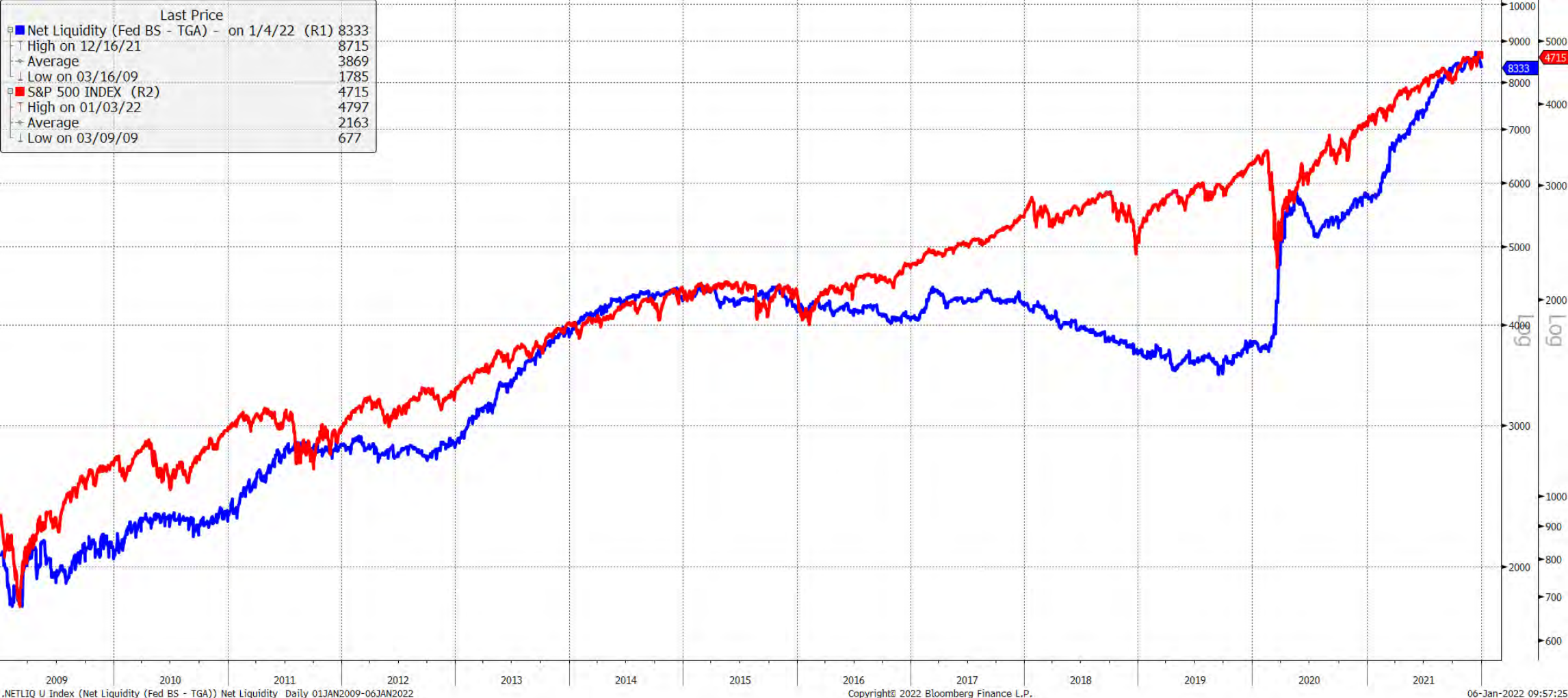
Even If We Are Proven Right On Our Call For Inflation To Trend Lower Over The NTM, OER Will Keep An Elevated Floor Under Those Metrics



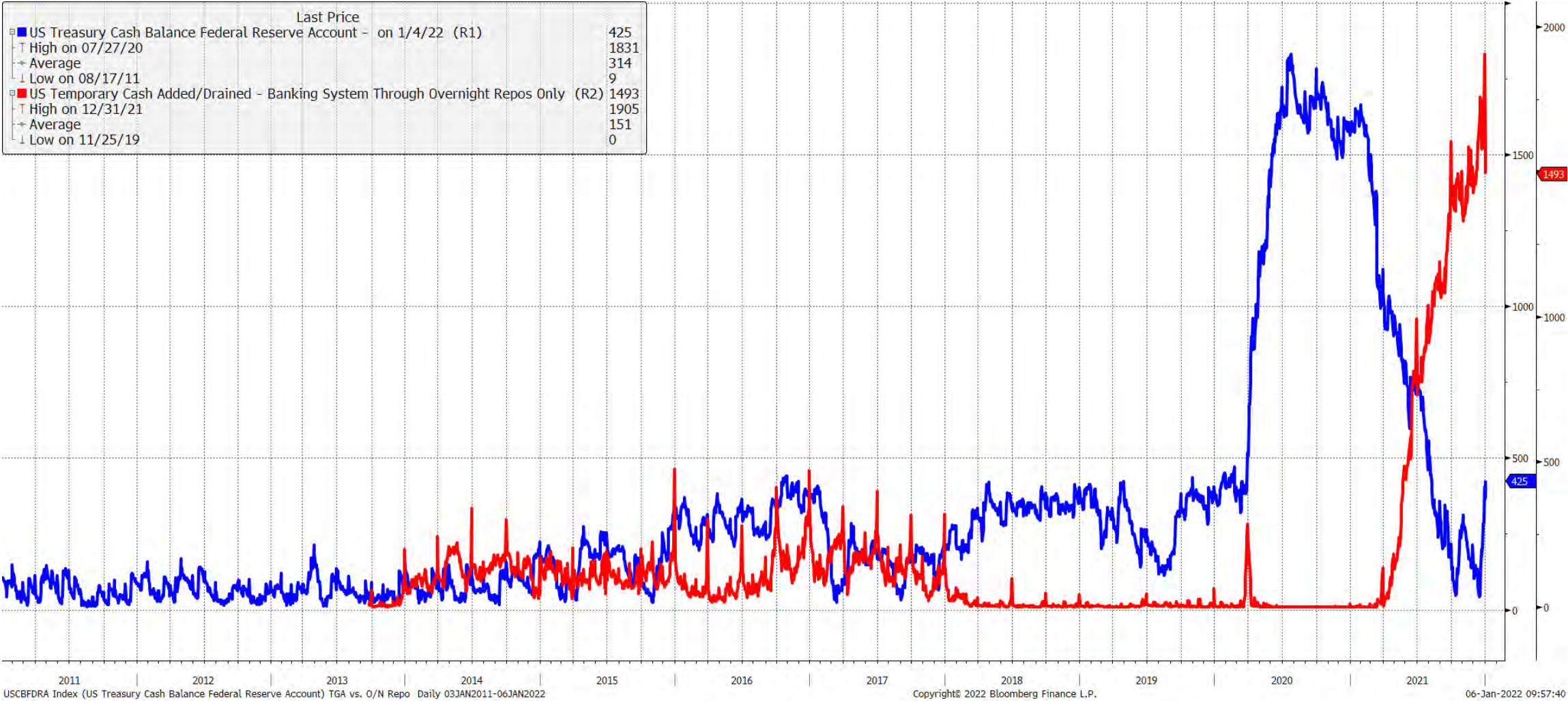
If Inflation Continues To Surprise To The Upside From Here, Risk Assets May Crash Because The Fed Will Have To Remove The “Punch Bowl” Faster



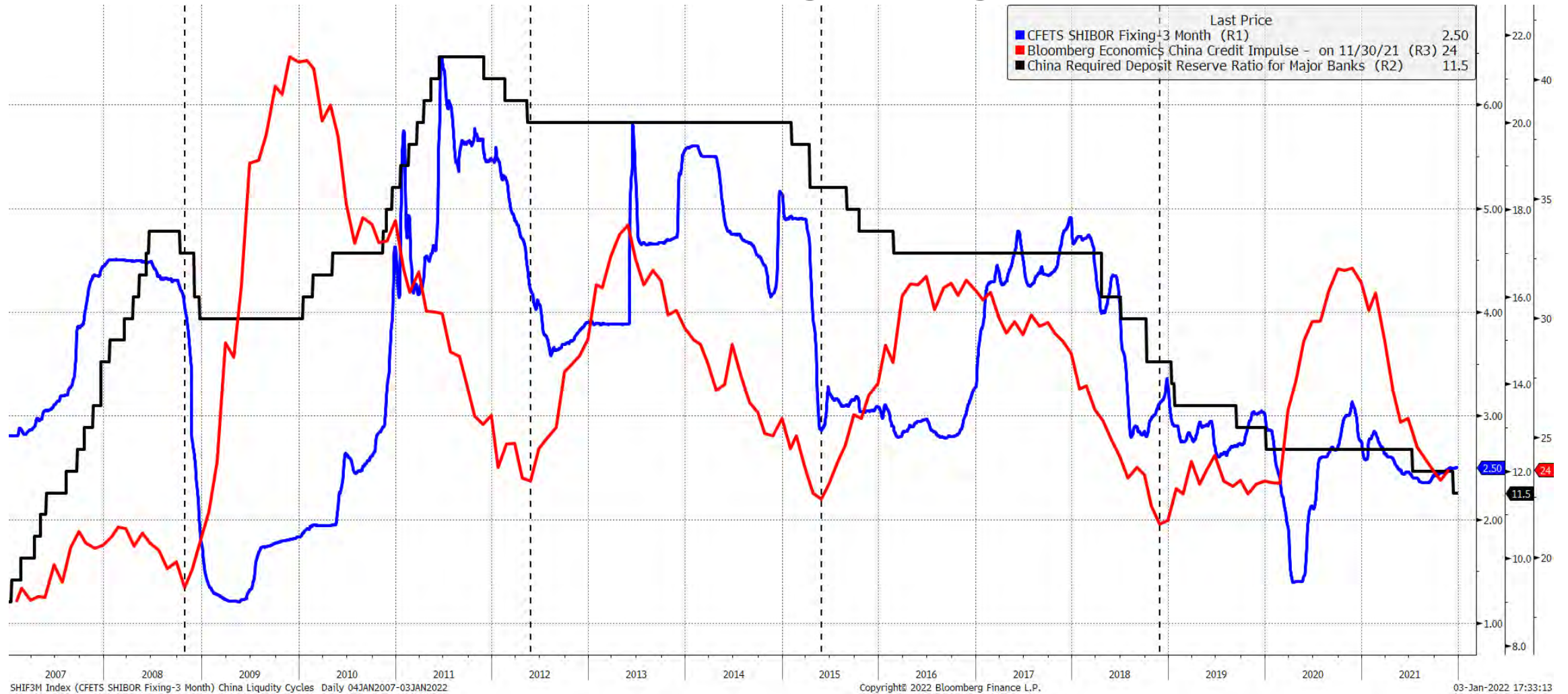
The “Patient” (Read: Risk Assets) Cannot Survive Without Increasing Quantities Of “Medicine” (Read: Easy Money)



