

Equity Research
Macroeconomics

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Economics Weekly

How Should We Think About the End of Quantitative Tightening



Our long-stated plan is to stop balance sheet runoff when reserves are somewhat above the level we judge consistent with ample reserve conditions. We may approach that point in coming months, and we are closely monitoring a wide range of indicators to inform this decision. Some signs have begun to emerge that liquidity conditions are gradually tightening, including a general firming of repo rates along with more noticeable but temporary pressures on selected dates. The Committee's plans lay out a deliberately cautious approach to avoid the kind of money market strains experienced in September 2019.

– Chair Jerome H. Powell, “Understanding the Fed’s Balance Sheet,” speech delivered October 14, 2025

Last week, Chair Powell announced that the Fed is getting close to ending quantitative tightening (QT), which began in June 2022. During this cycle, the Fed has managed to reduce the size of its balance sheet by \$2.3 trillion, to \$6.6 trillion, after ballooning to \$8.9 trillion. The decision to end QT comes as emerging stress in the financial system has been signaling that the level of reserves, while still in “ample” territory, is moving closer to “scarce.” ***In this Economics Weekly, we discuss how QT has played out so far and what its ending might mean for financial markets.***

The QE Channels

When the Fed undertakes QE (or large-scale asset purchases [LSAPs]), it purchases assets (mostly Treasuries and agency mortgage-backed securities) in the secondary market from financial institutions that are eligible to hold reserve accounts at the Fed. To pay for those purchases, the Fed simply credits those accounts with reserves—reserves that it creates out of thin air.

The Fed believes that LSAPs impact the economy and financial markets through three main channels:

- 1) **The liquidity channel** – The agency acts as a lender of last resort and puts cash in the hands of financial institutions that might be liquidity constrained, lowering the risk of default and market contagion.
- 2) **The duration/portfolio balance channel** – The Fed typically controls the short end of the yield curve, but QE enables it to impact the long end of the curve by reducing the supply of longer-term Treasury securities in the open market, which helps raise the price and lower the demanded term premium. It believes

that a lower-term premium is where we should be looking for its impact.

- 3) **The volatility or signaling channel** – Providing more liquidity to markets helps calm volatility, but QE also is intended as a firm message to markets that the Fed will keep rates low for as long as necessary to prevent deflation and keep the economy rolling. The process also involves reinforcing that message to market participants through public addresses, reminding investors that the Fed won’t suddenly reverse course and raise rates again as long as LSAPs are still being carried out.

Through these channels, QE also helps depreciate the exchange rate, which supports stronger export growth as well as the equity market, by boosting the net present value of those assets via a lower discount rate.

Shouldn’t QT Be the Reverse of QE?

Quantitative tightening would seemingly be the reverse of QE: bank reserves created out of thin air are extinguished, the duration of debt in the market starts to rise again, and the Fed signals that it will move away from easing and potentially back toward a tightening stance.

Indeed, the Fed previously believed that it could not start to lower interest rates as long as QT was still being carried out. It felt this would be seen as effectively pulling the interest rate lever in one direction while pushing the balance sheet lever in the other, which might be viewed as counterproductive. In the end, the Fed seems to have overcome its cognitive dissonance, as this is exactly what it has been doing over the last few years.

Meanwhile, as exhibit 1 shows, QT1 (October 2017 to September 2019) has also been notably different from QT2 (June 2022 to present).

Exhibit 1

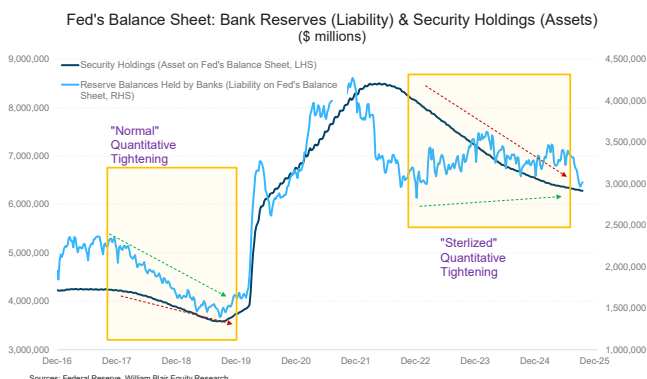
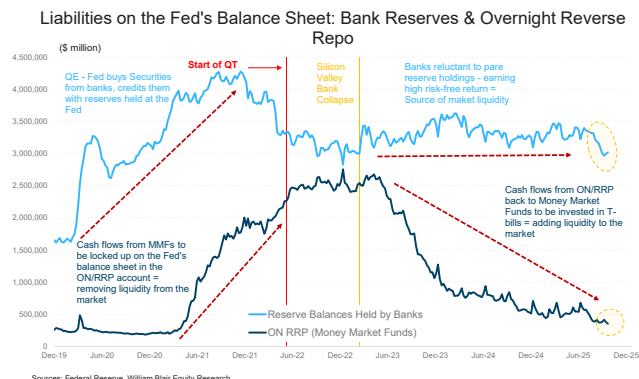


Exhibit 2



During QT1, which we would dub a “normal” QE, the Fed very much followed this QE reversal pattern. Treasuries and other securities that matured were not reinvested, shrinking the asset side of the balance sheet, while corresponding bank reserves on the liability side also shrunk.

This had the effect of pulling liquidity from the system, which effectively helped further tighten monetary policy. Indeed, 2019’s “repo madness” event—when the price of reserves (the repo rate) skyrocketed—was a clear sign that reserves had moved from ample to scarce.

During QT2, while the asset side of the Fed’s balance sheet has shrunk in a similar fashion, the liability side has not. This time around, banks have not reduced their reserve holdings at the Fed. In fact, the level of reserves is almost exactly where it was at the start of QT in 2022.

So, if bank reserves haven’t fallen, what has?

What’s Declined on the Liability Side of the Fed’s Balance Sheet?

The simple answer is that the overnight reverse repurchase (ON RRP) account declined (exhibit 2).

The ON RRP facility allows financial market participants, such as money market funds, to swap cash for Treasury securities held at the Fed, which the Fed repos back the next day. In so doing, it allows the Fed to add or subtract liquidity from the system to manage and maintain the fed funds policy rate at its desired target level. It also effectively acts as a floor for the funds rate—why would you take the risk of lending to another financial institution for a lower rate than you would earn lending that cash to the Fed entirely risk-free?

Money market funds pulling cash out of the market and placing it at the Fed’s ON RRP in exchange for Treasury securities *helps reduce liquidity* in the system. Conversely, draining the ON RRP of the funds that were parked at the Fed and effectively out of the system (hence not available for collateral purposes) *helps push liquidity back* into the financial system.

Reducing the amount of cash held in ON RRP is, therefore, not the same as reducing the level of bank reserves.

What has happened during QT2 is that as interest rates started to increase, money market funds have begun to find T-bill rates more attractive than what the Fed had to offer. This pulled cash back off the Fed’s balance sheet and back into the market, thus increasing liquidity.

