

Equity Research
Macroeconomics

18 September 2026

Richard de Chazal, CFA
rdechazal@williamblair.com
+44 20 7868 4489

Louis Mukama
lmukama@williamblair.com
+1 312 364 8867

Economics Weekly

Where Are Rates Heading? A Look at
Tightening Cycles and 10-Year Yields

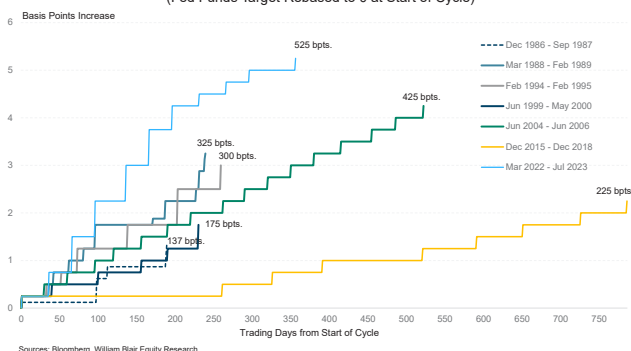


Several weeks ago [we wrote](#) that the path of least resistance for Treasury yields was higher. The main reason for the increase in yield is the realization that we are in a new inflation regime, which itself is being driven by faster economic growth, ongoing supply-side frictions, rising debt, demographics, climate change, and geopolitical tensions, none of which were issues in the 2000-2020 period. **In this *Economics Weekly*, we take another look at interest rates, examining how high rates are likely to go in the current cycle relative to past Fed tightening cycles; we also explain why 10-year yields are more likely to remain anchored around today's higher levels of 5.0%-5.25% than fall back sustainably toward the lows of the pre-pandemic years.**

Three and Done?

Looking back at past tightening cycles from 1985 onward, and excluding the 1997 one-and-done episode, this is likely to be one of the smallest cycles on record. It is our view that the Fed will raise rates twice more (by 25 basis points each), leaving the cumulative increase well below the 302-basis-point average across the seven cycles since 1985 (exhibit 1). The 1994-1995, 2015-2018, and 2022-2023 cycles all ended with soft landings, and at this point we see little reason a further two more rate increases should derail this one either, even though it should still help to dampen growth and prevent inflation from accelerating further.

Exhibit 1
Fed Target Rate During Tightening Cycles
(Fed Funds Target Rebased to 0 at Start of Cycle)



It is important to recognize that the inflation we are seeing today is not just a reflection of recurring “one-off” supply shocks—the deepening war with Iran and the unfolding Super El Niño are the latest—but also the result of stronger demand growth stemming from the current AI/energy/reindustrialization boom. We are also witnessing a solid, and tentatively reaccelerating, labor market, where companies continue to struggle

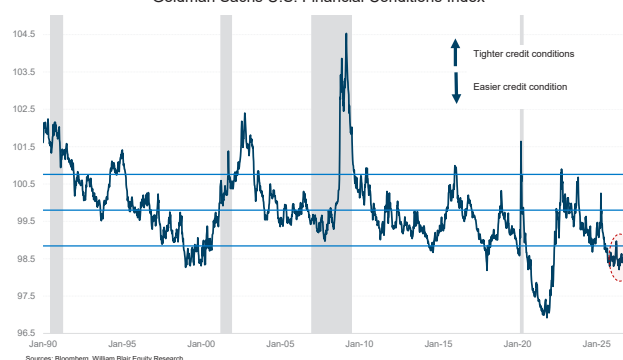
to find workers (exhibit 2). And there are also several structural features that are supporting the higher inflationary regime. Not only has the golden age of a frictionless global supply side now ended, but we are also experiencing higher debt and budget deficits (6% of GDP for at least the near future); an aging population that will be demanding more healthcare services from fewer available workers, putting even greater pressure on government resources; and a continuing shortage of available power relative to its demand.

Exhibit 2



It is true the Fed cannot print more oil, produce more semiconductor chips, or open the Strait of Hormuz. It can, however, attempt to moderate the pace of demand for those supply-constrained goods and services, tighten extremely loose financial conditions (exhibit 3), reestablish its inflation-fighting credibility lost during the recent inflation surge, and prevent a further acceleration in inflation that could emerge from second and third round effects by consumers who start to demand higher wages and salaries on the expectation that inflation is likely to stay high or accelerate further.

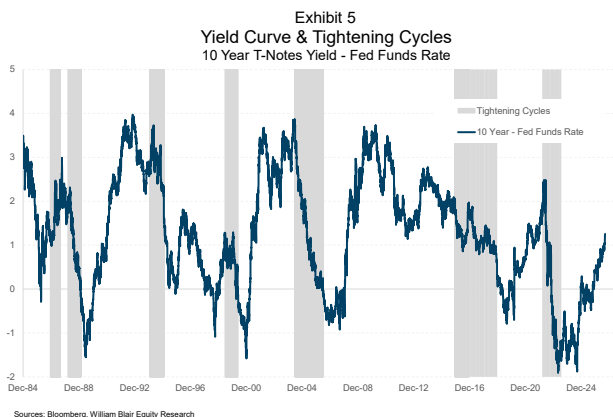
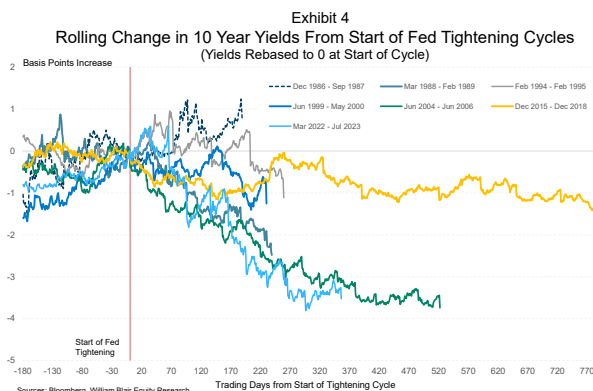
Exhibit 3
Goldman Sachs U.S. Financial Conditions Index



What Happens to 10-Year Yields During Tightening Cycles

If longer-term bond yields are the sum of expected future short rates plus a term premium, we should expect to see 10-year yields pricing in those expected increases in short rates before the actual first rate increase, and then gradually come back down as the inflation and term premium they are demanding compresses as that tightening cycle gets further underway, growth and inflation moderate, and investors become more confident the Fed is getting inflation back under control.

