arc MACRO

The New Capital Deepening

Report for the week ending June 27, 2026

Dylan Smith

Key Takeaways

- MONOLOGUE: The macro data flow aligns with our short-run view. Stocks are wobbling amid AI-financing fears, but a bit of caution at these valuations is probably healthy.
- MACRO: Inflation stayed hot while consumer spending outpaced it. That keeps the Fed hawkish, and we still look for a two-hike cycle. Canadian inflation rose on gas prices, but underlying measures remain benign.
- MARKETS: Tech dragged US stocks down while a Treasury rally lifted rate-sensitive sectors. Global equities were mixed, the dollar firmed, and oil and gold both fell.
- MEMO: AI is driving rapid capital deepening in white-collar work, pointing to higher productivity and wages. History suggests early deepening cycles create jobs, so we expect AI to add more than it destroys.

Monologue

Not every week brings regime-shifting news. Sure, hyperscale names are pulling US stocks down, but at current valuations, it's hard to make the case for an infinite rally, and a bit of caution (not panic) at these heights is healthy.

Meanwhile, in a slow week for new macro data, everything we did get confirmed our view of near-term economic dynamics. Inflation remains high (especially the upward drift in "core" or underlying measures), but consumer spending growth is more than keeping pace. This justifies the Fed's hawkishness on rates, and we continue to expect a two-hike (50 basis point) tightening cycle to keep inflation in check without troubling low-income consumers or causing excessive problems in the subdued housing market.

In this week's Memo, we turn our attention to what seems to be the big debate of the decade: will AI eat your employment prospects? By framing the new technology as a type of capital deepening for service workers, we can compare the current investment spree with prior capital deepening periods centered more on manufacturing. We find reasons for optimism.

With that, enjoy this week's note.

Dylan Smith

Founder and Chief Economist

Marginal Movers

Rising 👆

- **Korean AI adoption:** Does AI Adoption Improve Productivity? Effects Over the First Three Years — "AI has currently entered the 'efficiency' stage but has not yet fully transitioned to the 'productivity' stage"
- **Inflation damage:** The Search Costs of Inflation in the Labor Market — "When wages are contracted in nominal terms, inflation reduces real wages, leading workers to intensify on-the-job search to obtain wage-adjusting outside offers. Both the search effort and the resulting job mobility are costly"

Falling 👇

- **Interest rate stability (?):** Will the Shadow Fed Chair Please Stand Up? — In the interest of balance, a counterpoint to our views on Warsh: "A muddier signal raises the odds that the Fed will surprise markets and that adds to borrowing costs. And it leaves the public with a looser claim on an institution that owes it both accountability and transparency."
- **World Cup Finance Content:** PE World Cup: Who wins when capital calls the shots? — World Cup-related financial research distraction papers used to be great (see if you can spot a certain Chief Economist's contributions). Now they're this.

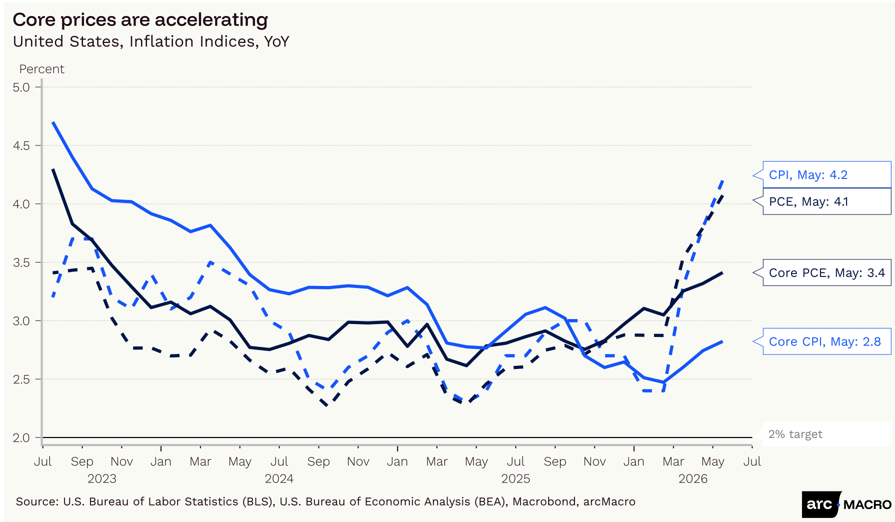
Macro Monitor

PCE (Inflation edition)