Those banks that held reserves at the Fed, meanwhile, were quite happy to keep them there, particularly following the Silicon Valley Bank episode, in addition to the penalty banks get for actually holding Treasuries, which still count as risk assets when calculating the supplementary leverage ratio.

With bank reserves relatively unchanged and the ON RRP account pushing liquidity back into the market, the Fed’s QT balance sheet reduction program has up to now been

essentially sterilized, with limited adverse impacts on financial markets.

Yet, the fact that the ON RRP account is now back to pre-COVID levels would suggest that any further QT will start to require a decline in reserves, or unsterilized QT, which is something the Fed would seem to be keen to avoid.

Why Is QT Stopping Now?

Perhaps the most important change the Fed made when it first began QE during the global financial crisis was to ask Congress for the ability to pay interest on bank reserves (a power that some in Congress now want to take back).

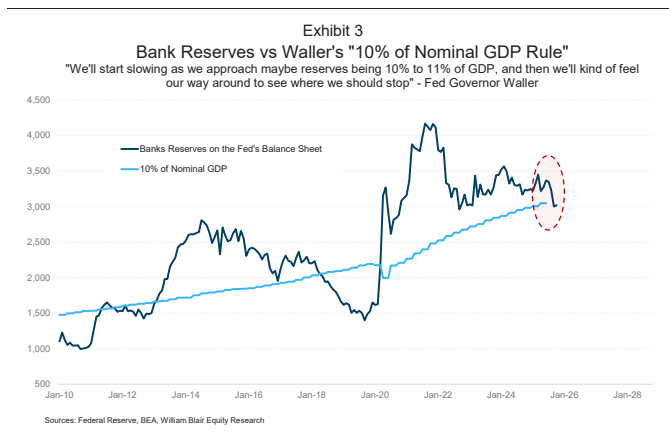
Without this ability, the Fed would lose control of monetary policy. It would not be able to raise interest rates when the time came, because the system would be flush with reserves and there would be no need to borrow more—thus, the policy rate would be ineffective. Paying interest on those reserves allows the Fed to control the monetary spigot—the flow of reserves. What this crucially also did was to allow the Fed to separate control of monetary policy from the size of its balance sheet.

In doing so, the Fed moved from a “corridor” system of managing interest rates (where the fed funds rate was held between the discount rate as a ceiling and the floor of zero when no interest was paid on reserves) to a “floor” system.

In a floor system, the Fed manages rates not by small open market operation movements to buy or sell Treasuries to increase or lower the available amount of reserves, but by simply adjusting the rate of interest it is willing to pay on those reserves.

The system has proved to be very effective so far and has removed much of the guesswork around the amount of open market operations to engage in each day. The corollary, however, is that it requires the level of reserves to be ample, as opposed to abundant or scarce.

Yet, knowing what level of reserves is abundant is not easy either. One method suggested by Fed Governor Waller, now known as the Waller rule, is to “start slowing as we approach maybe reserves being 10% to 11% of GDP, and then we’ll kind of feel our way around to see where we should stop.”



As exhibit 3 shows, the Fed’s balance sheet is now just under 10% of GDP, suggesting that we are now in the “feeling our way around” territory.

Signals the Fed Is Looking at to Gauge Reserve Scarcity

As the Fed feels around in the dark, it has stated that it looks at a number of different market signals, in addition to having regular dialogue with financial market participants.

What also makes this process difficult is the fact that reserves held at the Fed are not all distributed evenly. The reality is that a handful of banks hold the vast majority, while many smaller banks hold relatively few. Hence, simply looking at the level is not enough, as these smaller banks will find themselves short of reserves much sooner.

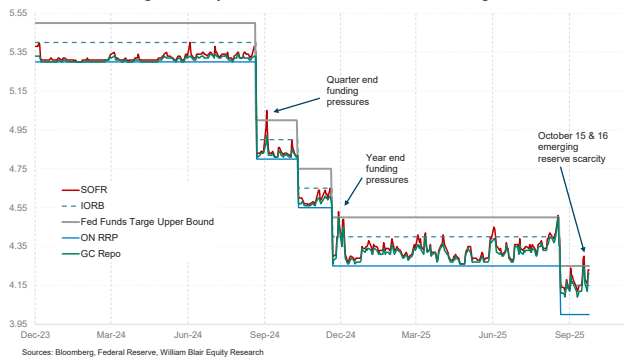
The more obvious signs of an emerging shortage of reserves are spikes in the SOFR rate (secured overnight financing rate, or the rate for collateralized repo transactions to a broad group of participants) above the interest rate on reserve balances.

As shown in exhibits 4 and 5, this is exactly what has happened over the last few weeks. Lenders (i.e., money market funds and banks) have become less willing or able to lend to dealers and hedge funds, thereby indicating some emerging stress in the market.

Exhibit 4
SOFR - Interest Rate on Reserve Balances, %



Exhibit 5
Overnight Money Market Rates vs. Fed Funds Target Rate, %



As those spread rates have increased, naturally so have visits to the Fed's standing repo facility (SRF; exhibit 6). The SRF was made permanent in July 2021, following the September 2019 event, when reserves became incredibly scarce and the Fed was forced to step in with a temporary facility to provide market liquidity. The fact that we are seeing greater use of this facility today—albeit on a still very small scale—is notable, and something the Fed has been paying very close attention to.

Exhibit 6
Fed's Standing Repo Facility (SRF) Overnight Amounts Accepted (\$ billions)



As another gauge, the Fed tracks reserve demand elasticity (RDE, exhibit 7). The RDE is a measure of the sensitivity that changes in reserves have on the fed funds rate. When reserves are abundant, there is very little change in the fed funds rate, and the slope of the RDE is low. When reserves become scarcer, sensitivity increases and small changes in reserves will cause much larger changes in the funds rate. The latest data show a sharp spike in sensitivity, consistent with reserves becoming scarcer.

Exhibit 7
New York Fed's Reserve Demand Elasticity (50th Percentile)



The Fed will also look at a few other signals, such as the share of late payments on interbank reserves after the 5 p.m. cut-off period. Fed studies have shown that bank transfers in an abundant reserve system tend to be made earlier in the day, and in a scarce environment they are made later in the day, as banks have to dig down the back of the sofa looking for loose reserves to borrow.

What Does This Mean for Equity Markets?

For equity market investors, ending QT would in theory be a good thing and help plug liquidity draining out of the system. Yet, the fact that this last round of QT2 was effectively sterilized by a rundown in the ON RRP account suggests that any positive impact from it ending may be muted.

Furthermore, now that the ON RRP has returned to normal pre-COVID levels, this will no longer help provide the offsetting liquidity increases that it did when the Fed was reducing its asset purchases.

The Fed may also decide to shift its portfolio away from longer-term debt purchases and back toward holding more shorter-term debt securities, helping further steepen the yield curve.

What the end of QT does do, however, is to help prevent what could have been another nasty blowup in the

all-important repo market were balance sheet reduction to continue for much longer. Banks would have become liquidity starved and conditions would have tightened further.

Conclusion

The Fed has now given us warning that it is ending QT. The recent hiccups in the repo market, increased visits to the SRF, and a widening of spreads are all indications that the level of reserves on the Fed's balance sheet are starting to move from being ample to being scarce.

