

# Economics Weekly

## Choose Your Own Inflation Metric

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As we discussed in last week's [Economics Weekly](#), the Warsh-led Fed appears to be looking to jettison the reaction function of more recent FOMCs, but Warsh is seemingly waiting to announce what its replacement will be. Warsh also seems to be suggesting that he would like investors to take on more risk themselves and rely less on any hand-holding and moral suasion from the Fed. This likely means the strike price for the Fed put is now lower, and investors may have to stomach a little more volatility in the future. In many ways, this feels like Nassim Nicholas Taleb's antifragile approach to monetary policy. It also seems sensible in a world where the inflation regime has shifted and where inflation risks are now either symmetrically or even asymmetrically skewed to the upside, as opposed to being solely to the downside from 2000 to 2020. Under this new regime, where inflation is harder to predict and more prone to rise, the Fed's reaction function necessarily needs to be tweaked, and Warsh is right to want to at least question the nature and measurement of the inflation metrics that the Fed uses to gauge inflation's proximity to its target. **In this *Economics Weekly*, we discuss some of the alternative measures of inflation and what might be the best approach in this uncertain environment.**

## Questioning Everything About Inflation

In his first press conference, Fed Chair Warsh said that he was commissioning a series of taskforces, one of which was on inflation:

*First on the inflation framework review, their remit is, what are the drivers of inflation? What's the Fed's responsibility for inflation? In part, how do we measure inflation?*

As Warsh discussed at his April confirmation hearing, he prefers the trimmed mean measures of inflation:

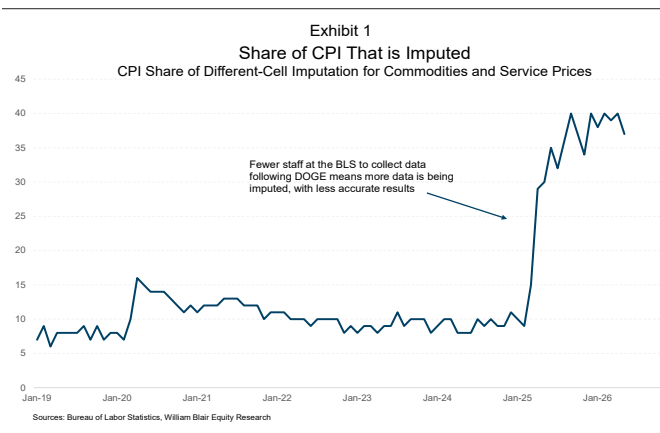
*My broad sense is that these inflation risks and the inflation damage the last several years is improving somewhat. It has improved somewhat in the last year. **The measures I prefer are looking at things that are called trimmed averages, where we take out all of the tail risks, all of the one-off items, and we ask ourselves whether the generalized change in prices is having second order effects on the economy. Again, they're not where they should be, but I think that the trend is quite favorable.***

*Some in economics profession are increasingly looking to these median type measures, but among*

*the projects I would hope to undertake as one of the first reforms at the Fed is a data project where we would go off and we would evaluate with the public sector and the private sector, including the Bureau of Labor Statistics, a survey of a billion prices. **What I'm really most interested [in], Senator, is what's the change of that 500 million and one price? Because that's inflation. That's a change in the generalized level. In a market economy, prices change all the time. And I don't want to be confused by that. I want to know what inflation really is, and I still think there's some work to do.** [Emphasis added]*

Once again, in a world where inflation is not permanently high, but seemingly more volatile and increasingly being impacted by recurring supply shocks in a way that was not the case in previous decades, central banks can still afford to look through first-round supply shocks; however, they need to be exceptionally vigilant when it comes to the threat from second-round effects.

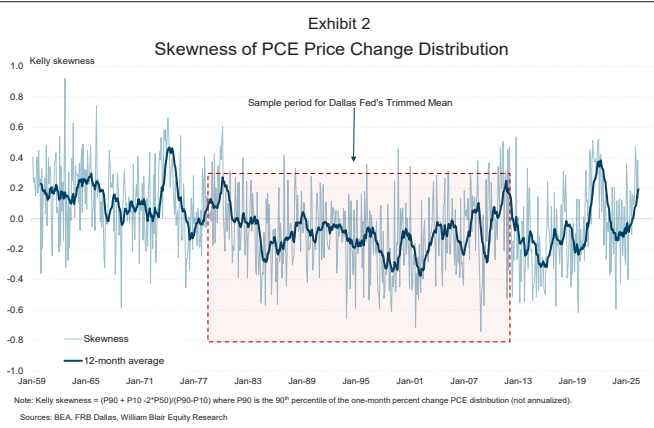
As a result, gauging alternative measures of inflation, including trimmed means and multivariate measures, makes a lot of sense and is useful in providing a broader picture of the inflation environment. This is particularly true when, due to budget cuts at the Bureau of Labor Statistics, there has been a sharp increase in the share of the CPI basket that is no longer resulting from direct survey evidence, but is being imputed (exhibit 1).



Headline PCE inflation is a weighted average of rates of change in the prices of every good and service in the basket, with each item weighted by its share of total spending. Warsh's favored trimmed mean measure ranks those price changes from high to low and removes (or trims) a fixed share from the top and bottom of the rankings. The inflation rate is the (expenditure-weighted)

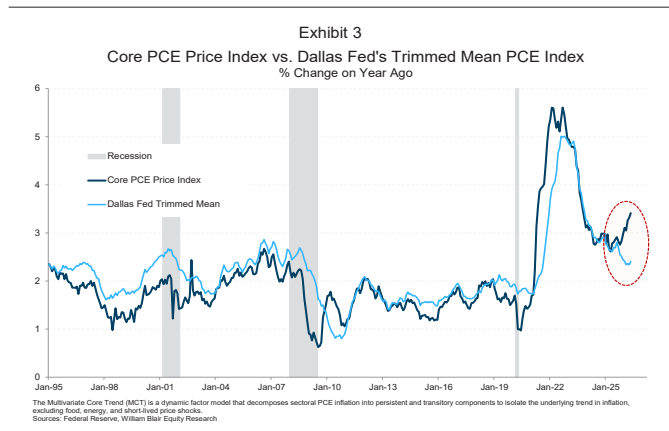
average of what is left. An extreme form of the trimmed-mean approach is median inflation, which excludes all price movements other than the median—Warsh’s reference to the 500 million and 1 price.

The Dallas Fed, which publishes the most closely watched version, asymmetrically eliminates the top 31% of the fastest-rising price categories, but only the bottom 24% of the slowest. The cutoffs are set to reflect the behavior of several measures of headline inflation between 1977 and 2009, a period when the distribution of price changes was negatively skewed (exhibit 2).



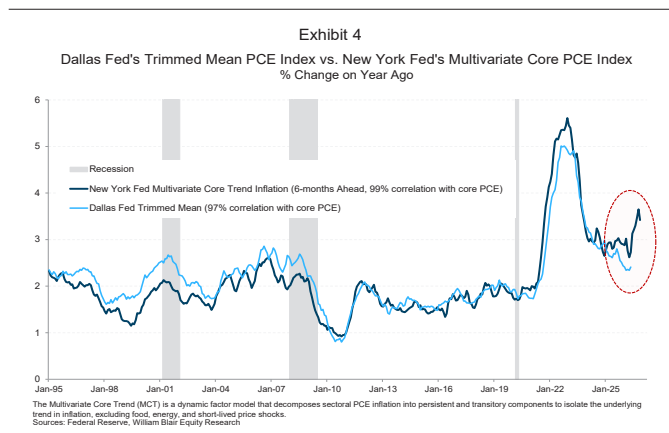
Yet, because the trim removes more from the upper tail than the lower one, it tends to lower the inflation estimate. This is also why the trimmed mean and core PCE are each less volatile than the headline index.