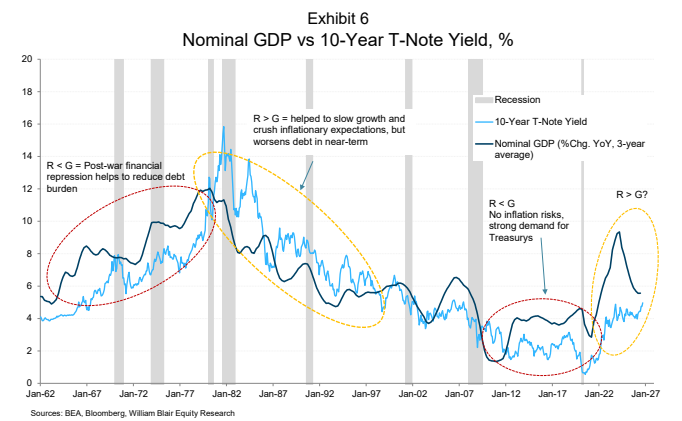
As exhibit 4 shows, this is roughly the pattern we see, whereby 10-year yields increase by an average of 50 basis points in the few months ahead of the start of the cycle, and then start to come down once the Fed commits to raising rates and cooling inflation. The yield curve will therefore also flatten throughout the cycle and often fully invert when the Fed is close to the end of the tightening cycle (exhibit 5).



If today's tightening is similar to the 1994-1995 cycle—i.e., a midcycle reduction in monetary accommodation rather than more overt tightening—there is room for 10-year yields to increase further before finally peaking and coming back down.

Nominal GDP as an Anchor for 10-Year Yields

What is the appropriate level for 10-year yields? We believe it is roughly where we are today, close to 5%-5.25%. One crude way of assessing this level is to simply look at the level of the yield relative to nominal GDP (exhibit 6).



This strong relationship makes sense for at least two reasons, the first being that a 10-year yield can be decomposed into:

$$\text{Bond Yield} = \text{Real Growth} + \text{Expected Inflation} + \text{Term Premium}$$

Whereas nominal GDP growth is:

$$\text{Nominal GDP Growth} = \text{Real Growth} + \text{Inflation}$$

Both contain the same two fundamental drivers of real growth and inflation. Therefore, if nominal GDP growth is growing at 6%, as it has over the last four quarters (roughly 2.5% real growth and 3.5% inflation), we should expect 10-year yields to be not too far off.

The historical relationship is not perfect, but it is meaningful: the two series have a correlation of roughly 75%. Applying a simple regression of that relationship to consensus nominal GDP expectations for the next year points to a 10-year yield of around 5.5%. That would be consistent with the idea that yields are no longer too low relative to

nominal activity, but neither are they obviously too high if the economy remains in a faster nominal-growth regime.

During the high-inflation 1980s, yields were consistently above GDP; it took Chairman Paul Volcker to push yields well above the economy's growth rate ($R > G$) to drive down both inflation and inflationary expectations. Since then, yields have been lower than GDP growth, helped by the lack of inflation, strong global demand for Treasuries, regulatory demand for high-quality collateral, and growth in the role of U.S. government bonds as global liquidity instruments. Yet, if we are now in a world with stickier inflation, where economic growth is a little faster, where there is a little more price sensitivity around demanded yields, and where the real neutral rate of interest (r -star) is higher, it seems reasonable that bonds and nominal GDP growth should once again be closer than in the recent past.

The second reason yields should track GDP growth is relative return. If nominal GDP is growing at roughly 6%, it usually implies stronger corporate revenue growth, firmer pricing power, and potentially higher returns across competing assets. In that environment, a price-sensitive investor is unlikely to accept a 2% Treasury yield for long. Yields would need to rise enough to keep bonds competitive relative to other assets, particularly when inflation and fiscal risks are also higher than they were in the pre-2020 period. This is exactly the situation we are seeing today.

Conclusion

The Fed this week embarked on what is likely to be a mini midcycle tightening cycle, which, based on the economic and inflation growth rates, is likely to result in a total of three rate increases over the next year. If this cycle is anything like the 1994-1995 midcycle tightening, this should still be consistent with a soft landing; 10-year yields could remain flat or even move slightly higher than current levels in the coming months, as opposed to almost immediately falling as they do in most other tightening cycles.

The current level of 10-year yields is also not especially anomalous when compared to nominal GDP, which has historically acted as an anchor for 10-year yields. If the economy has moved into a higher nominal-growth regime, with a 2.5%-3.0% trend rate (compared to the pre-pandemic 1.5%-2.0% norm), coupled with real economic growth also now trending closer to 2.5% than 2%, then 5.0%-5.25% 10-year yields look sustainable.

Highlights in the Week Ahead

Date	Time (ET)	Indicator	Last	Consensus	WB Estimate	Actual
24 Sep	10:00 a.m.	New Home Sales (Aug)	-10.5%	1.3%	0.5%	
25 Sep	8:30 a.m.	Durable Goods Orders (Aug)	1.1%	-0.3%	0.5%	
		Orders Less-transportation	0.4%	0.5%	0.5%	

