Darius Dale Macro Voices Interview

Thursday, June 23, 2022

Prepared 6/21/22

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Key Takeaways: Tuesday, June 21, 2022

- **SHORT TERM (< 3wks):** The S&P 500 is trapped between a rock (JPMorgan Hedged Equity put spread that expires 6/30) and a hard place (#TheCycle) over the next few weeks. That said, with Risk Assets ending last week broadly oversold, we found it prudent to take some chips off the table from the short side of the trade. Q2 earnings season in 3-4 weeks likely represents the next major leg down.
  - **CROSS ASSET CORRECTION RISK INDICATOR:** (-)
  - **CROWDING – RISK ASSETS:** 0
  - **CROWDING – S&P 500 (SPY):** 0
  - **DISPERSION:** 0
  - **DOMINANT MARKET REGIME:** (-)
  - **FOUR HORSEMEN OF MARKET RISK:** 0
  - **PROBABLE RANGE – S&P 500:** +
  - **VOLATILITY ADJUSTED MOMENTUM SIGNAL – S&P 500:** (-)
- **MEDIUM/LONG TERM (3-6mos/6-12mos):** We are sellers of rips across most Risk Assets. Refer to our 3/12 Around the Horn for details regarding our ~3,200-3,400 zone for a durable bottom in the S&P 500.
  - **BASE CASE (High Probability):** Our US GRID Model suggests the trending INFLATION regime has legs through July and will give way to a likely transition to DEFLATION in August. Recall that INFLATION and DEFLATION are the two GRID Regimes that feature elevated volatility and covariance across asset classes. Given this condition of elevated portfolio risk, it is likely we are only in the middle innings of the bear market(s) in high beta risk assets we have been anticipating since the fall. With the Fed unlikely to receive "clear and confirming evidence" from either the labor market or inflation statistics to stop tightening monetary policy until at least Q4, it is likely financial conditions will tighten considerably along the way to amid simultaneous deteriorations in the #LiquidityCycle, #GrowthCycle, and #ProfitsCycle.
  - **BEAR CASE (Middling Probability):** A deterioration on the geopolitical front amid incremental supply chain disruptions stemming from China's "Zero COVID" policy sustain the Positive RoC inflation impulse for another 2-3 months. This causes Fed officials to take incremental actions [relative to market pricing] to tighten financial conditions into the teeth of the sharper deceleration in growth our models have persisting throughout 2H22E. The resulting DEFLATION would likely be deeper and more protracted, perpetuating jump conditions in recession probability models.
  - **BULL CASE (Low Probability):** Inflation peaks and slows much faster over the next 2-3 months than we, economist consensus, and the Fed currently anticipate, leading to a sharp repricing lower of the projected path for the Fed Funds Rate in money markets. Any such sharp deceleration in inflation would also inflate real incomes and delay a more meaningful slowdown in growth by perpetuating a GOLDILOCKS soft landing in the US and across large parts of the global economy.
- **PORTFOLIO CONSTRUCTION:** We are currently exposed to four key themes: 1) LONG Energy and Agricultural Commodities; 2) SHORT US Risk Assets; 3) LONG Chinese Risk Assets; and 4) LONG lots of Cash in preparation to rotate into Long Duration Fixed Income, followed by an eventual rotation back into Risk Assets broadly. You need Cash to "buy the bottom".
  - **SELLS:** n/a
  - **COVERS:** n/a
  - **BUYS:** n/a
  - **OVERBOUGHT:** High Yield Credit Spreads (CDX)
  - **OVERSOLD:** WTI Crude Oil, Bloomberg Industrial Metals Index

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

United States

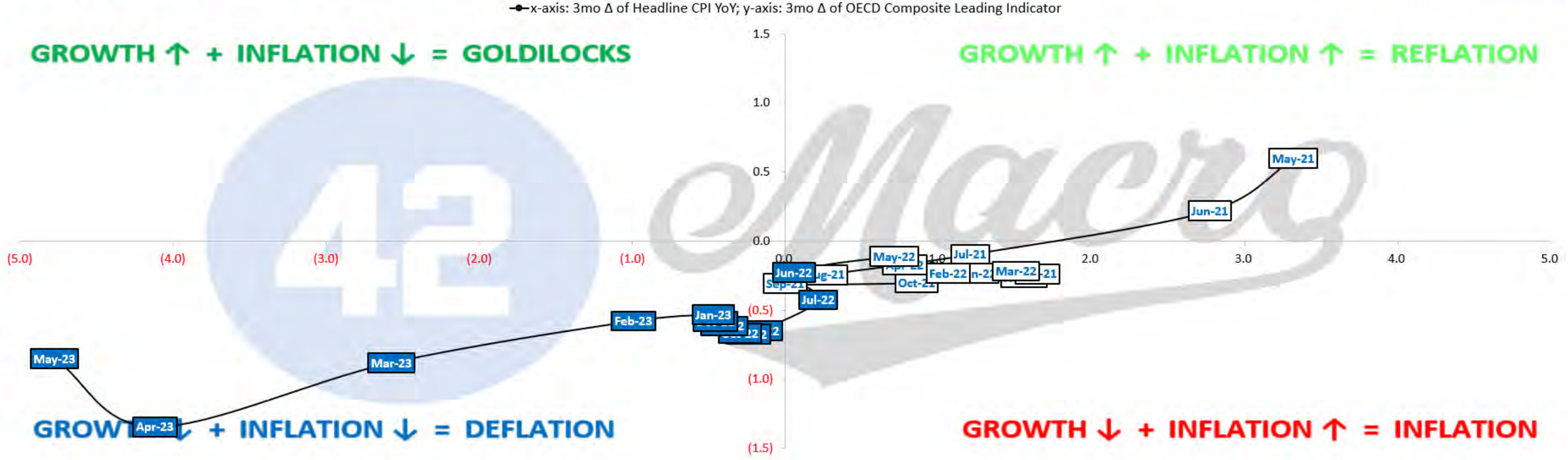
Actuals

42 Macro GRID Framework	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21
Macro Regime	G	G	R	R	R	R	R	R	I
Conditional Probability of GOLDILOCKS	48%	54%	26%	17%	10%	2%	2%	1%	3%
Conditional Probability of REFLATION	43%	41%	69%	73%	87%	94%	60%	52%	36%
Conditional Probability of INFLATION	4%	2%	4%	7%	3%	3%	37%	45%	57%
Conditional Probability of DEFLATION	5%	3%	1%	2%	0%	0%	1%	1%	4%
OECD Composite Leading Indicator	99.0	99.3	99.7	100.1	100.4	100.6	100.7	100.6	100.5
3mo Δ	0.9	1.1	1.0	1.1	1.1	1.0	0.6	0.2	-0.1
Z-Score (t3yrs)	0.6	0.6	0.6	0.6	0.6	0.5	0.3	0.1	0.0
Headline CPI YoY	1.2	1.4	1.4	1.7	2.6	4.2	5.0	5.4	5.4
3mo Δ	-0.1	0.0	0.2	0.5	1.3	2.8	3.3	2.8	1.2
Z-Score (t3yrs)	-0.1	0.1	0.4	0.8	1.7	3.1	3.1	2.3	0.9

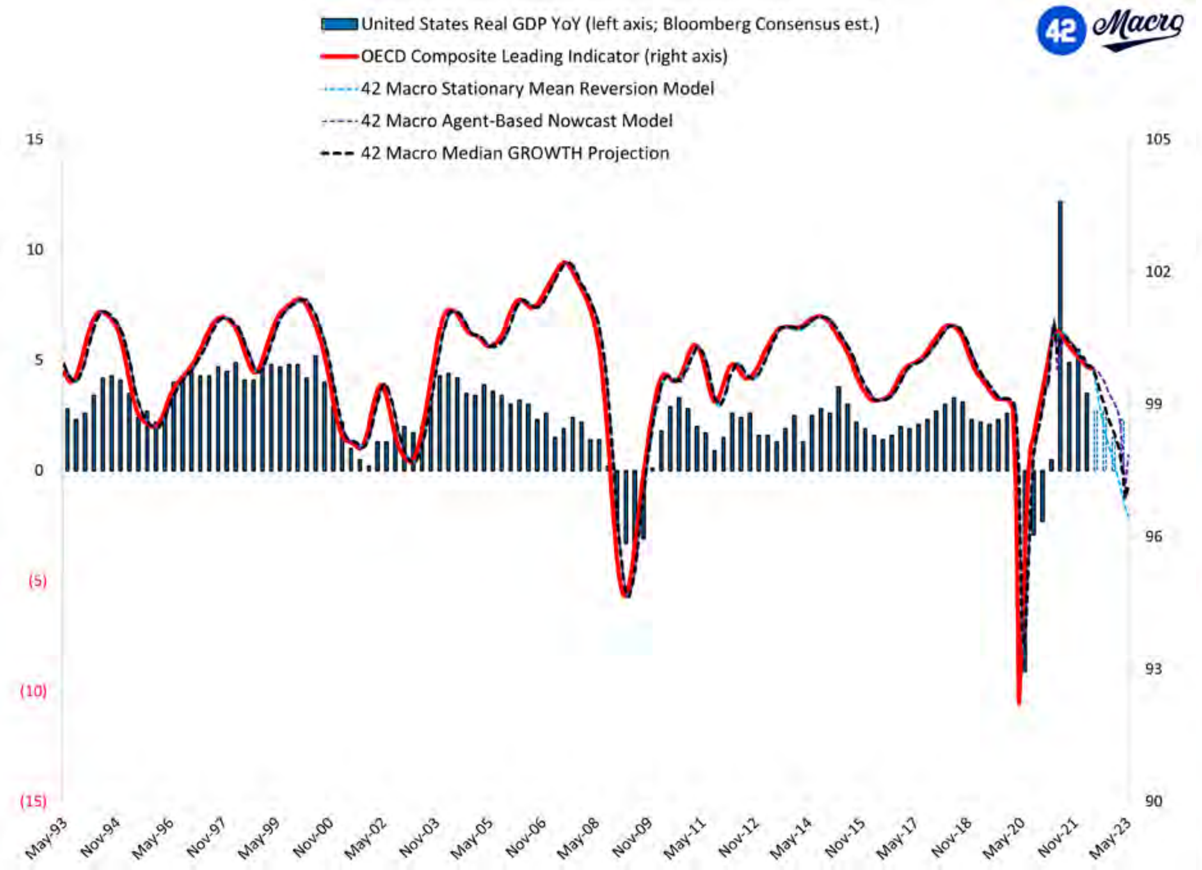
42 Macro GRID Framework	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Macro Regime	I	D	I	I	I	I	I	I	I	I
Conditional Probability of GOLDILOCKS	14%	21%	11%	3%	1%	3%	4%	2%	4%	15%
Conditional Probability of REFLATION	22%	11%	23%	33%	33%	31%	35%	30%	33%	25%
Conditional Probability of INFLATION	39%	23%	44%	58%	63%	61%	54%	62%	56%	37%
Conditional Probability of DEFLATION	25%	45%	21%	6%	3%	5%	6%	5%	7%	23%
OECD Composite Leading Indicator	100.4	100.3	100.2	100.2	100.1	100.0	99.9	99.9	99.8	99.8
3mo Δ	-0.2	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
Z-Score (t3yrs)	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Headline CPI YoY	5.3	5.4	6.2	6.8	7.0	7.5	7.9	8.5	8.3	8.6
3mo Δ	0.3	0.0	0.9	1.6	1.6	1.3	1.1	1.5	0.8	0.7
Z-Score (t3yrs)	0.0	-0.2	0.5	1.1	1.1	0.7	0.5	0.9	0.2	0.1

Projections

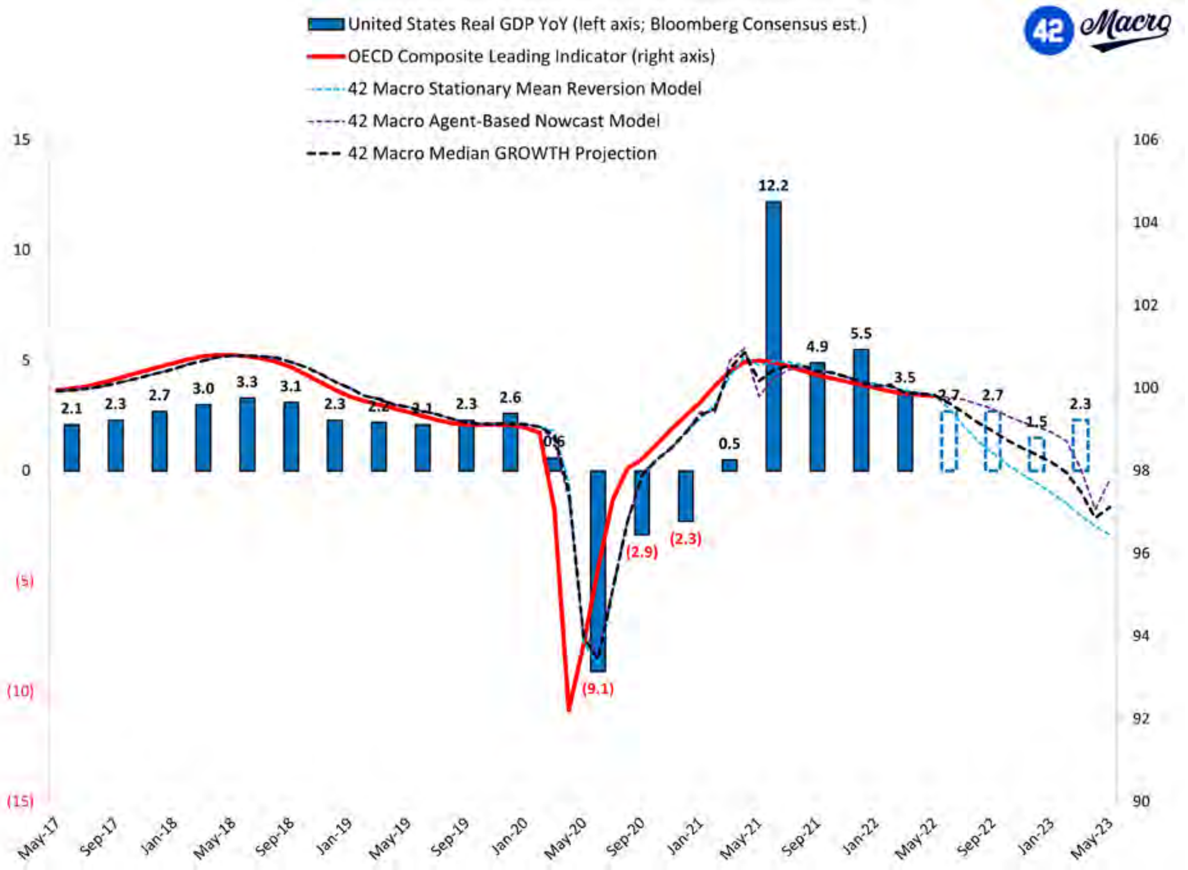
42 Macro GRID Framework	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Macro Regime	I	I	D	D	D	D	D	D	D	D	D	D
Conditional Probability of GOLDILOCKS	13%	4%	4%	4%	4%	4%	5%	6%	6%	6%	4%	6%
Conditional Probability of REFLATION	16%	6%	2%	2%	2%	2%	2%	2%	1%	0%	0%	0%
Conditional Probability of INFLATION	40%	57%	37%	34%	30%	24%	23%	23%	8%	2%	2%	2%
Conditional Probability of DEFLATION	31%	33%	57%	60%	64%	69%	70%	70%	85%	91%	94%	91%
OECD Composite Leading Indicator	99.6	99.4	99.2	99.0	98.7	98.5	98.4	98.2	98.0	97.5	96.9	97.1
3mo Δ	-0.2	-0.4	-0.6	-0.7	-0.7	-0.6	-0.6	-0.5	-0.6	-0.9	-1.3	-0.8
Z-Score (t3yrs)	-0.5	-1.5	-2.1	-1.8	-1.6	-1.3	-1.1	-0.8	-0.9	-1.7	-2.6	-1.2
Headline CPI YoY	8.6	8.5	8.4	8.4	8.2	8.0	7.9	7.7	7.0	5.3	3.6	2.2
3mo Δ	0.1	0.2	-0.2	-0.2	-0.3	-0.4	-0.5	-0.5	-1.0	-2.6	-4.1	-4.8
Z-Score (t3yrs)	0.0	-0.4	-0.2	-0.7	-0.8	-0.8	-0.9	-0.8	-1.2	-2.3	-3.1	-3.1



US GROWTH: Secular View



US GROWTH: Cyclical View



US GROWTH Agent-Based Nowcast Model

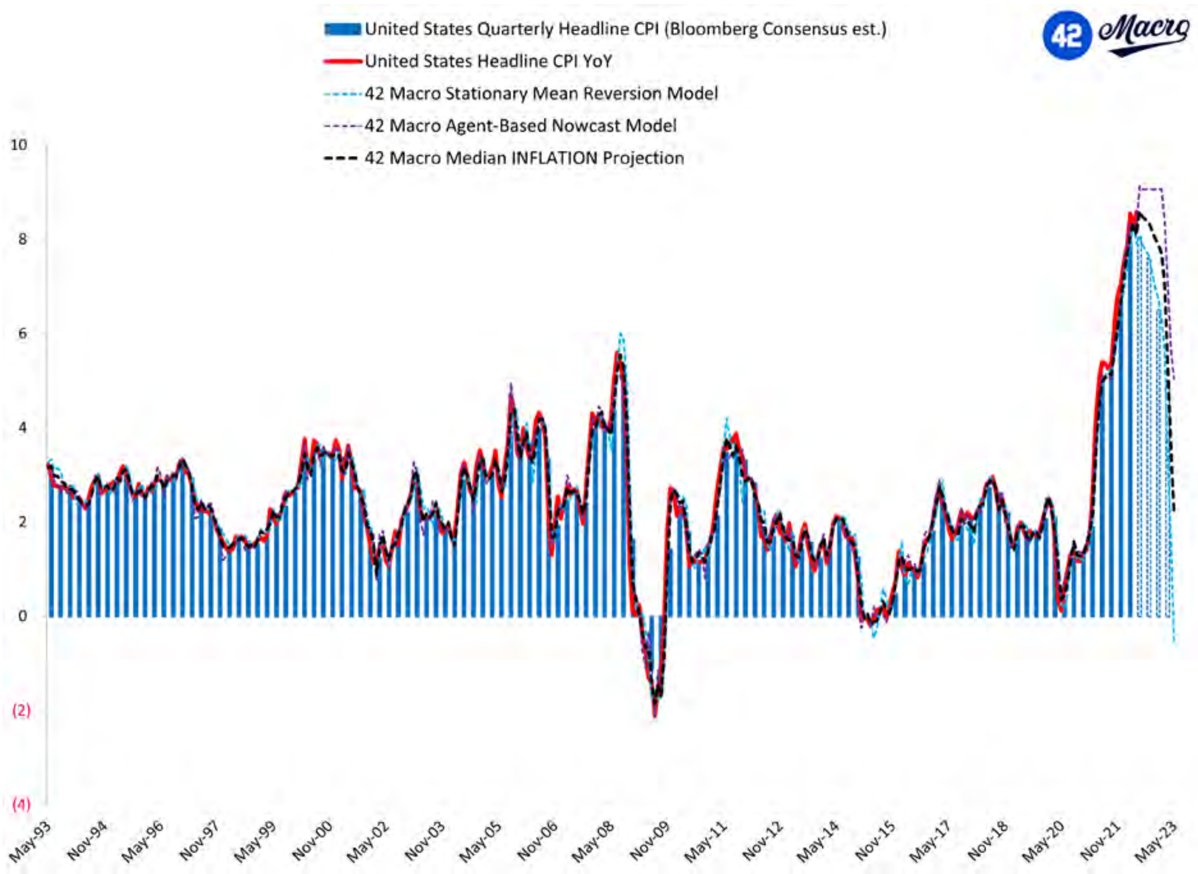
42 Macro Agent-Based Nowcast GROWTH Model Features

United States	v-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
USA OECD Leading Indicators CLI Amplitude Adjusted SA	99.1	99.1	99.0	98.9	97.1	92.2	93.8	95.7	97.3	98.1	98.3	98.6	99.0	99.3	99.7	100.1
US Industrial Production YOY SA (6%)	-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
US Trade Balance of Exports YOY SA (4%)	0.1	1.5	-1.5	-2.1	-12.0	-28.6	-32.0	-24.5	-19.0	-16.9	-14.1	-12.3	-10.9	-8.3	-4.7	-6.9
Retail Sales Less Food Services Auto Dealers & Building Mat& Gas Station SA YoY (4%)	2.1	6.1	3.6	4.6	6.9	-7.2	2.4	8.1	9.9	9.5	12.0	11.1	10.4	8.0	14.5	11.3
ISM Manufacturing PMI SA (7%)	48.1	47.9	51.4	50.3	49.1	41.6	43.5	52.4	53.9	55.4	55.4	58.8	57.3	60.5	59.4	60.9
ISM Services PMI (7%)	53.6	55.7	56.0	56.9	52.8	41.5	45.2	56.8	57.0	57.4	57.7	56.1	56.5	57.8	58.5	55.9
USA Business Tendency Manufacturing Confidence Composite OECD Normalsd SA (3%)	-2.1	-1.7	-1.4	-1.4	-1.6	-1.9	-1.4	-0.4	0.6	1.4	1.9	2.3	2.4	2.5	2.5	2.8
USA Consumer Opinion Confidence Composite OECD Normalised SA (3%)	0.0	0.4	0.6	0.1	-1.2	-2.5	-3.1	-3.0	-2.8	-2.2	-1.9	-2.0	-2.3	-2.5	-2.5	-1.9
US Employees on Nonfarm Payrolls Total SA (6%)	1.3	1.3	1.4	1.6	0.4	-13.4	-11.6	-8.7	-7.9	-6.9	-6.4	-6.0	-5.9	-6.1	-6.0	-5.8
US Employees on Nonfarm Payrolls Total Private SA (6%)	1.4	1.4	1.4	1.6	0.3	-15.2	-12.8	-9.4	-8.4	-7.6	-6.9	-6.3	-6.2	-6.4	-6.3	-5.9
US Avg Weekly Hours Nonfarm Total Private Production and Nonsupervisory SA (0%)	-0.6	-0.6	-0.6	0.3	-0.9	-0.3	1.5	1.2	1.2	1.8	1.8	2.1	2.4	2.1	2.4	1.2
Average Weekly Earnings Total (1%)	3.3	2.6	3.0	4.8	4.1	7.5	8.4	4.8	6.1	8.1	4.2	6.7	8.3	6.2	8.2	4.9
US Job Openings By Industry Total SA (2%)	-8.8	-9.3	-4.2	-0.7	-19.1	-34.8	-25.4	-15.5	-6.5	-11.6	-8.5	-7.3	-0.8	2.9	1.0	12.2
Bureau of Labor Statistics Employment Diffusion Nonfarm Payrolls +1 Month SA (4%)	60.4	51.4	57.0	52.3	20.3	3.9	63.9	74.0	62.5	70.3	75.2	70.3	66.0	63.9	57.6	65.0
US Personal Consumption Expenditures Chained 2012 Dollars SAAR (5%)	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
Real Personal Consumption Expenditures of Goods (3%)	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
US Personal Consumption Expenditures Services Chained 2012 Dollars SAAR (5%)	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
US Disposable Personal Income Chained 2012 Dollars SA (1%)	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
Adjusted Retail & Food Services Sales Total SA (3%)	2.9	5.5	4.5	4.6	-5.8	-20.2	-5.8	2.2	3.4	3.6	6.6	5.9	4.2	3.2	9.3	6.9
MBA US Purchase Index SA (1%)	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
US Auto Sales Total Annualized SAAR (1%)	-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
US Capacity Utilization % of Total Capacity SA (6%)	-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
US Manufacturers New Orders Total SA (5%)	-5.9	-5.6	-2.3	-1.1	-12.2	-23.7	-17.9	-10.9	-7.1	-5.7	-3.9	-2.7	-0.2	0.6	1.5	1.1
Capital Goods New Orders Nondefense Excluding Aircraft SA (4%)	-2.2	-4.3	-7.2	-8.3	-10.2	-17.1	-15.3	-11.6	-8.8	-7.8	-4.7	-3.7	-1.3	1.6	3.9	5.4
US Durable Goods New Orders Industries SA (4%)	-8.1	-9.7	-1.5	3.6	-14.1	-28.9	-17.5	-9.5	-3.2	-1.5	1.6	3.0	7.4	7.5	5.2	2.6
US Trade Balance of Imports SA (4%)	-4.1	-3.1	-2.9	-4.3	-11.4	-22.0	-24.5	-19.9	-11.4	-8.9	-6.1	-2.3	1.3	0.4	3.8	4.3
Association of American Railroads Total Traffic US Freight Carloads (2%)	-23.0	-9.2	-2.3	-8.5	-11.9	-22.4	-17.4	-13.8	-8.7	-6.2	-2.1	1.4	3.6	8.4	2.2	1.8
Census Bureau US Construction Spending Total SA (2%)	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	2.1

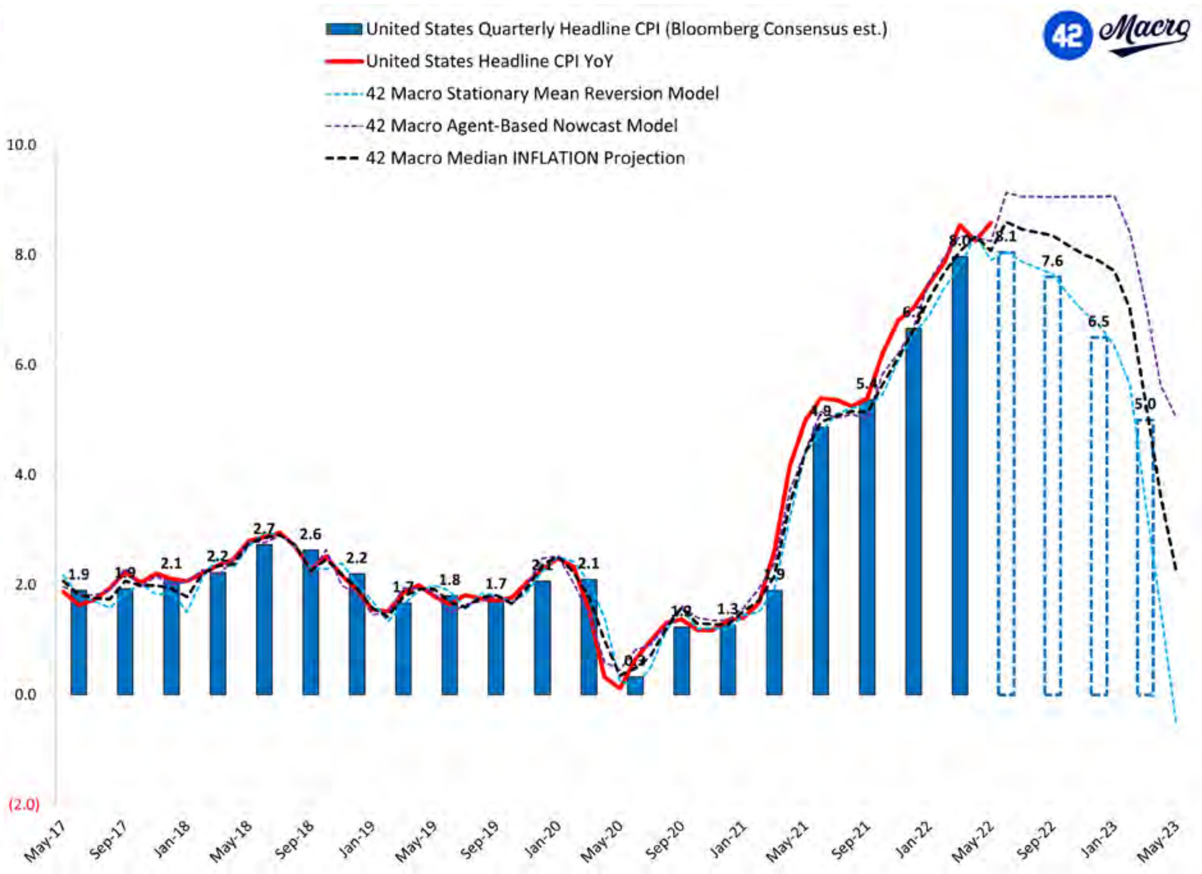
United States	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
USA OECD Leading Indicators CLI Amplitude Adjusted SA	100.4	100.6	100.7	100.6	100.5	100.4	100.3	100.2	100.2	100.1	100.0	99.9	99.9	99.8	99.8
US Industrial Production YOY SA (6%)	1.8	17.9	16.4	10.2	6.6	5.4	4.5	4.8	5.0	3.5	3.2	7.4	5.0	6.3	5.8
US Trade Balance of Exports YOY SA (4%)	9.8	37.7	43.8	32.6	24.4	22.4	16.7	21.9	21.1	19.8	15.3	20.3	17.7	21.7	
Retail Sales Less Food Services Auto Dealers & Building Mat& Gas Station SA YoY (4%)	17.6	33.2	19.3	14.0	10.3	12.1	10.8	12.7	13.5	12.5	9.9	12.2	3.7	5.6	6.2
ISM Manufacturing PMI SA (7%)	63.7	60.6	61.6	60.9	59.9	59.7	60.5	60.8	60.6	58.8	57.6	58.6	57.1	55.4	56.1
ISM Services PMI (7%)	62.2	62.7	63.2	60.7	64.1	62.2	62.6	66.7	68.4	62.3	59.9	56.5	58.3	57.1	55.9
USA Business Tendency Manufacturing Confidence Composite OECD Normalsd SA (3%)	3.5	3.9	3.5	2.4	1.6	1.1	0.9	0.6	0.4	0.0	-0.4	-0.8	-1.2	-1.3	-1.2
USA Consumer Opinion Confidence Composite OECD Normalised SA (3%)	-0.5	0.9	1.4	1.2	0.7	-0.1	-0.8	-1.2	-1.3	-1.4	-1.7	-2.2	-2.7	-2.8	
US Employees on Nonfarm Payrolls Total SA (6%)	-4.4	10.9	9.0	5.8	5.3	4.4	4.0	4.0	4.2	4.7	4.7	4.7	4.4	4.6	4.5
US Employees on Nonfarm Payrolls Total Private SA (6%)	-4.4	13.1	10.2	6.4	5.8	5.1	4.6	4.5	4.7	5.2	5.2	5.2	5.0	5.1	5.1
US Avg Weekly Hours Nonfarm Total Private Production and Nonsupervisory SA (0%)	3.0	2.7	0.6	0.9	0.9	0.0	0.3	-0.3	-0.3	-0.3	-1.2	0.3	-0.9	-0.9	-0.6
Average Weekly Earnings Total (1%)	6.5	4.2	5.1	5.1	6.1	5.2	6.3	6.1	4.9	5.9	6.3	7.3	5.7	5.0	5.6
US Job Openings By Industry Total SA (2%)	43.3	96.8	77.2	63.1	62.9	68.3	64.4	61.4	59.6	65.0	56.0	44.3	39.8	23.0	
Bureau of Labor Statistics Employment Diffusion Nonfarm Payrolls +1 Month SA (4%)	76.8	65.2	64.5	66.6	71.1	67.6	67.8	73.0	74.8	73.0	62.9	79.9	74.2	72.3	69.3
US Personal Consumption Expenditures Chained 2012 Dollars SAAR (5%)	9.6	25.4	15.1	9.3	7.5	7.5	6.4	6.7	7.2	6.7	5.3	6.8	2.6	2.8	
Real Personal Consumption Expenditures of Goods (3%)	21.1	37.3	17.1	11.2	6.7	8.1	6.1	7.4	8.4	6.3	2.7	5.1	-4.2	-2.9	
US Personal Consumption Expenditures Services Chained 2012 Dollars SAAR (5%)	4.1	19.7	14.0	8.4	7.9	7.2	6.5	6.4	6.7	7.0	6.6	7.7	6.4	5.9	
US Disposable Personal Income Chained 2012 Dollars SA (1%)	28.8	-6.0	-4.1	-2.8	-2.6	1.1	-1.1	-0.6	0.7	0.3	-10.4	-2.1	-20.8	-6.2	
Adjusted Retail & Food Services Sales Total SA (3%)	30.3	53.7	28.9	19.4	15.8	15.7	14.3	16.5	18.6	16.8	13.7	17.7	7.1	7.8	8.1
MBA US Purchase Index SA (1%)	40.4	32.0	-11.7	-17.3	-17.7	-16.3	-12.6	-10.0	-9.4	-13.0	-6.7	-8.7	-10.2	-11.0	-14.3
US Auto Sales Total Annualized SAAR (1%)	56.1	115.7	39.1	17.7	1.6	-14.0	-25.5	-19.9	-17.3	-23.5	-9.6	-10.2	-24.9	-22.8	-25.4
US Capacity Utilization % of Total Capacity SA (6%)	1.9	17.9	16.4	10.2	6.5	5.2	4.2	4.4	4.6	3.1	2.6	6.8	4.2	5.5	5.0
US Manufacturers New Orders Total SA (5%)	12.9	31.2	26.3	18.9	13.0	13.0	11.4	12.2	13.2	11.9	11.7	12.1	12.9	14.0	
Capital Goods New Orders Nondefense Excluding Aircraft SA (4%)	8.5	22.3	18.5	16.4	14.3	14.6	11.5	12.5	13.0	11.3	11.5	11.6	10.6	7.7	
US Durable Goods New Orders Industries SA (4%)	20.6	48.7	34.7	23.7	13.2	13.3	9.4	9.0	11.2	10.8	11.4	10.5	9.5	12.2	
US Trade Balance of Imports SA (4%)	17.8	34.7	38.0	35.6	22.7	21.0	20.6	18.8	20.8	21.3	20.8	24.0	27.7	24.3	
Association of American Railroads Total Traffic US Freight Carloads (2%)	16.1	30.7	34.1	12.4	3.0	-0.7	-1.3	-2.0	-4.8	-2.4	-5.6	-0.3	-3.2	-6.3	-2.9
Census Bureau US Construction Spending Total SA (2%)	2.8	7.0	8.8	10.1	9.8	9.7	10.5	10.5	10.5	10.9	10.9	13.2	12.4	12.3	

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	v-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
US CPI Urban Consumers NSA YoY	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
US CPI Urban Consumers Less Food & Energy YoY NSA (8%)	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
US PPI Final Demand YoY NSA (7%)	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
Commodity Research Bureau BLS/US Spot All Commodities (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
Commodity Research Bureau BLS/US Spot Foodstuff (3%)	-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
Commodity Research Bureau BLS/US Spot Raw Industrials (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
US CPI Urban Consumers Food NSA (2%)	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
US CPI Urban Consumers Energy NSA (9%)	-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
US CPI Urban Consumers Commodities Less Food & Energy NSA (5%)	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
US CPI Household Furnishings & Supplies NSA (0%)	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
US CPI Urban Consumers Apparel NSA (5%)	-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
US CPI Transportation Commodities Less Motor Fuel NSA (3%)	-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
US CPI Urban Consumers Medical Care Commodities NSA (1%)	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
US CPI Recreation Commodities NSA (3%)	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
US CPI Education & Communication Commodities NSA (0%)	-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
US CPI Urban Consumers Alcoholic Beverages NSA (2%)	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
US CPI Urban Consumers Services Less Energy Services NSA (8%)	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
US CPI Urban Consumers Shelter NSA (4%)	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
US CPI Urban Consumers Water and Sewer and Trash Collection Services NSA (0%)	2.3	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
US CPI Urban Consumers Medical Care Services NSA (0%)	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
US CPI Urban Consumers Transportation Services NSA (7%)	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
US CPI Recreation Services NSA (0%)	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
US CPI Education & Communication Services NSA (0%)	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
US Personal Consumption Expenditures Chain Type Price Index SA (10%)	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
US Personal Consumption Expenditures Ex Food & Energy Deflator SA (9%)	1.6	1.6	1.8	1.9	1.7	0.9	1.0	1.1	1.3	1.5	1.6	1.4	1.4	1.5	1.5	1.5	2.0
NFIB Small Business Higher Prices (5%)	12.0	14.0	15.0	11.0	6.0	-18.0	-14.0	-5.0	-2.0	1.0	13.0	15.0	18.0	16.0	17.0	25.0	26.0
ISM Manufacturing Report on Business Prices Index NSA (1%)	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
ISM Services PMI Report on Business Prices SA (0%)	57.0	59.8	56.1	52.3	50.7	55.6	55.5	61.6	57.0	63.7	59.3	62.8	64.3	65.4	64.7	71.6	73.5

United States	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
US CPI Urban Consumers NSA YoY	4.2	5.0	5.4	5.4	5.3	5.4	6.2	6.8	7.0	7.5	7.9	8.5	8.3	8.6
US CPI Urban Consumers Less Food & Energy YoY NSA (8%)	3.0	3.8	4.5	4.3	4.0	4.0	4.6	4.9	5.5	6.0	6.4	6.5	6.2	6.0
US PPI Final Demand YoY NSA (7%)	6.5	7.0	7.6	8.0	8.7	8.8	8.9	9.9	10.0	10.1	10.4	11.5	10.9	10.8
Commodity Research Bureau BLS/US Spot All Commodities (4%)	50.6	49.4	54.4	48.8	41.8	36.4	39.5	31.7	30.3	27.2	25.3	25.2	20.9	14.8
Commodity Research Bureau BLS/US Spot Foodstuff (3%)	66.0	57.3	68.3	58.6	48.5	38.4	41.1	31.1	35.5	36.8	37.4	32.1	26.1	22.4
Commodity Research Bureau BLS/US Spot Raw Industrials (3%)	40.8	44.2	45.5	42.5	37.3	35.0	38.3	32.1	26.8	20.9	17.5	20.7	17.4	9.7
US CPI Urban Consumers Food NSA (2%)	2.4	2.2	2.4	3.4	3.7	4.6	5.3	6.1	6.3	7.0	7.9	8.8	9.4	10.1
US CPI Urban Consumers Energy NSA (9%)	25.1	28.5	24.5	23.8	25.0	24.8	30.0	33.3	29.3	27.0	25.6	32.0	30.3	34.6
US CPI Urban Consumers Commodities Less Food & Energy NSA (5%)	4.4	6.5	8.7	8.5	7.7	7.3	8.4	9.4	10.7	11.7	12.3	11.7	9.7	8.5
US CPI Household Furnishings & Supplies NSA (0%)	3.2	3.7	3.4	3.0	3.3	4.8	6.1	6.0	7.4	9.3	10.3	10.8	10.6	9.7
US CPI Urban Consumers Apparel NSA (5%)	1.9	5.6	4.9	4.2	4.2	3.4	4.3	5.0	5.8	5.3	6.6	6.8	5.4	5.0
US CPI Transportation Commodities Less Motor Fuel NSA (3%)	9.2	13.3	20.3	19.8	17.2	14.9	16.5	19.2	21.8	23.4	23.9	21.8	17.2	14.1
US CPI Urban Consumers Medical Care Commodities NSA (1%)	-1.7	-1.9	-2.2	-2.1	-2.5	-1.6	-0.4	0.2	0.4	1.4	2.5	2.7	2.1	2.4
US CPI Recreation Commodities NSA (3%)	2.9	3.5	3.2	3.2	3.3	3.5	4.0	3.9	3.3	4.1	4.6	4.7	4.0	3.8
US CPI Education & Communication Commodities NSA (0%)	-2.2	-1.4	-1.2	-0.2	-0.5	2.6	2.5	0.9	0.2	0.8	0.3	1.3	-4.0	-6.0
US CPI Urban Consumers Alcoholic Beverages NSA (2%)	1.9	1.6	1.9	2.4	2.6	2.8	2.2	1.9	2.3	2.7	3.5	3.7	3.9	4.0
US CPI Urban Consumers Services Less Energy Services NSA (8%)	2.5	2.9	3.1	2.9	2.7	2.9	3.2	3.4	3.7	4.1	4.4	4.7	4.9	5.2
US CPI Urban Consumers Shelter NSA (4%)	2.1	2.2	2.6	2.8	2.8	3.2	3.5	3.8	4.1	4.4	4.7	5.0	5.1	5.5
US CPI Urban Consumers Water and Sewer and Trash Collection Services NSA (0%)	3.6	3.4	3.6	3.7	3.5	3.7	3.7	3.5	3.5	4.0	4.2	4.0	4.2	4.4
US CPI Urban Consumers Medical Care Services NSA (0%)	2.2	1.5	1.0	0.8	1.0	0.9	1.7	2.1	2.5	2.7	2.4	2.9	3.5	4.0
US CPI Urban Consumers Transportation Services NSA (7%)	5.6	11.2	10.4	6.4	4.6	4.4	4.5	3.9	4.2	5.6	6.6	7.7	8.5	7.9
US CPI Recreation Services NSA (0%)	1.8	0.6	1.9	3.7	3.5	3.5	3.8	2.8	3.3	5.0	5.1	4.8	4.4	4.9
US CPI Education & Communication Services NSA (0%)	2.0	2.2	2.4	1.2	1.3	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.7
US Personal Consumption Expenditures Chain Type Price Index SA (10%)	3.6	4.0	4.0	4.2	4.2	4.4	5.1	5.6	5.8	6.0	6.3	6.6	6.3	
US Personal Consumption Expenditures Ex Food & Energy Deflator SA (9%)	3.1	3.5	3.6	3.6	3.6	3.7	4.2	4.7	4.9	5.1	5.3	5.2	4.9	
NFIB Small Business Higher Prices (5%)	36.0	40.0	47.0	46.0	49.0	46.0	53.0	59.0	57.0	61.0	68.0	72.0	70.0	72.0
ISM Manufacturing Report on Business Prices Index NSA (1%)	89.6	88.0	92.1	85.7	79.4	81.2	85.7	82.4	68.2	76.1	75.6	87.1	84.6	82.2
ISM Services PMI Report on Business Prices SA (0%)	76.0	79.1	78.8	81.4	75.9	79.5	83.0	83.0	83.9	82.3	83.1	83.8	84.6	82.1

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.

The GRIDs Are Global

42 Macro	Actuals																								Projections												
Macro Regime	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	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
United States	D	D	R	R	R	R	G	G	R	R	R	R	R	R	I	I	D	I	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D
Australia	D	D	R	R	R	G	R	R	R	R	R	R	R	R	I	D	D	I	I	I	D	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	G
Austria	D	D	R	R	R	G	G	G	G	G	R	R	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D
Belgium	D	D	R	R	R	R	G	G	G	G	R	R	R	R	R	I	I	I	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D
Brazil	D	D	G	R	R	R	R	R	R	R	I	I	I	I	I	I	I	I	I	D	D	D	I	I	I	I	D	D	D	D	D	D	G	D	G	D	D
Canada	D	G	R	R	G	R	R	R	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D	D	D
Chile	D	G	G	G	R	R	R	G	R	I	D	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	G	G
China	G	G	G		G	G	G	G	G	R	I	I	I	I	I	D	D	I	I	I	D	D		I	I	R	R	R	R	R	G	G	G	R	R	R	R
Denmark	D	G	R	R	R	G		G	I	I	R	R	R	R	I	I	I	I	I	I	I	I	I	I	I	I	I	I	D	D	D	D	G	G	D	D	D
Finland	D	D	R	R	R	G	R	R	R	R	R	R	R	R	G	D	I	I	I	I	I	I	I	I	I	I	I	R	D	D	D	D	D	D	D	D	D
France	D	G	R	G	G	G			R	R	R	R	R	R	G	R	R	I	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D
Germany	D	G	G	G	G	G	G	G	R	R	R	R	R	R	R	R	I	I	I	I	I	D	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D
Greece	D	D	G	G	G	R	R	G	G	R	R	R	R	R	R	I	I	I	I	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D
India	D	R	G	R	R	R	R	G	G	G	R	R	R	R	R	G	G	D	D	I	I	I	I	I	I	D	D	I	I	I	I	I	I	D	D	D	D
Indonesia	D	D	G	G	G	G	R	R	R	G	G	G	R	G	R	G	R	R	R	R	R	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D
Ireland	D	D	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	I	I	I	I	I	I	D	D	D	D	I	D	D	D	D
Israel	D	G	G	I	I	D	R		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	I	D	D	D	D	D	D	D	D	D	D	D
Italy	D	G	R	G	G	G	R	R	R	R	R	R	R	R		R	R	I	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D
Japan	D	D	R		G	G	G	G	G	R	R	G	G	G	R	R	I	I	I	I	R	R	R	R	R	I	D	D	D	I	I	I	D	D	D	D	D
Korea	G	G	R	R	R	G	G	G	R	R	R	R	R	R	I	D	I	I	I	I	I	D	I	I	I	I	I	G	D	D	D	D	D	D	D	D	D
Mexico	D	I	R	R	R	R	G	G	G	R	R	R	R	R	G	G	R	I	I	R	R	G	R	R	R	I	D	D	D	D	D	D	D	D	D	D	D
Netherlands	D	I	R	G	G	G	R	G	R	R	R	R	R	G	G	R	R	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D	D	D
Norway	I	R	R	R	R	R	G	G	R	R	R	R	G	G	R	R	R	R	R	R	G	G	D	I	I	I	D	D	D	D	D	D	D	D	D	D	D
Poland	D	D	G	G	G	G	R	G	G	G	R	R	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D
Portugal	D	I	R	R	G	G	G	R	R	R	R	G	R	G	R	R	R	R	R	R	R	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D	D
Russia	I	I	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	D	D	G	D	D	D	D	D	D	D	D	G	G	G	G
South Africa	D	D	R	R	R	R	R	R	G	G	R	R	R	R	R	G	R	R	R	R	R	R	G	R	R	I	D	D	D	D	D	D	D	D	D	D	I
Spain	D	G		R	G	G	G		R	R	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D	D	D
Sweden	D	I	R	R	G	G	G	R	R	R	R	R	R	G	G	R	R	I	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D
Switzerland	D	G	R	R	R	R	R	G	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D
Taiwan	G	G	R	R	R	R	R	R	R	R	R	R	R	R	G	G	R	R	R	R	R	G	R	R	R	R	D	D	D	D	D	D	D	D	D	D	G
Turkey	D	I	R	R	G	R	I	I	I	I	R	R	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D
United Kingdom	D	D	R	G	G	D	I	R	R	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D	D	I
Eurozone	D	G		G	G	G	G		R	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	D	D
World	D	D	R	R	R	G	G	G	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	I	I	I	D	I	D	D	D	D	D	D	D	D	I
MEDIAN Conditional Probability of GOLDILOCKS	2%	2%	27%	16%	37%	40%	33%	39%	23%	10%	2%	4%	2%	2%	13%	21%	11%	4%	3%	1%	7%	5%	2%	1%	2%	1%	3%	6%	7%	7%	8%	9%	13%	13%	8%	4%	5%
MEDIAN Conditional Probability of REFLATION	0%	2%	63%	70%	48%	35%	37%	32%	56%	73%	88%	88%	61%	58%	40%	38%	40%	38%	33%	27%	24%	24%	20%	28%	26%	14%	7%	3%	2%	2%	2%	2%	3%	1%	0%	0%	1%
MEDIAN Conditional Probability of INFLATION	5%	3%	2%	2%	2%	3%	9%	4%	8%	8%	4%	4%	12%	29%	23%	24%	33%	49%	52%	62%	45%	49%	59%	68%	63%	68%	44%	32%	24%	22%	17%	18%	14%	6%	2%	2%	2%
MEDIAN Conditional Probability of DEFLATION	93%	32%	1%	1%	1%	4%	6%	5%	4%	1%	0%	0%	1%	1%	8%	14%	9%	5%	4%	3%	11%	11%	7%	2%	3%	6%	23%	50%	63%	66%	69%	64%	63%	78%	88%	93%	84%

Data Source: Bloomberg. Intellectual property of 42 Macro LLC. Macro Regime backtests performed on monthly observations on a rolling out of sample basis since the start of 1998.

Eurozone GRID Outlook: The Balance Of Risks To Growth And Inflation Are Skewed To The Downside And Upside, Respectively

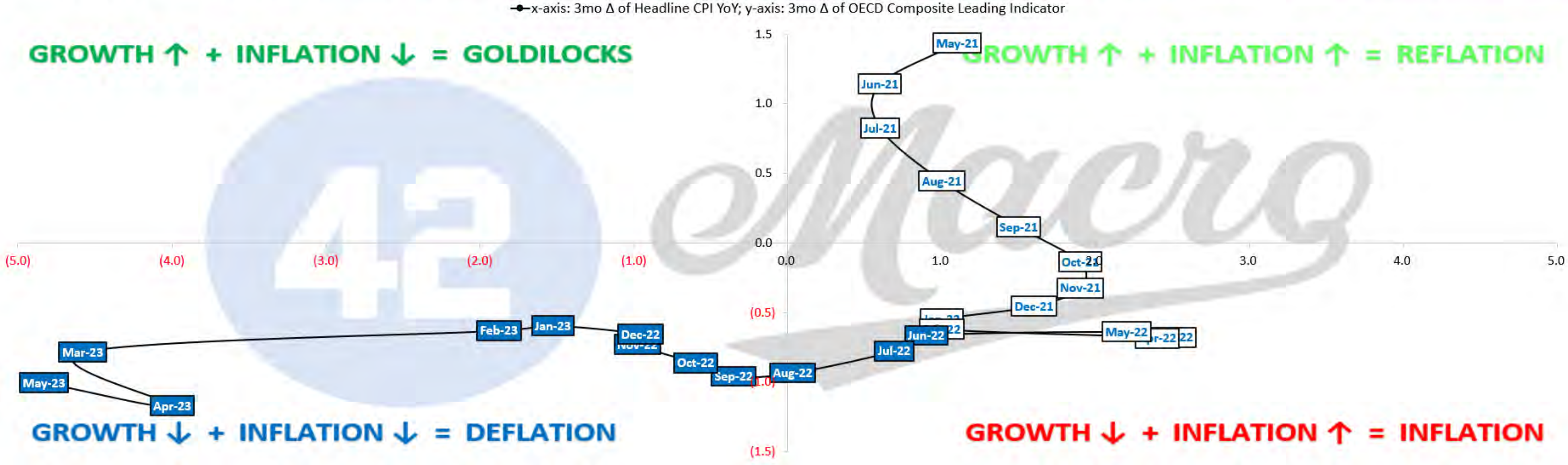
Eurozone

Actuals

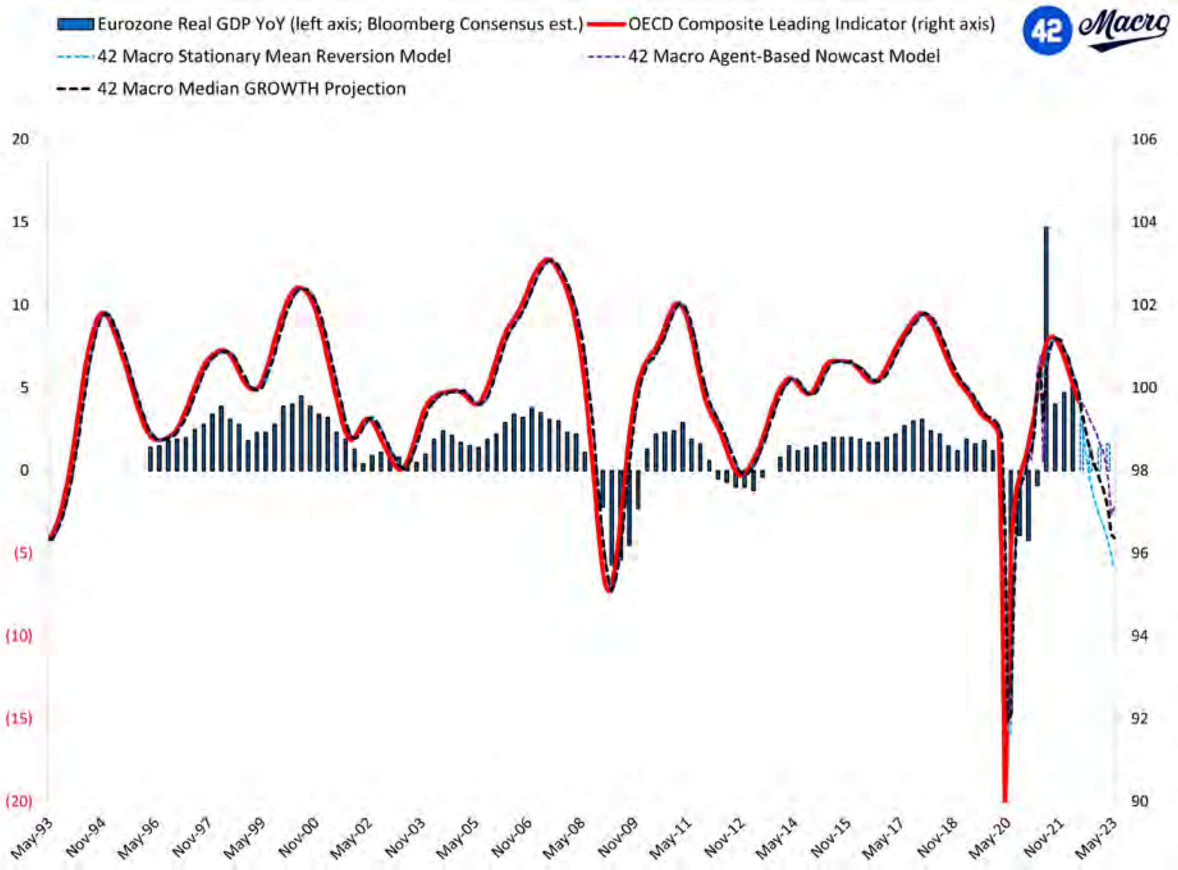
42 Macro GRID Framework	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Macro Regime	G		R	R	R	R	R	R	R	R	R	I	I	I	I	I	I	I	I
Conditional Probability of GOLDILOCKS	48%	4%	15%	2%	2%	7%	1%	6%	14%	9%	1%	1%	1%	1%	3%	5%	1%	1%	1%
Conditional Probability of REFLATION	29%	4%	57%	89%	95%	91%	56%	77%	71%	61%	56%	46%	43%	30%	29%	24%	16%	20%	22%
Conditional Probability of INFLATION	9%	4%	22%	9%	2%	2%	41%	15%	12%	26%	41%	52%	54%	67%	62%	58%	80%	77%	76%
Conditional Probability of DEFLATION	15%	4%	6%	0%	0%	0%	1%	1%	2%	4%	1%	1%	2%	2%	6%	13%	3%	2%	2%
OECD Composite Leading Indicator	98.3	98.7	99.0	99.4	99.9	100.4	100.8	101.1	101.2	101.2	101.2	101.1	100.9	100.7	100.5	100.3	100.1	99.9	99.7
3mo Δ	0.7	0.8	0.9	1.0	1.3	1.4	1.4	1.1	0.8	0.4	0.1	-0.1	-0.3	-0.5	-0.5	-0.6	-0.7	-0.7	-0.6
Z-Score (t3yrs)	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.3	0.2	0.0	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	-0.3	-0.2
Headline CPI YoY	-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	5.1	5.9	7.5	7.5	8.1
3mo Δ	-0.1	0.0	1.2	1.2	1.6	0.7	1.1	0.6	0.6	1.0	1.5	1.9	1.9	1.6	1.0	1.0	2.5	2.4	2.2
Z-Score (t3yrs)	0.1	0.3	2.5	2.2	2.6	1.1	1.7	0.9	0.9	1.5	2.0	2.3	2.1	1.6	0.9	0.8	2.3	2.0	1.7

Projections

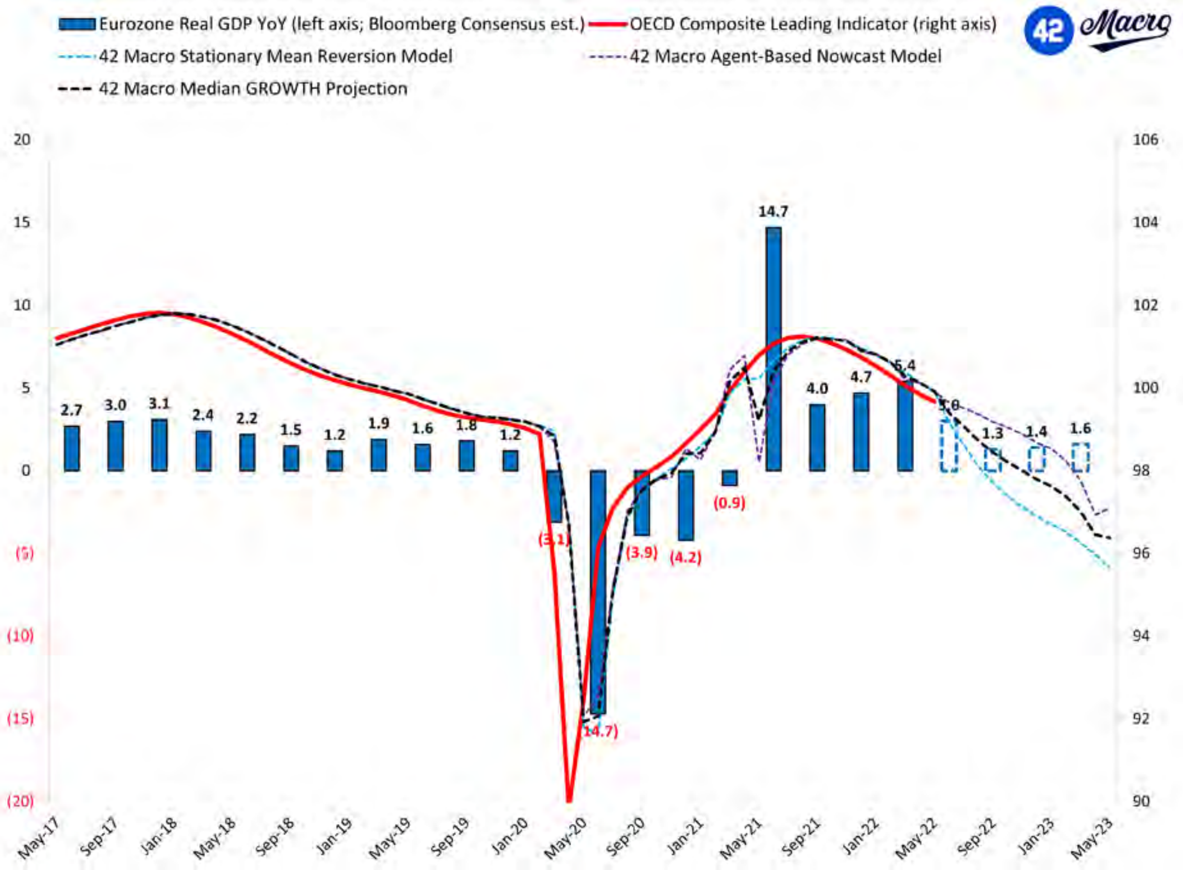
42 Macro GRID Framework	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Macro Regime	I	I	I	D	D	D	D	D	D	D	D	D
Conditional Probability of GOLDILOCKS	1%	1%	2%	4%	5%	6%	8%	10%	10%	6%	4%	5%
Conditional Probability of REFLATION	8%	6%	3%	1%	1%	1%	1%	0%	0%	0%	0%	0%
Conditional Probability of INFLATION	84%	83%	52%	25%	16%	8%	8%	3%	2%	2%	2%	2%
Conditional Probability of DEFLATION	8%	11%	43%	70%	78%	85%	84%	87%	88%	91%	94%	93%
OECD Composite Leading Indicator	99.4	99.1	98.7	98.4	98.2	98.0	97.8	97.6	97.4	97.0	96.5	96.4
3mo Δ	-0.7	-0.8	-0.9	-1.0	-0.9	-0.7	-0.7	-0.6	-0.6	-0.8	-1.2	-1.0
Z-Score (t3yrs)	-1.2	-1.4	-1.5	-1.1	-0.9	-0.6	-0.5	-0.4	-0.4	-0.6	-1.1	-0.8
Headline CPI YoY	8.4	8.2	8.1	8.0	7.6	7.2	7.1	6.1	5.3	2.5	2.1	0.4
3mo Δ	0.9	0.7	0.0	-0.4	-0.6	-1.0	-1.0	-1.5	-1.9	-4.6	-4.0	-4.8
Z-Score (t3yrs)	1.6	0.1	-0.2	-1.0	-1.2	-1.5	-1.4	-1.8	-1.9	-3.4	-2.6	-2.8



Eurozone GROWTH: Secular View



Eurozone GROWTH: Cyclical View



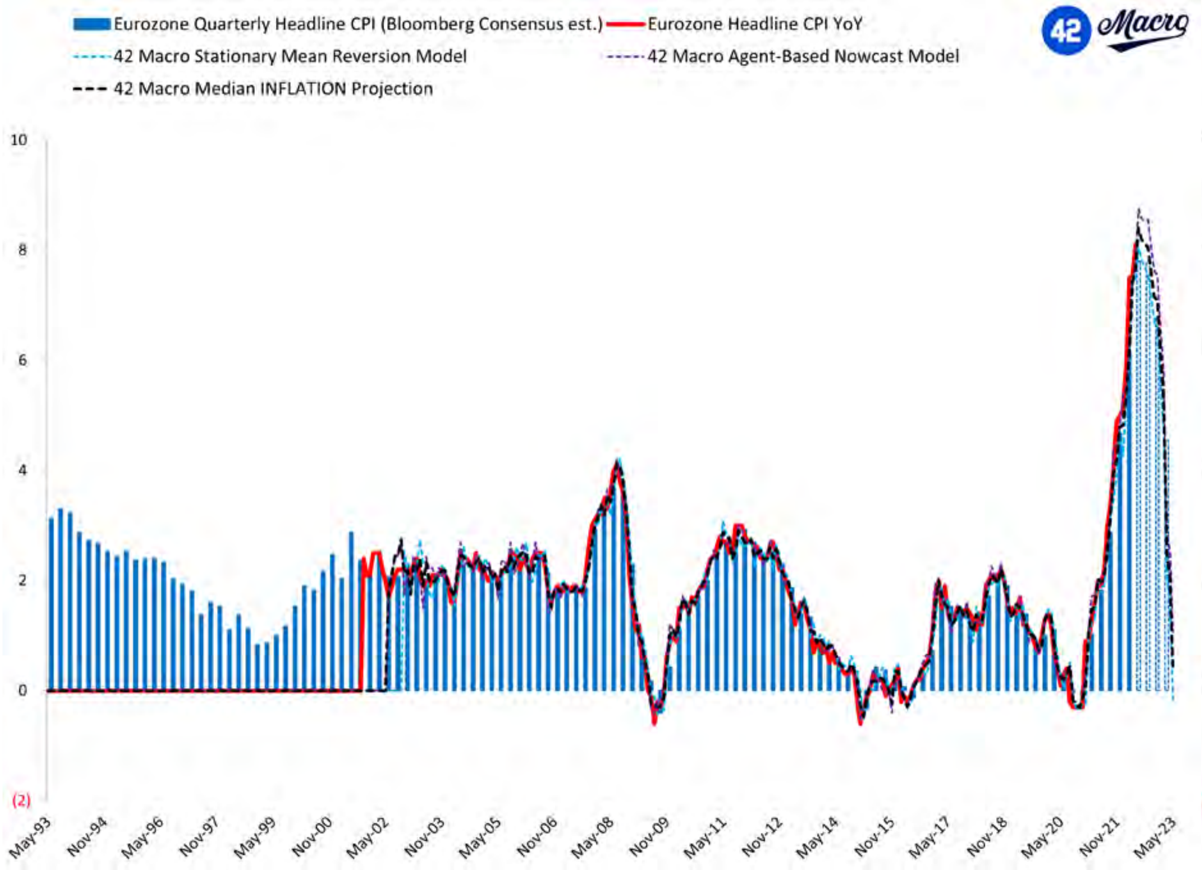
Eurozone GROWTH Agent-Based Nowcast Model