Core Personal Consumer Expenditures (PCE) inflation – the Federal Reserve's preferred benchmark to gauge its performance against its 2% target – rose to 3.4% YoY in May, confirming the signal we already had from the Consumer Price Index (CPI) that even as energy price growth starts to slow, core prices are still accelerating.

Meanwhile, consumer spending is rising faster than inflation (+0.7% MoM in May, vs. +0.4% for headline PCE inflation).

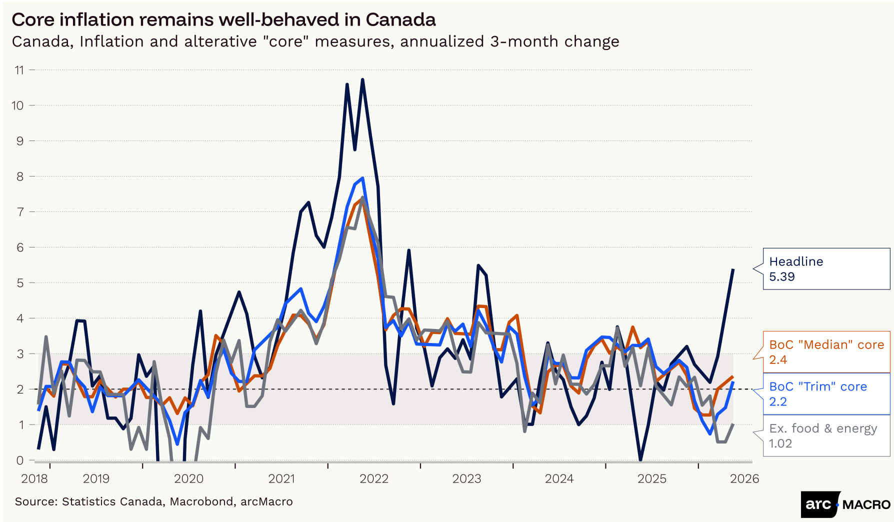
No thematic change in these data. Inflation is high, and consumption is rising regardless.



Good Canadian Behavior (Inflation edition)

Headline Canadian Consumer Price Index (CPI) inflation was 3.2% YoY in May, and stands above the 1%-3% target range for the first time since December 2023. Looking beyond the rise in energy prices driving this move, underlying inflation remains completely benign. The Bank of Canada's suite of core inflation measures ranged between 2.0% and 2.7% YoY.

Looking at the change in these indices on a 3-month annualized horizon provides the cleanest signal of near-term momentum shifts, and, conveniently, covers the period since the start of the Iran conflict. The BoC's underlying inflation metrics are well-contained at the midpoint of the target range. Meanwhile, the traditional measure of "core" inflation – the headline CPI excluding energy and food – is at the lower end of the target range (1.0%), revealing the fundamentally disinflationary setup in Canada's consumer demand, investment, and housing sectors at present.



PMI High

The S&P Global Flash PMIs provided an early glimpse at activity trends in June. In the US, the index rose to a five-month high of 52.2, comfortably in "expansion" territory. The manufacturing component is at a blistering 49-month high of 55.7 (very robust growth). This is partially driven by precautionary inventory building, so the unrelated rise in services sector output to a 4-month high of 51.3 is welcome. The only blot on the copybook was a second sequential fall in reported employment, which was attributed to cost management.

The PMIs also showed America's relatively strong position compared with Europe. Services PMIs were in contractionary territory and falling in the UK and the euro area, with modest manufacturing growth unable to fully offset the decline.