The trimmed mean and the core PCE measure part ways when the underlying distribution of prices themselves shifts. For example, early in the pandemic, sharp drops in a few non-food, non-energy categories pulled the core measure of inflation lower with the headline, though the trimmed mean, which excluded those items, barely budged. Over the 12 months ending in May, headline PCE rose 4.1%, PCE excluding food and energy rose 3.4%, and the Dallas Fed’s trimmed mean rose 2.4% (exhibit 3).



Another alternative measure that we have followed closely over the years, in part because it acts as a leading indicator of inflation, is the New York Fed’s multivariate core trend PCE inflation gauge (MCT). This is a dynamic factor model (i.e., it is used to extract a small number of hidden variables or factors that are the main drivers of the index’s change) and can be used to gauge the persistence of underlying inflation or the breadth of inflation pressures.

Historically, as exhibit 4 shows, both the trimmed mean and the MCT have tracked each other quite well. Over the last year, however, there has been a sharp divergence. The manner in which these indices are calculated suggests that the difference is related to the MCT picking up a greater persistence in underlying inflation than the trimmed mean, which simply attaches a greater weight to what’s happening in the middle of the distribution.



Notably, this introduces a strong note of caution. The inflation we are seeing is more than just related to the war in Iran, rather it is the result of a series of shocks, including: COVID; the Russian invasion of Ukraine, and the war with Iran; demographics, immigration restrictions,

the aging out of the labor force, and a lower birth rate; deglobalization, policy uncertainty, tariffs, reshoring, and supply-chain resiliency; government spending and the OBBB; a massive capex boom and the energy demands of the AI innovation wave; and increasingly volatile and more frequent weather events (such as this year's [super El Niño](#)). All of these are causing consumer-survey-based measures of inflationary expectations to become much less anchored than they were.

Generalized inflation tends to start in a handful of categories before it spreads, and with measures such as the trimmed mean, those are the first categories cut. From that perspective, the signal that the Fed needs to catch early is the very one that the trimmed mean is built to discard. As a result, the trimmed mean ends up looking tame for the wrong reason and lags the rising pressure.

## The Inflation Dashboard Approach

As we outlined above, most measures of inflation have their own individual quirks, drawbacks, and flaws. This suggests that no one measure should be relied on entirely—even more so following the DOGE cutbacks; rather, each measure should be treated as a small piece of the overall inflation puzzle. Looking at the mosaic of inflationary measures should help reveal the entire picture and give us a better feel for where inflation is directionally heading.

As exhibits 5 and 6 illustrate, the inflation gauges taken together project a picture of accelerating inflation. This is consistent with the more hawkish turn being taken by members of the FOMC.

Exhibit 5  
U.S. Inflation Measures (Year-over-Year % Change)

Measure of Inflation	Year-over-Year % Change												
	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26
CPI	2.4	2.7	2.7	2.9	3.0	2.7	2.7	2.4	2.4	3.3	3.8	4.2	4.2
CPI Less Food and Energy	2.8	2.9	3.1	3.1	3.0	2.6	2.6	2.5	2.5	2.6	2.7	2.8	2.8
CPI Services Less Shelter	3.5	3.8	4.0	4.0	3.7	3.5	3.4	3.4	3.3	3.4	3.5	3.7	3.7
FRB Cleveland Median CPI	3.5	3.6	3.7	3.6	3.5	3.3	3.1	3.1	3.0	2.8	2.7	2.8	2.9
FRB Cleveland 16% Trimmed-Mean CPI	3.0	3.2	3.2	3.3	3.2	3.0	2.9	2.9	2.7	2.7	2.6	2.8	2.9
FRB Atlanta Sticky CPI	3.2	3.3	3.4	3.5	3.3	3.1	3.0	3.1	3.0	3.0	3.0	3.1	3.1
FRB Atlanta Flexible CPI	0.1	0.9	0.8	1.6	2.3	2.3	2.0	1.6	0.7	1.0	4.0	5.6	7.0
PCE	2.5	2.6	2.6	2.7	2.8	2.7	2.8	2.9	2.9	2.9	3.5	3.8	4.1
PCE Less Food and Energy	2.8	2.8	2.9	2.9	2.8	2.8	2.8	3.0	3.1	3.0	3.3	3.3	3.4
Market-Based PCE	2.2	2.4	2.4	2.5	2.5	2.5	2.7	2.6	2.7	3.5	3.7	4.0	4.0
Market-Based PCE Less Food and Energy	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.8	2.9	3.1	3.1	3.2
FRB Dallas Trimmed-Mean PCE	2.6	2.7	2.7	2.8	2.7	2.6	2.5	2.4	2.4	2.3	2.4	2.3	2.4
FRB San Francisco Cyclical Core PCE Inflation	3.7	3.6	3.7	3.8	3.6	3.3	3.2	3.3	3.1	3.3	3.2	3.4	3.3
FRB San Francisco Acyclical Core PCE Inflation	2.3	2.3	2.4	2.4	2.3	2.4	2.6	2.8	3.2	3.0	3.3	3.4	3.6
Multivariate Core Trend Inflation	2.9	2.9	2.9	3.0	2.8	2.8	2.7	3.1	3.2	3.3	3.5	3.7	3.4
PPI	2.7	2.4	3.2	2.7	3.0	2.8	3.1	3.1	3.0	3.4	4.3	5.7	6.4
Core PPI	3.2	2.7	3.6	2.9	3.0	3.0	3.2	3.4	3.7	3.8	3.9	4.9	4.9
Import Price Index	-0.4	-0.6	-0.4	-0.3	-0.1	-0.1	0.0	0.2	1.0	2.3	4.2	6.7	6.7
Export Price Index	1.9	2.6	2.4	3.2	3.9	3.3	3.4	2.8	3.8	5.5	9.1	11.2	11.2
AIER Everyday Prices Index	1.2	1.8	1.6	2.0	2.8	3.1	3.0	2.4	2.5	5.0	6.3	7.4	7.4

Sources: BLS, BEA, Federal Reserve System, American Institute for Economic Research, William Blair Equity Research

Exhibit 6  
Inflation Measures

Measure of Inflation	12-mo growth rate		Average difference: Measure - PCE	Target based on 2% PCE	Index tracked	Lead / Lag / Coincident	What the measure tracks
	May-25	May-26					
CPI	2.4	4.2	0.5	2.5	CPI	Coincident	Headline Consumer Price Index, all items; primary cost-of-living headline inflation measure
Core CPI	2.8	2.8	0.5	2.5	CPI	Coincident	Core CPI: all items CPI excluding food & energy
CPI Services Less Shelter	3.5	3.7	0.7	2.7	CPI	Leading	CPI for services excluding shelter ('supercore'); tracks underlying services price pressure
FRB Cleveland Median CPI	3.5	2.9	0.8	2.8	CPI	Coincident	Median price change across CPI components (50th-percentile weight); rings out outliers
FRB Cleveland 16% Trimmed-Mean CPI	3.0	2.9	0.5	2.5	CPI	Coincident	Weighted CPI excluding the largest 8% and smallest 8% monthly price moves; robust core trend
FRB Atlanta Sticky CPI	3.2	3.1	0.7	2.7	CPI	Lagging	CPI basket of 'sticky' (frequently repriced) items; slow-moving, persistent inflation signal
FRB Atlanta Flexible CPI	0.1	7.0	-0.8	1.2	CPI	Leading	CPI basket of 'flexible' (frequently repriced) items; fast-moving, volatile inflation signal
PCE	2.5	4.1	-	2.0	PCE	Coincident	Headline Personal Consumption Expenditures price index; the Fed's preferred headline gauge
Core PCE	2.8	3.4	0.2	2.2	PCE	Coincident	PCE excluding food & energy
Market-Based PCE	2.2	4.0	-0.2	1.8	PCE	Coincident	PCE limited to market-based (transaction-priced) items; excludes imputed prices
Market-Based Core PCE	2.5	3.2	0.0	2.0	PCE	Coincident	Market-based PCE excluding food & energy; cleaner core read on transactional prices
FRB Dallas Trimmed-Mean PCE	2.6	2.4	0.3	2.3	PCE	Coincident	PCE excluding topbottom price changes by weight; Dallas Fed's robust core-PCE brand
Multivariate Core Trend Inflation	2.7	3.4	0.2	2.2	PCE	Leading	NY Fed model-based persistent (trend) component of core PCE inflation
FRB San Francisco Cyclical Core PCE	2.7	3.3	0.8	2.8	PCE	Lagging	Cyclical (demand-sensitive) component of core PCE; responds to economic slack/tightness
FRB San Francisco Acyclical Core PCE	2.3	3.6	-0.2	1.8	PCE	Lagging	Acyclical (demand-insensitive) component of core PCE; driven by sector-specific factors
PPI Final Demand	2.7	4.4	0.4	2.4	PPI	Leading	Wholesale/producer prices; often lead consumer prices
Core PPI Final Demand	3.2	4.9	0.4	2.4	PPI	Leading	PPI excluding food & energy; core producer-price pressure
Import Price Index	-0.4	6.7	0.1	2.1	Trade prices	Leading	Prices of imported goods; pass-through to consumer prices, a pipeline/leading input
Export Price Index	1.9	11.2	-0.4	1.6	Trade prices	Coincident	Prices of exported goods; reflects U.S. producer pricing power in world markets
AIER Everyday Price Index	1.2	7.4	0.6	2.6	CPI	Coincident	AIER's index of frequently purchased everyday items such as gas and groceries; a subset of CPI; best inflation proxy