Sources: Bloomberg, William Blair Equity Research

Indicators of the Week: Durable Goods Orders



Economic Scorecard

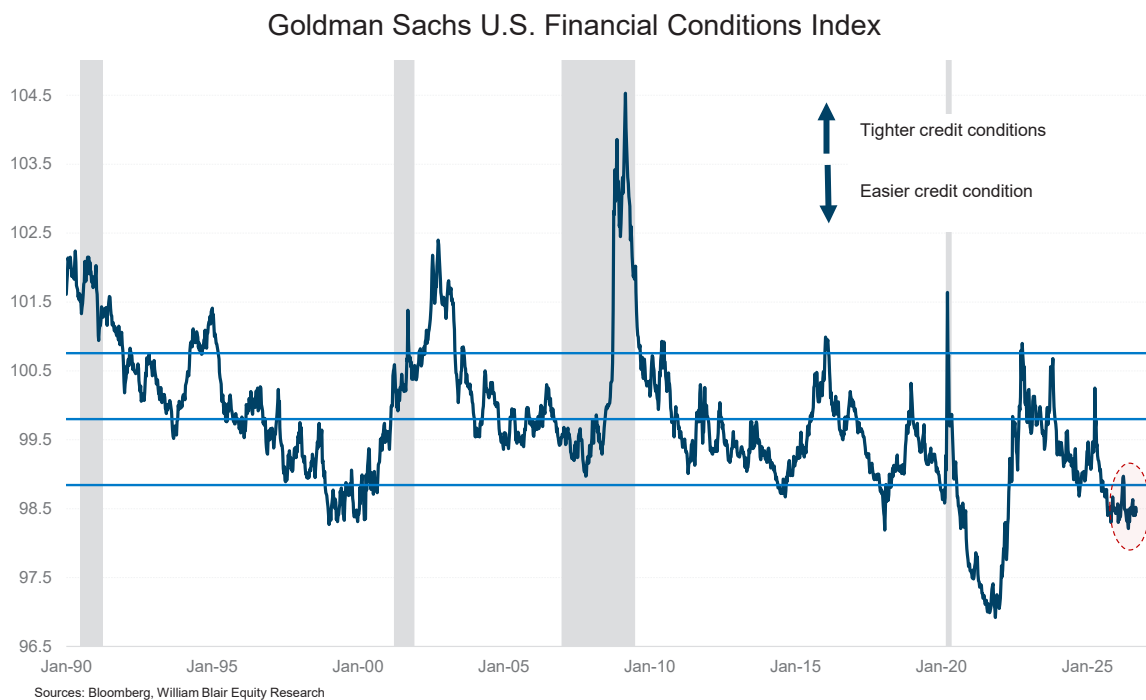
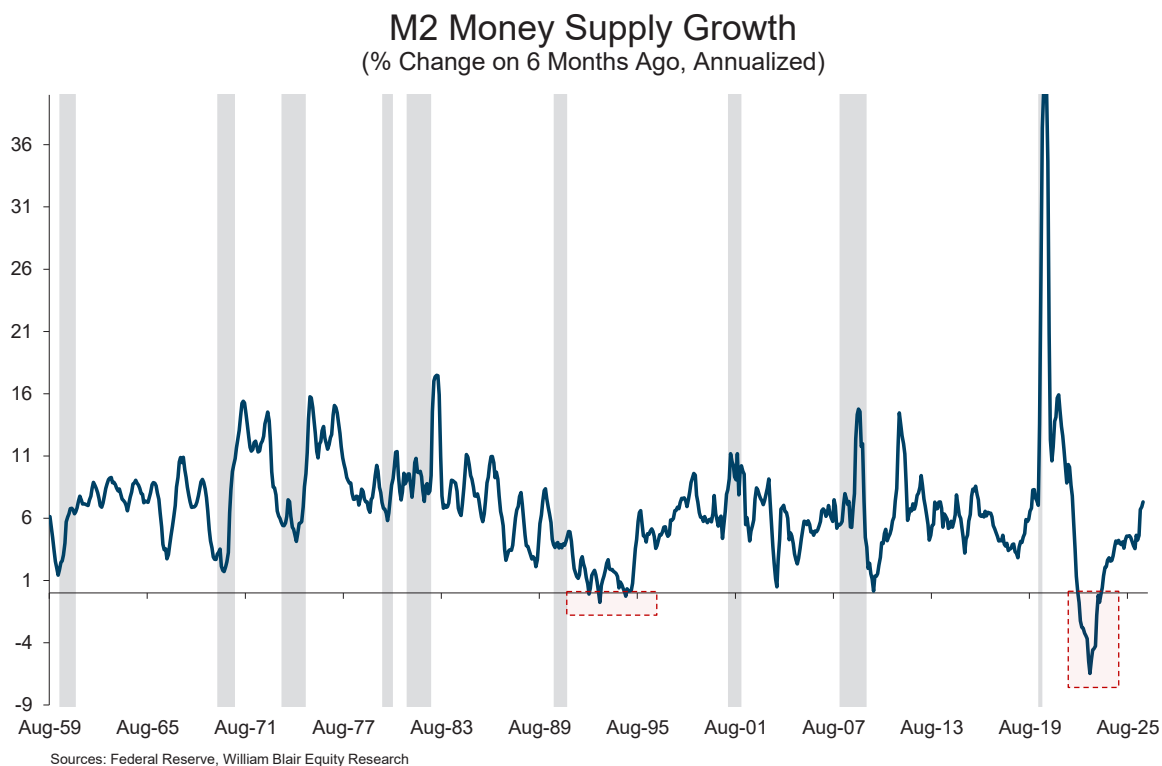
Rolling monthly heat map, % Change on Year Ago (unless otherwise noted)