While this might seem to be encouraging for equity markets, the fact that QT was very much sterilized this time around suggests that there were very little adverse effects from this past quantitative tightening period compared to the previous episode. What it helps to achieve, however, is lowering the risks of the Fed shrinking its balance sheet too much, pulling too much liquidity out of the market, and causing a repeat of the repo market events of September 2019.

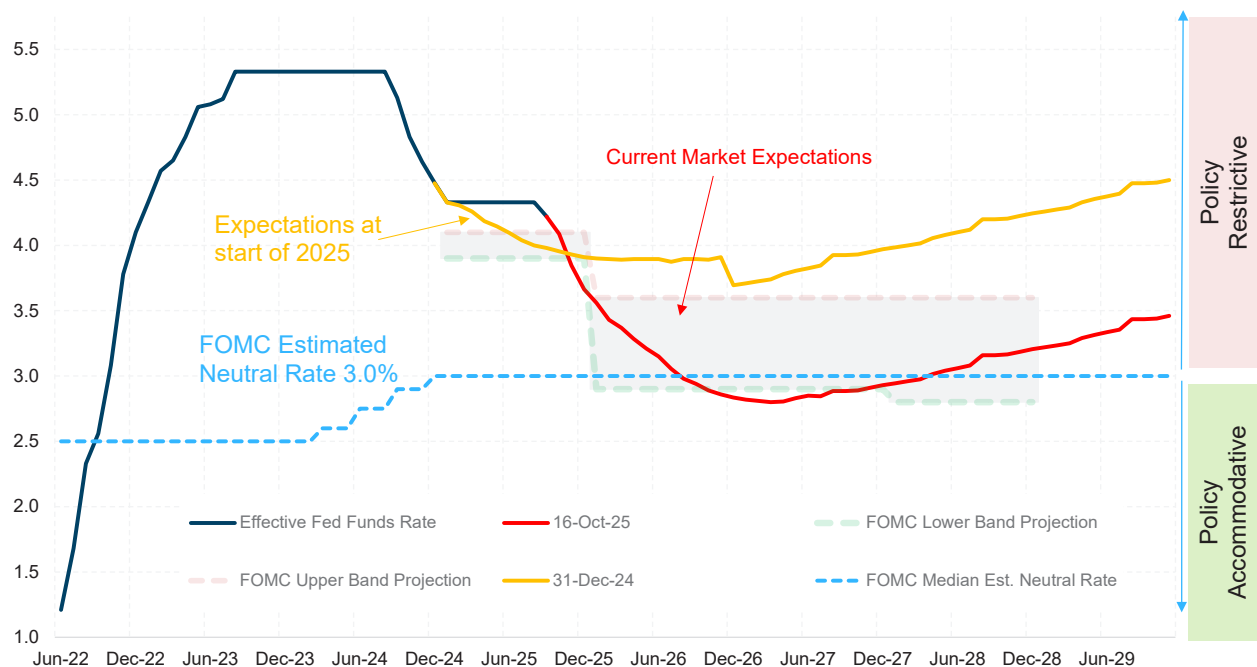
Highlights in the Week Ahead

Date	Time (ET)	Indicator	Last	Consensus	WB Estimate	Actual
27 Oct	8:30 a.m.	Durable Goods Orders (Sep)	-0.1%	NA	NA	
28 Oct	10:00 a.m.	Consumer Confidence (Oct)	94.2	93.8	93.5	
29 Oct	8:30 a.m.	Advance Trade Balance (Sep)	-\$85.5bn	-\$90.0bn	NA	
29 Oct	2:00 p.m.	FOMC Decision	4.25%	4.0%	4.0%	
30 Oct	8:30 a.m.	GDP (3Q A)	3.8%	3.0%	3.3%	
31 Oct	8:30 a.m.	Personal Income (Sep)	0.4%	0.4%	0.3%	
		Personal Spending	0.6%	0.4%	0.3%	

Sources: Bloomberg, William Blair Equity Research

Indicator of the Week: FOMC Meeting

Fed Funds Rate Futures Market Expectations & FOMC Projections, %



Sources: Bloomberg, William Blair Equity Research

Economic Scorecard

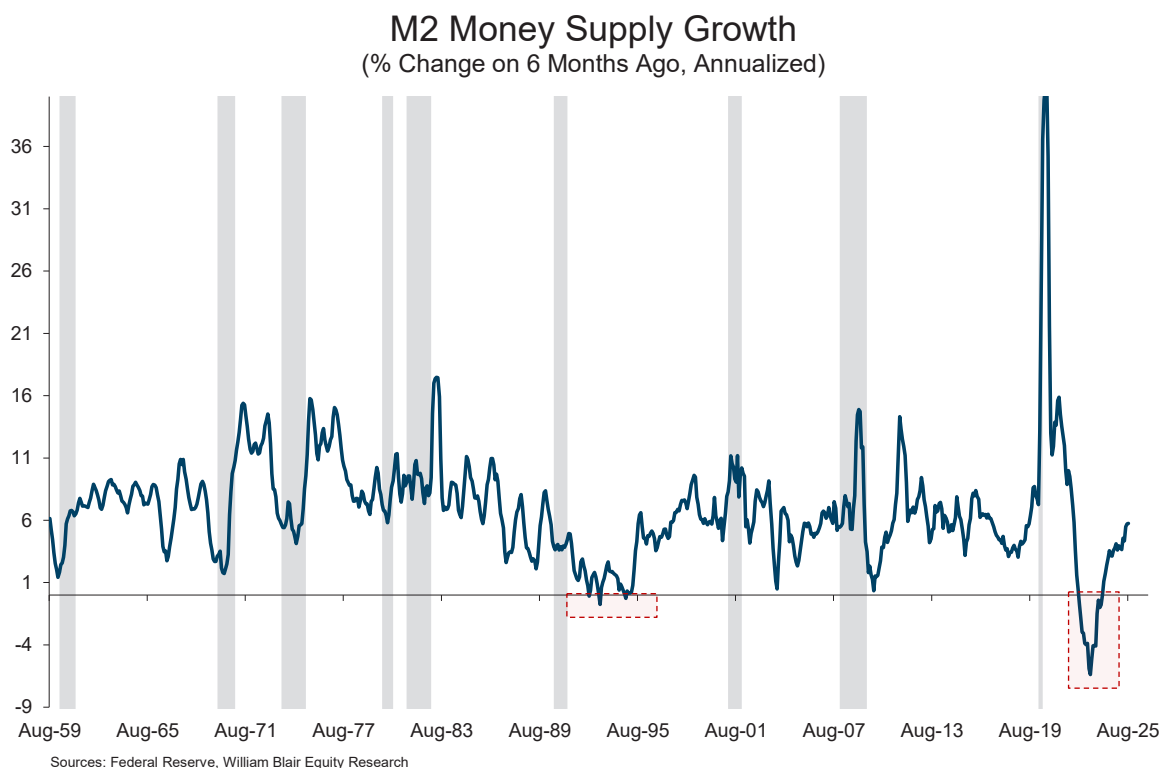
Rolling monthly heat map, % Change on Year Ago (unless otherwise noted)