See the appendix for arcMacro proprietary Factors and the Key Macroeconomic Indicators tracking chart.

Market Monitor

Public markets

The S&P 500 has had a volatile month, and it's clear overall that there is a lacuna in the bull market as investors vacillate between optimism over the potential earnings implications of the AI build-out and concern about the sheer scale of financing that chip makers and hyperscalers require. Bad vibes won out this week to the tune of a

-2% return in the S&P 500, its second down week in four. The Nasdaq Composite (which includes AI company SpaceX) fell by 4.6%.

Within the American stock market, the pessimism was limited to technology names. A powerful rally in Treasuries supported rate-sensitive industries such as Real Estate and Utilities, while strong consumption data drove gains in Consumer Staples and Health Care.

That Treasury rally sliced off some of the extreme reaction to last week's Fed meeting, but still leaves 2- and 5-year Treasury yields more than 10 basis points above the three-month average. The dollar followed suit, with a 0.5% climb in the DXY index.

Global equity markets were mixed, with East Asia and emerging markets broadly hit hard (Hang Seng: -5.2%; TOPIX: -2.0%), Europe flat, and the UK rallying by 1.5%.

The benchmark WTI crude spot closed the week below $70 per barrel, despite a rocky start to mass-scale Hormuz transits and a shaky ceasefire. Gold was down yet again and is nearly below the $4,000 per ounce threshold.

See the appendix for the market monitor table

Memo

Services Sector Capital Deepening

Bottom line: *A process of rapid capital deepening is taking place in white-collar industries and occupations. This points to higher productivity and wage growth in the services sector. But the net employment effect depends on whether AI and labor are complements or substitutes. Looking at historical deepening cycles in US manufacturing, we argue for the former.*

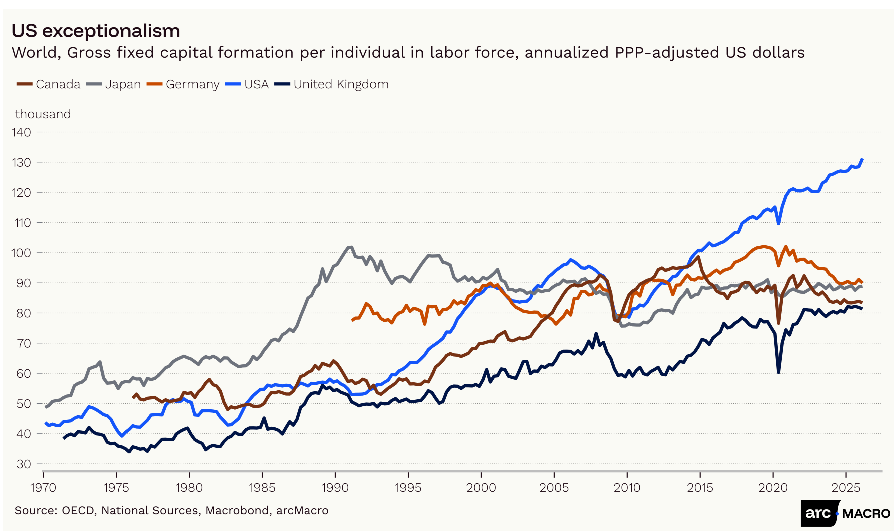
What it means for investors: *A period of high productivity and strong wage growth without aggregate job destruction implies high returns to equity in exposed industries. It also imparts upward pressure on longer-term interest rates — for the "right" reason (expected strong future returns rather than inflation compensation).*

"Capital deepening" is when businesses invest to increase the amount of capital per worker. In theory, this should raise labor productivity and result in higher wages.