	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	Aug-26	Sep-26
Growth																			
US Leading Indicators	-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	-1.4	-1.2	-1.1		
US Coincident Indicators	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	0.3	0.6	0.7	0.5		
US Lagging Indicators	-0.6	-0.8	-0.1	-0.3	-0.5	-0.4	0.2	0.3	0.3	0.7	0.9	0.6	1.1	1.3	0.7	0.7	1.2		
Consumer																			
Total Retail Sales	5.2	5.1	3.1	3.9	4.2	4.7	4.1	3.2	3.2	2.4	3.3	4.2	4.2	5.1	7.2	6.8	5.0	6.0	
Personal Income	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	2.7	4	3.9	3.7		
Real Disposable Personal Income	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	0.1	0.5	0.5		
Real Personal Consumption	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	1.9	2.4	2.6	2.1		
Personal Saving Rate (%)	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	2.9	2.8	2.6	3		
Consumer Confidence (Conference Board)**	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	92.2	90.2	89.4	
Employment																			
Employment Growth	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	0.2	0.3	0.2	0.4	
ASA Temporary Staffing Index	-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	2.5	6.3	
ISM Employment Index Manufacturing*	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	52.8	51.2	
ISM Employment Index Services*	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	51.2	47.4	47.8	
Unemployment Rate, %	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	4.2	4.1	4.1	
Average Hourly Earnings	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	3.3	3.4	3.2	3.1	
Initial Jobless Claims (avg. wkly. chg. '000s)	223	226	233	239	222	231	234	226	221	219	213	216	208	208	215	223	199	208	
Jop Openings	-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	3.1	-0.3	2.6		
Layoff Announcements	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	-46.1	-38.5	
Housing Market																			
Housing Starts	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	1	-8.3	4.4	-8.6		
New Home Sales	-3.7	-0.7	-7.2	-2.6	-11.5	1.6	-0.1	3.2	13.2	3	-13.4	-1.7	0.5	-8.6	1.3	2	-6.3		
Existing Home Sales	-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	3.7	3.8	0.7		
Median House Price (Existing Homes)	-5.4	-0.4	2.5	-1.2	-7.4	3	-1	-5.2	1.2	1.4	-3.1	-0.7	-3.4	0.5	-2	-1.5	-0.9		
Existing Homes Inventory (Mths' supply)	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	4.2	4.3	4.3		
New Homes Inventory (Mths' supply)	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	9.3	8.5	9.6		
NAHB Homebuilder Sentiment*	39	40	34	32	33	32	32	37	38	39	37	37	38	34	37	36	34		
Inflation																			
Consumer Price Index	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	3.5	3.4	3.4	
CPI Less-food & energy	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	2.6	2.5	2.4	
Producer Price Index	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	5.9	5.6	4.8	5.4	
PPI Less-food & energy	3.8	3.1	3.2	2.7	3.5	2.9	3	3	3.2	3.4	3.7	3.8	3.9	4.9	4.5	4.8	4.3	4.6	
PCE Price Index	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	3.7	3.7		
PCE Prices Less-food & energy	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	3.5	3.3	3.3		
Business Activity - US																			
Industrial Production	0.6	0.9	0.1	0.6	1.9	1.2	1.9	1.8	1.8	1.2	1.0	0.8	0.7	1.4	1.5	1.3	1.1		
New Cap Gds Orders less-aircraft & parts	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	11.1	10	14.9	13.2		
Business Inventories	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	2.8	3.2	3	0	
ISM Manufacturing PMI*	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	55.6	54.6	
Markit US Manufacturing PMI*	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	53.9	53.9	
ISM Services Index*	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	54	54.1	55.4	
Markit US Services PMI*	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	51.2	54.6	56.5	
Business Activity - International																			
Germany Manufacturing PMI Markit/BME*	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	52.2	54.3	
Japan Manufacturing PMI Jibun Bank*	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	54.5	54.9	
Caixin China Manufacturing PMI*	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	50.9	51.5	
China Manufacturing PMI*	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	49.2	49.8	
UK Manufacturing PMI Markit/CIPS*	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	51.9	51.7	
France Manufacturing PMI Markit*	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	49.8	51.1	
Currencies***																			
Euro (EUR/USD)	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	1.0	-0.6	
Renminbi (USD/CNY)	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	-6.2	-5.8	
Yen (USD/Yen)	-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	4.4	8.6	
Sterling (GBP/USD)	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	2.1	0.3	
Canadian \$ (USD/CAD)	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	1.2	0.8	
Mexican Peso (USD/MXN)	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	-8.1	-8.9	
US Equities																			
S&P 500	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	18.1	19.0	
S&P 400 Midcap	-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	19.3	15.6	
S&P 600 Smallcap	-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	31.5	22.1	
Russell 2000	-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	32.5	24.9	

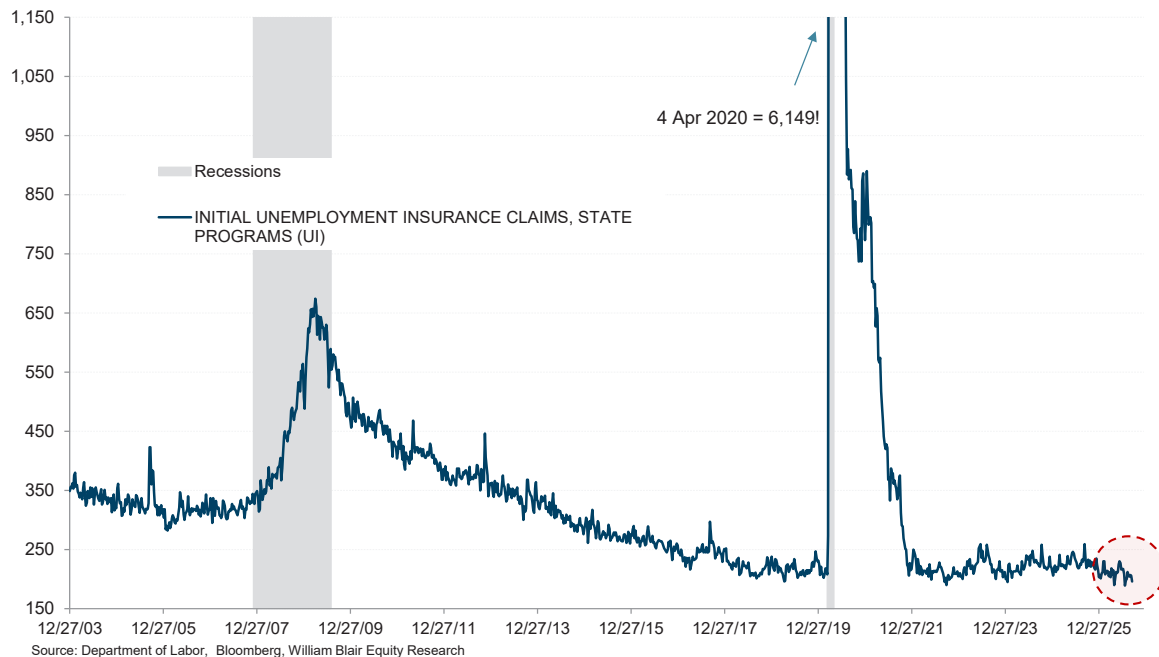
* Diffusion Index, **1985=100, ***Currencies - green/red = strengthening/weakening foreign currency vs dollar

Source: ISM, Federal Reserve, Census Bureau, Bureau of Labor Statistics, Conference Board, Bloomberg, William Blair