## Conclusion

The Warsh-led Fed is right to question whether the old inflation framework is still fit for its purpose. The inflation regime has changed, and it makes sense to question whether current Fed policy both recognizes and is aligned with that change.

Warsh has commissioned a taskforce to look at a wide variety of inflation metrics being produced in both the public and private sectors. At his testimony in April, he admitted that he favors the trimmed mean measures, which are useful for filtering monthly noise. Unfortunately, they can also understate inflation and can miss the early signals of a broader inflation impulse if the initial pressure is concentrated in those categories being trimmed away. In a more supply-shock-prone regime, the better approach is a dashboard, using trimmed means, core measures, and multivariate indicators together to judge persistence, breadth, and second-round effects.

At the moment, this dashboard approach is pointing to inflation that is well above target and heading in the wrong direction. However, much like ECB governor Christine Lagarde discussed this week, we do not think the central bank is very far from the appropriate policy rate nor that this is the start of a major tightening cycle. It does, however, suggest there is some room for rates to be nudged higher in the coming year—if only to help ensure that the current inflation, which is being driven by a host of factors beyond just the energy shock from the war with Iran, does not become further entrenched and even more difficult to shift.

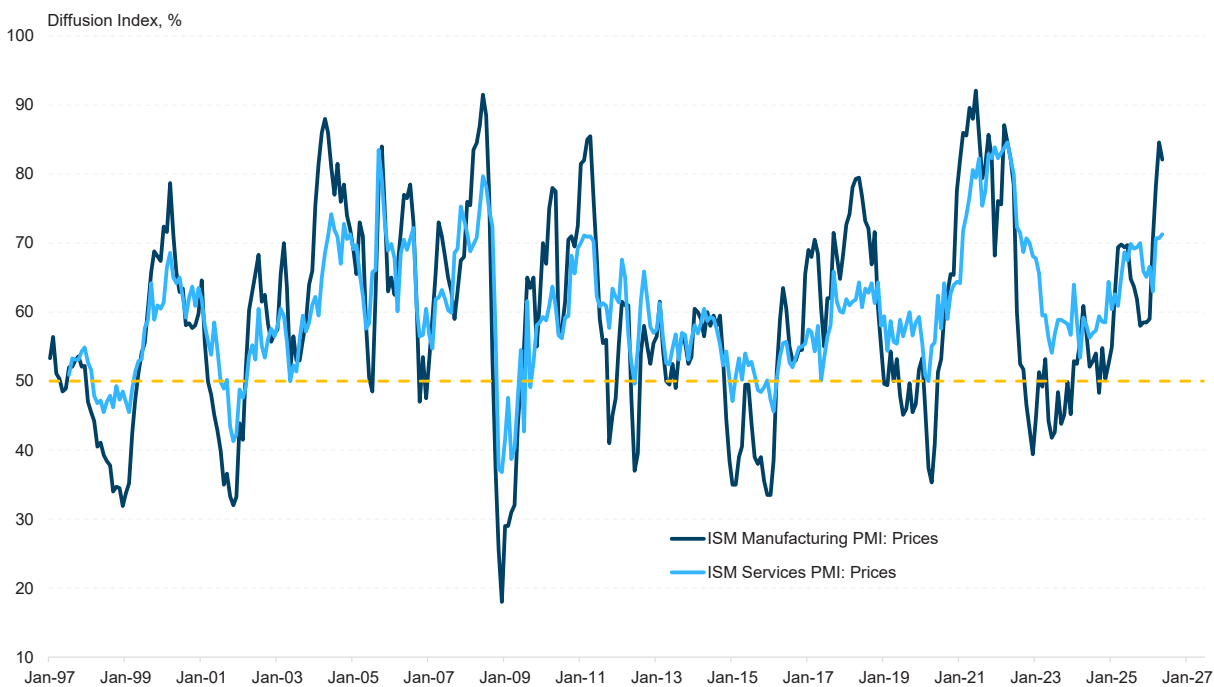
## Highlights in the Week Ahead

Date	Time (ET)	Indicator	Last	Consensus	WB Estimate	Actual
6 July	10:00 a.m.	ISM Services Index (June)	54.5	54.2	54.5	
7 July	8:30 a.m.	Trade Balance (May)	-\$55.9bn	-\$78.7bn	-\$65.0bn	