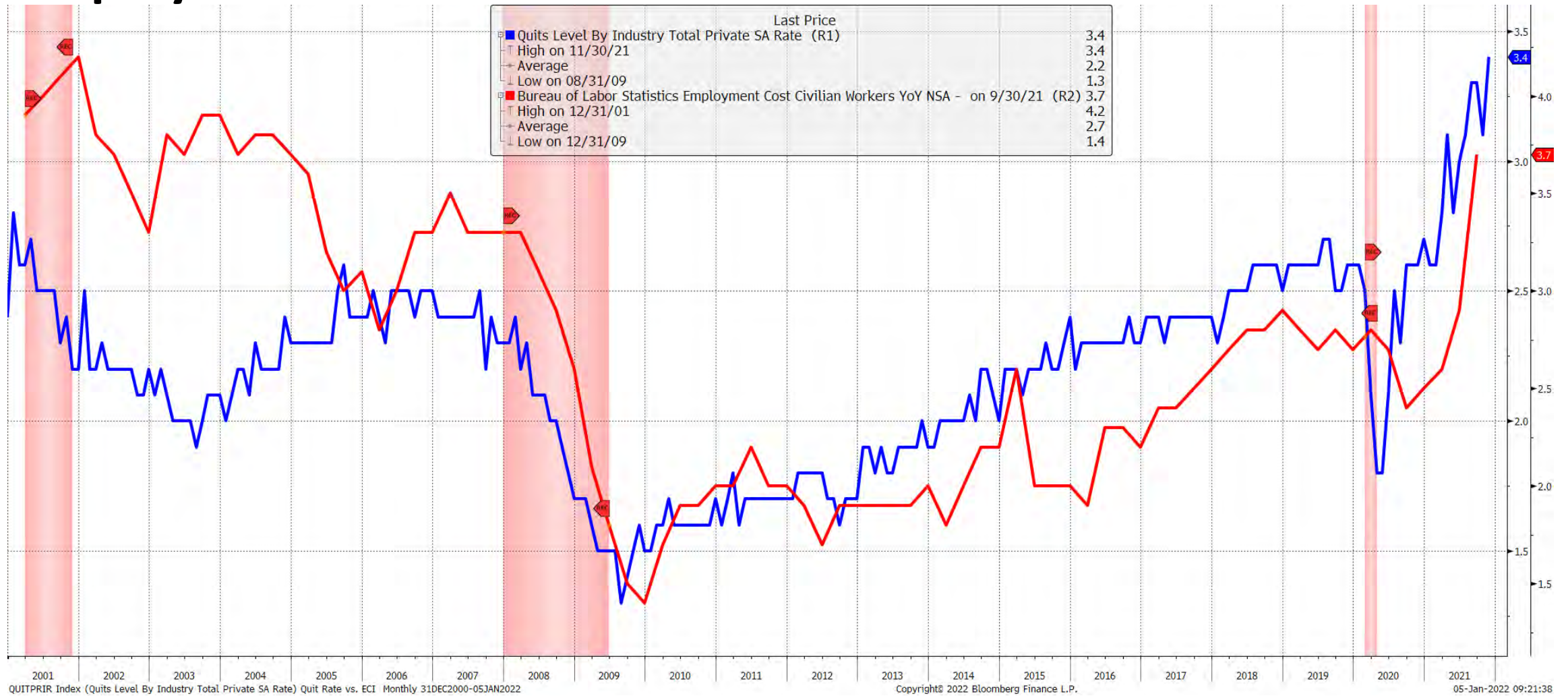
The Assumption That Overnight Repo Will Provide A Liquidity Cushion Against Fed Tightening Is Potentially A Very Dangerous One



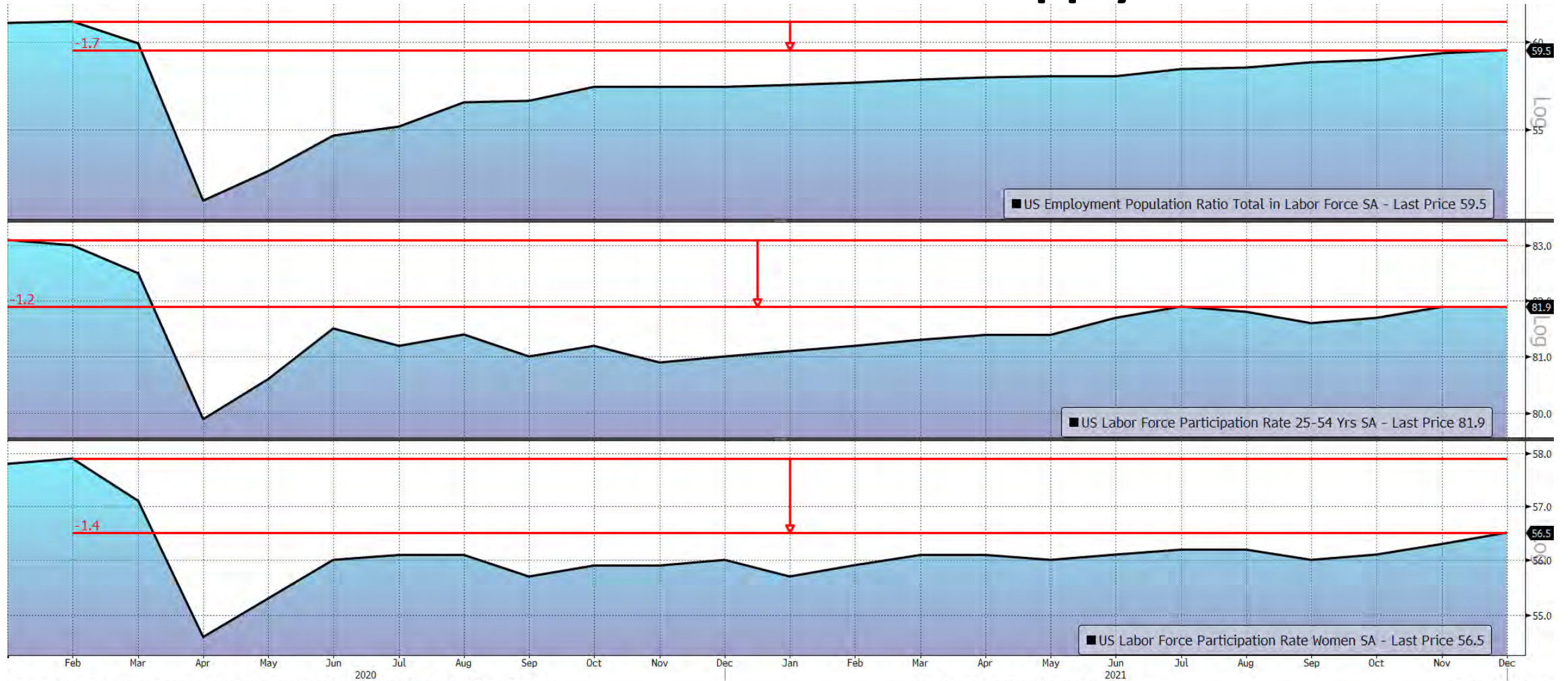
Liquidity Dynamics On The Mainland Suggest China Is Unlikely To Provide Much Of An Offset To Fed Tightening Over The Medium Term



Wage Increases Are An Upside Inflation Risk Relative To The Fed's "Employment Shortfall" Guidance



Wage Growth May Continue To Run Hot Until The US Economy Returns To Pre-Pandemic Levels Of Labor Supply – If Ever