42 Macro Agent-Based Nowcast GROWTH Model Features

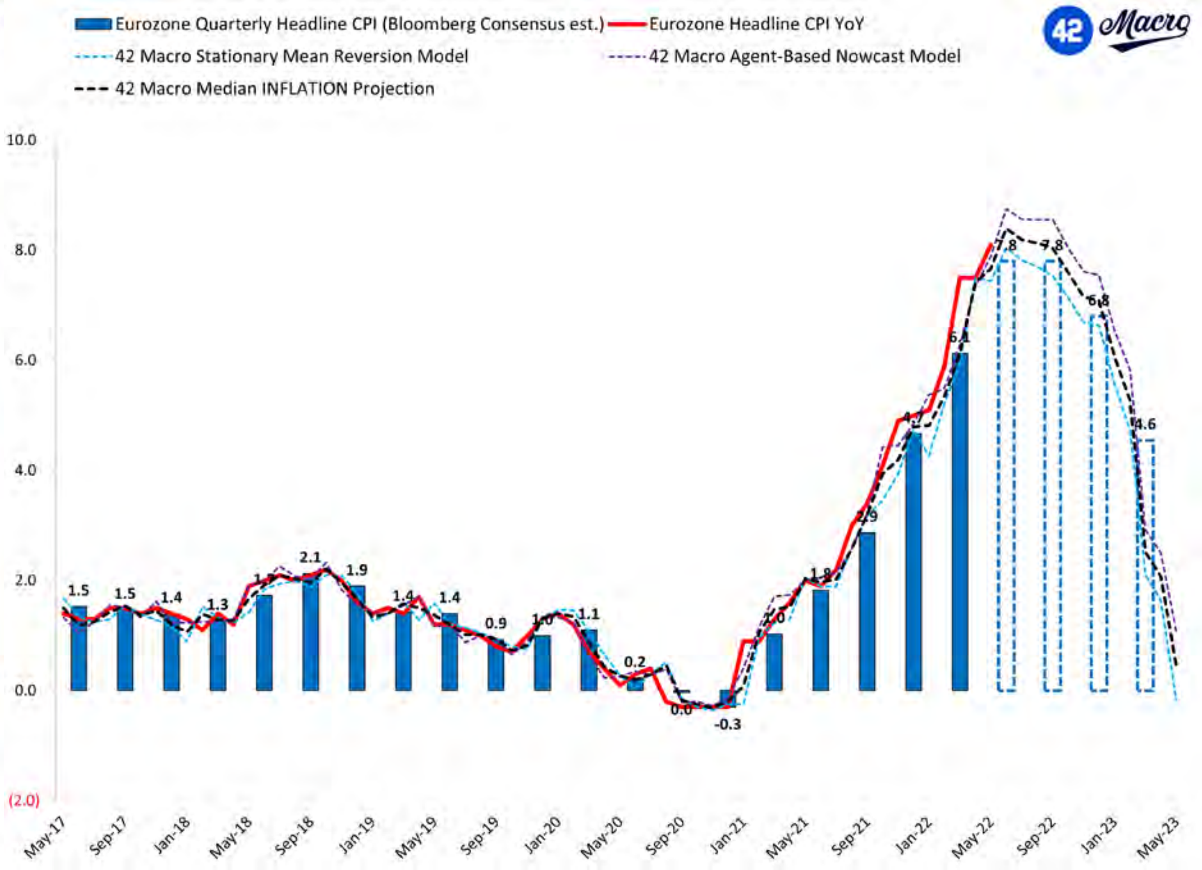
Eurozone	v-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Euro Area OECD Leading Indicators CLI Amplitude Adjusted SA	99.2	99.1	99.0	98.9	95.6	89.8	92.4	96.2	97.1	97.6	97.9	98.1	98.3	98.7	99.0	99.4	99.9	100.4	100.8	101.1	101.2	101.2	101.2	101.1	100.9	100.7	100.5	100.3	100.1	99.9	99.7
Eurostat Industrial Production Eurozone Industry Ex Construction YoY WDA (3%)	-0.8	-3.4	-1.5	-1.8	-13.1	-28.1	-19.4	-11.1	-6.1	-6.5	-5.9	-3.9	1.0	1.6	2.3	-0.5	12.8	40.8	21.4	11.0	8.4	5.5	4.1	0.0	-1.3	1.8	-1.5	1.8	-0.5	-2.0	
OECD Euro Area International Trade Exports Value YoY SA (3%)	-1.9	-0.3	-1.8	-1.5	-10.0	-32.5	-26.4	-16.1	-8.8	-4.1	-0.4	-1.0	4.3	6.7	6.3	7.3	16.9	61.0	50.5	29.5	20.0	14.6	10.3	9.7	9.2	3.0	8.2	9.6	5.9	4.9	
Eurostat Retail Sales Eurozone Volume YoY WDA (3%)	2.4	2.0	2.2	2.4	-7.8	-18.9	-2.3	1.7	0.5	4.6	2.6	4.7	-1.3	1.8	-4.8	-1.3	13.7	23.7	8.6	5.6	3.4	1.4	2.7	1.6	8.5	2.3	8.5	5.2	1.6	3.9	
Eurozone Manufacturing PMI SA (10%)	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	58.7	58.2	56.5	55.5	54.6
Eurozone Services PMI SA (8%)	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	51.1	55.5	55.6	57.7	56.1
Euro Area Business Tendency Manufacturing Confidence Composite OECD Normalsd SA (3%)	-2.1	-1.8	-1.4	-1.8	-3.0	-4.6	-4.7	-3.6	-2.1	-1.0	-0.2	0.2	0.3	0.5	0.8	2.0	4.2	6.8	7.7	7.1	6.2	5.2	4.6	4.2	3.9	3.6	3.1	2.3	1.2	0.2	-0.7
Euro Area Consumer Opinion Confidence Composite OECD Normalised SA (4%)	-0.2	-0.1	-0.2	-0.9	-2.4	-3.8	-3.9	-3.2	-2.6	-2.2	-2.2	-2.3	-2.5	-2.2	-1.9	-0.9	1.2	3.3	4.3	4.2	3.7	3.2	3.0	2.8	2.4	1.8	1.1	-0.2	-2.5	-4.5	
Europe Eurozone New Passenger Car Registrations YoY (0%)	5.0	21.9	-7.1	-6.8	-58.5	-79.6	-52.4	-22.6	-5.8	-17.1	1.9	-7.4	-12.6	-2.8	-24.6	-20.9	95.5	265.1	51.7	8.4	-23.6	-21.8	-24.1	-31.4	-20.8	-22.6	-6.9	-6.9	-20.2	-22.1	-12.0
Europe EU 27 New Passenger Car Registrations YoY (1%)	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	-22.8	-6.0	-6.7	-20.5	-20.6	-11.2
European Commission Consumer Confidence Indicator Eurozone (8%)	-6.7	-7.8	-7.5	-6.3	-12.0	-24.4	-20.2	-14.3	-14.5	-14.2	-13.0	-14.8	-16.7	-12.2	-14.0	-13.2	-9.5	-9.6	-5.3	-1.9	-3.7	-5.2	-3.8	-5.4	-8.2	-9.3	-9.7	-9.5	-21.5	-22.0	-21.1
European Commission Economic SentiMent Indicator Eurozone (9%)	101.7	102.5	104.8	105.1	94.6	61.0	65.5	76.6	83.9	90.5	94.6	94.7	91.6	96.5	96.0	97.7	103.6	106.1	110.6	116.3	117.7	116.9	117.2	117.4	115.5	114.1	113.0	114.2	106.5	104.9	105.0
European Commission Manufacturing Confidence Eurozone Industrial Confidence (10%)	-7.7	-8.1	-5.3	-4.8	-10.6	-36.8	-29.2	-21.1	-15.0	-10.7	-8.7	-6.1	-7.2	-3.6	-2.8	-0.2	4.1	7.2	9.2	11.8	13.9	13.4	13.5	13.9	13.3	13.8	13.1	13.4	9.0	7.7	6.3
European Commission Services Confidence Indicator Eurozone (8%)	9.1	13.3	13.9	13.2	-3.2	-46.1	-51.3	-39.0	-27.4	-14.8	-6.6	-8.1	-12.8	-9.0	-8.3	-8.3	-3.9	-0.9	5.7	15.1	17.3	17.2	16.5	18.1	17.5	12.6	11.1	14.2	13.0	13.6	14.0
European Commission Euro Area Business Climate Indicator (5%)	-0.1	-0.2	-0.1	0.1	-0.2	-2.3	-2.7	-2.4	-1.9	-1.3	-1.0	-0.5	-0.4	-0.1	0.0	0.2	0.6	1.0	1.3	1.5	1.7	1.6	1.6	1.7	1.8	1.8	1.8	1.8	1.7	1.6	1.3
ZEW Eurozone Expectation of Economic Growth (0%)	-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	49.4	48.6	-38.7	-43.0	-29.5
Eurostat Industrial Production Eurozone Capital Goods YoY WDA (2%)	-0.1	-4.6	-0.9	-3.7	-21.4	-39.6	-26.9	-14.7	-7.3	-11.8	-12.1	-10.0	3.7	1.8	7.0	0.9	19.3	67.5	29.9	8.3	7.7	4.8	3.1	-2.4	-9.3	0.3	-8.8	-3.4	-2.3	-9.0	
Eurostat Industrial Production Eurozone Consumer Durables YoY WDA (2%)	1.6	0.2	3.7	1.7	-25.9	-51.6	-25.0	-8.6	-3.3	4.6	0.4	0.5	-0.1	1.0	1.2	0.2	34.4	117.1	37.5	15.8	9.6	-1.9	1.6	2.6	5.0	2.9	0.0	6.1	7.1	5.7	
Eurostat Industrial Production Eurozone Consumer Non Durables YoY WDA (3%)	1.0	1.0	0.2	0.6	-0.9	-14.5	-12.2	-6.2	-1.3	-3.6	-1.1	-0.1	-1.5	-2.3	-2.4	-2.7	4.4	20.4	13.2	13.8	10.7	10.7	7.8	1.3	5.8	5.3	7.6	9.9	3.1	4.7	
ECB Money Aggregates M1 YoY (1%)	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	10.8	10.1	9.9	8.9	8.9	8.9	8.5	
ECB Money Aggregates M2 YoY (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	7.9	7.8	7.6	7.5	7.2	7.0	6.6	6.6	6.6	6.5	
ECB M3 Annual Growth Rate SA (1%)	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	6.9	6.5	6.4	6.3	6.0	
Eurostat Retail Sales Germany Volume YoY WDA (1%)	3.5	2.3	2.3	2.2	1.1	-4.9	8.3	4.4	5.1	7.0	5.4	9.2	10.0	3.3	-5.3	-2.4	7.7	7.4	-0.3	5.2	0.5	0.4	-0.7	-1.8	-1.8	1.1	10.1	7.0	-0.9	0.5	
Eurostat Retail Sales France Volume YoY WDA (2%)	3.3	2.8	2.6	1.5	-13.5	-29.7	-3.6	3.6	0.1	6.4	2.7	5.3	-11.3	8.1	2.4	4.2	25.4	43.0	11.2	5.7	6.8	2.6	6.5	4.1	24.6	0.4	6.9	5.6	4.2	10.3	
Eurostat Retail Sales Netherlands Volume YoY WDA (2%)	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	-5.5	5.2	9.8	9.1	4.7	1.9	1.8	2.8	5.1	2.4	3.2	13.9	10.4	2.9	2.1	
Eurostat Retail Sales Italy Volume YoY WDA (3%)	-0.6	0.7	0.8	3.0	-22.2	-33.4	-14.3	-5.5	-8.0	0.8	0.0	0.1	-8.5	-6.0	-10.6	-5.1	22.3	39.3	17.8	9.0	8.1	2.1	4.1	4.4	12.3	9.1	8.8	3.2	5.7	4.5	
Eurostat Retail Sales Spain Volume YoY WDA (4%)	3.1	1.2	1.7	2.0	-13.5	-29.8	-17.8	-4.5	-3.5	-3.0	-3.5	-2.0	-4.9	-0.1	-9.0	-6.2	13.3	37.3	17.5	1.1	-0.2	-1.3	0.0	-1.0	5.1	-2.8	3.1	1.6	-4.8	1.5	
Eurostat Retail Sales Portugal Volume YoY WDA (3%)	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	-10.0	-15.1	1.2	28.3	16.0	6.9	2.7	3.7	3.0	3.8	11.0	7.0	10.7	17.5	11.8	5.0	

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	v-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
Eurostat Eurozone MUICP All Items YoY Flash Estimate NSA YoY	1.0	1.3	1.4	1.2	0.7	0.4	0.1	0.3	0.4	-0.2	-0.3	-0.3	-0.3	-0.3	0.9
Eurostat Eurozone Core MUICP YoY NSA (9%)	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
Eurostat PPI Eurozone Industry Ex Construction YoY (7%)	-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
Commodity Research Bureau BLS/US Spot All Commodities (0%)	1.6	1.6	15.0	14.6	15.7	15.8	21.8	25.7	29.7	34.9	41.7	50.1	40.8	42.8	45.0
Commodity Research Bureau BLS/US Spot Foodstuff (0%)	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
Commodity Research Bureau BLS/US Spot Raw Industrials (1%)	-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
Euro Area HICP Food & non Alcoholic Beverages (0%)	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
Euro Area HICP Alcoholic Beverages Tobacco & Narcotics (0%)	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
Euro Area MUICP Clothing & Footwear (3%)	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
Euro Area MUICP Housing NSA (8%)	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
Euro Area MUICP Furnishings & Household Equipment (7%)	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
Euro Area MUICP Health NSA (2%)	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
Euro Area MUICP Transport (8%)	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
Euro Area MUICP Communications (1%)	-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
Euro Area MUICP Recreation & Culture (5%)	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
Euro Area MUICP Education (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
Euro Area MUICP Restaurants & Hotels (2%)	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
Euro Area MUICP Misc Goods & Services (5%)	1.6	1.7	1.6	1.7	1.7	1.6	1.7	1.5	1.7	1.4	1.3	1.4	1.4	1.3	1.8
Euro Area MUICP Goods (13%)	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
Euro Area MUICP Food Alcohol & Tobacco (0%)	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
Euro Area MUICP Energy (7%)	-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
Euro Area MUICP Services (6%)	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
Euro Area CPI Services Related to Housing (1%)	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
Euro Area CPI Services Related to Transport (6%)	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
Euro Area CPI Services Related to Communication (1%)	-0.1	-0.1	-0.2	0.0	0.1	-0.4	0.3	0.3	-0.6	-0.8	-0.8	-1.8	-1.3	-1.4	-0.3
Euro Area CPI Services Related to Recreation Incl Repairs & Pers Care (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
Euro Area CPI Services Rel to Recr & Pers Care Excl Pack Holidays & Accom (1%)	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
Euro Area CPI Services Related to Package Holidays & Accommodation (4%)	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

Eurozone	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
Eurostat Eurozone MUICP All Items YoY Flash Estimate NSA YoY	0.9	1.3	1.6	2.0	1.9	2.2	3.0	3.4	4.1	4.9	5.0	5.1	5.9	7.5	7.5	8.1
Eurostat Eurozone Core MUICP YoY NSA (9%)	1.1	0.9	0.7	1.0	0.9	0.7	1.6	1.9	2.0	2.6	2.6	2.3	2.7	3.0	3.5	3.8
Eurostat PPI Eurozone Industry Ex Construction YoY (7%)	1.5	4.4	7.6	9.6	10.3	12.4	13.5	16.1	21.9	23.7	26.4	30.8	31.5	36.9	37.2	
Commodity Research Bureau BLS/US Spot All Commodities (0%)	53.2	49.6	49.7	44.3	41.6	47.6	33.6	32.1	37.0	38.1	39.8	23.3	16.0	4.3	10.3	3.8
Commodity Research Bureau BLS/US Spot Foodstuff (0%)	12.4	30.4	51.0	43.1	59.7	57.7	50.2	40.2	42.4	38.5	45.5	47.9	48.2	40.0	43.7	39.2
Commodity Research Bureau BLS/US Spot Raw Industrials (1%)	12.0	26.1	28.1	31.2	38.0	41.6	38.9	36.8	39.6	39.6	36.2	30.7	26.7	27.9	33.9	24.8
Euro Area HICP Food & non Alcoholic Beverages (0%)	0.8	0.7	0.0	0.1	0.2	1.4	1.9	1.9	1.8	2.2	3.5	3.9	4.7	5.7	7.4	8.7
Euro Area HICP Alcoholic Beverages Tobacco & Narcotics (0%)	3.5	2.7	2.8	2.3	1.9	2.2	2.3	2.3	2.5	2.0	2.2	2.2	2.2	2.3	2.2	2.7
Euro Area MUICP Clothing & Footwear (3%)	0.7	-1.3	-0.2	0.4	1.8	-3.3	3.6	1.7	0.9	1.4	2.8	-0.2	2.1	2.1	2.0	1.7
Euro Area MUICP Housing NSA (8%)	0.5	1.6	3.0	3.5	3.7	4.7	5.2	5.9	8.0	9.1	9.7	11.9	13.4	17.2	15.9	16.3
Euro Area MUICP Furnishings & Household Equipment (7%)	0.8	0.8	0.7	0.8	1.0	1.3	2.0	2.1	2.3	2.6	2.8	2.8	3.8	4.2	5.0	5.9
Euro Area MUICP Health NSA (2%)	0.2	0.2	0.0	0.2	0.2	0.3	0.4	0.6	0.8	0.9	0.9	0.8	0.9	1.0	1.1	1.3
Euro Area MUICP Transport (8%)	0.4	3.5	5.1	6.6	6.0	6.8	7.4	8.5	10.6	12.2	10.4	9.4	10.3	14.6	13.0	14.0
Euro Area MUICP Communications (1%)	-1.3	-1.7	-1.1	-1.1	-1.0	-0.1	0.1	0.2	1.0	0.5	0.6	-0.4	-0.4	0.0	0.1	-0.4
Euro Area MUICP Recreation & Culture (5%)	1.9	1.7	0.7	1.4	-0.4	-1.4	-0.5	1.1	1.6	4.0	2.9	2.8	3.1	3.1	3.6	3.6
Euro Area MUICP Education (0%)	0.1	0.1	0.1	0.3	0.2	0.2	0.2	-1.8	-1.0	-1.0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
Euro Area MUICP Restaurants & Hotels (2%)	0.7	0.7	0.4	0.2	0.6	1.7	2.1	2.6	2.9	3.3	3.5	4.1	4.4	5.1	5.9	7.1
Euro Area MUICP Misc Goods & Services (5%)	1.7	1.7	1.7	1.7	1.9	1.9	2.0	2.1	2.0	2.1	2.3	1.9	2.1	2.2	2.4	2.6
Euro Area MUICP Goods (13%)	0.7	1.3	2.1	2.6	2.8	3.3	4.5	4.6	5.5	6.3	6.8	7.1	8.3	10.8	10.4	11.3
Euro Area MUICP Food Alcohol & Tobacco (0%)	1.3	1.1	0.6	0.5	0.5	1.6	2.0	2.0	1.9	2.2	3.2	3.5	4.2	5.0	6.3	7.5
Euro Area MUICP Energy (7%)	-1.7	4.3	10.4	13.1	12.6	14.3	15.4	17.6	23.7	27.5	25.9	28.8	32.0	44.3	37.5	39.1
Euro Area MUICP Services (6%)	1.2	1.3	0.9	1.1	0.7	0.9	1.1	1.7	2.1	2.7	2.4	2.3	2.5	2.7	3.3	3.5
Euro Area CPI Services Related to Housing (1%)	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.6	1.6	1.6	1.7	1.8	1.9	2.1	2.3
Euro Area CPI Services Related to Transport (6%)	0.8	1.5	0.5	1.2	0.7	1.7	2.3	3.3	3.6	4.4	4.0	3.1	3.3	3.5	5.4	5.2
Euro Area CPI Services Related to Communication (1%)	-0.3	-0.7	0.1	-0.1	-0.1	0.7	0.7	0.6	1.5	1.0	1.0	0.0	-0.1	0.3	0.5	-0.1
Euro Area CPI Services Related to Recreation Incl Repairs & Pers Care (5%)	1.2	1.3	0.6	0.8	0.1	0.3	1.0	1.9	2.3	3.8	3.3	3.8	4.1	4.4	5.2	5.9
Euro Area CPI Services Rel to Recr & Pers Care Excl Pack Holidays & Accom (1%)	1.5	1.6	1.7	1.5	1.7	1.8	1.8	2.1	2.2	2.5	2.6	2.9	3.3	3.5	4.0	4.6
Euro Area CPI Services Related to Package Holidays & Accommodation (4%)	-0.9	-0.6	-2.4	-0.5	-3.3	-0.5	3.0	3.7	4.0	7.8	6.6	9.4	8.2	9.2	10.6	11.4

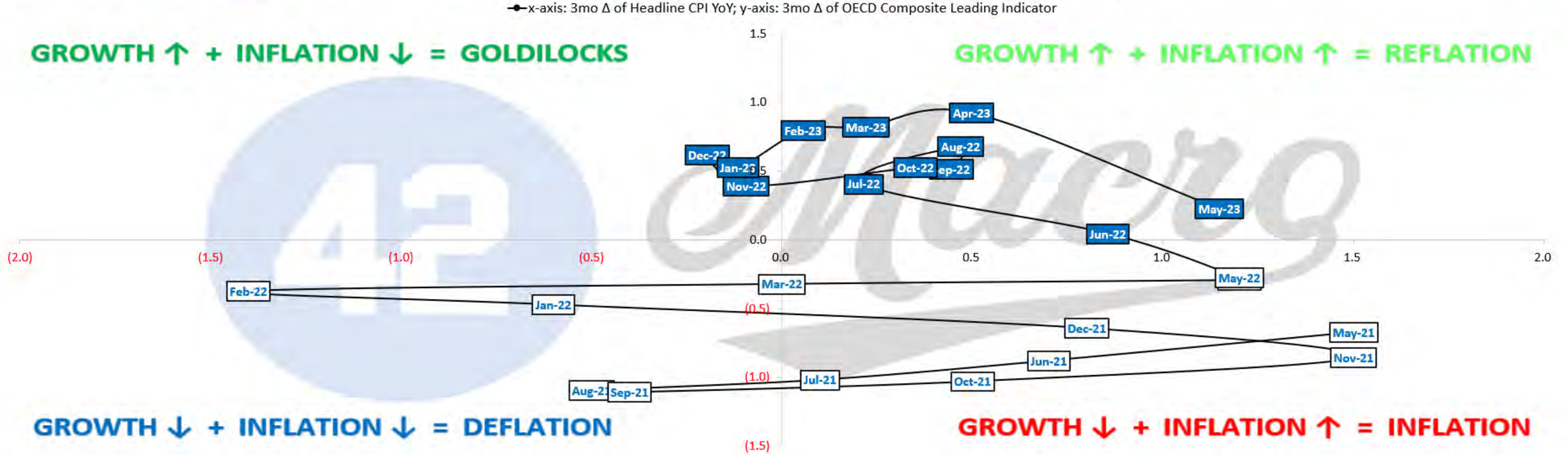
Data Source: Bloomberg. Intellectual Property of 42 Macro LLC. Nowcast feature weights are dynamically retrained monthly according to the relative strength of the first difference regressions between the independent and the dependent variables.

China GRID Outlook: Extended Runway For Accelerating Growth Post Xi's COVID Lockdowns

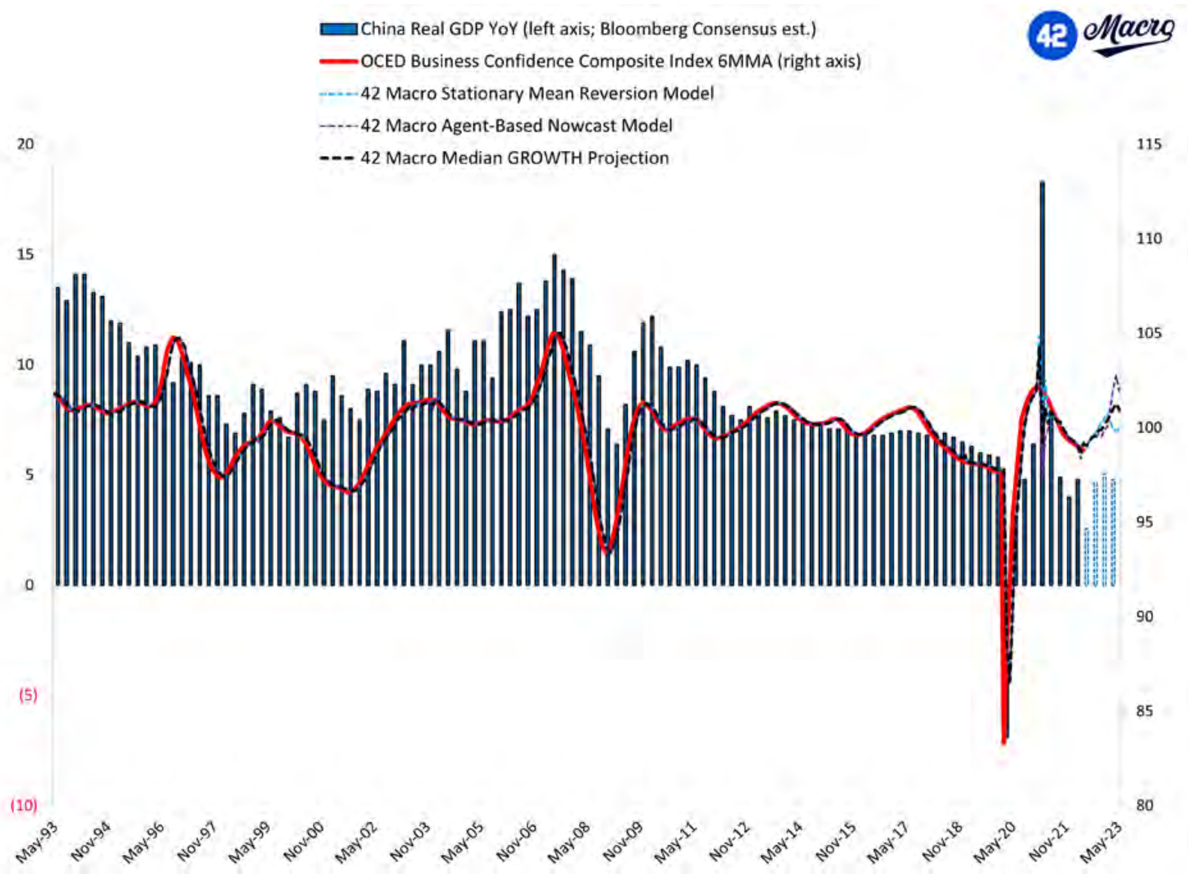
China

42 Macro GRID Framework	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
	Actuals															
Macro Regime	G	G	G	R	I	I	I	I	I	D	D	I	I	I	D	D
Conditional Probability of GOLDILOCKS	93%	91%	64%	33%	1%	1%	0%	1%	2%	3%	4%	3%	1%	1%	14%	31%
Conditional Probability of REFLATION	2%	2%	27%	63%	2%	4%	3%	3%	2%	1%	2%	4%	9%	11%	9%	2%
Conditional Probability of INFLATION	0%	0%	3%	2%	58%	83%	87%	72%	55%	32%	32%	49%	82%	84%	30%	4%
Conditional Probability of DEFLATION	4%	6%	7%	1%	38%	13%	9%	24%	41%	64%	62%	44%	8%	5%	47%	63%
OECD Composite Leading Indicator	101.8	102.0	102.1	102.1	102.0	101.7	101.4	101.1	100.7	100.3	100.0	99.7	99.5	99.3	99.2	99.1
3mo Δ	1.3	1.0	0.7	0.3	-0.1	-0.4	-0.7	-0.9	-1.0	-1.1	-1.1	-1.0	-0.9	-0.6	-0.5	-0.4
Z-Score (t3yrs)	0.3	0.2	0.1	0.0	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1
Headline CPI YoY	-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	1.5	0.9	0.9
3mo Δ	-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	0.8	-0.6	-1.4
Z-Score (t3yrs)	-2.4	-1.2	-0.5	0.4	0.3	1.2	1.3	0.6	0.1	-0.3	-0.2	0.5	1.3	0.7	-0.5	-1.1

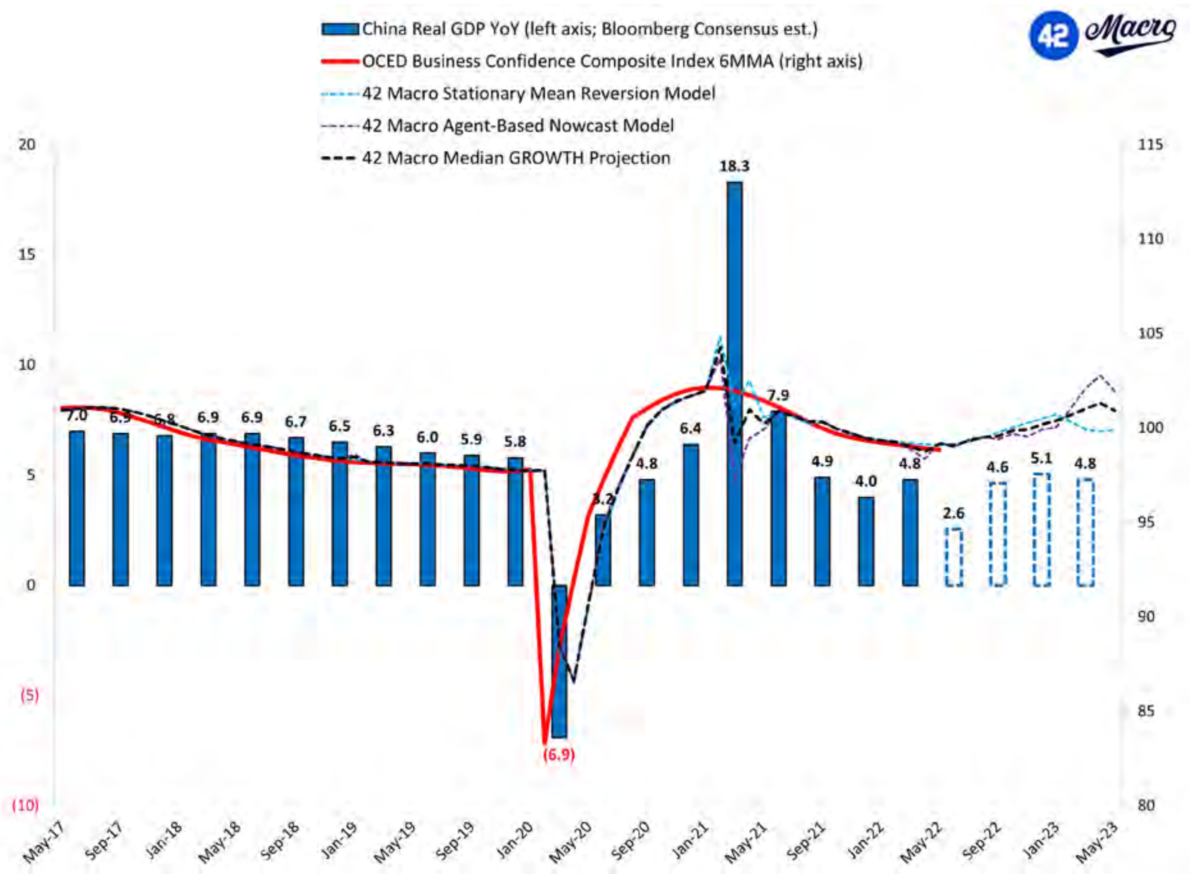
42 Macro GRID Framework	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
	Actuals			Projections											
Macro Regime		I	I	R	R	R	R	R	G	G	G	R	R	R	R
Conditional Probability of GOLDILOCKS	6%	1%	2%	6%	32%	26%	25%	30%	42%	51%	50%	44%	36%	28%	6%
Conditional Probability of REFLATION	6%	11%	46%	46%	50%	65%	63%	59%	37%	38%	38%	49%	56%	66%	62%
Conditional Probability of INFLATION	6%	77%	51%	42%	11%	6%	9%	8%	10%	5%	5%	4%	5%	5%	29%
Conditional Probability of DEFLATION	6%	10%	2%	6%	7%	2%	4%	4%	11%	6%	7%	4%	3%	2%	3%
OECD Composite Leading Indicator	99.0	98.9	98.8	99.1	99.3	99.5	99.6	99.9	99.9	100.2	100.4	100.7	101.0	101.3	100.9
3mo Δ	-0.3	-0.3	-0.3	0.0	0.4	0.7	0.5	0.5	0.4	0.6	0.5	0.8	0.8	0.9	0.2
Z-Score (t3yrs)	-0.1	-0.1	-0.1	0.4	0.6	0.5	0.5	0.5	0.4	0.5	0.5	1.5	1.5	1.5	0.5
Headline CPI YoY	1.5	2.1	2.1	2.4	2.3	2.6	2.8	2.7	2.5	2.6	2.5	2.5	2.8	3.0	3.7
3mo Δ	0.0	1.2	1.2	0.9	0.2	0.5	0.4	0.4	-0.1	-0.2	-0.1	0.1	0.2	0.5	1.1
Z-Score (t3yrs)	0.0	1.0	1.0	1.1	0.4	0.1	0.4	0.3	0.0	-0.1	0.1	0.2	0.3	0.5	1.1



China GROWTH: Secular View



China GROWTH: Cyclical View



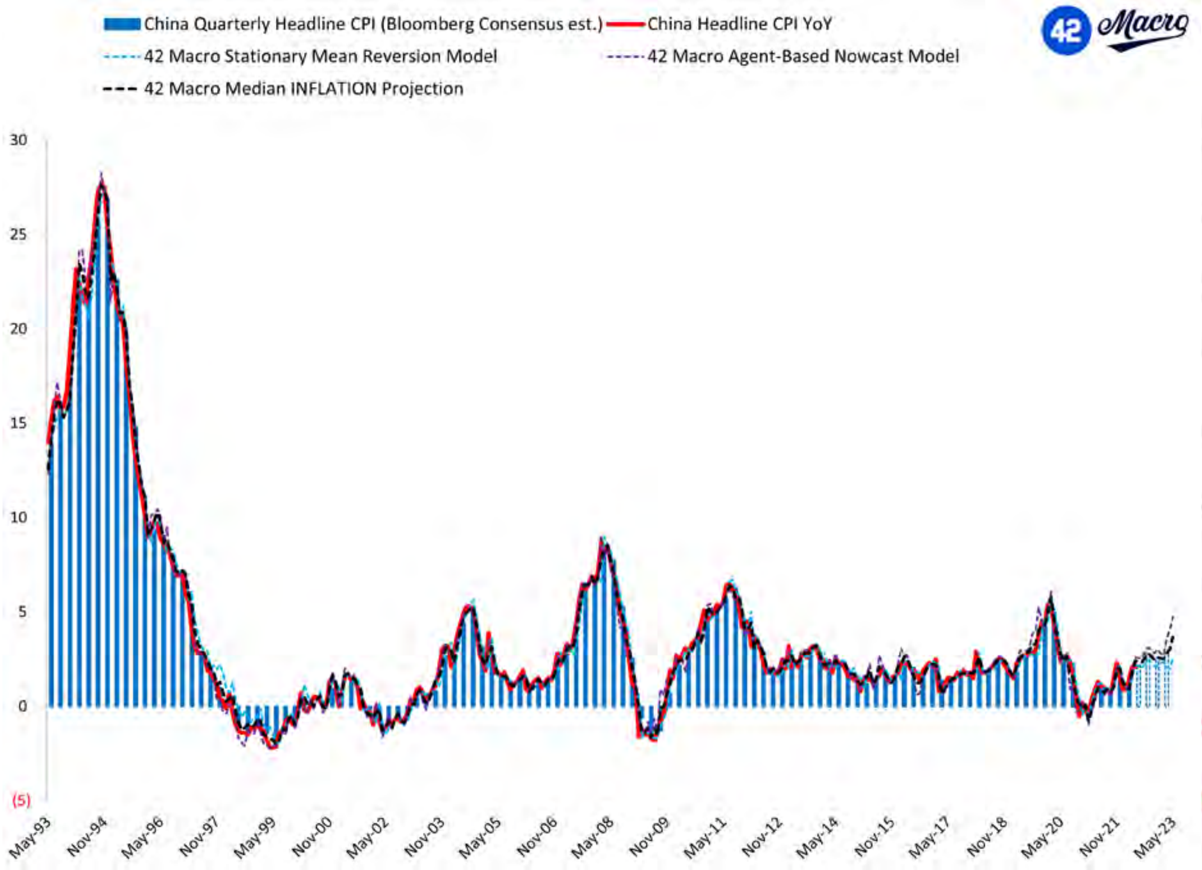
China GROWTH Agent-Based Nowcast Model

42 Macro Agent-Based Nowcast GROWTH Model Features

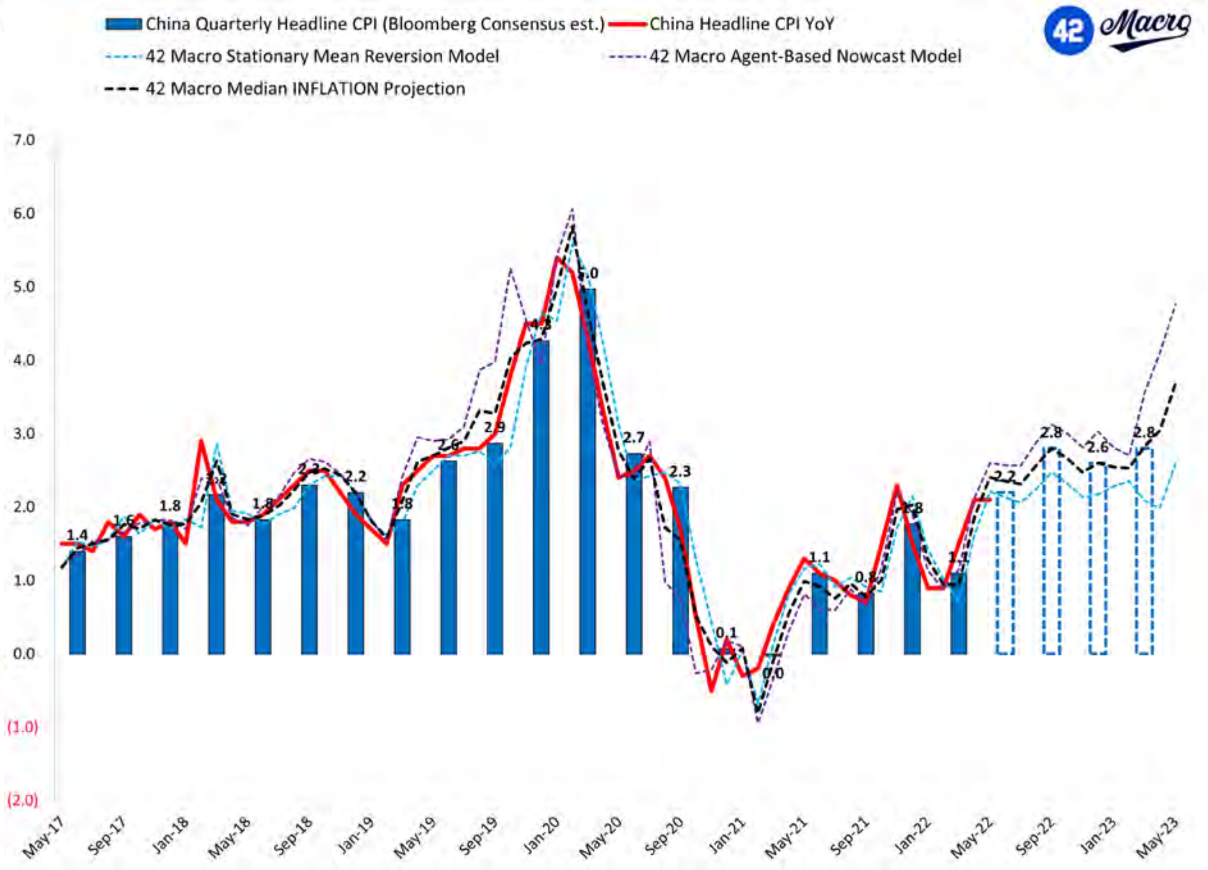
China	v-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
China OECD Leading Indicators CLI Amplitude Adjusted SA	97.7	97.7	97.8	83.3	88.4	91.9	95.4	97.2	98.9	100.5	101.0	101.5	101.8	102.0	102.1	102.1	102.0	101.7	101.4	101.1	100.7	100.3	100.0	99.7	99.5	99.3	99.2	99.1	99.0	98.9	98.8
China Value Added of Industry YoY (4%)	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	4.3			5.0	-2.9	0.7
China Export Trade USD YoY (1%)	-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	30.4	32.1	27.7	32.1	19.2	25.4	28.0	26.9	21.7	20.9	24.1	6.3	14.6	3.9	16.9
China Retail Sales Value YoY (4%)	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	1.7			-3.5	-11.1	-6.7
China Manufacturing PMI SA (9%)	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	50.1	50.2	49.5	47.4	49.6
China Non-Manufacturing PMI SA (10%)	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	51.1	51.6	48.4	41.9	47.8
China Leading Index (1%)	-2.8	-3.5	-4.2	-4.1	-3.0	-1.0	1.4	3.3	4.6	5.1	5.3	5.7	6.7	7.9	8.7	8.5	6.9	4.0	0.5	-2.8	-5.4	-7.2	-8.1	-8.3	-8.2	-8.1	-7.8	-7.3	-6.5		
China Coincident Index (1%)	-5.4	-8.6	-12.0	-13.6	-12.8	-10.1	-6.5	-3.3	-1.2	0.3	2.2	5.7	12.0	21.1	30.5	35.7	33.9	26.8	18.2	10.9	5.7	2.0	-1.2	-4.5	-7.7	-11.4	-14.0	-14.9	-14.1		
Bloomberg Economics China Credit Impulse (0%)	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	-22.6	-18.4	-21.9	-10.7	-9.5	-1.5
Bloomberg Economics China Credit Impulse 12 Month Net Change (0%)	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	-7.1	-5.6	-6.8	-3.1	-2.6	-0.4
China All-system Financing Aggregate YTD (0%)	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	-14.5	-19.0	-14.7	-16.3	-16.4	-16.4	-14.9	-12.6	-9.9	19.1	7.1	17.2	6.8	11.8
China Social Financing New Loan in Local Currency YTD (0%)	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	-0.5	10.0	-1.0	5.4	-5.4	-1.0
China Monthly Money Supply M0 YoY (0%)	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	-3.9	4.2	4.2	5.3	5.6	6.2	6.1	6.3	5.5	6.2	7.2	7.7	18.5	5.8	9.9	11.4	13.5
China Monthly Money Supply M1 YoY (1%)	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	3.5	-1.9	4.7	4.7	5.1	4.6
China Monthly Money Supply M2 YoY (0%)	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	9.0	9.8	9.2	9.7	10.5	11.1
China Total Loans of Financial Institutions YoY (1%)	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	11.6	11.5	11.4	11.4	10.9	11.0
China PPI Manufacturing YoY (0%)	-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	8.2	7.0	6.6	5.7	4.8	3.2
China Retail Sales Cumulative Value YoY (6%)	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	12.5		6.7	3.3	-0.2	-1.5
China Value Added of Industry YoY Cumulative (5%)	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	9.6		7.5	6.5	4.0	3.3
China Fixed Assets Investment (Excluding Rural Households) Cumulative YoY (9%)	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	4.9		12.2	9.3	6.8	6.2
China Fixed Assets Investment (Cumulative) YoY - State-owned & State holdings (9%)	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	2.9		14.1	11.7	9.1	8.5
China Fixed Assets Investment (Cumu) YoY- Infrastructure (excluding electricity) (9%)	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	0.4		8.1	8.5	6.5	6.7
China Private Investments in Fixed Assets YTD YoY (8%)	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	7.0		11.4	8.4	5.3	4.1
China Completed Investment in Real Estate(Cumulative)YoY (7%)	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	4.4		3.7	0.7	-2.7	-4.0
China Import Trade USD YoY (1%)	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	39.1	44.0	52.0	37.1	28.2	32.7	17.2	20.4	31.4	19.5	20.4	10.9	0.1	-0.1	4.1
China Property - Land Areas Purchased YTD YoY (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	-15.5		-42.3	-41.8	-46.5	-45.7
China Property - Floor Space of Newly Started Cumulative YoY% (5%)	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	-11.4		-12.2	-17.5	-26.3	-30.6
China Property - Total Sales of Buildings YoY (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	4.8		-19.3	-22.7	-29.5	-31.5

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	v-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20
China CPI YoY	4.5	4.5	5.4	5.2	4.3	3.3	2.4	2.5	2.7	2.4	1.7
China Core CPI (excluding Food & Energy) YoY (1%)	1.4	1.4	1.5	1.0	1.2	1.1	1.1	0.9	0.5	0.5	0.5
China PPI YoY (12%)	-1.4	-0.5	0.1	-0.4	-1.5	-3.1	-3.7	-3.0	-2.4	-2.0	-2.1
Commodity Research Bureau BLS/US Spot All Commodities (1%)	-6.2	-0.6	1.0	0.0	-8.4	-12.2	-8.8	-9.2	-5.1	-2.4	-0.5
Commodity Research Bureau BLS/US Spot Foodstuff (1%)	-1.7	5.7	4.8	4.7	-5.0	-13.4	-10.1	-14.1	-10.4	-2.0	-0.1
Commodity Research Bureau BLS/US Spot Raw Industrials (2%)	-9.2	-4.8	-1.6	-3.2	-10.4	-11.4	-7.9	-5.6	-1.2	-2.7	-0.8
China CPI Food YoY (40%)	19.1	17.4	20.6	21.9	18.3	14.8	10.6	11.1	13.2	11.2	7.9
China CPI Pork YoY (24%)	110.2	97.0	116.0	135.2	116.4	96.9	81.7	81.6	85.7	52.6	25.5
China CPI Non Food YoY (11%)	1.0	1.3	1.6	0.9	0.7	0.4	0.4	0.3	0.0	0.1	0.0
China PPI Manufacturing YoY (7%)	-1.6	-0.9	-0.6	-0.7	-1.2	-2.2	-2.4	-2.0	-1.8	-1.4	-1.3
China 1st Tier Cities Newly Built Commercial Residential Bldgs Price YoY Avg (2%)	4.9	3.9	3.8	3.5	3.4	2.9	2.9	3.3	3.6	3.9	3.9
China 2nd Tier Cities Newly Built Commercial Residential Bldgs Price YoY Avg (0%)	7.4	7.0	6.5	5.9	5.4	5.2	4.9	4.8	4.6	4.4	4.2
China 3rd Tier Cities Newly Built Commercial Residential Bldgs Price YoY Average (0%)	7.4	7.0	6.7	6.2	5.7	5.5	5.3	5.2	5.1	5.1	4.9

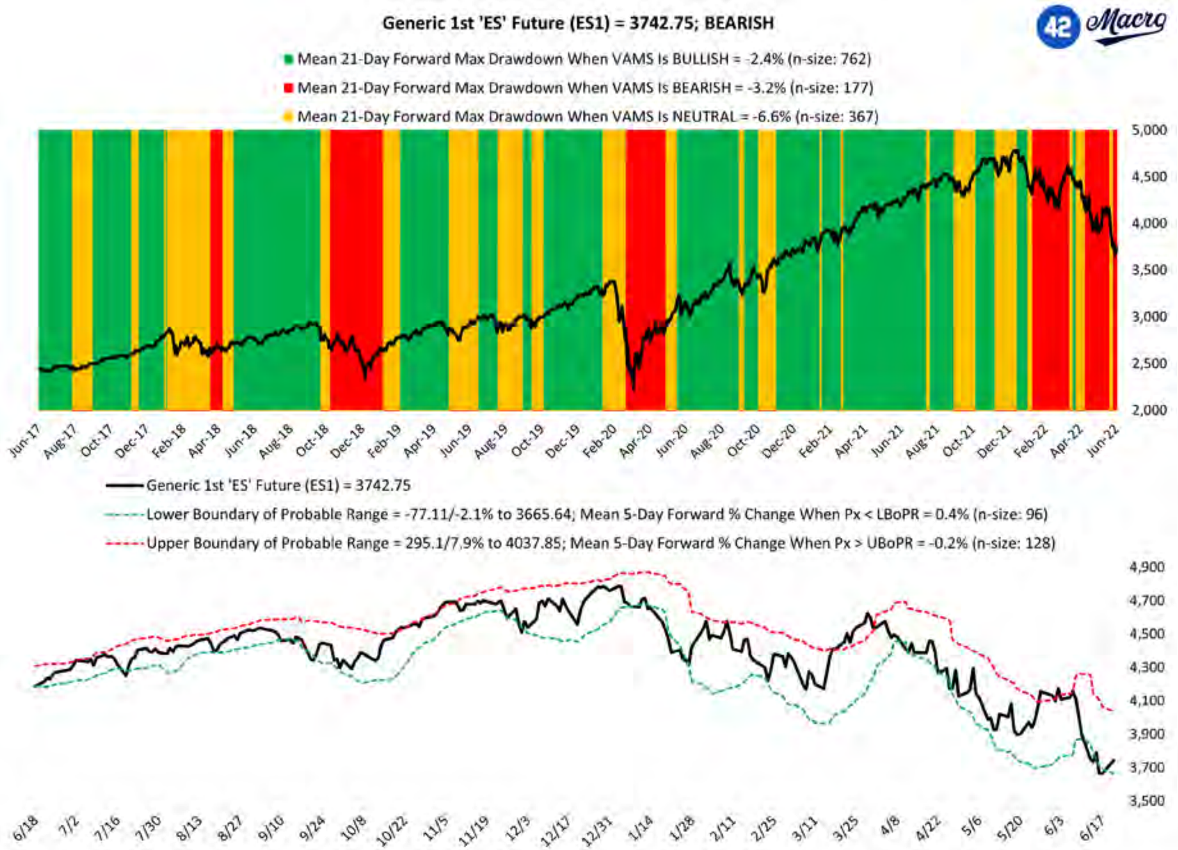
China	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
China CPI YoY	0.5	-0.5	0.2	-0.3	-0.2	0.4	0.9	1.3	1.1	1.0	0.8	0.7	1.5	2.3	1.5	0.9	0.9	1.5	2.1	2.1
China Core CPI (excluding Food & Energy) YoY (1%)	0.5	0.5	0.4	-0.3	0.0	0.3	0.7	0.9	0.9	1.3	1.2	1.2	1.3	1.2	1.2	1.2	1.1	1.1	0.9	0.9
China PPI YoY (12%)	-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	10.3	9.1	8.8	8.3	8.0	6.4
Commodity Research Bureau BLS/US Spot All Commodities (1%)	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	25.8	22.1	21.1	23.4	20.2
Commodity Research Bureau BLS/US Spot Foodstuff (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	35.4	33.9	27.8	28.7	28.2
Commodity Research Bureau BLS/US Spot Raw Industrials (2%)	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	19.6	14.5	16.7	19.9	15.0
China CPI Food YoY (40%)	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	-1.2	-3.8	-3.9	-1.5	1.9	2.3
China CPI Pork YoY (24%)	-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	-36.7	-41.6	-42.5	-41.4	-33.3	-21.1
China CPI Non Food YoY (11%)	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	2.1	2.0	2.1	2.2	2.2	2.1
China PPI Manufacturing YoY (7%)	-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	8.2	7.0	6.6	5.7	4.8	3.2
China 1st Tier Cities Newly Built Commercial Residential Bldgs Price YoY Avg (2%)	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	4.4	4.4	4.4	4.3	3.9	3.6
China 2nd Tier Cities Newly Built Commercial Residential Bldgs Price YoY Avg (0%)	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	2.8	2.5	2.2	1.7	1.0	0.3
China 3rd Tier Cities Newly Built Commercial Residential Bldgs Price YoY Average (0%)	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	1.0	0.5	-0.2	-0.7	-1.6	-2.3

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.

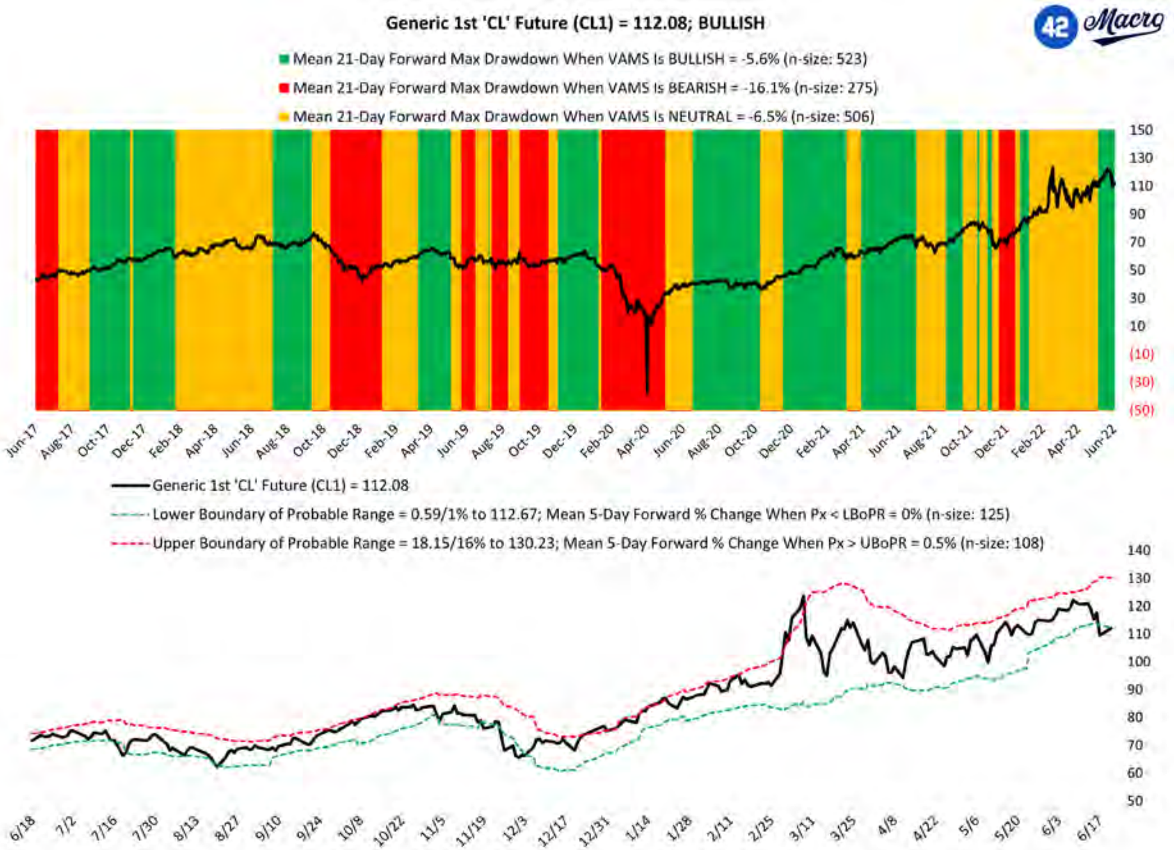
Introducing The 42 Macro Global Macro Risk Matrix, Which We Use To Measure And Map Top-Down MARKET Regime Cycles (Ticker Key)

6/21/2022	DAX	ES1	MES1	NKY	NQ1	RTY1	SHCOMP	RVX	VIX	VVIX	VXN	BCOMAG	BCOMIN	BGCI	CL1	XAG	AUD	BBDXY	EUR	GBP	USDCAD	USDCHF	USDJPY	XAU	FWISBP55	FWISEU55	FWISUS55	GDBR10	GJGB10	GUKG10	LF98OAS	LUACOAS	S0042FC 1Y1M	S0133FC 1Y1M	S0141FC 1Y1M	USFOSC3	USGG10YR	USGG2YR	USGG30YR	USGGT10Y	USSWIT2	USYC2Y10
5/2/2022	✖	✖	✖	!	✖	✖	✖	!	!	!	!	!	!	✖	!	!	✖	✔	!	✖	✔	!	✔	!	✔	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/3/2022	✖	✖	✖	!	✖	✖	✖	!	!	!	!	!	!	✖	!	!	✖	✔	!	✖	✔	!	✔	!	✔	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/4/2022	✖	✖	✖	!	✖	✖	✖	!	!	!	!	!	!	✖	!	!	✖	✔	!	✖	✔	!	✔	!	✔	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/5/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	!	✖	!	!	✖	✔	!	✖	✔	!	✔	!	✔	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/6/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	!	✖	!	✖	✖	✔	!	✖	✔	!	✔	!	✔	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/9/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	!	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	!	✔	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/10/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	!	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	!	!	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/11/2022	✖	✖	✖	✖	✖	✖	✖	!	!	✔	!	!	!	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	!	!	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/12/2022	✖	✖	✖	✖	✖	✖	✖	!	!	✔	!	!	!	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	!	!	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/13/2022	✖	✖	✖	✖	✖	✖	✖	!	!	✔	!	!	!	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	!	!	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/16/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	!	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	!	!	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	✔	✖
5/17/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	!	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	✔	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	!	✖
5/18/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	!	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	!	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	!	✖
5/19/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	✖	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	!	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	!	✖
5/20/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	✖	✖	!	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	!	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	!	✖
5/23/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	!	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	!	✖
5/24/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	!	!	✔	✔	✔	!	!	✔	✔	✔	!	✔	✔	✔	✔	!	✖
5/25/2022	✖	✖	✖	✖	✖	✖	✖	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	!	✖
5/26/2022	!	✖	✖	✖	✖	✖	✖	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	✖	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	!	✖
5/27/2022	!	✖	✖	✖	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	!	✖
5/30/2022	!	✖	✖	✖	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	!	✖
5/31/2022	!	✖	!	!	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	!	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	!	✖
6/1/2022	!	✖	!	!	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	✖	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	!	✖
6/2/2022	!	✖	!	!	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	✖	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/3/2022	!	✖	!	!	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	✖	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/6/2022	!	✖	!	!	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	✖	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/7/2022	!	✖	!	!	✖	!	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	✖	!	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/8/2022	!	!	!	!	✖	!	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	!	✔	✔	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/9/2022	!	!	!	!	✖	!	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✖	✔	✔	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/10/2022	!	!	!	!	✖	!	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✖	✔	✔	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/13/2022	!	!	!	!	✖	!	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✖	✔	✔	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/14/2022	!	✖	!	!	✖	!	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✖	✔	!	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/15/2022	!	✖	!	!	✖	!	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✖	✔	✔	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/16/2022	!	✖	!	!	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✖	✔	✔	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/17/2022	!	✖	!	!	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/20/2022	!	✖	!	!	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖
6/21/2022	!	✖	!	!	✖	✖	!	!	!	!	!	!	✖	✖	✔	✖	✖	✔	✖	✖	✔	✔	✔	✖	✖	✔	!	✔	✔	✔	✔	!	✔	✔	✔	!	✔	✔	✔	!	✔	✖

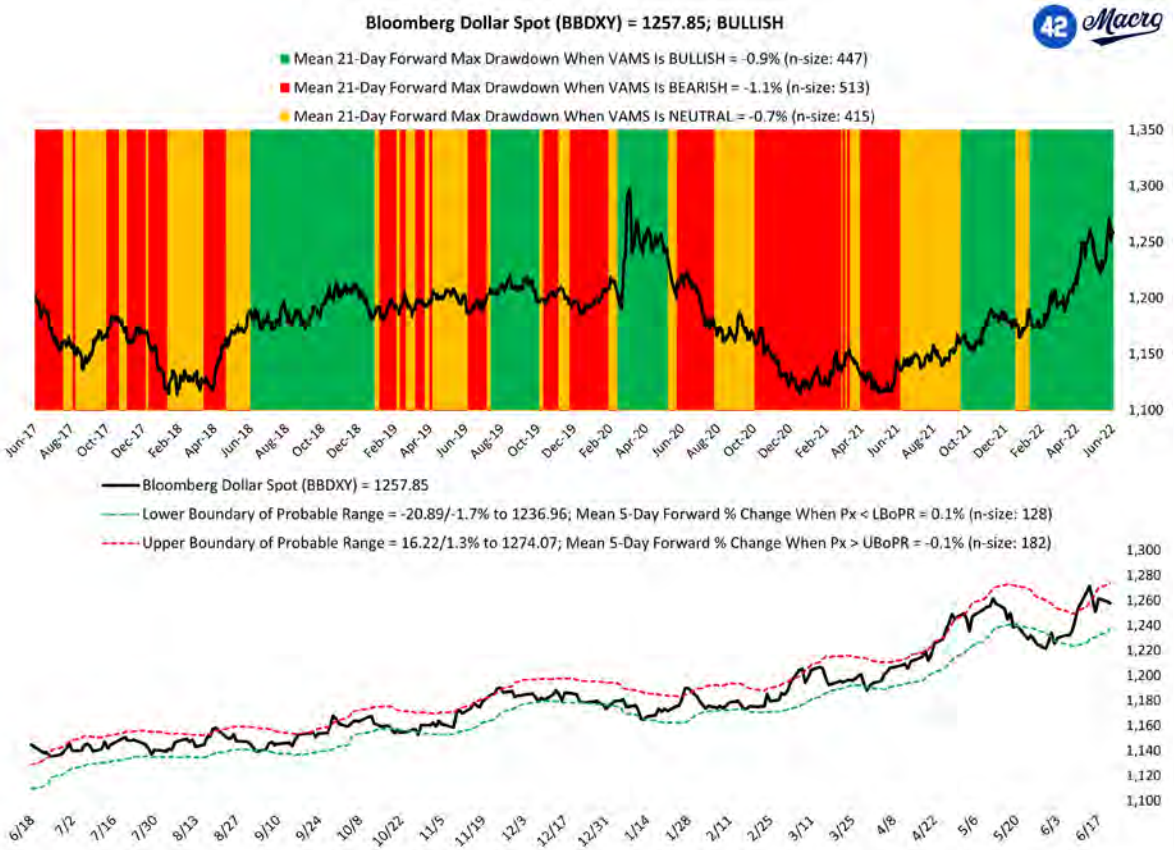
S&P 500 VAMS & Probable Range Model



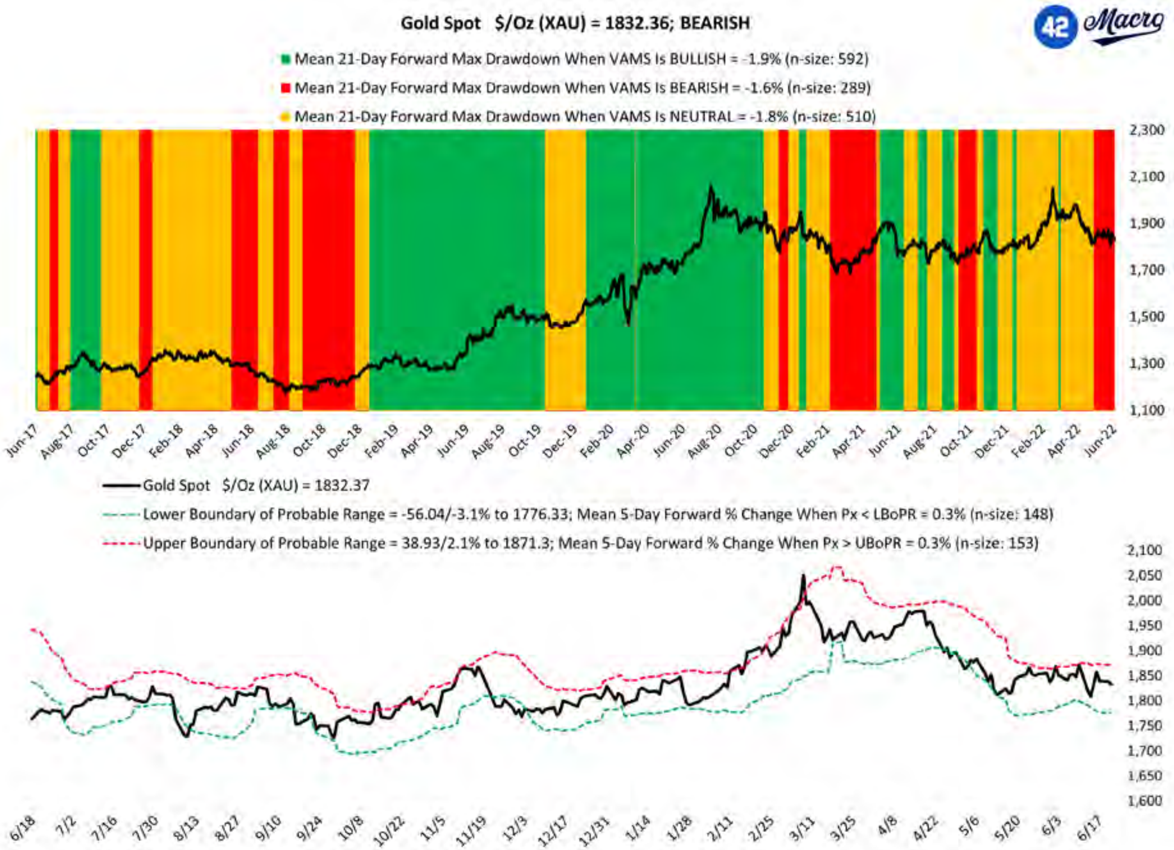
WTI VAMS & Probable Range Model



Bloomberg US Dollar Index VAMS & Probable Range Model

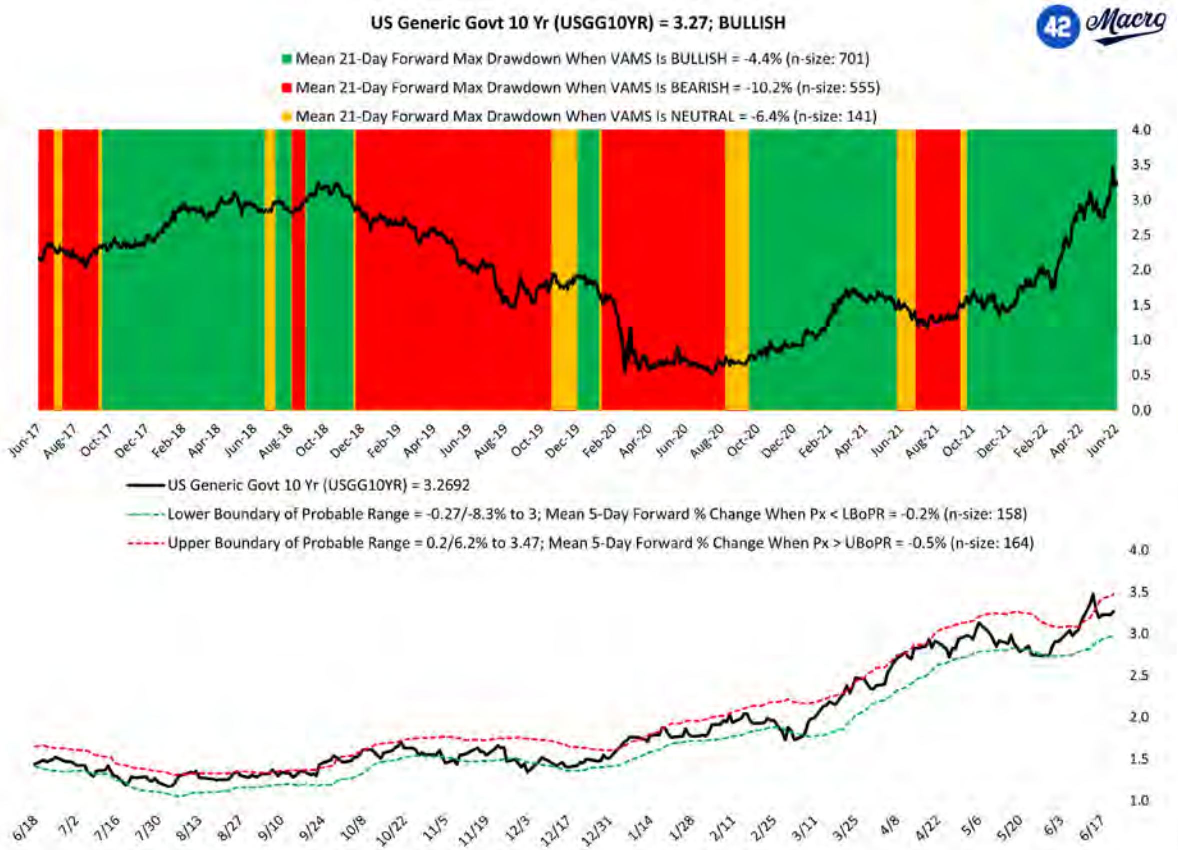


Gold VAMS & Probable Range Model

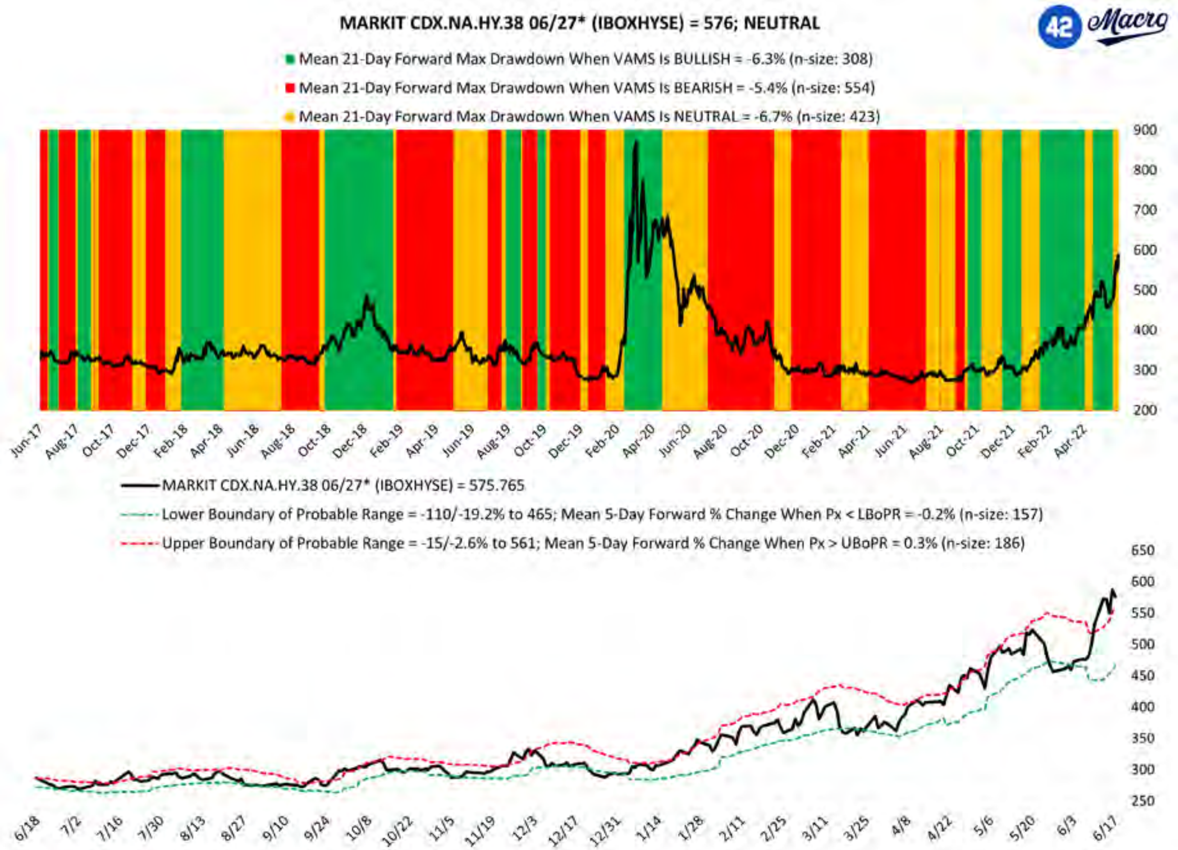


 Data Source: Bloomberg. Bullish VAMS = GREEN; Bearish VAMS = RED; and Neutral VAMS = ORANGE.