Sources: Bloomberg, William Blair Equity Research

## Indicators of the Week: ISM Services

ISM Services PMI vs. Manufacturing PMI Prices Paid Indexes



Sources: Institute for Supply Management, William Blair Equity Research

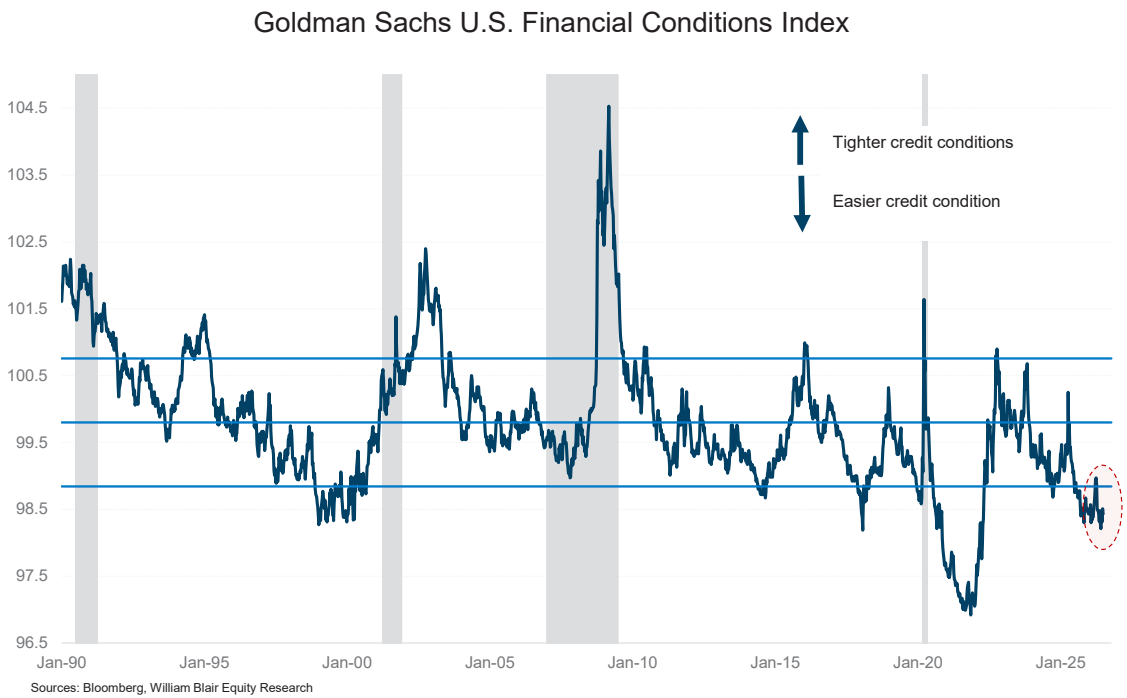
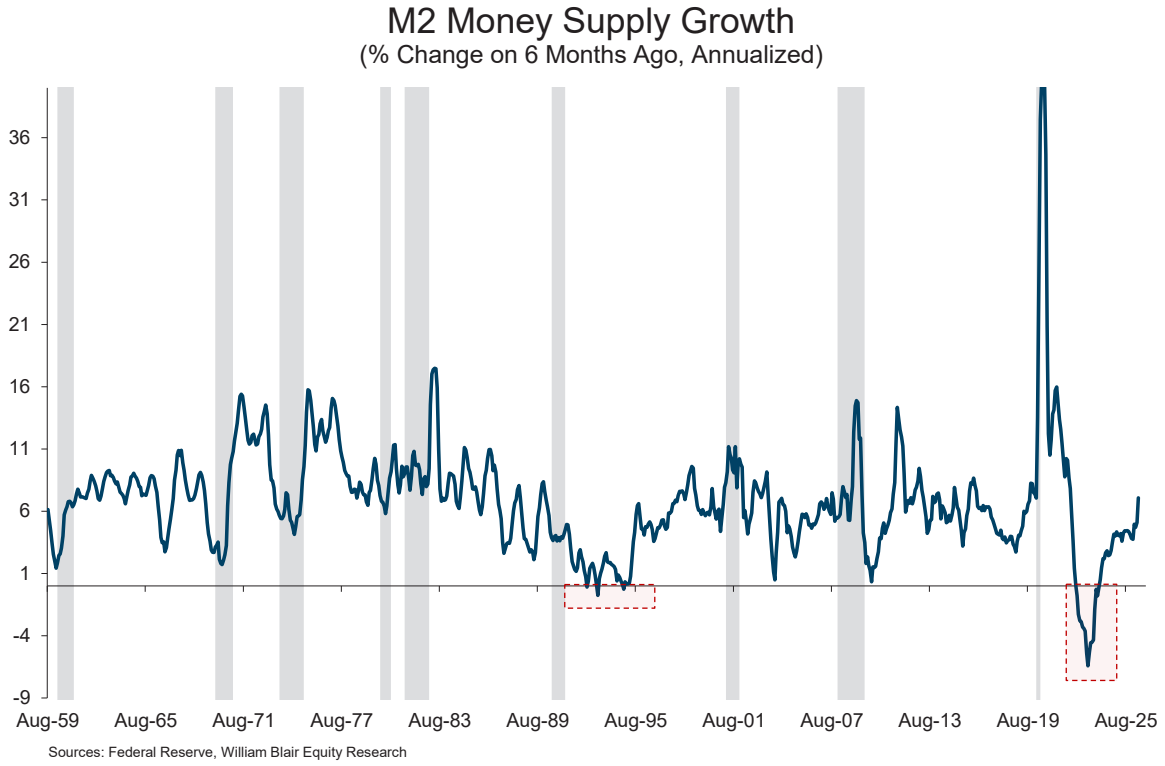
# Economic Scorecard

Rolling monthly heat map, % Change on Year Ago (unless otherwise noted)