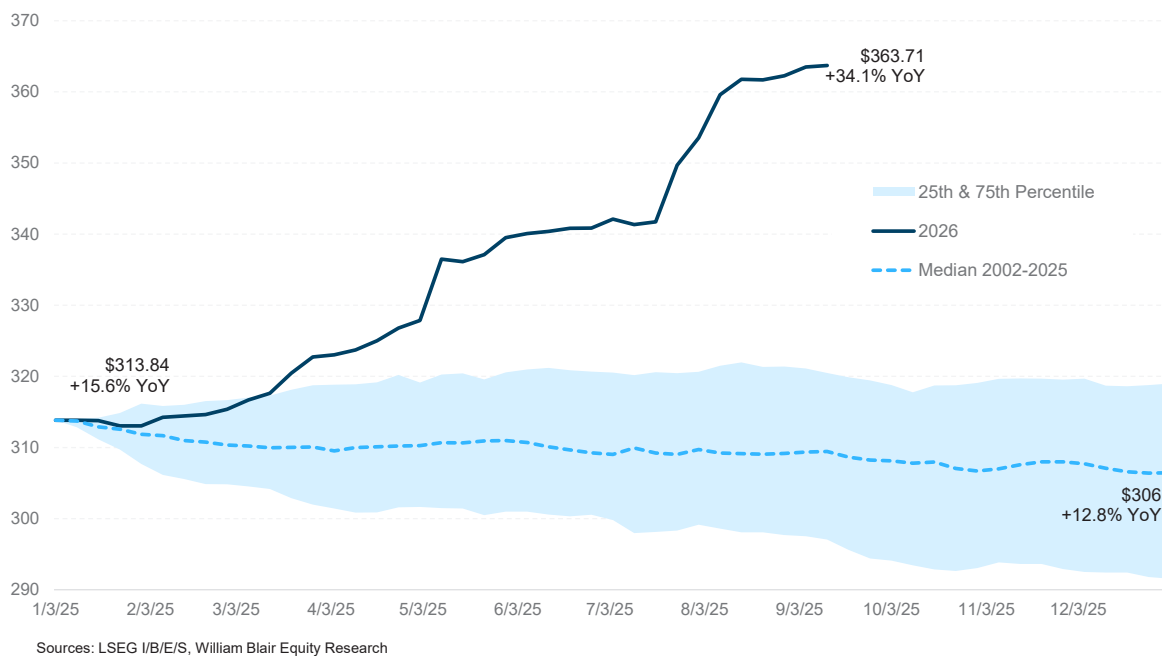
Other Economic Indicators



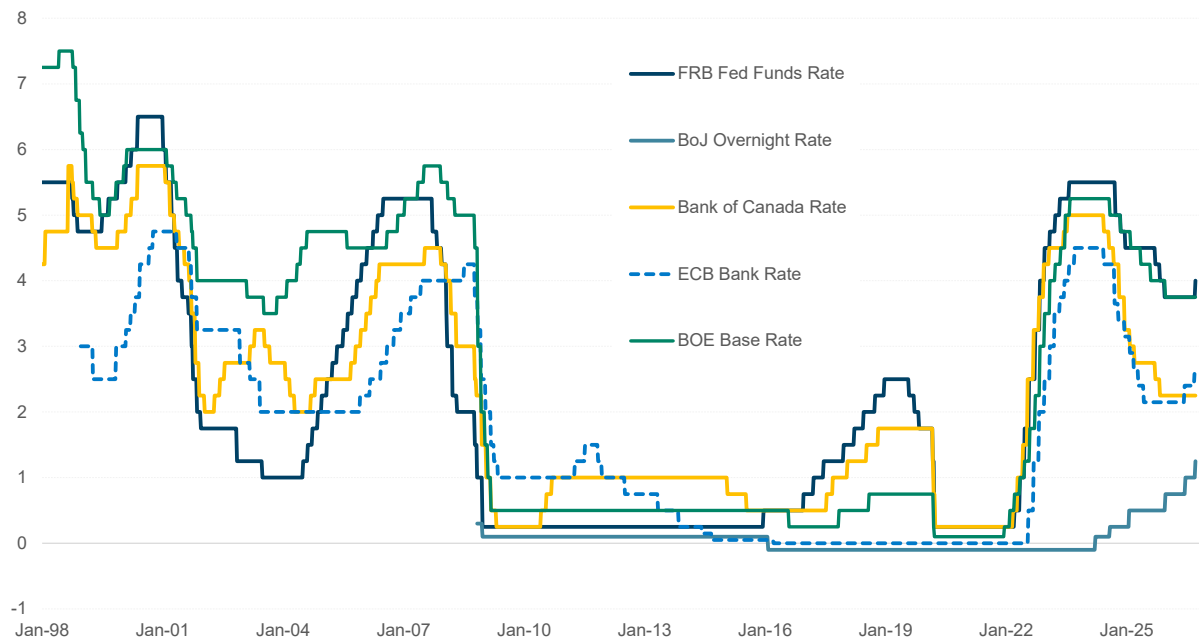
Initial Jobless Claims (‘000s, Seasonally Adjusted)



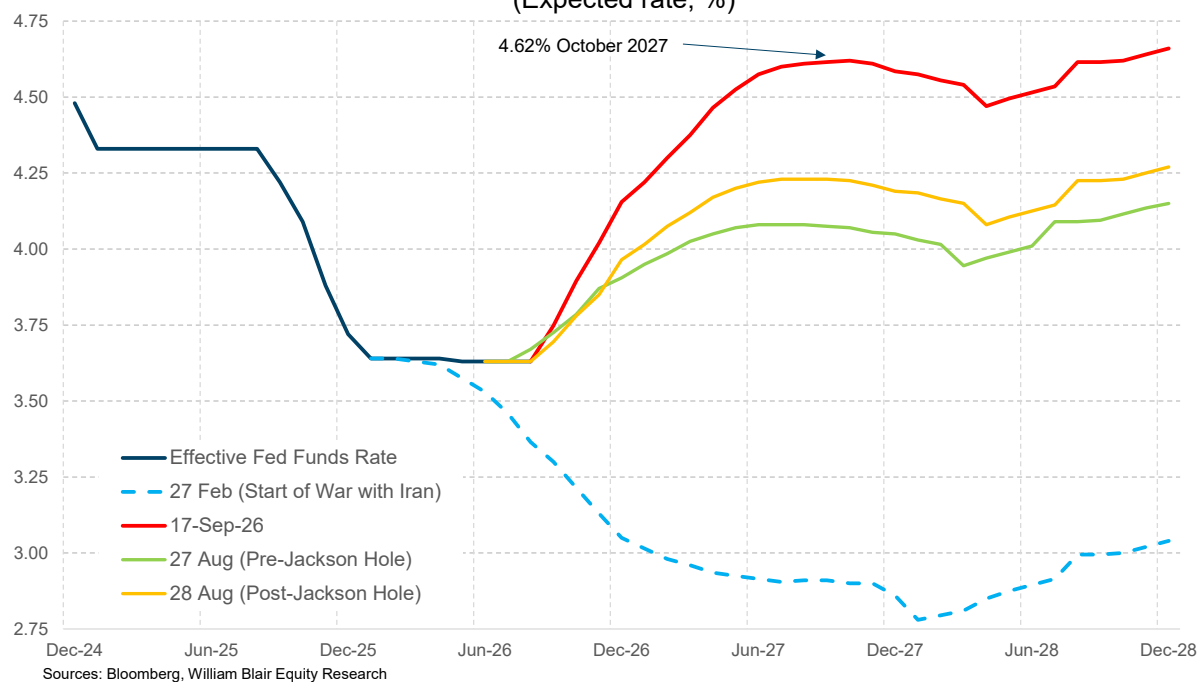
Progression of S&P 500 2026 EPS Estimates, 2026 vs Median 2002-2025 (Rebased to Estimate at End of Q4 2025 of \$313.84 per share)