	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25
Growth																			
US Leading Indicators	-5.4	-5.0	-4.5	-4.7	-4.6	-4.3	-3.7	-3.0	-3.0	-2.7	-3.0	-3.6	-4.3	-3.9	-4.0	-3.4	-3.6		
US Coincident Indicators	1.7	1.9	2.1	1.7	1.7	1.6	1.6	1.3	1.7	1.5	1.5	1.8	2.0	1.4	1.4	1.4	1.5		
US Lagging Indicators	1.4	1.2	1.1	1.0	0.8	0.3	0.1	0.0	0.1	-0.1	0.1	-0.1	0.0	0.8	0.7	0.8	0.9		
Consumer																			
Total Retail Sales	2.6	2.8	2.3	3	1.8	2	3.1	3.9	4.6	4.6	3.9	5.1	5	3.4	4.4	4.1	5.0		
Personal Income	5.7	5.7	5.7	5.6	5.4	5.3	5.5	5.3	5.3	5	5	5.2	5.8	4.9	4.7	4.9	5.1		
Real Disposable Personal Income	2.9	3	3.1	2.9	2.8	2.8	2.7	2.4	2.2	1.8	1.8	2.3	3	1.9	1.6	1.9	1.9		
Real Personal Consumption	2.6	3.1	3.1	3	3	3.4	3.3	3.2	3.6	3.3	2.7	3.2	3.1	2.5	2.5	2.5	2.7		
Personal Saving Rate (%)	5.8	5.8	5.7	5.3	5.2	4.8	5	4.9	4.3	5.1	5.2	5.1	5.7	5.2	5	4.8	4.6		
Consumer Confidence (Conference Board)**	97.5	101.3	97.8	101.9	105.6	99.2	109.6	112.8	109.5	105.3	100.1	93.9	85.7	98.4	95.2	98.7	97.8	94.2	
Employment																			
Employment Growth	1.5	1.4	1.3	1.3	1.2	1.3	1.2	1.3	1.3	1.3	1.2	1.1	1.1	1.0	1.0	1.0	0.9		
ASA Temporary Staffing Index	-9.3	-10.2	-9.9	-12.5	-12.2	-12.0	-9.5	-6.6	-21.0	-8.2	-7.5	-8.7	-6.4	-5.8	-5.3	-0.8	-0.9	0.8	
ISM Employment Index Manufacturing*	48.2	50.4	48.4	43.6	45.8	44.6	44.8	48.1	45.4	50.3	47.6	44.7	46.5	46.8	45	43.4	43.8	45.3	
ISM Employment Index Services*	46.6	47.5	46.7	51	49.6	48.2	52.2	50.9	51.3	52.3	53.9	46.2	49	50.7	47.2	46.4	46.5	47.2	
Unemployment Rate, %	3.9	4	4.1	4.2	4.2	4.1	4.1	4.2	4.1	4	4.1	4.2	4.2	4.2	4.1	4.2	4.3		
Average Hourly Earnings	4	4.1	3.9	3.6	4	3.9	4.1	4.2	4	3.9	3.9	3.9	3.8	3.8	3.7	3.9	3.7		
Initial Jobless Claims (avg. wkly. chg. '000s)	210	222	237	237	230	225	236	219	222	218	227	223	226	235	241	221	231	238	
Jop Openings	-23.7	-15.1	-19.4	-12.8	-17.6	-23.5	-10.9	-7.3	-12.5	-8.3	-11.4	-11.0	-2.9	-2.4	-0.7	-3.9	-5.5	1.7	
Layoff Announcements	-3.3	-20.3	19.8	9.2	1	53.4	50.9	26.8	11.4	-39.5	103.2	204.8	62.7	47	-1.6	139.8	13.3	-25.8	
Housing Market																			
Housing Starts	2.3	-16.9	-6.6	-13.4	5.6	-1	-1.2	-14.5	-0.5	-1.7	-4	3.3	0.9	-2.6	4.1	13	-6		
New Home Sales	8.1	-10	-0.4	1.1	7.4	5.3	-8.8	10.7	11.7	-2.8	-2.4	-4.6	-1.8	-5.7	0.7	-6.5	15.4		
Existing Home Sales	-2.6	-3.1	-5.1	-2.5	-3.7	-3.0	3.1	6.7	9.7	2.3	-0.9	-2.4	-2.0	-0.5	0.0	0.8	1.8		
Median House Price (Existing Homes)	-0.5	-1.6	-0.9	-1.6	-8	-1.2	2.1	-7.4	1.1	-0.2	-1.4	-5.4	-0.4	2.5	-2.5	-7.9	1.9		
Existing Homes Inventory (Mths' supply)	3.5	3.5	3.8	3.7	3.9	4	3.9	3.8	3.7	3.9	3.8	4.2	4.3	4.3	4.4	4.3	4.3		
New Homes Inventory (Mths' supply)	7.7	8.5	8.4	7.9	8.2	7.9	9.3	8.7	8.2	9	9.3	9.2	8.5	9.6	8.9	9	7.4		
NAHB Homebuilder Sentiment*	51	45	43	41	39	41	43	46	46	47	42	39	40	34	32	33	32	32	37
Inflation																			
Consumer Price Index	3.4	3.3	3	2.9	2.5	2.4	2.6	2.7	2.9	3	2.8	2.4	2.3	2.4	2.7	2.7	2.9		
CPI Less-food & energy	3.6	3.4	3.3	3.2	3.2	3.3	3.3	3.3	3.2	3.3	3.1	2.8	2.8	2.8	2.9	3.1	3.1		
Producer Price Index	2.3	2.5	2.9	2.4	2.1	2.1	2.8	2.9	3.5	3.8	3.4	3.2	2.4	2.7	2.4	3.1	2.6		
PPI Less-food & energy	2.5	2.7	3.3	2.6	2.8	3.3	3.6	3.4	3.7	3.9	3.7	3.8	3.1	3.2	2.6	3.4	2.8		
PCE Price Index	2.8	2.7	2.5	2.6	2.4	2.3	2.5	2.6	2.7	2.6	2.7	2.4	2.3	2.5	2.6	2.6	2.7		
PCE Prices Less-food & energy	3.0	2.8	2.8	2.8	2.9	2.8	3.0	3.0	3.0	2.8	3.0	2.7	2.6	2.8	2.8	2.9	2.9		
Business Activity - US																			
Industrial Production	-0.8	0.0	0.9	-0.5	-0.1	-0.7	-0.4	-0.9	0.4	1.4	1.1	1.0	1.2	0.7	0.9	1.3	0.9		
New Cap Gds Orders less-aircraft & parts	2.1	-2.8	-4	-0.6	-1.8	0.5	0.2	-1.1	1.9	3.3	-0.9	2.2	0.5	2.2	4.5	4.5	2.9		
Business Inventories	0.2	0.6	1.2	1.6	2.1	2.1	1.9	2.2	2.6	1.9	2.5	2.3	2.5	2.2	1.7	1.6	1.5		
ISM Manufacturing PMI*	48.8	48.5	48.3	47	47.5	47.5	46.9	48.4	49.2	50.9	50.3	49	48.7	48.5	49	48	48.7	49.1	
Markit US Manufacturing PMI*	50	51.3	51.6	49.6	47.9	47.3	48.5	49.7	49.4	51.2	52.7	50.2	50.2	2.3	2.3	2.3	2.3	4	
ISM Services Index*	49.6	53.5	49.2	51.4	51.6	54.5	55.8	52.5	54	52.8	53.5	50.8	51.6	49.9	50.8	50.1	52	50	
Markit US Services PMI*	51.3	54.8	55.3	55	55.7	55.2	55	56.1	56.8	52.9	51	54.4	50.8	53.7	52.9	55.7	54.5	54.2	
Business Activity - International																			
Germany Manufacturing PMI Markit/BME*	42.5	45.4	43.5	43.2	42.4	40.6	43	43	42.5	45	46.5	48.3	48.4	48.3	49	49.1	49.8	49.5	
Japan Manufacturing PMI Jibun Bank*	49.6	50.4	50	49.1	49.8	49.7	49.2	49	49.6	48.7	49	48.4	48.7	49.4	50.1	48.9	49.7	48.5	
Caixin China Manufacturing PMI*	51.4	51.7	51.8	49.8	50.4	49.3	50.3	51.5	50.5	50.1	50.8	51.2	50.4	48.3	50.4	49.5	50.5	51.2	
China Manufacturing PMI*	50.4	49.5	49.5	49.4	49.1	49.8	50.1	50.3	50.1	49.1	50.2	50.5	49	49.5	49.7	49.3	49.4	49.8	
UK Manufacturing PMI Markit/CIPS*	49.1	51.2	50.9	52.1	52.5	51.5	49.9	48	47	48.3	46.9	44.9	45.4	46.4	47.7	48	47	46.2	
France Manufacturing PMI Markit*	45.3	46.4	45.4	44	43.9	44.6	44.5	43.1	41.9	45	45.8	46.5	48.7	49.8	48.1	48.2	50.4	48.2	
Currencies***																			
Euro (EUR/USD)	-3.2	1.5	-1.8	-1.6	1.9	5.3	2.9	-2.9	-6.2	-4.2	-4.0	0.2	6.2	4.6	10.0	5.4	5.8	5.4	
Renmimbi (USD/CNY)	4.7	1.9	0.2	1.2	-2.3	-3.8	-2.7	1.6	2.8	1.1	1.2	0.5	0.4	-0.6	-1.4	-0.4	0.6	1.5	
Yen (USD/Yen)	15.8	12.9	11.5	5.4	0.4	-3.8	0.2	1.1	11.5	5.6	0.4	-0.9	-9.3	-8.4	-10.5	0.5	0.6	3.0	
Sterling (GBP/USD)	-0.6	2.4	-0.5	0.2	3.6	9.6	6.1	0.9	-1.7	-2.3	-0.4	2.3	6.7	5.6	8.6	2.7	2.9	0.5	
Canadian \$ (USD/CAD)	1.7	0.4	3.3	4.7	-0.1	-0.4	0.4	3.3	8.6	8.2	6.5	6.3	0.2	0.8	-0.5	0.3	1.8	2.9	
Mexican Peso (USD/MXN)	-4.8	-3.8	7.0	11.2	15.8	13.0	11.0	17.2	22.7	20.1	20.5	23.6	14.4	14.3	2.3	1.4	-5.4	-7.0	
US Equities																			
S&P 500	20.8	26.3	22.7	20.3	25.3	34.4	36.0	32.1	23.3	24.7	16.8	6.8	10.6	12.0	13.6	14.8	14.4	16.1	
S&P 400 Midcap	14.9	23.9	11.7	13.5	16.9	24.8	30.9	31.3	12.2	18.6	7.1	-4.2	-0.3	0.6	5.9	1.7	5.3	4.5	
S&P 600 Smallcap	10.4	18.1	6.6	12.0	15.1	23.5	27.6	30.9	6.8	14.5	4.5	-5.0	-3.6	-3.4	2.8	-6.3	1.8	1.9	
Russell 2000	11.6	18.3	8.4	12.5	16.7	24.9	32.1	34.6	10.0	17.5	5.3	-5.3	-0.5	-0.2	6.2	-1.9	6.7	9.3	