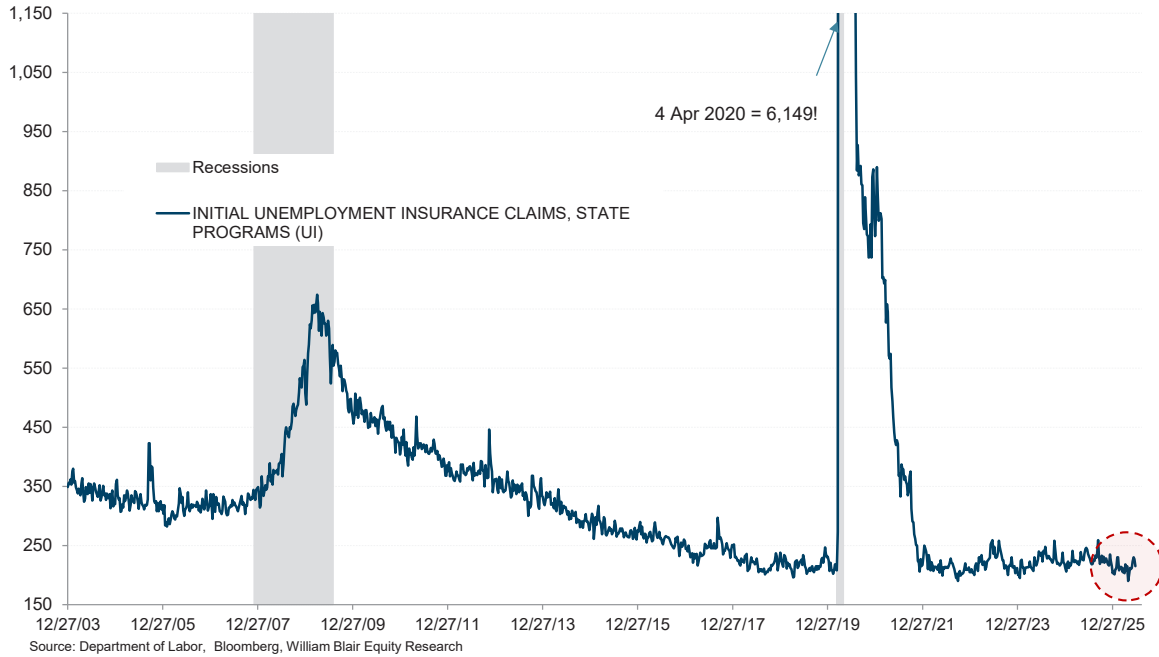
	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26
<b>Growth</b>																			
US Leading Indicators	-2.8	-3.0	-3.3	-4.1	-3.7	-3.8	-3.4	-3.5	-3.2	-3.1	-3.7	-3.7	-3.6	-3.1	-3.0	-1.6	-1.5		
US Coincident Indicators	1.4	1.4	1.8	1.8	1.1	1.1	1.4	1.2	1.2	1.0	0.8	0.6	0.9	0.8	0.3	0.4	0.8		
US Lagging Indicators	-0.6	-0.5	-0.6	-0.8	-0.1	-0.3	-0.5	-0.4	0.2	0.3	0.3	0.7	0.9	0.7	1.2	1.5	0.9		
<b>Consumer</b>																			
Total Retail Sales	4.5	3.8	5.2	5.1	3.1	4.4	4.1	5	4.1	3.2	3.2	2.4	3.3	4.2	4.2	4.8	6.9		
Personal Income	5	5	5.2	5.6	4.5	4.3	4.8	5.1	5.1	4.5	4.4	4.2	4.1	3.5	3.3	2.6	3.8		
Real Disposable Personal Income	1.8	1.8	2.3	2.8	1.5	1.2	1.7	1.8	1.8	1.3	1	0.8	1.4	0.8	0	-1.1	0		
Real Personal Consumption	3.3	2.7	3.2	3.1	2.5	2.5	2.6	2.8	2.4	2.5	2.2	1.6	2	2.4	1.9	1.7	2.1		
Personal Saving Rate (%)	5.1	5.2	5.1	5.5	4.9	4.6	4.5	4.4	4.3	3.9	3.8	3.6	4.4	3.8	3.5	3	3		
Consumer Confidence (Conference Board)**	105.3	100.1	93.9	85.7	98.4	95.2	98.7	97.8	95.6	95.5	92.9	94.2	89	91	92.2	93.8	90.6	91.2	
<b>Employment</b>																			
Employment Growth	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.3		
ASA Temporary Staffing Index	-8.2	-7.5	-8.7	-6.4	-5.8	-5.3	-0.8	-0.9	0.8	1.5	4.5	7.3	2.3	3.2	6.1	5.4	5.1	6.5	
ISM Employment Index Manufacturing*	49.7	47.1	44.4	46.2	46.1	45.1	44.9	44.3	45.4	45.8	44.1	44.8	48.1	48.8	48.7	46.4	48.6	49.7	
ISM Employment Index Services*	51.4	53.4	46	49.2	50.4	47.7	46.9	46.9	47.6	48.1	48.7	51.7	50.3	51.8	45.2	48	47.9		
Unemployment Rate, %	4	4.2	4.2	4.2	4.3	4.1	4.3	4.3	4.4		4.5	4.4	4.3	4.4	4.3	4.3	4.3		
Average Hourly Earnings	4	4.1	4.2	3.9	4	3.9	4	4	3.8	3.9	3.9	3.7	3.7	3.7	3.4	3.6	3.4		
Initial Jobless Claims (avg. wkly. chg. '000s)	219	226	223	226	233	239	222	231	234	226	221	219	213	216	208	208	214	224	
Job Openings	-11.3	-14.2	-15.3	-5.7	-6.1	-2.9	-4.5	-8.0	3.3	-2.8	-9.5	-10.2	-2.6	-4.4	-0.9	6.9	3.9		
Layoff Announcements	-39.5	103.2	204.8	62.7	47	-1.6	139.8	13.3	-25.8	175.3	23.5	-8.3	117.8	-71.9	-78	-20.9	3.4	-4.5	
<b>Housing Market</b>																			
Housing Starts	-1.8	-4.1	3.8	1.5	-3	4.6	12.8	-7.4	-2.8	-7.1	1.5	-7.8	2.4	-9.7	13.1	-0.6	-8.7		
New Home Sales	-2.6	-1.8	-3.7	-0.7	-7.2	-2.6	-11.5	1.6	-0.1	3.2	13.2	3	-13.4	-1.7	1.2	-10.7	-6.8		
Existing Home Sales	1.7	-1.0	-2.7	-1.5	-0.5	0.5	0.8	2.3	4.4	2.2	-1.2	1.9	-1.7	-0.5	-0.3	0.5	3.2		
Median House Price (Existing Homes)	-0.2	-1.4	-5.4	-0.4	2.5	-1.2	-7.4	3	-1	-5.2	1.2	1.4	-3.1	-0.7	-4.8	0.7	0		
Existing Homes Inventory (Mths' supply)	3.9	4	4.2	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4	4.2	4.3	4.3	4.3	4.1		
New Homes Inventory (Mths' supply)	9	9.4	9.3	8.6	9.7	9	9.2	8.5	8.2	9	7.7	7.9	9.9	9.3	8.7	9.3	10.3		
NAHB Homebuilder Sentiment*	47	42	39	40	34	32	33	32	32	37	38	39	37	37	38	34	37		
<b>Inflation</b>																			
Consumer Price Index	3	2.8	2.4	2.3	2.4	2.7	2.7	2.9	3		2.7	2.7	2.4	2.4	3.3	3.8	4.2		
CPI Less-food & energy	3.3	3.1	2.8	2.8	2.8	2.9	3.1	3.1	3		2.6	2.6	2.5	2.5	2.6	2.8	2.9		
Producer Price Index	3.8	3.4	3.2	2.4	2.7	2.4	3.2	2.7	3	2.8	3.1	3.1	3.1	3.4	4.3	5.7	6.5		
PPI Less-food & energy	3.9	3.7	3.8	3.1	3.2	2.7	3.5	2.9	3	3	3.2	3.4	3.7	3.9	3.9	4.9	4.9		
PCE Price Index	2.6	2.7	2.4	2.3	2.5	2.6	2.6	2.7	2.8	2.7	2.8	2.9	2.9	2.9	3.5	3.8	4.1		
PCE Prices Less-food & energy	2.8	3.0	2.7	2.6	2.8	2.8	2.9	2.9	2.8	2.8	2.8	3.0	3.1	3.0	3.3	3.3	3.4		
<b>Business Activity - US</b>																			
Industrial Production	0.9	0.8	0.6	0.9	0.1	0.6	1.9	1.2	1.9	1.8	1.8	1.2	1.1	0.8	0.6	1.4	1.7		
New Cap Gds Orders less-aircraft & parts	3.3	-0.9	2.2	0.5	2.2	4.5	4.4	2.5	5.3	6.2	4.1	8	2.9	5.9	10.8	10.9	10.2		
Business Inventories	1.8	2.5	2.2	2.5	2.1	1.7	1.6	1.4	1	1.3	1.3	1.2	1.5	1	1.2	2.1	2.7	0	
ISM Manufacturing PMI*	50.5	50	48.9	48.8	48.6	49	48.4	48.9	48.9	48.8	48	47.9	52.6	52.4	52.7	52.7	54	53.3	
Markit US Manufacturing PMI*	51.2	52.7	50.2	50.2	52	52.9	49.8	53	52	52.5	52.2	51.8	52.4	51.6	52.3	54.5	55.1	53.9	
ISM Services Index*	52.6	53.2	50.8	51.6	50.2	50.8	50.5	51.9	50.3	52	52.4	53.8	53.8	56.1	54	53.6	54.5		
Markit US Services PMI*	52.9	51	54.4	50.8	53.7	52.9	55.7	54.5	54.2	54.8	54.1	52.5	52.7	51.7	49.8	51	50.7	51.3	
<b>Business Activity - International</b>																			
Germany Manufacturing PMI Markit/BME*	45	46.5	48.3	48.4	48.3	49	49.1	49.8	49.5	49.6	48.2	47	49.1	50.9	52.2	51.4	50.1	50.3	
Japan Manufacturing PMI Jibun Bank*	48.7	49	48.4	48.7	49.4	50.1	49	49.7	48.5	48.2	48.7	50	51.5	53	51.6	55.1	54.5	54.8	
Caixin China Manufacturing PMI*	50.1	50.8	51.2	50.4	48.3	50.4	49.5	50.5	51.2	50.6	49.9	50.1	50.3	52.1	50.8	52.2	51.8	51.7	
China Manufacturing PMI*	49.1	50.2	50.5	49	49.5	49.7	49.3	49.4	49.8	49	49.2	50.1	49.3	49	50.4	50.3	50	50.3	
UK Manufacturing PMI Markit/CIPS*	48.3	46.9	44.9	45.4	46.4	47.7	48	47	46.2	49.7	50.2	50.6	51.8	51.7	51	53.7	53.9	52.5	
France Manufacturing PMI Markit*	45	45.8	48.5	48.7	49.8	48.1	48.2	50.4	48.2	48.8	47.8	50.7	51.2	50.1	50	52.8	49.7	51.2	
<b>Currencies***</b>																			
Euro (EUR/USD)	-4.2	-4.0	0.2	6.2	4.6	10.0	5.4	5.8	5.4	6.0	9.7	13.4	14.4	13.9	6.8	3.6	2.7	-3.1	
Renminbi (USD/CNY)	1.1	1.2	0.5	0.4	-0.6	-1.4	-0.4	0.6	1.5	0.0	-2.4	-4.3	-4.0	-5.7	-5.0	-6.1	-6.0	-5.3	
Yen (USD/Yen)	5.6	0.4	-0.9	-9.3	-8.4	-10.5	0.5	0.6	3.0	1.3	4.3	-0.3	-0.3	3.6	5.8	9.4	10.6	12.9	
Sterling (GBP/USD)	-2.3	-0.4	2.3	6.7	5.6	8.6	2.7	2.9	0.5	2.0	3.9	7.7	10.4	7.2	2.4	2.1	0.0	-3.4	
Canadian \$ (USD/CAD)	8.2	6.5	6.3	0.2	0.8	-0.5	0.3	1.8	2.9	0.5	-0.2	-4.6	-6.4	-5.7	-3.3	-1.6	0.4	4.3	
Mexican Peso (USD/MXN)	20.1	20.5	23.6	14.4	14.3	2.3	1.4	-5.4	-7.0	-7.4	-10.2	-13.5	-15.6	-16.2	-12.4	-11.0	-10.7	-6.7	
<b>US Equities</b>																			
S&P 500	24.7	16.8	6.8	10.6	12.0	13.6	14.8	14.4	16.1	19.9	13.5	16.4	14.9	15.5	16.3	29.4	28.2	20.9	
S&P 400 Midcap	18.6	7.1	-4.2	-0.3	0.6	5.9	1.7	5.3	4.5	4.8	-1.7	5.9	6.1	15.5	15.7	27.6	24.1	24.2	
S&P 600 Smallcap	14.5	4.5	-5.0	-3.6	-3.4	2.8	-6.3	1.8	1.9	3.8	-4.0	4.2	7.0	15.9	18.5	36.6	31.2	35.3	
Russell 2000	17.5	5.3	-5.3	-0.5	-0.2	6.2	-1.9	6.7	9.3	12.9	2.7	11.3	14.3	21.7	24.1	42.6	41.3	39.0	