Central Bank Target Short-Term Interest Rates, %



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



S&P 500 Sector Performance

Global Industry Classification System	Current Weight* 17-Sep-26	Week Ago 10-Sep-26	Month Ago 17-Aug-26	Qtr-to-Date 30-Jun-26	Year-to-Date 31-Dec-25
S&P 500 Index	100.00	0.61	-1.39	1.85	11.57
S&P 400 MidCap Index		-0.60	-6.52	-4.96	10.78
S&P 600 SmallCap Index		-1.04	-6.67	-5.84	15.75
Dow Jones Industrials		-0.55	-3.15	-1.03	7.73
Nasdaq Composite		1.29	-0.85	0.78	13.67
Communication Services	9.90	3.28	4.13	3.42	3.88
Advertising	0.18	1.59	0.88	-10.94	-34.67
Broadcasting	0.05	0.36	-4.52	22.01	-12.14
Cable & Satellite	0.04	-1.81	-4.24	-8.21	-27.55
Integrated Telecommunication Services	0.65	-3.37	-0.74	12.68	3.60
Interactive Home Entertainment	0.06	-2.92	-12.83	-12.96	-13.82
Interactive Media & Services	7.76	4.69	5.66	3.08	8.14
Movies & Entertainment	0.88	-0.65	-0.32	5.75	-12.98
Publishing & Printing	0.02	2.47	4.32	20.83	14.75
Wireless Telecommunication Svcs	0.25	-6.05	-7.59	-0.76	-18.02
Consumer Discretionary	9.24	-0.40	-3.95	-3.40	-4.47
Apparel Retail	0.30	0.67	-11.85	-9.42	-6.15
Apparel & Accessories & Luxury Goods	0.07	0.34	-11.58	-18.09	-23.90
Auto Parts & Equipment	0.01	-4.53	-12.83	-28.93	-34.10
Automobile Manufacturers	2.24	0.59	7.00	-11.14	-16.41
Automobile Retail	0.23	-2.55	-5.92	-6.67	-14.25
Broadline Retail	3.92	-0.13	-3.60	5.30	9.18
Casinos & Gaming	0.06	-5.36	-13.52	-14.97	-27.54
Computer & Electronics Retail	0.03	7.34	10.67	24.62	41.28
Consumer Electronics	0.08	1.16	-10.45	15.92	35.74
Distributors	0.03	-2.44	-1.24	10.93	5.92
Footwear	0.08	-0.61	-7.96	-13.27	-39.66
Home Furnishings	0.01	3.34	-5.13	5.82	17.47
Home Improvement Retail	0.58	-1.09	-10.35	-13.63	-14.18
Homebuilding	0.13	2.78	-5.61	-12.43	-8.28
Hotels, Resorts & Cruise Lines	0.70	-1.12	-12.59	-7.02	-6.77
Leisure Products	0.02	-1.55	-6.62	7.47	8.24
Restaurants	0.68	-3.05	-7.43	-5.04	-9.24
Other Specialty Retail	0.06	-0.03	3.07	12.91	-22.19
Consumer Staples	4.84	0.42	-1.67	-0.21	6.50
Agricultural Products	0.09	-0.25	7.07	14.31	47.36
Brewers	0.01	1.67	-4.07	0.31	-16.28
Consumer Staples Merchandise Retail	2.08	0.21	-5.72	-3.45	1.71
Distillers & Vintners	0.04	-0.94	-5.75	-9.82	-8.92
Food Distributors	0.06	-3.89	-3.35	-5.35	7.35
Food Retail	0.08	2.54	-11.02	-6.51	-5.52
Household Products	0.68	2.18	0.39	-1.35	3.62
Packaged Foods & Meats	0.29	-0.48	-3.02	2.51	-1.83
Personal Care Products	0.08	-0.85	1.03	2.32	-2.52
Soft Drinks	0.98	-0.19	-0.31	2.79	12.55
Tobacco	0.59	0.64	4.79	2.78	19.36
Energy	3.38	-0.74	2.83	21.12	42.91
Integrated Oil & Gas	1.64	-1.04	2.22	22.32	37.08
Oil & Gas Equipment & Services	0.23	-6.01	-6.62	6.20	28.72
Oil & Gas Exploration & Production	0.62	-3.33	0.84	14.48	29.37
Oil & Gas Refining & Marketing & Transportation	0.49	6.90	16.94	61.83	141.10
Oil & Gas Storage & Transportation	0.39	-1.31	-1.39	1.21	26.17