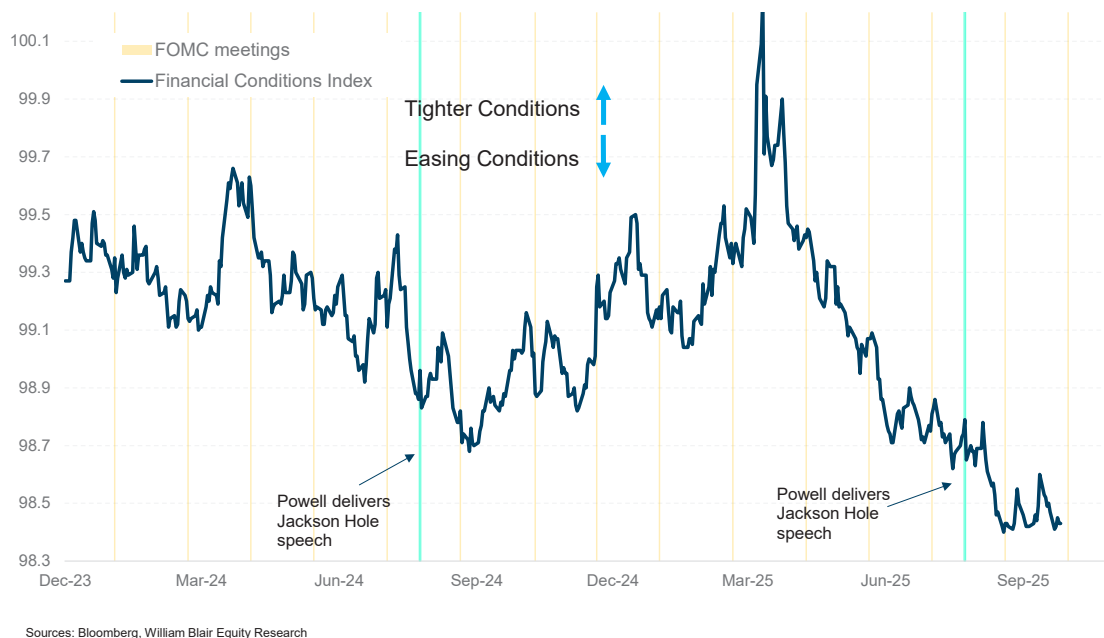
* Diffusion Index, **1985=100, ***Currencies - green/red = strengthening/weakening foreign currency vs dollar

