



EQUIPMENT LEASING & FINANCE

**FOUNDATION**

Your Eye on the Future

**2025**

EQUIPMENT LEASING & FINANCE

**U.S. ECONOMIC  
OUTLOOK**

# EQUIPMENT LEASING & FINANCE ECONOMIC OUTLOOK

December 2024



**Executive Summary**..... *Page 2*



**Equipment Investment Momentum Monitor** ..... *Page 3*



**Fed Policy Corner** ..... *Page 4*



**Equipment Finance Industry Conditions** ..... *Page 5*



**U.S. Economic Overview** ..... *Page 6*



**Trump Administration: Policy Issues in Focus**..... *Page 7*



**Appendices** ..... *Page 10*

## Key Policy Developments to Monitor

Tariffs



Taxes



Industrial  
Policy



# EXECUTIVE SUMMARY

**Equipment & Software Investment:** In the third quarter, E&S investment expanded by 7.5% (annualized), the second consecutive quarter of solid growth. The strong performance over the last two quarters has been driven by aircraft investment, which has more than doubled since Q1. Growth in computers equipment and communication equipment has also been strong, while construction machinery investment contracted again.

**Momentum Monitor:** As of December, eight of the 12 tracked verticals are demonstrating weak momentum relative to historical averages, including large verticals such as Trucks and Other Industrial Equipment. More positively, six of 12 verticals are exhibiting recent momentum that is stronger than historical norms, including Computers and Mining & Oilfield Machinery. Overall, we expect moderate equipment and software investment growth rates during the first half of 2025.

**Fed Policy:** The December employment confirmed that the labor market remains generally healthy, with 227K jobs created in November and upward revisions to the previous two months' data. These data align with Fed Chair Jay Powell's description of recent economic performance as "remarkably good" and "not sending any signals [for] the need to be in a hurry to lower rates." Nonetheless, the market-implied probability of another rate cut in December is 86%.

Looking to Fed policy in 2025, FOMC members will be carefully following and evaluating upside risks to inflation and downside risks to employment, including the extent to which the incoming Trump administration pursues broad-based tariffs or large-scale deportations, both of which could put near-term pressure on the economy.

**U.S. Economy:** The U.S. economy continues to perform remarkably well compared to its international peers. Despite the unprecedented downturn in early 2020, the U.S. economy is roughly 11% larger in inflation-adjusted terms than it was at the end of 2019, faring far better than other major economies. The combination of a strong labor market, rising household wealth, and resilient consumer spending boosted growth in 2024 and should continue to do so next year. Indeed, businesses are feeling more optimistic about their prospects in 2025, in part due to the prospects of lower taxes and less regulation under the incoming Trump administration and a Republican-controlled Congress. Still, the policy landscape is uncertain: while it remains to be seen whether the President-elect follows through on campaign promises to institute broad-based tariffs, lower the tax rate for U.S. manufacturers, or repeal incentives and rescind unobligated funding for clean energy projects, these will be important developments to monitor.