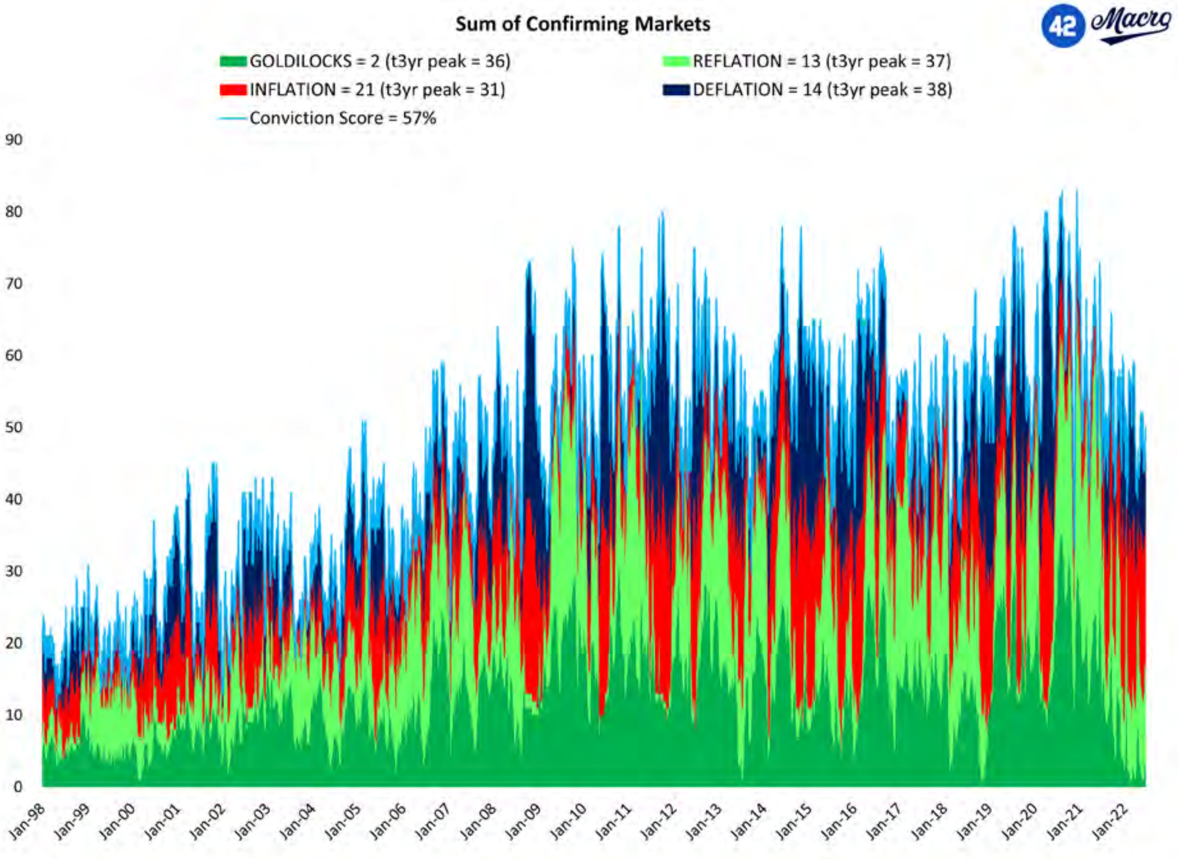
10yr Nominal Treasury Yield VAMS & Probable Range Model



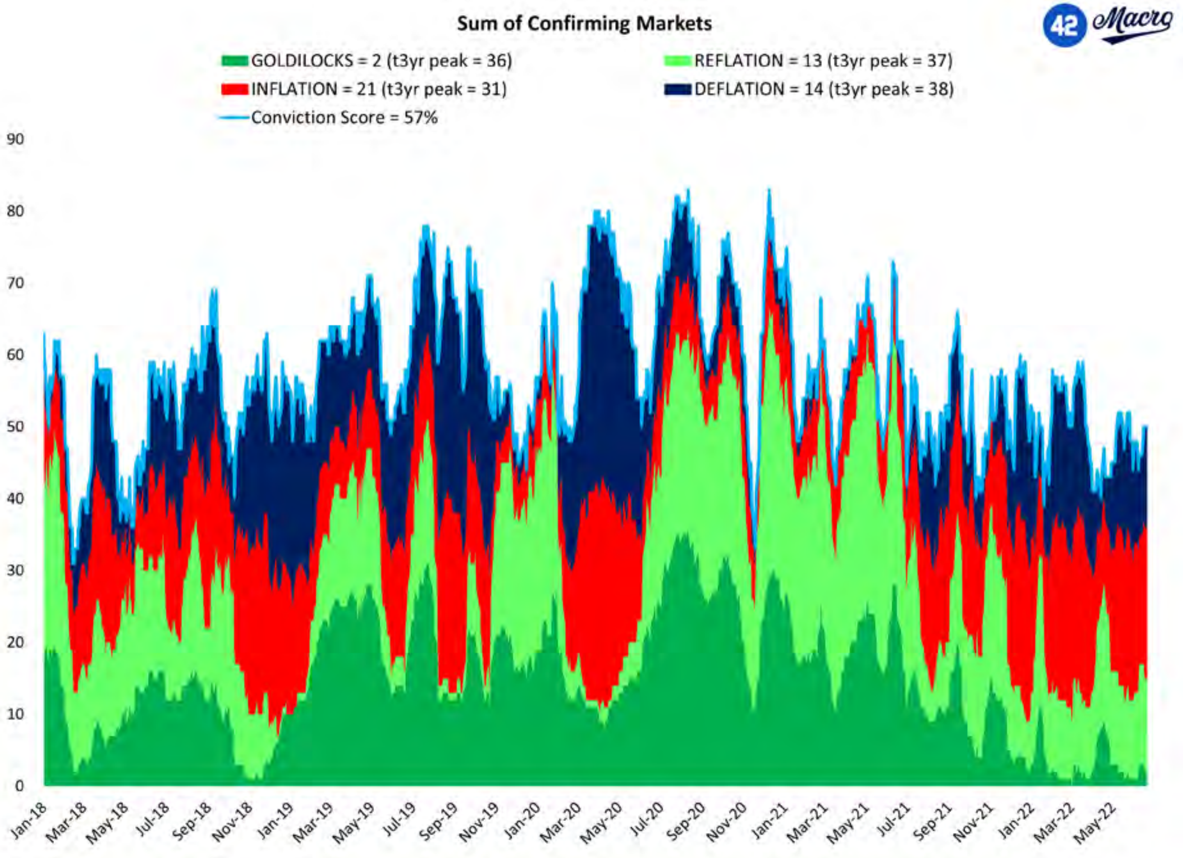
USD High Yield Credit Spreads (CDX) VAMS & Probable Range Model



Global Macro Risk Matrix: Sum Of Confirming Markets

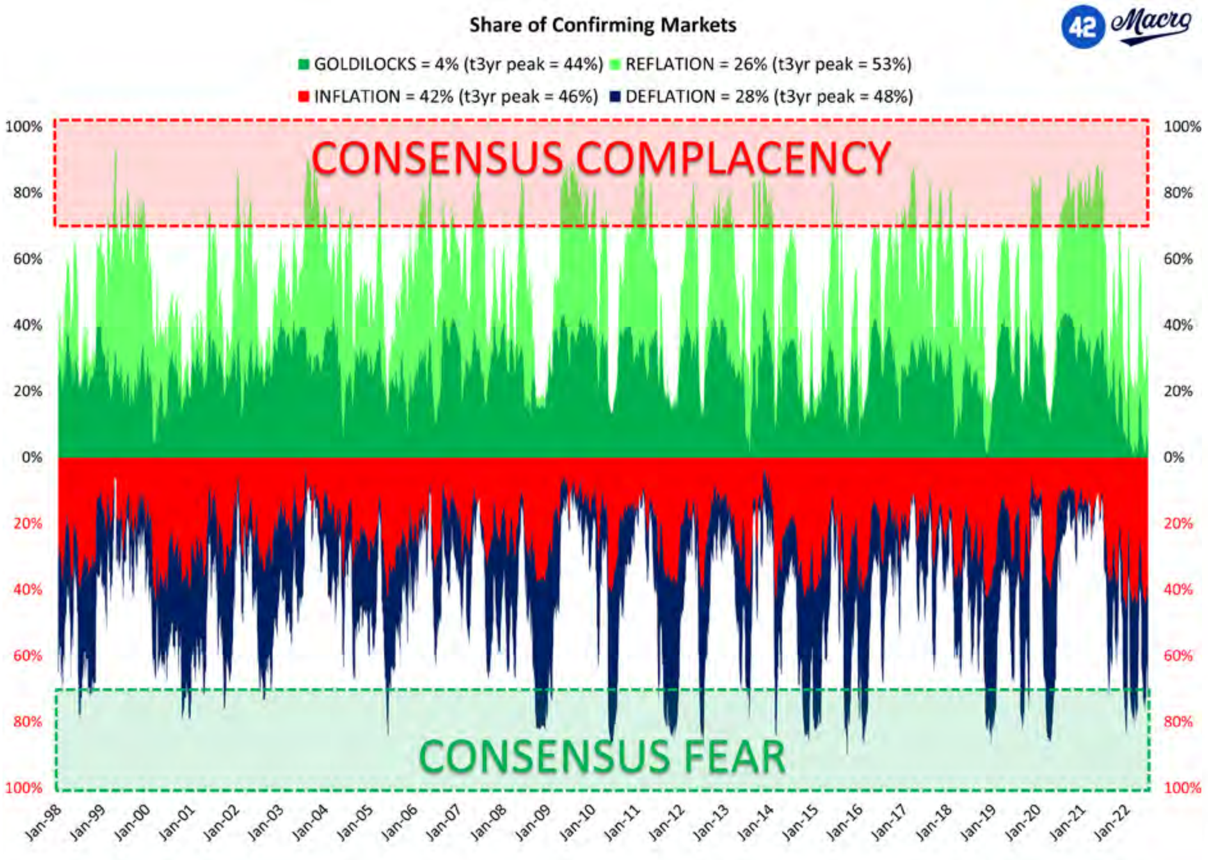


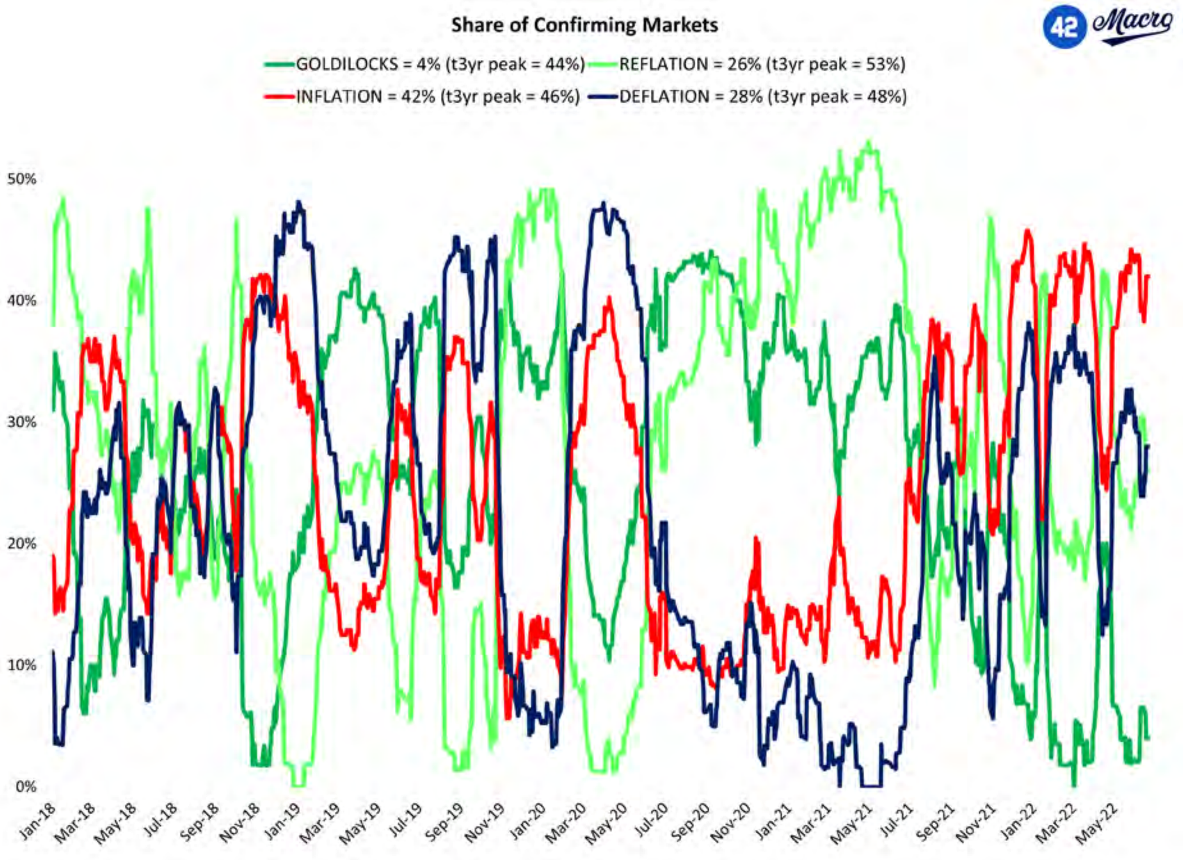
Since Jan-18



Global Macro Risk Matrix: Share Of Confirming Markets

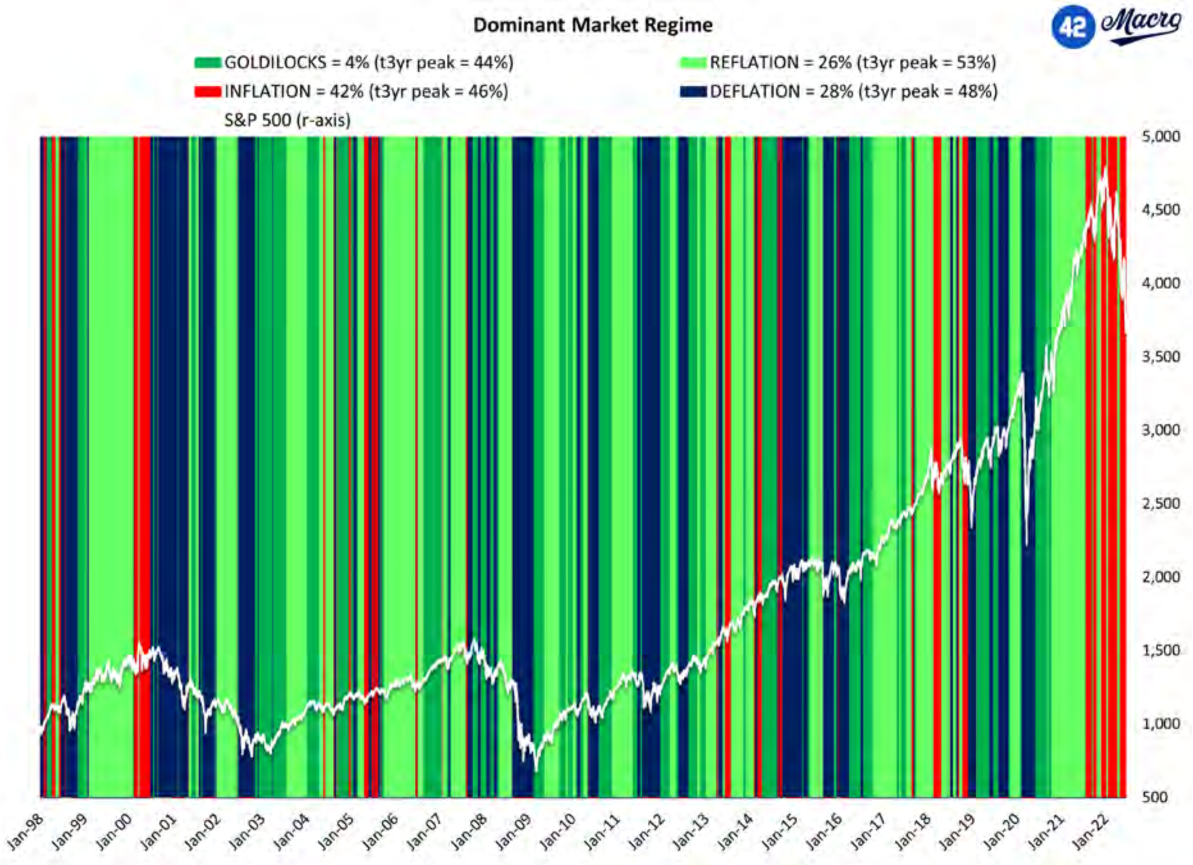
Since Jan-18

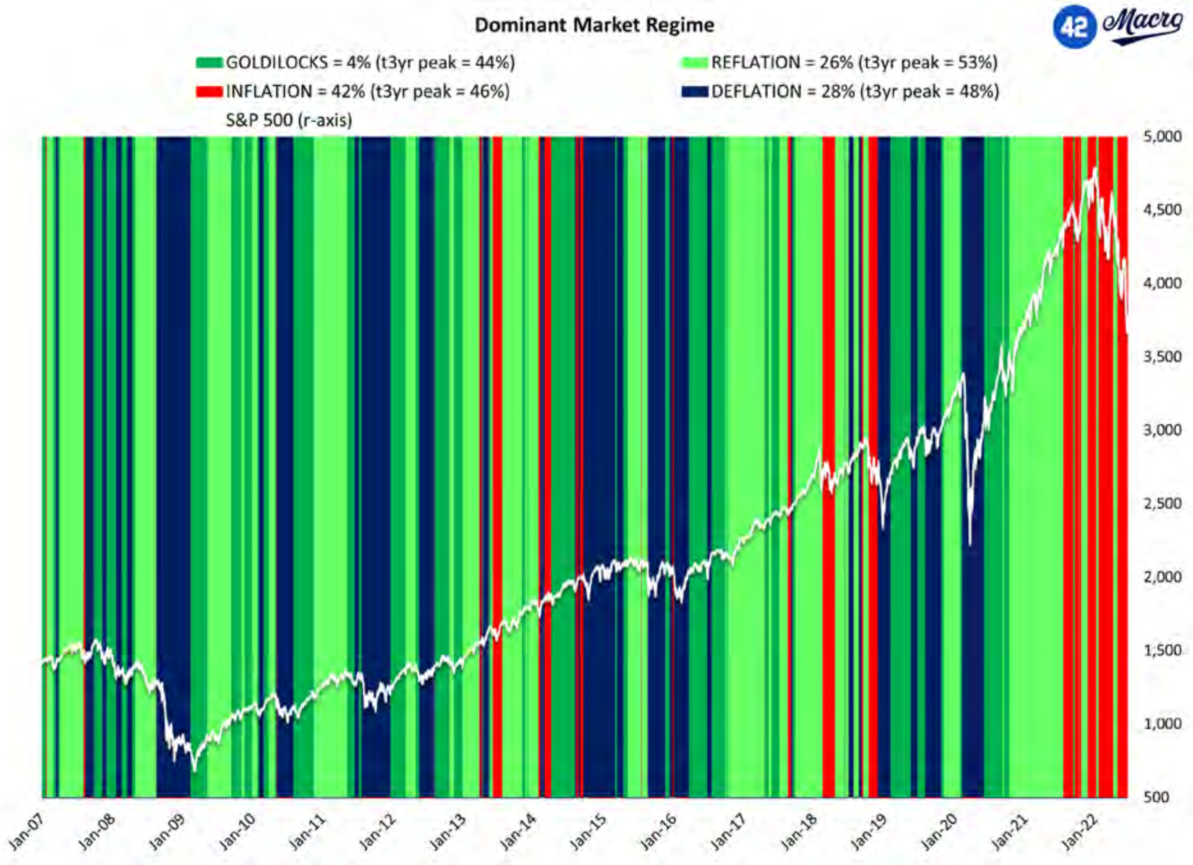




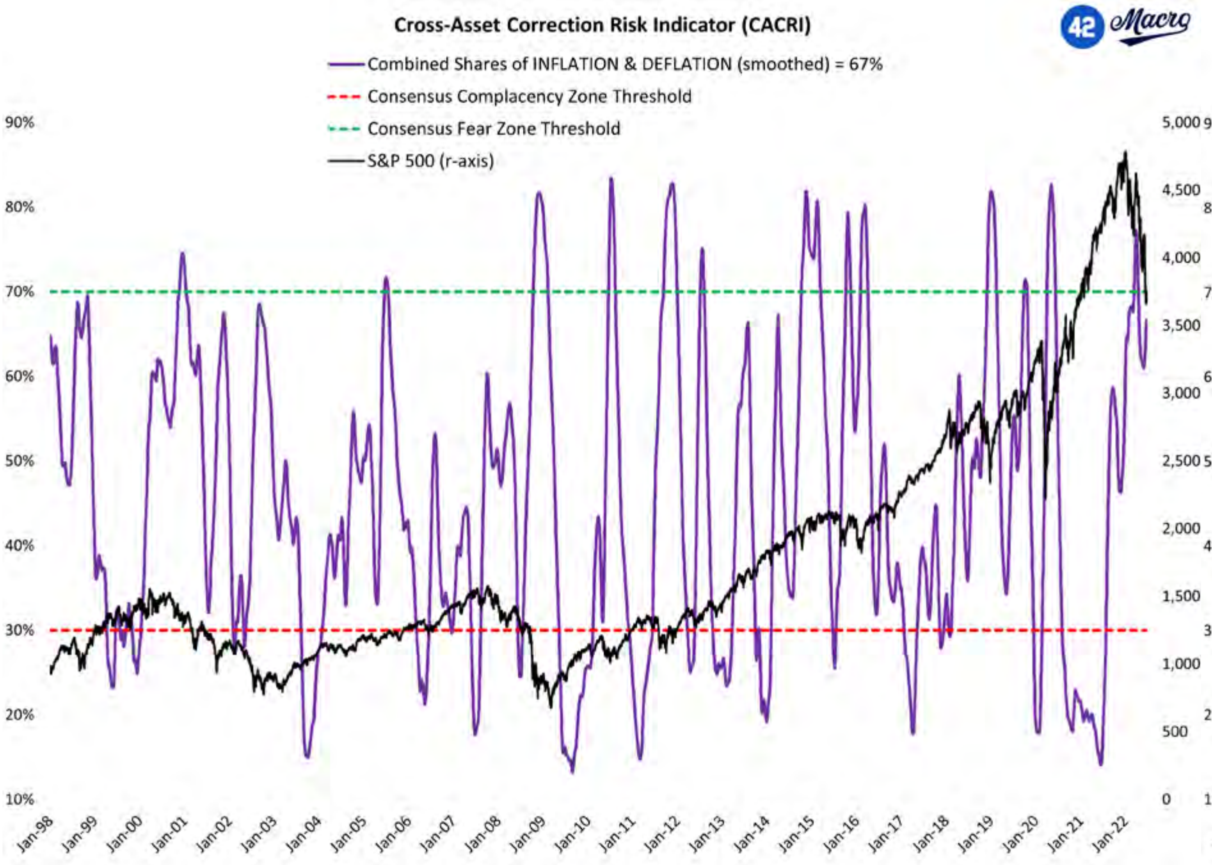
Global Macro Risk Matrix: Dominant Market Regime

Since Jan-07

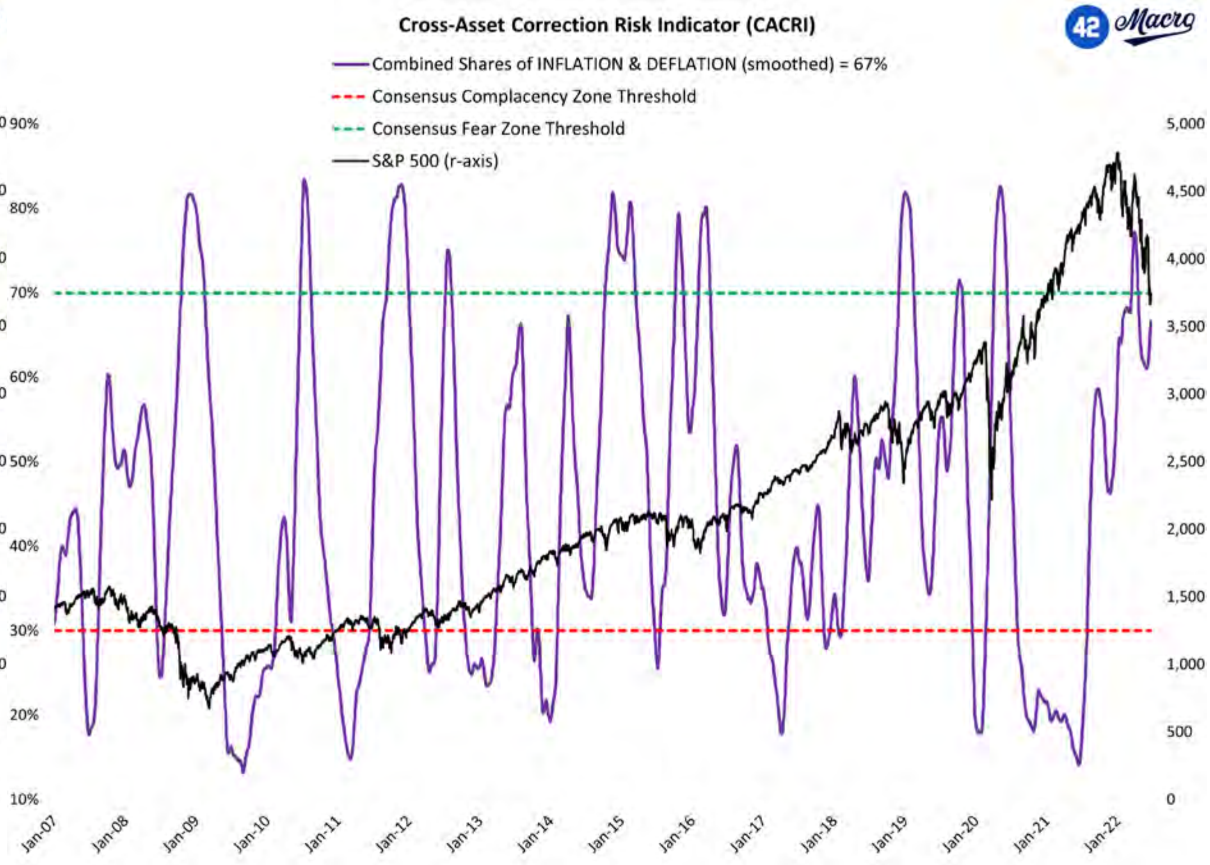




Cross-Asset Correction Risk Indicator (CACRI)



Since Jan-07



Bottom-Up MACRO Regime Summary Table

	Actuals						Estimates							
	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Next 3mo	Next 6mo
United States	I	I	I	I	I	I	I	I	D	D	D	D	I	D
Conditional Probability of GOLDILOCKS	1%	3%	4%	2%	4%	15%	13%	4%	4%	4%	4%	4%	7%	5%
Conditional Probability of REFLATION	33%	31%	35%	30%	33%	25%	16%	6%	2%	2%	2%	2%	8%	5%
Conditional Probability of INFLATION	63%	61%	54%	62%	56%	37%	40%	57%	37%	34%	30%	24%	44%	37%
Conditional Probability of DEFLATION	3%	5%	6%	5%	7%	23%	31%	33%	57%	60%	64%	69%	41%	53%
China	I	D	D		I	I	R	R	R	R	R	G	R	R
Conditional Probability of GOLDILOCKS	1%	14%	31%	6%	1%	2%	6%	32%	26%	25%	30%	42%	22%	27%
Conditional Probability of REFLATION	11%	9%	2%	6%	11%	46%	46%	50%	65%	63%	59%	37%	54%	53%
Conditional Probability of INFLATION	84%	30%	4%	6%	77%	51%	42%	11%	6%	9%	8%	10%	20%	14%
Conditional Probability of DEFLATION	5%	47%	63%	6%	10%	2%	6%	7%	2%	4%	4%	11%	5%	6%
Eurozone	I	I	I	I	I	I	I	I	I	D	D	D	I	D
Conditional Probability of GOLDILOCKS	1%	3%	5%	1%	1%	1%	1%	1%	2%	4%	5%	6%	1%	3%
Conditional Probability of REFLATION	30%	29%	24%	16%	20%	22%	8%	6%	3%	1%	1%	1%	5%	3%
Conditional Probability of INFLATION	67%	62%	58%	80%	77%	76%	84%	83%	52%	25%	16%	8%	73%	44%
Conditional Probability of DEFLATION	2%	6%	13%	3%	2%	2%	8%	11%	43%	70%	78%	85%	21%	49%
Japan	I	R	R	R	R	R	I	D	D	D	I	I	I	I
Conditional Probability of GOLDILOCKS	11%	13%	26%	26%	2%	2%	3%	26%	15%	20%	11%	12%	15%	15%
Conditional Probability of REFLATION	27%	44%	29%	30%	54%	57%	44%	11%	13%	13%	17%	14%	23%	19%
Conditional Probability of INFLATION	44%	34%	24%	23%	43%	40%	49%	18%	34%	26%	43%	39%	34%	35%
Conditional Probability of DEFLATION	18%	10%	22%	21%	1%	1%	4%	44%	38%	40%	28%	34%	29%	32%
United Kingdom	I	I	I	I	I	I	I	D	D	D	D	D	D	D
Conditional Probability of GOLDILOCKS	1%	1%	3%	1%	0%	0%	0%	3%	2%	2%	4%	6%	2%	3%
Conditional Probability of REFLATION	35%	39%	28%	15%	13%	12%	6%	1%	1%	1%	0%	0%	3%	1%
Conditional Probability of INFLATION	63%	58%	62%	82%	85%	86%	91%	20%	30%	18%	5%	4%	47%	28%
Conditional Probability of DEFLATION	2%	2%	7%	3%	2%	2%	2%	76%	67%	79%	91%	90%	48%	68%
World	I	I	I	I	I	I	I	D	I	D	D	D	I	D
Conditional Probability of GOLDILOCKS	1%	1%	1%	1%	1%	1%	1%	3%	3%	4%	4%	5%	3%	3%
Conditional Probability of REFLATION	27%	24%	30%	20%	22%	30%	6%	2%	3%	2%	2%	1%	4%	3%
Conditional Probability of INFLATION	69%	71%	67%	75%	74%	66%	76%	39%	48%	31%	29%	23%	54%	41%
Conditional Probability of DEFLATION	2%	3%	3%	3%	3%	3%	17%	55%	46%	63%	65%	71%	39%	53%

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

Top-Down MARKET Regime Summary Table

	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	6/21/2022
GOLDILOCKS Share of Confirming Markets	6%	4%	2%	5%	7%	2%	4%
REFLATION Share of Confirming Markets	19%	21%	19%	26%	29%	25%	26%
INFLATION Share of Confirming Markets	**42%**	**40%**	**42%**	**40%**	**38%**	**43%**	**42%**
DEFLATION Share of Confirming Markets	34%	35%	37%	30%	27%	30%	28%

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

Why The GRIDs Work

- *"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 & Amos Tversky, 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: Stocks

SPX Index

	ANNUALIZED EXPECTED RETURN				PERCENT POSITIVE RATIO			
	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION
OVERALL BACKTEST	24%	13%	-7%	-3%	72%	65%	44%	53%
-2σ GROWTH Δ	-	-	17%	41%	-	-	33%	46%
-1σ GROWTH Δ	-	-	10%	-8%	-	-	43%	52%
0σ GROWTH Δ	19%	11%	-2%	7%	66%	66%	48%	55%
+1σ GROWTH Δ	32%	13%	-	-	78%	63%	-	-
+2σ GROWTH Δ	30%	75%	-	-	91%	100%	-	-
-2σ INFLATION Δ	42%	-	-	1%	93%	-	-	50%
-1σ INFLATION Δ	6%	-	-	13%	52%	-	-	48%
0σ INFLATION Δ	28%	14%	-9%	1%	76%	67%	49%	56%
+1σ INFLATION Δ	-	3%	-5%	-	-	55%	39%	-
+2σ INFLATION Δ	-	24%	-5%	-	-	89%	22%	-
POLICY RATE ↓	33%	42%	22%	-4%	71%	100%	39%	50%
POLICY RATE ↑	10%	11%	-7%	-5%	63%	65%	45%	48%
QUANTITATIVE EASING	36%	16%	3%	10%	89%	68%	56%	57%
QUANTITATIVE TIGHTENING	21%	21%	20%	-7%	67%	88%	50%	63%
FISCAL EASING	17%	16%	25%	27%	82%	67%	50%	50%
FISCAL TIGHTENING	39%	39%	14%	32%	100%	75%	75%	33%

	VOLATILITY				COVARIANCE w/ US EQUITY BETA			
	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION
OVERALL BACKTEST	11%	9%	14%	16%	1.00	1.00	1.00	1.00
-2σ GROWTH Δ	-	-	10%	31%	-	-	1.00	1.00
-1σ GROWTH Δ	-	-	18%	15%	-	-	1.00	1.00
0σ GROWTH Δ	11%	9%	12%	13%	1.00	1.00	1.00	1.00
+1σ GROWTH Δ	12%	10%	-	-	1.00	1.00	-	-
+2σ GROWTH Δ	12%	12%	-	-	1.00	1.00	-	-
-2σ INFLATION Δ	8%	-	-	21%	1.00	-	-	1.00
-1σ INFLATION Δ	10%	-	-	17%	1.00	-	-	1.00
0σ INFLATION Δ	12%	9%	16%	14%	1.00	1.00	1.00	1.00
+1σ INFLATION Δ	-	10%	12%	-	-	1.00	1.00	-
+2σ INFLATION Δ	-	8%	13%	-	-	1.00	1.00	-
POLICY RATE ↓	12%	6%	15%	17%	1.00	1.00	1.00	1.00
POLICY RATE ↑	11%	9%	11%	11%	1.00	1.00	1.00	1.00
QUANTITATIVE EASING	10%	10%	11%	29%	1.00	1.00	1.00	1.00
QUANTITATIVE TIGHTENING	11%	11%	17%	19%	1.00	1.00	1.00	1.00
FISCAL EASING	8%	16%	11%	24%	1.00	1.00	1.00	1.00
FISCAL TIGHTENING	7%	14%	16%	15%	1.00	1.00	1.00	1.00

	NUMBER OF OBSERVATIONS			
	GOLDILOCKS	REFLATION	INFLATION	DEFLATION
OVERALL BACKTEST	118	110	138	104
-2σ GROWTH Δ	-	-	12	13
-1σ GROWTH Δ	-	-	65	29
0σ GROWTH Δ	70	76	61	62
+1σ GROWTH Δ	37	32	-	-
+2σ GROWTH Δ	11	2	-	-
-2σ INFLATION Δ	15	-	-	12
-1σ INFLATION Δ	29	-	-	31
0σ INFLATION Δ	74	70	88	61
+1σ INFLATION Δ	-	31	41	-
+2σ INFLATION Δ	-	9	9	-
POLICY RATE ↓	31	4	31	34
POLICY RATE ↑	32	31	49	23
QUANTITATIVE EASING	18	31	18	14
QUANTITATIVE TIGHTENING	6	8	8	19
FISCAL EASING	11	3	2	6
FISCAL TIGHTENING	2	4	4	3

GRID Asset Market Backtests: Bonds

US Treasury Long Bond Futures																				
	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	-2%	-10%	3%	10%	53%	39%	50%	54%	8%	9%	9%	10%	-0.01	-0.20	-0.09	-0.06	78	85	101	91
-2σ GROWTH Δ	-	-	3%	32%	-	-	57%	77%	-	-	3%	15%	-	-	0.04	-0.09	-	-	7	13
-1σ GROWTH Δ	-	-	0%	-1%	-	-	49%	38%	-	-	12%	10%	-	-	-0.03	0.19	-	-	41	26
0σ GROWTH Δ	0%	-12%	5%	10%	52%	37%	49%	56%	7%	9%	8%	9%	-0.09	-0.23	-0.18	-0.08	52	54	58	52
+1σ GROWTH Δ	1%	-8%	-	-	64%	41%	-	-	10%	8%	-	-	0.20	-0.15	-	-	22	29	-	-
+2σ GROWTH Δ	-53%	-4%	-	-	0%	50%	-	-	9%	6%	-	-	-0.96	-1.00	-	-	4	2	-	-
-2σ INFLATION Δ	-34%	-	-	16%	29%	-	-	64%	9%	-	-	19%	-0.56	-	-	0.02	7	-	-	11
-1σ INFLATION Δ	11%	-	-	5%	69%	-	-	48%	8%	-	-	11%	0.40	-	-	-0.01	13	-	-	29
0σ INFLATION Δ	-1%	-14%	6%	11%	52%	37%	52%	55%	8%	10%	9%	8%	0.03	-0.28	-0.03	-0.17	58	54	64	51
+1σ INFLATION Δ	-	-2%	-4%	-	-	41%	44%	-	-	6%	10%	-	-	-0.19	-0.26	-	-	22	34	-
+2σ INFLATION Δ	-	-6%	27%	-	-	44%	67%	-	-	8%	6%	-	-	0.38	-0.24	-	-	9	3	-
POLICY RATE ↓	-1%	1%	-7%	10%	56%	67%	38%	43%	11%	2%	13%	12%	0.18	-0.99	-0.09	0.08	16	3	24	30
POLICY RATE ↑	-9%	-14%	-1%	8%	35%	38%	49%	59%	6%	12%	7%	6%	-0.10	-0.33	0.28	0.02	20	26	37	22
QUANTITATIVE EASING	-8%	-8%	-6%	20%	44%	45%	33%	57%	8%	8%	8%	16%	0.04	-0.10	0.01	-0.01	18	31	18	14
QUANTITATIVE TIGHTENING	6%	0%	10%	7%	67%	63%	50%	53%	9%	8%	9%	12%	-0.39	0.13	-0.47	0.00	6	8	8	19
FISCAL EASING	-4%	-16%	-32%	20%	33%	33%	0%	50%	12%	8%	6%	12%	-0.44	-0.36	-	0.58	6	3	1	6
FISCAL TIGHTENING	-3%	-21%	-30%	1%	50%	25%	0%	50%	1%	8%	2%	16%	-1.00	0.13	1.00	-1.00	2	4	2	2

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			
	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION	GOLDILOCKS	REFLATION	INFLATION	DEFLATION
OVERALL BACKTEST	7%	14%	-1%	-6%	60%	64%	47%	44%	6%	7%	7%	10%	0.23	0.35	0.10	0.39	67	81	77	85
-2σ GROWTH Δ	-	-	-20%	-40%	-	-	14%	23%	-	-	7%	18%	-	-	-0.81	0.53	-	-	7	13
-1σ GROWTH Δ	-	-	-3%	1%	-	-	41%	45%	-	-	5%	9%	-	-	-0.27	-0.08	-	-	22	26
0σ GROWTH Δ	8%	14%	2%	-1%	57%	62%	54%	48%	6%	7%	7%	7%	0.19	0.36	0.40	0.32	47	50	48	46
+1σ GROWTH Δ	11%	11%	-	-	65%	66%	-	-	6%	8%	-	-	0.29	0.23	-	-	20	29	-	-
+2σ GROWTH Δ	-	56%	-	-	-	100%	-	-	0%	9%	-	-	-	-1.00	-	-	-	2	-	-
-2σ INFLATION Δ	17%	-	-	-16%	75%	-	-	33%	8%	-	-	10%	0.97	-	-	0.05	4	-	-	9
-1σ INFLATION Δ	10%	-	-	-21%	70%	-	-	33%	5%	-	-	12%	-0.29	-	-	0.66	10	-	-	27
0σ INFLATION Δ	8%	12%	-2%	3%	57%	63%	52%	51%	6%	8%	7%	8%	0.23	0.35	0.03	0.22	53	54	50	49
+1σ INFLATION Δ	-	12%	0%	-	-	61%	38%	-	-	6%	6%	-	-	0.36	0.18	-	-	18	24	-
+2σ INFLATION Δ	-	25%	-1%	-	-	78%	33%	-	-	9%	7%	-	-	0.32	0.59	-	-	9	3	-
POLICY RATE ↓	-5%	2%	10%	-18%	45%	33%	65%	36%	6%	1%	7%	12%	-0.12	-0.95	0.00	0.43	13	3	20	28
POLICY RATE ↑	13%	5%	-3%	-5%	67%	64%	44%	47%	5%	4%	5%	6%	-0.27	0.05	0.17	0.07	12	22	18	19
QUANTITATIVE EASING	11%	22%	1%	-32%	61%	71%	50%	36%	9%	10%	8%	19%	0.59	0.43	0.18	0.74	18	31	18	14
QUANTITATIVE TIGHTENING	-3%	11%	-6%	-6%	33%	75%	25%	47%	9%	7%	8%	9%	0.66	0.62	-0.53	0.09	6	8	8	19
FISCAL EASING	2%	18%	-10%	-18%	50%	67%	0%	33%	7%	12%	2%	16%	0.85	-0.26	-	0.44	6	3	1	6
FISCAL TIGHTENING	-4%	35%	6%	-15%	50%	75%	50%	0%	3%	11%	10%	1%	1.00	0.98	1.00	1.00	2	4	2	2

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GRID Asset Market Backtests: Currencies

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%	1%	2%	5%	45%	53%	49%	56%	5%	5%	5%	6%	-0.50	-0.40	-0.34	-0.65	44	62	47	54
-2σ GROWTH Δ	-	-	13%	8%	-	-	60%	45%	-	-	5%	12%	-	-	0.67	-0.69	-	-	5	11
-1σ GROWTH Δ	-	-	-2%	13%	-	-	42%	78%	-	-	4%	6%	-	-	-0.02	-0.51	-	-	12	18
0σ GROWTH Δ	-1%	2%	1%	-2%	46%	59%	50%	44%	5%	4%	5%	4%	-0.45	-0.37	-0.59	-0.70	39	39	30	25
+1σ GROWTH Δ	-18%	0%	-	-	40%	48%	-	-	5%	6%	-	-	-0.68	-0.32	-	-	5	21	-	-
+2σ GROWTH Δ	-	-29%	-	-	-	0%	-	-	0%	5%	-	-	-	1.00	-	-	-	2	-	-
-2σ INFLATION Δ	0%	-	-	4%	50%	-	-	43%	2%	-	-	9%	-1.00	-	-	-0.58	2	-	-	7
-1σ INFLATION Δ	-12%	-	-	19%	0%	-	-	69%	2%	-	-	7%	0.30	-	-	-0.72	5	-	-	13
0σ INFLATION Δ	-2%	1%	2%	0%	51%	55%	47%	53%	5%	5%	5%	5%	-0.54	-0.36	-0.31	-0.58	37	42	36	34
+1σ INFLATION Δ	-	-3%	2%	-	-	50%	60%	-	-	4%	3%	-	-	-0.54	-0.70	-	-	14	10	-
+2σ INFLATION Δ	-	4%	-2%	-	-	50%	0%	-	-	6%	0%	-	-	-0.55	-	-	-	6	1	-
POLICY RATE ↓	-	-	-8%	11%	-	-	40%	57%	0%	0%	3%	7%	-	-	-0.13	-0.70	-	-	10	14
POLICY RATE ↑	-11%	1%	-1%	7%	27%	60%	44%	62%	4%	4%	2%	4%	0.26	-0.25	-0.29	-0.21	11	15	9	13
QUANTITATIVE EASING	0%	0%	0%	5%	61%	52%	50%	50%	8%	5%	5%	11%	-0.61	-0.45	-0.38	-0.78	18	31	18	14
QUANTITATIVE TIGHTENING	-1%	1%	6%	10%	50%	50%	63%	68%	6%	9%	3%	7%	-0.66	-0.67	0.12	-0.67	6	8	8	19
FISCAL EASING	-6%	4%	-	-17%	50%	67%	-	25%	5%	6%	-	11%	-1.00	-0.41	-	-0.73	2	3	-	4
FISCAL TIGHTENING	-10%	-3%	-5%	4%	50%	75%	0%	50%	5%	9%	2%	6%	1.00	-0.74	-1.00	1.00	2	4	2	2

GRID Asset Market Backtests: Crypto

Bitcoin

	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	483%	105%	93%	-10%	100%	61%	50%	35%	29%	35%	24%	19%	0.05	0.05	0.03	0.25	7	23	16	17
-2σ GROWTH Δ	-	-	-	-64%	-	-	-	33%	-	-	0%	54%	-	-	-	0.35	-	-	-	6
-1σ GROWTH Δ	-	-	542%	60%	-	-	100%	50%	-	-	26%	21%	-	-	-0.07	0.31	-	-	2	6
0σ GROWTH Δ	418%	118%	29%	-29%	100%	62%	43%	20%	30%	34%	27%	5%	0.15	0.02	0.13	0.07	6	13	14	5
+1σ GROWTH Δ	872%	69%	-	-	100%	50%	-	-	32%	39%	-	-	-0.08	0.07	-	-	1	8	-	-
+2σ GROWTH Δ	-	162%	-	-	-	100%	-	-	0%	33%	-	-	-	-1.00	-	-	-	2	-	-
-2σ INFLATION Δ	-	-	-	148%	-	-	-	67%	0%	-	-	33%	-	-	-	0.58	-	-	-	3
-1σ INFLATION Δ	468%	-	-	-124%	100%	-	-	14%	35%	-	-	25%	0.04	-	-	0.19	2	-	-	7
0σ INFLATION Δ	489%	147%	126%	36%	100%	64%	58%	43%	30%	40%	29%	13%	0.08	-0.04	0.07	0.17	5	14	12	7
+1σ INFLATION Δ	-	148%	-5%	-	-	83%	25%	-	-	23%	17%	-	-	0.43	-0.12	-	-	6	4	-
+2σ INFLATION Δ	-	-179%	-	-	-	0%	-	-	-	34%	0%	-	-	0.15	-	-	-	3	-	-
POLICY RATE ↓	-	-	-151%	29%	-	-	0%	50%	0%	0%	12%	22%	-	-	-0.27	0.45	-	-	3	6
POLICY RATE ↑	461%	57%	52%	-101%	100%	60%	50%	14%	52%	50%	16%	25%	0.02	-0.02	0.11	-0.08	5	10	2	7
QUANTITATIVE EASING	649%	102%	3%	55%	100%	60%	40%	60%	75%	45%	50%	44%	0.20	0.09	0.32	0.64	3	10	10	5
QUANTITATIVE TIGHTENING	823%	187%	311%	-37%	100%	71%	80%	25%	97%	105%	92%	45%	-0.09	-0.30	0.01	0.14	1	7	5	12
FISCAL EASING	596%	132%	-	-45%	100%	50%	-	0%	48%	70%	0%	5%	0.32	0.72	-	-0.28	1	2	-	1
FISCAL TIGHTENING	-	25%	-227%	-91%	-	50%	0%	0%	0%	20%	33%	15%	-	0.11	-0.47	0.43	-	2	1	1

What Tends To Outperform/Underperform In Each GRID Regime?