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

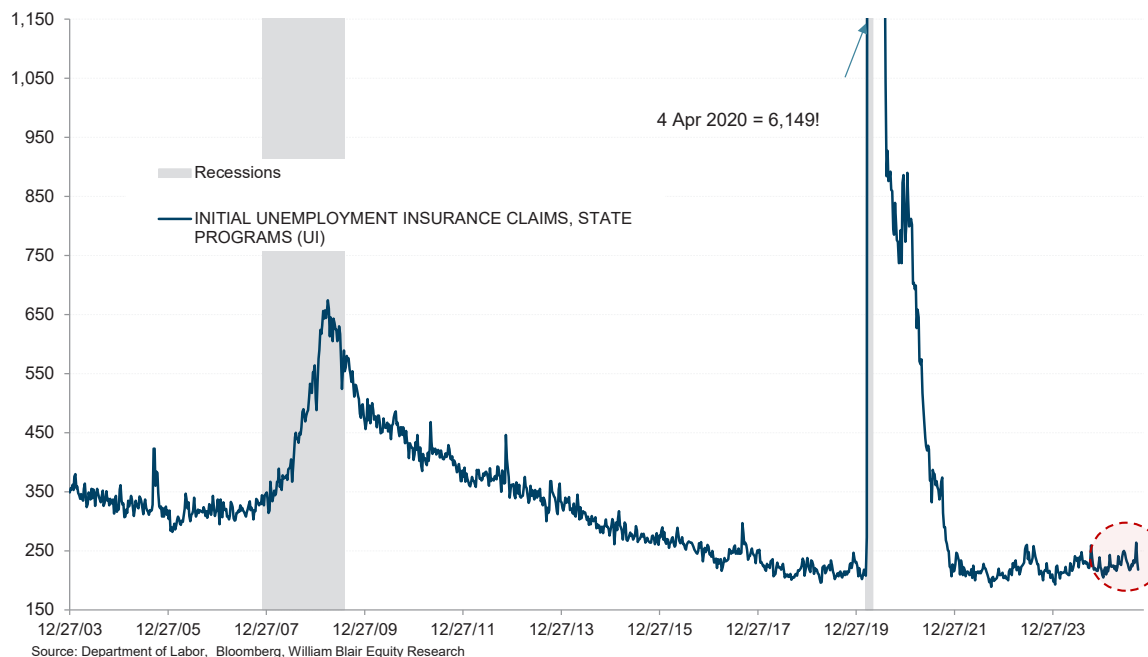
Other Economic Indicators



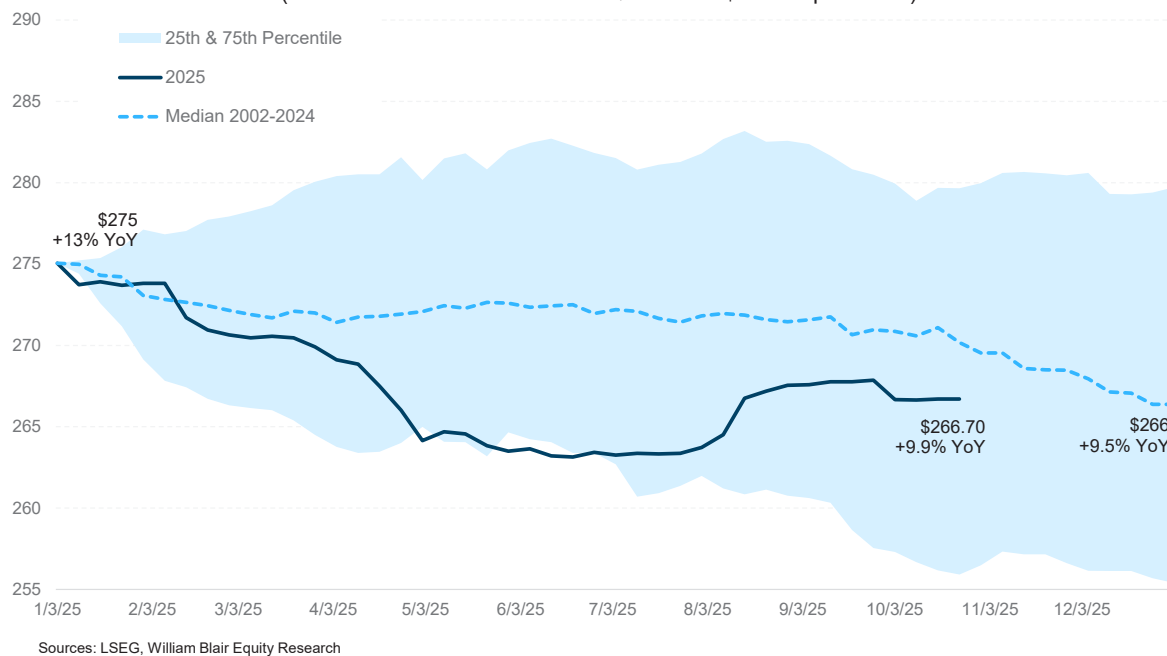
Goldman Sachs Financial Conditions Index



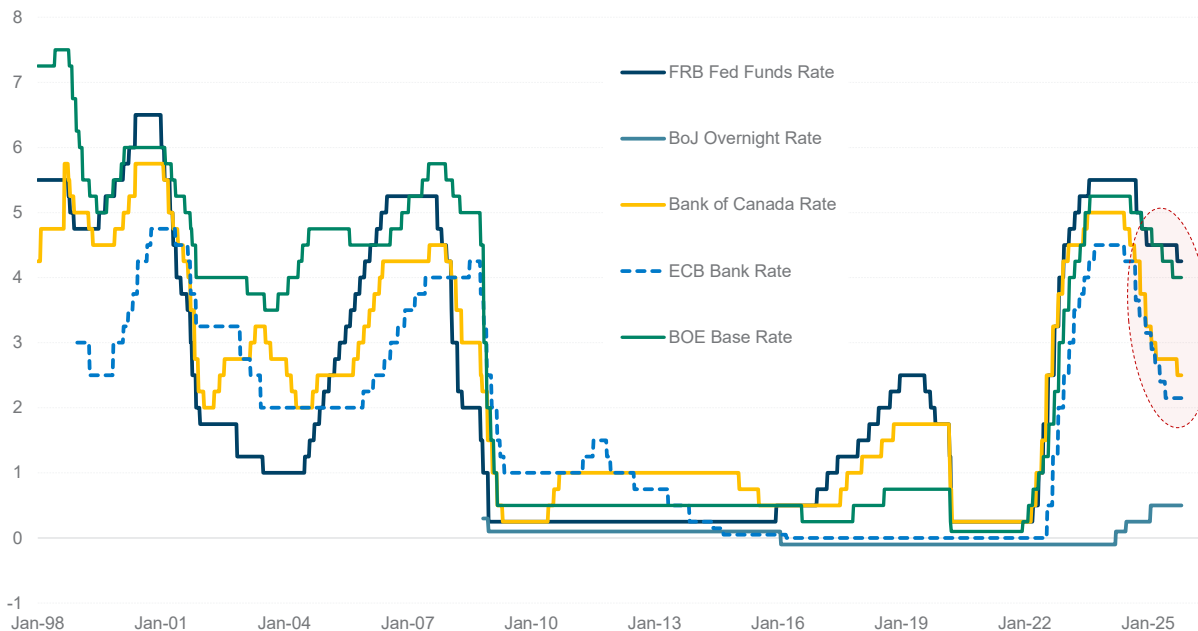
Initial Jobless Claims (‘000s, Seasonally Adjusted)