\* Diffusion Index, \*\*1985=100, \*\*\*Currencies - green/red = strengthening/weakening foreign currency vs dollar  
Source: ISM, Federal Reserve, Census Bureau, Bureau of Labor Statistics, Conference Board, Bloomberg, William Blair

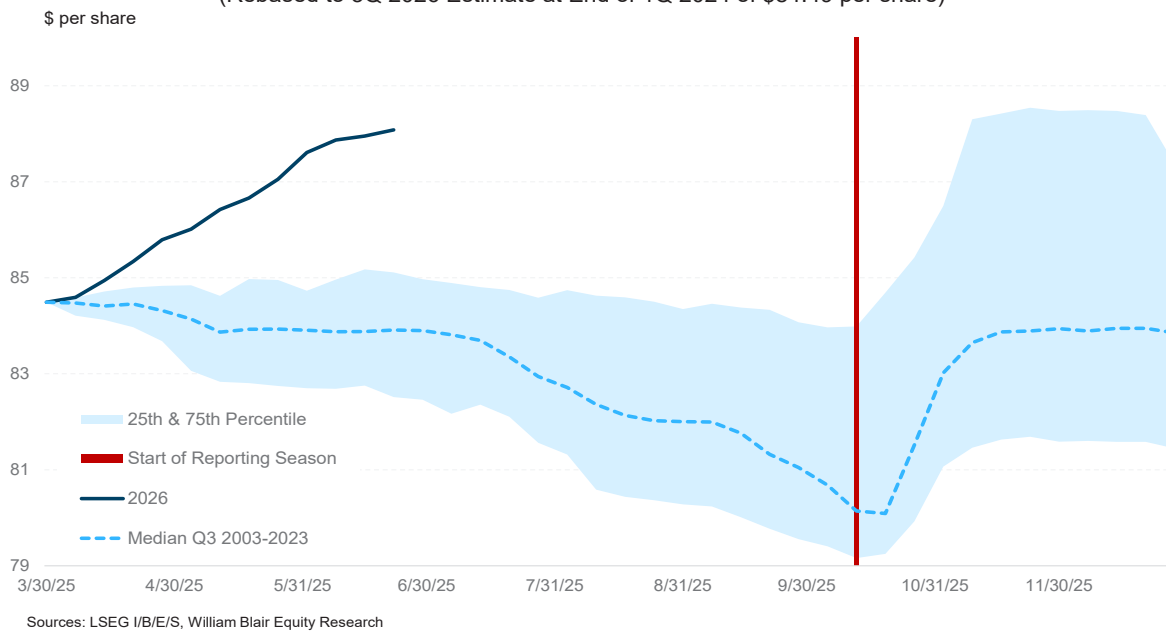
## Other Economic Indicators



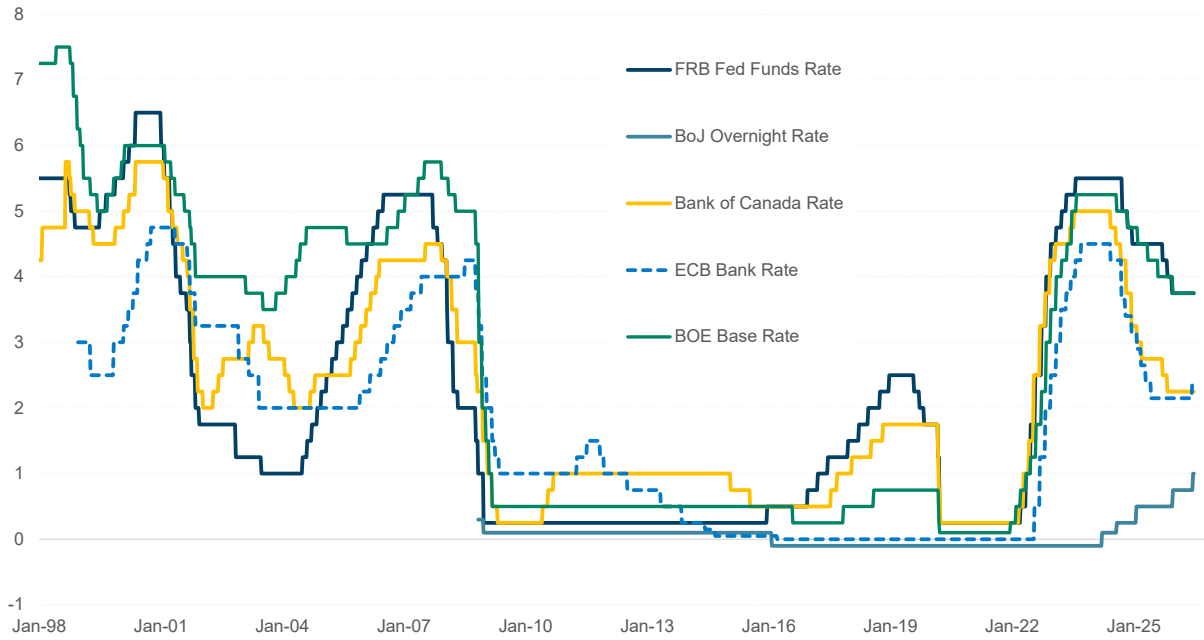
### Initial Jobless Claims ('000s, Seasonally Adjusted)



### Progression of S&P 500 3Q EPS Estimates, 3Q 2026 vs. Median 3Q 2002-2025 (Rebased to 3Q 2026 Estimate at End of 1Q 2024 of \$84.49 per share)