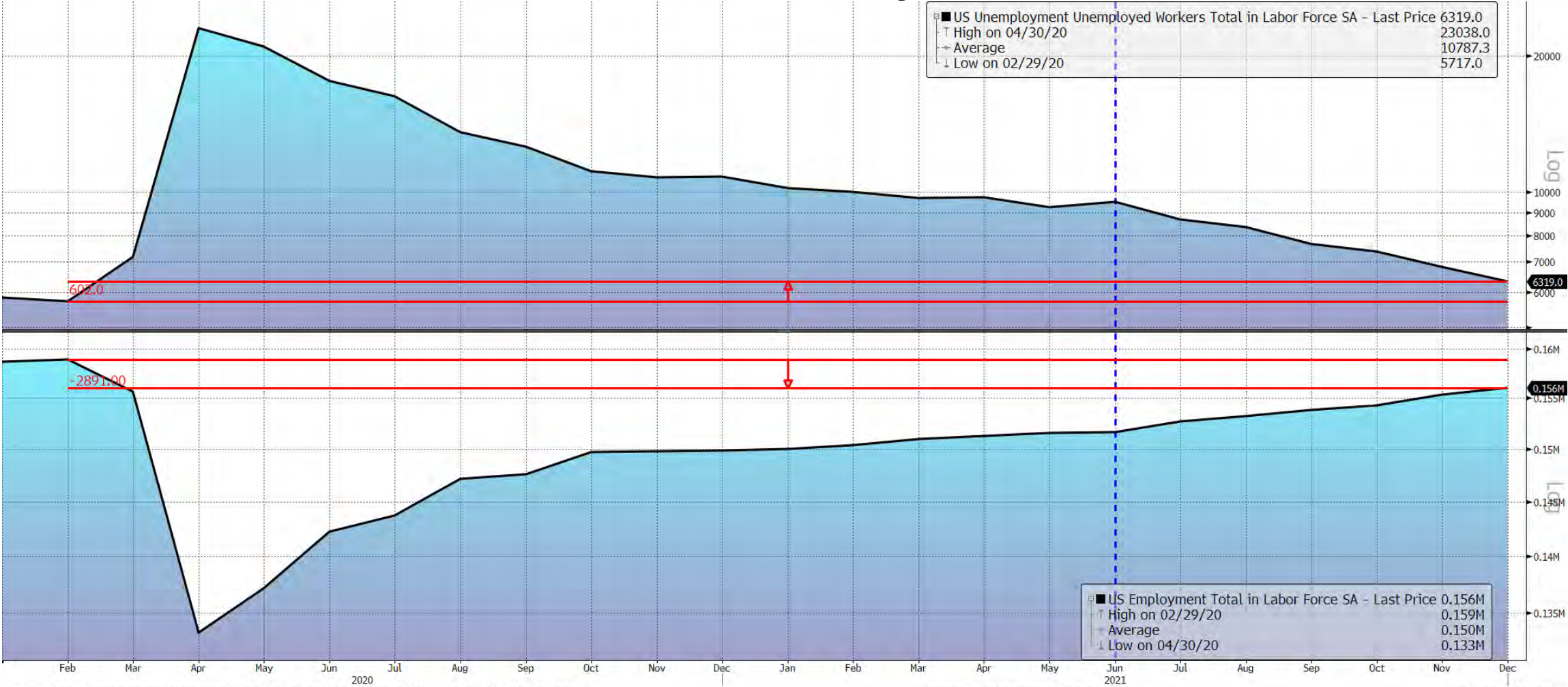


USERTOT Index (US Employment Population Ratio Total in Labor Force SA) Labor Supply Monthly 31JAN2020-07JAN2022

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07-Jan-2022 09:15:08

The Expiration Of Enhanced Unemployment Benefits Did, In Fact, Accelerate A Return To Work For Many, However

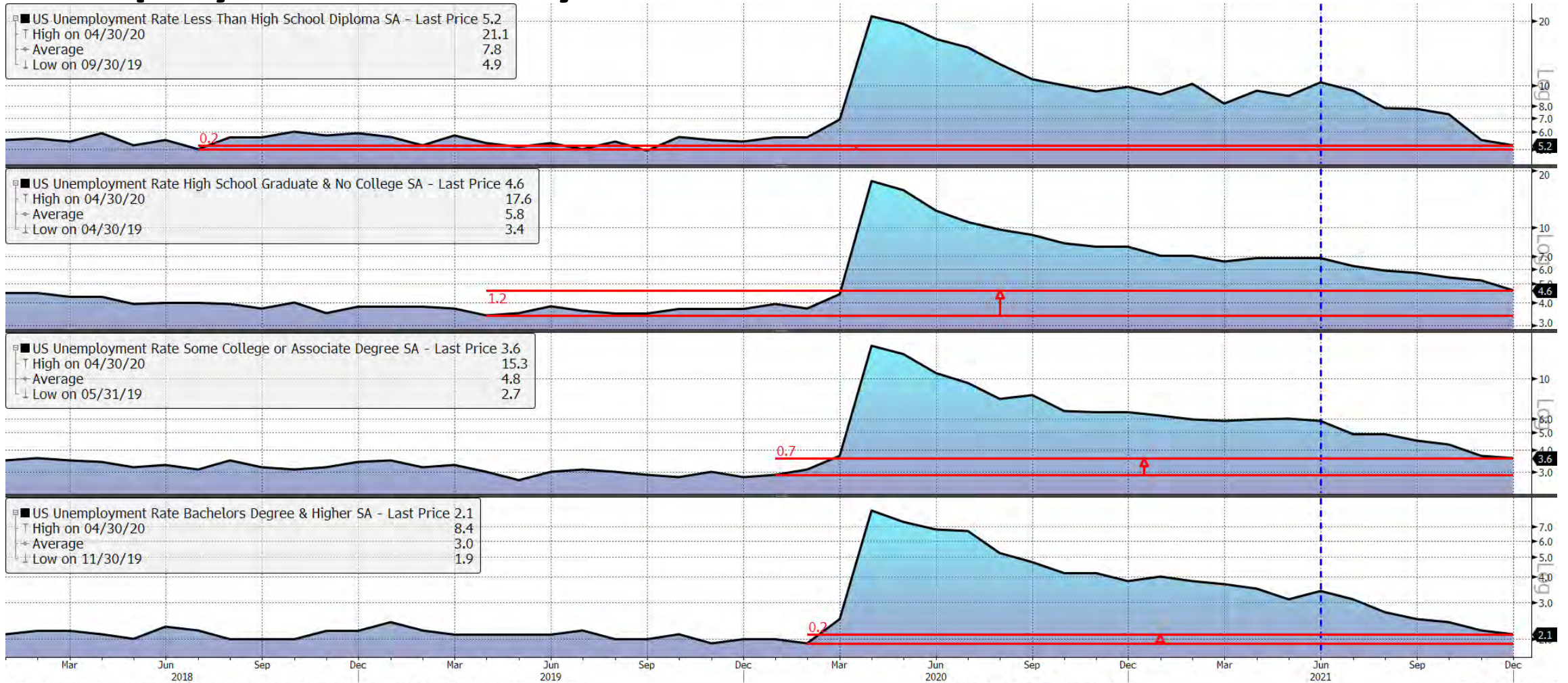


USUETOT Index (US Unemployment Unemployed Workers Total in Labor Force SA) Out of Work Monthly 31JAN2020-07JAN2022

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Employment Gains Have Been Broad Based Of Late: Unemployment Rates By Education Cohort