## 2025 ELFF Projections

**2.7%**

*GDP Growth\**

*\*see explanation on p. 11*

**4.7%**

*Equip. & Software Investment Growth*

**2.7%**

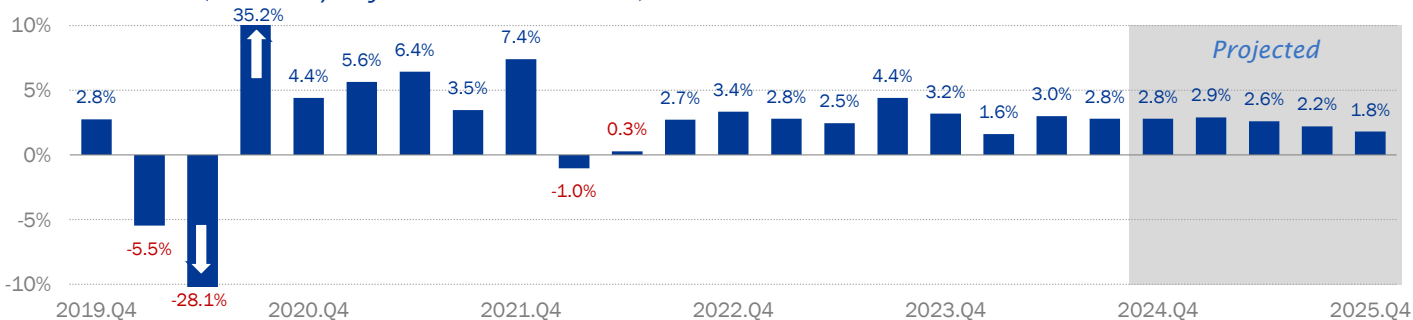
*Headline CPI\**

*\*end-of-year forecast*

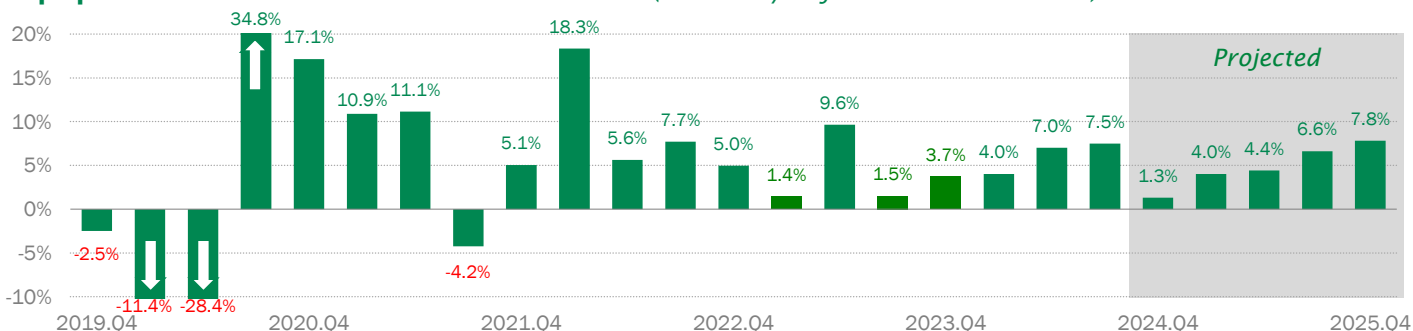
**-50bp**

*Δ in Fed Funds Rate from Expected End-of-Year Range*

## GDP Growth (Seasonally Adjusted Annualized Rate)



## Equipment & Software Investment Growth (Seasonally Adjusted Annualized Rate)



Source: U.S. Bureau of Economic Analysis; Keybridge LLC

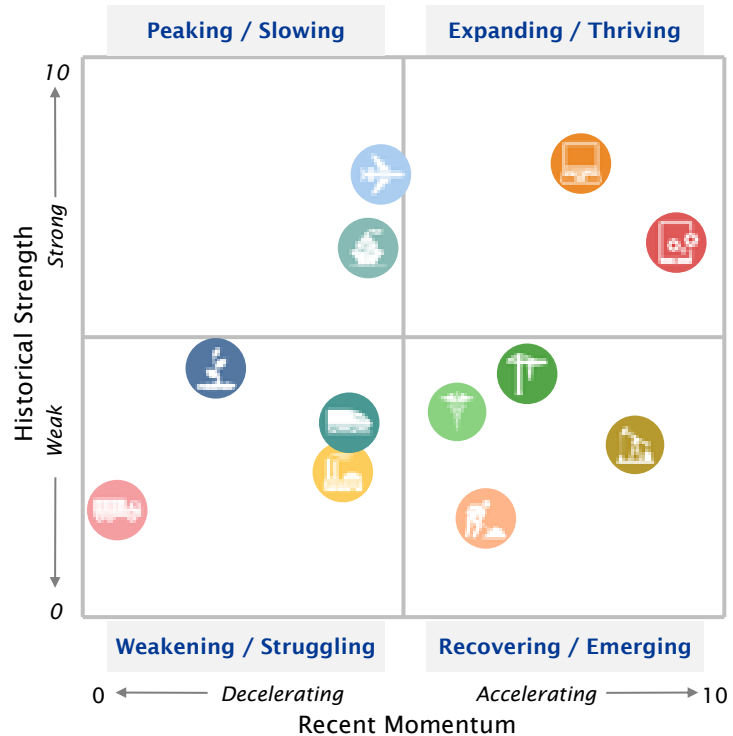
## Sectoral Performance

### E&S investment posts strong growth in Q3

Equipment and software investment expanded 7.5% in Q3 (annualized). Growth was positive in seven of 12 tracked verticals, with Aircraft leading for the second consecutive quarter (+421% Q/Q annualized). Other verticals experiencing notable Q/Q annualized growth include Computers (+39%), Ships & Boats (+20%), and Materials Handling Equipment (+6.7%). Verticals that experienced negative investment movement include Mining & Oilfield Machinery (-19%) and Construction Machinery (-29%).









Looking ahead, the investment outlook is mixed. Eight of the 12 tracked verticals are demonstrating weak momentum relative to historical averages, including large verticals such as Trucks and Other Industrial Equipment (which, as shown in the adjacent chart, are both in the “Weakening / Struggling” quadrant). More positively, half of the verticals are exhibiting recent momentum that is stronger than historical norms, including Computers and Mining & Oilfield Machinery. Overall, while Q4 2024 is shaping up to be a disappointing quarter for investment, we expect moderate equipment and software investment growth rates during the first half of the year, with more upside potential if inflation resumes its downward path toward 2% and the Fed responds by further lowering interest rates.