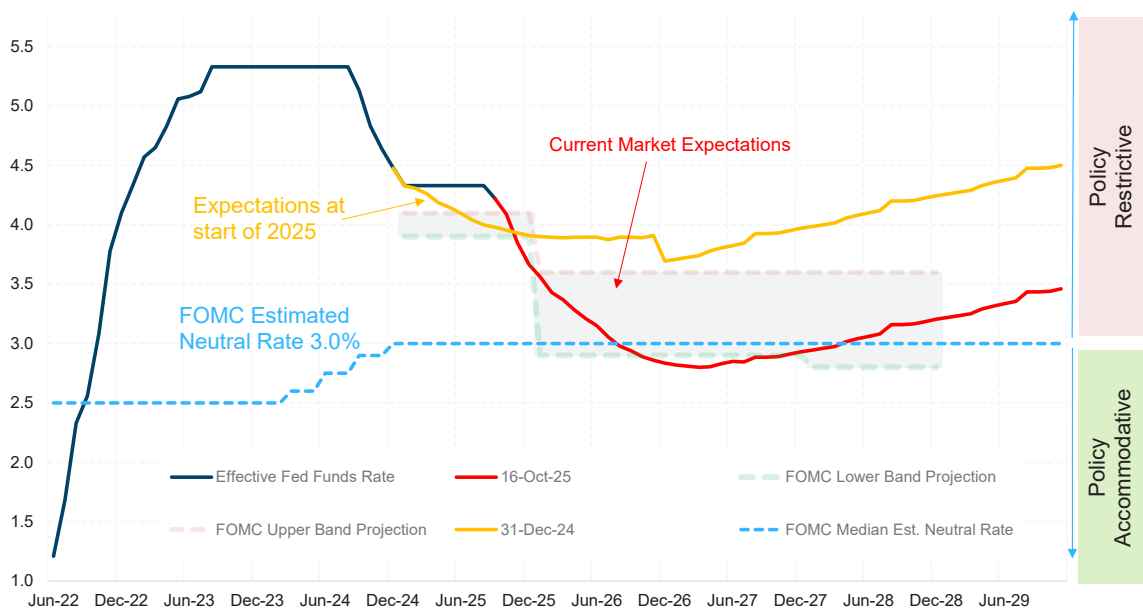
Progression of S&P 500 2025 EPS Estimates, 2025 vs Median 2002-2024 (Rebased to Estimate at End of Q4 2024 of \$275.05 per share)



Central Bank Target Short-Term Interest Rates, %



Fed Funds Rate Futures Market Expectations & FOMC Projections, %



S&P 500 Sector Performance

Global Industry Classification System	Current Weight* 23-Oct-25	Week Ago 16-Oct-25	Month Ago 23-Sep-25	Qtr-to-Date 30-Sep-25	Year-to-Date 31-Dec-24
S&P 500 Index	100.00	1.65	1.22	0.75	14.57
S&P 400 MidCap Index		1.96	0.02	0.49	5.09
S&P 600 SmallCap Index		2.05	0.60	1.11	4.06
Dow Jones Industrials		1.70	0.95	0.73	9.85
Nasdaq Composite		1.68	1.63	1.24	18.80
Communication Services	10.04	0.50	-2.34	-0.10	23.56
Advertising	0.08	6.25	10.07	3.99	-29.12
Broadcasting	0.07	1.93	-7.30	-8.38	24.77
Cable & Satellite	0.23	-0.69	-7.57	-7.58	-23.25
Integrated Telecommunication Services	0.55	-5.47	-13.04	-12.73	1.99
Interactive Home Entertainment	0.16	-0.84	7.90	-1.01	36.93
Interactive Media & Services	7.25	1.57	-0.76	2.51	30.24
Movies & Entertainment	1.27	-2.12	-5.17	-4.64	20.32
Publishing & Printing	0.03	1.99	-12.88	-13.69	-3.29
Wireless Telecommunication Svcs	0.40	-2.85	-8.14	-8.10	-0.33
Consumer Discretionary	10.61	2.72	0.37	-0.29	4.44
Apparel Retail	0.34	0.15	3.23	-0.47	14.02
Apparel & Accessories & Luxury Goods	0.09	3.19	2.47	2.46	-12.09
Auto Parts & Equipment	0.03	1.77	-0.57	-1.45	34.69
Automobile Manufacturers	2.61	5.22	5.79	1.41	12.46
Automobile Retail	0.25	-3.22	-6.84	-9.25	16.00
Broadline Retail	3.92	3.12	0.26	0.78	1.51
Casinos & Gaming	0.10	11.06	1.91	1.13	8.64
Computer & Electronics Retail	0.03	4.95	12.90	9.01	-3.93
Consumer Electronics	0.08	1.39	5.39	1.60	21.29
Distributors	0.06	1.31	-2.96	-2.79	-2.07
Footwear	0.16	4.13	-2.87	0.12	-18.51
Home Furnishings	0.01	1.50	0.84	-0.02	8.20
Home Improvement Retail	0.85	-0.37	-6.26	-4.45	-1.07
Homebuilding	0.20	1.88	-3.17	-4.79	6.44
Hotels, Resorts & Cruise Lines	0.83	3.75	-3.07	-0.96	7.39
Leisure Products	0.02	4.76	4.17	2.75	39.40
Restaurants	0.90	-0.21	0.04	-0.39	1.31
Other Specialty Retail	0.09	0.10	-2.15	-2.33	12.07
Consumer Staples	5.41	1.03	1.35	1.53	3.60
Agricultural Products	0.08	0.01	8.52	8.71	24.15
Brewers	0.01	-3.02	3.47	0.82	-20.41
Distillers & Vintners	0.05	0.11	5.62	3.76	-34.95
Drug Retail	0.02	0.00	0.00	0.00	28.40
Food Distributors	0.06	-0.79	-4.88	-5.02	2.29
Food Retail	0.07	-0.32	5.06	1.85	12.28
Household Products	0.81	1.19	-0.87	-1.50	-10.88
Packaged Foods & Meats	0.45	-0.40	-2.06	-1.91	-8.36
Personal Care Products	0.09	5.05	-2.55	0.92	-10.71
Soft Drinks	1.00	1.27	5.79	6.35	6.56
Tobacco	0.58	0.91	-2.74	-2.62	28.56
Energy	2.77	4.24	-0.12	-0.17	4.09
Integrated Oil & Gas	1.40	4.21	0.54	1.61	6.82
Oil & Gas Equipment & Services	0.20	12.00	3.94	4.03	3.51
Oil & Gas Exploration & Production	0.56	3.13	-1.53	-2.65	-4.16
Oil & Gas Refining & Marketing & Transportation	0.27	8.17	2.33	1.07	33.00
Oil & Gas Storage & Transportation	0.34	-1.19	-4.76	-6.41	-9.07