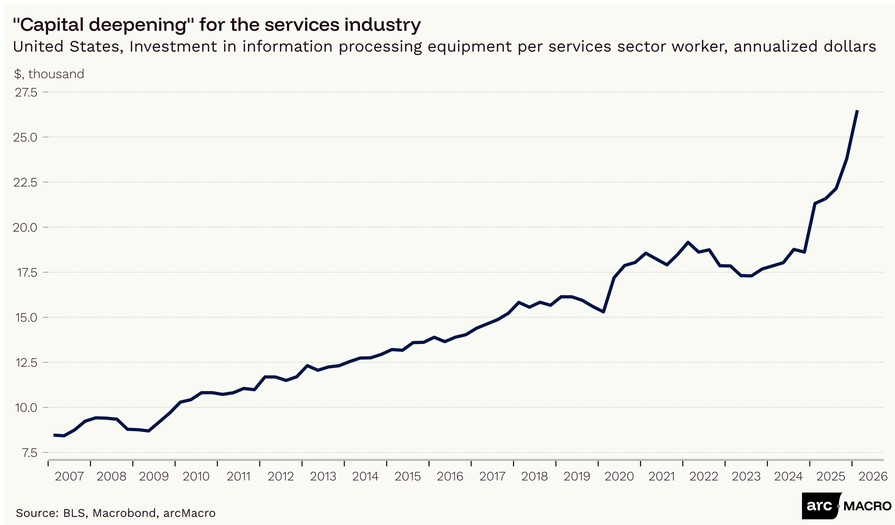
Usually, capital deepening is thought about in terms of investing in physical productivity enhancement for laborers in goods production or logistics – adding more and better machines to a production process to raise throughput and quality. It's therefore central to the study of industrialization and growth/development economics.

The idea of capital deepening gets far less play in the white-collar world. That needs to change. If AI is viewed as a machine that improves the throughput of a human mind, then we're entering a period of rapid capital deepening for white-collar occupations for the first time in history.

At the aggregate level, the ratio of new business investment per member of the labor force carries important information on the drivers of post-COVID-19 global economic dynamics. The United States is the only major industrialized economy that has been actively adding capital to the workforce. That growth has been more robust, and returns have been broadly higher over the same period compared with peers, follows from this observation.



This isn't your Granddaddy's capital deepening, however. It's narrowly concentrated in AI-related investment in IT systems and software. Since 2024, after roughly a year of rapid improvement in frontier Large Language Models (LLMs), businesses have invested heavily in these two areas. IT and software spending per services-sector worker (a rough gauge of white-collar capital deepening) has popped from $45k per year in 2023 to $60k now, roughly doubling the pace of growth compared to the prior two decades (measured in 2012 dollars to adjust for inflation).