GOLDILOCKS	REFLATION	INFLATION	DEFLATION
Top 5 Equity Style Factors	**Top 5 Equity Style Factors**	**Top 5 Equity Style Factors**	**Top 5 Equity Style Factors**
High Beta (SPHB)	Mega Cap Growth (MGK)	Low Beta (SPLV)	Dividends (SPHD)
Small Caps (IWM)	High Beta (SPHB)	Mega Cap Growth (MGK)	Low Beta (SPLV)
Mega Cap Growth (MGK)	Cyclicals (IYT, IWN)	Quality (QUAL)	Quality (QUAL)
Cyclicals (IYT, IWN)	Momentum (MTUM)	Dividends (SPHD)	Defensives (DEF)
Mid Caps (IWR)	Small Caps (IWM)	Defensives (DEF)	Growth (IWF)
Bottom 5 Equity Style Factors	**Bottom 5 Equity Style Factors**	**Bottom 5 Equity Style Factors**	**Bottom 5 Equity Style Factors**
Low Beta (SPLV)	Low Beta (SPLV)	High Beta (SPHB)	High Beta (SPHB)
Defensives (DEF)	Dividends (SPHD)	Small Caps (IWM)	Cyclicals (IYT, IWN)
Size (OEF)	Defensives (DEF)	Cyclicals (IYT, IWN)	Value (IWD)
Quality (QUAL)	Quality (QUAL)	Value (IWD)	Small Caps (IWM)
Dividends (SPHD)	Large Caps (IWB)	Mid Caps (IWR)	Mid Caps (IWR)
Top 5 Equity Sectors	**Top 5 Equity Sectors**	**Top 5 Equity Sectors**	**Top 5 Equity Sectors**
Consumer Discretionary (XLY)	Technology (XLK)	Utilities (XLU)	Real Estate (XLRE)
Financials (XLF)	Industrials (XLI)	Health Care (XLV)	Health Care (XLV)
Technology (XLK)	Consumer Discretionary (XLY)	Real Estate (XLRE)	Consumer Staples (XLP)
Materials (XLB)	Financials (XLF)	Consumer Staples (XLP)	Utilities (XLU)
Industrials (XLI)	Energy (XLE)	Communication Services (XLC)	Consumer Discretionary (XLY)
Bottom 5 Equity Sectors	**Bottom 5 Equity Sectors**	**Bottom 5 Equity Sectors**	**Bottom 5 Equity Sectors**
Utilities (XLU)	Real Estate (XLRE)	Energy (XLE)	Financials (XLF)
Communication Services (XLC)	Consumer Staples (XLP)	Materials (XLB)	Industrials (XLI)
Real Estate (XLRE)	Utilities (XLU)	Financials (XLF)	Technology (XLK)
Consumer Staples (XLP)	Communication Services (XLC)	Industrials (XLI)	Communication Services (XLC)
Health Care (XLV)	Health Care (XLV)	Consumer Discretionary (XLY)	Energy (XLE)
Top 5 Fixed Income Sectors	**Top 5 Fixed Income Sectors**	**Top 5 Fixed Income Sectors**	**Top 5 Fixed Income Sectors**
BDCs (BIZD)	BDCs (BIZD)	Long Bond (TLT, EDV, ZROZ)	Long Bond (TLT, EDV, ZROZ)
Convertibles (CWB)	Convertibles (CWB)	EM $ Debt (EMB)	Treasury Belly (IEI, IEF)
HY Credit (HYG)	Preferreds (PFF)	5-10yr TIPS (TIP)	IG Credit (LQD)
EM $ Debt (EMB)	HY Credit (HYG)	Treasury Belly (IEI, IEF)	MBS (MBB)
Preferreds (PFF)	EM Local Currency (EMLC)	IG Credit (LQD)	Short Rates (SHY)
Bottom 5 Fixed Income Sectors	**Bottom 5 Fixed Income Sectors**	**Bottom 5 Fixed Income Sectors**	**Bottom 5 Fixed Income Sectors**
Long Bond (TLT, EDV, ZROZ)	Long Bond (TLT, EDV, ZROZ)	BDCs (BIZD)	Preferreds (PFF)
0-5yr TIPS (STIP)	Treasury Belly (IEI, IEF)	Convertibles (CWB)	BDCs (BIZD)
Treasury Belly (IEI, IEF)	IG Credit (LQD)	EM Local Currency (EMLC)	Leveraged Loans (BKLN)
MBS (MBS)	MBS (MBB)	Preferreds (PFF)	HY Credit (HYG)
5-10yr TIPS (TIP)	Short Rates (SHY)	Leveraged Loans (BKLN)	EM Local Currency (EMLC)

Current GRID Asset Market Backtests Overlay: INFLATION

	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
	I	0σ	0σ	Tightening	n/a	Tightening	I-I	I	I
SPX Index	-7.3%	-2.1%	-8.8%	-7.0%	-	13.8%	-9.2%	-7.2%	7
NASDAQ 100 Stock Index	-1.5%	6.9%	-12.9%	-5.3%	-	24.8%	0.7%	-0.4%	25
Russell 2000 Index	-7.3%	-9.7%	-3.6%	-3.5%	-	23.6%	-5.7%	-5.5%	13
MSCI USA Consumer Discretionary Index	-5.0%	-2.7%	-6.1%	-4.8%	-	8.1%	-8.0%	-4.9%	15
MSCI USA Consumer Staples Index	-0.5%	-1.5%	-0.8%	1.1%	-	61.1%	0.2%	-0.1%	27
MSCI USA Communication Services Index	-4.1%	0.5%	-9.5%	14.7%	-	19.6%	-8.3%	-1.8%	22
MSCI USA Energy Index	-10.4%	-2.3%	-10.9%	-1.9%	-	33.8%	-13.0%	-6.4%	12
MSCI USA Financials Index	-7.6%	-5.4%	-11.0%	5.0%	-	26.7%	-11.6%	-6.5%	10
MSCI USA Health Care Index	1.3%	1.4%	2.6%	1.3%	-	52.9%	-2.3%	1.3%	28
MSCI USA Industrials Index	-6.6%	-2.6%	-8.0%	7.6%	-	55.1%	-10.7%	-4.6%	17
MSCI USA Information Technology Index	-1.6%	7.5%	-10.7%	-7.1%	-	42.9%	-3.1%	-2.3%	20
MSCI USA Materials Index	-11.1%	-5.3%	-10.5%	-9.6%	-	70.0%	-12.6%	-10.4%	5
MSCI US Real Estate Index	6.2%	6.8%	-1.5%	29.2%	-	118.0%	4.2%	6.5%	33
MSCI USA Utilities Index	7.3%	14.1%	3.4%	30.9%	-	59.3%	7.1%	10.7%	36
S&P 500 High Beta Index	-13.3%	-4.2%	-18.6%	-10.7%	-	46.3%	-16.0%	-12.0%	4
S&P 500 Low Volatility Index	-3.9%	0.1%	-3.4%	-6.2%	-	61.6%	-4.2%	-3.6%	19
Russell 3000 Defensive	-2.3%	1.8%	-4.6%	4.1%	-	43.4%	-4.6%	-0.3%	26
Russell 3000 Dynamic	-9.1%	-2.6%	-12.5%	-3.9%	-	31.8%	-10.8%	-6.5%	11
MSCI United States Growth Index	-5.3%	-3.9%	-5.9%	-9.2%	-	23.9%	-5.5%	-5.4%	14
MSCI United States Value Index	-5.4%	-3.1%	-4.8%	-1.3%	-	52.8%	-6.7%	-4.2%	18
MSCI Australia Index	-5.3%	-8.2%	-8.0%	-10.2%	-	15.7%	-6.6%	-6.7%	9
MSCI Brazil Index	-4.4%	1.3%	-28.4%	5.2%	-	-15.4%	2.7%	-1.6%	23
MSCI Canada Index	-2.0%	-1.7%	-5.8%	4.8%	-	27.9%	-4.0%	-1.9%	21
MSCI China Index	-33.7%	-21.0%	-31.8%	-20.8%	-	-39.5%	-28.6%	-31.1%	1
MSCI EMU Index	-14.0%	-13.2%	-21.0%	-1.9%	-	33.9%	-21.7%	-13.6%	2
MSCI Japan Index	-14.0%	-16.6%	-12.1%	-9.5%	-	39.9%	-18.0%	-13.0%	3
Commodity Research Bureau BLS/US Spot All Commodities	-1.3%	2.4%	-1.7%	-2.7%	-	6.2%	-2.7%	-1.5%	24
Bloomberg Agriculture Subindex	11.8%	-4.2%	14.5%	14.4%	-	-5.6%	16.8%	13.1%	37
Bloomberg Industrial Metals Subindex	-11.3%	-3.8%	-11.1%	1.5%	-	67.7%	-12.2%	-7.6%	6
Bloomberg Precious Metals Subindex	15.3%	8.0%	17.1%	31.0%	-	-5.4%	22.8%	16.2%	38
High Grade Copper	-10.0%	-3.7%	-11.2%	7.1%	-	56.8%	-12.7%	-6.8%	8
WTI Crude Oil	-5.4%	-4.1%	-1.5%	-30.7%	-	118.8%	-12.6%	-4.7%	16
Bitcoin	93.0%	28.9%	125.7%	51.6%	-	-226.9%	124.1%	72.3%	41
Ethereum	111.6%	60.4%	136.1%	-145.2%	-	-244.1%	137.1%	86.0%	42
Bloomberg Barclays U.S. Treasury: 1-3 Year Total Return Index Value U	3.5%	2.1%	3.0%	3.2%	-	-2.1%	3.2%	3.3%	32
Bloomberg Barclays U.S. Treasury 5-10 Yr Total Return Index Value Unh	8.9%	8.2%	8.0%	8.7%	-	-12.4%	9.6%	8.5%	34
Bloomberg Barclays US Treasury 25+Y Total Return Index Value Unhedged USD	18.1%	20.6%	18.0%	18.5%	-	-23.7%	19.6%	18.3%	39
Bloomberg Barclays TIPS 5-10 Year Index Adjusted TR Index	9.9%	9.9%	9.4%	8.1%	-	-8.1%	10.8%	9.7%	35
Bloomberg Barclays US Credit Total Return Value Unhedged USD	3.0%	5.1%	4.9%	-1.1%	-	-2.0%	2.6%	2.8%	30
Bloomberg Barclays US Corporate High Yield Total Return Index Value Unhedged USD	3.3%	5.6%	2.4%	2.6%	-	14.5%	1.7%	3.0%	31
Bloomberg Dollar Index	1.6%	1.2%	1.6%	-0.8%	-	-5.5%	2.9%	1.4%	29
Gold	25.4%	18.9%	19.6%	37.1%	-	-12.9%	35.1%	22.5%	40

Pending GRID Asset Market Backtests Overlay: DEFLATION

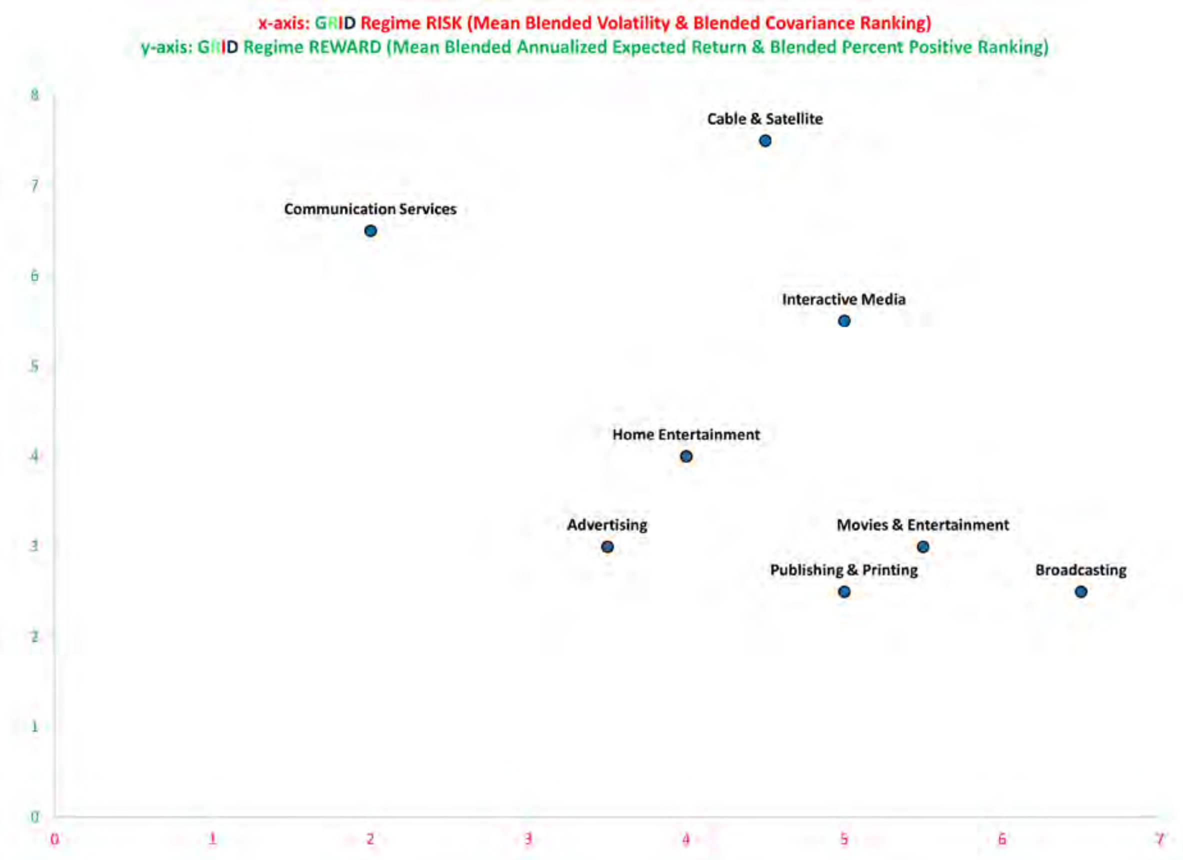
	Macro Regime	GROWTH Δ Z-Score	INFLATION Δ Z-Score	POLICY Rate	POLICY Balance Sheet	POLICY Fiscal Balance	US-World Regime	Blended Annualized Expected Return	Dynamic Macro Regime Ranking
	D	(2σ)	(1σ)	Tightening	Tightening	Tightening	D-D	D	D
SPX Index	-3.0%	-41.0%	-12.6%	-5.2%	-7.5%	-31.5%	0.1%	-7.5%	16
NASDAQ 100 Stock Index	-1.3%	-48.4%	-20.6%	2.2%	6.5%	-71.1%	-4.0%	-1.3%	26
Russell 2000 Index	-2.7%	-48.8%	-25.1%	4.0%	-19.1%	-65.6%	-3.2%	-19.1%	5
MSCI USA Consumer Discretionary Index	0.0%	-27.6%	-24.5%	-0.6%	1.2%	-74.5%	-1.6%	0.0%	29
MSCI USA Consumer Staples Index	5.9%	-22.7%	-14.9%	11.1%	1.3%	-43.9%	7.5%	1.3%	30
MSCI USA Communication Services Index	-4.7%	-24.3%	-9.9%	-3.5%	11.4%	-42.7%	-3.0%	-4.7%	20
MSCI USA Energy Index	1.3%	-50.8%	-27.9%	10.0%	-22.8%	17.5%	1.5%	1.3%	31
MSCI USA Financials Index	-11.1%	-66.8%	-41.3%	-3.0%	-34.8%	-52.5%	-11.2%	-34.8%	3
MSCI USA Health Care Index	7.8%	-16.5%	-1.6%	14.1%	-4.1%	-45.0%	12.3%	-1.6%	24
MSCI USA Industrials Index	-6.8%	-51.0%	-32.1%	0.0%	-18.6%	-77.2%	-8.7%	-18.6%	6
MSCI USA Information Technology Index	-1.1%	-55.3%	-19.8%	4.1%	9.5%	-72.4%	-4.0%	-1.1%	27
MSCI USA Materials Index	-0.6%	-43.8%	-29.7%	-10.5%	-9.0%	-88.2%	-2.1%	-9.0%	12
MSCI US Real Estate Index	5.1%	4.4%	-38.5%	10.6%	19.5%	-80.6%	15.7%	5.1%	37
MSCI USA Utilities Index	-1.9%	-12.6%	-16.6%	14.8%	-6.9%	-44.4%	-0.6%	-6.9%	18
S&P 500 High Beta Index	-10.9%	-70.5%	-44.0%	-1.2%	-22.2%	-71.8%	-14.2%	-22.2%	4
S&P 500 Low Volatility Index	4.7%	-21.4%	-2.2%	1.6%	-0.6%	-16.4%	6.9%	-0.6%	28
Russell 3000 Defensive	0.7%	-28.3%	-16.4%	8.0%	-4.5%	-60.6%	1.8%	-4.5%	21
Russell 3000 Dynamic	-6.7%	-57.5%	-35.8%	-0.1%	-11.7%	-65.4%	-8.5%	-11.7%	11
MSCI United States Growth Index	1.5%	-42.2%	-11.5%	-4.7%	2.7%	-43.2%	2.5%	1.5%	33
MSCI United States Value Index	-3.7%	-41.7%	-14.2%	-5.7%	-16.4%	-20.5%	-2.5%	-14.2%	8
MSCI Australia Index	-3.1%	-49.9%	-4.5%	3.3%	-2.1%	-55.4%	1.2%	-3.1%	23
MSCI Brazil Index	-18.0%	-104.3%	-43.2%	44.0%	6.0%	-114.4%	-21.7%	-18.0%	7
MSCI Canada Index	-7.3%	-58.3%	-16.1%	3.0%	-4.2%	-36.8%	-5.5%	-7.3%	17
MSCI China Index	4.3%	-44.1%	-37.5%	18.2%	-7.9%	-25.0%	5.2%	-7.9%	14
MSCI EMU Index	-4.1%	-57.7%	-20.6%	5.5%	-8.3%	-28.3%	-5.9%	-8.3%	13
MSCI Japan Index	-7.5%	-57.4%	-13.2%	-3.8%	-20.4%	-5.1%	-6.9%	-7.5%	15
Commodity Research Bureau BLS/US Spot All Commodities	-6.4%	-40.3%	-21.1%	-4.8%	-5.5%	-14.8%	-11.2%	-6.4%	19
Bloomberg Agriculture Subindex	-11.7%	-41.6%	-29.5%	-16.9%	-13.1%	0.5%	-15.1%	-13.1%	9
Bloomberg Industrial Metals Subindex	-11.8%	-62.2%	-25.5%	8.2%	-4.9%	-47.2%	-16.2%	-11.8%	10
Bloomberg Precious Metals Subindex	0.2%	12.3%	-27.2%	2.9%	19.1%	31.9%	-4.0%	2.9%	34
High Grade Copper	-3.7%	-75.4%	-12.6%	14.3%	11.3%	-69.9%	-8.0%	-3.7%	22
WTI Crude Oil	2.6%	-98.5%	-79.6%	41.9%	-1.5%	70.7%	-4.2%	-1.5%	25
Bitcoin	-10.1%	-64.4%	-124.1%	-101.3%	-37.2%	-91.2%	16.2%	-37.2%	2
Ethereum	-71.4%	-33.5%	-130.6%	-146.4%	-119.8%	-148.3%	-16.8%	-119.8%	1
Bloomberg Barclays U.S. Treasury: 1-3 Year Total Return Index Value U	4.9%	8.5%	5.2%	3.5%	2.3%	2.2%	5.3%	4.9%	35
Bloomberg Barclays U.S. Treasury 5-10 Yr Total Return Index Value Unh	11.2%	23.9%	7.8%	8.2%	6.4%	7.9%	12.6%	8.2%	40
Bloomberg Barclays US Treasury 25+Y Total Return Index Value Unhedged USD	16.9%	51.2%	12.7%	14.0%	11.0%	14.9%	20.9%	14.9%	42
Bloomberg Barclays TIPS 5-10 Year Index Adjusted TR Index	5.0%	-4.5%	-10.7%	4.2%	7.1%	4.5%	5.1%	5.0%	36
Bloomberg Barclays US Credit Total Return Value Unhedged USD	10.3%	3.6%	7.3%	10.0%	9.9%	10.3%	11.5%	10.0%	41
Bloomberg Barclays US Corporate High Yield Total Return Index Value Unhedged USD	1.5%	-30.2%	-16.4%	7.8%	9.6%	7.4%	0.3%	1.5%	32
Bloomberg Dollar Index	5.0%	8.1%	18.6%	7.2%	10.5%	4.4%	6.5%	7.2%	39
Gold	6.1%	19.8%	-14.3%	5.0%	19.5%	42.2%	1.7%	6.1%	38

US Equities
Current GRID Regime: INFLATION

US Equities
Pending GRID Regime: DEFLATION

Communication Services
Current GRID Regime: INFLATION

Communication Services
Pending GRID Regime: DEFLATION



Consumer Discretionary
Current GRID Regime: INFLATION

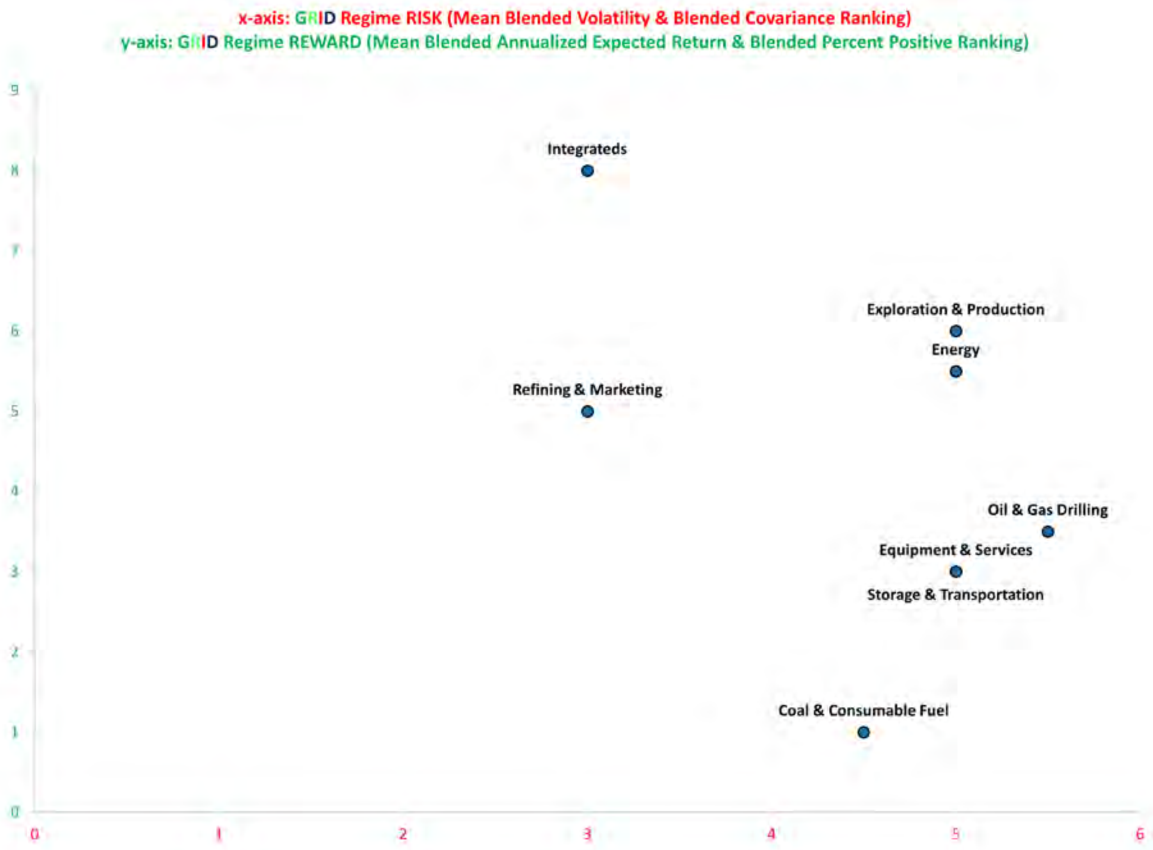
Consumer Discretionary
Pending GRID Regime: DEFLATION

Consumer Staples
Current GRID Regime: INFLATION

Consumer Staples
Pending GRID Regime: DEFLATION

Energy
Current GRID Regime: INFLATION

Energy
Pending GRID Regime: DEFLATION



Financials
Current GRID Regime: INFLATION

Financials
Pending GRID Regime: DEFLATION

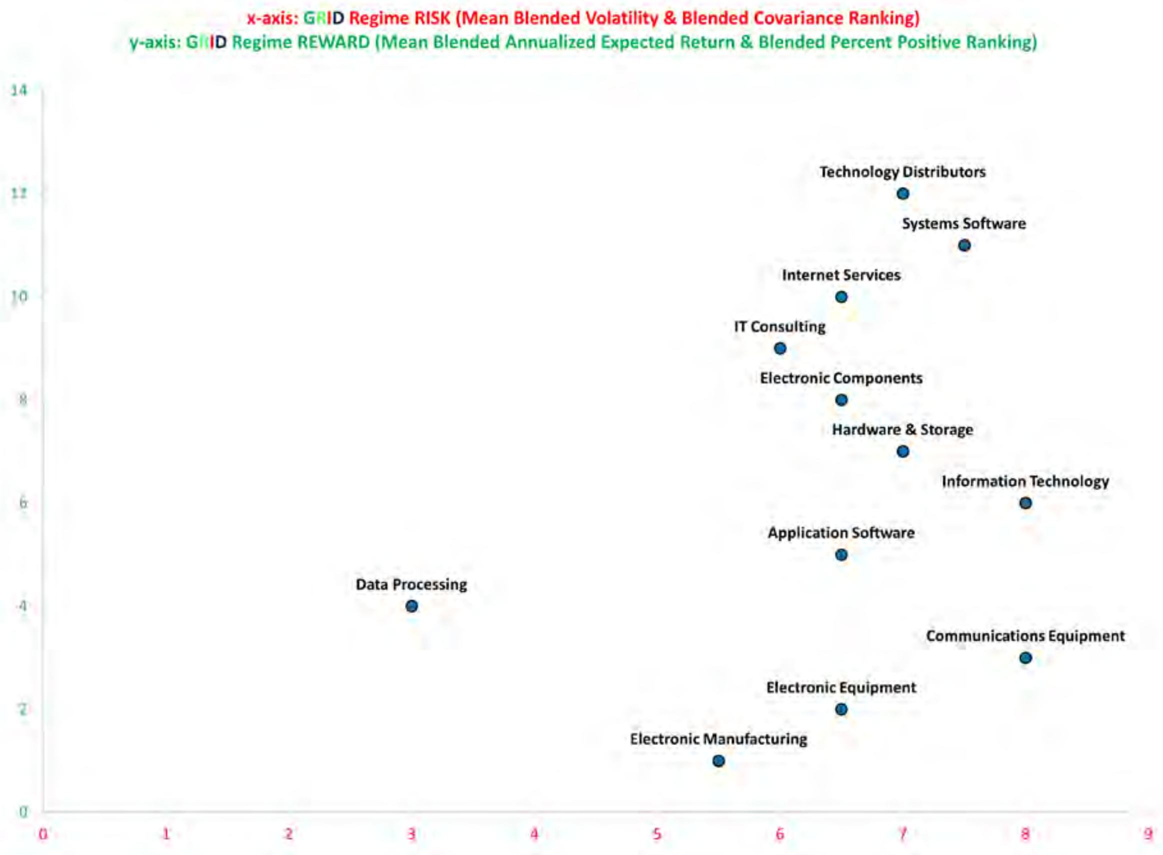
Health Care
Current GRID Regime: INFLATION

Health Care
Pending GRID Regime: DEFLATION

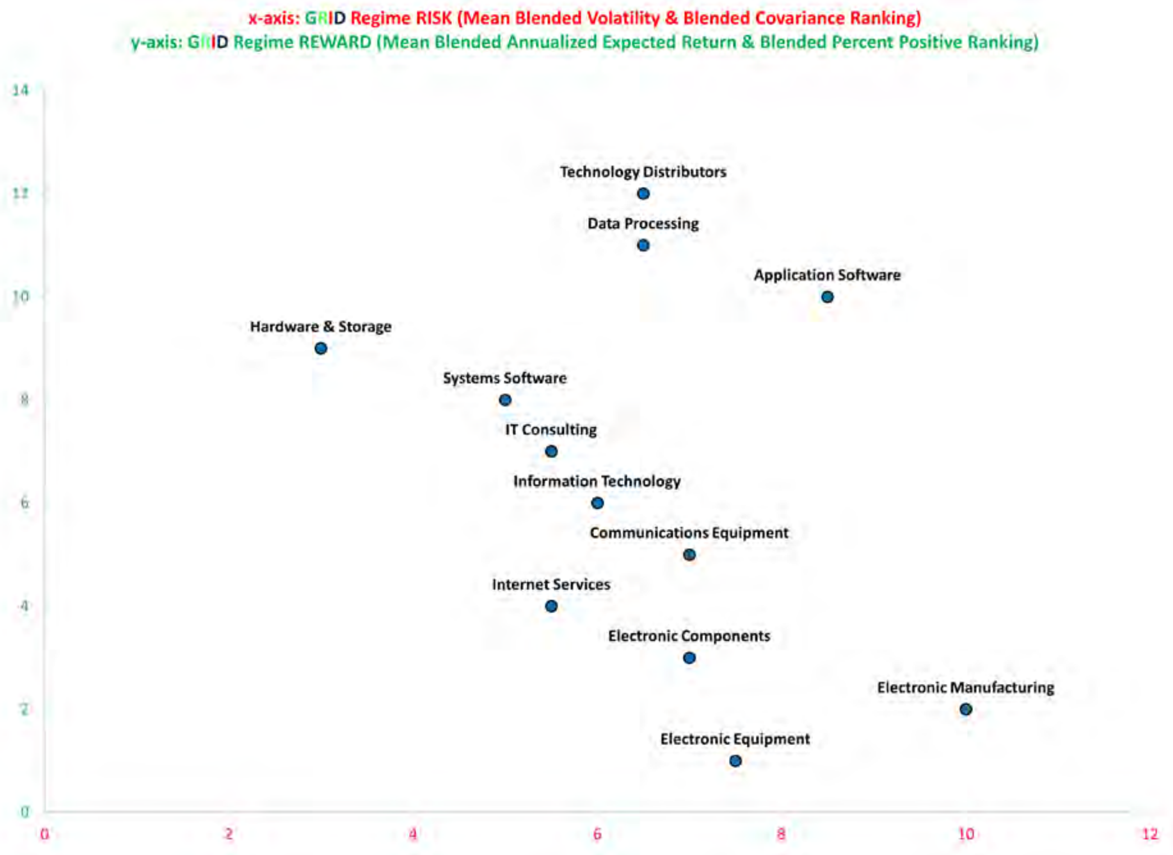
Industrials
Current GRID Regime: INFLATION

Industrials
Pending GRID Regime: DEFLATION

Information Technology
Current GRID Regime: INFLATION



Information Technology
Pending GRID Regime: DEFLATION



Materials
Current GRID Regime: INFLATION

Materials
Pending GRID Regime: DEFLATION

Real Estate
Current GRID Regime: INFLATION

Real Estate
Pending GRID Regime: DEFLATION

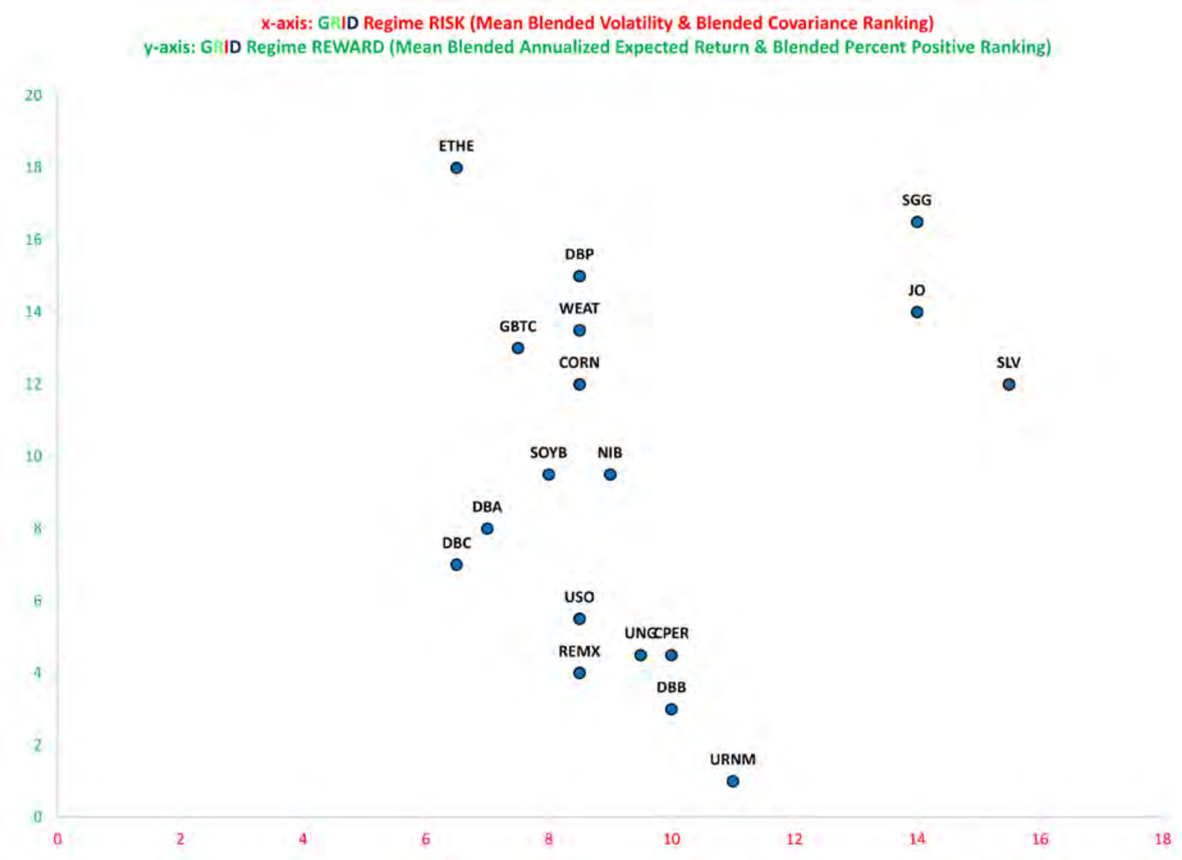
Utilities
Current GRID Regime: INFLATION

Utilities
Pending GRID Regime: DEFLATION

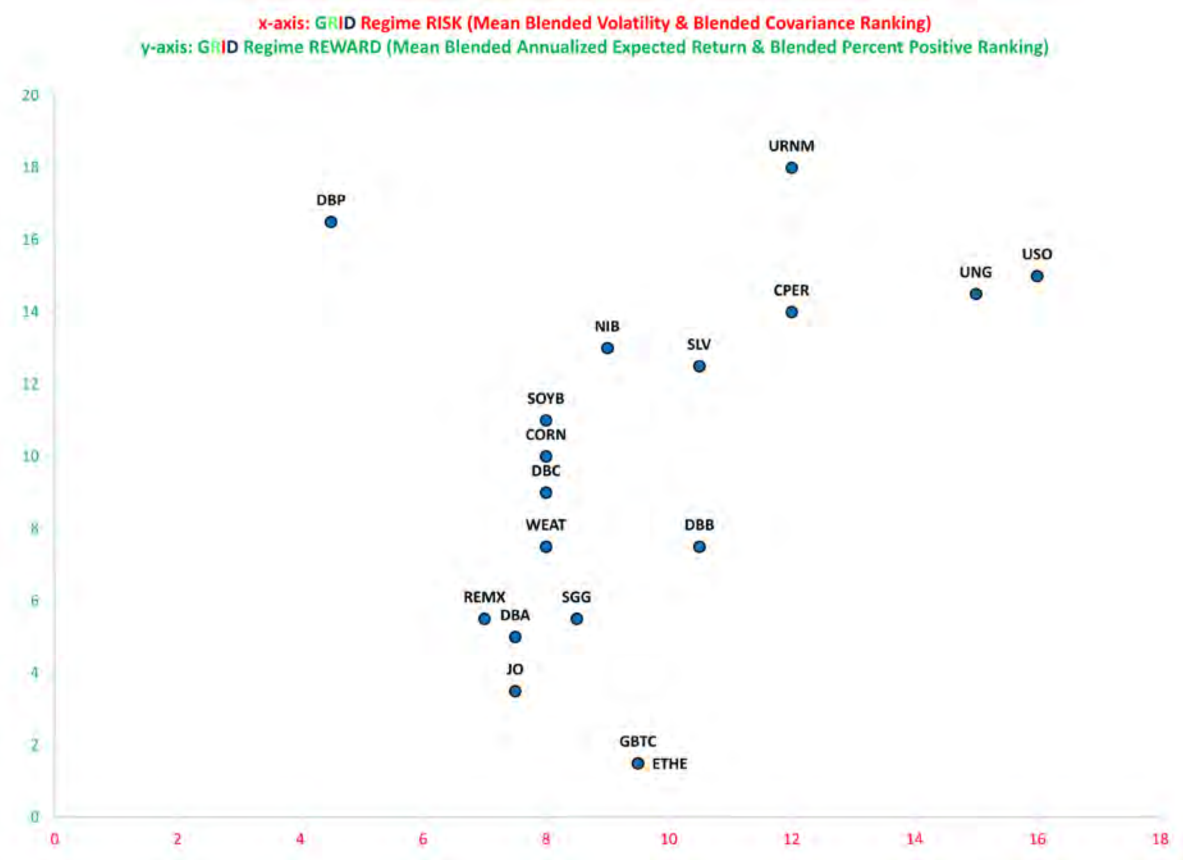
Global Equities
Current GRID Regime: INFLATION

Global Equities
Pending GRID Regime: DEFLATION

Commodities
Current GRID Regime: INFLATION



Commodities
Pending GRID Regime: DEFLATION



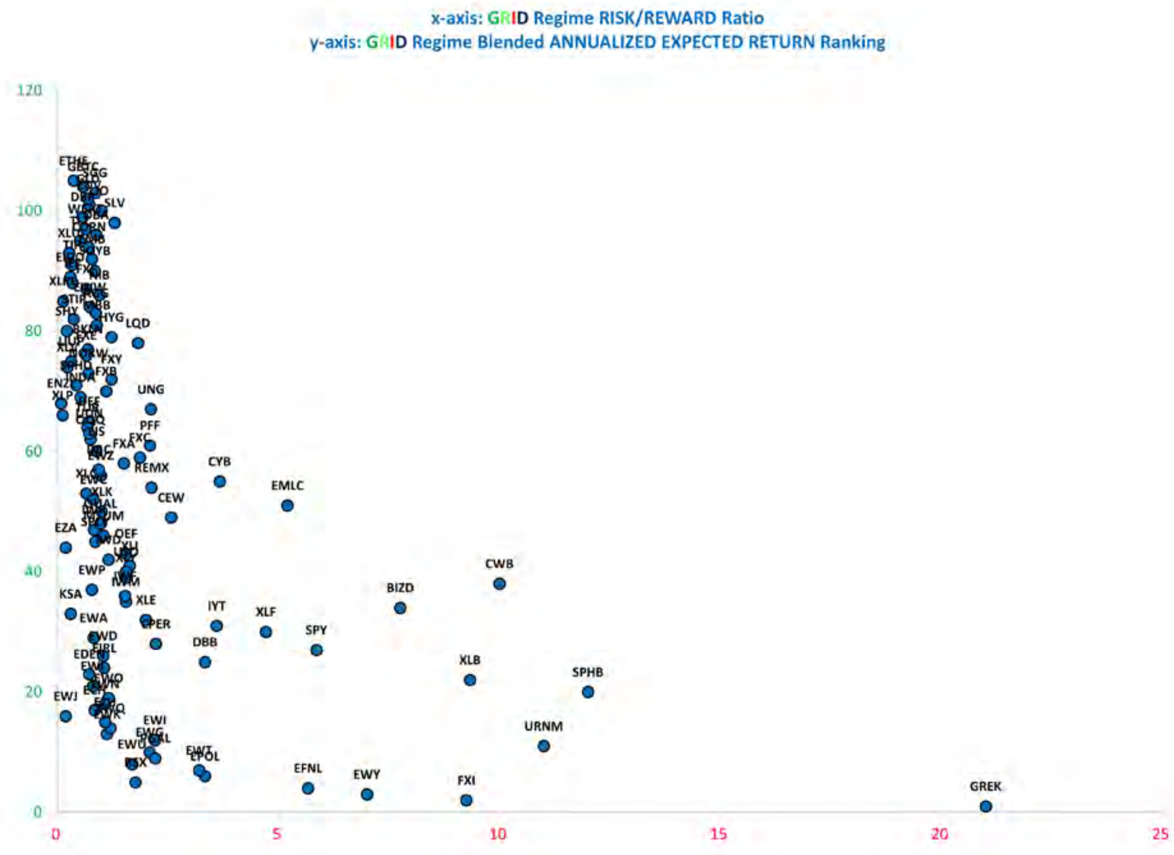
Fixed Income
Current GRID Regime: INFLATION

Fixed Income
Pending GRID Regime: DEFLATION

Foreign Exchange
Current GRID Regime: INFLATION

Foreign Exchange
Pending GRID Regime: DEFLATION

Global Macro
Current GRID Regime: INFLATION



Global Macro
Pending GRID Regime: DEFLATION

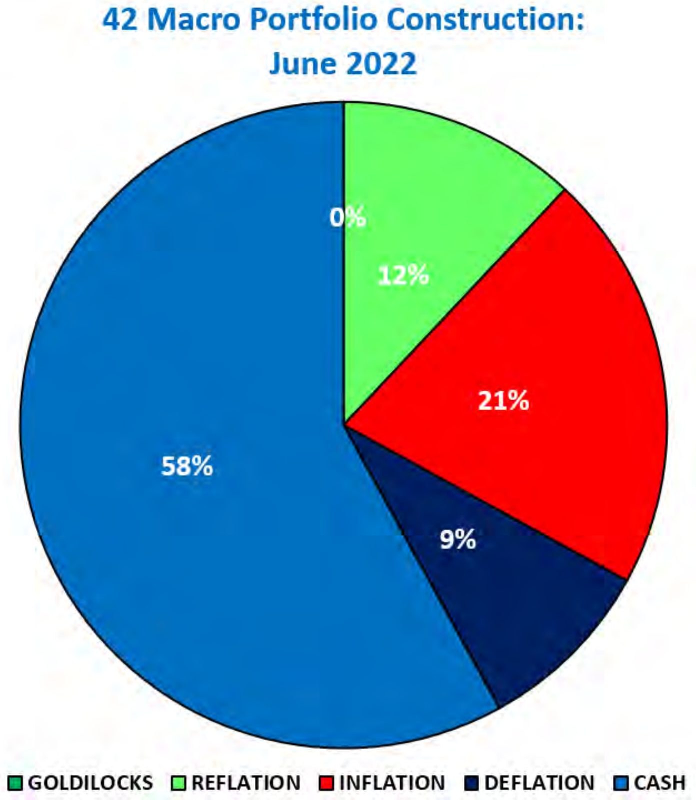
Portfolio Construction Candidates
Current GRID Regime: INFLATION

Portfolio Construction Candidates
Pending GRID Regime: DEFLATION

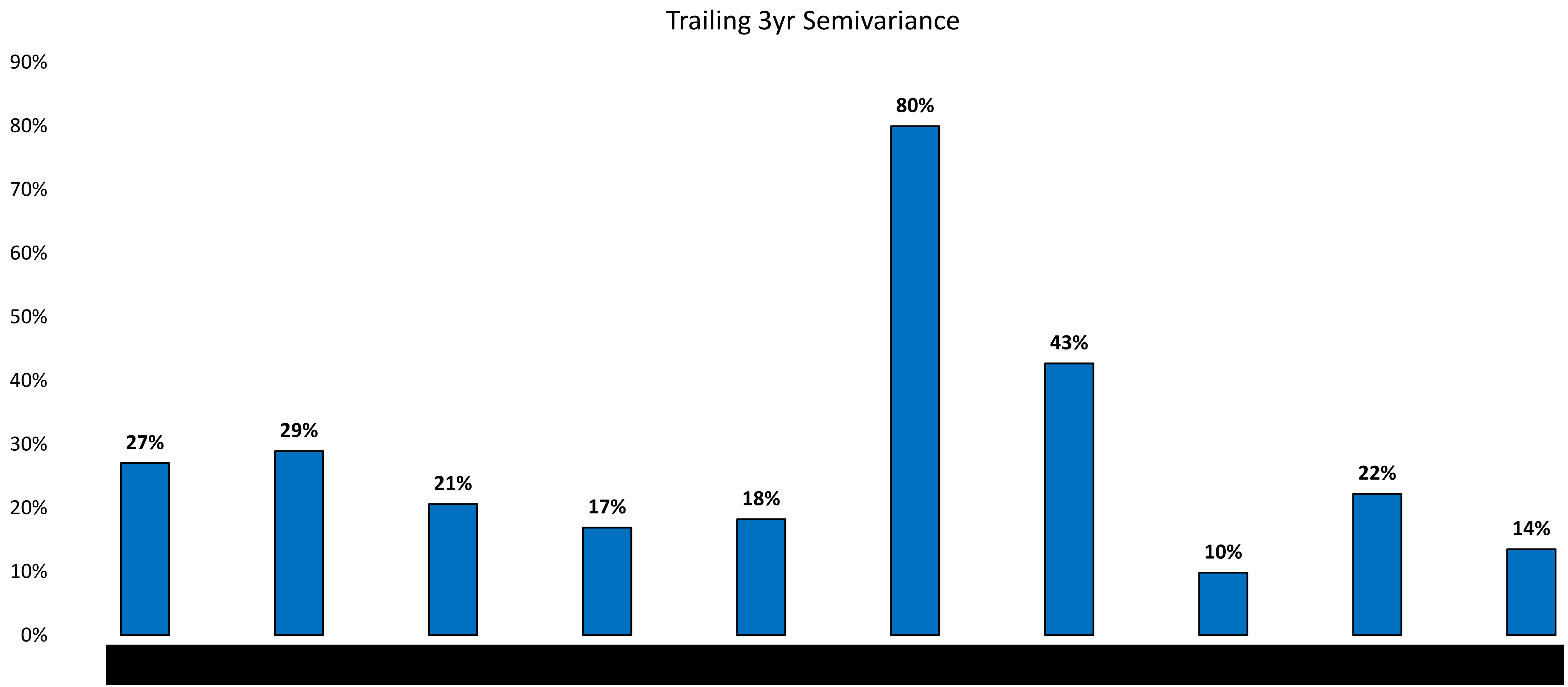
Our Current Portfolio Construction

		GOLDILOCKS	REFLATION	INFLATION	DEFLATION	CASH/TETHER	CASH/TETHER EX-SHORTS
Jun-22	GRID REGIME ALLOCATIONS	0%	12%	21%	9%	58%	49%
Ticker	Net Equity, Commodity, and Crypto Exposure = 0%	0%	12%	24%	0%	n/a	Δ Since Prior Update
[redacted]			3%				
			3%				
			6%				
				9%			
				9%			
				3%			
				3%			

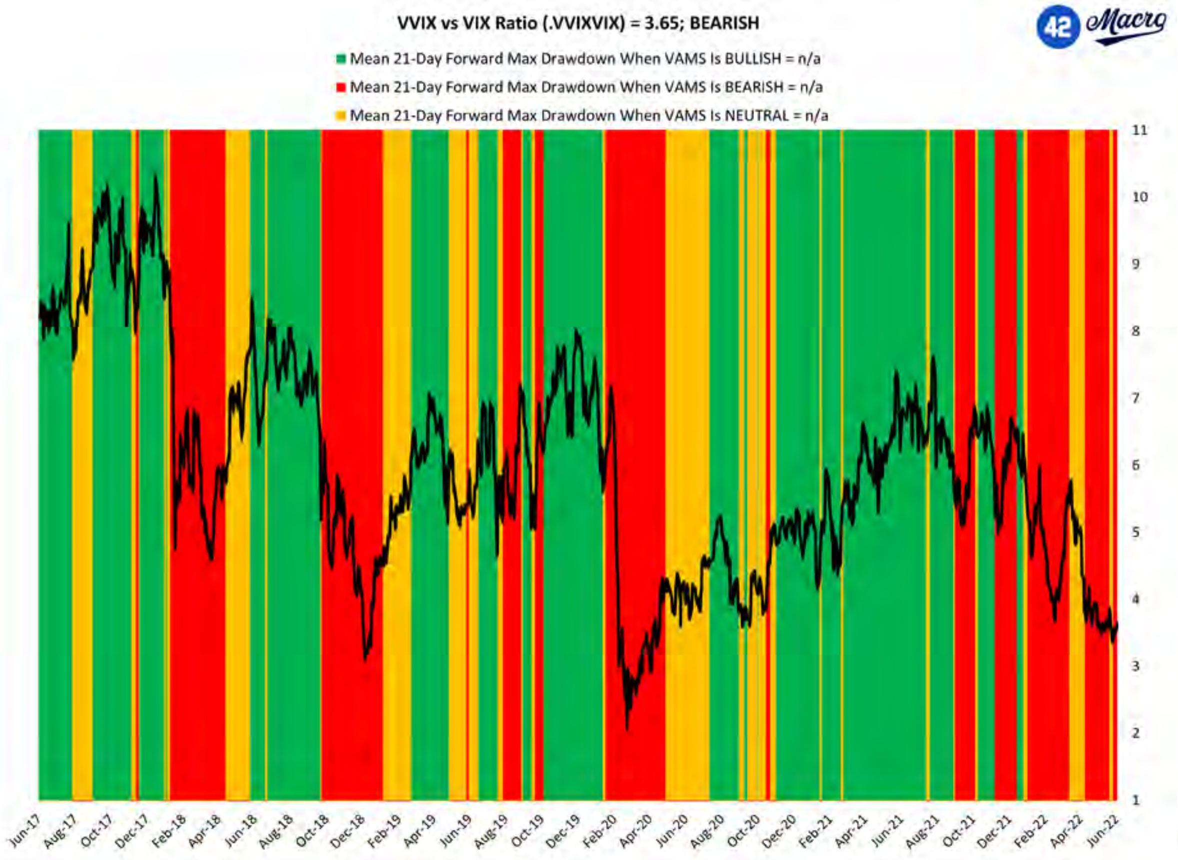
Ticker	Net Fixed Income, FX, and Volatility Exposure = 6%	0%	0%	-3%	9%	n/a	Δ Since Prior Update
[redacted]				-9%			
				6%			
					9%		



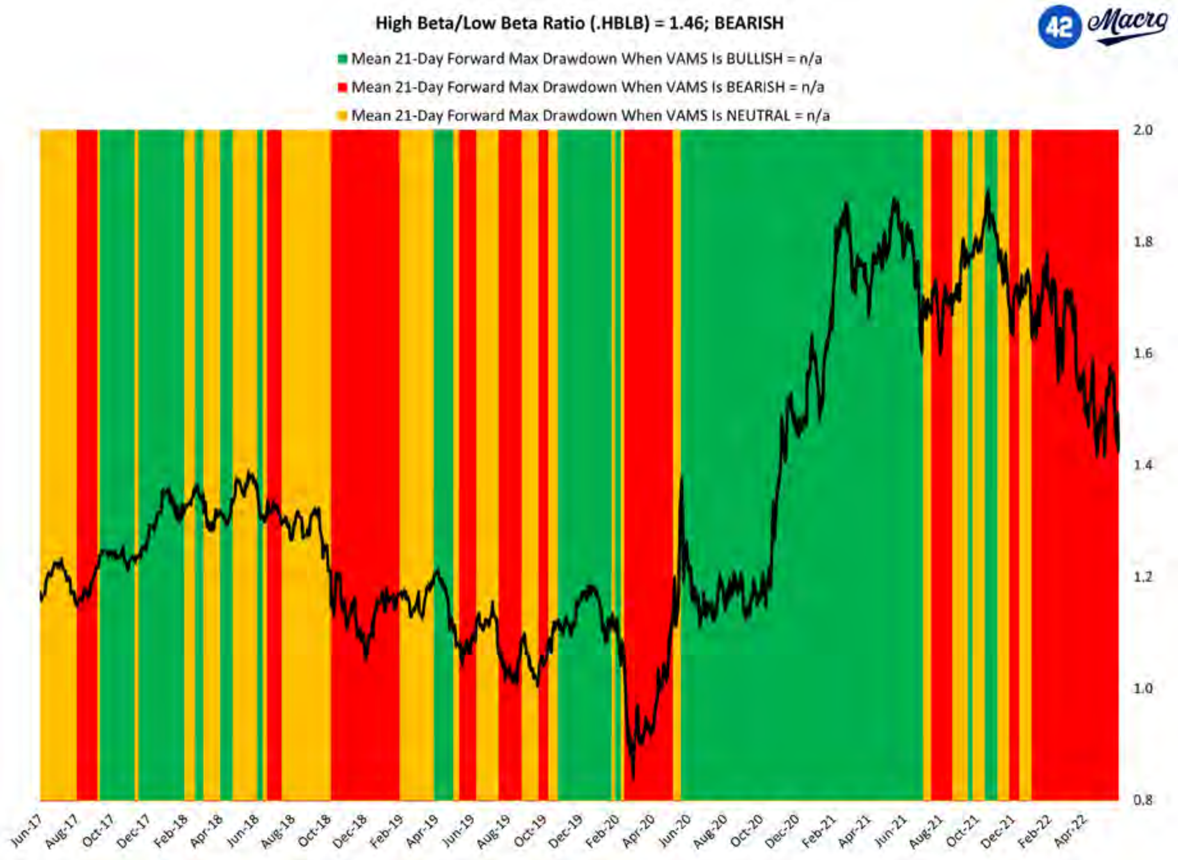
Volatility-Adjusted Position Sizing Based On Relative t3yr Semivariance: 0th to 33rd Percentile = 9% Position; 34th to 67th Percentile = 6%; 68th to 100th Percentile = 3%



Four Horsemen Of Market Risk: VVIX/VIX Ratio

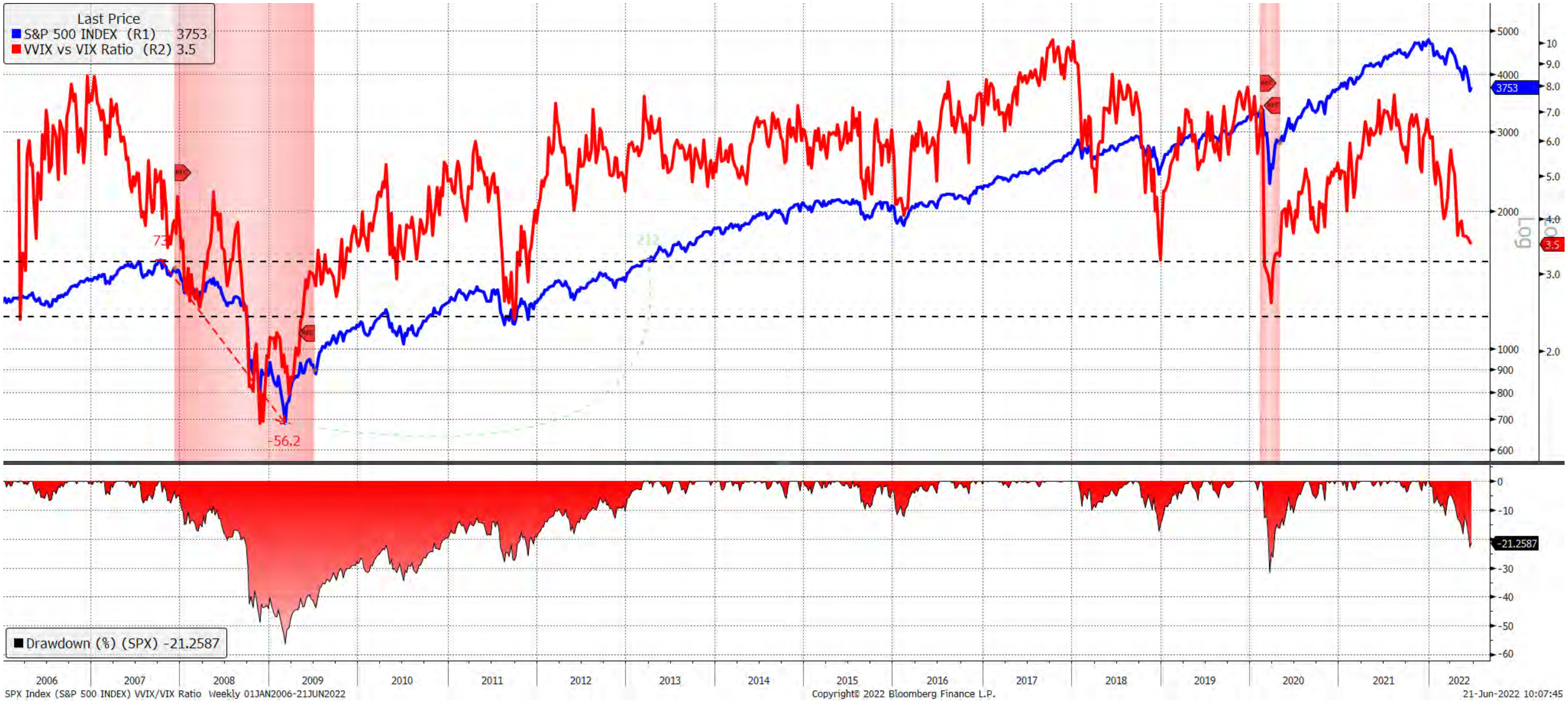


Four Horsemen Of Market Risk: High Beta/Low Beta Ratio

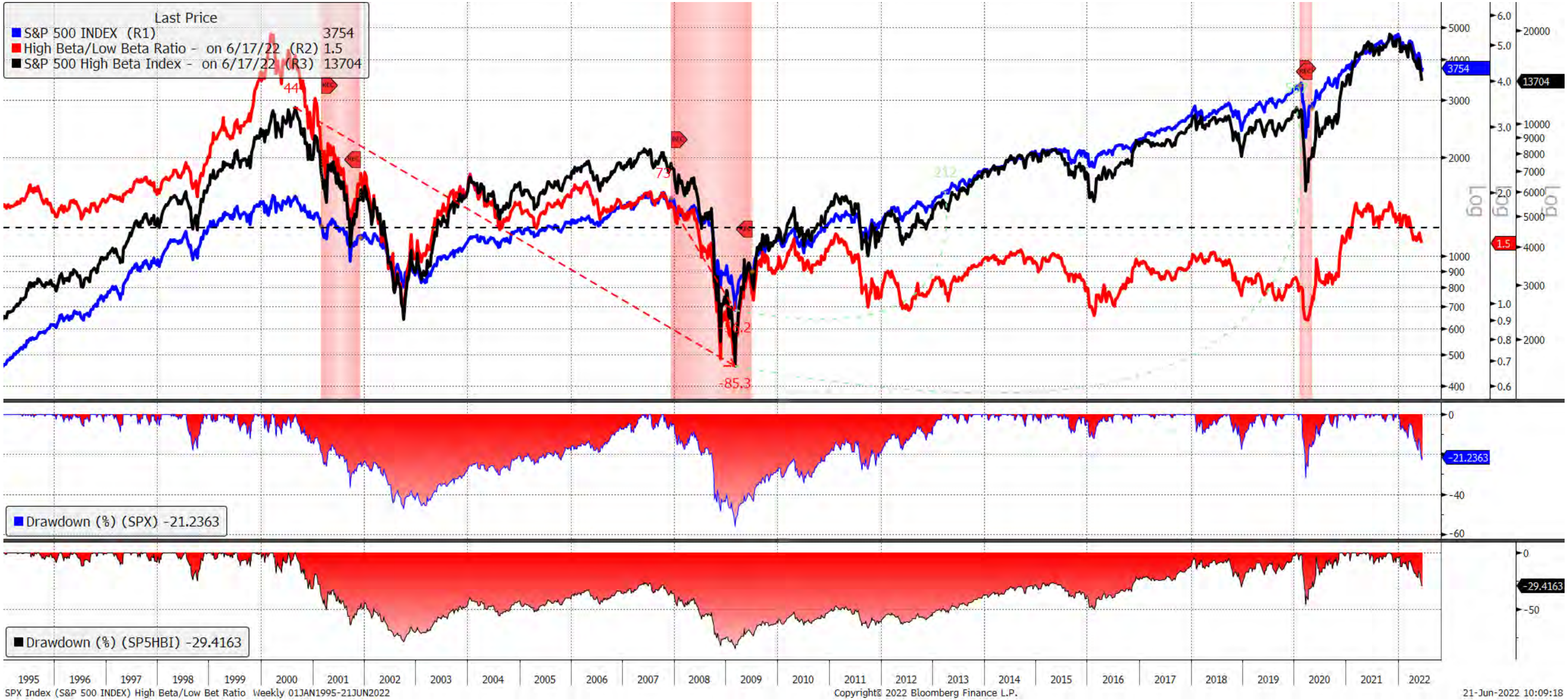


 Volatility adjustment factor for the High Beta/Low Beta Ratio = HY OAS. Bullish VAMS = GREEN; Bearish VAMS = RED; and Neutral VAMS = ORANGE.

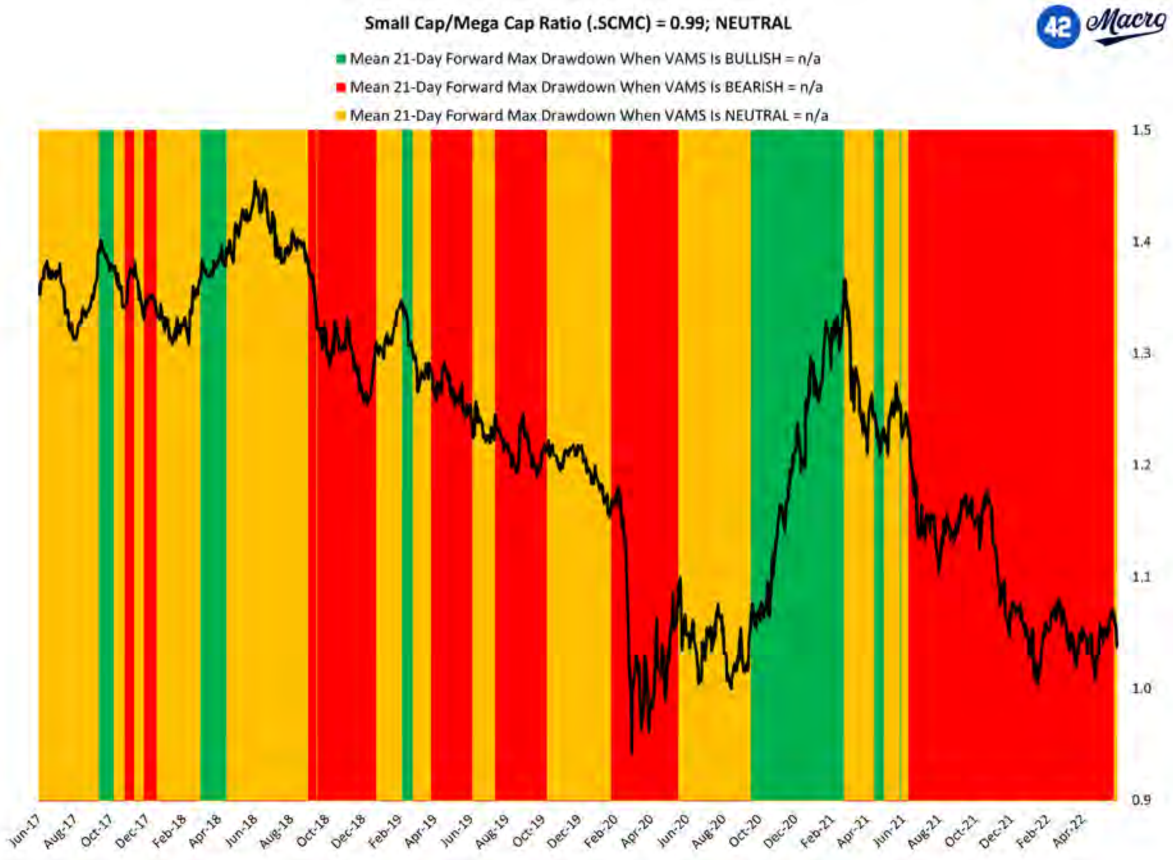
VVIX/VIX Ratio: ↓ Almost Always = Risk Off



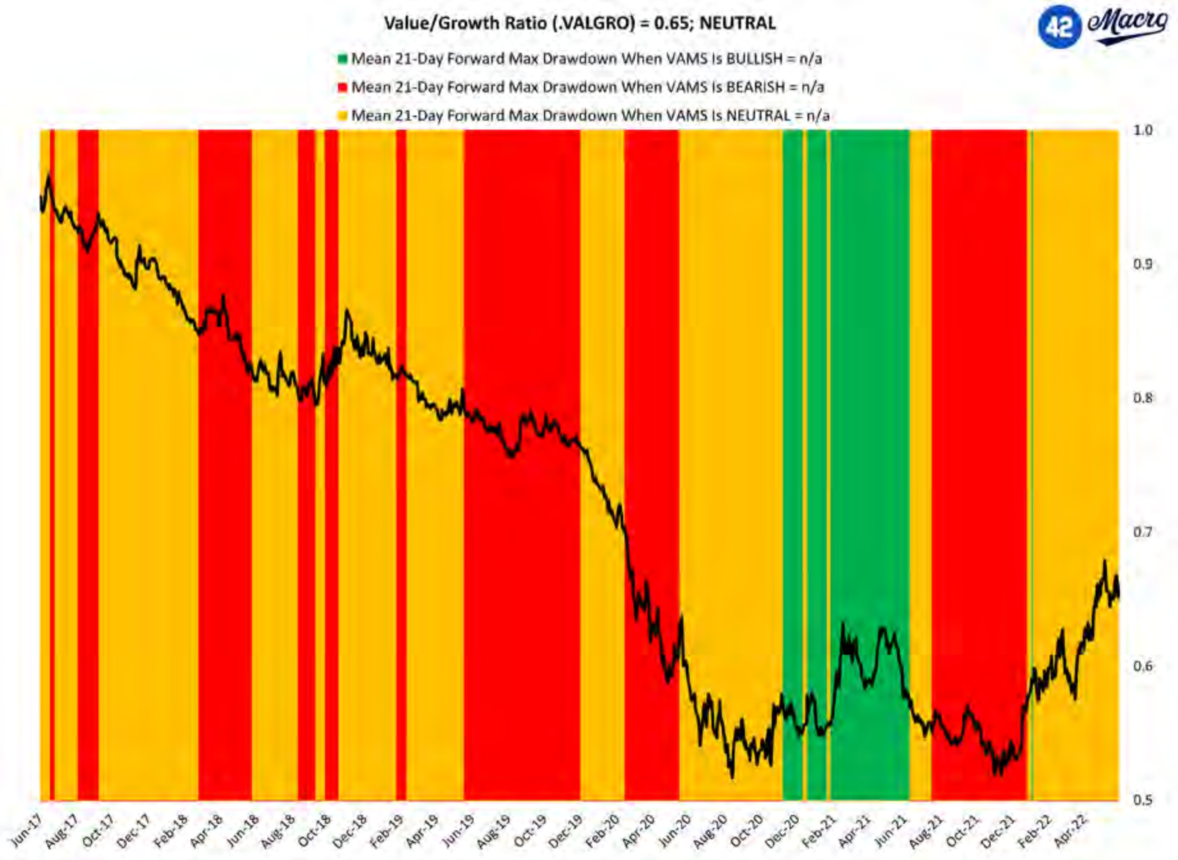
High Beta/Low Beta Ratio: ↓ Almost Always = Risk Off



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

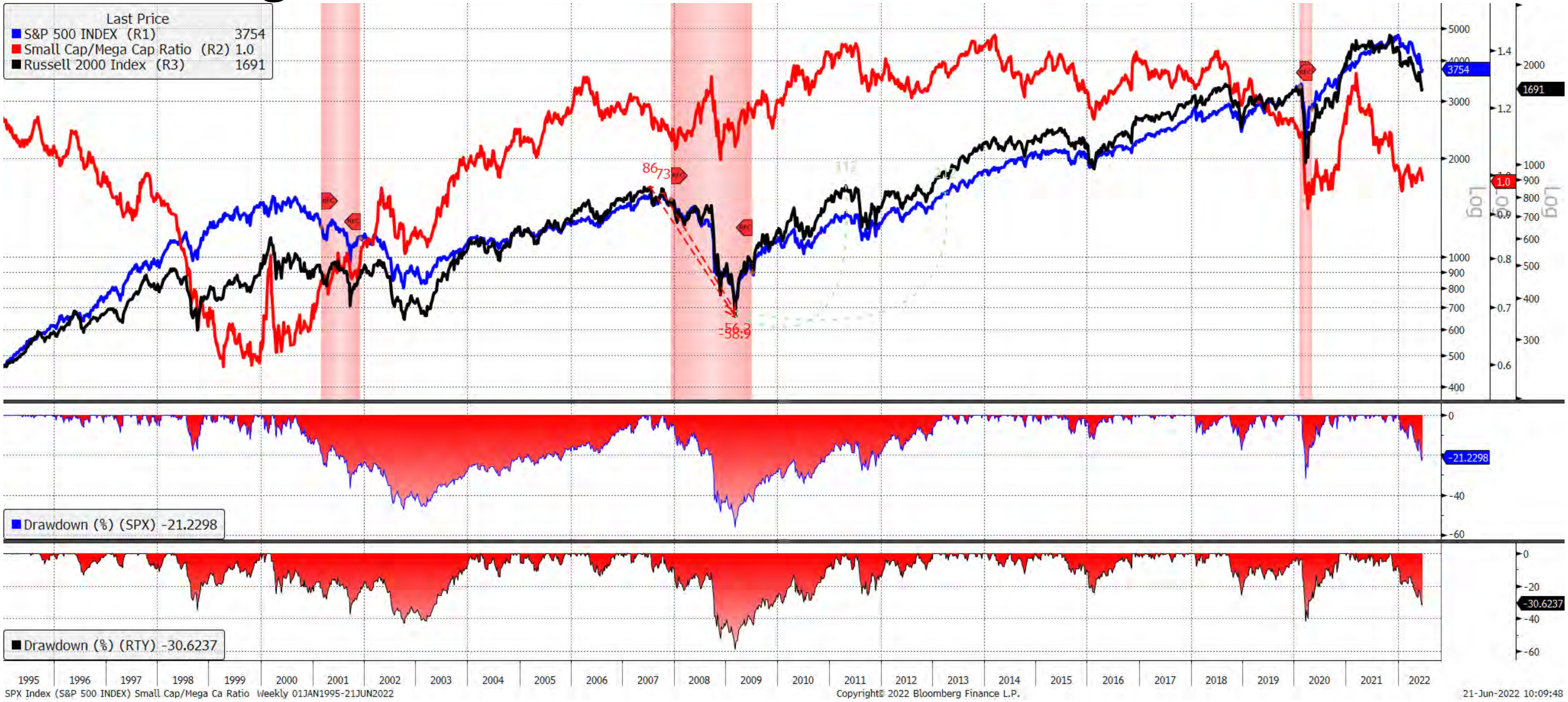


Four Horsemen Of Market Risk: Value/Growth Ratio

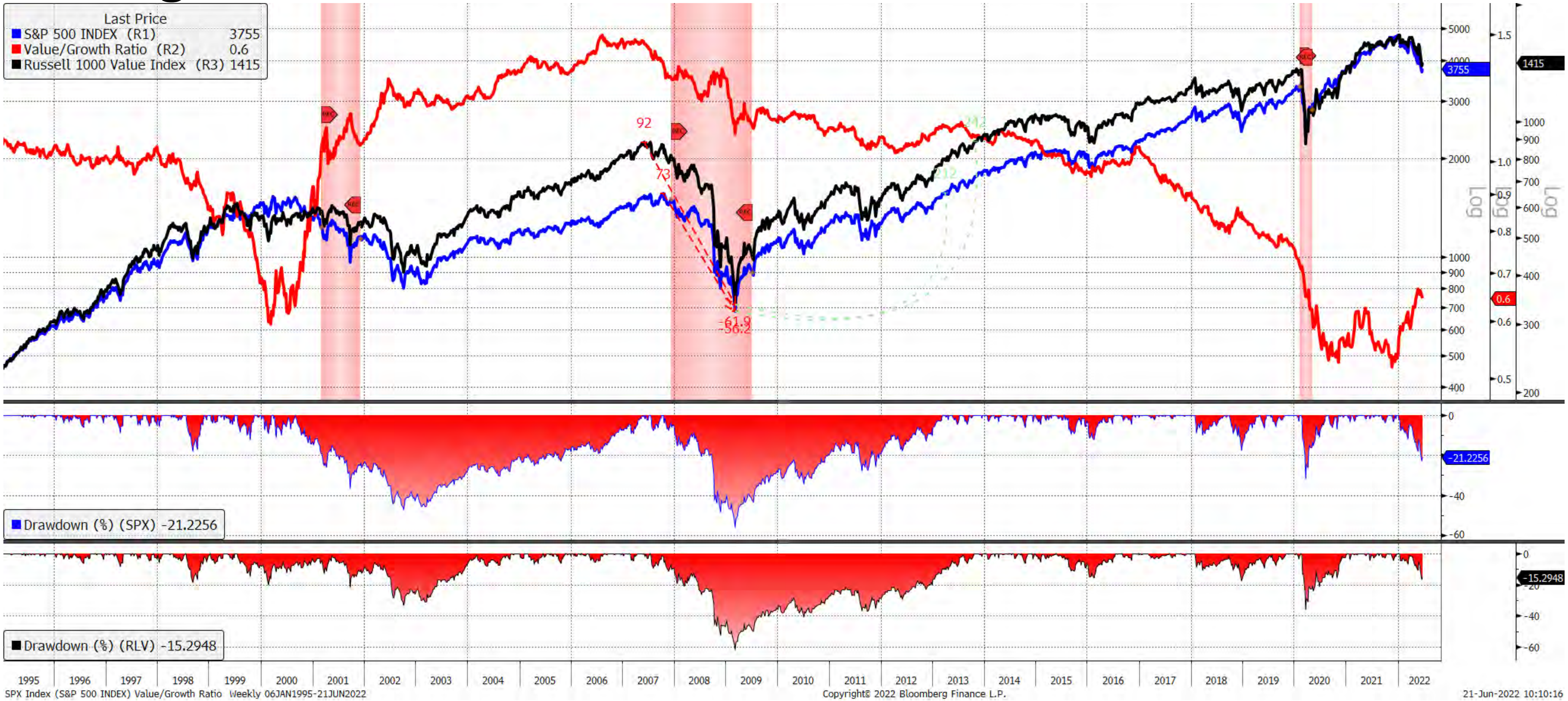


Volatility adjustment factors for the Small Cap/Mega Cap Ratio = BBDXY and Value/Growth Ratio = CCC OAS.
Bullish VAMS = GREEN; Bearish VAMS = RED; and Neutral VAMS = ORANGE.