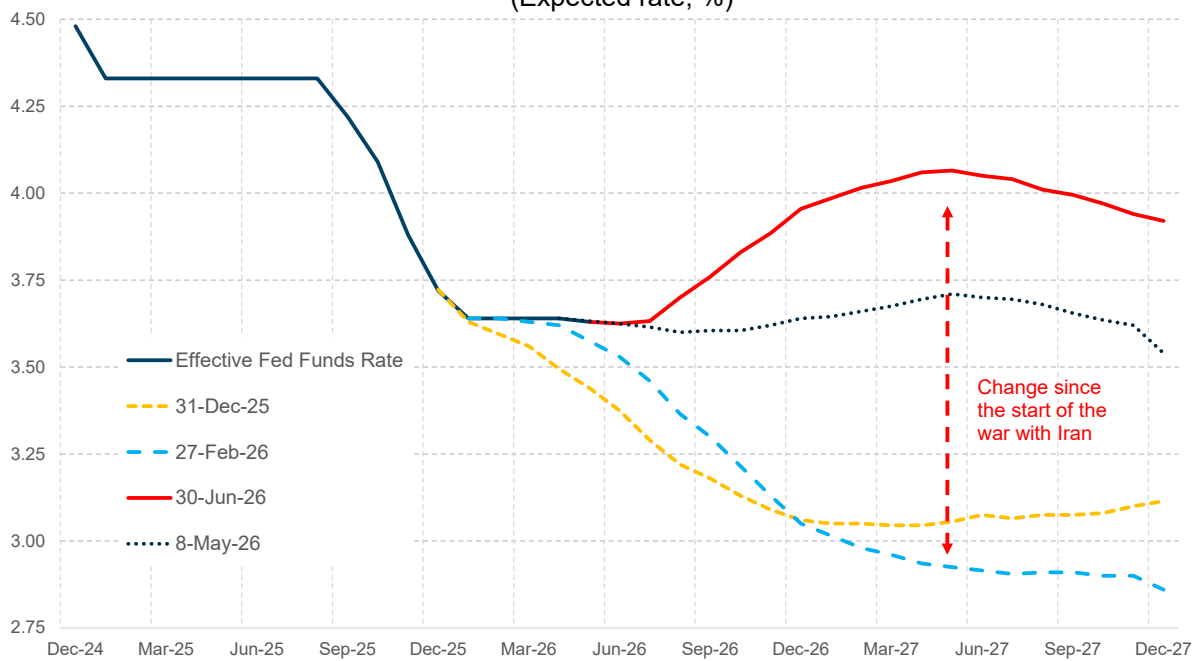


### Central Bank Target Short-Term Interest Rates, %



Sources: Bloomberg, William Blair Equity Research

### Fed Funds Rate and Futures Market Expectations (Expected rate, %)



Sources: Bloomberg, William Blair Equity Research

## S&P 500 Sector Performance

Global Industry Classification System	Current Weight* 01-Jul-26	Week Ago 24-Jun-26	Month Ago 01-Jun-26	Qtr-to-Date 30-Jun-26	Year-to-Date 31-Dec-25
<b>S&amp;P 500 Index</b>	<b>100.00</b>	<b>1.70</b>	<b>-1.54</b>	<b>-0.22</b>	<b>9.32</b>
<b>S&amp;P 400 MidCap Index</b>		<b>0.82</b>	<b>2.61</b>	<b>-0.86</b>	<b>15.56</b>
<b>S&amp;P 600 SmallCap Index</b>		<b>2.11</b>	<b>6.72</b>	<b>-0.54</b>	<b>22.27</b>
<b>Dow Jones Industrials</b>		<b>0.88</b>	<b>2.40</b>	<b>-0.03</b>	<b>8.83</b>
<b>Nasdaq Composite</b>		<b>2.21</b>	<b>-3.86</b>	<b>-0.66</b>	<b>12.04</b>
<b>Communication Services</b>	<b>9.88</b>	<b>4.15</b>	<b>-3.92</b>	<b>2.62</b>	<b>3.07</b>
Advertising	0.04	4.61	-5.17	4.88	-23.07
Broadcasting	0.05	7.35	-17.45	3.55	-25.43
Cable & Satellite	0.05	3.43	-13.11	-1.10	-21.94
Integrated Telecommunication Services	0.58	-5.78	-12.40	-1.45	-9.39
Interactive Home Entertainment	0.14	3.15	5.69	0.17	-0.83
Interactive Media & Services	7.85	5.64	-2.47	3.06	8.12
Movies & Entertainment	0.87	0.25	-9.36	1.98	-16.09
Publishing & Printing	0.02	2.27	-4.04	3.94	-1.30
Wireless Telecommunication Svcs	0.27	-4.28	-7.33	3.18	-14.77
<b>Consumer Discretionary</b>	<b>9.77</b>	<b>3.34</b>	<b>-1.42</b>	<b>0.82</b>	<b>-0.29</b>
Apparel Retail	0.34	-8.06	-2.27	-0.20	3.40
Apparel & Accessories & Luxury Goods	0.08	-2.49	1.04	-0.67	-7.72
Auto Parts & Equipment	0.02	-0.23	-12.13	-1.79	-8.93
Automobile Manufacturers	2.49	11.52	0.64	0.82	-5.15
Automobile Retail	0.26	3.57	3.53	1.32	-6.91
Broadline Retail	3.83	3.14	-7.33	1.37	5.11
Casinos & Gaming	0.08	-3.15	-10.36	-0.39	-15.11
Computer & Electronics Retail	0.02	-0.52	3.00	1.78	15.39
Consumer Electronics	0.07	-0.99	0.35	0.04	17.15
Distributors	0.02	6.03	19.89	-0.49	-4.99
Footwear	0.09	1.11	-6.96	4.04	-27.62
Home Furnishings	0.01	0.65	13.47	-1.21	9.66
Home Improvement Retail	0.69	1.76	11.26	-0.22	-0.85
Homebuilding	0.15	-4.33	6.45	-3.38	1.21
Hotels, Resorts & Cruise Lines	0.78	-1.47	4.72	0.58	0.85
Leisure Products	0.02	-2.19	-4.25	-1.37	-0.66
Restaurants	0.74	1.33	4.47	0.79	-3.67
Other Specialty Retail	0.05	0.28	-4.56	1.40	-30.12
<b>Consumer Staples</b>	<b>4.95</b>	<b>-2.37</b>	<b>1.14</b>	<b>-0.33</b>	<b>6.37</b>
Agricultural Products	0.08	0.35	-10.97	-0.29	28.55
Brewers	0.01	-3.68	0.03	0.21	-16.37
Consumer Staples Merchandise Retail	2.15	-5.75	-2.31	-2.18	3.05
Distillers & Vintners	0.04	-4.82	0.87	-1.87	-0.88
Food Distributors	0.06	3.65	13.31	-0.06	13.35
Food Retail	0.09	-3.03	-2.62	0.02	1.09
Household Products	0.71	-1.74	5.59	0.71	5.79
Packaged Foods & Meats	0.30	0.74	1.89	3.43	-0.95
Personal Care Products	0.08	1.44	5.56	2.30	-2.54
Soft Drinks	0.99	0.93	3.31	1.58	11.24
Tobacco	0.57	-0.65	3.30	-1.42	14.49
<b>Energy</b>	<b>2.85</b>	<b>-1.24</b>	<b>-7.39</b>	<b>-0.56</b>	<b>17.33</b>
Integrated Oil & Gas	1.36	-1.69	-9.90	-0.27	11.77
Oil & Gas Equipment & Services	0.21	-3.61	-16.27	-2.97	17.61
Oil & Gas Exploration & Production	0.55	-2.73	-8.38	-1.59	11.22
Oil & Gas Refining & Marketing & Transportation	0.33	7.43	2.04	3.43	54.10
Oil & Gas Storage & Transportation	0.39	-3.09	2.06	-2.03	22.14