Financials	12.44	1.54	-2.32	-2.55	8.65
Asset Management & Custody Banks	1.01	-0.88	-7.31	-4.82	1.65
Consumer Finance	0.67	8.80	1.36	5.24	21.15
Diversified Banks	2.99	0.38	-4.01	-3.95	19.58
Diversified Financial Services	7.48	1.95	-1.34	-1.28	7.29
Financial Exchanges & Data	1.02	1.55	-1.56	-2.24	4.36
Insurance Brokers	0.49	0.58	-4.71	-6.23	-5.85
Investment Banking & Brokerage	1.34	0.20	-1.62	-3.09	29.51
Life & Health Insurance	0.28	1.04	-2.16	-3.85	-2.17
Multi-Sector Holdings	1.10	0.27	-0.80	-2.50	8.13
Property & Casualty Insurance	0.92	1.92	-2.36	-4.77	1.66
Regional Banks	0.25	4.23	-6.89	-6.40	1.51
Reinsurance	0.02	2.47	3.35	-0.28	-3.64
Transaction & Payment Processing	2.23	3.85	1.35	1.32	0.83
Health Care	8.95	2.58	6.50	4.77	6.03
Biotechnology	1.51	1.08	3.99	2.63	16.41
Health Care Distributors	0.34	2.74	6.16	2.93	37.66
Health Care Equipment	1.93	5.25	2.81	3.33	8.56
Health Care Facilities	0.19	4.51	7.45	3.10	41.72
Health Care Services	0.39	1.34	4.27	4.69	34.87
Health Care Supplies	0.06	3.36	5.18	5.50	-18.10
Life Sciences Tools & Services	0.91	6.42	19.42	15.92	4.33
Managed Health Care	0.76	0.82	4.55	4.60	-24.64
Pharmaceuticals	2.88	0.94	7.79	4.10	4.90
Industrials	7.93	2.07	1.10	0.29	17.41
Aerospace & Defense	2.14	4.84	3.02	1.66	40.71
Agricultural & Farm Machinery	0.21	2.68	-0.48	2.66	10.79
Air Freight & Logistics	0.25	0.87	1.03	1.18	-18.95
Building Products	0.46	0.00	-0.14	-1.78	7.48
Cargo Ground Transportation	0.07	-1.64	5.62	4.35	-17.09
Construction & Engineering	0.15	-1.15	9.14	4.43	35.30
Construction Machinery & Heavy Trucks	0.63	-1.89	6.45	5.34	27.02
Data Processing & Outsourced Services	0.04	2.53	-2.81	-2.55	2.66
Diversified Support Svcs	0.20	3.21	-3.09	-4.25	-6.94
Electrical Components & Equipment	0.55	0.99	1.77	0.89	11.13
Environmental & Facilities Services	0.34	1.95	-0.84	-2.35	8.76
Heavy Electrical Equipment	0.26	-1.14	-6.04	-3.21	80.94
Human Resource & Employment Services	0.30	0.01	-3.10	-3.28	-5.60
Industrial Conglomerates	0.38	10.43	7.11	7.03	9.10
Industrial Machinery	0.64	4.04	1.34	0.65	4.45
Passenger Airlines	0.14	-3.09	-4.04	1.07	-2.83
Passenger Ground Transportation	0.32	2.26	-3.26	-3.43	56.85
Railroads	0.42	-1.62	-1.45	-4.88	4.96
Research & Consulting Svcs	0.17	2.70	-2.06	-3.52	0.81
Trading Companies & Distributors	0.25	-2.76	-5.57	-5.67	13.30
Information Technology	33.52	1.53	2.62	1.53	23.61
Application Software	2.70	2.60	-1.94	-1.77	7.76
Communications Equipment	0.91	2.58	2.75	2.19	19.87
Electronic Components	0.39	4.04	7.34	7.94	90.54
Electronic Equipment & Instruments	0.15	1.77	-3.70	-3.06	3.97
Electronic Manufacturing Services	0.15	2.91	1.41	3.59	58.42
Internet Software & Services	0.09	0.15	-8.39	-6.02	-14.82
IT Consulting & Services	0.79	4.65	4.46	0.95	-5.88
Semiconductor Equipment	0.89	3.02	11.23	9.66	65.09
Semiconductors	12.23	-0.28	4.42	1.94	40.06
Systems Software	8.51	0.81	0.97	0.76	24.45
Technology Distributors	0.03	4.89	-3.71	-0.50	-8.94
Technology Hardware, Storage & Peripherals	6.69	4.57	2.10	1.89	5.48
Materials	1.67	0.84	-1.62	-0.83	6.83
Commodity Chemicals	0.05	7.66	0.86	1.88	-38.11
Construction Materials	0.12	-1.09	-0.64	-3.45	16.61
Copper	0.10	-1.13	-9.11	5.12	8.27

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Fertilizers & Agricultural Chemicals	0.11	3.72	-7.60	-6.81	8.49
Gold	0.16	-9.53	5.01	5.46	138.87
Industrial Gases	0.44	1.18	-6.57	-5.52	2.69
Metal & Glass Containers	0.02	3.41	2.43	-1.43	-9.85
Paper Packaging	0.16	5.43	3.17	3.31	-11.52
Specialty Chemicals	0.41	1.90	1.33	0.41	-0.46
Steel	0.09	4.87	5.35	4.48	23.63
Real Estate	1.85	1.73	1.06	0.87	4.36
Data Center REITs	0.23	1.72	2.38	4.22	-7.73
Health Care REITs	0.29	1.85	0.68	-1.60	23.50
Hotel & Resort REITs	0.02	2.72	-4.59	-2.29	-5.08
Industrial REITs	0.19	3.79	9.90	9.83	18.98
Multi-Family Residential REITs	0.00	2.45	-3.09	-2.29	-12.19
Office REITs	0.02	4.74	-3.23	-0.82	-0.84
Other Specialized REITs	0.10	0.29	-0.91	-1.05	3.21
Real Estate Service	0.13	5.16	-3.47	-1.09	17.70
Retail REITs	0.25	1.54	-0.49	-2.19	4.37
Self-Storage REITs	0.14	-0.40	8.64	6.42	1.69
Single-Family Residential REITs	0.14	-0.40	8.64	6.42	1.69
Telecom Tower REITs	0.25	-0.40	-0.29	0.08	3.84
Timber REITs	0.03	0.84	-2.18	-3.79	-15.27
Utilities	2.29	-1.74	5.39	3.47	19.13
Electric Utilities	1.49	-1.87	7.31	5.06	20.76
Gas Utilities	0.05	-0.35	5.66	2.93	26.20
Independent Power Producers & Energy Traders	0.12	-8.38	-4.49	-0.99	34.35
Water Utilities	0.05	-0.44	3.94	2.44	14.54
Multi-Utilities	0.58	-0.16	2.91	0.61	12.13

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

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DOW JONES: 46590.40

S&P 500: 6699.40

NASDAQ: 22740.40

Additional information is available upon request.

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Market Perform (Hold)	27	Market Perform (Hold)	3
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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