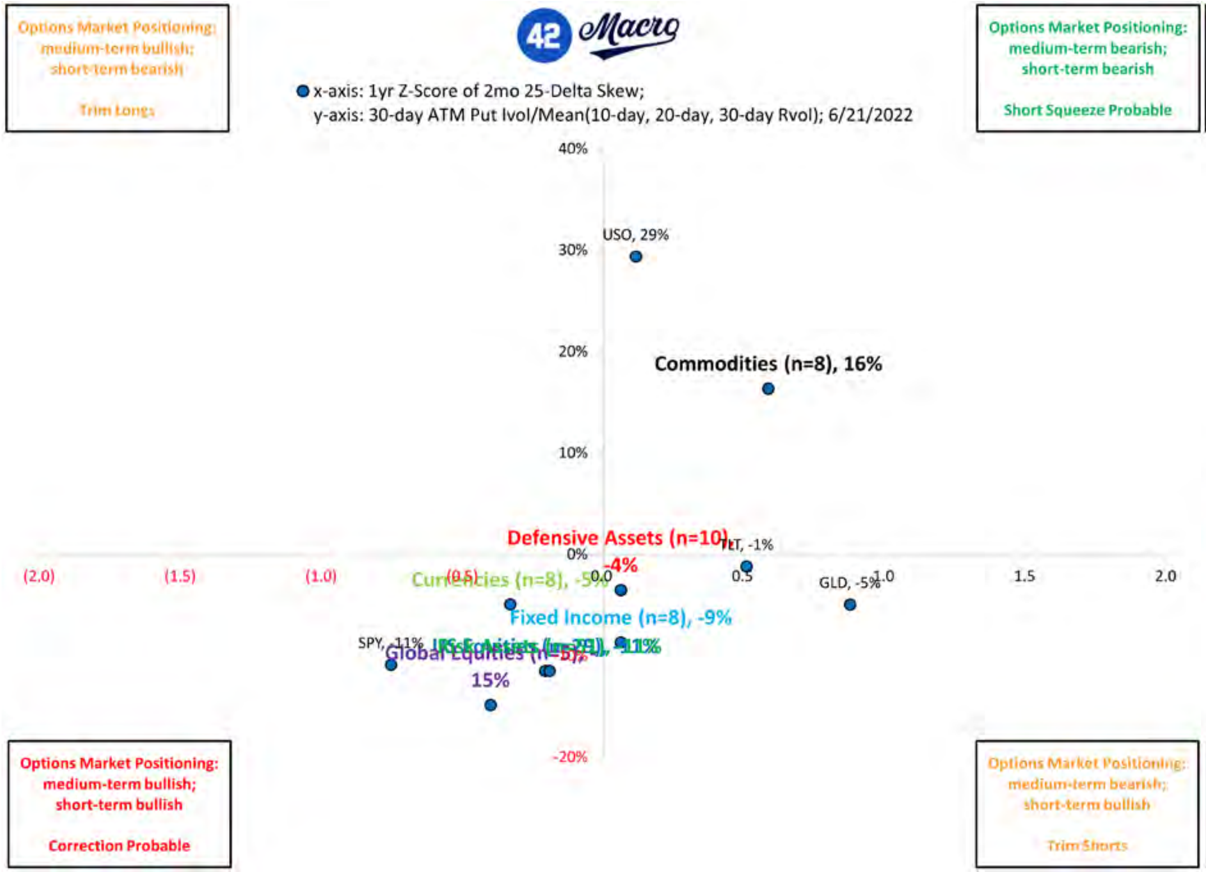
Small Cap/Mega Cap Ratio: ↓ Almost Always = Risk Off, Save For The Bursting Of The Tech Bubble And 1H08



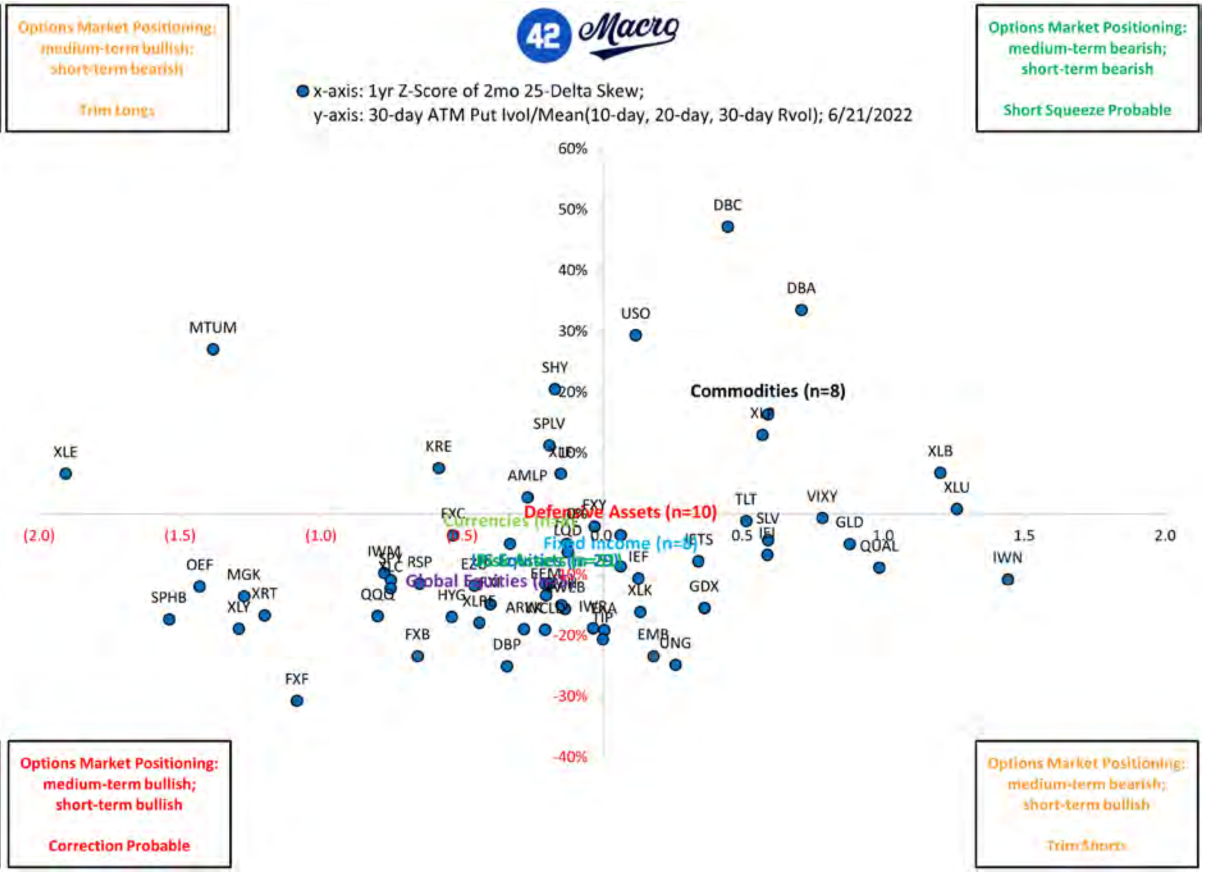
Value/Growth Ratio: ↑ Almost Always = Risk On, Save For The Bursting Of The Tech Bubble And 2H08



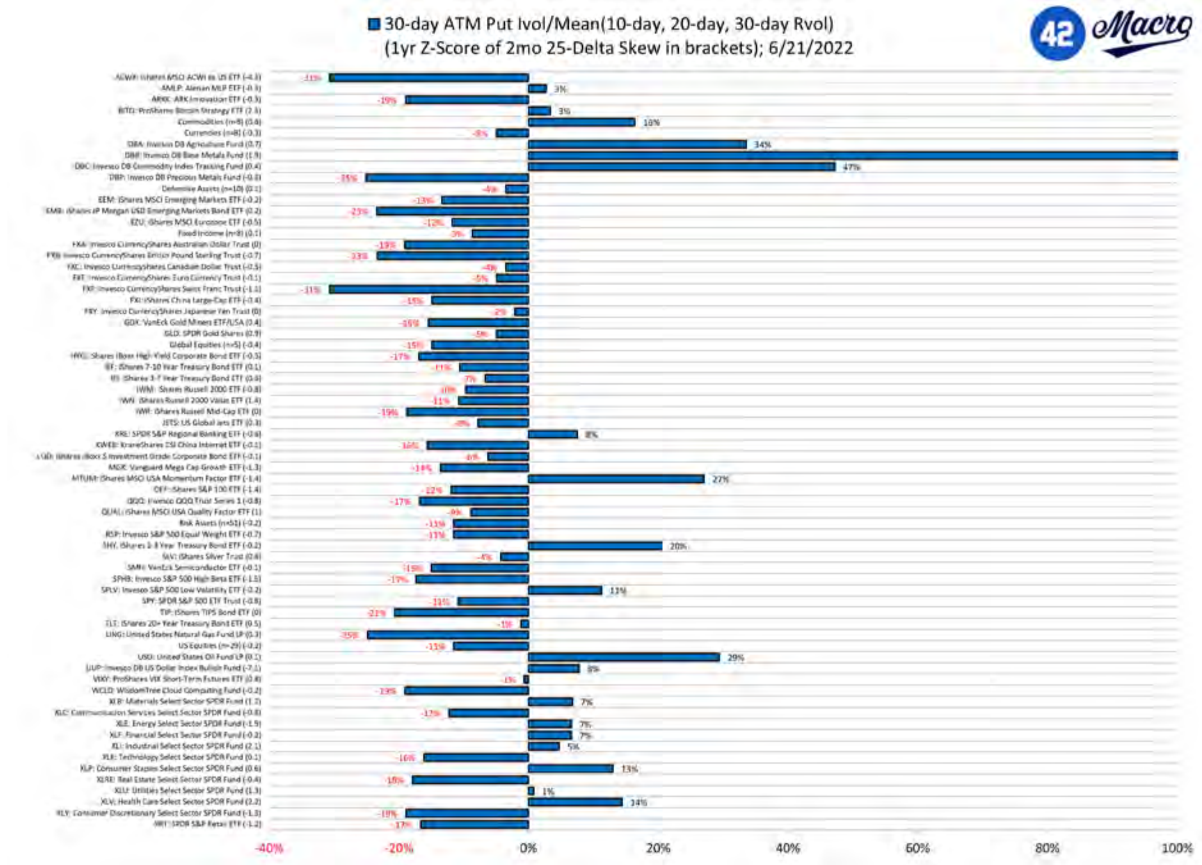
CROWDING: Macro



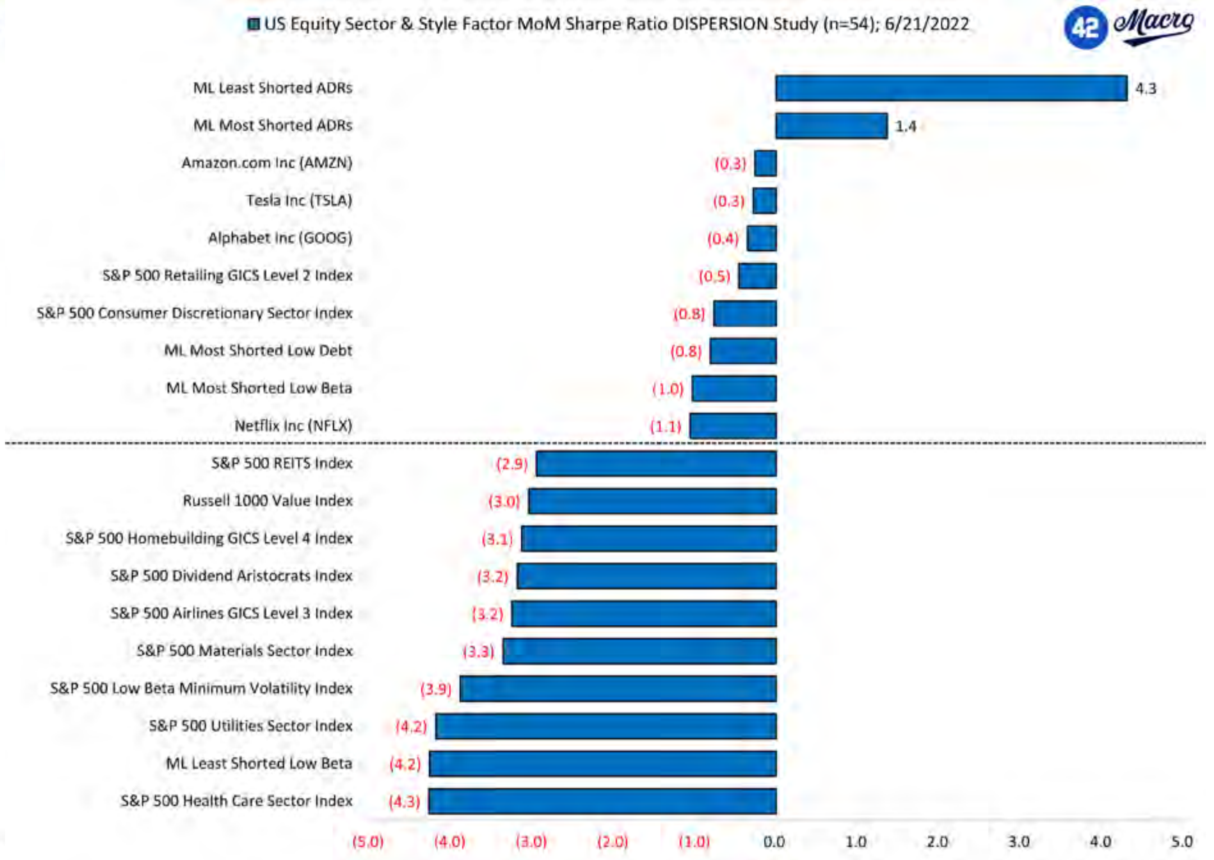
CROWDING: Micro



CROWDING: Aggregate

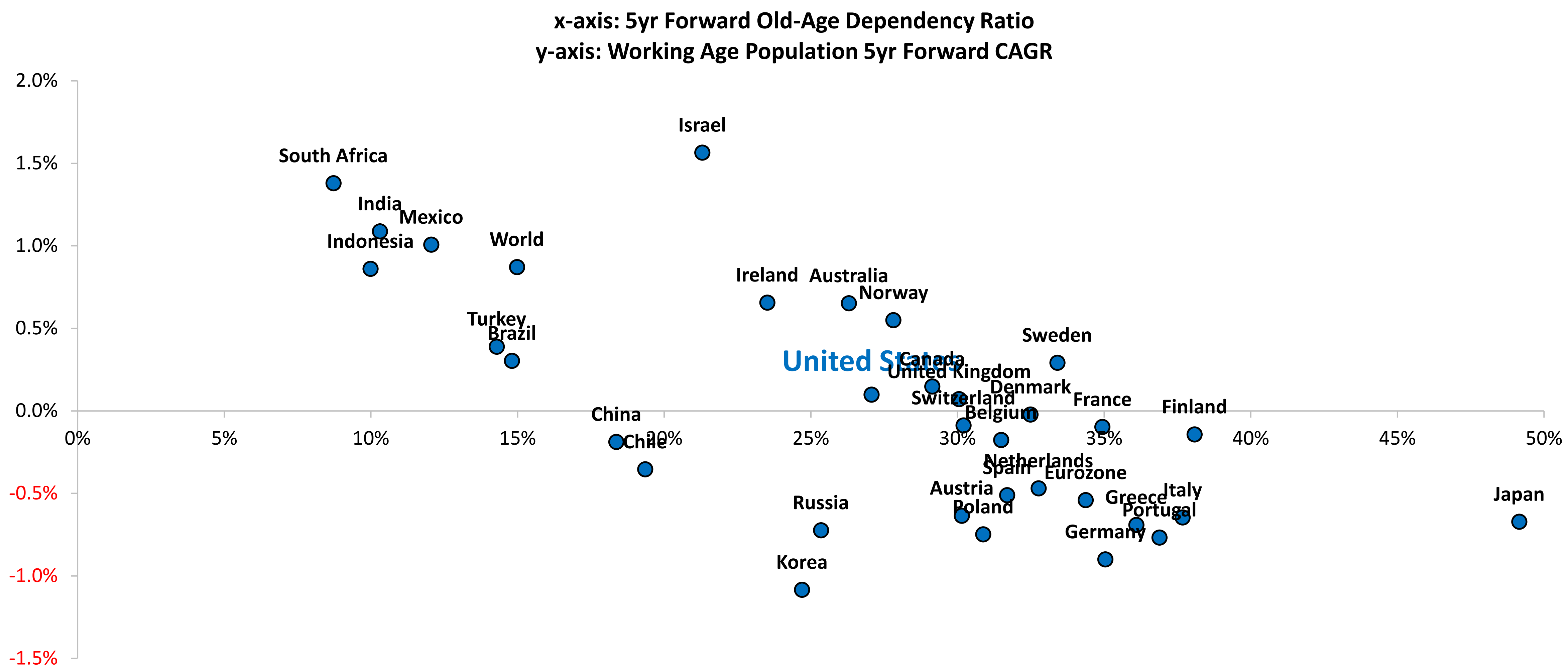


DISPERSION: "Pod Shop" Flows

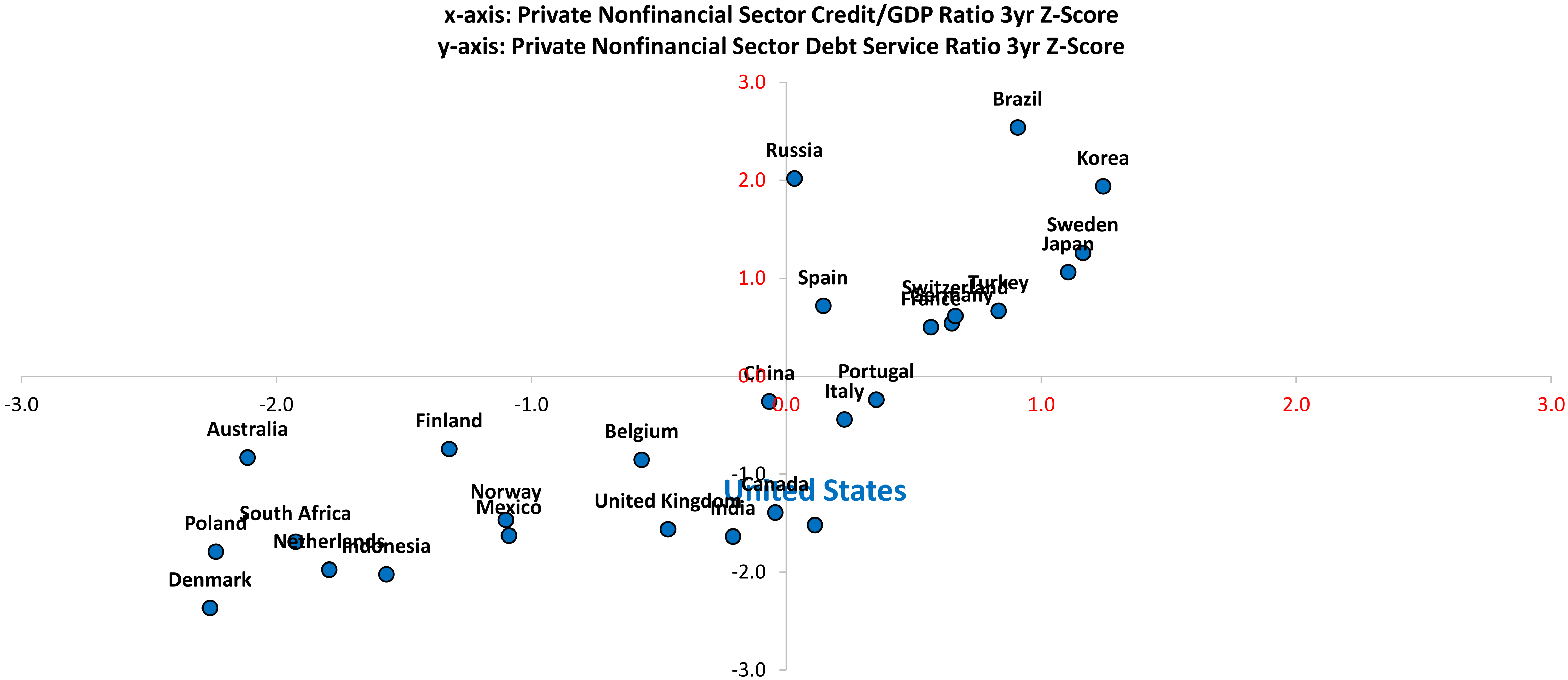


CROWDING chart axis capped at [100%] to reduce the visual impact of statistical outliers.

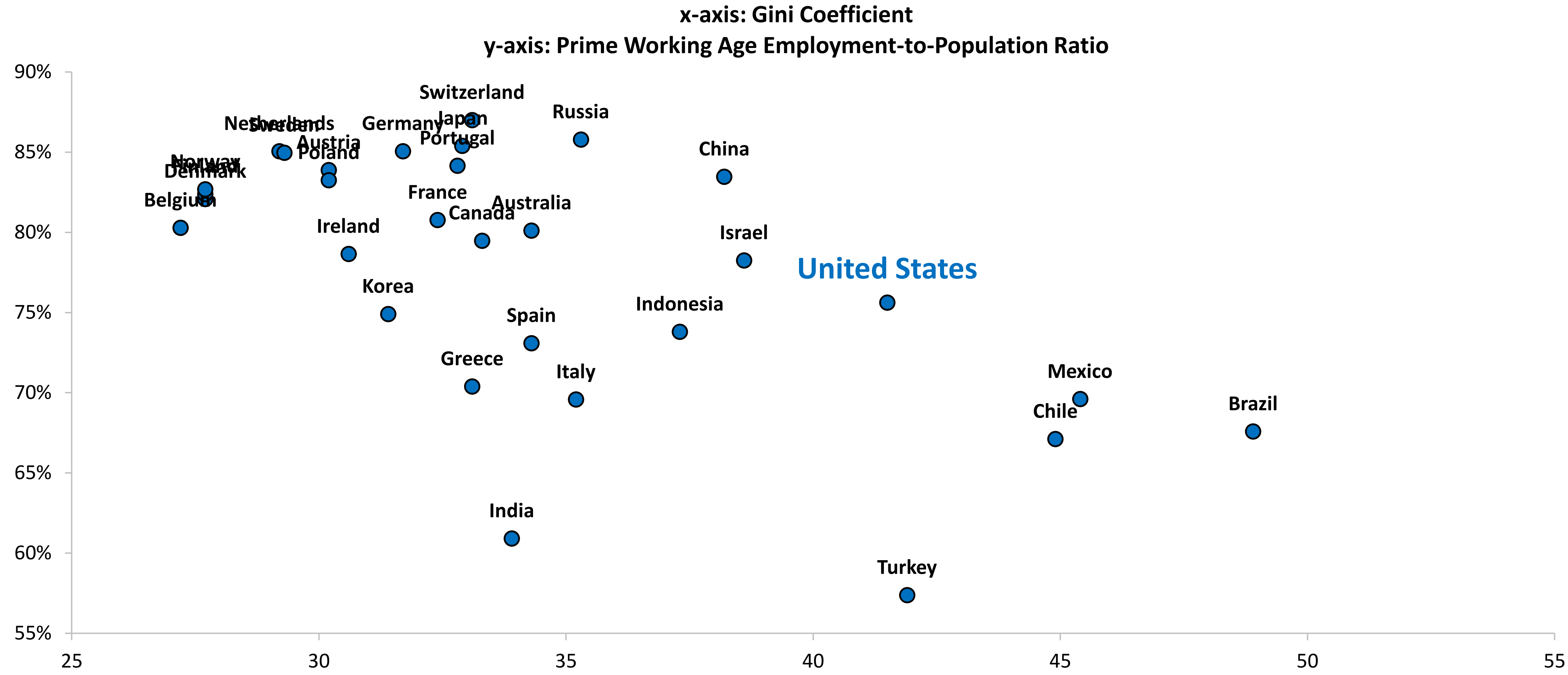
Four Horsemen Of Economic Risk: DEMOGRAPHICS



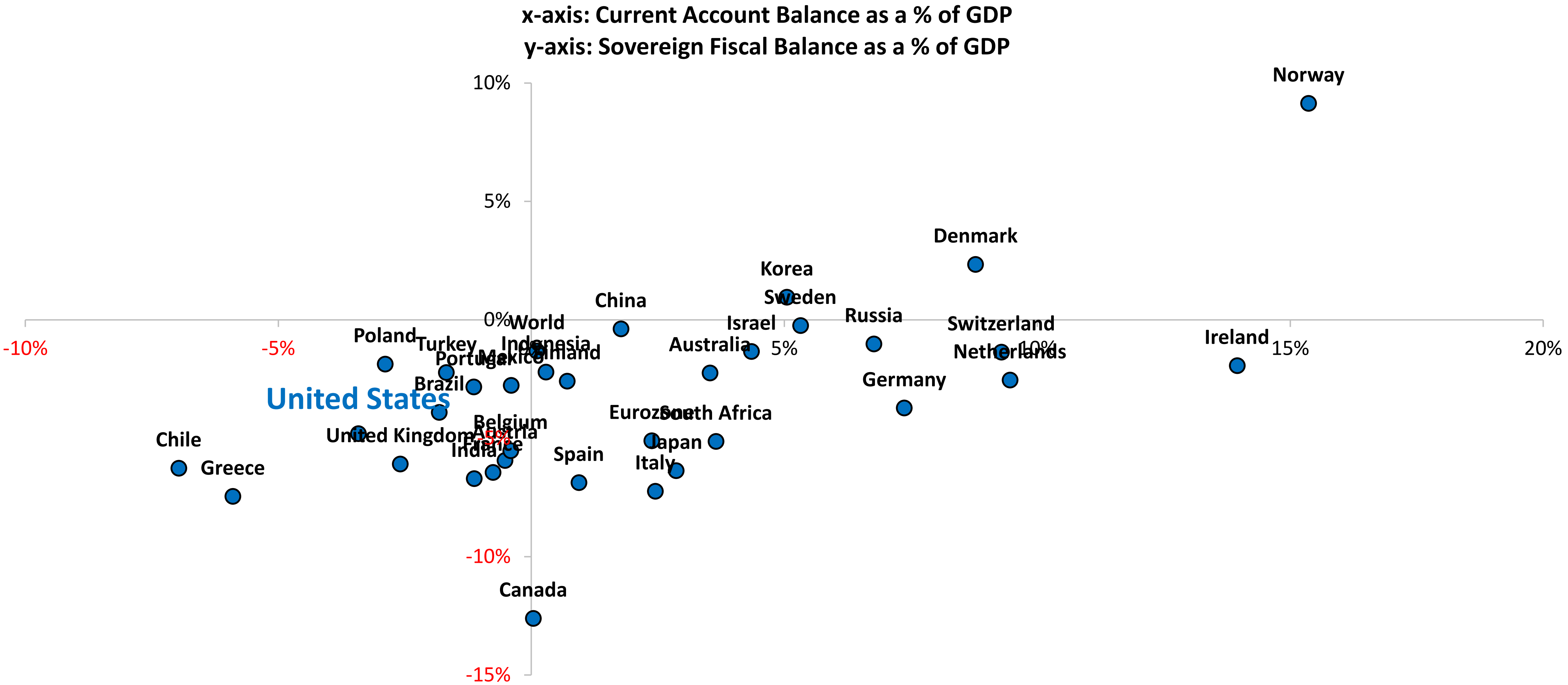
Four Horsemen Of Economic Risk: **LEVERAGE**



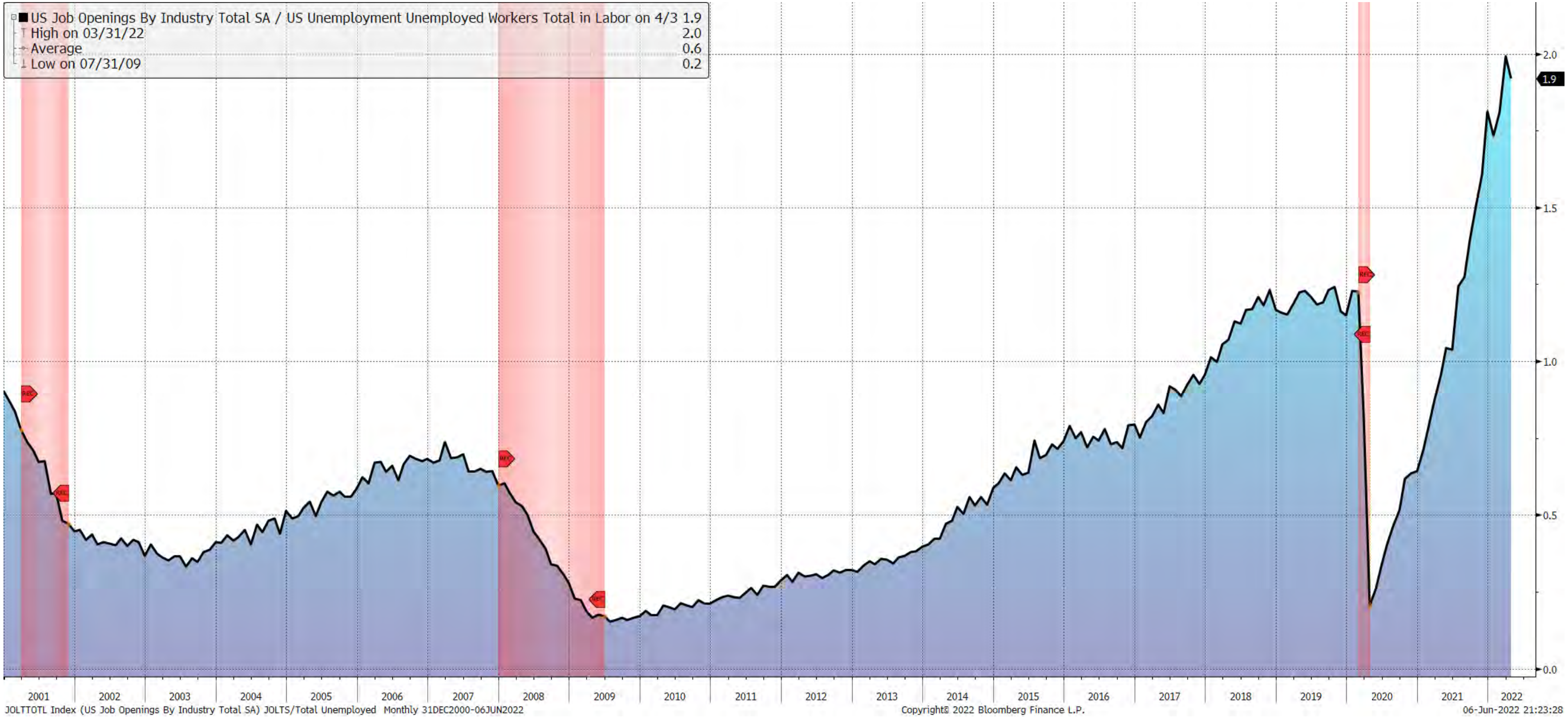
Four Horsemen Of Economic Risk: **POLITICS**



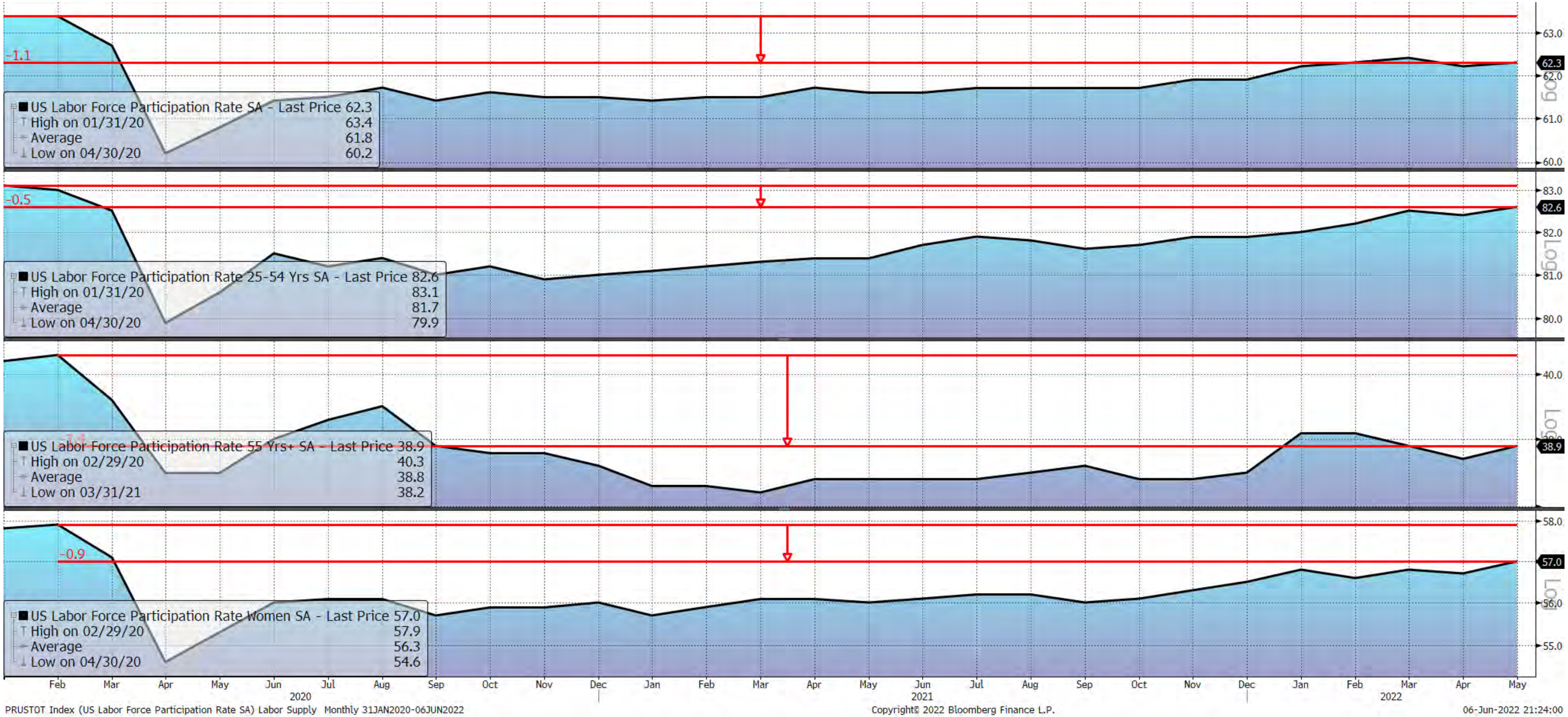
Four Horsemen Of Economic Risk: BALANCE OF PAYMENTS



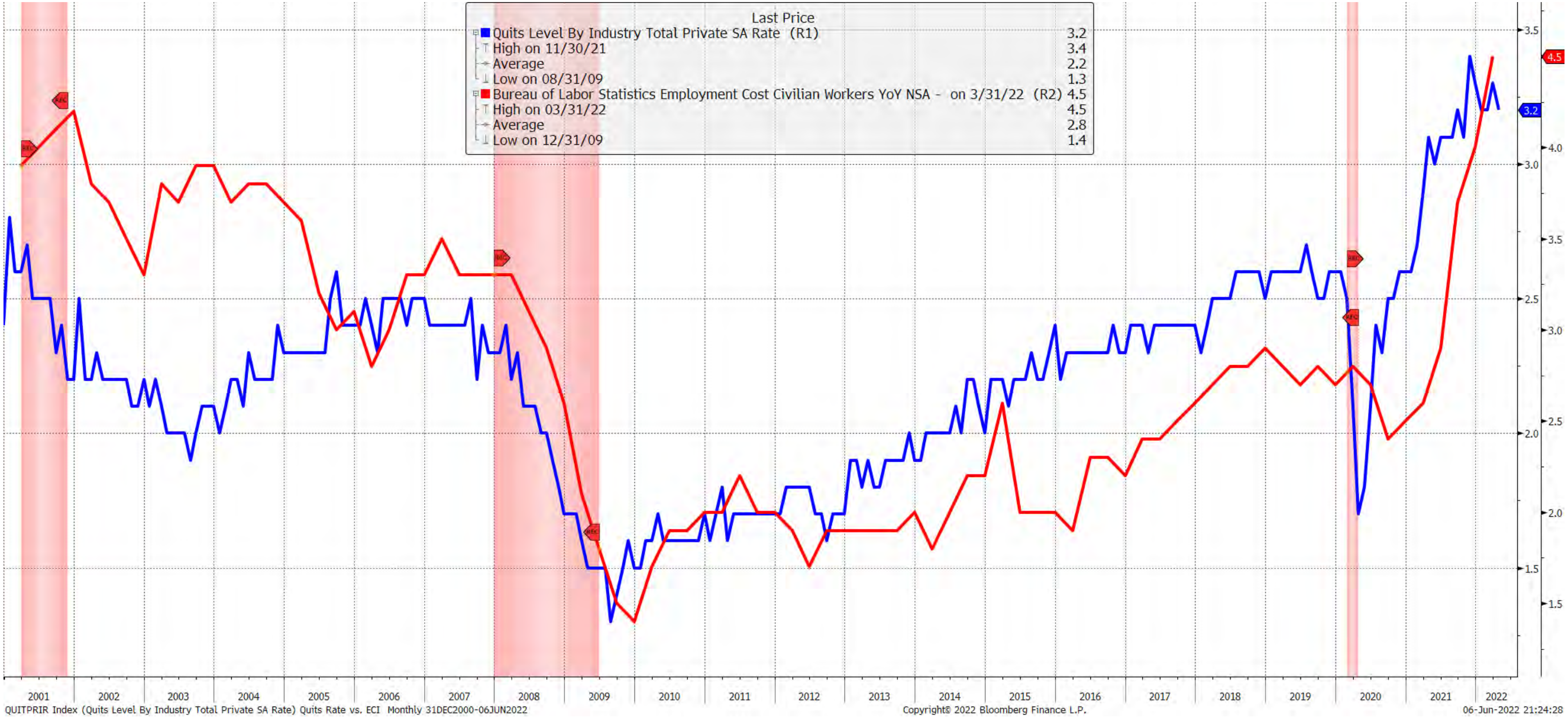
The Fed Will Tighten Until Something Breaks: Labor Demand



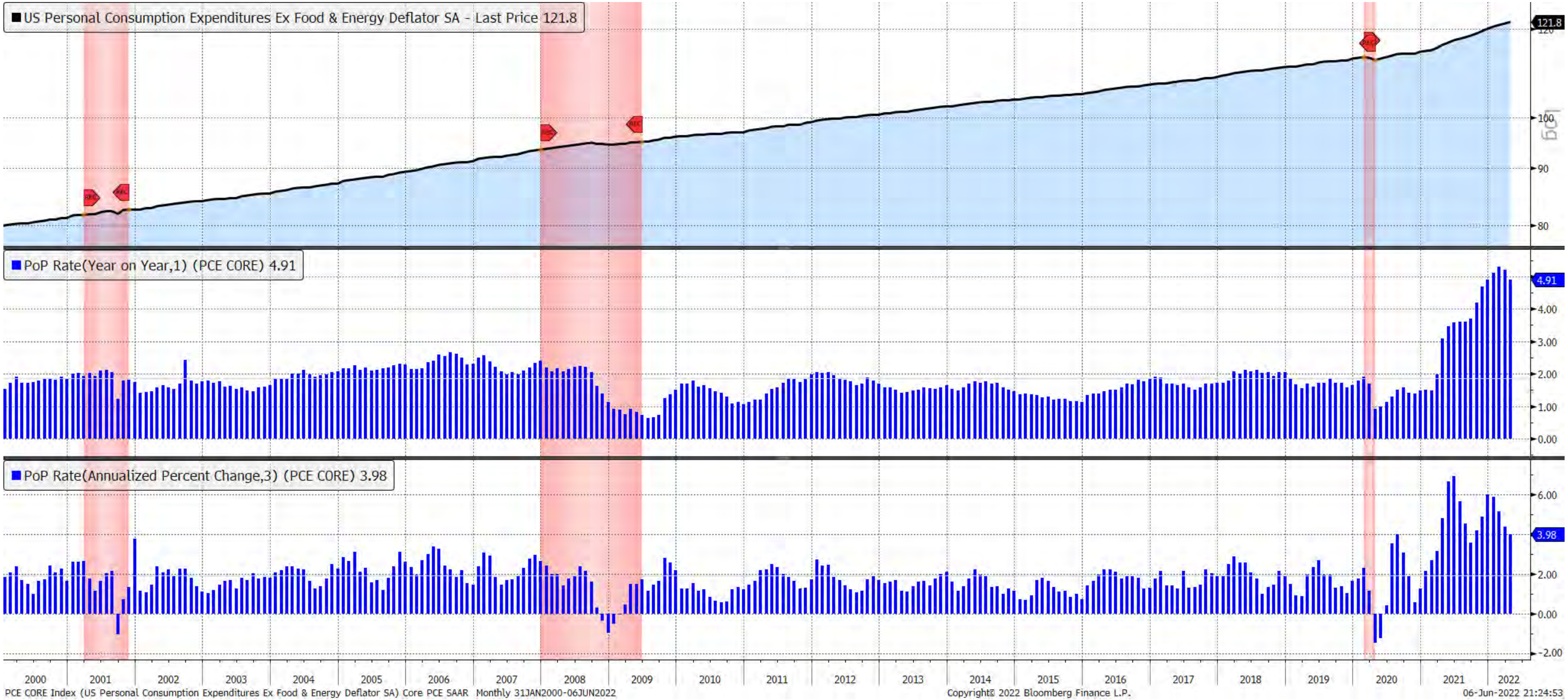
The Fed Will Tighten Until Something Breaks: Labor Supply



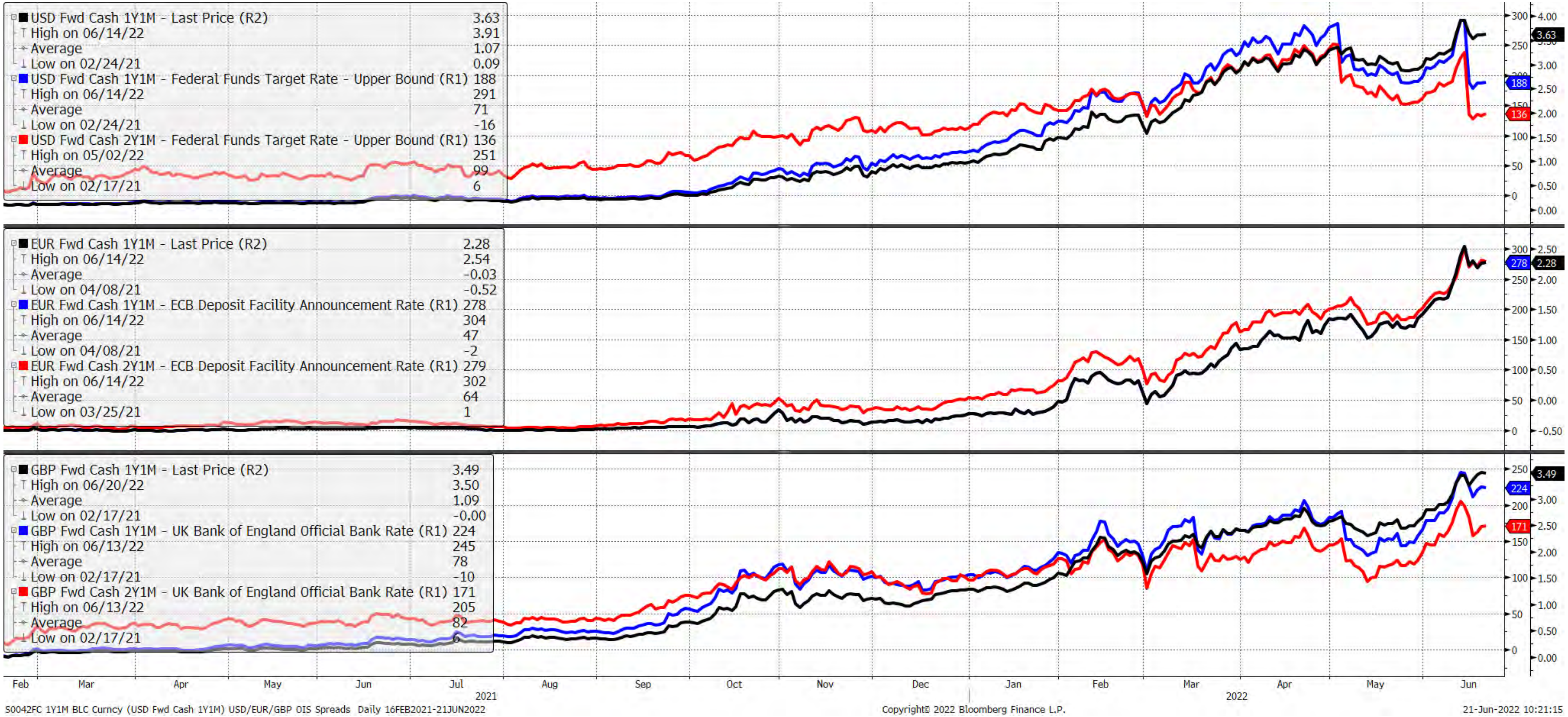
The Fed Will Tighten Until Something Breaks: Wages



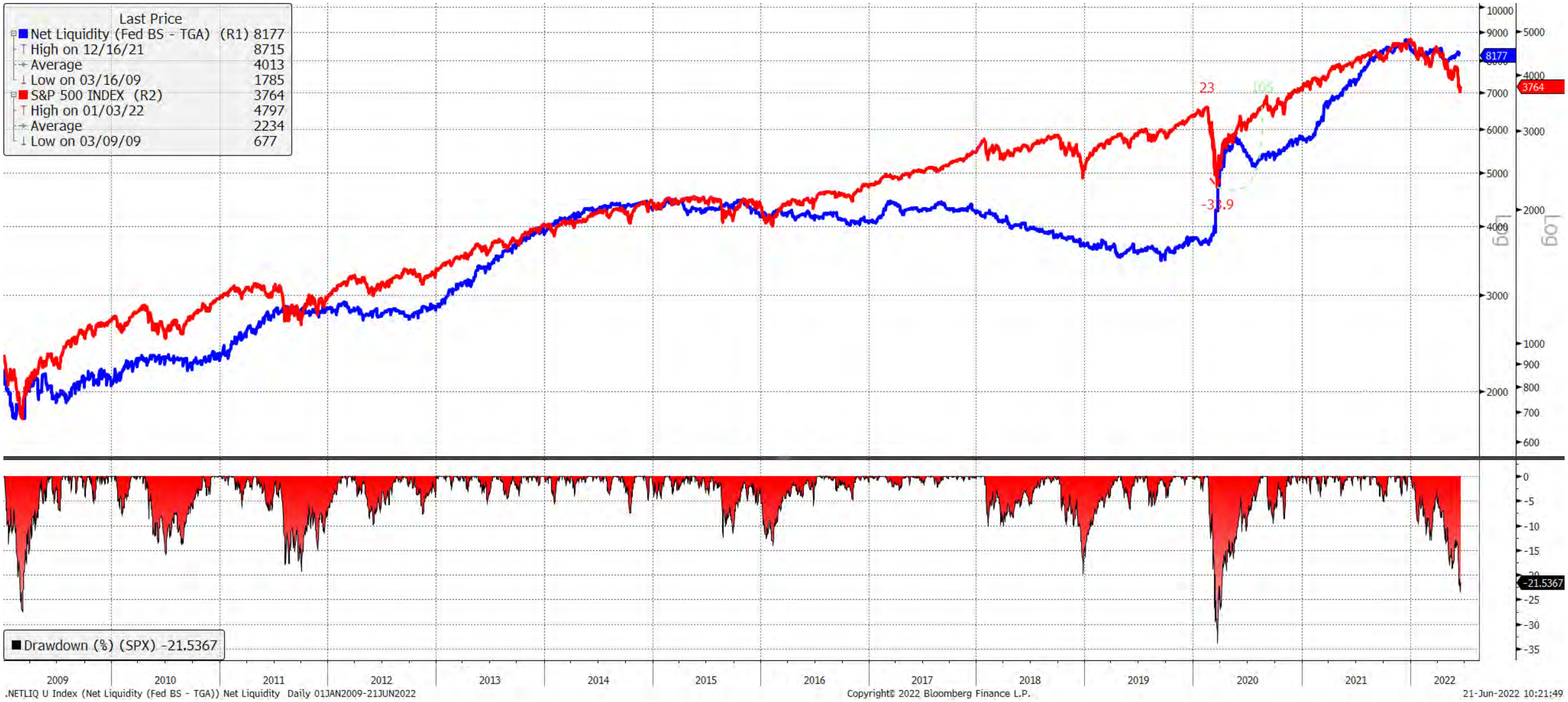
The Fed Will Tighten Until Something Breaks: Core PCE



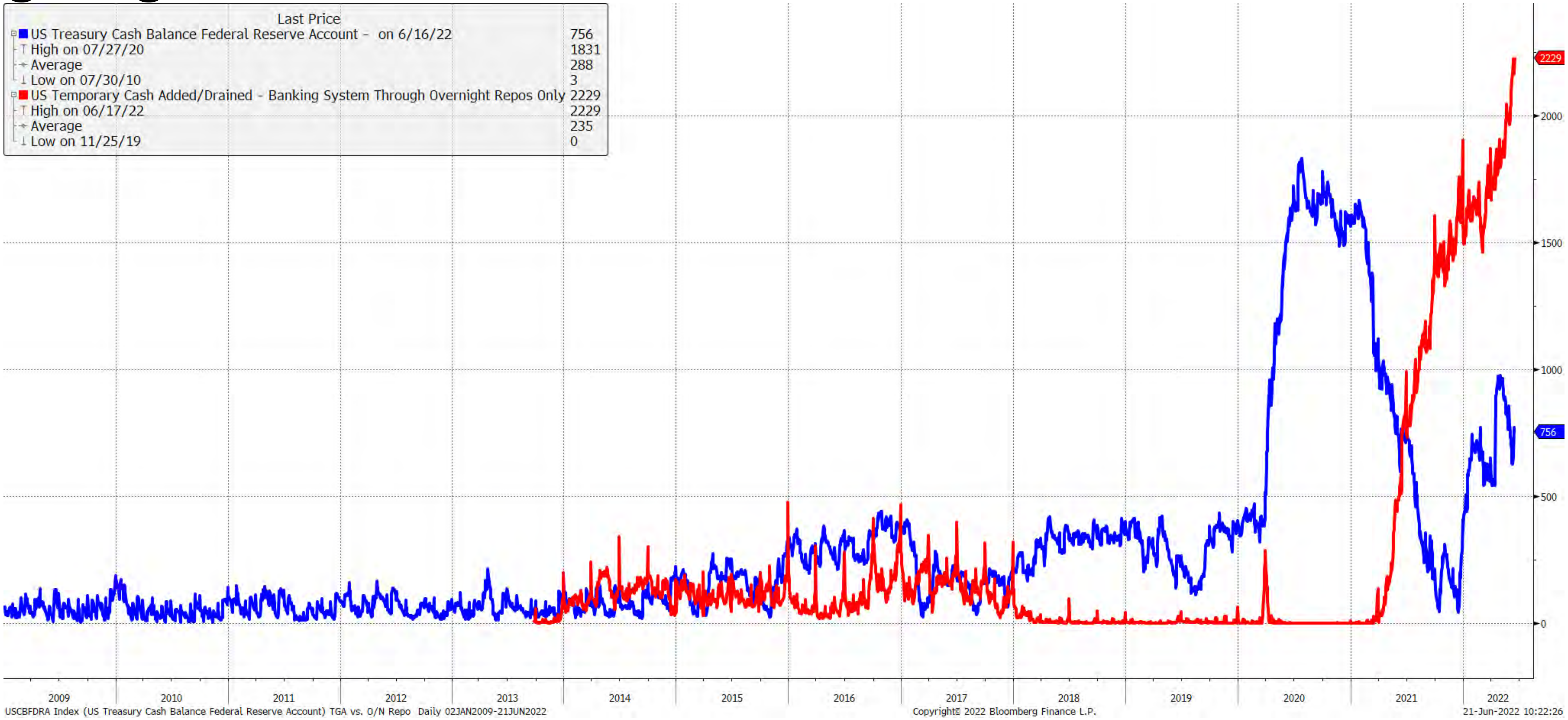
The Market May Be Underestimating The Fed’s Resolve



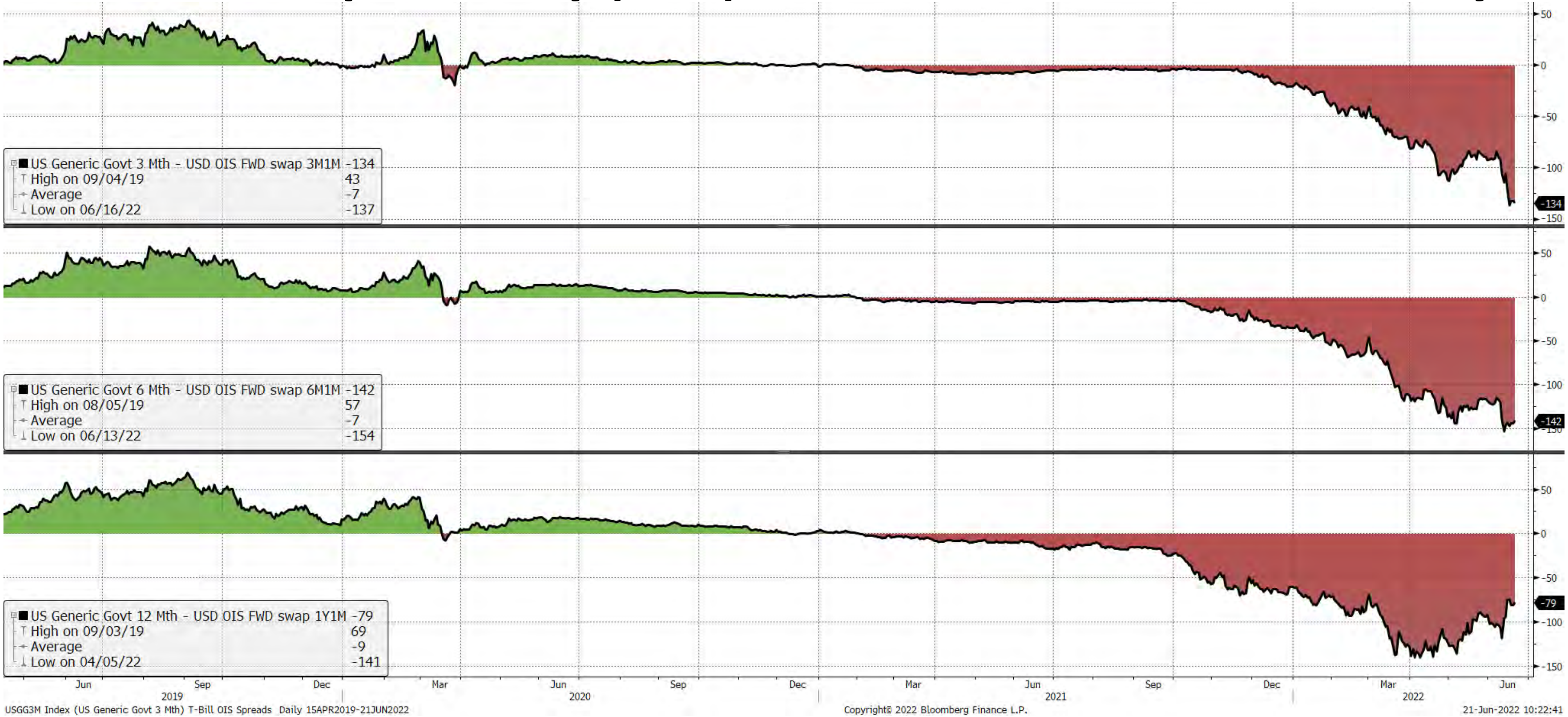
Net Liquidity Is Poised To Decline Meaningfully



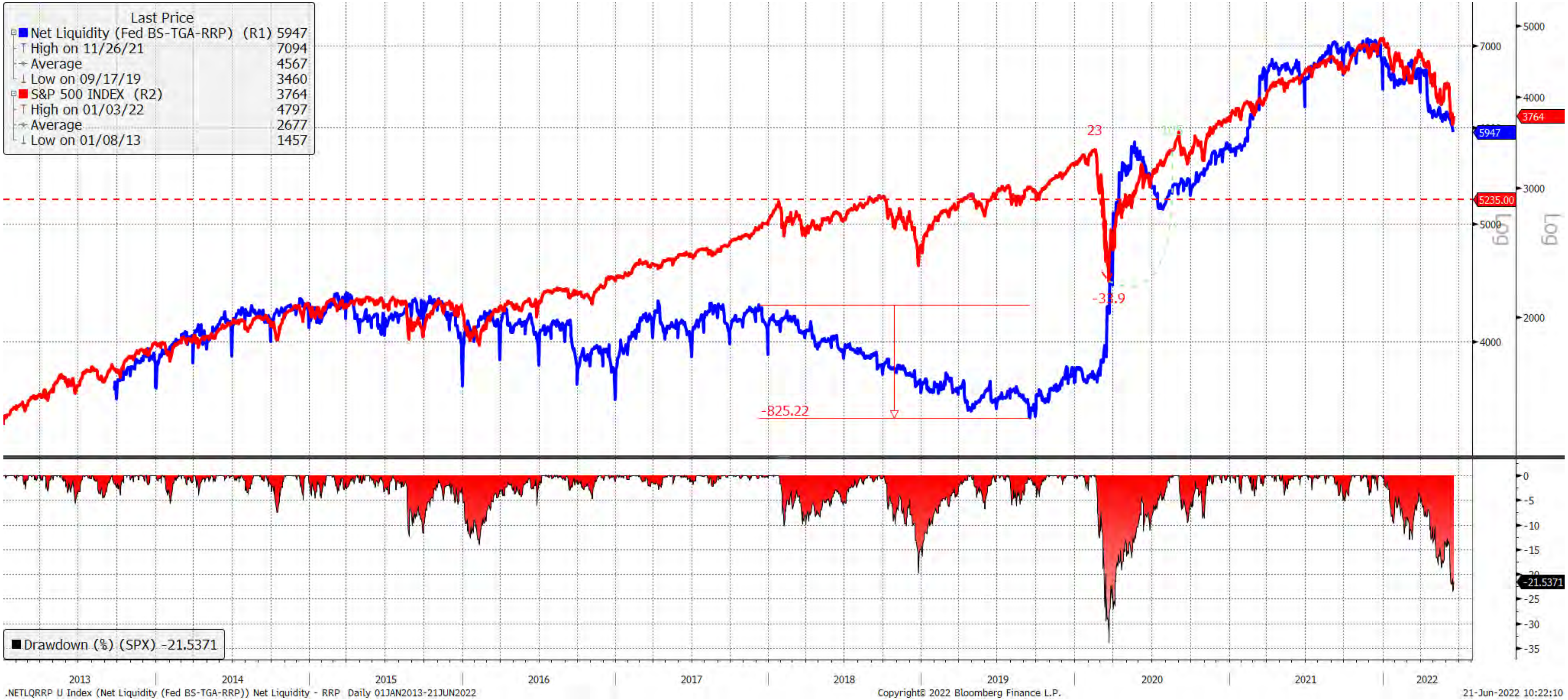
The Q3 Quarterly Refunding Announcement = Yellen Is Actively Fighting Inflation Too



The [Welcome] T-Bill Shortage Keeps Excess Liquidity Trapped In The Reverse Repo Facility (RRP) And Out Of The Real Economy

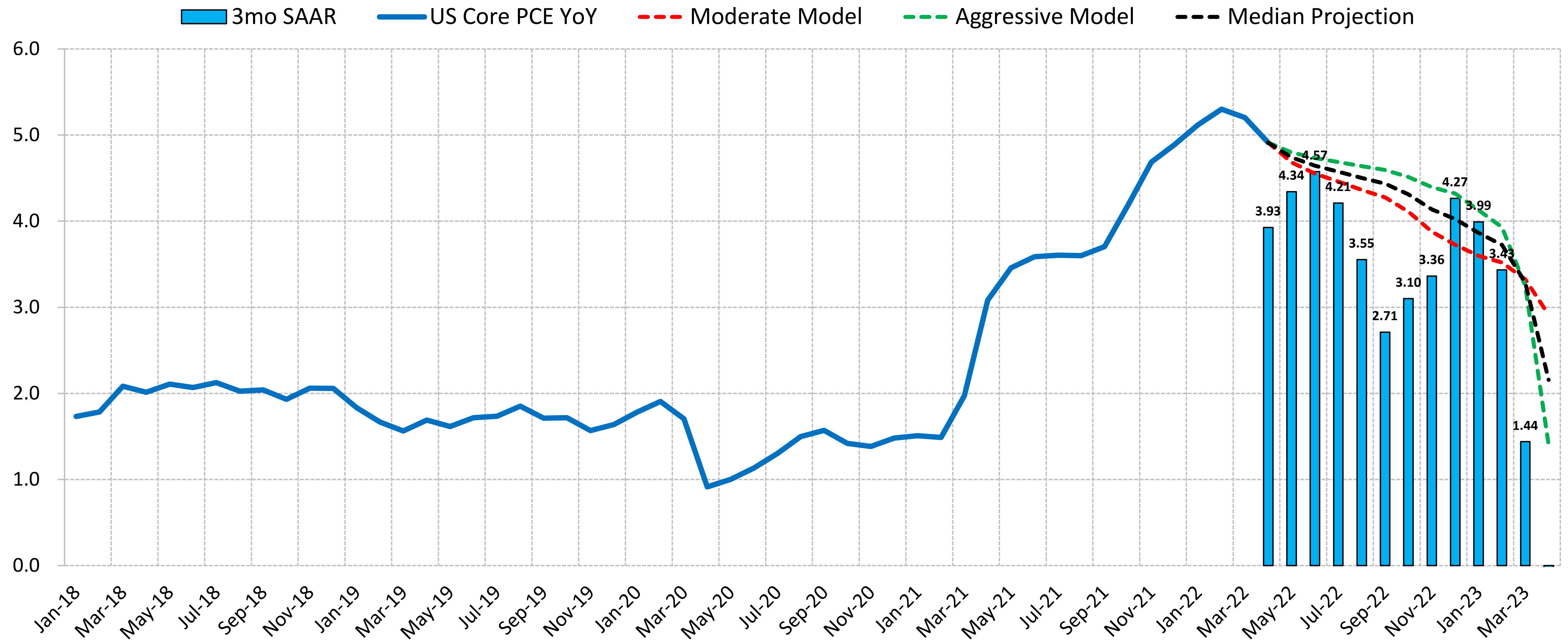


“Trapped” Liquidity ≠ “Excess” Liquidity



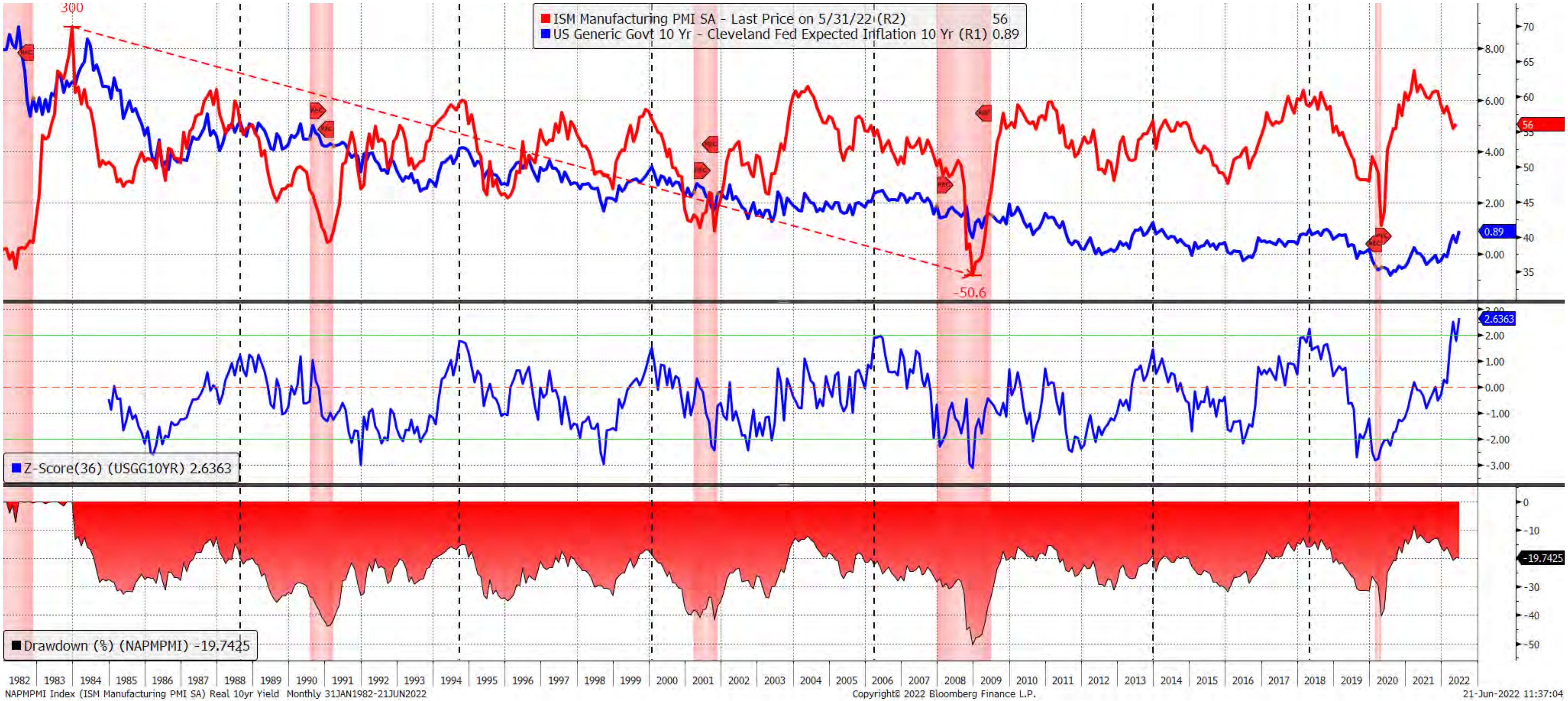
© 42 Macro LLC. Data Source: Bloomberg. Projected QT through yearend: $523bn (Jun-Aug = $143bn; Sep-Dec = $380bn).
Projected RRP uptake through yearend: $392bn (via extrapolating 3mo annualized RoC over the next seven months).
Total projected liquidity reduction through yearend: -$915bn, or > the sum of the 2017-19 QT program (-$825bn over 21mos).