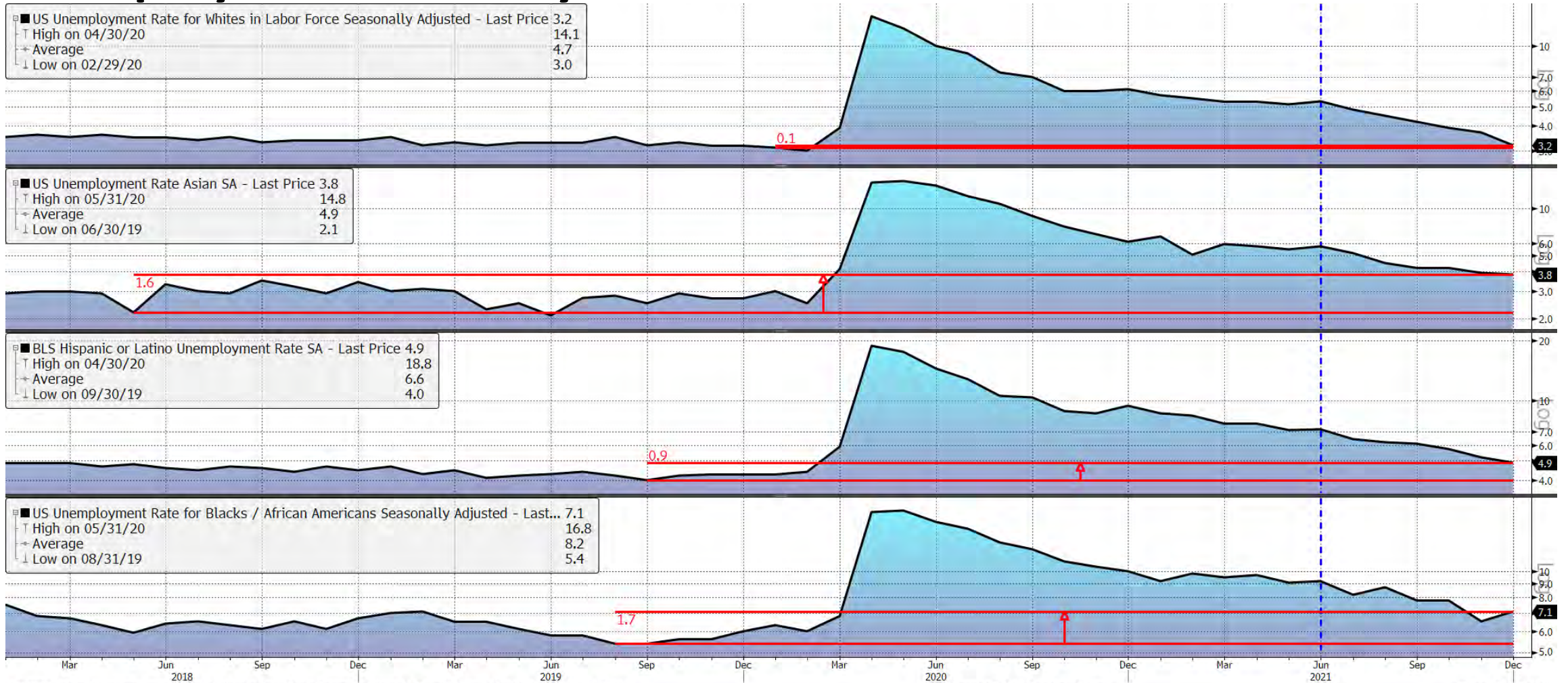


USAEURT Index (US Unemployment Rate Less Than High School Diploma SA) Education U3 Rates Monthly 31JAN2018-07JAN2022

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Employment Gains Have Been Broad Based Of Late: Unemployment Rates By Ethnic Cohort



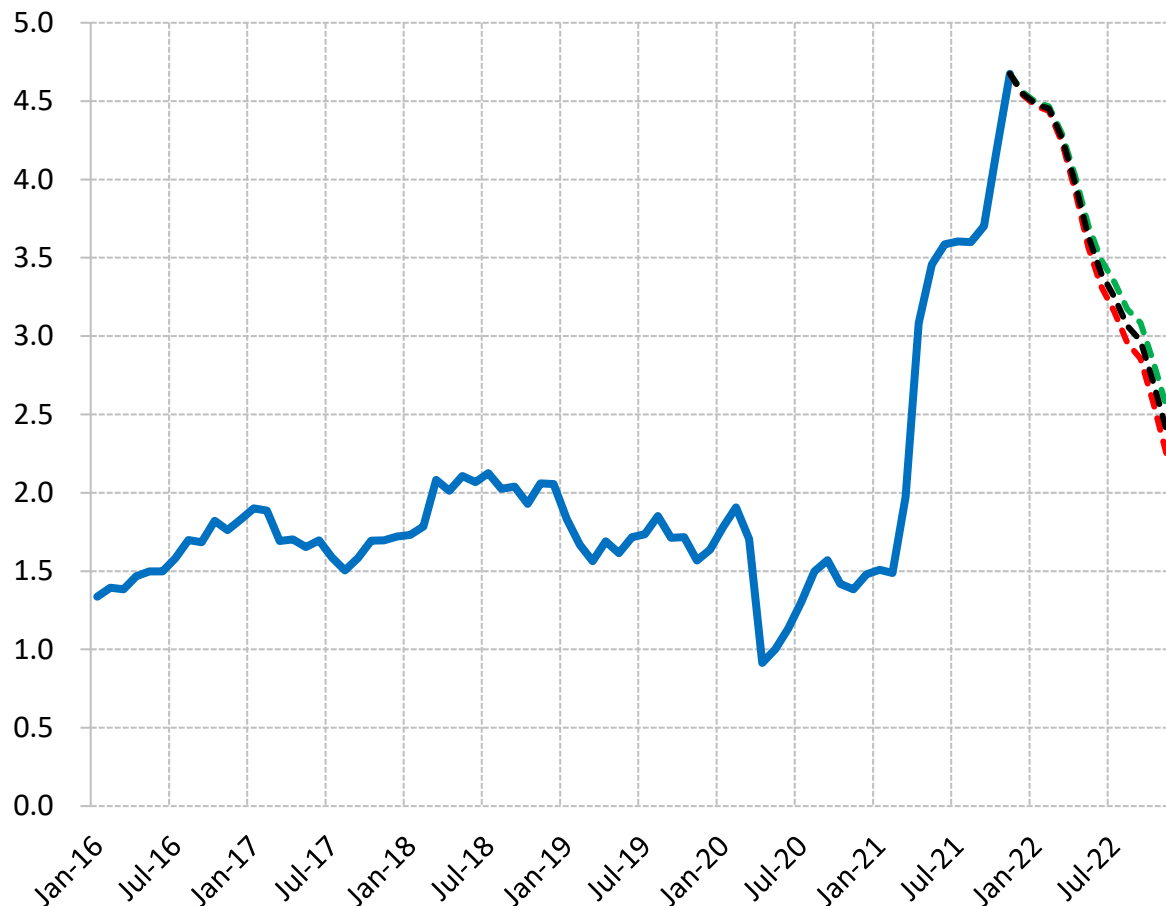
USURWURS Index (US Unemployment Rate for Whites in Labor Force Seasonally Adjusted) Ethnic U3 Rates Monthly 31JAN2018-07JAN2022

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US INFLATION: Core PCE

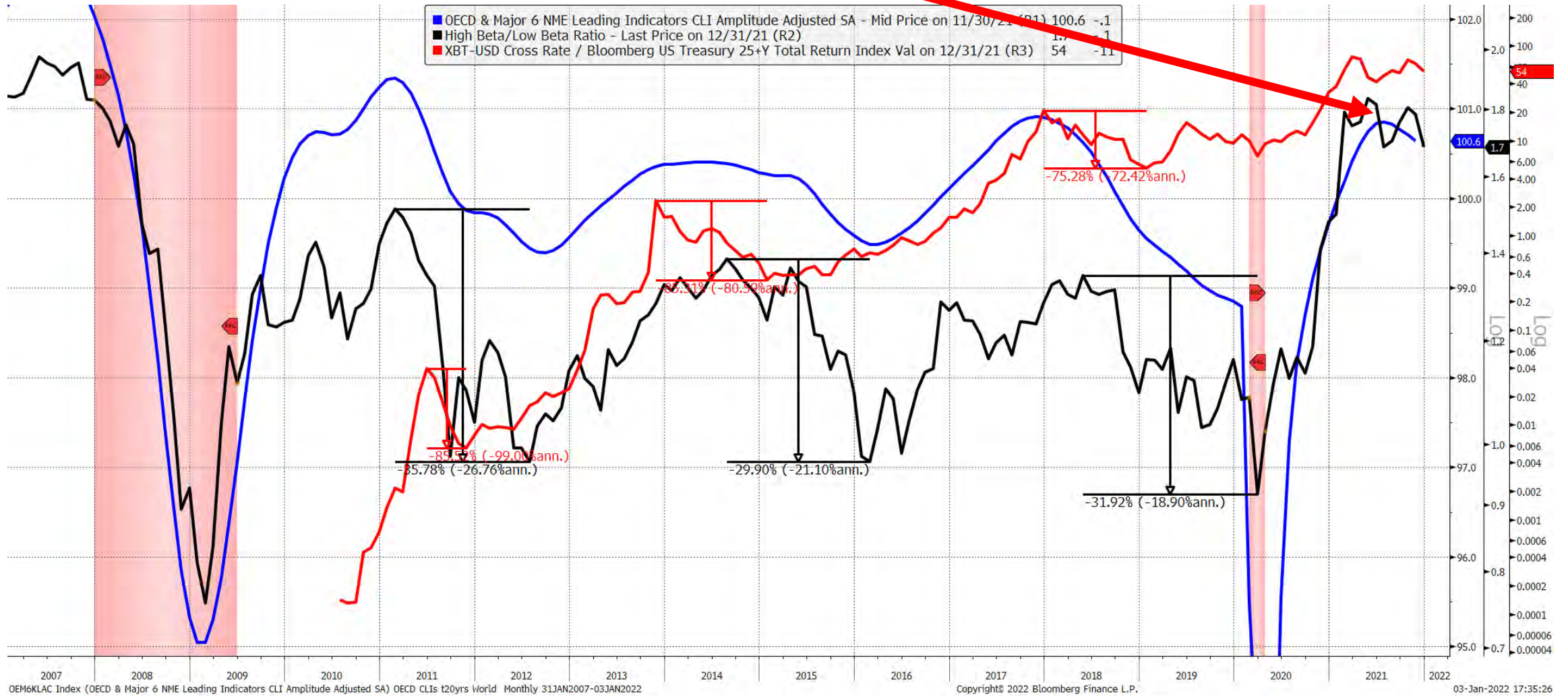
— US Core PCE YoY - - - Aggressive Model **42 Macro**
- - - Moderate Model - - - Median Projection