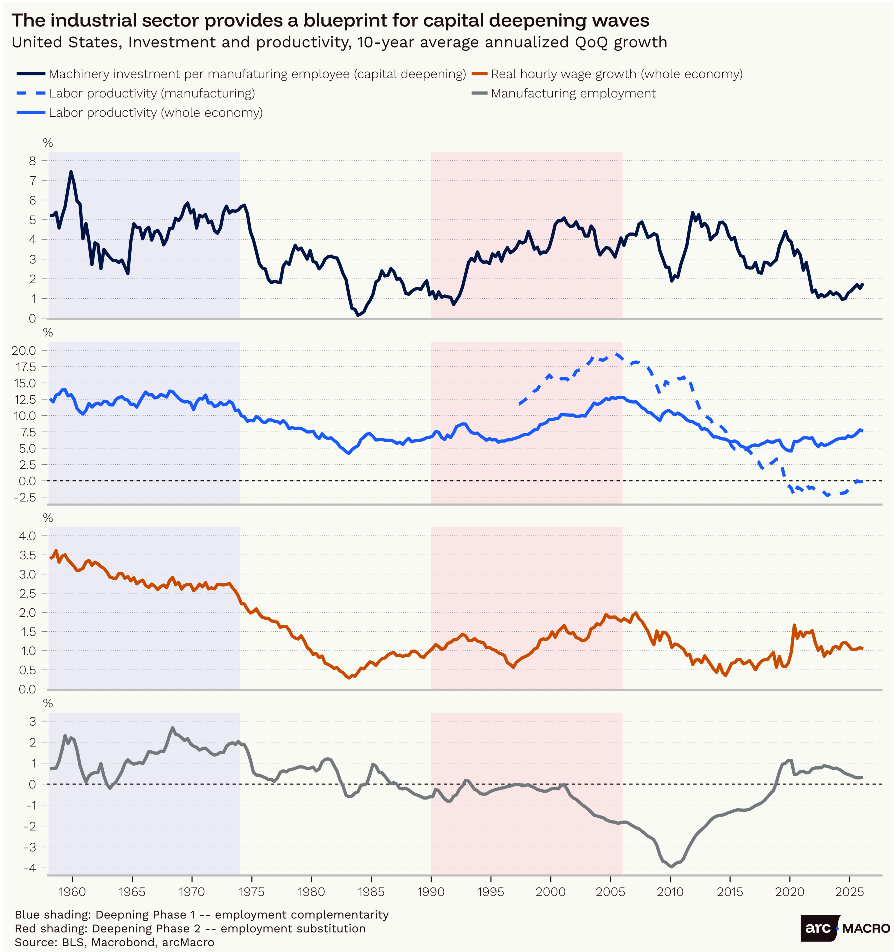


Employment could rise or fall depending on whether the new capital investments are on aggregate complementary to human labor, or substitutes. Viewed through classical growth theory, this points to a period of higher services sector productivity and wages to come. But the theory is largely silent on the employment level that results from these effects.

The manufacturing industry provides precedent for both effects. As the chart below shows, there have been two major capital deepening episodes in the industrial sector since reliable records began in 1960.

The first, spanning the post-war period until the economic crisis of the early 1970s, was driven by the process of reorienting wartime technology breakthroughs and production capacity toward consumers. This generated higher productivity, higher wage growth *and* higher manufacturing employment. Productivity gains improved returns by more than the marginal cost of labor, leading to a broad expansion alongside improved efficiency.

The second period, roughly spanning the 1990s, also saw improved productivity and wages, but this came at the cost of a decline in manufacturing employment. "Capital deepening" was in part driven by a shrinking denominator, as automation and early robotics replaced workers, with businesses seeking to compete in a more globalized labor market.



This raises a natural question: which type of episode will AI be? If history is anything to go by, early rounds of capital deepening are employment-generating because the marginal productivity curve is steepest at this point, and the scope for improvement across the economy is wide. There are good reasons to believe that implementing AI in business processes will be employment-generating in the aggregate.

Of course, this won't hold for every occupation. But on balance, we're optimistic that AI will create more jobs than it destroys.