All Eyes On The November 2nd FOMC Meeting For The First Signs Of "@federalreserve Ambulance Sirens"

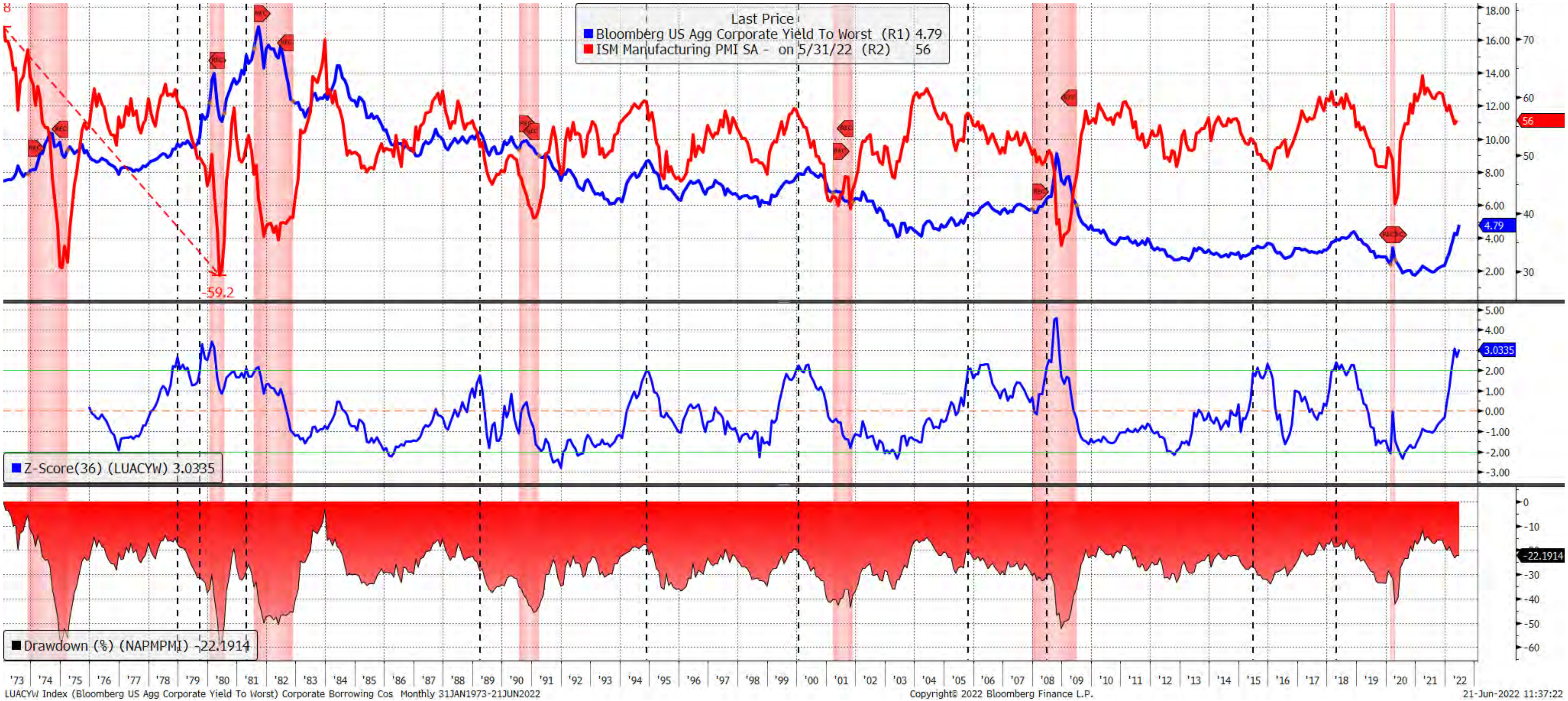


 Data Source: Bloomberg. September Core PCE reported on 10/23.

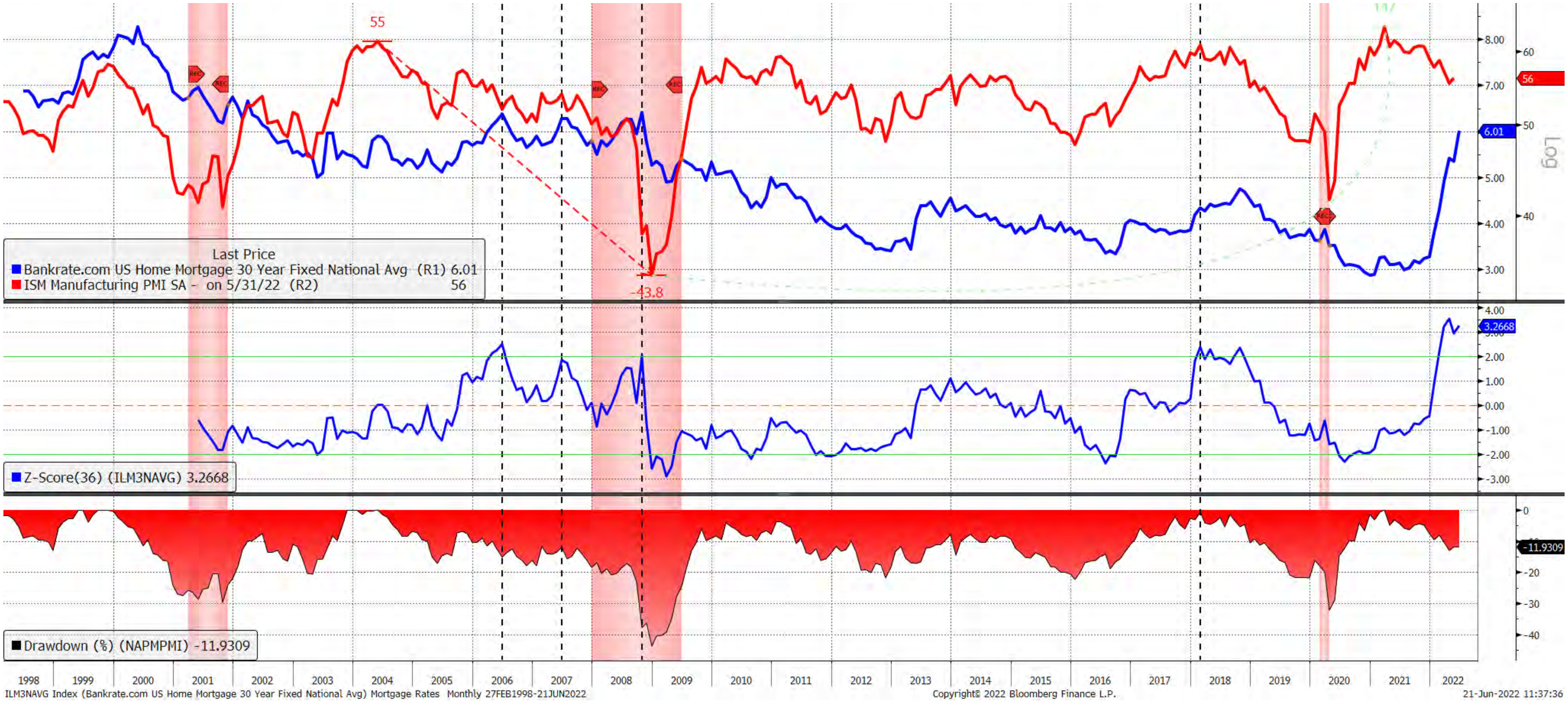
Forward Guidance Accelerates Monetary Policy Transmission



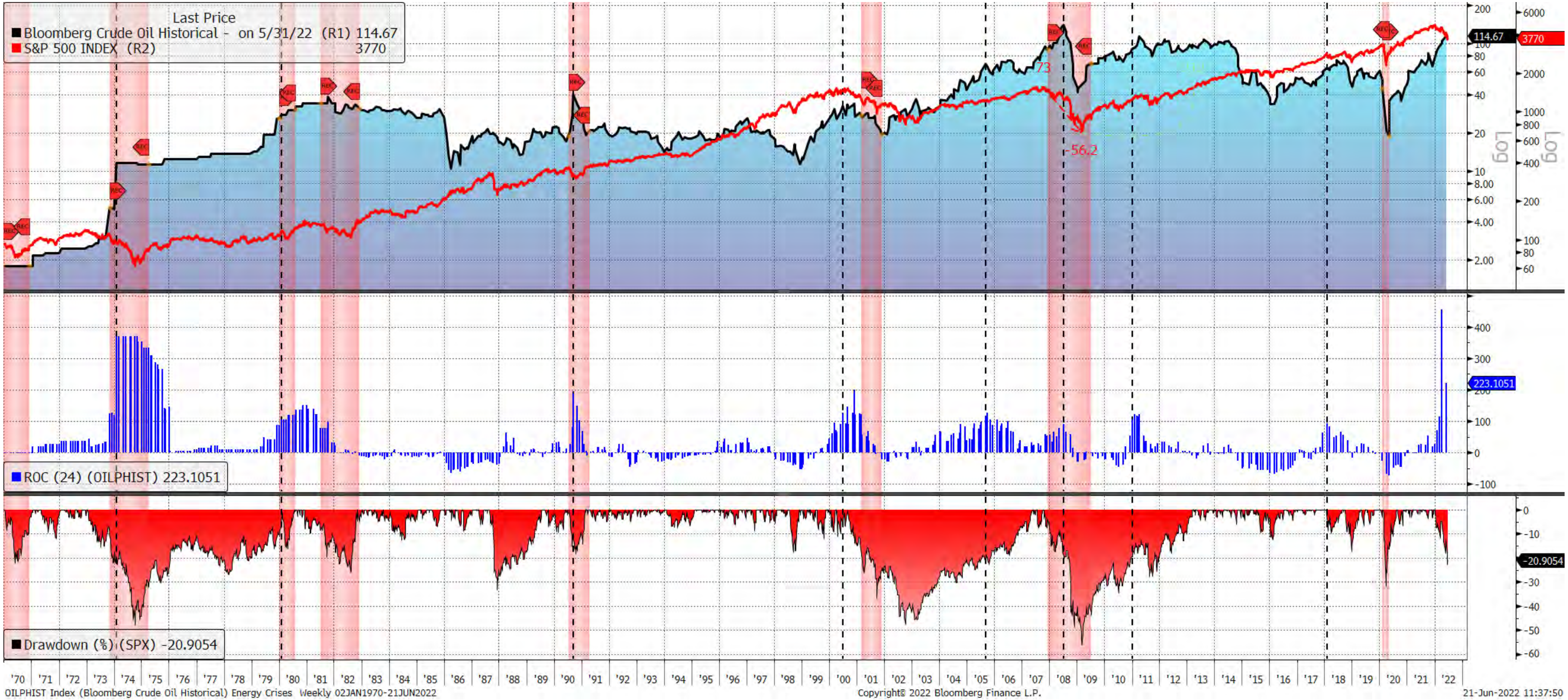
The ~3σ Rise In Corporate Borrowing Costs Will Slow Growth



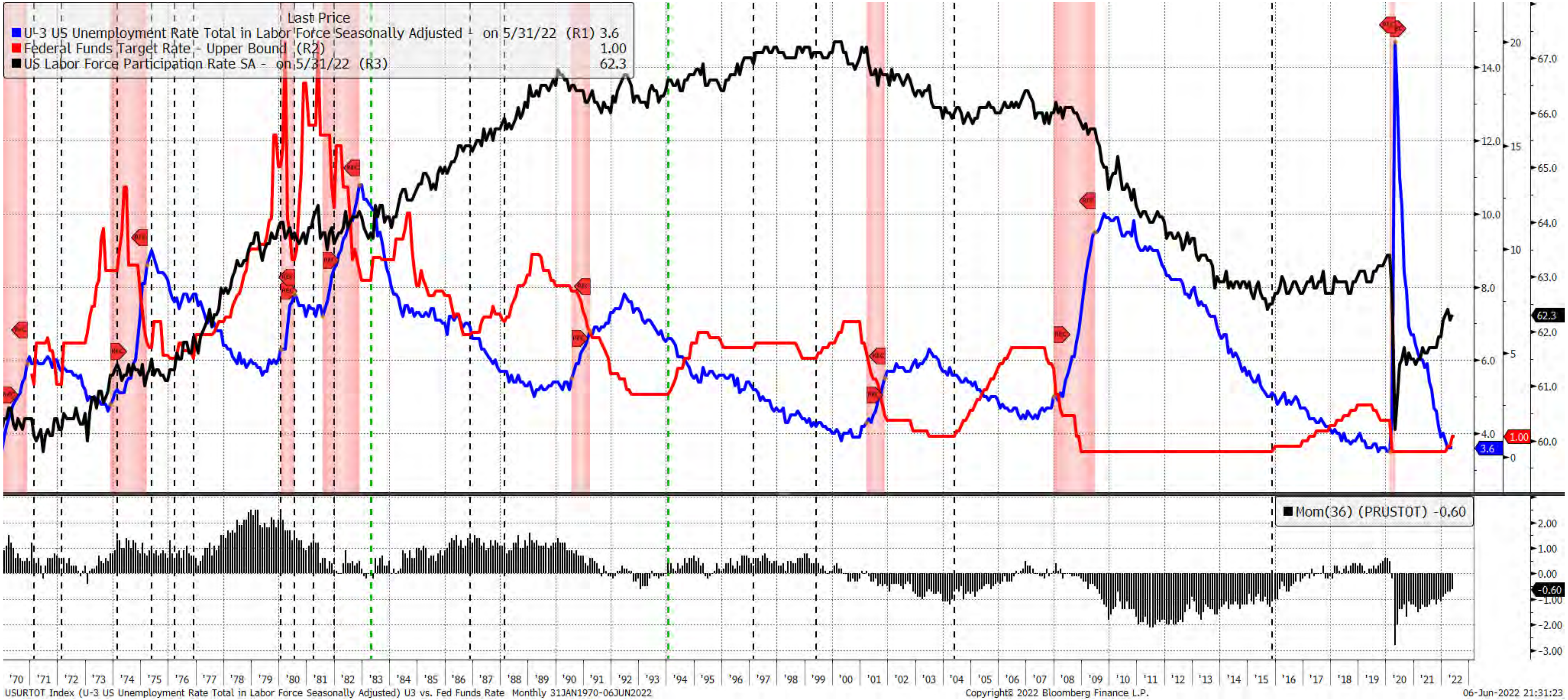
The ~3σ Rise In Mortgage Rates Will Slow Growth



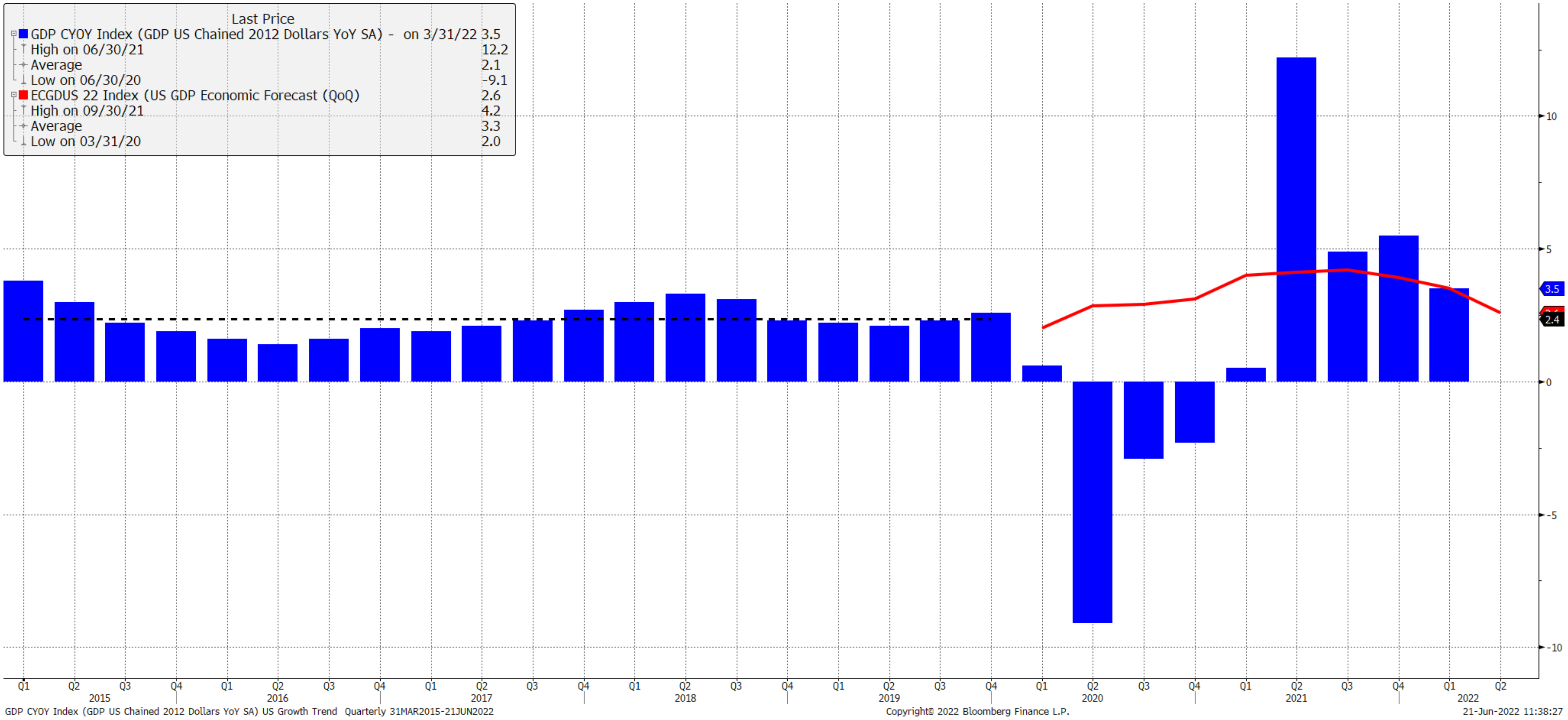
Energy Crises Also Tend To Cause Big Problems



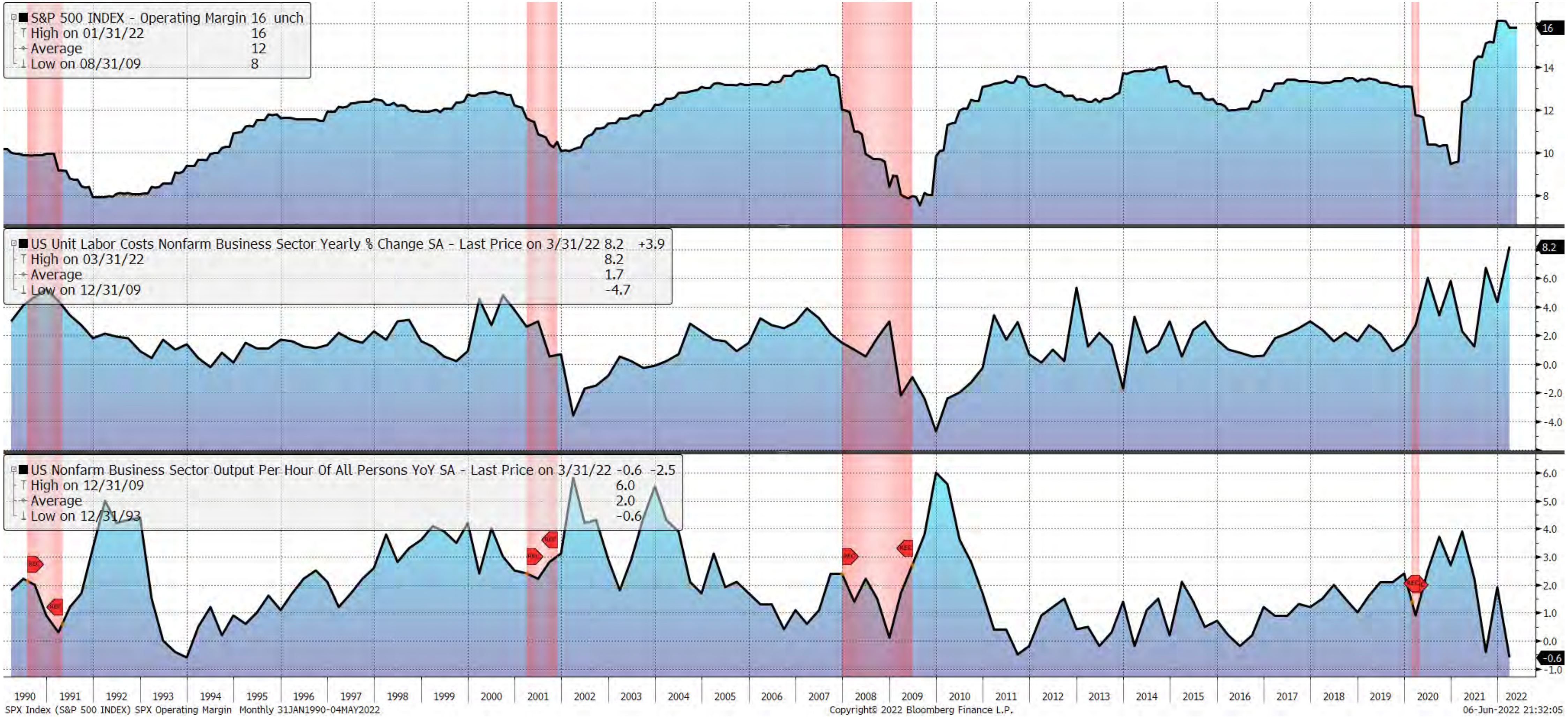
A Soft Landing Is Unlikely



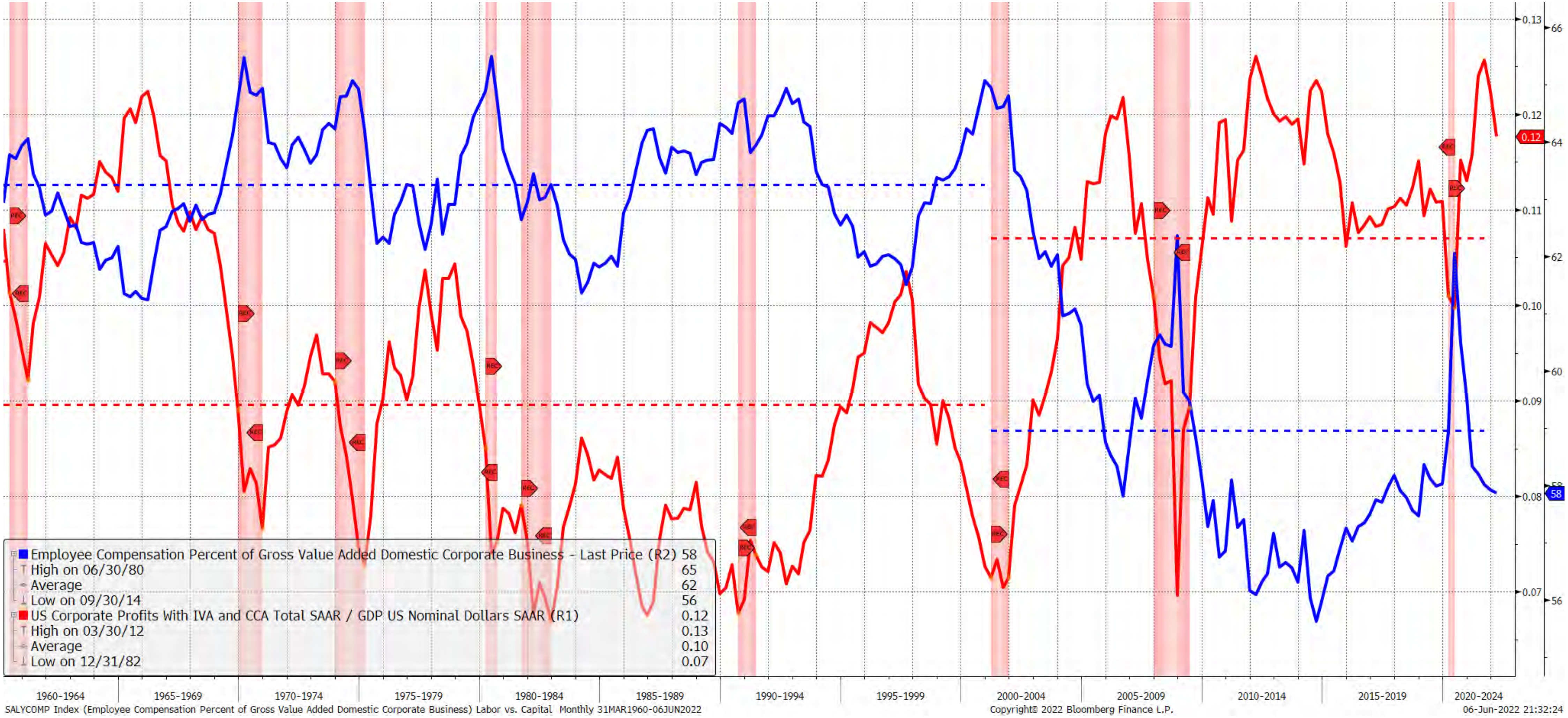
Growth Estimates Are Still Too High



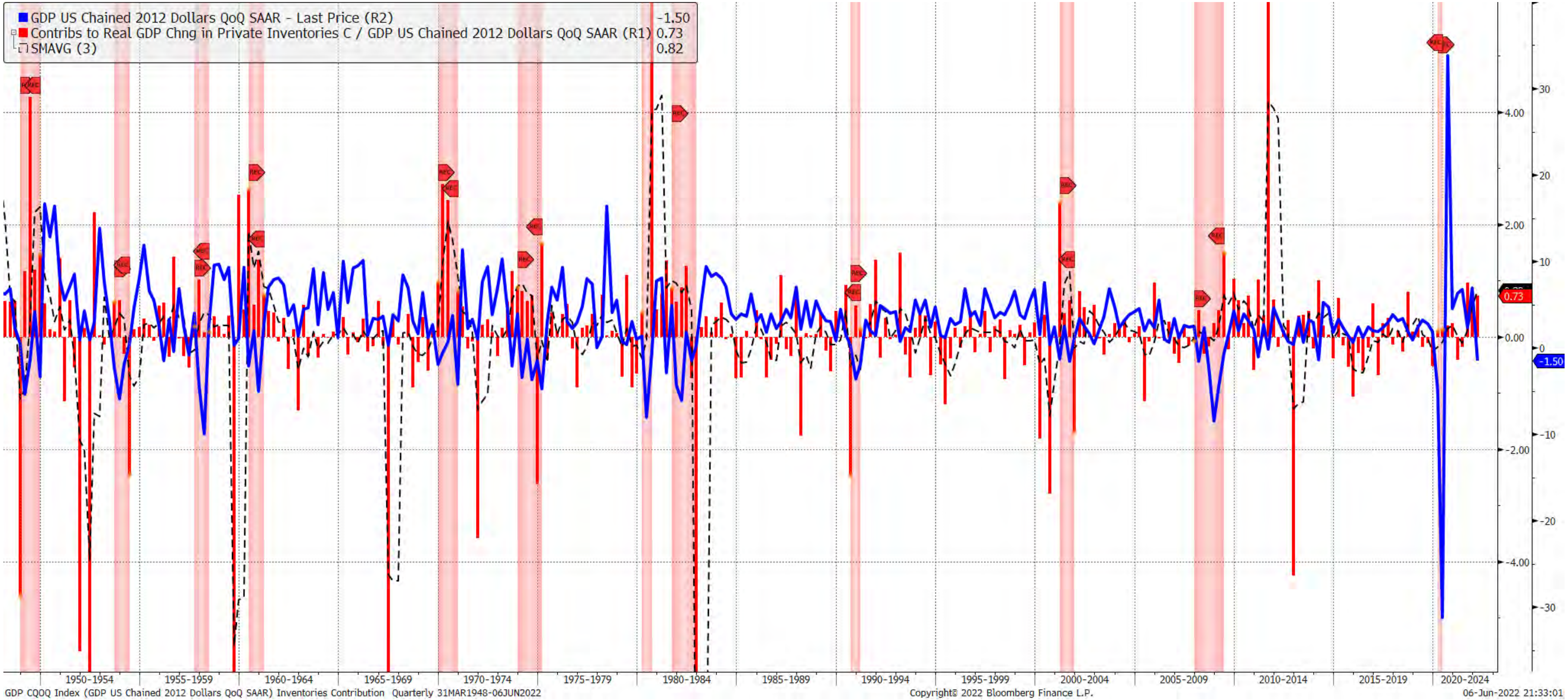
Corporate Profitability Is Cyclically Inflated



Corporate Profitability Is Structurally Inflated As Well

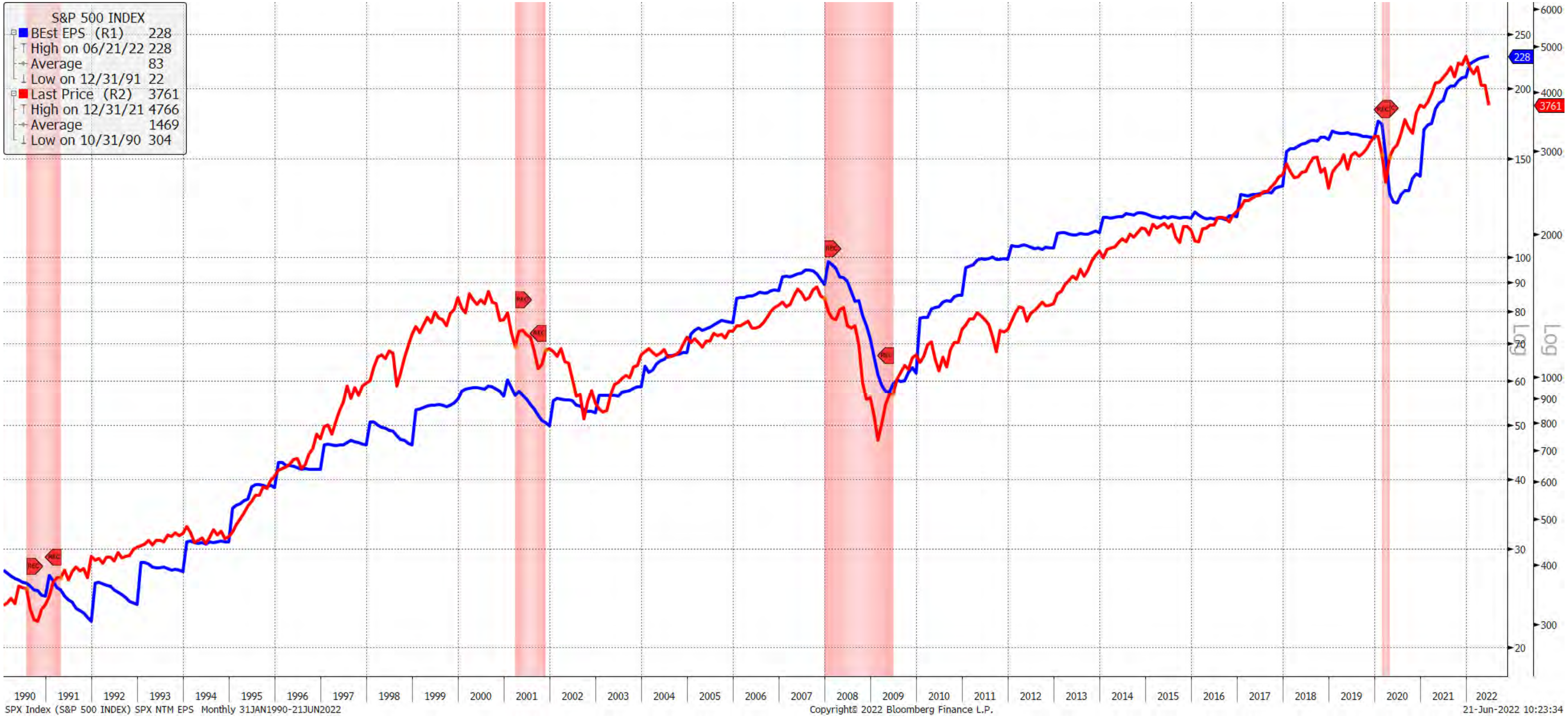


Inventory Builds Bode Poorly For The #ProfitsCycle

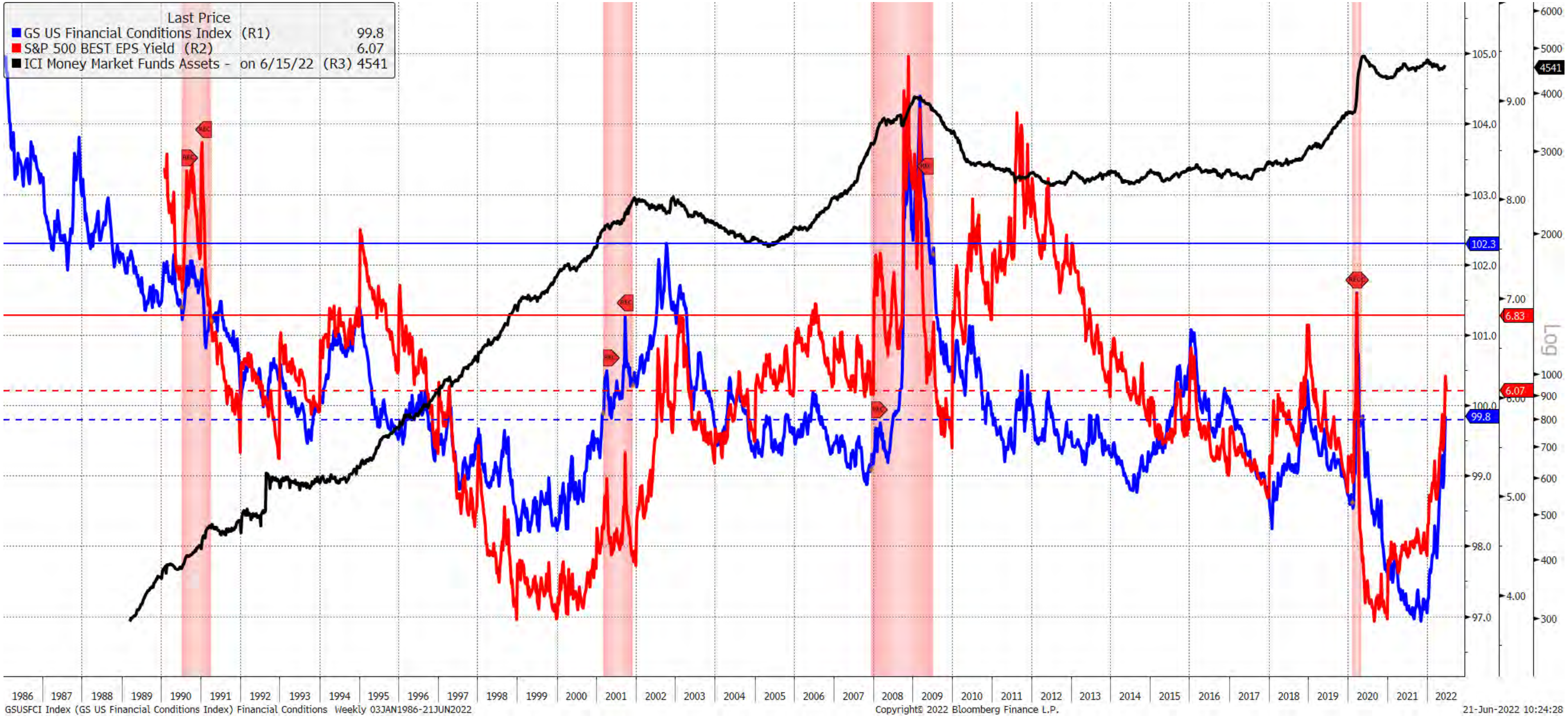


Inventories accounted for an average of 82% of Headline GDP in the three quarters through 1Q22.

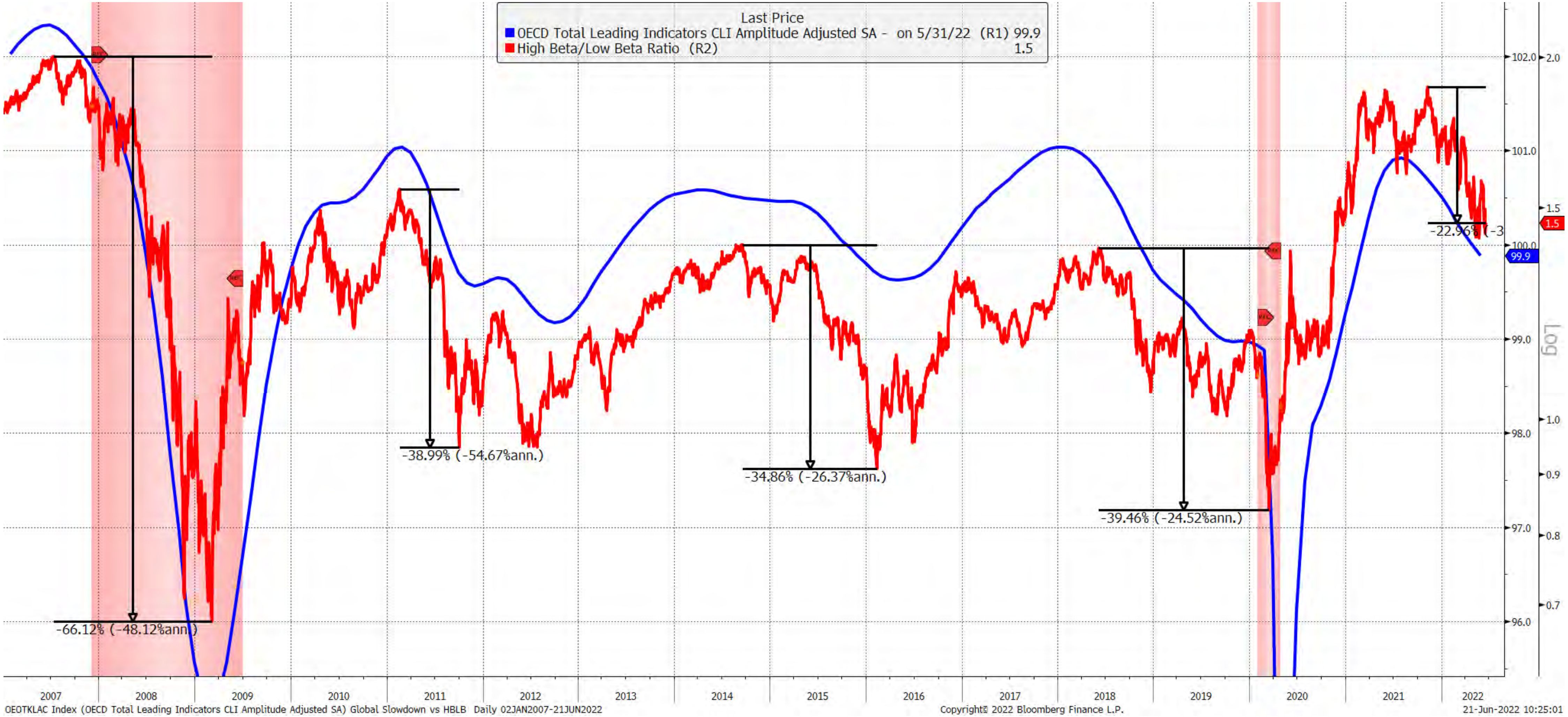
Earnings Estimates Remain Out To Lunch



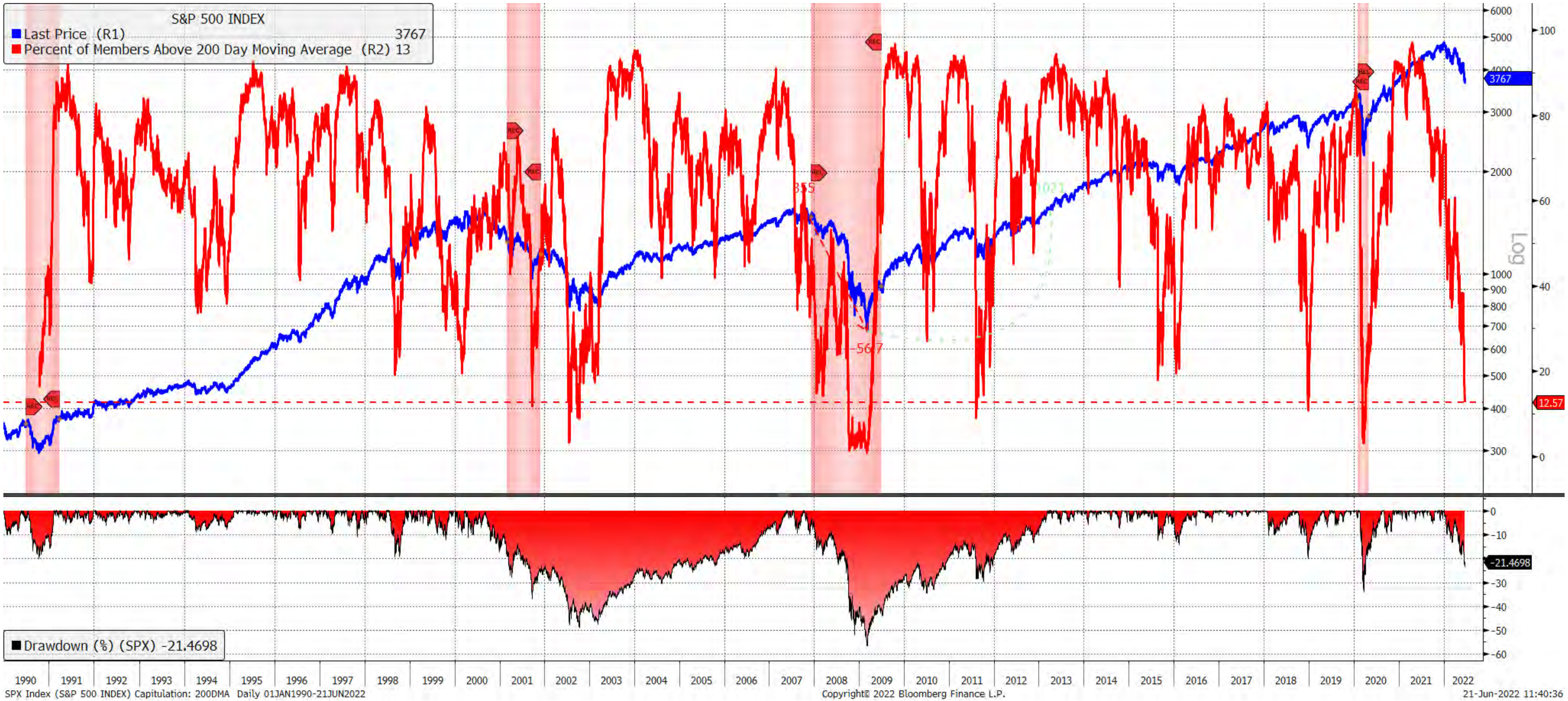
Financial Conditions Remain Uncomfortably Loose



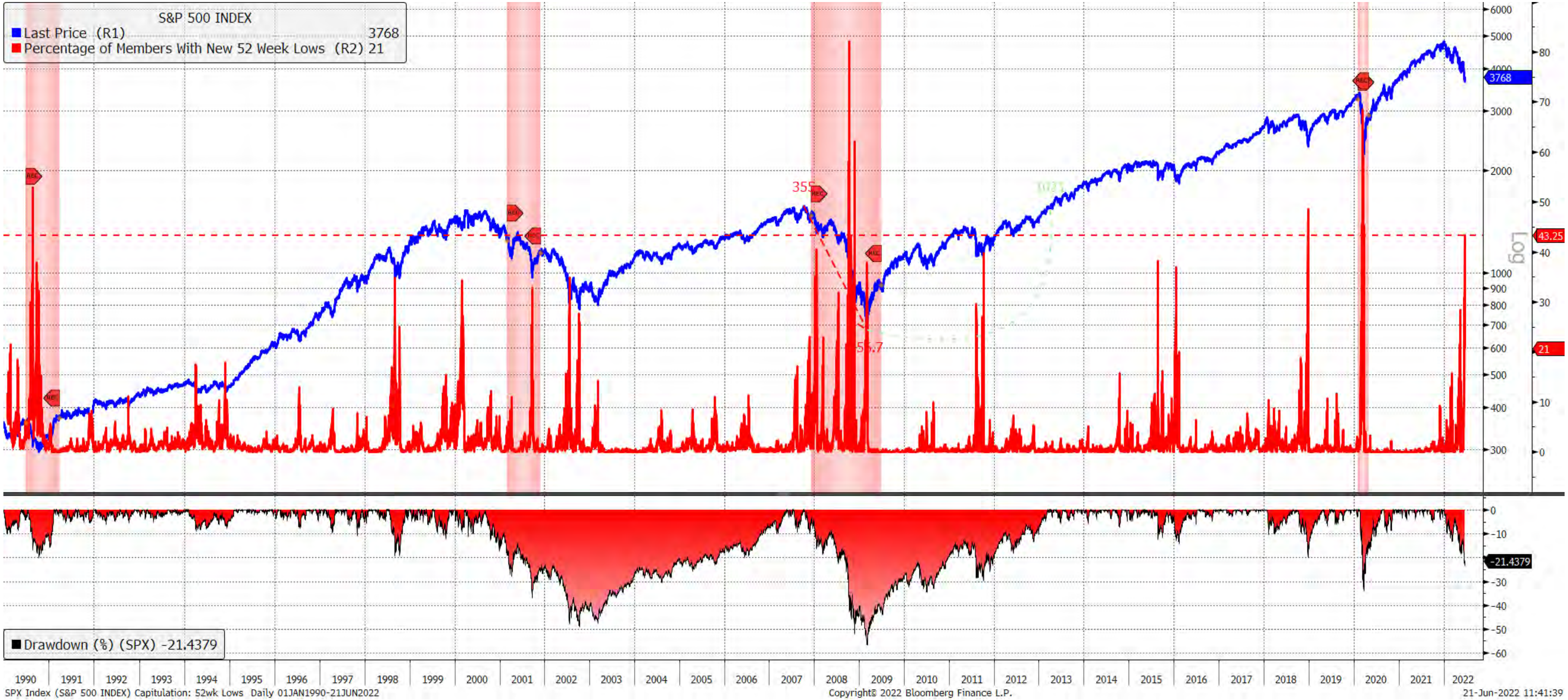
The Global Downturn Is Not Adequately Priced In



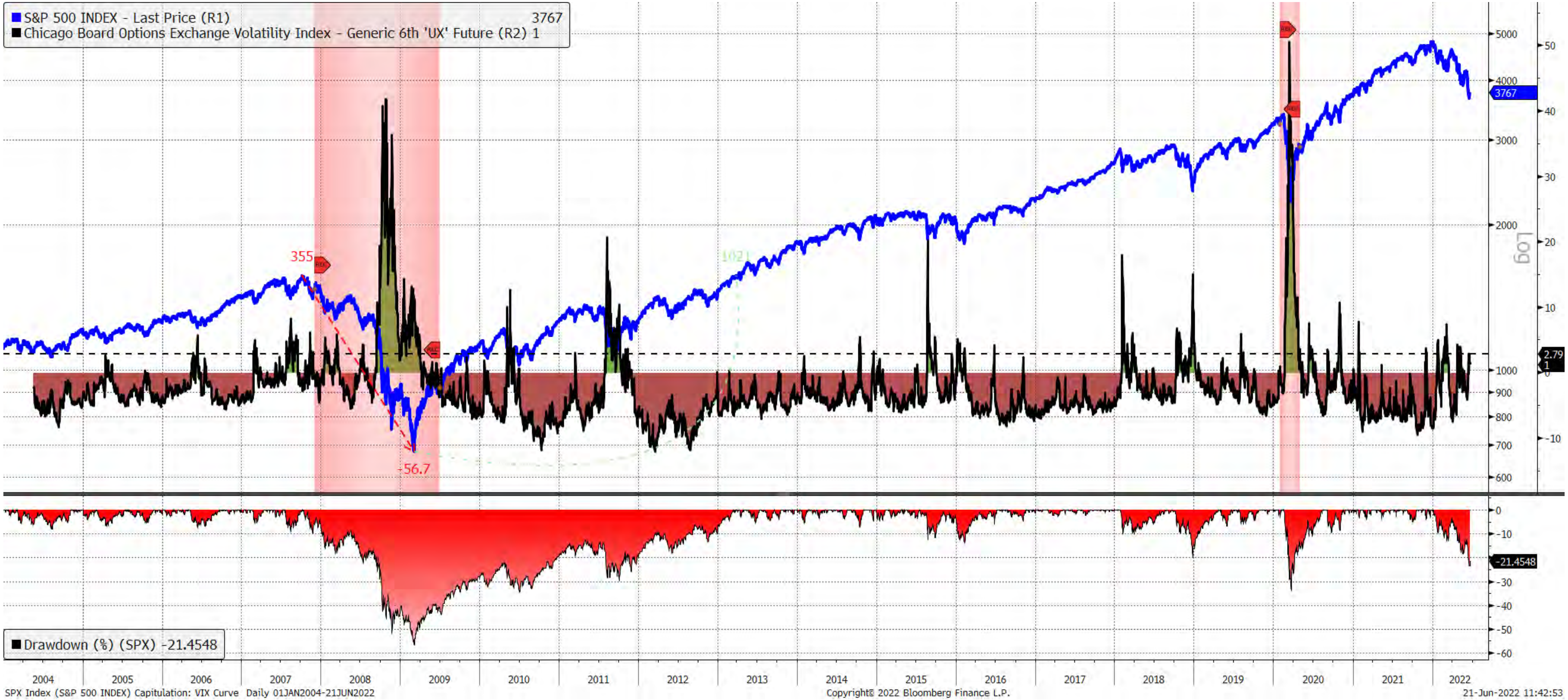
Signs Of Capitulation: % Of S&P 500 Members < 200DMA



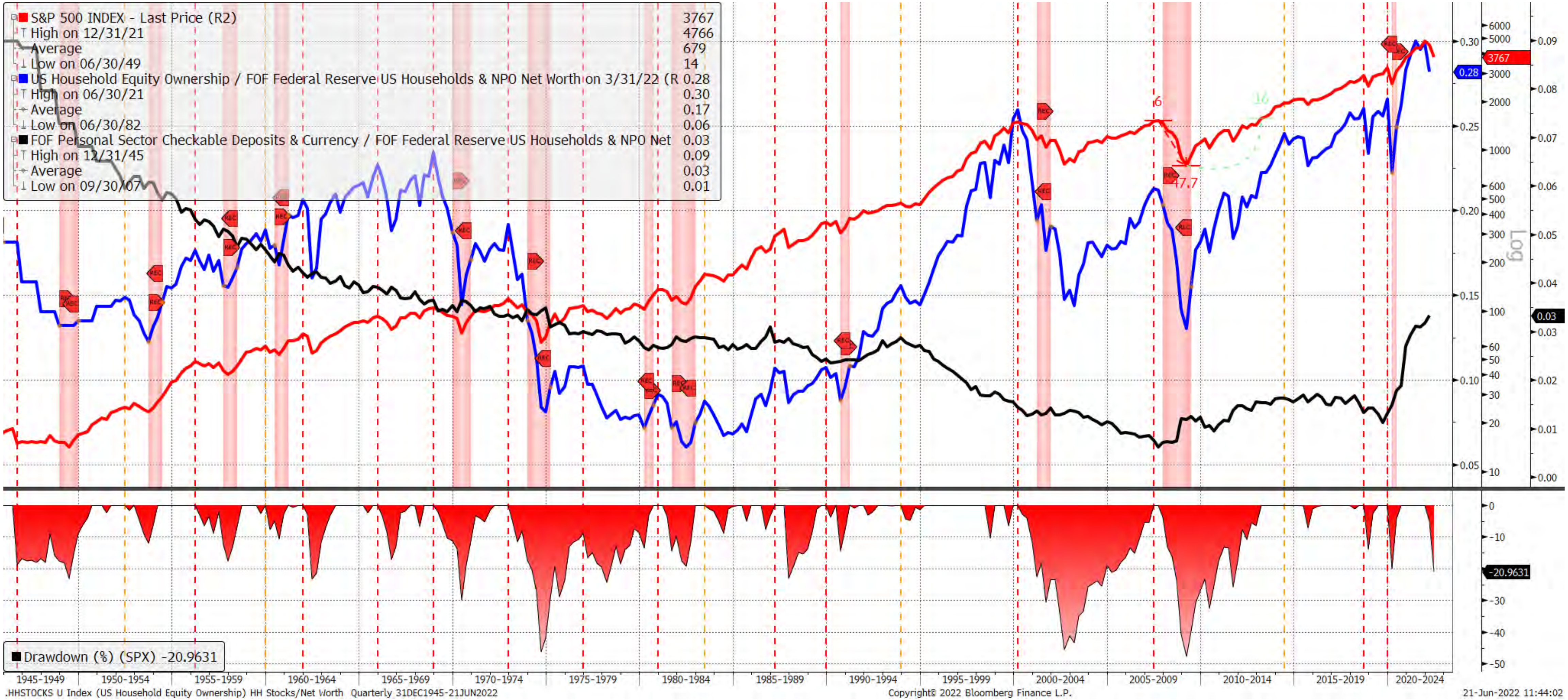
Signs Of Capitulation: % Of S&P 500 Members Making 52wk Lows



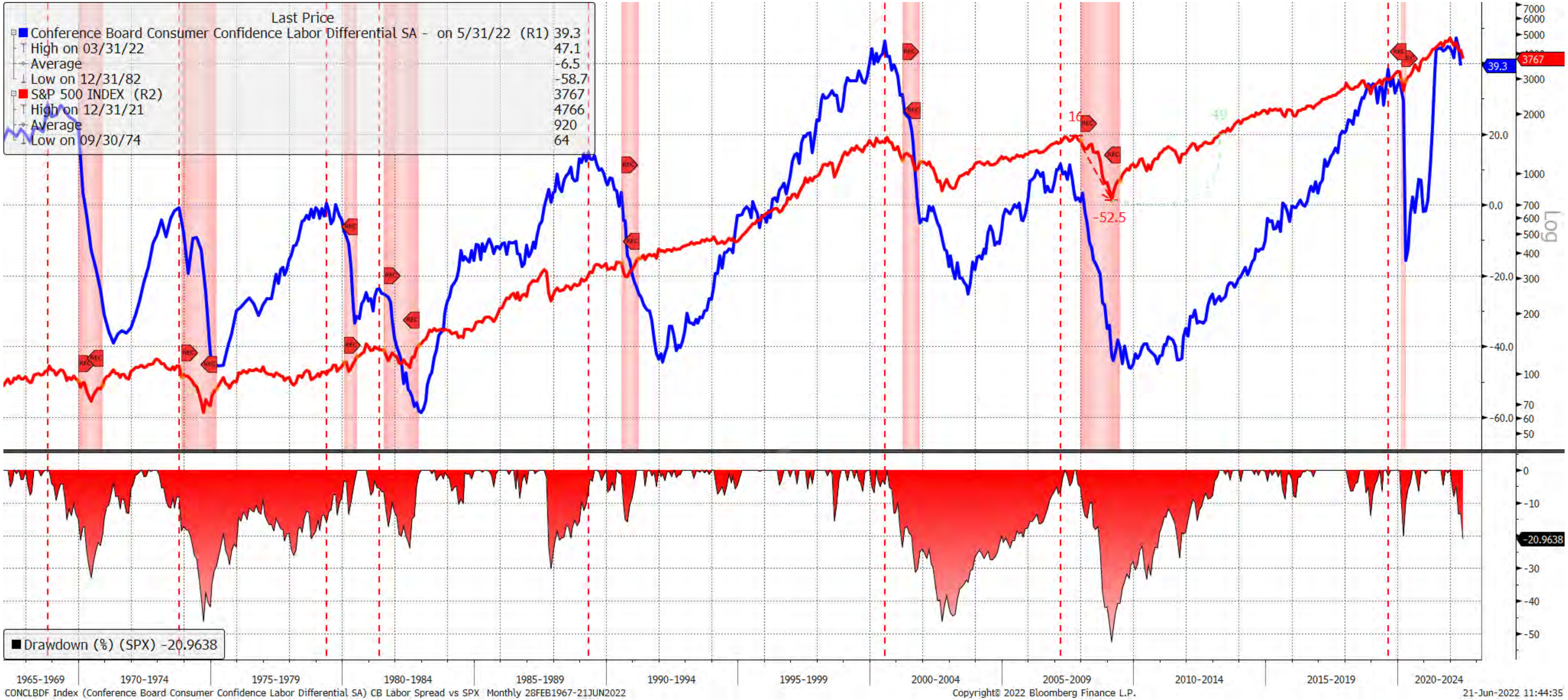
No Capitulation Yet: VIX Curve Backwardation



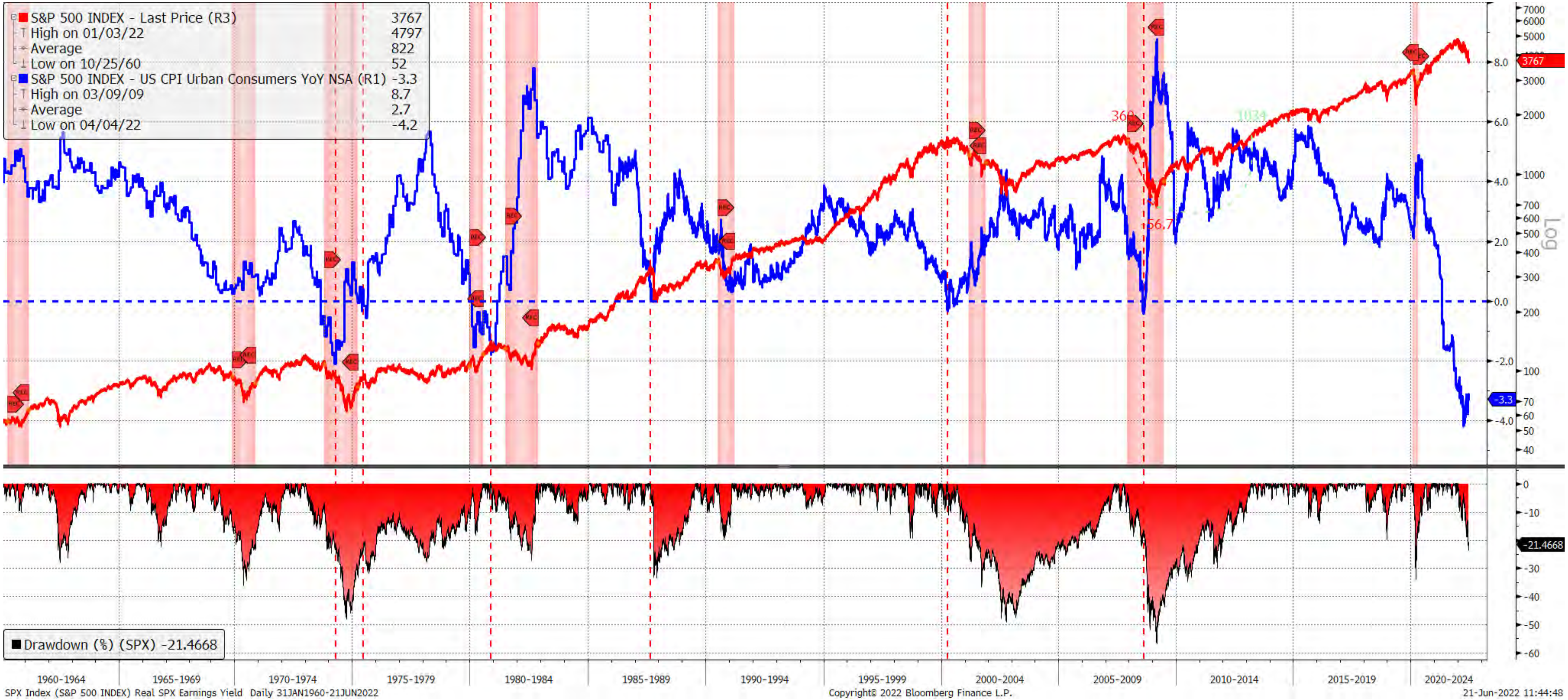
POSITIONING: 19 Cycle Peaks Since The Mid-1940s With A Median S&P 500 Drawdown Of -22%



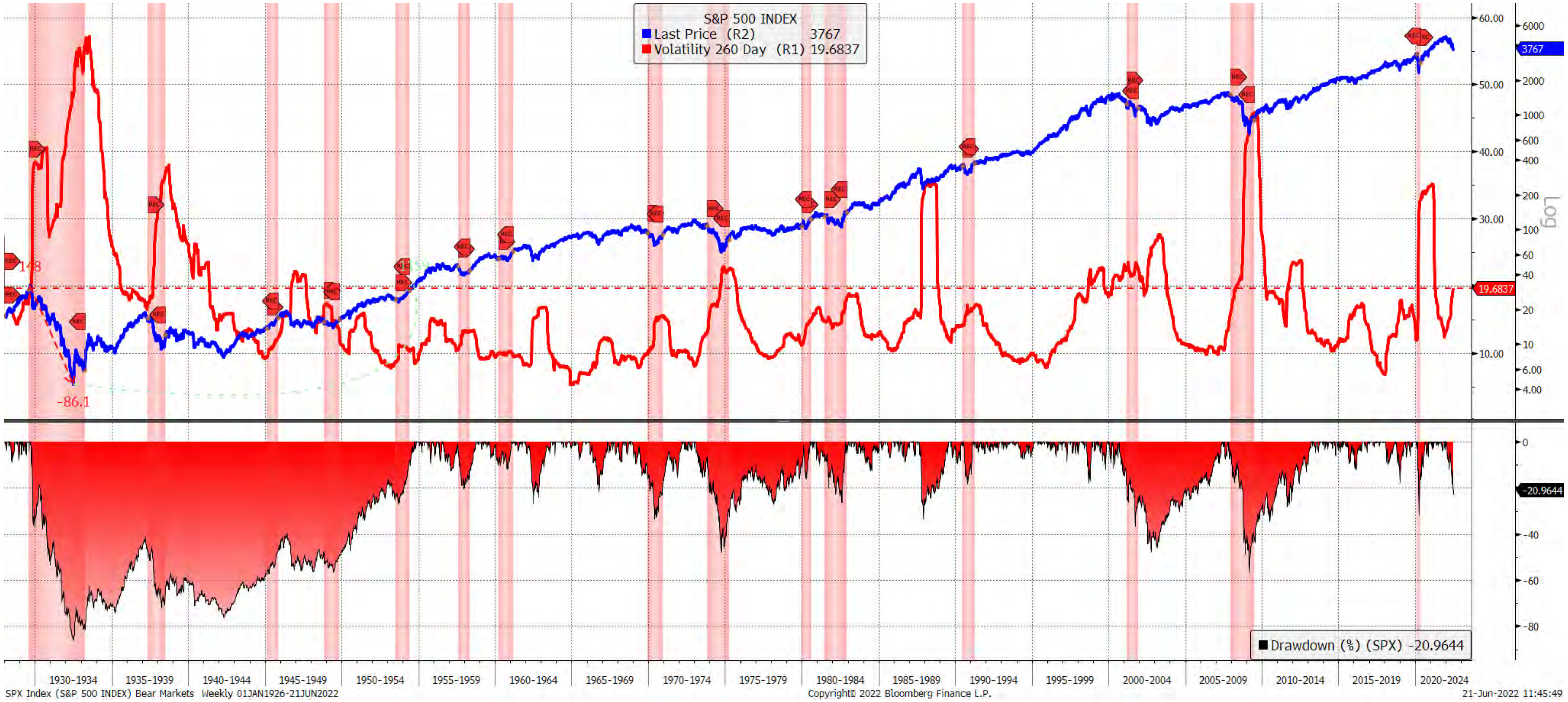
BUSINESS CYCLE: Eight Cycle Peaks Since The Mid-1960s With A Median S&P 500 Drawdown Of -35%



VALUATION: Six Inversions Since The Early-1960s With A Median S&P 500 Drawdown Of -41%



Bear Markets Are Common; Don't Freak Out



FOMO Is Even More Common; Don't Blow Yourself Up: 1929-32

© 42 Macro LLC. Data Source: Bloomberg. Green arrow = third bear market rally.
First red arrow = drawdown from third bear market rally. Second red arrow = drawdown from final bear market rally.
Black dotted line = high achieved during final bear market rally.