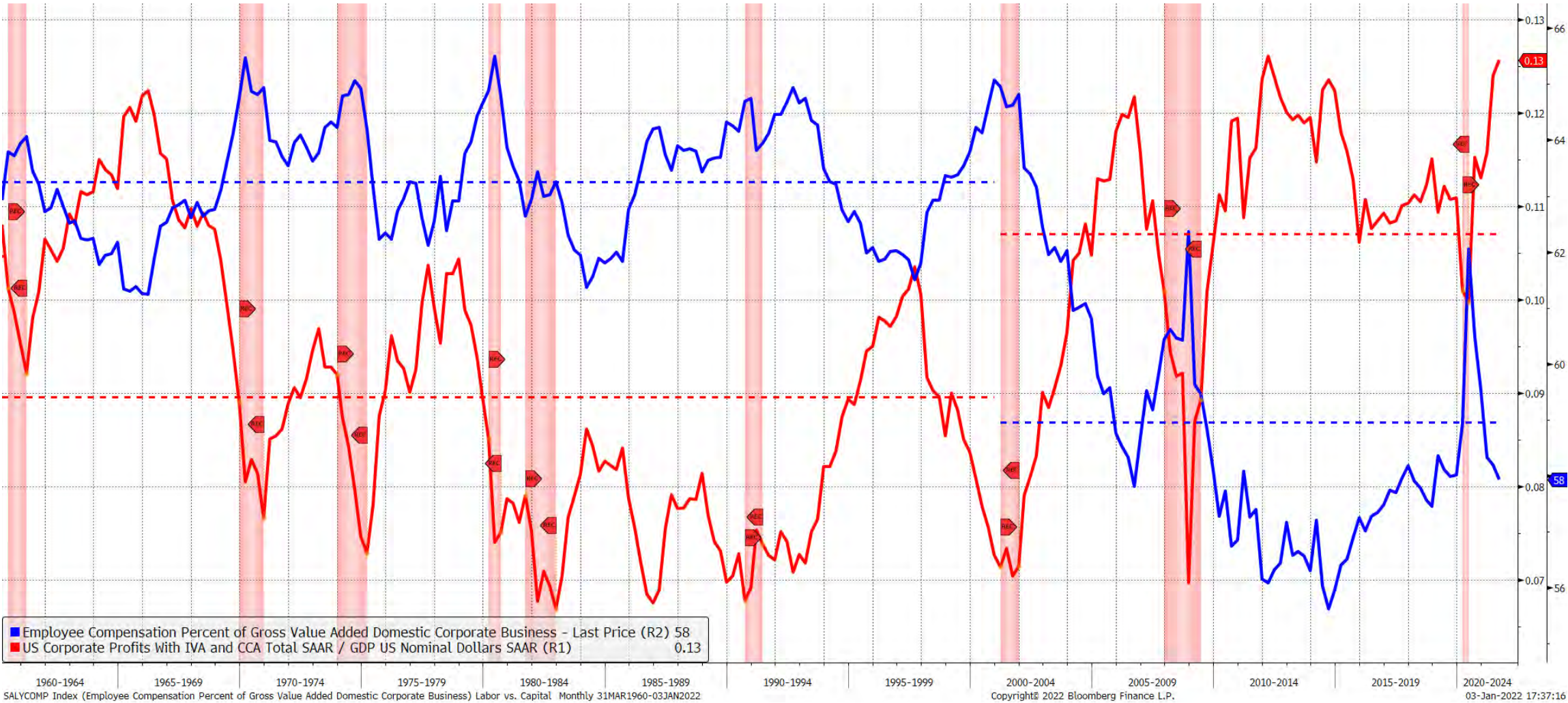
FOMC Meeting Schedule

- With respect to the Fed’s reaction function, it’s not about where inflation is today. What matters is where inflation will be on 3/16/22, 6/15/22, 9/21/22, and 12/14/22 – the latter three of which are the dates of the “SEP” FOMC meetings (note: Core PCE is released on a full 1mo lag):
- Realized or forecasted Core PCE rates as of the following FOMC dates:
 - Mar-22: 4.5% (Jan)
 - Jun-22: 4.0% (Apr)
 - Sep-22: 3.3% (Jul)
 - Dec-22: 2.7% (Oct)
- Our analysis suggests March is a “live” meeting, which heightens the probability the FOMC hikes rates four times throughout 2022.

Market Cycle: You Are HERE



The Most Important Chart In Macro Proves Why [Inflationary] Populism Has Garnered Bi-Partisan Support In The US In Recent Years



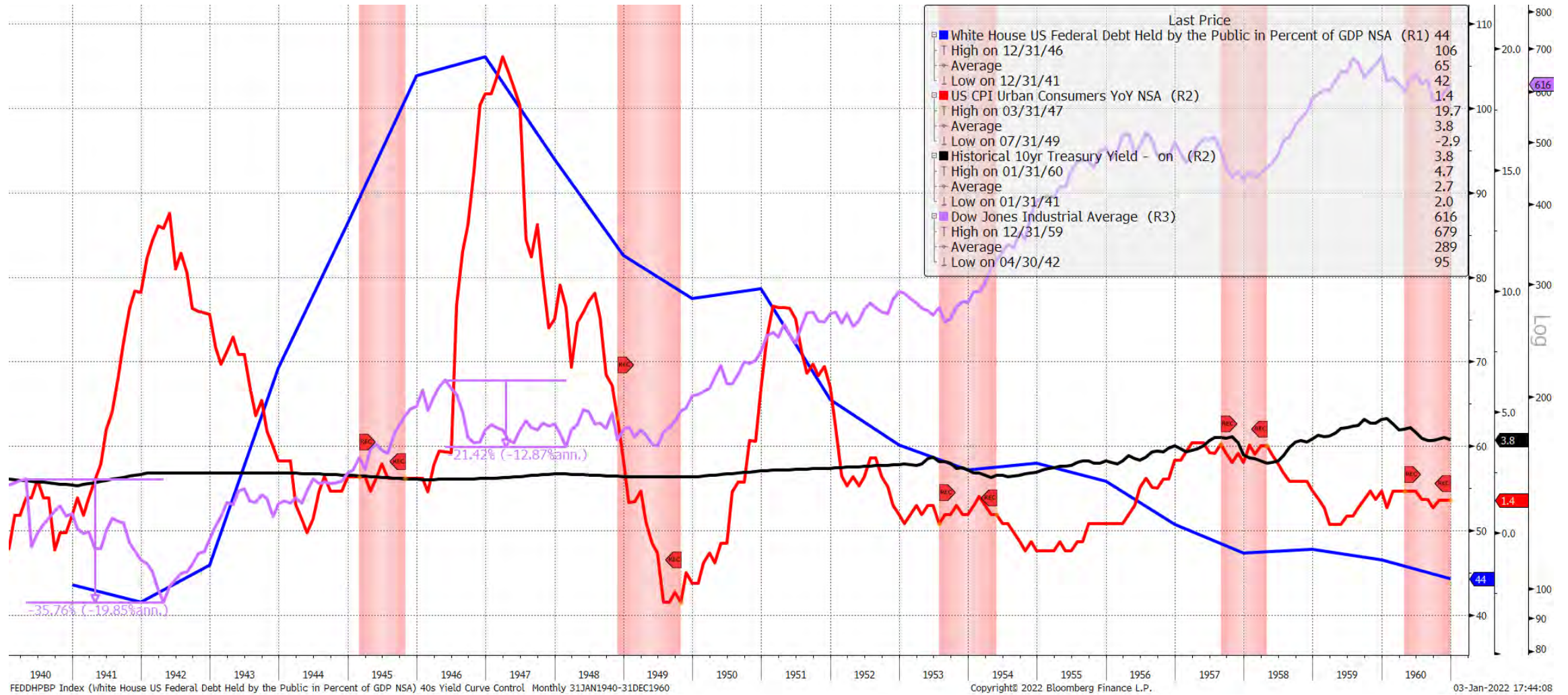
Foreign Central Banks Have Eschewed Dollar Recycling Since 2014