Financials	11.29	-1.80	-3.07	3.84	1.70
Asset Management & Custody Banks	0.94	-2.75	-7.85	7.54	1.09
Consumer Finance	0.51	-2.64	-8.01	-4.26	-15.82
Diversified Banks	2.95	-3.16	-4.73	2.83	6.53
Diversified Financial Services	6.55	-1.49	-2.39	4.95	-0.60
Financial Exchanges & Data	0.79	-1.22	-0.71	11.96	-9.55
Insurance Brokers	0.37	-1.93	-7.12	1.66	-9.71
Investment Banking & Brokerage	1.33	-4.54	-5.71	0.72	8.80
Life & Health Insurance	0.28	0.77	-2.09	6.49	14.10
Multi-Sector Holdings	1.02	0.44	2.20	1.76	1.30
Property & Casualty Insurance	0.87	0.61	1.23	1.99	5.53
Regional Banks	0.25	-4.35	-9.54	-5.19	2.95
Reinsurance	0.02	2.45	4.09	6.40	12.01
Transaction & Payment Processing	1.87	0.07	0.61	8.92	0.88
Health Care	8.95	1.81	0.89	5.97	8.68
Biotechnology	1.69	2.70	4.57	11.06	20.45
Health Care Distributors	0.32	-2.11	-0.38	8.38	3.42
Health Care Equipment	1.27	1.89	-5.82	5.05	-19.94
Health Care Facilities	0.15	2.20	5.95	11.37	-9.36
Health Care Services	0.36	-1.80	-1.24	-4.09	14.10
Health Care Supplies	0.05	-0.48	-14.12	-8.84	-12.42
Life Sciences Tools & Services	0.88	7.86	8.38	21.47	10.26
Managed Health Care	0.72	-2.59	-2.31	-5.73	19.26
Pharmaceuticals	3.46	1.69	1.07	3.71	17.31
Industrials	7.69	-0.93	-9.36	-9.02	8.69
Aerospace & Defense	1.91	-1.62	-13.02	-9.04	-1.87
Agricultural & Farm Machinery	0.26	1.13	14.29	8.09	47.27
Air Freight & Logistics	0.27	-0.55	-3.06	-4.01	13.72
Building Products	0.39	-2.39	-10.27	-14.22	4.66
Cargo Ground Transportation	0.11	-5.25	-16.61	-18.85	15.79
Construction & Engineering	0.26	-0.97	-15.31	-16.00	46.13
Construction Machinery & Heavy Trucks	0.78	-1.71	-10.62	-21.31	28.38
Data Processing & Outsourced Services	0.03	-2.34	-2.10	19.98	-26.37
Diversified Support Svcs	0.15	-1.19	-1.85	13.02	-5.12
Electrical Components & Equipment	0.67	-0.68	-11.01	-11.41	13.37
Environmental & Facilities Services	0.27	-0.62	-2.79	-2.08	-6.04
Heavy Electrical Equipment	0.35	0.11	-14.28	-21.27	41.52
Human Resource & Employment Services	0.21	1.66	1.26	20.76	6.09
Industrial Conglomerates	0.24	1.50	-9.32	-2.15	5.96
Industrial Machinery	0.55	0.05	-8.98	-6.50	-0.78
Passenger Airlines	0.15	1.87	-9.78	-18.33	4.70
Passenger Ground Transportation	0.21	-2.33	-5.49	-1.78	-13.26
Railroads	0.47	-1.51	-5.82	2.46	21.83
Research & Consulting Svcs	0.11	-0.17	-3.94	7.91	-18.91
Trading Companies & Distributors	0.31	-0.30	-8.82	-8.09	21.04
Information Technology	36.28	1.36	-0.19	3.39	23.48
Application Software	1.71	2.54	1.29	17.83	-17.27
Communications Equipment	1.30	2.55	-3.41	-0.85	42.46
Electronic Components	0.54	-4.20	-11.60	-25.83	30.45
Electronic Equipment & Instruments	0.14	1.43	-8.74	-2.10	43.98
Electronic Manufacturing Services	0.19	0.17	-12.42	-17.28	-4.80
Internet Software & Services	0.08	2.52	1.63	8.72	8.38
IT Consulting & Services	0.54	3.78	6.67	3.93	-24.32
Semiconductor Equipment	1.38	-7.60	-20.77	-40.20	55.18
Semiconductors	14.98	0.89	-2.99	-2.09	33.52
Systems Software	7.10	2.55	4.40	28.96	8.09
Technology Distributors	0.03	4.63	10.27	6.09	9.54
Technology Hardware, Storage & Peripherals	8.30	2.68	7.22	11.08	36.78
Materials	1.67	-0.28	-2.66	-0.33	10.72
Commodity Chemicals	0.06	-0.31	-3.71	13.60	35.04
Construction Materials	0.18	-1.58	-10.00	-17.35	-24.33
Copper	0.14	-0.51	3.61	12.66	39.50

William Blair

Fertilizers & Agricultural Chemicals	0.12	-2.56	9.88	3.93	29.22
Gold	0.19	-1.39	3.37	33.18	24.58
Industrial Gases	0.39	-1.12	-3.71	-9.67	9.35
Metal & Glass Containers	0.02	1.69	-0.70	-2.64	14.69
Paper Packaging	0.14	2.73	-6.90	-1.81	3.91
Specialty Chemicals	0.30	0.15	-5.16	-5.15	2.49
Steel	0.14	3.68	-3.56	14.43	55.76
Real Estate	1.68	-0.48	-4.52	-2.51	6.92
Data Center REITs	0.24	-0.11	-6.67	-0.01	28.07
Health Care REITs	0.34	-1.12	-1.04	1.38	22.52
Hotel & Resort REITs	0.02	-1.08	-3.99	-7.63	27.19
Industrial REITs	0.18	0.57	-3.86	-0.21	5.89
Multi-Family Residential REITs	0.00	-2.32	-3.99	-9.20	-3.83
Office REITs	0.01	0.33	-4.14	-3.59	-5.26
Other Specialized REITs	0.09	-0.58	-10.08	-9.50	8.91
Real Estate Service	0.07	0.59	-6.00	3.44	-29.59
Retail REITs	0.23	-2.05	-7.45	-8.48	7.07
Self-Storage REITs	0.12	2.02	-6.56	-5.04	12.24
Single-Family Residential REITs	0.12	2.02	-6.56	-5.04	12.24
Telecom Tower REITs	0.19	0.85	0.88	4.08	-5.58
Timber REITs	0.02	-1.50	-10.06	-9.53	-8.57
Utilities	1.86	-2.01	-5.93	-8.66	-3.00
Electric Utilities	1.21	-2.29	-6.80	-8.65	-3.89
Gas Utilities	0.04	-1.69	-4.63	-5.94	-3.34
Independent Power Producers & Energy Traders	0.08	-1.87	-1.31	-7.64	-8.59
Water Utilities	0.04	-1.15	2.90	5.06	5.93
Multi-Utilities	0.48	-1.39	-5.21	-9.98	-0.33

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

IMPORTANT DISCLOSURES

This report is available in electronic form to registered users via R*Docs™ at <https://williamblairlibrary.bluematrix.com> or www.williamblair.com.