FOMO Is Even More Common; Don't Blow Yourself Up: 1937-42

 Data Source: Bloomberg. Green arrow = third bear market rally.
First red arrow = drawdown from third bear market rally. Second red arrow = drawdown from final bear market rally.
Black dotted line = high achieved during final bear market rally.

FOMO Is Even More Common; Don't Blow Yourself Up: 1973-74

 Data Source: Bloomberg. Green arrow = third bear market rally.
First red arrow = drawdown from third bear market rally. Second red arrow = drawdown from final bear market rally.
Black dotted line = high achieved during final bear market rally.

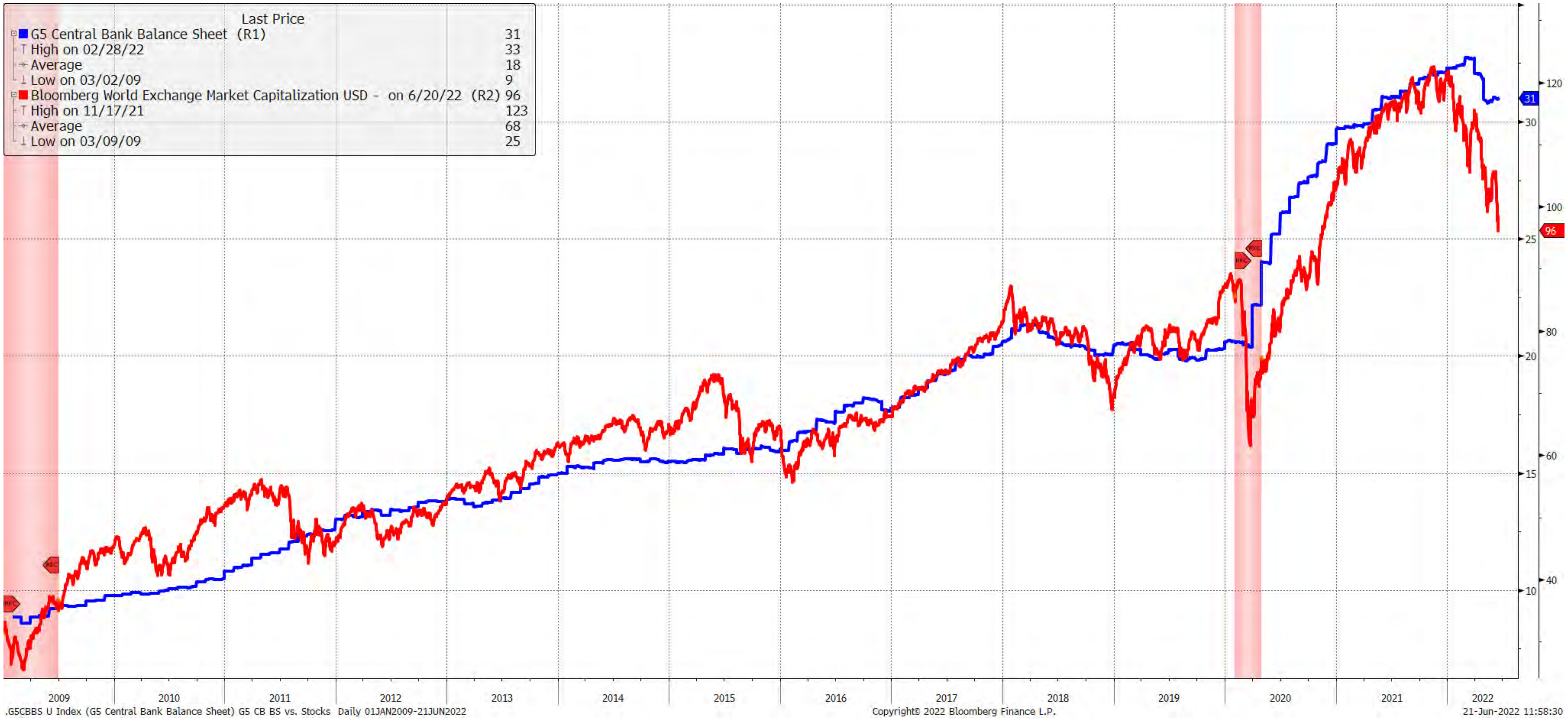
FOMO Is Even More Common; Don't Blow Yourself Up: 2000-02

 Data Source: Bloomberg. Green arrow = third bear market rally.
First red arrow = drawdown from third bear market rally. Second red arrow = drawdown from final bear market rally.
Black dotted line = high achieved during final bear market rally.

FOMO Is Even More Common; Don't Blow Yourself Up: 2007-09

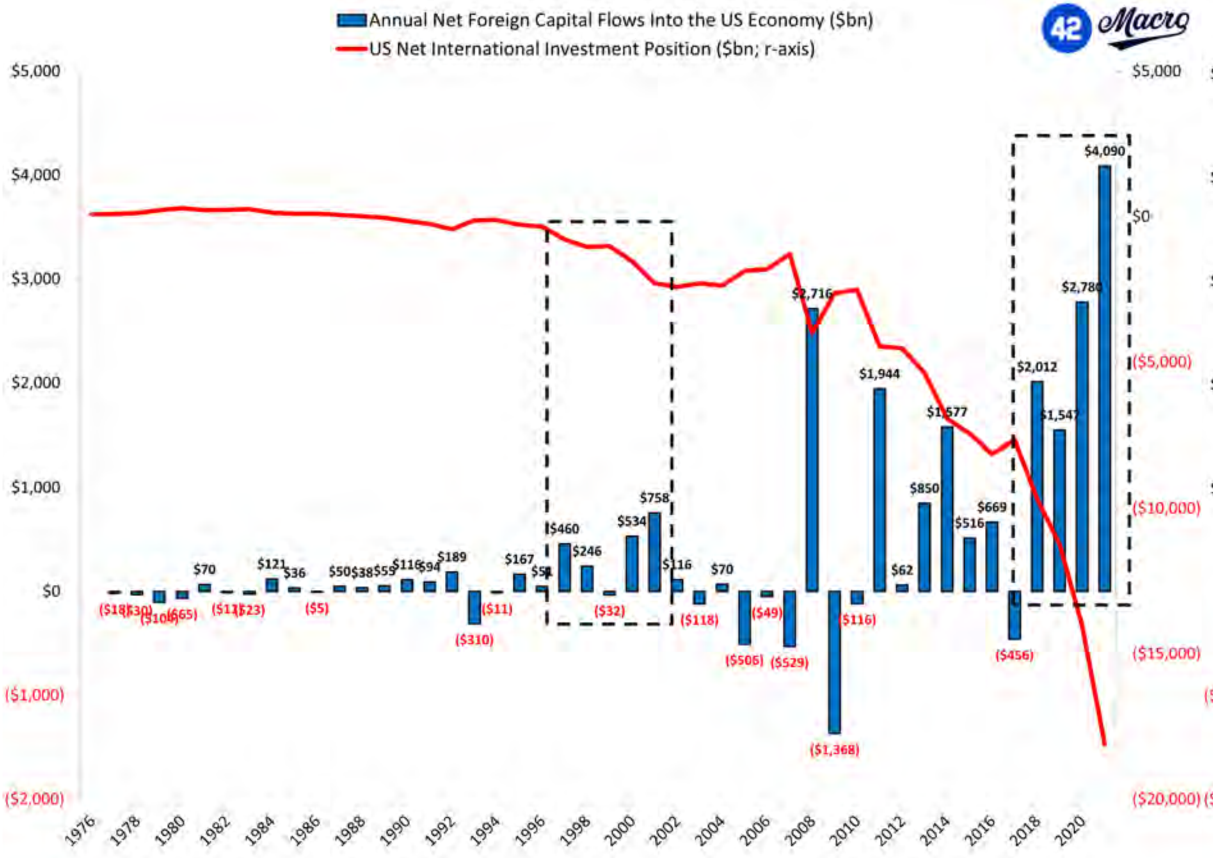
© 42 Macro LLC. Data Source: Bloomberg. Green arrow = third bear market rally.
First red arrow = drawdown from third bear market rally. Second red arrow = drawdown from final bear market rally.
Black dotted line = high achieved during final bear market rally.

Liquidity Reduction Is A Global Phenomenon

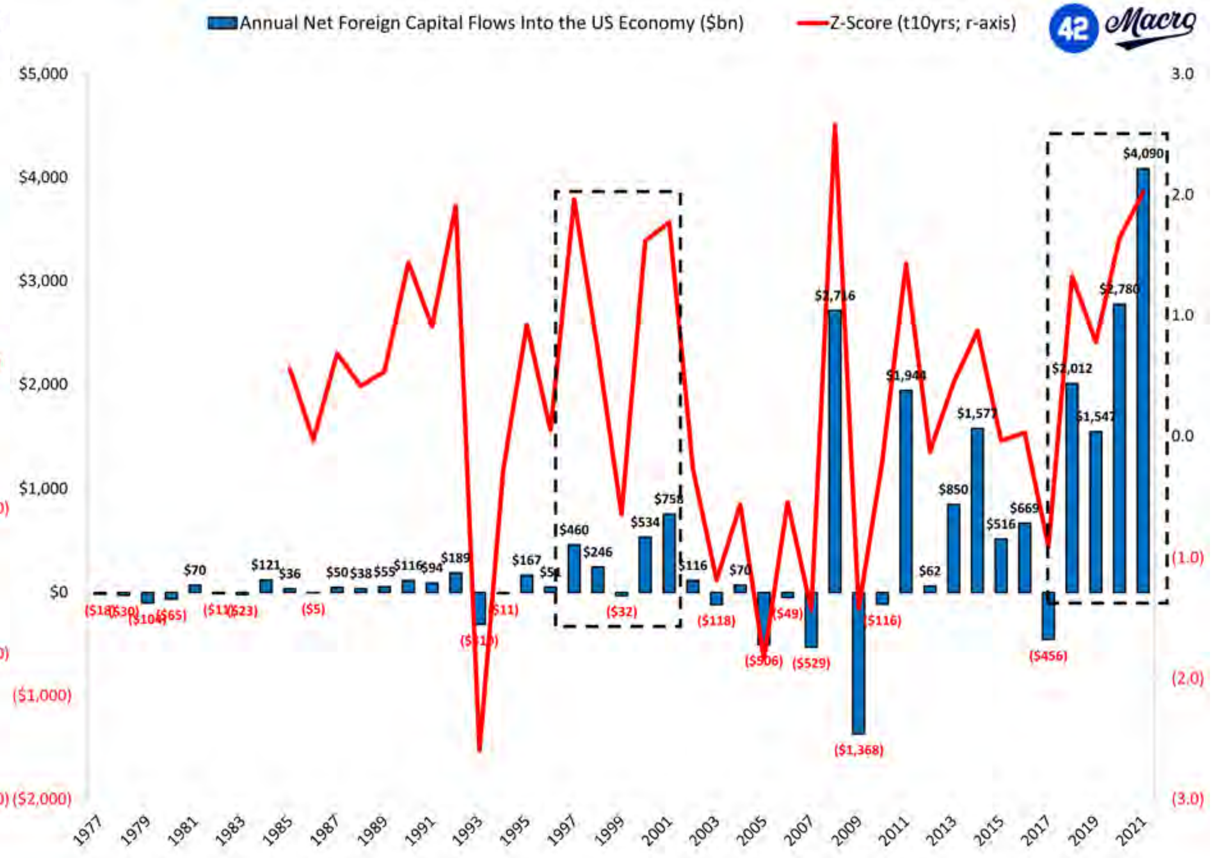


© 42 Macro LLC. Data Source: Bloomberg. In trillions of USD.

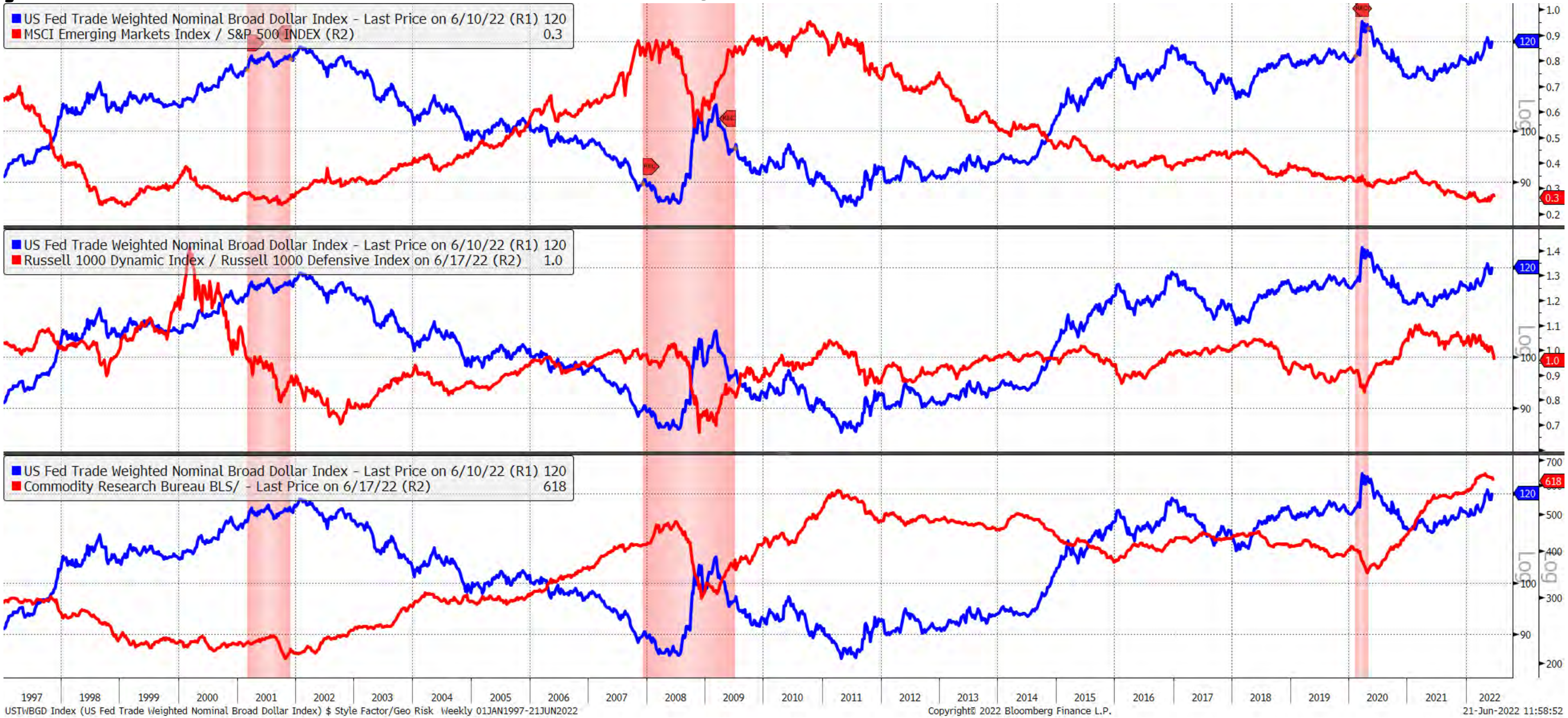
Substantial Capital Outflow Risk: Annual Net Foreign Capital Flows Into the US Economy vs. US Net International Investment Position



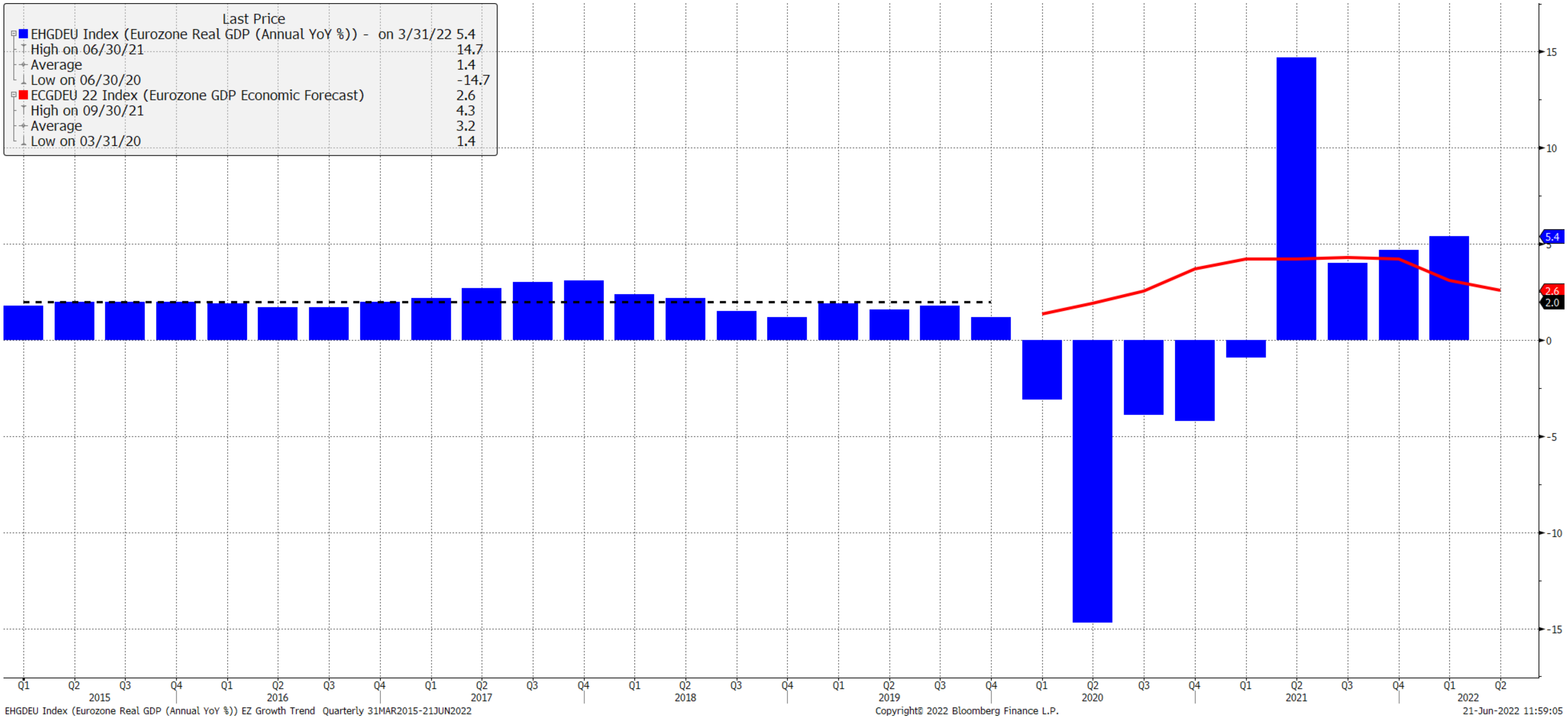
Substantial Capital Outflow Risk: Annual Net Foreign Capital Flows Into the US Economy vs. Trailing 3yr Z-Score



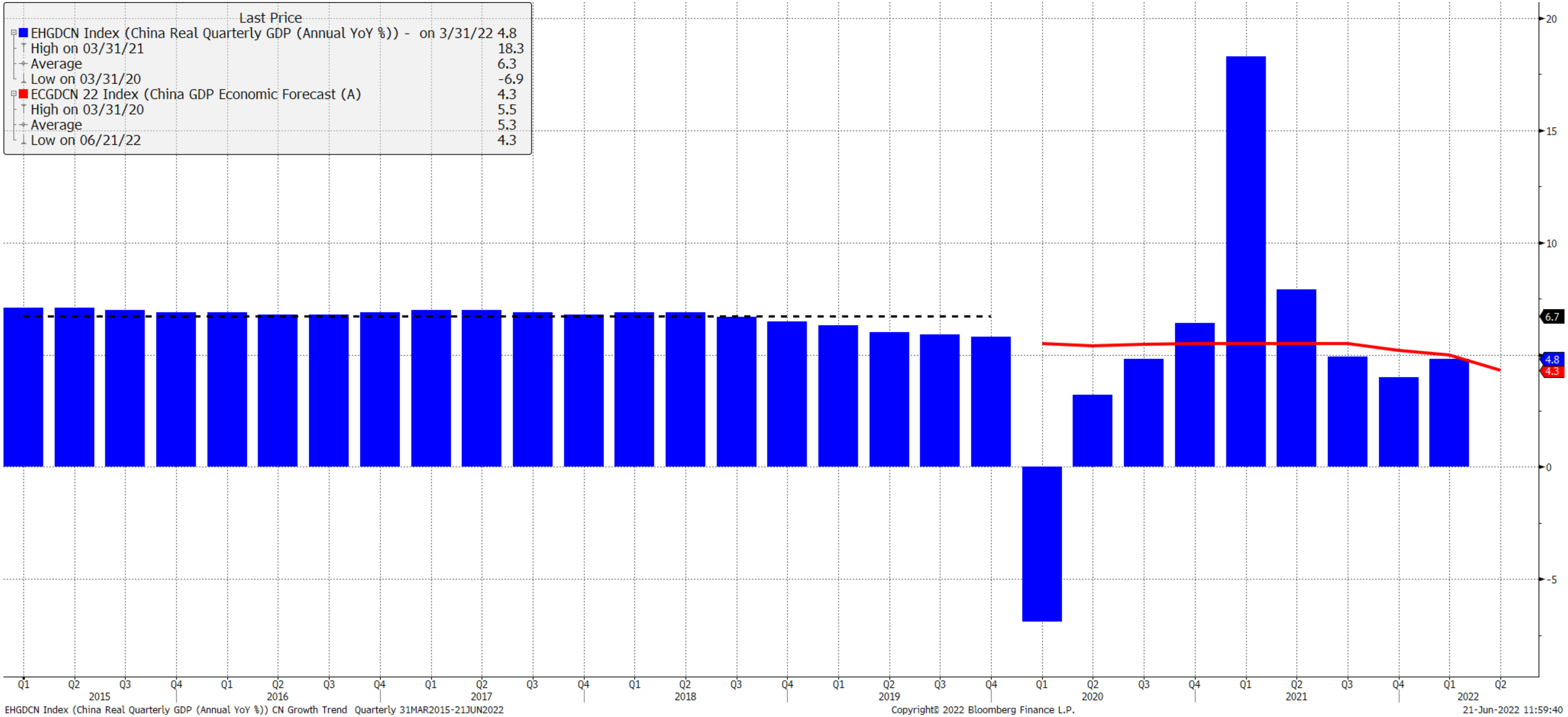
A Weak Dollar Favors Int’l & EM Equities In Lieu Of US Equities, Cyclicals In Lieu Of Defensives, And Real Assets



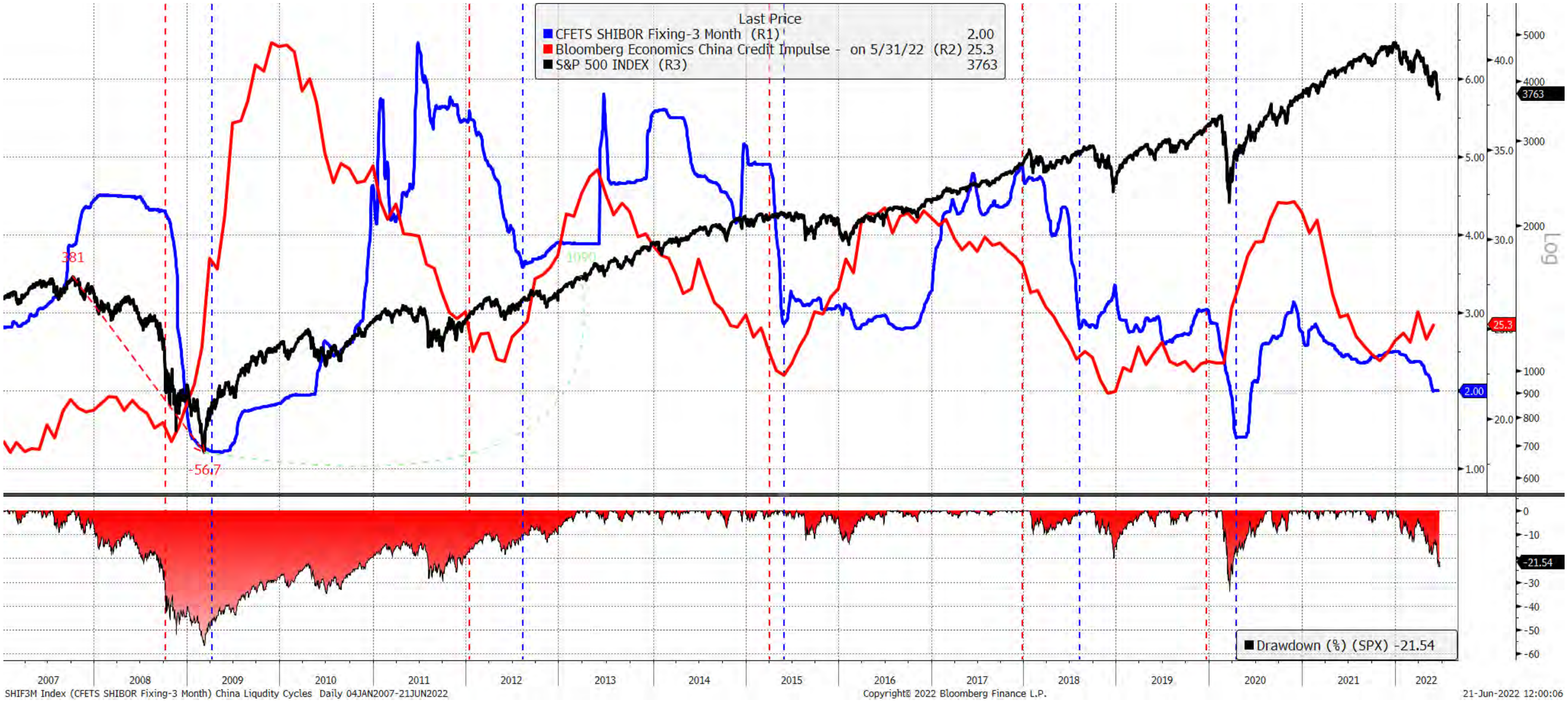
Eurozone Growth Estimates Are Still Way Too High



China Growth Estimates Are Reasonable



China's #LiquidityCycle Has Inflected



The Bull Case: Sharp Disinflation = Accelerating Real Incomes

Indicator	RoC	Sequential Momentum		Trending Momentum		Secant Context		Tangent Context	
US Personal Consumption Expenditures Chained 2012 Dollars SAAR YoY	Apr-22	Mar-22	Apr-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.2	2.6	2.8	7.0	5.2	Feb-22	-	Feb-22	-
US Personal Consumption Expenditures Chained 2012 Dollars SAAR 3mo SAAR	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.9)	2.1	1.2	1.0	0.6	-	Feb-22	-	Dec-21
Real Personal Consumption Expenditures of Goods YoY	Apr-22	Mar-22	Apr-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	1.4	(4.2)	(2.9)	6.0	2.6	Feb-22	-	Feb-22	-
Real Personal Consumption Expenditures of Goods 3mo SAAR	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(2.6)	2.8	0.2	(0.1)	(0.3)	-	Feb-22	-	Dec-21
US Personal Consumption Expenditures Services Chained 2012 Dollars SAAR YoY	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.5)	6.4	5.9	7.6	6.7	-	Mar-21	-	Mar-22
US Personal Consumption Expenditures Services Chained 2012 Dollars SAAR 3mo SAAR	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.0)	1.8	1.8	1.6	1.1	-	Feb-22	-	Dec-21
US Disposable Personal Income Chained 2012 Dollars SA YoY	Apr-22	Mar-22	Apr-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	14.6	(20.8)	(6.2)	(4.0)	(6.4)	Feb-22	-	Mar-21	-
US Disposable Personal Income Chained 2012 Dollars SA 3mo SAAR	Apr-22	Mar-22	Apr-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	1.4	(1.9)	(0.5)	(2.5)	(1.2)	Dec-21	-	Aug-21	-
US Disposable Personal Income Per Capita Chained 2012 Dollars SA YoY	Apr-22	Mar-22	Apr-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	14.6	(21.0)	(6.4)	(4.2)	(6.6)	Feb-22	-	Mar-21	-
US Disposable Personal Income Per Capita Chained 2012 Dollars SA 3mo SAAR	Apr-22	Mar-22	Apr-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	1.4	(1.9)	(0.5)	(2.5)	(1.3)	Dec-21	-	Dec-21	-
U.S. Personal Income Excl Transfer Receipts Chained 2012 Dollars SAAR YoY	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.3)	2.3	2.0	3.4	2.6	-	Mar-21	-	Mar-22
U.S. Personal Income Excl Transfer Receipts Chained 2012 Dollars SAAR 3mo SAAR	Apr-22	Mar-22	Apr-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.4	(0.1)	0.3	0.6	0.3	Dec-21	-	Apr-21	-
US Personal Saving as a % of Disposable Personal Income	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.6)	5.0	4.4	7.8	6.3	-	Sep-08	-	Mar-22
US Personal Consumption Expenditures Chain Type Price Index SA YoY	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.3)	6.6	6.3	5.2	6.1	-	Feb-22	-	Apr-20
US Personal Consumption Expenditures Chain Type Price Index SA 3mo SAAR	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(1.0)	7.8	6.8	6.2	6.7	-	Feb-22	-	Nov-20
US Personal Consumption Expenditures Ex Food & Energy Deflator SA YoY	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.3)	5.2	4.9	4.4	5.0	-	Dec-21	-	Apr-20
US Personal Consumption Expenditures Ex Food & Energy Deflator SA 3mo SAAR	Apr-22	Mar-22	Apr-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.4)	4.3	3.9	5.0	4.9	-	Sep-21	-	Mar-22

The Bear Case: The Labor Market Continues To Overheat

Indicator	RoC	Sequential Momentum		Trending Momentum		Secant Context		Tangent Context	
US Employees on Nonfarm Payrolls Total SA	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	390.0	151,292.0	151,682.0	148,853.8	150,545.3	Feb-20	-	Apr-22	-
US Employees on Nonfarm Payrolls Total SA YoY	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.1)	4.6	4.5	4.6	4.6	-	Mar-22	-	Mar-22
US Employees on Nonfarm Payrolls Total SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.9)	4.1	3.3	4.4	4.4	-	Feb-21	-	Dec-20
US Employees on Nonfarm Payrolls Total Private SA	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	333.0	129,085.0	129,418.0	126,718.8	128,361.3	Feb-20	-	Apr-22	-
US Employees on Nonfarm Payrolls Total Private SA YoY	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.1)	5.1	5.1	5.2	5.1	-	Mar-22	-	Mar-22
US Employees on Nonfarm Payrolls Total Private SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(1.2)	4.7	3.5	5.0	5.0	-	Feb-21	-	Jan-21
US Avg Hourly Earnings NonsupervisoryPrivate Nonfarm Payrolls TTL Nom Dollars SA	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.1	27.2	27.3	26.6	27.0	-	-	Dec-21	-
US Avg Hourly Earnings NonsupervisoryPrivate Nonfarm Payrolls TTL Nom Dollars SA YoY	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.2)	6.6	6.5	6.1	6.6	-	Dec-21	-	Dec-21
US Avg Hourly Earnings NonsupervisoryPrivate Nonfarm Payrolls TTL Nom Dollars SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	1.0	4.6	5.6	6.5	5.9	Feb-22	-	May-21	-
US Avg Weekly Hours Nonfarm Total Private Production and Nonsupervisory SA	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	Lowest Since	Fastest Since	Slowest Since
	0.0	34.1	34.1	34.2	34.1	-	-	-	-
US Avg Weekly Hours Nonfarm Total Private Production and Nonsupervisory SA YoY	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.3	(0.9)	(0.6)	(0.2)	(0.6)	Feb-22	-	Feb-22	-
US Avg Weekly Hours Nonfarm Total Private Production and Nonsupervisory SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(2.3)	1.2	(1.2)	(0.8)	(0.8)	-	Jan-22	-	Jun-21
Average Weekly Earnings Total SA	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	5.1	926.8	932.0	909.1	921.4	-	-	Feb-22	-
Average Weekly Earnings Total SA YoY	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.1	5.7	5.8	5.9	6.0	Feb-22	-	Feb-22	-
Average Weekly Earnings Total SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(1.4)	5.8	4.5	5.7	5.1	-	Jan-22	-	Dec-21
Aggregate Private Sector Monthly Earnings SA YoY YoY	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.1	11.1	11.2	11.3	11.4	Feb-22	-	Feb-22	-
Aggregate Private Sector Monthly Earnings SA 3mo SAAR 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(2.6)	10.6	8.0	10.7	10.1	-	Feb-21	-	Jun-21

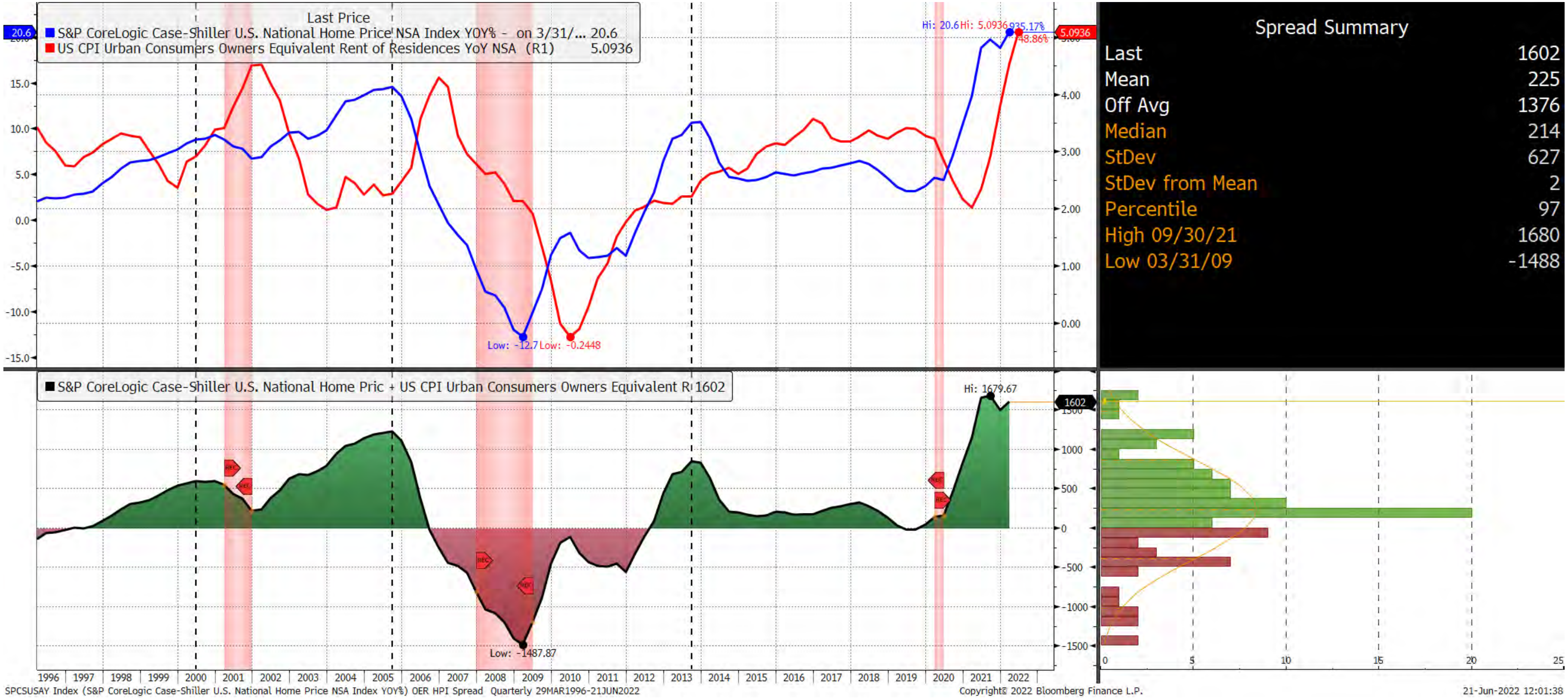
2015-19 trend for Total Nonfarm Payrolls = +190k MoM.

2015-19 trend for Aggregate Private Sector Monthly Earnings = +4.5% YoY.

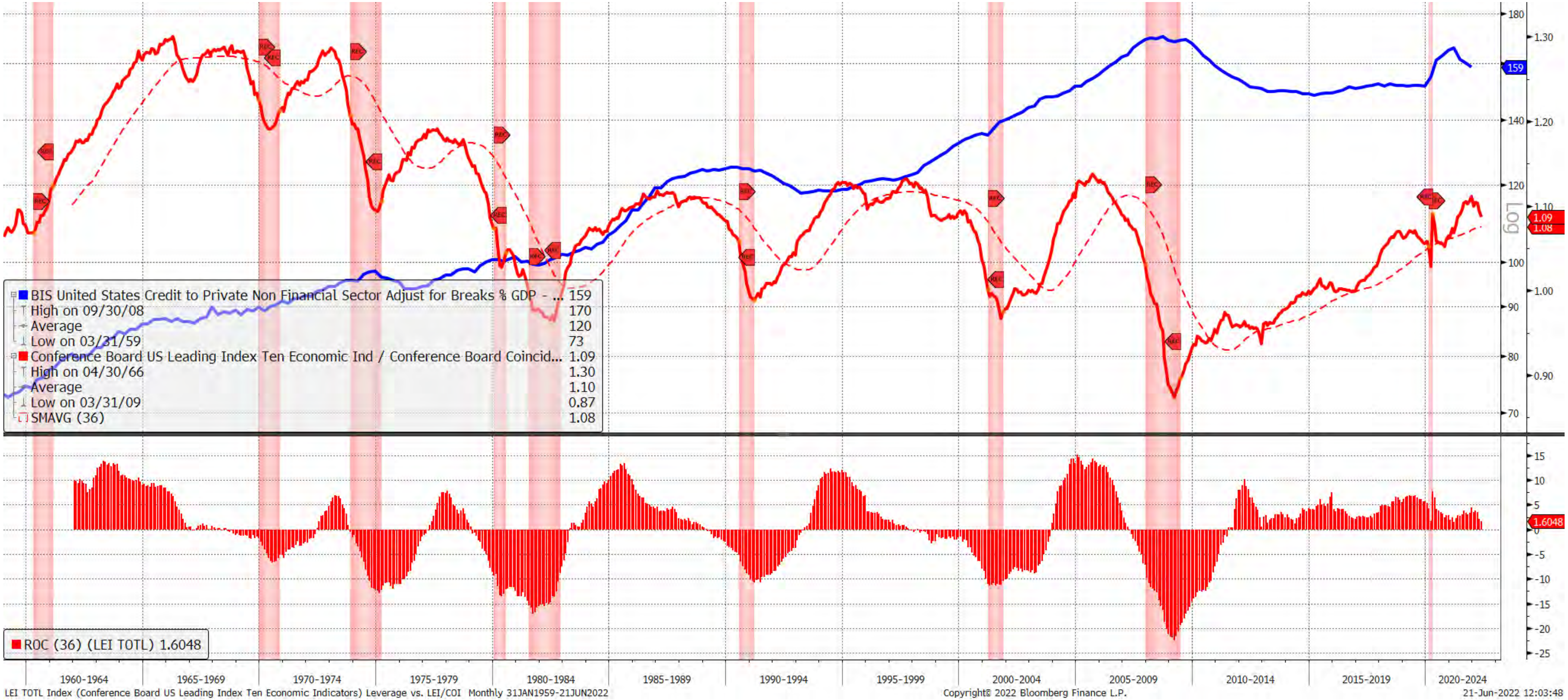
The Bear Case: Goods Inflation Hands Over The Baton To Services

Indicator	RoC	Sequential Momentum		Trending Momentum		Secant Context		Tangent Context	
US CPI Urban Consumers NSA YoY	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.3	8.3	8.6	6.8	8.0	Dec-81	-	Mar-22	-
US CPI Urban Consumers SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.7	9.5	10.3	8.2	9.2	Mar-22	-	Mar-22	-
US CPI Urban Consumers Food NSA YoY	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.8	9.4	10.1	6.3	8.2	Feb-81	-	Mar-22	-
US CPI Urban Consumers Food SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.6	11.6	12.2	9.1	10.4	Nov-80	-	Mar-22	-
US CPI Urban Consumers Energy NSA YoY	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	4.3	30.3	34.6	28.3	29.8	Sep-05	-	Mar-22	-
US CPI Urban Consumers Energy SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	1.9	47.1	48.9	29.2	37.8	Mar-22	-	Mar-22	-
US CPI Urban Consumers Less Food & Energy NSA YoY	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(0.1)	6.2	6.0	5.2	6.1	-	Jan-22	-	Apr-22
US CPI Urban Consumers Less Food & Energy SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.5	5.6	6.1	6.1	6.3	Feb-22	-	Dec-21	-
US CPI Urban Consumers Commodities Less Food & Energy NSA YoY	May-22	Apr-22	May-22	12MMA	6MMA	-	Lowest Since	-	Slowest Since
	(1.3)	9.7	8.5	9.5	10.8	-	Oct-21	-	Apr-22
US CPI Urban Consumers Commodities Less Food & Energy SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	1.0	0.8	1.8	9.6	7.0	Mar-22	-	Dec-21	-
US CPI Urban Consumers Services Less Energy Services NSA YoY	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.2	4.9	5.2	3.8	4.5	Jun-91	-	Apr-22	-
US CPI Urban Consumers Services Less Energy Services 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.3	7.5	7.8	4.8	6.0	Aug-90	-	Apr-22	-
US CPI Urban Consumers Shelter NSA YoY	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.3	5.1	5.5	4.0	4.8	Feb-91	-	Feb-22	-
US CPI Urban Consumers Shelter SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.4	6.2	6.6	5.1	5.6	Sep-90	-	Apr-22	-
Federal Reserve Bank of Cleveland Median CPI YoY NSA	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.3	5.2	5.5	3.7	4.7	-	-	Apr-22	-
Federal Reserve Bank of Cleveland Median CPI SA 3mo SAAR	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.2	6.2	6.4	5.1	6.1	-	-	Jan-22	-
Atlanta Fed Sticky CPI 12 Month	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.2	4.9	5.2	3.7	4.5	May-91	-	Mar-22	-
Atlanta Fed Sticky CPI 3 Month Annualized Rate	May-22	Apr-22	May-22	12MMA	6MMA	Highest Since	-	Fastest Since	-
	0.3	6.5	6.8	5.0	6.0	Aug-90	-	Mar-22	-

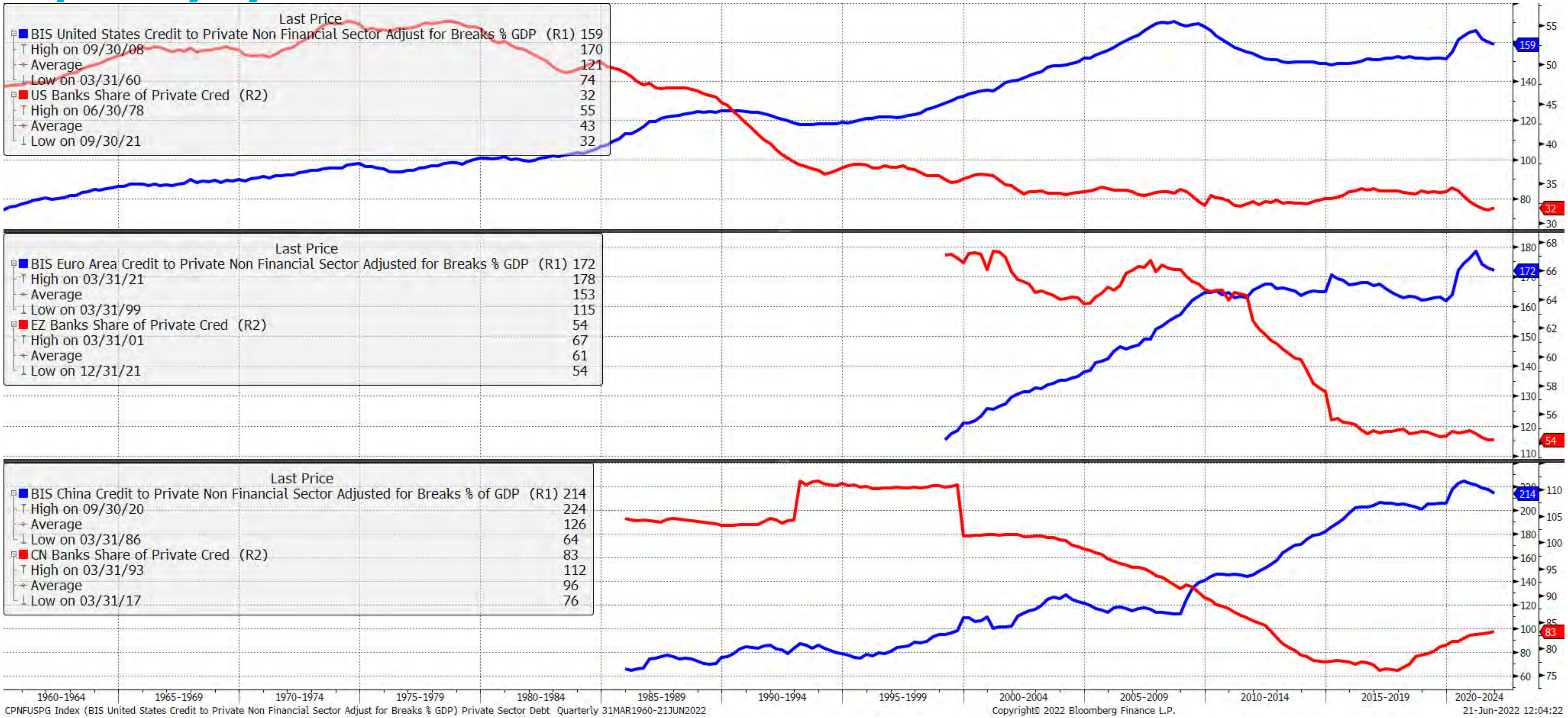
Shelter Inflation Has Not Yet Peaked



Rising Leverage Makes The Economy More Cyclical

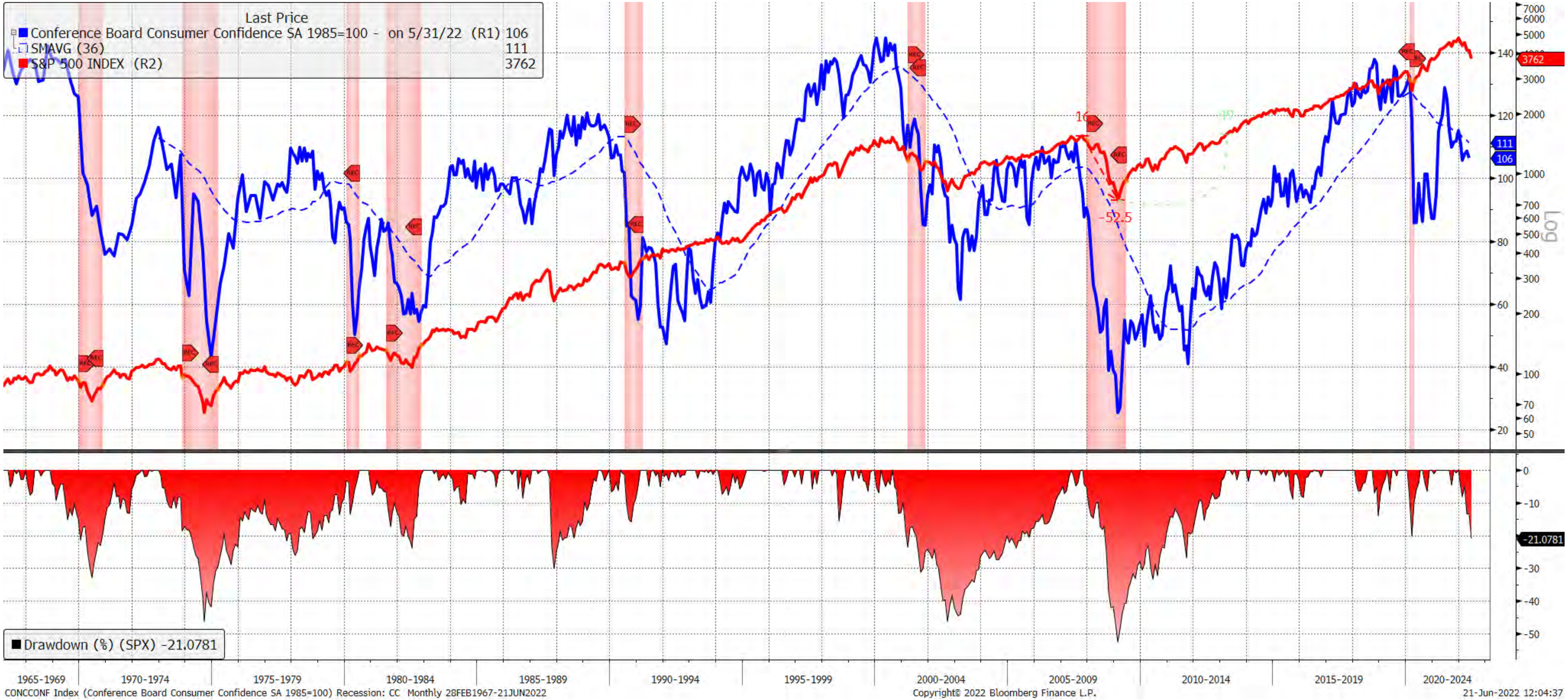


Financialization Makes The Economy More Sensitive To The #LiquidityCycle

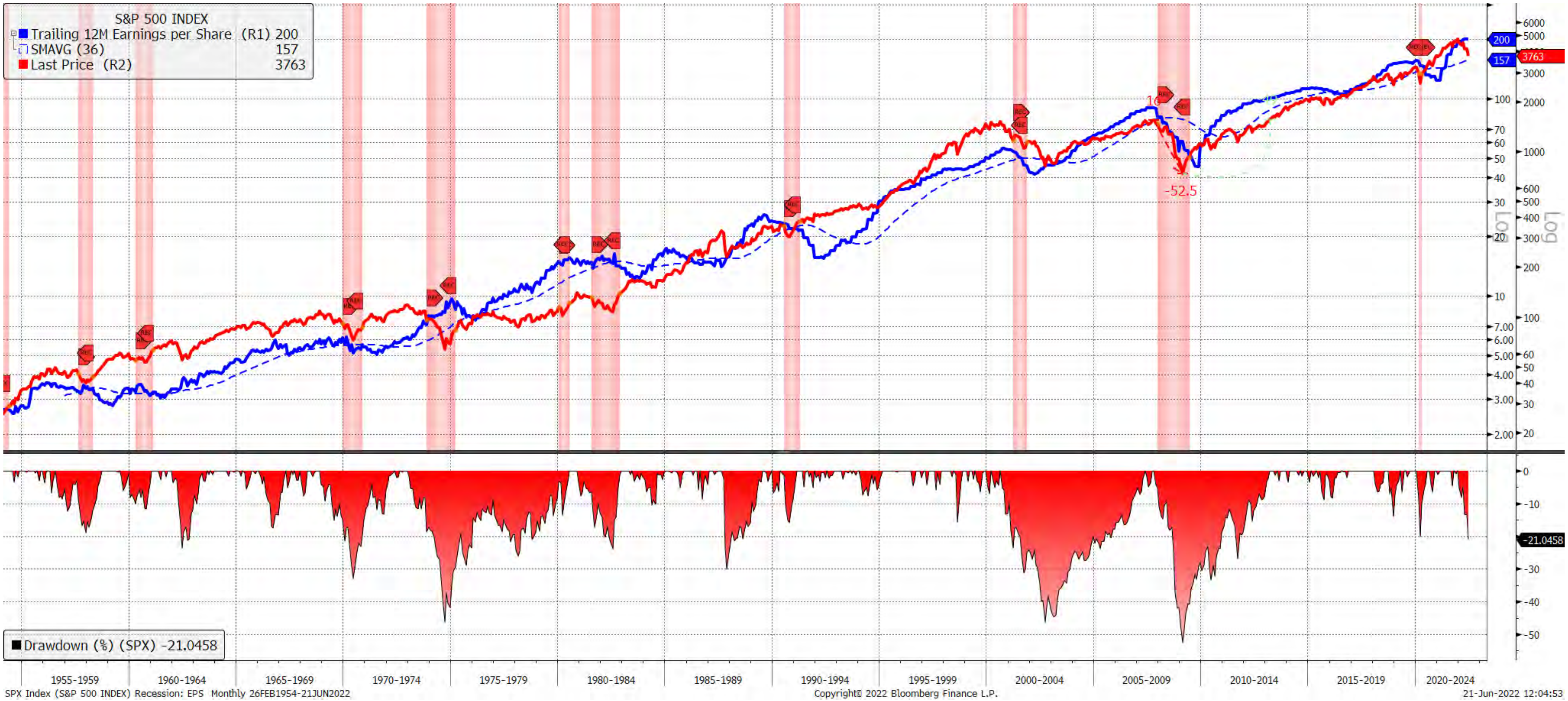


42 Macro

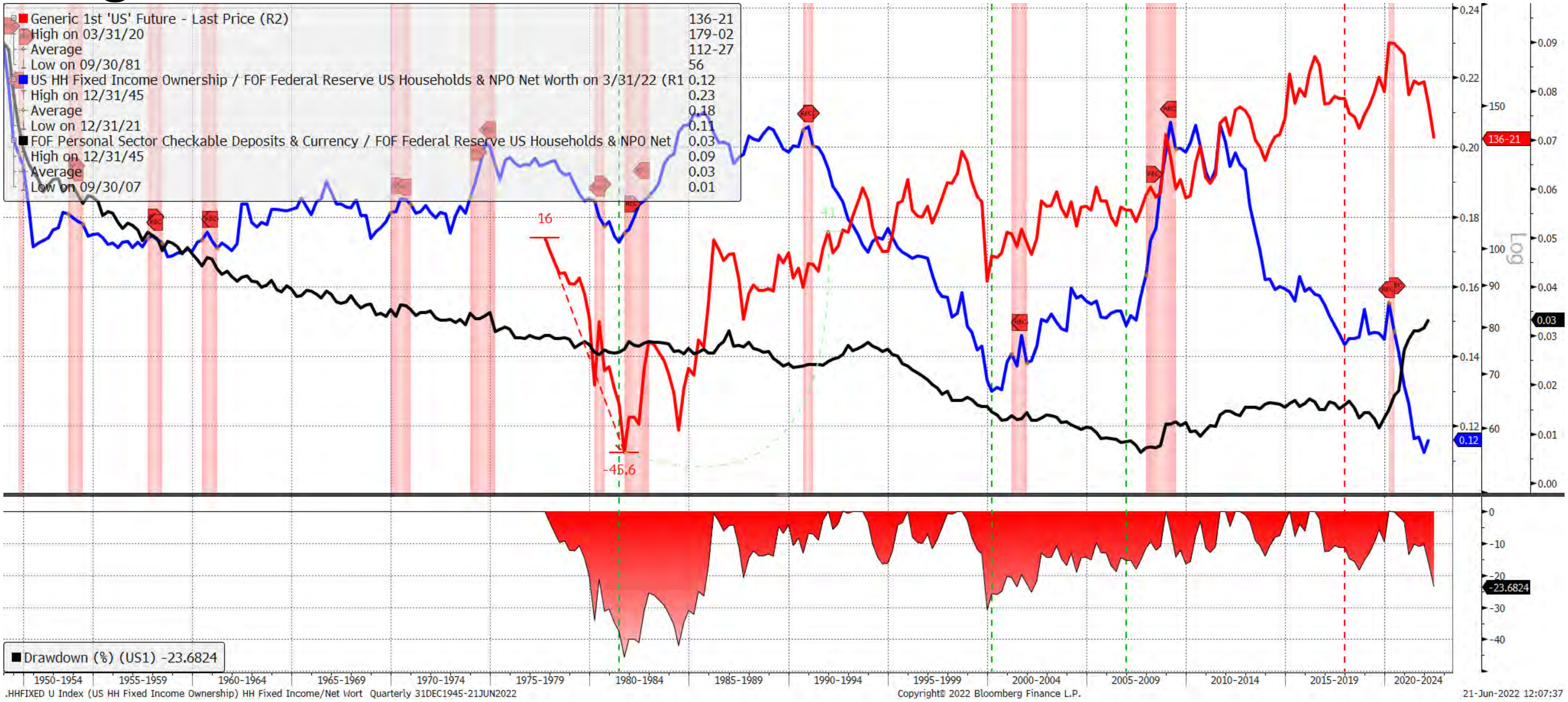
Recession Watch: Consumer Confidence



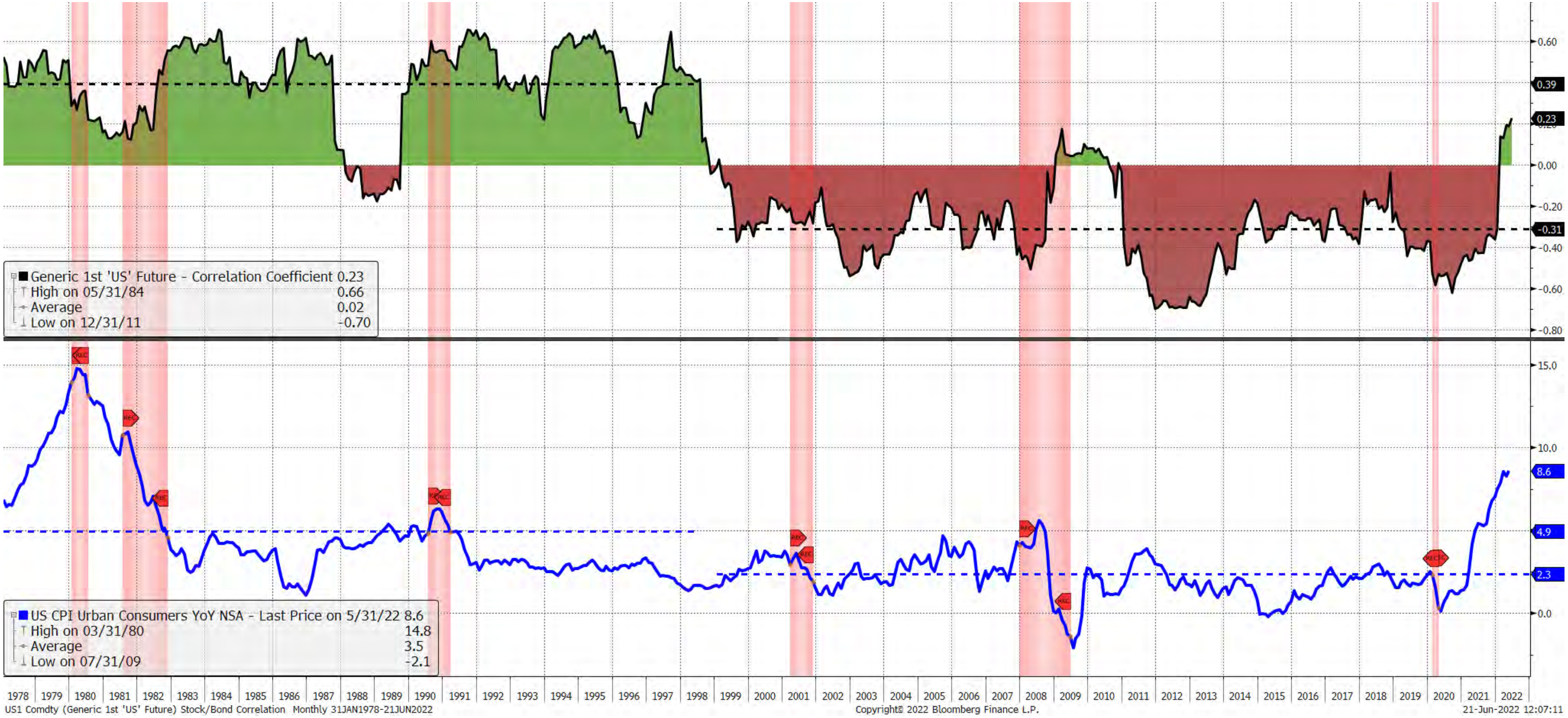
Recession Watch: Corporate Profits



The Massive Underweight In Fixed Income Is Incongruent With Rising Recession Risk