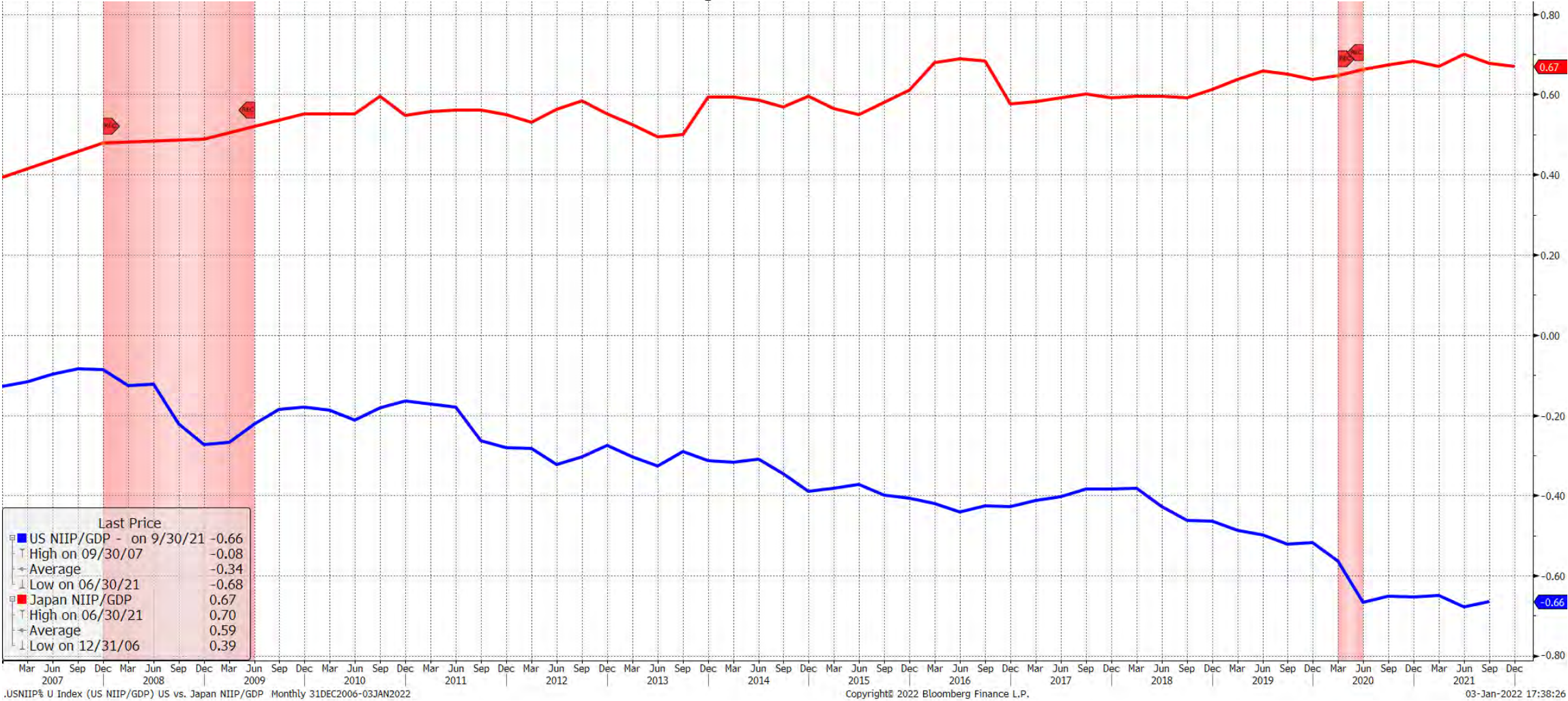
... Which Implies The Fed Will Be Increasingly Called Upon To Finance Bloated US Budget Deficits Throughout The Remainder Of This Fourth Turning



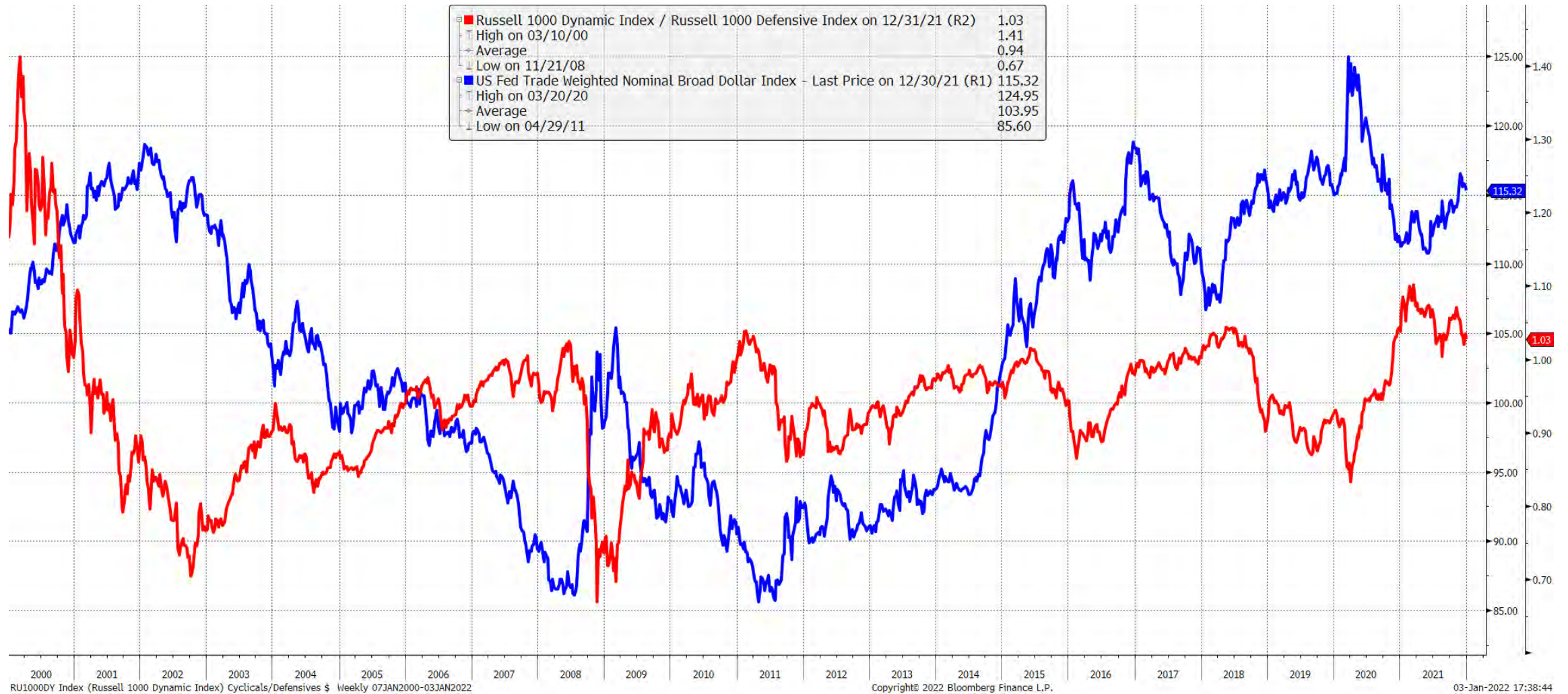
The US Already Has A Playbook For Deleveraging The Federal Balance Sheet Amid Wartime Conditions: 1940s Yield Curve Control



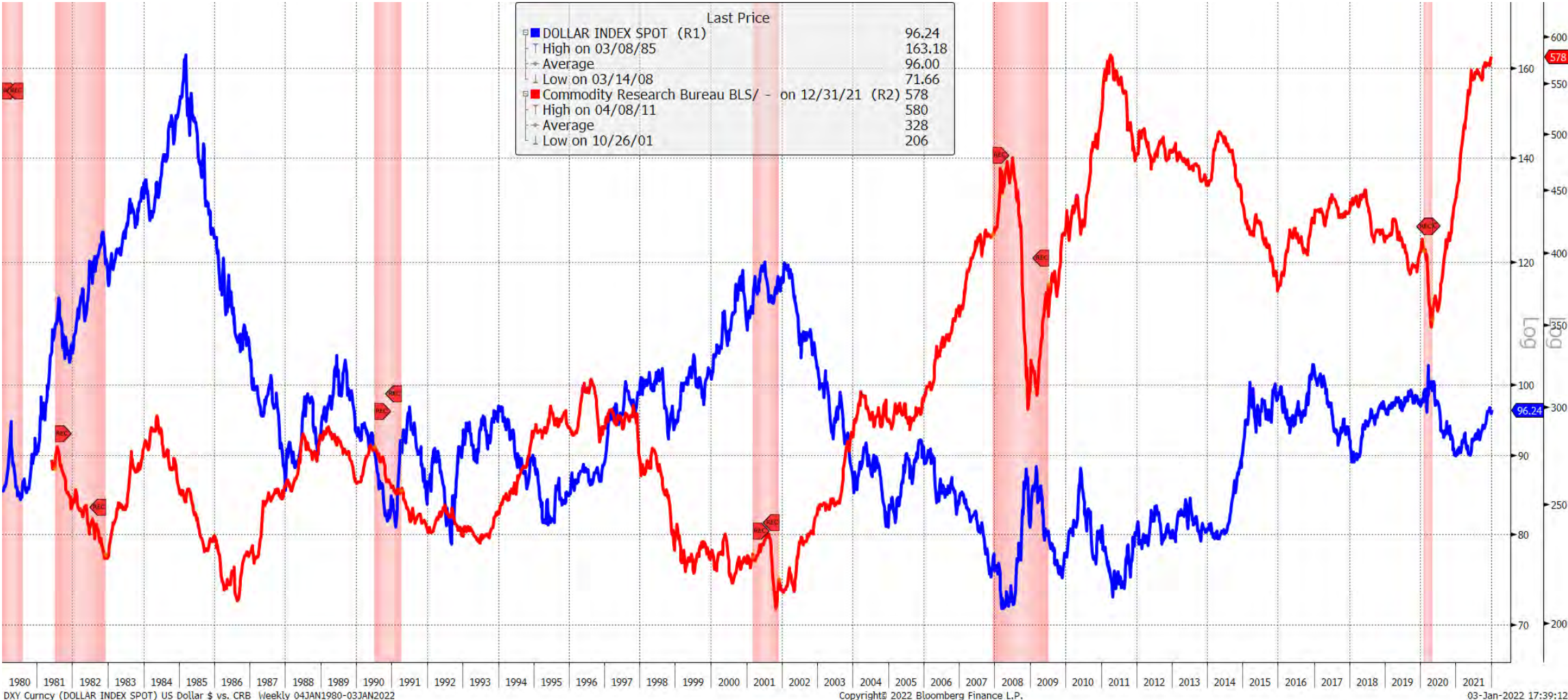
The US Does Not Have The Luxury Of CTRL+P-ing Its Way Out Of Indebtedness Without Consequence