Appendix

Proprietary Factor and Regime Model and Key Indicators

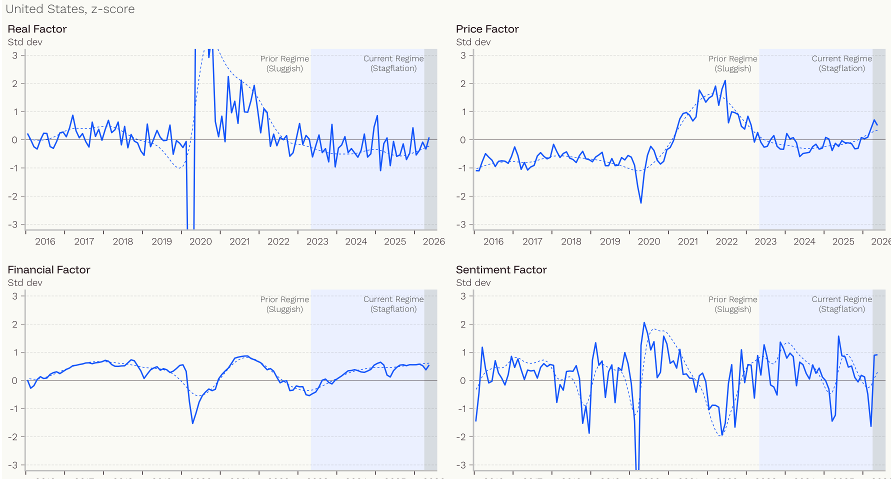
The Week in Markets

	Latest*	Change since last week (units)	Change since last week (%)	3-month change (units)	3-month change (%)	Year-to-date change (units)	Year-to-date change (%)
US Equities							
S&P 500	7354	-147	-2.0	762	11.6	509	7.4
Information Technology			-5.4		23.5		14.5
Financials			0.5		8.7		-2.0
Consumer Discretionary			-2.7		4.4		-3.8
Communication Services			-6.2		3.7		-2.6
Health Care			7.9		9.8		3.7
Industrials			0.5		9.8		16.9
Consumer Staples			1.5		2.5		8.8
Energy			0.7		-11.7		19.5
Utilities			3.9		2.2		8.3
Real Estate			4.0		12.3		13.0
Materials			-0.1		4.2		12.6
Nasdaq Composite			-4.6		15.4		8.8
Dow Jones Industrial Average			0.6		11.7		7.9
Russell 2000			1.0		18.7		21.3
Global Equities							
DM: MSCI World index			-2.1		11.4		9.7
EM: MSCI EM Index			-4.4		16.7		22.8
CAN: TSX Composite			0.4		8.0		10.3
EUR: STOXX 600			0.0		8.2		7.4
HK: Hang Seng			-5.2		-10.5		-11.5
JPN: TOPIX			-2.0		8.6		16.3
UK: FTSE 100			1.4		4.0		5.8
Sovereign Fixed Income							
US: 2-year Treasury	4.07	-0.12		0.23		0.6	
US: 5-year Treasury	4.12	-0.11		0.16		0.39	
US: 10-year Treasury	4.38	-0.08		0.050		0.2	
CAN: 2-year GoC	2.75	-0.030		-0.24		0.17	
CAN: 10-year GoC	3.39	0.00		-0.2		-0.030	
UK: 10-year Gilt	4.81	-0.1		-0.040		0.27	
GER: 10-year Bund	2.85	-0.11		-0.12		0	
CHN: 10-year CGB	1.73	0.00		-0.0919		-0.116	
JPN: 10-year JGB	2.63	0.030		0.38		0.57	
Corporate Bond Spreads							
US: A-rated	67.6	3.4		-8.8		-2.2	
US: BBB-rated	101	3.8		-14.5		-3.8	
Foreign Exchange Rates							
DXY US Dollar Index	101		0.5		1.8		3.1
EUR/USD	1.13		-1.0		-2.0		-3.5
USD/CAD	1.42		0.5		3.2		3.6
USD/CNY	6.8		0.6		-1.2		-2.7
USD/JPY	162		0.6		2.0		3.5
GBP/USD	1.32		-0.4		-1.7		-2.1
USD/CHF	0.813		1.1		3.2		2.5
Commodities							
WTI Crude	69.2	-7.37	-9.6	-21.1	-23.4	11.8	20.6
Gold	4072	-78.8	-1.9	-493	-10.8	-296	-6.8
S&P GSCI Commodities			-4.0		-12.1		12.4
S&P GSCI Industrial Metals			-4.2		3.7		6.0
S&P GSCI Agriculture			-0.2		-6.5		-2.9