Please contact us at +1 312 236 1600 or consult <https://www.williamblair.com/equity-research/coverage> for all disclosures.

Richard de Chazal attests that 1) all of the views expressed in this research report accurately reflect his/her personal views about any and all of the securities and companies covered by this report, and 2) no part of his/her compensation was, is, or will be related, directly or indirectly, to the specific recommendations or views expressed by him/her in this report. We seek to update our research as appropriate. Other than certain periodical industry reports, the majority of reports are published at irregular intervals as deemed appropriate by the research analyst.

DOW JONES: 51778.00

S&P 500: 7637.76

NASDAQ: 26418.30

Additional information is available upon request.

Current Rating Distribution (as of September 17, 2026):

Coverage Universe	Percent	Inv. Banking Relationships *	Percent
Outperform (Buy)	72	Outperform (Buy)	15
Market Perform (Hold)	28	Market Perform (Hold)	4
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.

The compensation of the research analyst is based on a variety of factors, including performance of his or her stock recommendations; contributions to all of the firm's departments, including asset management, corporate finance, institutional sales, and retail brokerage; firm profitability; and competitive factors.

OTHER IMPORTANT DISCLOSURES

Stock ratings and valuation methodologies: William Blair & Company, L.L.C. uses a three-point system to rate stocks. Individual ratings reflect the expected performance of the stock relative to the broader market (generally the S&P 500, unless otherwise indicated) over the next 12 months. The assessment of expected performance is a function of near-, intermediate-, and long-term company fundamentals, industry outlook, confidence in earnings estimates, valuation (and our valuation methodology), and other factors. Outperform (O) - stock expected to outperform the broader market over the next 12 months; Market Perform (M) - stock expected to perform approximately in line with the broader market over the next 12 months; Underperform (U) - stock expected to underperform the broader market over the next 12 months; not rated (NR) - the stock is not currently rated. The valuation methodologies include (but are not limited to) price-to-earnings multiple (P/E), relative P/E (compared with the relevant market), P/E-to-growth-rate (PEG) ratio, market capitalization/revenue multiple, enterprise value/EBITDA ratio, discounted cash flow, and others. Stock ratings and valuation methodologies should not be used or relied upon as investment advice. Past performance is not necessarily a guide to future performance.

The ratings and valuation methodologies reflect the opinion of the individual analyst and are subject to change at any time.

Our salespeople, traders, and other professionals may provide oral or written market commentary, short-term trade ideas, or trading strategies to our clients, prospective clients, and our trading desks that are contrary to opinions expressed in this research report. Certain outstanding research reports may contain discussions or investment opinions relating to securities, financial instruments and/or issuers that are no longer current. Investing in securities involves risks. This report does not contain all the material information necessary for an investment decision. Always refer to the most recent report on a company or issuer. Our asset management and trading desks may make investment decisions that are inconsistent with recommendations or views expressed in this report. We will from time to time have long or short positions in, act as principal in, and buy or sell the securities referred to in this report. Our research is disseminated primarily electronically, and in some instances in printed form. Research is simultaneously available to all clients. This research report is for our clients only. No part of this material may be copied or duplicated in any form by any means or redistributed without the prior written consent of William Blair & Company, L.L.C.

This is not in any sense an offer or solicitation for the purchase or sale of a security or financial instrument.

The factual statements herein have been taken from sources we believe to be reliable, but such statements are made without any representation as to accuracy or completeness or otherwise, except with respect to any disclosures relative to William Blair or its research analysts. Opinions expressed are our own unless otherwise stated and are subject to change without notice. Prices shown are approximate.

This report or any portion hereof may not be copied, reprinted, sold, or redistributed or disclosed by the recipient to any third party, by content scraping or extraction, automated processing, or any other form or means, without the prior written consent of William Blair. Any unauthorized use is prohibited.

If the recipient received this research report pursuant to terms of service for, or a contract with William Blair for, the provision of research services for a separate fee, and in connection with the delivery of such research services we may be deemed to be acting as an investment adviser, then such investment adviser status relates, if at all, only to the recipient with whom we have contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing). If such recipient uses these research services in connection with the sale or purchase of a security referred to herein, William Blair may act as principal for our own account or as riskless principal or agent for another party. William Blair is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

For important disclosures, please visit our website at williamblair.com.

This material is distributed in the United Kingdom and the European Economic Area (EEA) by William Blair International, Ltd., authorised and regulated by the Financial Conduct Authority (FCA). William Blair International, Limited is a limited liability company registered in England and Wales with company number 03619027. This material is only directed and issued to persons regarded as Professional investors or equivalent in their home jurisdiction, or persons falling within articles 19 (5), 38, 47, and 49 of the Financial Services and Markets Act of 2000 (Financial Promotion) Order 2005 (all such persons being referred to as "relevant persons"). This document must not be acted on or relied on by persons who are not "relevant persons."

This report is being furnished in Brazil on a confidential basis and is addressed to the addressee personally, and for its sole benefit. This does not constitute an offer or solicitation for the purchase or sale of a security by any means that would constitute a public offering in Brazil under the regulations of the Brazilian Securities and Exchange Commission (*Comissão de Valores Mobiliários*) or an unauthorized distribution under Brazilian laws and regulations. The securities are authorized for trading on non-Brazilian securities markets, and this report and all the information herein is intended solely for professional investors (as defined by the applicable Brazilian regulation) who may only acquire these securities through a non-Brazilian account, with settlement outside Brazil in a non-Brazilian currency.

"William Blair" and "R*Docs" are registered trademarks of William Blair & Company, L.L.C. Copyright 2026, William Blair & Company, L.L.C. All rights reserved.

William Blair & Company, L.L.C. licenses and applies the SASB Materiality Map® and SICSTM in our work.