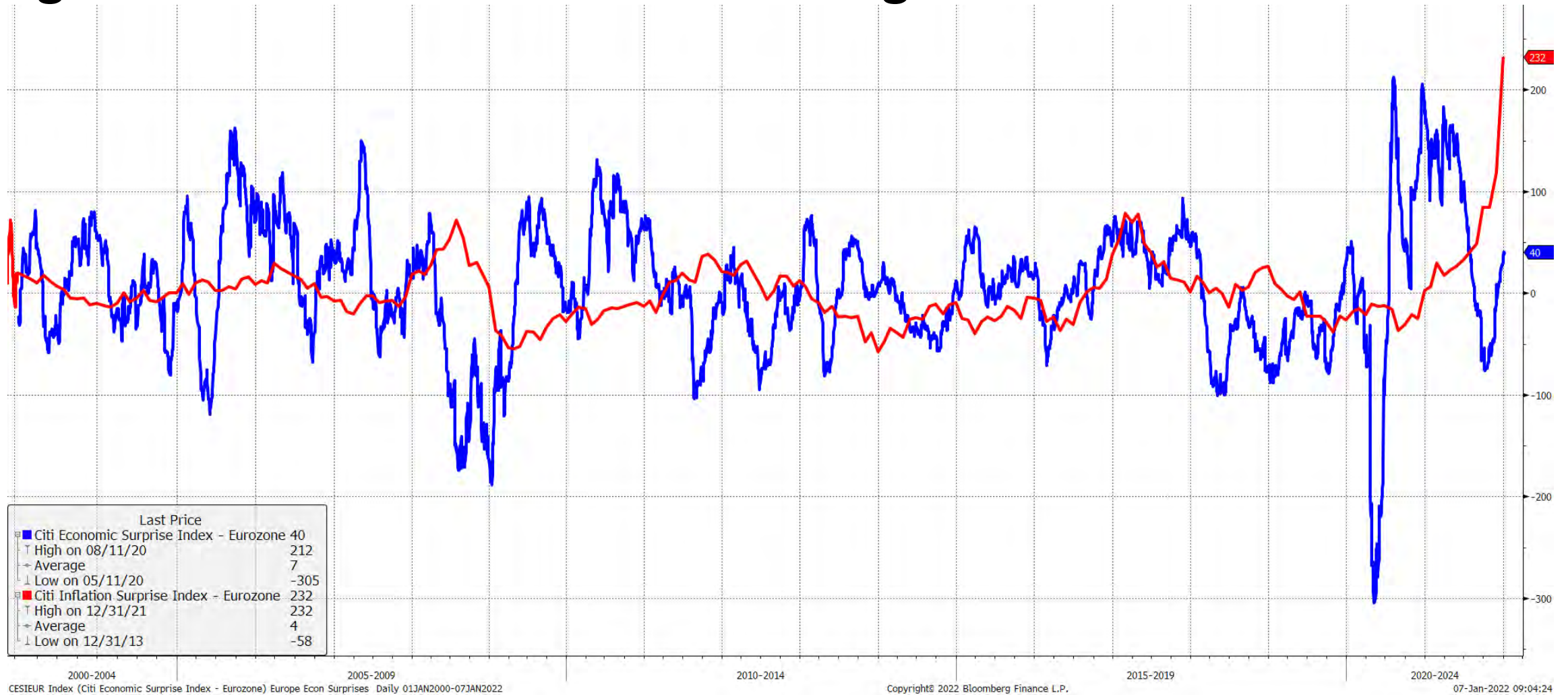
Ultimately, The US Dollar Will Be Sacrificed As Politicians Find Themselves Increasingly Tethered To The Zeitgeist Of Inequality Throughout This Fourth Turning



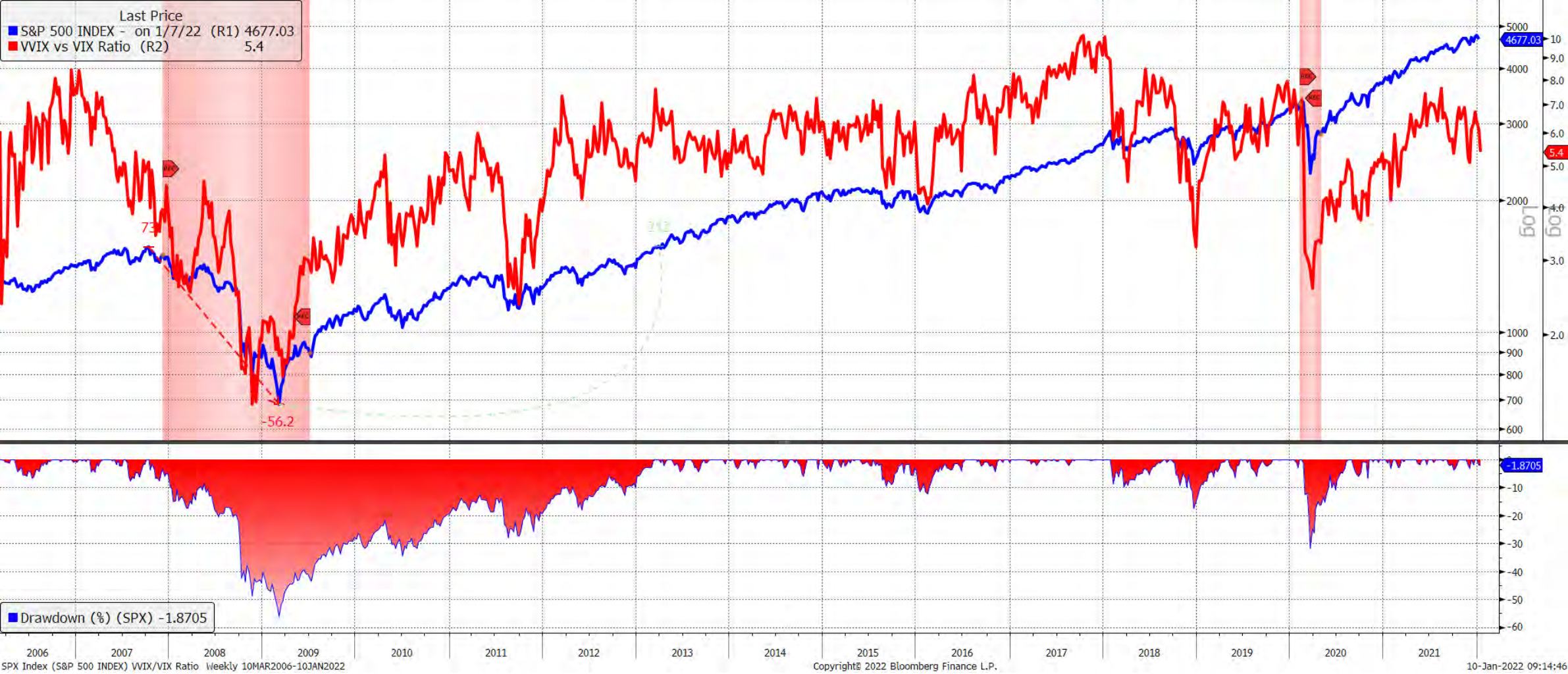
That Should Keep An Elevated Floor(s) Under Commodity Prices Over The Next Few Election Cycles – Especially Amid The Green Energy Transition