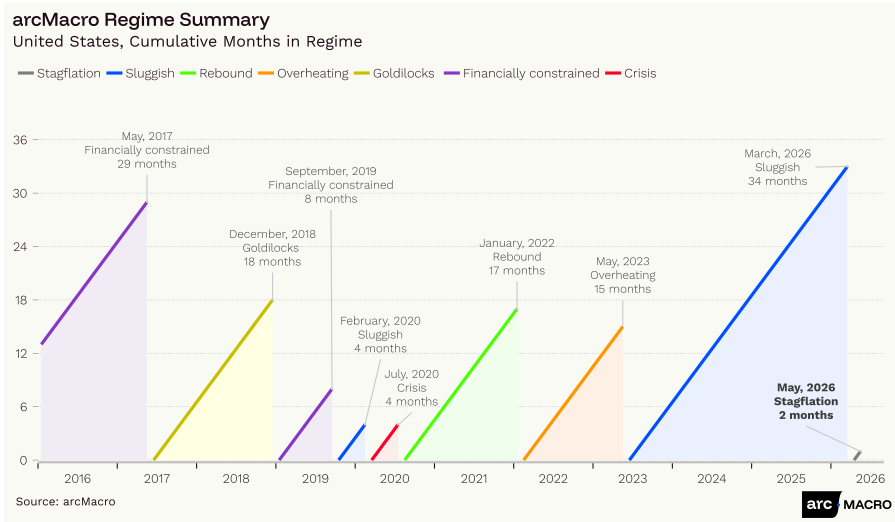
* Weekly closing value. Color indicates positive (green) or negative (red) change since prior week.

Source: S&P Global, Russell Investment Group, Nasdaq, U.S. Department of Treasury, Macrobond Financial AB, Central Bank of Germany (Deutsche Bundesbank), Bank of Canada, Intercontinental Exchange (ICE), International Monetary Fund (IMF), CME Group, LBMA (London Bullion Market Association), Robert Shiller, Chicago Board Options Exchange (CBOE), U.S. Department of Labor, U.S. Bureau of Labor Statistics (BLS), Federal Reserve Bank of Atlanta, Citi, Federal Reserve Bank of St. Louis, Energy Information Administration (EIA), MSCI, STOXX, Tokyo Stock Exchange, Toronto Stock Exchange, FTSE Russell, Hang Seng Indexes Company, Pitchbook | LCD, arcMacro

arcMacro Real Time Factors
United States, z-score



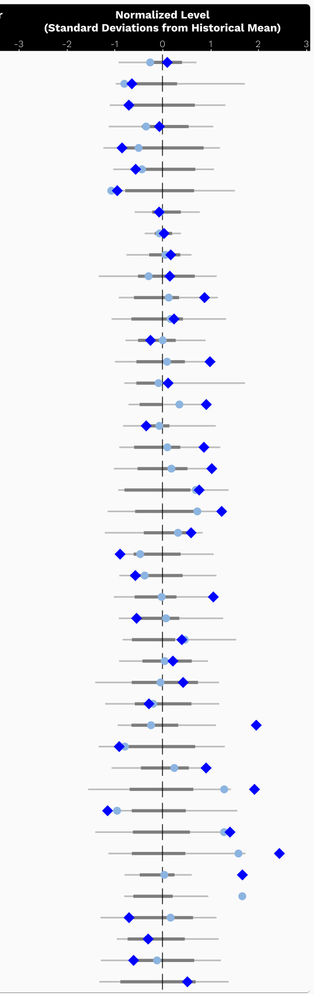
Source: arcMacro



arcMacro Regime Summary
United States, Cumulative Months in Regime
Stagflation
Sluggish
Rebound
Overheating
Goldilocks
Financially constrained
Crisis
May, 2017
Financially constrained
29 months
September, 2019
Financially constrained
8 months
December, 2018
Goldilocks
18 months
February, 2020
Sluggish
4 months
July, 2020
Crisis
4 months
January, 2022
Rebound
17 months
May, 2023
Overheating
15 months
March, 2026
Sluggish
34 months
May, 2026
Stagflation
2 months
36
30
24
18
12
6
0
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
Source: arcMacro