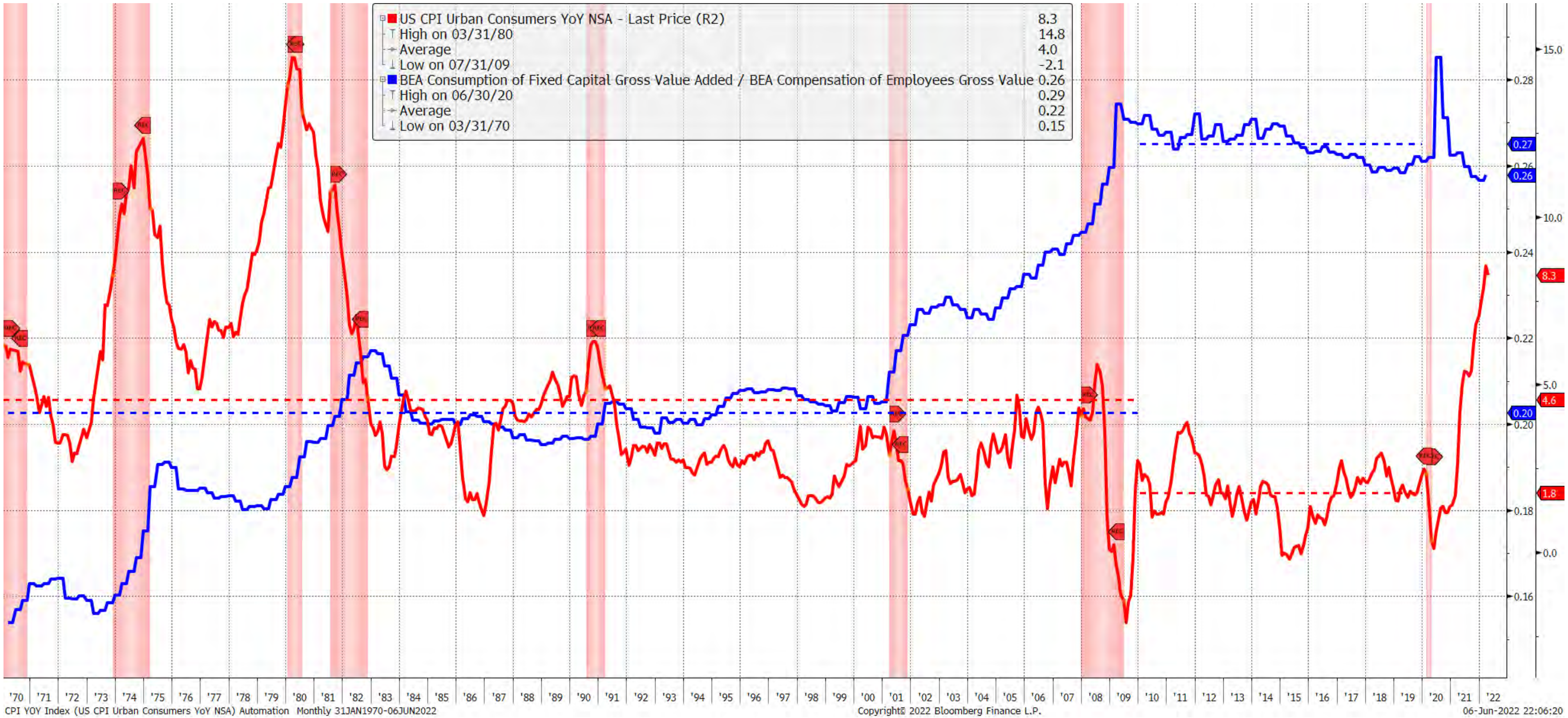
The Benefits Of Diversification Are Likely To Return If A Recession Becomes The Modal Outcome



42 Macro Secular Inflation Model: Our #Math Suggests Core PCE Inflation Is Likely To Trend 20-70bps Higher Throughout The 2020s

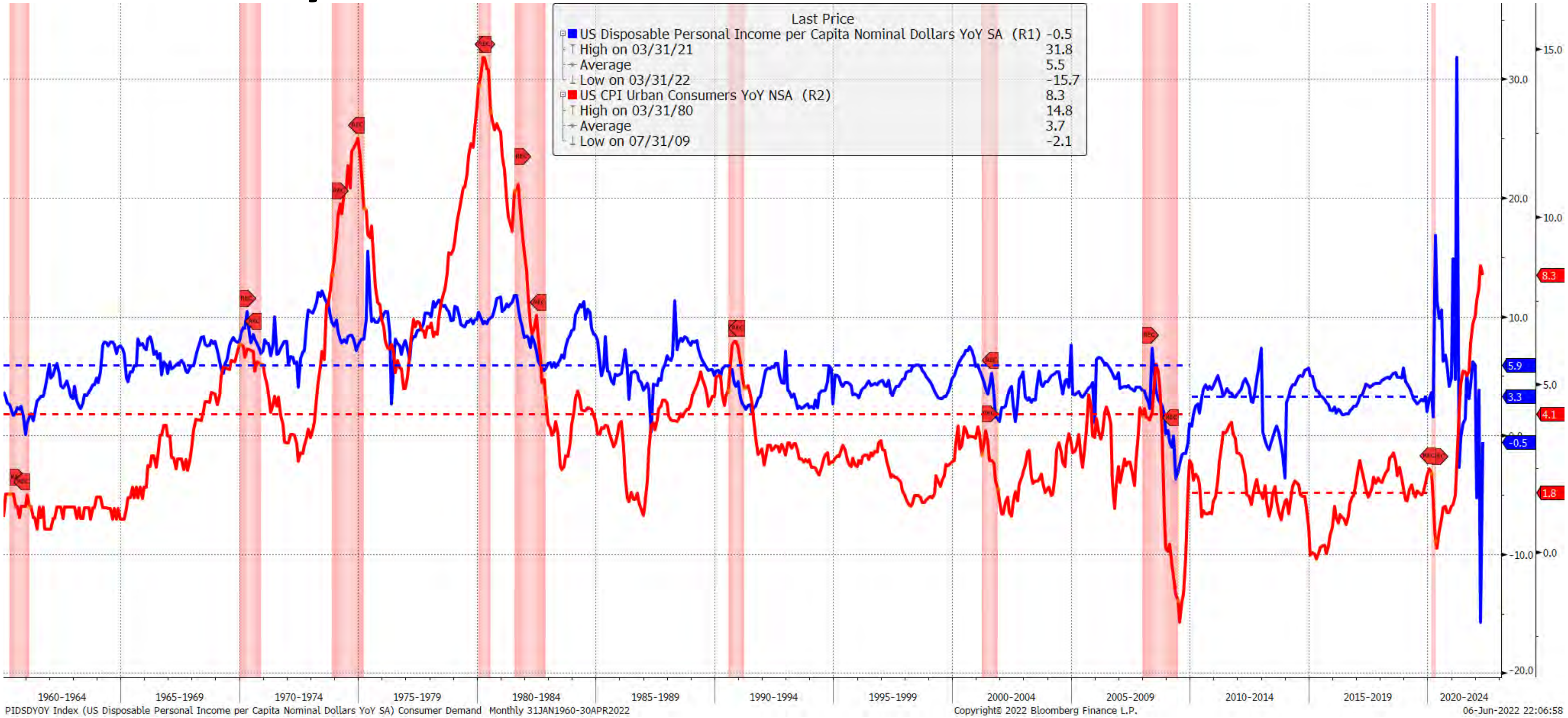
US SECULAR INFLATION DRIVER	Δ-ADJUSTED Z-SCORE (Latest Value vs. 2010-19 Sample)
Automation: Capex/Employee Compensation (Latest Value = 26%)	2.0
Consumer Demand: Disposable Personal Income per Capita YoY (Latest Value = -0.5%)	(1.6)
Demographics: Share of Population ≥ 65 Years Old (Latest Value = 17%)	(2.7)
Fed Reaction Function: Fed Balance Sheet as a % of GDP (Latest Value = 37%)	4.8
Fiscal Balance: Budget Deficit as a % of GDP (Latest Value = -5%)	0.0
Globalization: Imports of Goods and Services as a % of GDP (Latest Value = 13%)	2.8
Household Formation: Net Change in Domestic Households (Latest Value = 1456)	1.4
Income Inequality: Gini Coefficient (Latest Value = 0.49)	(2.3)
Money Supply: M2 YoY (Latest Value = 8%)	1.0
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%)	(3.9)
Public Debt: Federal Debt Held by the Public as a % of GDP (Latest Value = 104%)	5.9
Technology: NASDAQ 100 Market Cap/Russell 3000 Market Cap (Latest Value = 36%)	(3.3)
Wages: Employment Cost Index YoY (Latest Value = 4.5%)	6.9
Wealth Effect: Household Net Worth as a % of DPI (Latest Value = 818%)	3.9
Wealth Inequality: Top-10% Share of Household Wealth (Latest Value = 65%)	(2.3)
MEAN Z-SCORE MODEL	0.5
WEIGHTED Z-SCORE MODEL	2.0
2010-19 Trend of Core PCE YoY	1.6%
2020-29 Trend Projection - MEAN Z-SCORE MODEL	1.8%
2020-29 Trend Projection - WEIGHTED Z-SCORE MODEL	2.3%
2020-to-date Trend of Core PCE YoY	2.8%

42 Macro Secular Inflation Model: Automation… Inflationary



[0-1σ] = Slightly Inflationary/Disinflationary. [2-3σ] = Inflationary/Disinflationary. ≥ [4σ] = Very Inflationary/Disinflationary.

42 Macro Secular Inflation Model: Consumer Demand… Slightly Disinflationary



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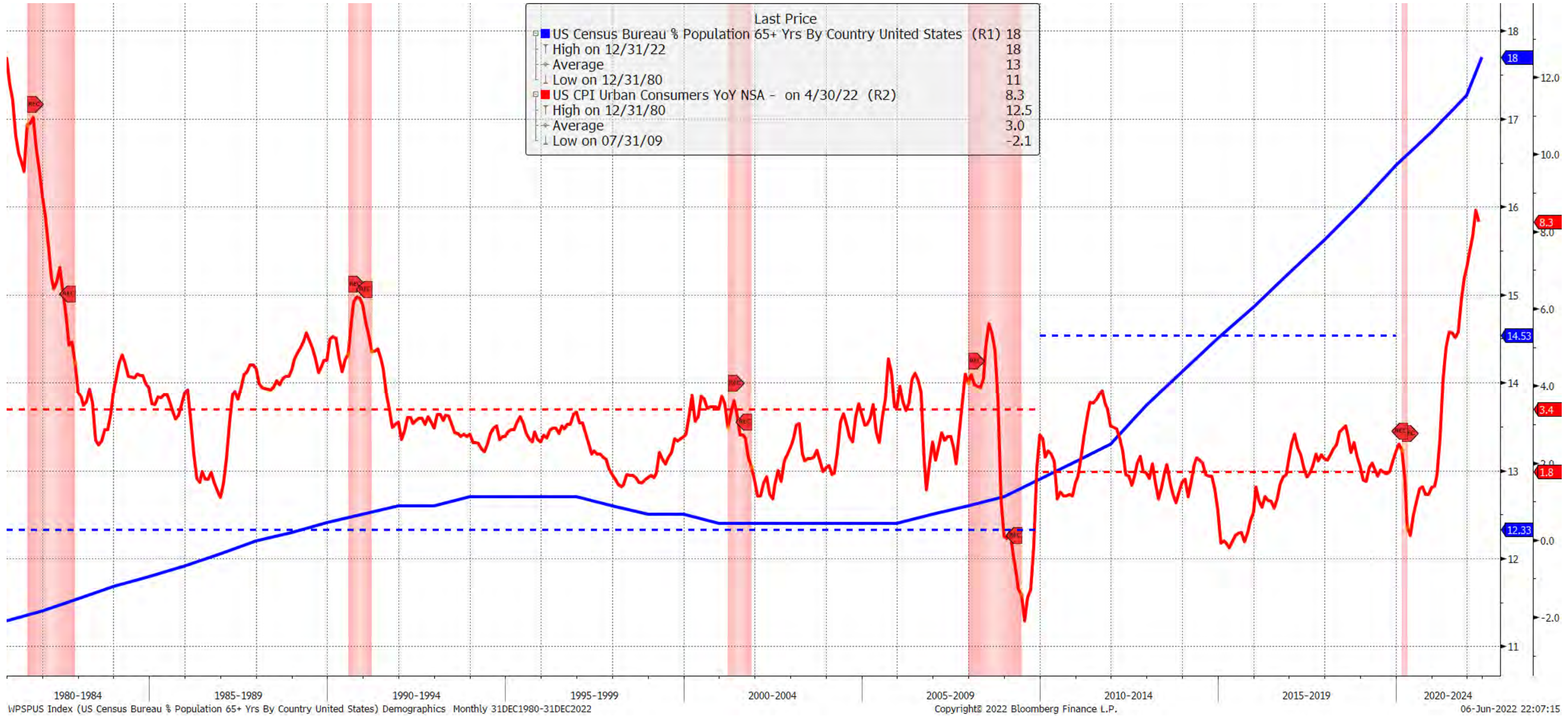
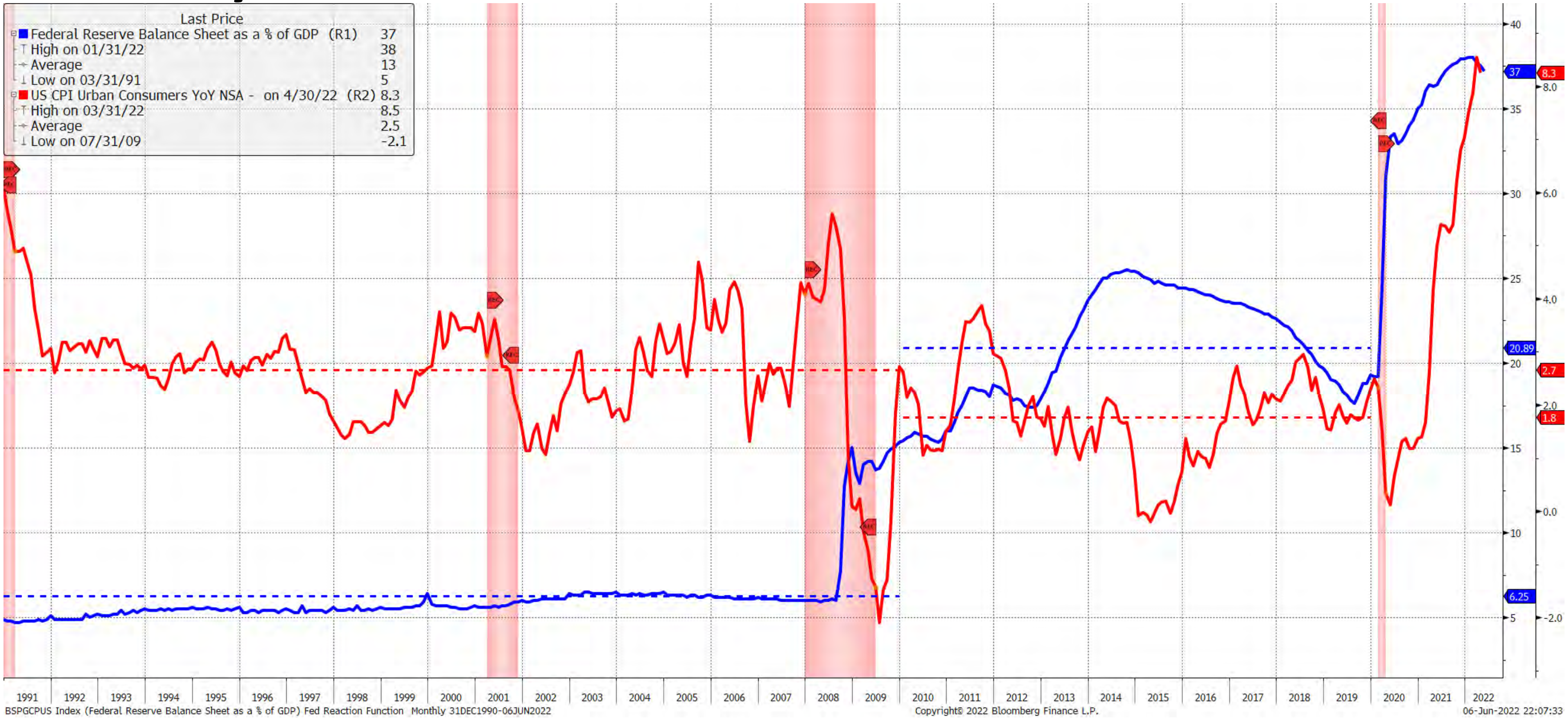
42 Macro Secular Inflation Model: Demographics… Disinflationary



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



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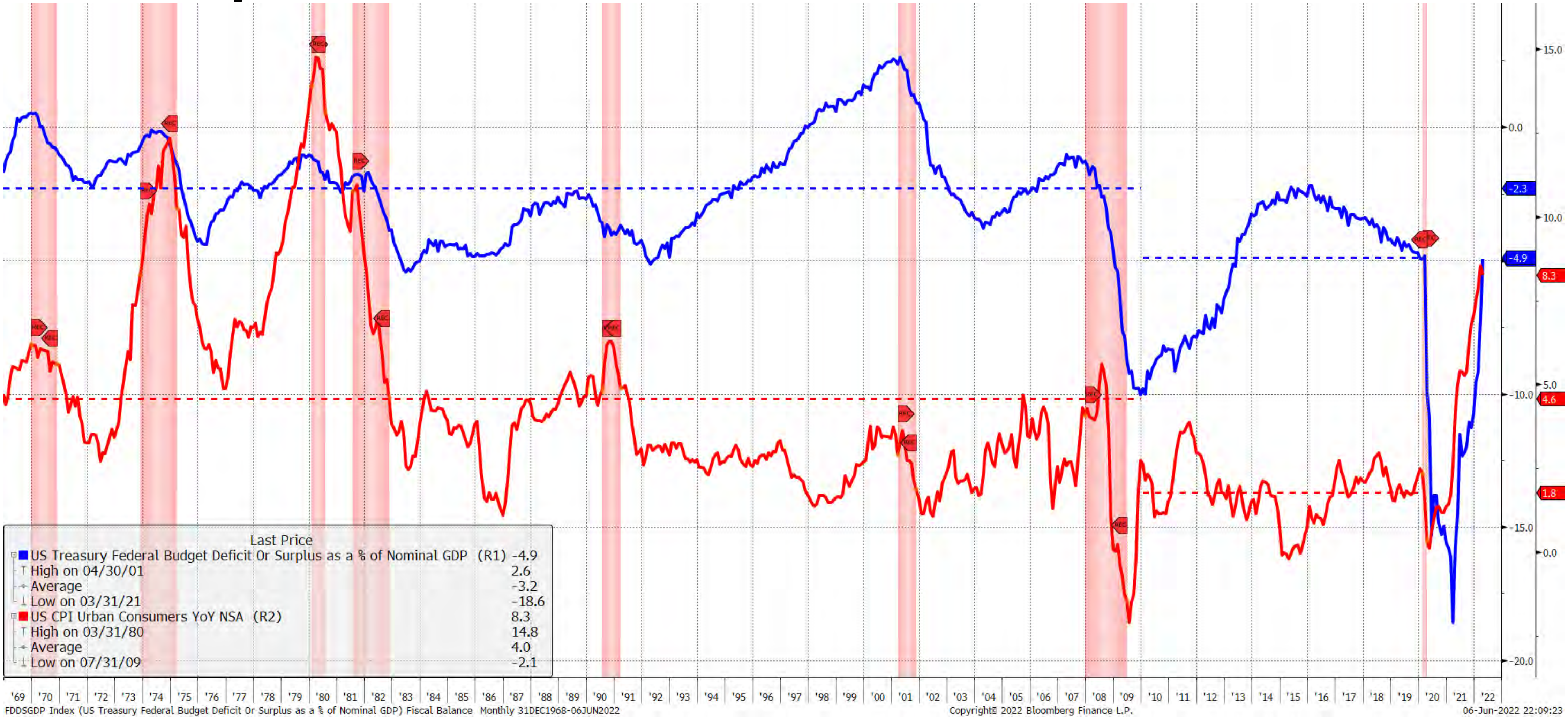
42 Macro Secular Inflation Model: Fiscal Balance… Slightly Inflationary



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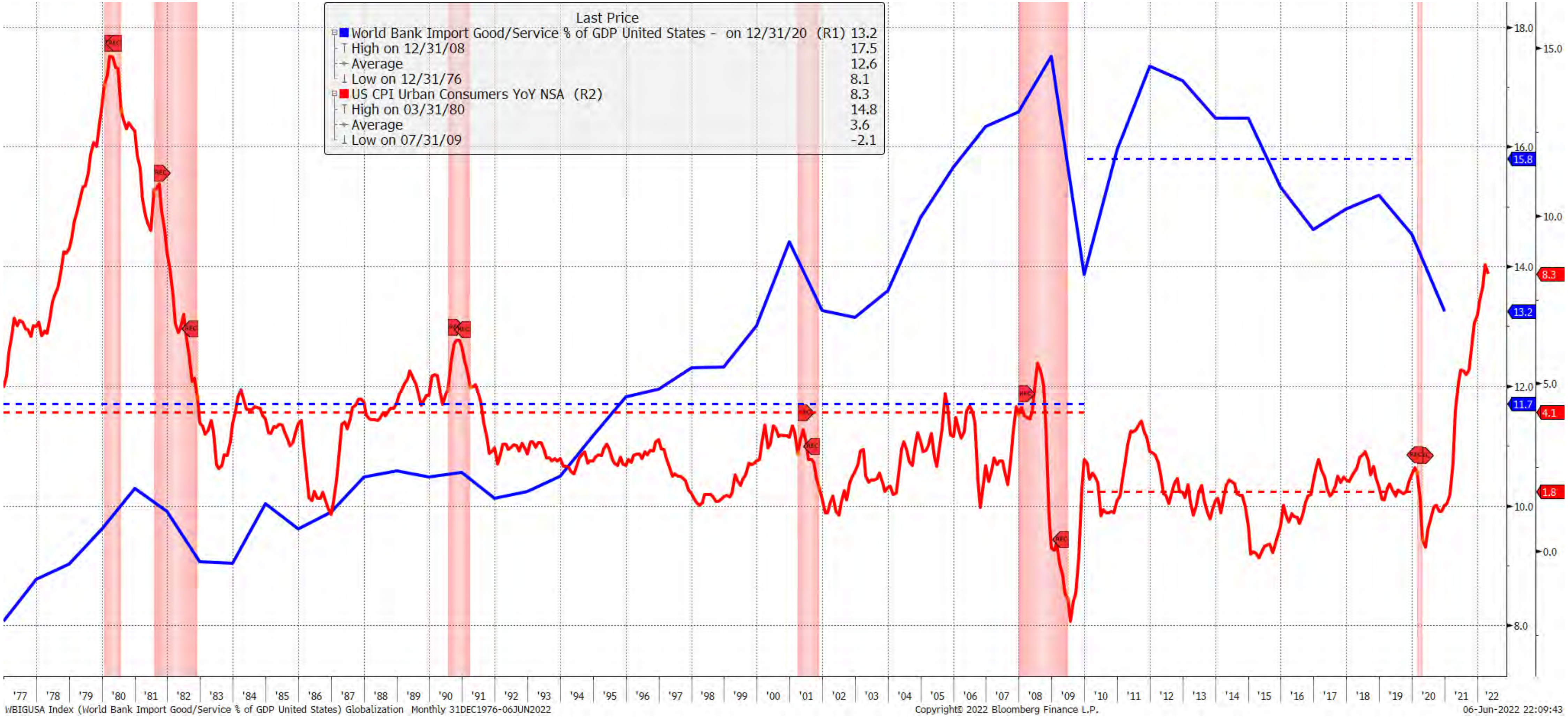
42 Macro Secular Inflation Model: Globalization… Inflationary



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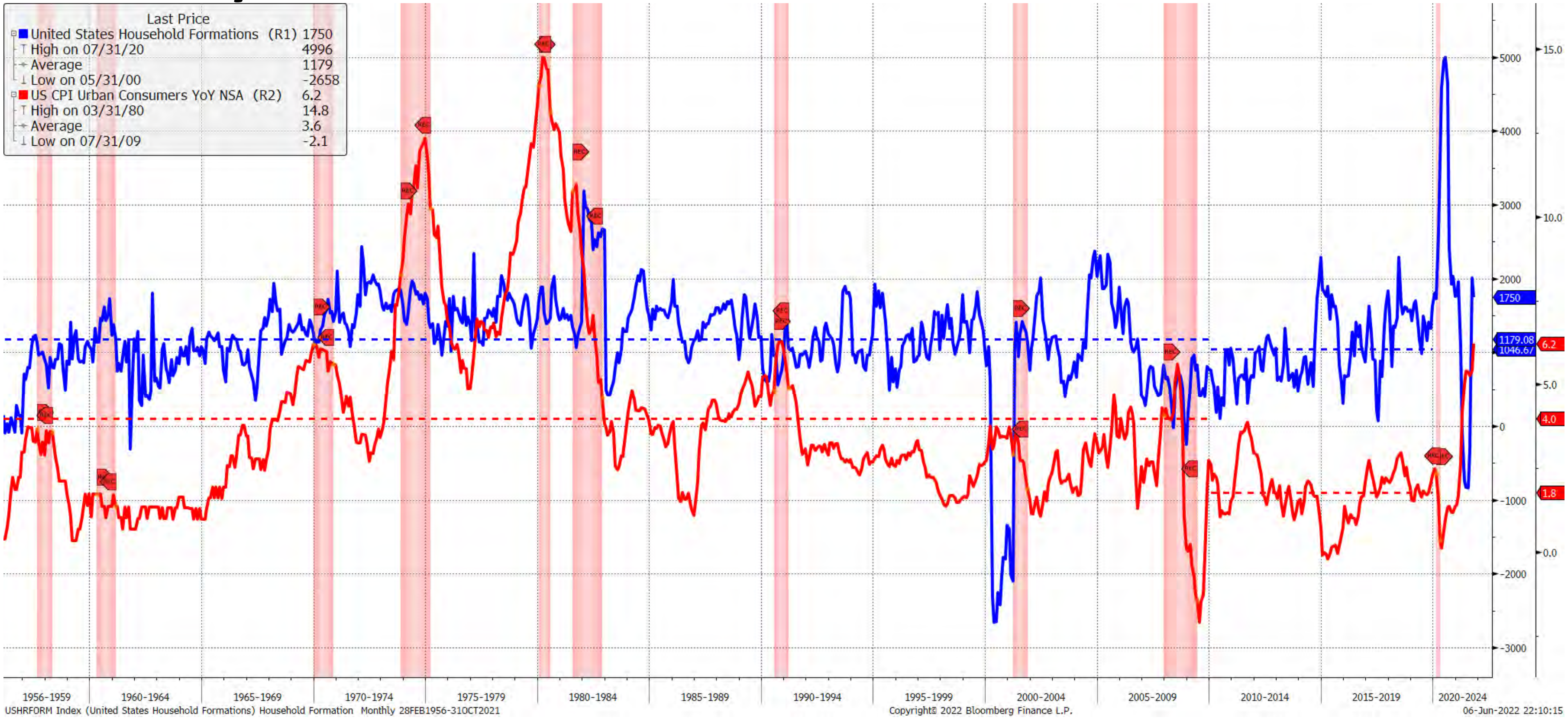
42 Macro Secular Inflation Model: Household Formation… Slightly Inflationary



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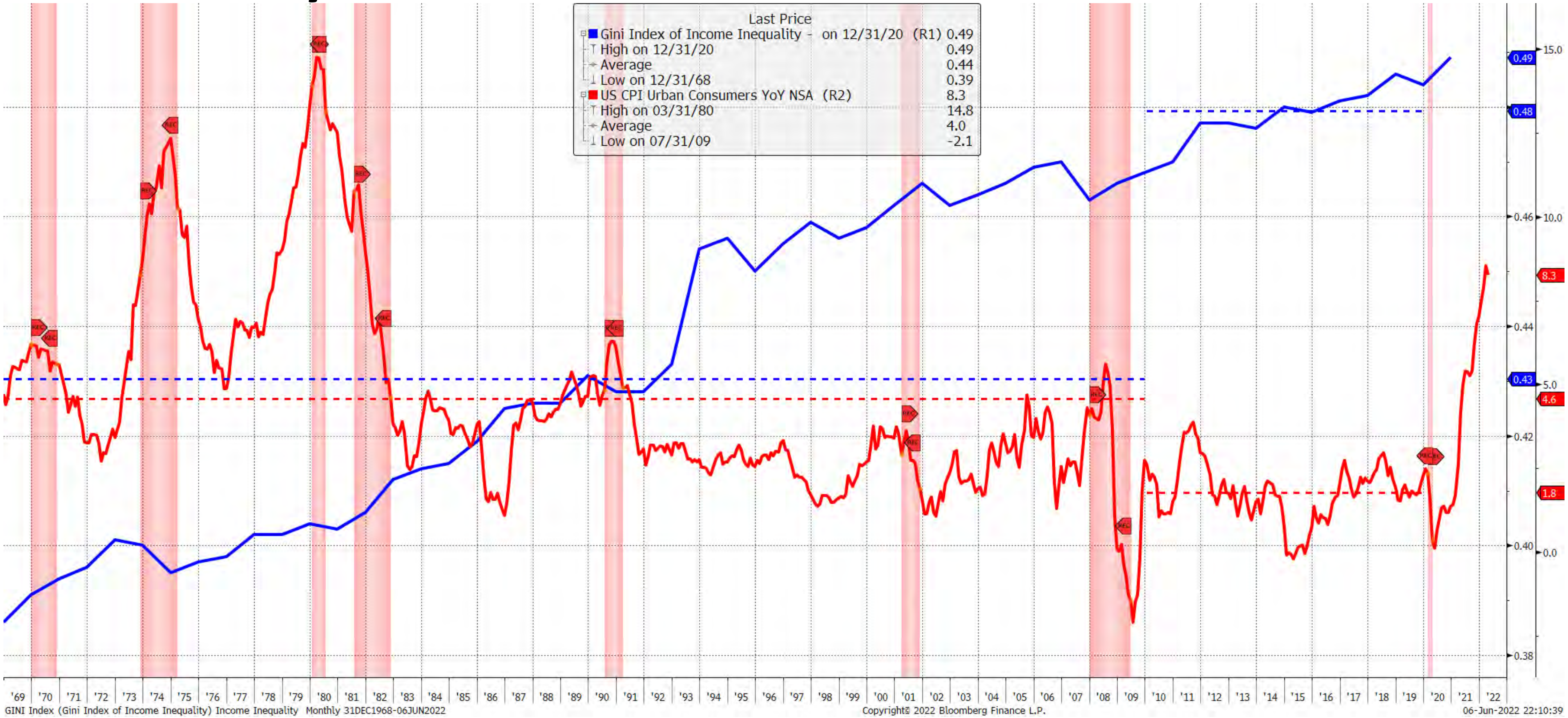
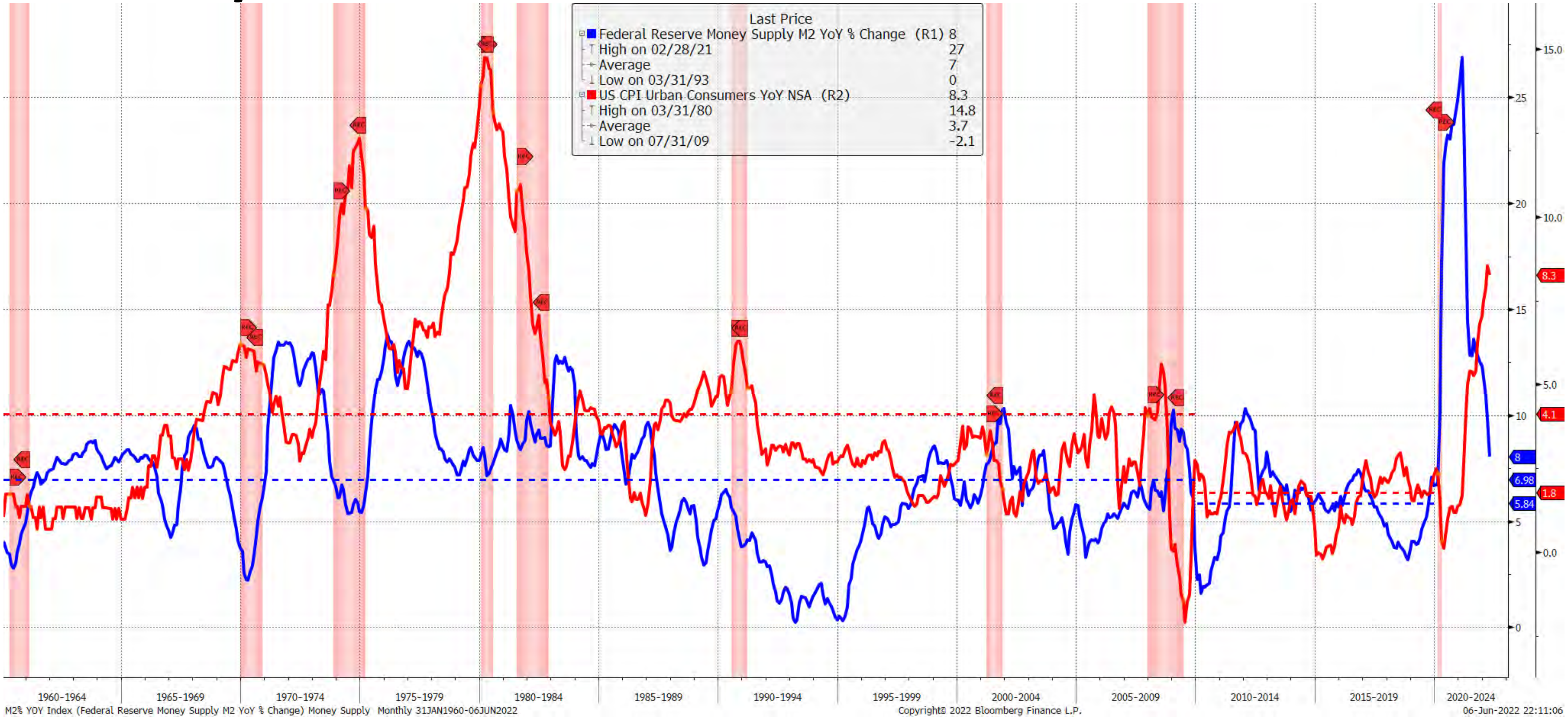
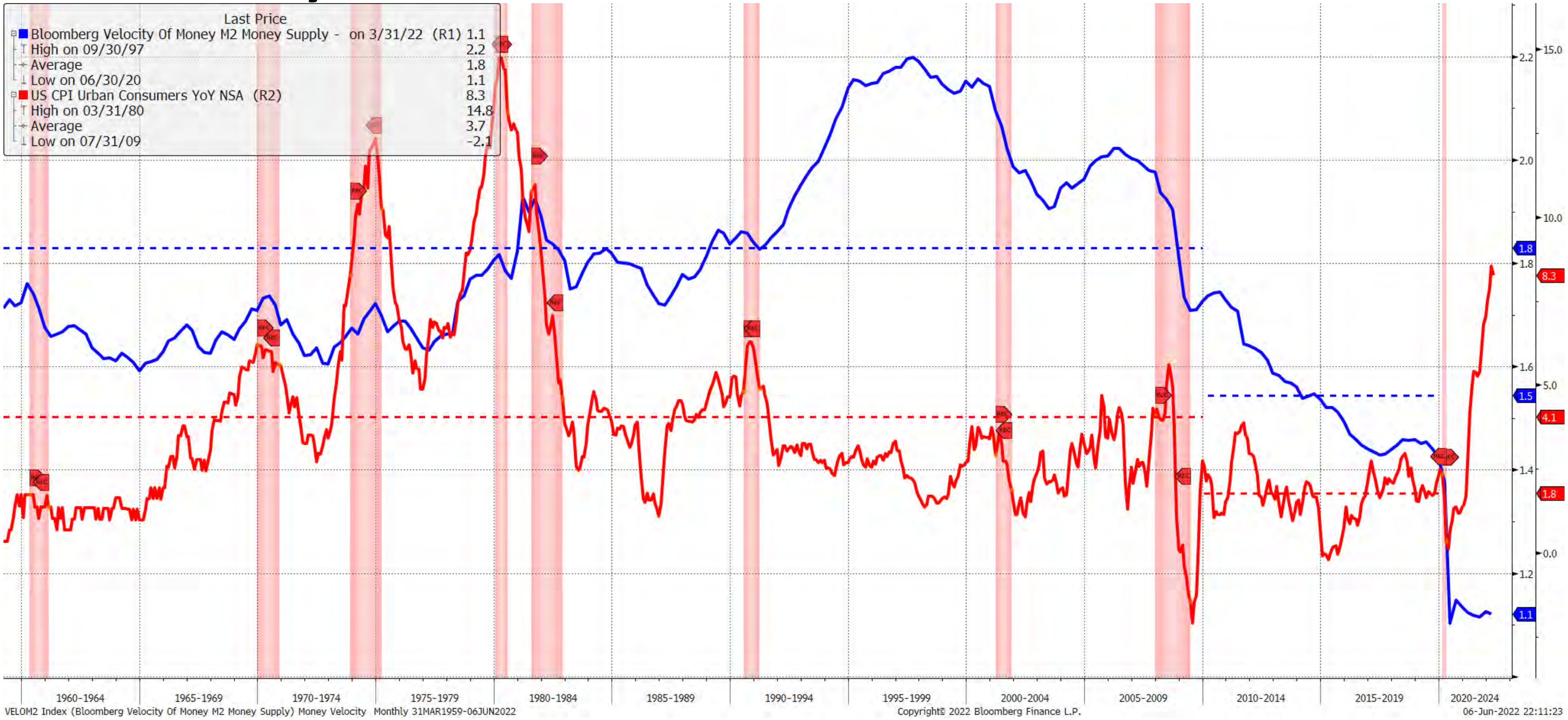
42 Macro Secular Inflation Model: Income Inequality… Disinflationary



42 Macro Secular Inflation Model: Money Supply… Slightly Inflationary



42 Macro Secular Inflation Model: Money Velocity… Very Disinflationary



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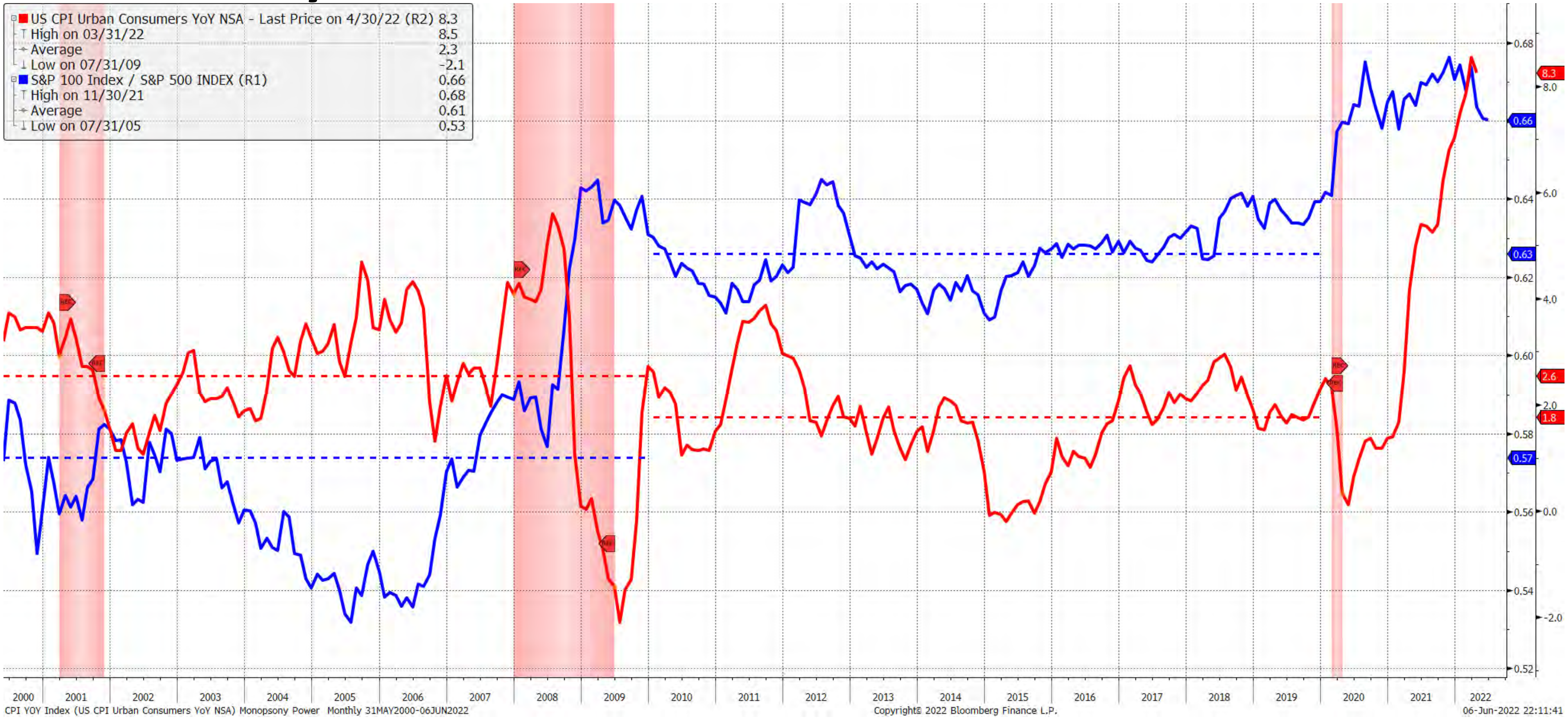
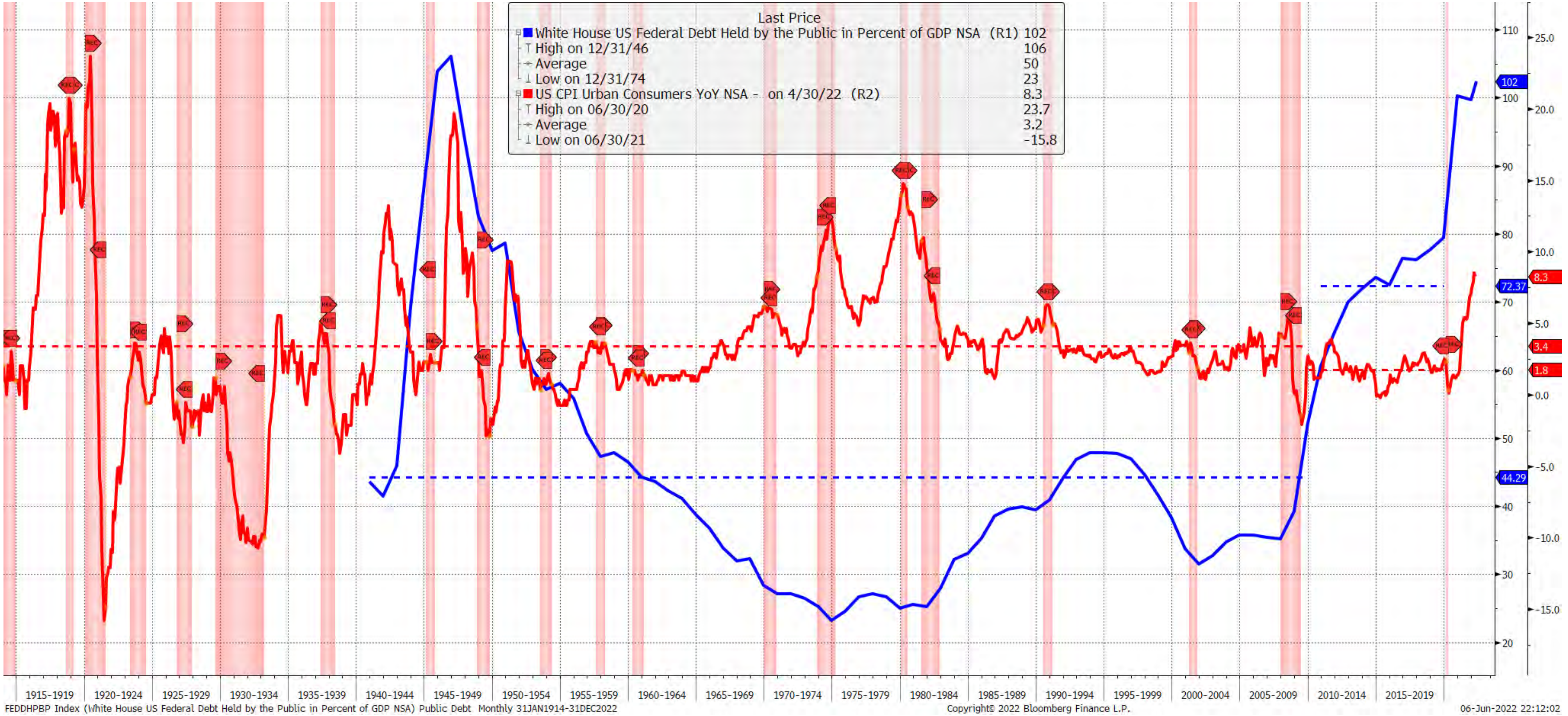
42 Macro Secular Inflation Model: Monopsony Power… Disinflationary



42 Macro Secular Inflation Model: Public Debt… Very Inflationary



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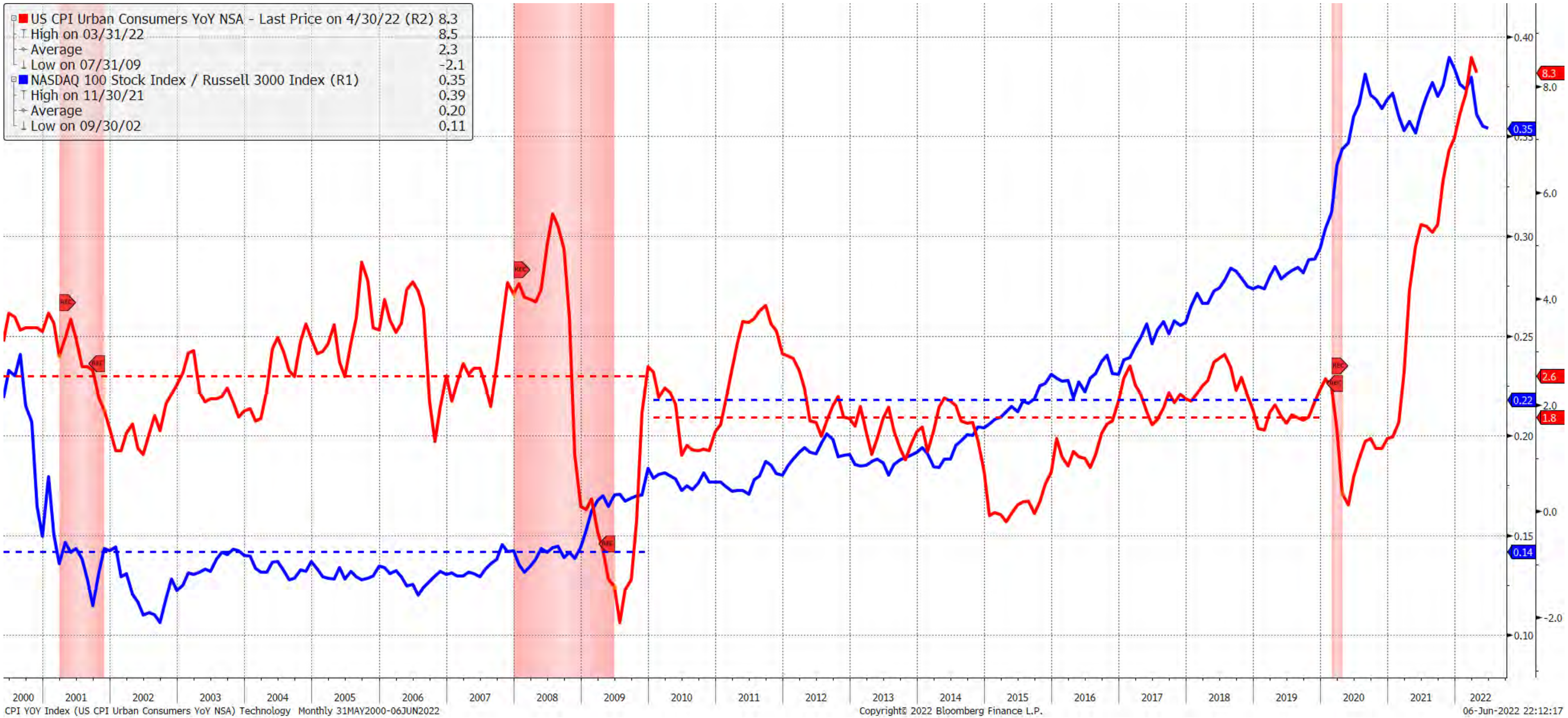
42 Macro Secular Inflation Model: Technology… Disinflationary



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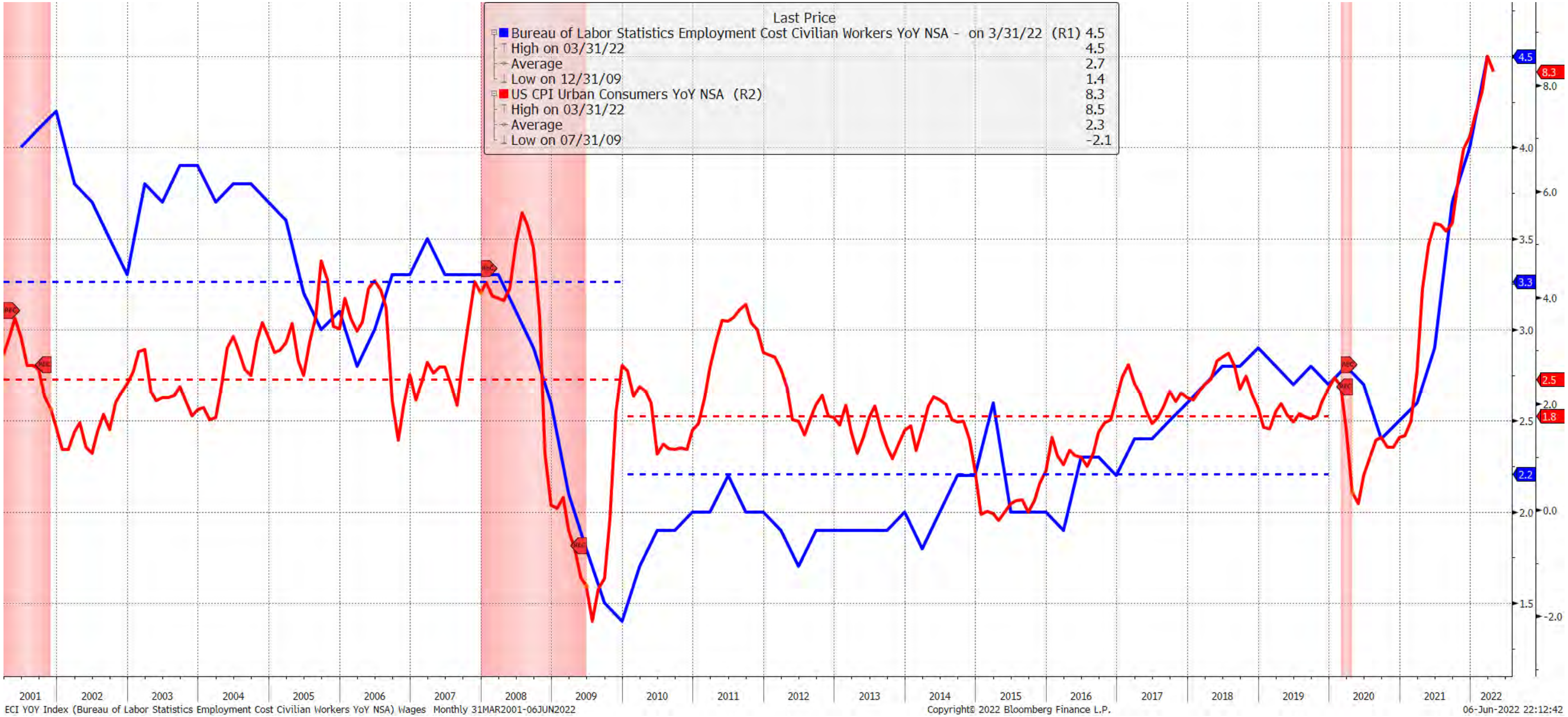
42 Macro Secular Inflation Model: Wages… Very Inflationary



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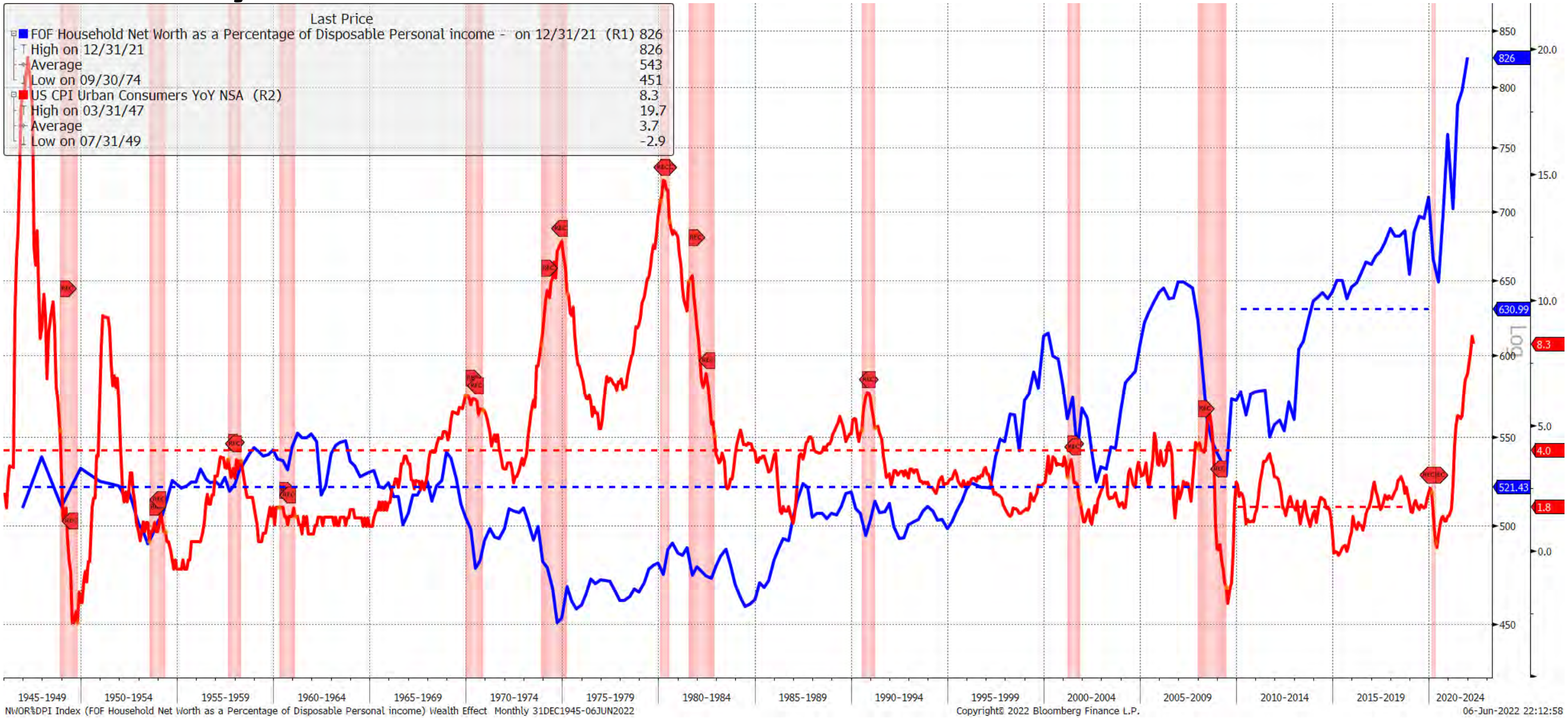
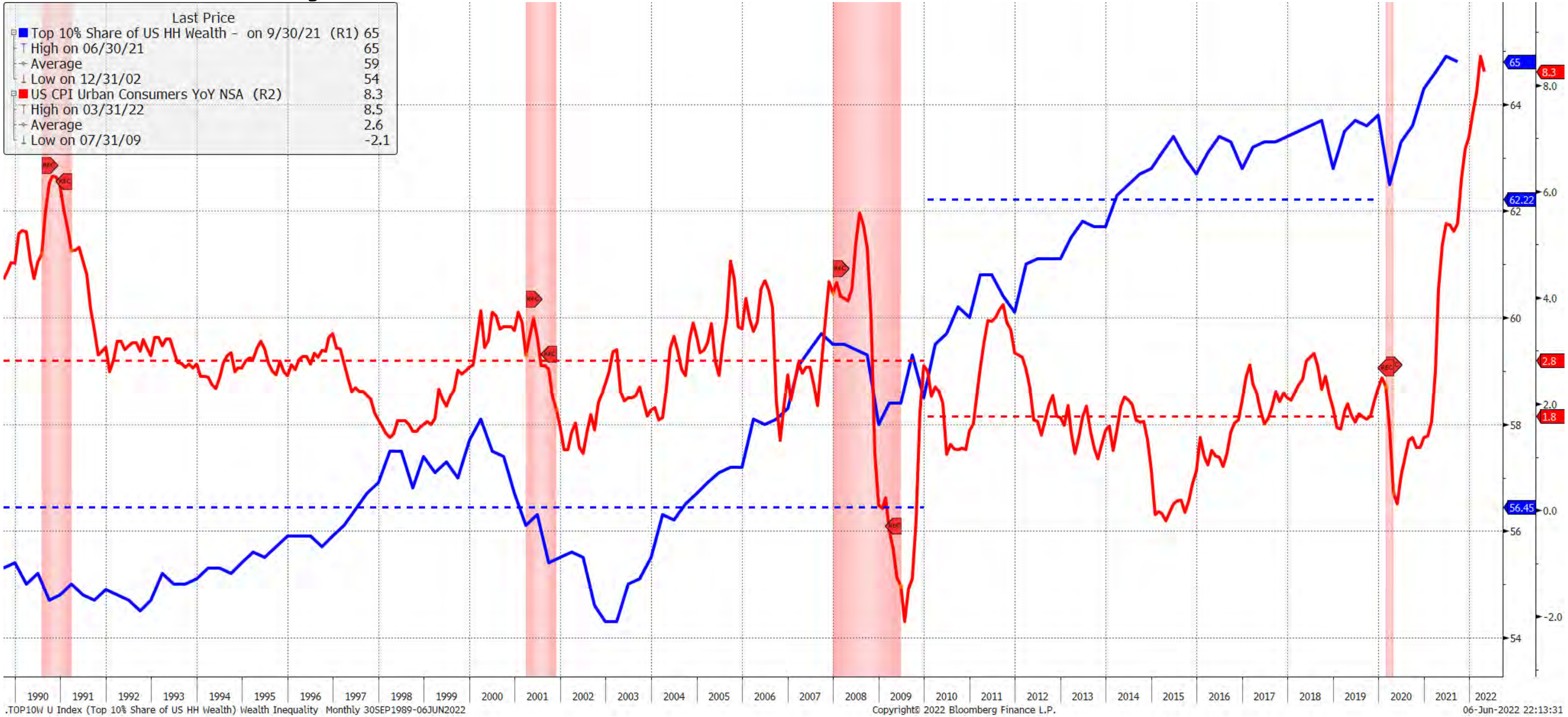
42 Macro Secular Inflation Model: Wealth Effect… Very Inflationary



42 Macro Secular Inflation Model: Wealth Inequality… Disinflationary



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Thanks for reviewing.
See you next month!

42 Macro Lingo:

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

42 Macro Process:

https://bit.ly/3oqS4u2

Frequently Asked Questions:

https://42macro.com/faq/