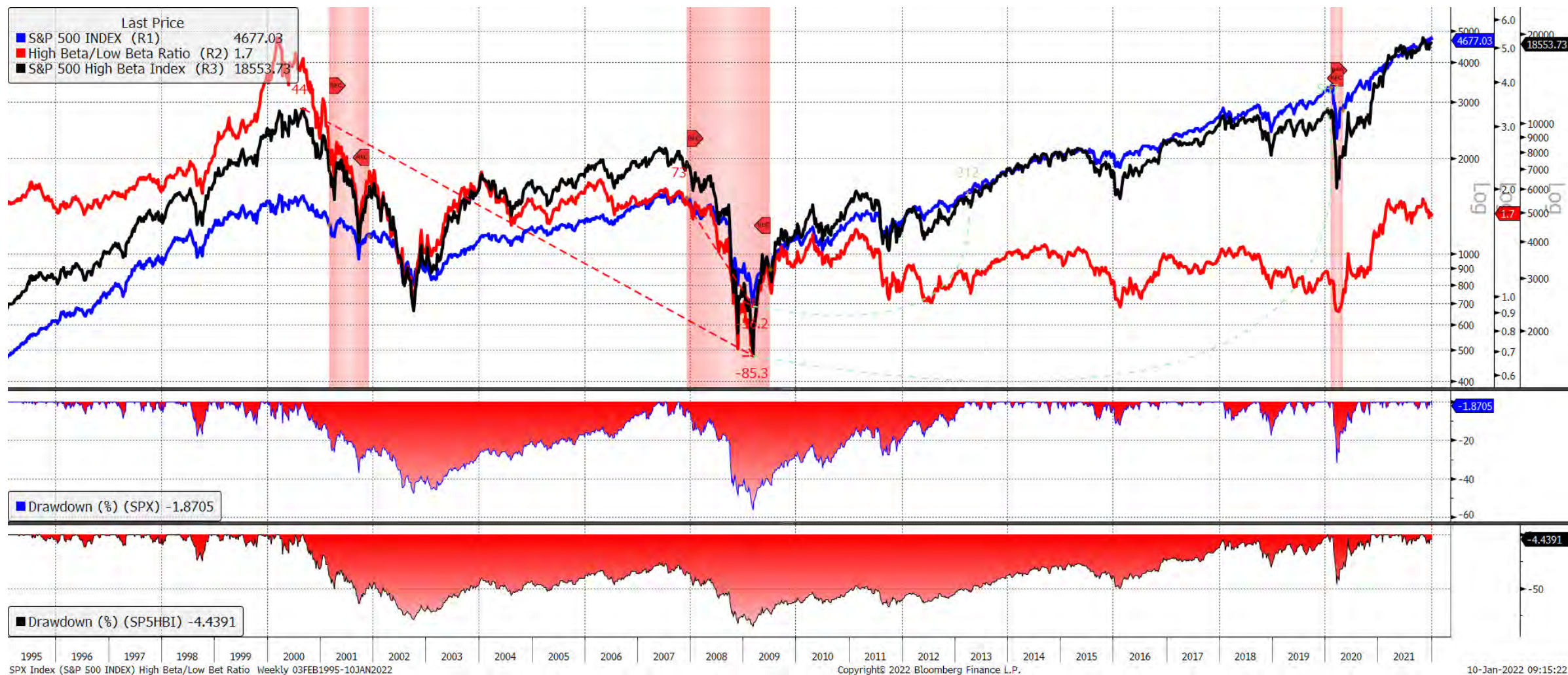
Europe's Unchecked Inflation Problem Has Very Quickly Become A Big Problem For Investors On The Long Side Of Duration Risk



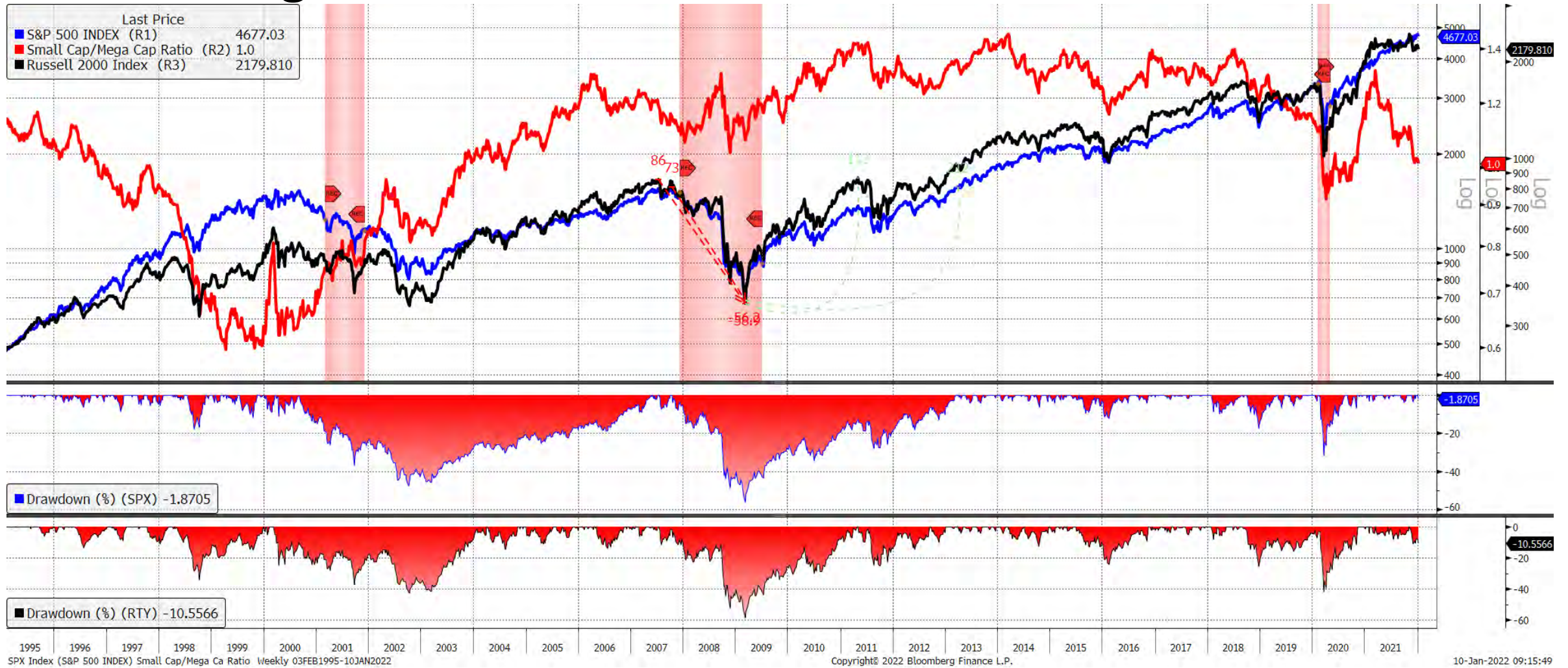
VVIX/VIX Ratio: ↓ Almost Always = Risk Off



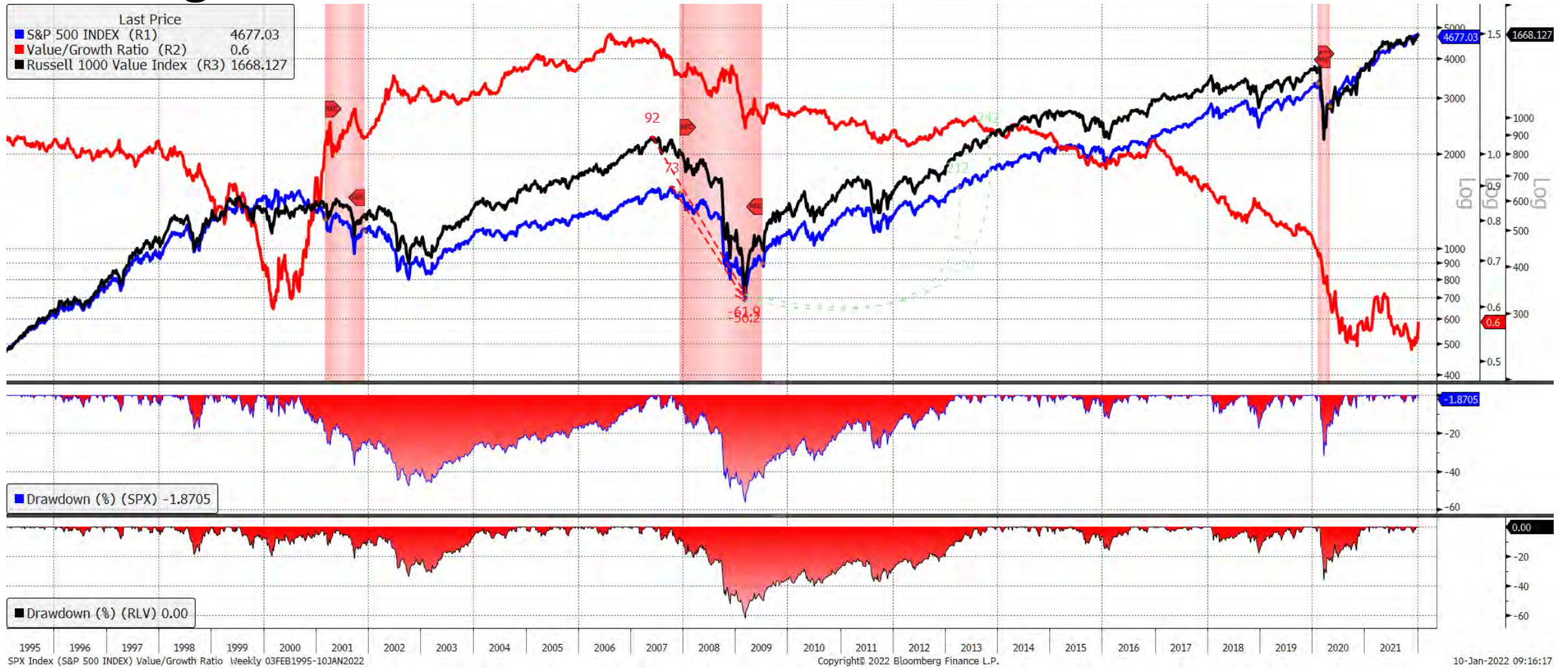
High Beta/Low Beta Ratio: ↓ Almost Always = Risk Off



Small Cap/Mega Cap Ratio: ↓ Almost Always = Risk Off, Save For The Bursting Of The Tech Bubble And 1H08



Value/Growth Ratio: ↓ Almost Always = Risk Off, Save For The Bursting Of The Tech Bubble And 2H08



**Thanks for reviewing.
See you next month!**

Intro to the 42 Macro Process:

<https://bit.ly/3oqS4u2>

Glossary of Terms:

<https://42macro.com/the-playbook/>

Frequently Asked Questions:

<https://42macro.com/faq/>