arcMacro Factor Input Monitor
Top 10 inputs by factor loading

Indicator	Unit	Latest*	Three months prior	One year prior
arcMacro Real Factor	**Standard deviations**	**0.1**	**-0.4**	**-0.9**
Underemployment (U-6)	%	8.1	7.9	7.8
Capacity Utilization	%	78	75.8	75.9
Industrial Production (IP)	%, YoY	1.4	1.4	0.9
Employment-to-Population Ratio	%	59.2	59.3	59.7
Dallas Fed Services Index	%, YoY	-7.7	-3.2	-11.8
Unemployment Rate	%	4.3	4.4	4.3
Transportation Services Index	%, YoY	1.7	-0.4	2.0
Employment	Thousands, MoM	149.0	-185.0	-654.0
Construction Employment	Thousands, MoM	17.0	-21.0	-2.0
Philadelphia Fed Manufacturing Index	%, YoY	10.3	18.1	-1.4
arcMacro Price Factor	**Standard deviations**	**0.9**	**0.4**	**0.0**
Trimmed CPI	%, MoM, SA	0.3	0.2	0.2
"Sticky" CPI	%, MoM, SA	0.2	0.2	0.2
PCE	%, MoM, SA	0.4	0.4	0.2
Inflation Expecations (NY Fed)	%, Annual	3.5	3.0	3.2
Inflation Expecations (U-Mich)	%, Annual	4.6	3.8	5.0
Core CPI	%, MoM, SA	0.2	0.2	0.1
Services PCE	%, MoM, SA	0.5	0.2	0.2
Market-based PCE	%, MoM, SA	0.4	0.4	0.1
Richmond Fed Services Price Index	%, Annual	5.6	4.8	5.2
5 Year Break-Even Inflation Rate	%, Annual	2.6	2.5	2.4
arcMacro Financial Factor	**Standard deviations**	**0.6**	**0.6**	**0.1**
Financial Stress Index (KC Fed)	Index (>0: higher stress)	-0.9	-0.6	-0.5
Financial Stress Index (OFR)	Index (>0: higher stress)	-2.3	-2.3	-1.2
Gold Volatility Index	%	26.0	34.3	21.5
Bank Lending Standards	% (>0: net tightening)	-6.3	-8.5	-3.7
Anxious Index (SPF)	% (Probablity of recession)	25.1	20.9	36.1
Dividend growth	%, YoY	7.9	8.4	6.2
Bank Loan Demand	% (>0: net increase)	6.3	12.0	-2.5
Household Debt-to-Income Ratio	Ratio	8.6	8.6	8.9
IPO Underwriting Activity	US$ Billions	13.1	4.9	2.2
Household Debt Growth	%, QoQ, Annualized	2.6	3.1	2.1
arcMacro Sentiment Factor	**Standard deviations**	**0.9**	**-0.6**	**1.6**
Cyclically-Adjusted PE Ratio (S&P 500)	Ratio	41.0	36.9	36.1
Dividend Yield (S&P 500)	Ratio	1.2	1.2	1.2
12-month Forward PE Ratio (S&P 500)	Ratio	21.2	21.6	21.3
Price/Book Ratio (S&P 500)	Ratio	5.3	5.0	4.9
Crude Oil Volatility Index	%	72.9	53.7	42.5
Economic Policy Uncertainty Index	Index	355.3	346.4	488.9
MOVE Index	Index	74.7	64.5	100.0
VIX	%	17.2	19.2	20.5
Bull-Bear Spread (AAII)	% (>0: net bullish)	-3.0	-14.8	-1.4
Equity Risk Premium (NYU Stern)	%	1.1	1.1	1.2



10th-90th Percentile · 25th to 75th Percentile · Mean of past 5 years · Latest Value

Source: arcMacro, BLS, Fed, Dallas Fed, DOT, Philadelphia Fed, Cleveland Fed, Atlanta Fed, BEA, New York Fed, University of Michigan, Richmond Fed, Macrobond, Kansas City Fed, The Office of Financial Research (OFR), CBOE, S&P Global, SIFMA, Robert Shiller, Economic Policy Uncertainty, ICE BofAML, LJKmfa, AAII
*Most recent published data point. Time period and frequency do not necesarily align.

Disclosures

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