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<b>Financials</b>	<b>11.37</b>	<b>1.99</b>	<b>6.76</b>	<b>2.13</b>	<b>0.03</b>
Asset Management & Custody Banks	0.91	2.14	0.66	1.61	-4.49
Consumer Finance	0.57	1.73	10.78	2.43	-9.93
Diversified Banks	3.02	0.73	12.55	2.16	5.84
Diversified Financial Services	6.50	2.10	3.04	2.00	-3.39
Financial Exchanges & Data	0.76	2.98	-6.92	5.00	-15.17
Insurance Brokers	0.39	5.86	9.52	3.94	-7.69
Investment Banking & Brokerage	1.39	-1.08	2.63	2.61	10.84
Life & Health Insurance	0.28	2.45	7.90	1.97	9.26
Multi-Sector Holdings	1.01	1.00	6.26	-0.13	-0.58
Property & Casualty Insurance	0.89	3.32	13.55	2.29	5.84
Regional Banks	0.28	3.12	12.71	2.09	10.85
Reinsurance	0.02	4.10	10.80	0.75	6.06
Transaction & Payment Processing	1.77	5.45	5.44	2.16	-5.38
<b>Health Care</b>	<b>8.70</b>	<b>4.04</b>	<b>8.28</b>	<b>0.52</b>	<b>3.10</b>
Biotechnology	1.55	4.69	11.68	-0.14	8.30
Health Care Distributors	0.31	1.06	10.02	1.28	-3.35
Health Care Equipment	1.26	0.27	1.65	1.19	-22.89
Health Care Facilities	0.14	1.66	5.77	0.91	-17.88
Health Care Services	0.39	2.57	10.54	1.18	20.36
Health Care Supplies	0.06	4.79	10.07	2.95	-1.10
Life Sciences Tools & Services	0.76	4.72	6.38	1.97	-7.44
Managed Health Care	0.81	6.49	11.57	3.66	31.13
Pharmaceuticals	3.39	4.94	8.88	-0.77	12.25
<b>Industrials</b>	<b>8.44</b>	<b>1.72</b>	<b>6.53</b>	<b>-1.06</b>	<b>18.20</b>
Aerospace & Defense	2.16	2.92	7.01	1.02	8.99
Agricultural & Farm Machinery	0.25	4.47	15.71	-1.06	34.81
Air Freight & Logistics	0.29	2.31	-1.38	1.32	20.03
Building Products	0.46	0.63	9.59	-1.22	20.52
Cargo Ground Transportation	0.14	1.11	-0.61	1.05	44.19
Construction & Engineering	0.30	-3.13	1.05	-4.44	66.24
Construction Machinery & Heavy Trucks	0.95	-0.36	12.07	-5.51	54.14
Data Processing & Outsourced Services	0.02	0.59	-11.90	2.91	-36.85
Diversified Support Svcs	0.14	-0.36	-3.07	2.35	-14.08
Electrical Components & Equipment	0.73	0.12	1.30	-4.14	22.67
Environmental & Facilities Services	0.29	0.51	4.90	0.81	-3.26
Heavy Electrical Equipment	0.44	7.25	19.34	-3.45	73.56
Human Resource & Employment Services	0.19	7.07	0.70	5.05	-7.71
Industrial Conglomerates	0.22	-3.74	-2.86	-1.09	7.11
Industrial Machinery	0.60	0.96	10.69	-1.18	4.86
Passenger Airlines	0.19	2.24	17.16	-0.87	27.09
Passenger Ground Transportation	0.21	-1.61	-1.50	0.69	-11.08
Railroads	0.47	5.90	5.20	1.83	21.08
Research & Consulting Svcs	0.10	1.68	-5.69	1.16	-23.99
Trading Companies & Distributors	0.27	1.83	9.34	-1.41	29.84
<b>Information Technology</b>	<b>35.31</b>	<b>1.20</b>	<b>-7.40</b>	<b>-1.84</b>	<b>17.23</b>
Application Software	1.74	8.63	-16.08	4.71	-26.48
Communications Equipment	1.29	-0.44	-4.62	-1.44	41.62
Electronic Components	0.69	4.23	17.33	-7.56	62.59
Electronic Equipment & Instruments	0.15	0.53	4.29	-2.44	43.48
Electronic Manufacturing Services	0.22	1.48	1.74	-2.68	12.01
Internet Software & Services	0.07	0.17	-17.15	-0.33	-0.64
IT Consulting & Services	0.55	6.53	-18.03	2.78	-25.16
Semiconductor Equipment	2.10	7.57	31.67	-10.32	132.72
Semiconductors	15.01	-1.51	-9.47	-3.71	31.32
Systems Software	5.77	6.03	-16.13	2.67	-13.94
Technology Distributors	0.03	6.28	-1.82	-1.58	1.62
Technology Hardware, Storage & Peripherals	7.69	-0.17	-2.91	0.17	23.35
<b>Materials</b>	<b>1.74</b>	<b>0.10</b>	<b>0.78</b>	<b>0.33</b>	<b>11.45</b>
Commodity Chemicals	0.05	-7.33	-21.94	-0.79	17.93
Construction Materials	0.21	-5.53	0.85	-0.73	-9.11
Copper	0.13	-2.12	-9.71	-3.75	19.18

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Fertilizers & Agricultural Chemicals	0.12	4.24	3.22	-0.94	23.16
Gold	0.14	-0.78	-13.76	-0.11	-6.56
Industrial Gases	0.46	4.79	7.82	3.18	24.91
Metal & Glass Containers	0.02	1.26	14.99	-1.04	16.58
Paper Packaging	0.14	0.69	11.02	0.20	6.04
Specialty Chemicals	0.36	1.71	8.49	0.71	8.82
Steel	0.12	-8.64	-13.80	-2.31	32.97
<b>Real Estate</b>	<b>1.74</b>	<b>-1.11</b>	<b>2.28</b>	<b>0.28</b>	<b>9.98</b>
Data Center REITs	0.23	-7.88	-3.95	-2.41	24.99
Health Care REITs	0.33	3.86	14.80	1.27	22.38
Hotel & Resort REITs	0.02	-2.18	3.73	-1.52	35.62
Industrial REITs	0.18	-2.89	-1.60	0.98	7.16
Multi-Family Residential REITs	0.00	4.20	6.57	1.07	7.05
Office REITs	0.02	5.64	14.60	2.18	0.41
Other Specialized REITs	0.09	-4.52	-4.38	-2.43	17.43
Real Estate Service	0.08	2.13	4.14	2.91	-29.95
Retail REITs	0.25	-0.31	6.50	-0.49	16.42
Self-Storage REITs	0.13	1.38	7.56	1.45	19.90
Single-Family Residential REITs	0.13	1.38	7.56	1.45	19.90
Telecom Tower REITs	0.19	-5.00	-12.63	1.54	-7.89
Timber REITs	0.02	-6.87	-0.63	-1.59	-0.54
<b>Utilities</b>	<b>2.05</b>	<b>-1.80</b>	<b>4.28</b>	<b>-1.30</b>	<b>4.81</b>
Electric Utilities	1.34	-2.08	3.89	-1.49	3.64
Gas Utilities	0.04	0.25	3.51	0.44	3.22
Independent Power Producers & Energy Traders	0.09	-5.00	-0.92	-2.88	-3.87
Water Utilities	0.04	1.66	8.80	0.15	0.99
Multi-Utilities	0.54	-0.99	5.89	-0.83	9.80

\*Current Weight is market cap based, based on calculations by William Blair Intl. Ltd.

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DOW JONES: 52305.20

S&P 500: 7483.23

NASDAQ: 26040.00

Additional information is available upon request.

**Current Rating Distribution (as of July 1, 2026):**

Coverage Universe	Percent	Inv. Banking Relationships *	Percent
Outperform (Buy)	73	Outperform (Buy)	13
Market Perform (Hold)	26	Market Perform (Hold)	2
Underperform (Sell)	1	Underperform (Sell)	0

\*Percentage of companies in each rating category that are investment banking clients, defined as companies for which William Blair has received compensation for investment banking services within the past 12 months.

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