### Momentum Monitor Sector Matrix



For more information on how to interpret the Momentum Monitor, please refer to the Appendix B (p. 11). A full breakdown of each industry vertical is available at <https://www.leasefoundation.org/industry-resources/momentum-monitor/>

## Movements to Monitor

Equipment Vertical	Q3 Investment Growth		Next 6 Months	Short-Term Outlook
	Q/Q (annualized)	Y/Y		
Computers 	+39%	+28%		Annualized investment in Computers has expanded for four consecutive quarters and shows no signs of slowing: recent Index momentum points to healthy investment growth over the next two quarters.
Materials Handling 	+6.7%	+2.7		After a weak first half of 2024, the Materials Handling vertical bounced back in Q3. Looking ahead to the next six months, the Index's current reading is slightly below its long-term average, but recent movement has been positive.
Agriculture 	-7.1%	-4.9%		Agricultural Machinery investment contracted on a quarterly basis in three of the last four quarters, and momentum has been worsening during the second half of the year.
Trucks 	-23%	-5.4%		After strong growth in 2022 and early 2023, investment in Trucks has been weaker this year. Looking ahead, the Index was strengthening in Q1 and Q2 but has turned downward in recent months, suggesting weak or negative near-term growth.

## Fed Policy Corner

### Fed Expected to Slow Pace of Rate Cuts in the New Year

The Fed began its much-anticipated rate cut cycle this fall, lowering rates by 50 bps in September and another 25 bps in November. These cuts reflect the Fed's growing confidence in the progress made toward controlling inflation and its cautious stance amid a softening labor market. Markets currently estimate a high probability of an additional 25bps cut in December, which would result in a full percentage point reduction in rates in 2024. Looking ahead to next year, markets expect an additional 2-4 rate cuts (see top chart).

Following the November FOMC meeting, Fed Chair Powell described recent economic performance as "remarkably good" and said that it was "not sending any signals that we [the FOMC] need to be in a hurry to lower rates." More recently, the December employment confirmed that the labor market remains generally healthy, with 227K jobs created in November and upward revisions to the previous two months' data. The current policy rate appears to support a steady and healthy economy, with a gradually softening labor market and falling inflation (although the path may be bumpy, as shown in the bottom chart).

Looking to Fed policy in 2025, FOMC members will be carefully following and evaluating upside risks to inflation, downside risks to employment, and the level at which interest rates will neither stimulate the economy or hamper growth.

#### Upside risks to inflation in 2025:

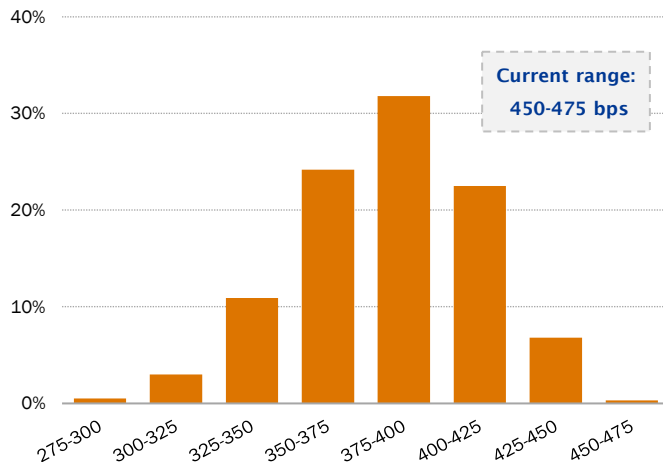
- Heavy tariff implementation, particularly large across-the-board tariffs on major U.S. trading partners such as Canada, Mexico, or China (which collectively provide nearly half of U.S. imports) would likely increase prices for U.S. consumers and increase inflationary pressures.
- Large-scale deportations could increase prices by putting reducing the labor supply and putting upward pressure on wages (though it would also reduce aggregate demand which would lessen the overall effect on inflation).
- Geopolitical conflict intensification and/or weather- and climate-related shocks (e.g., droughts and hurricanes) could lead to commodity price spikes.

#### Downside risks to employment in 2025:

- Low hiring rates, falling excess vacancies, and lower vacancy yields could mean higher unemployment and a labor market weakening more sharply in 2025.
- Deportation efforts could be particularly impactful in some industries (e.g., construction, hospitality, agriculture).

Finally, the Fed's ability to achieve its dual mandate of promoting maximum employment and price stability hinges on the so-called "neutral rate of interest," or  $r^*$ . While notoriously difficult to measure, many economists believe  $r^*$  has risen in recent years, potentially in the 2.5 - 4.5% range. As such, while additional rate cuts are likely next year, rates may not fall as much as markets hope.

### Markets Expect 2-4 Additional Rate Cuts Next Year Target Rate Probabilities for 10 Dec 2025 Fed Meeting

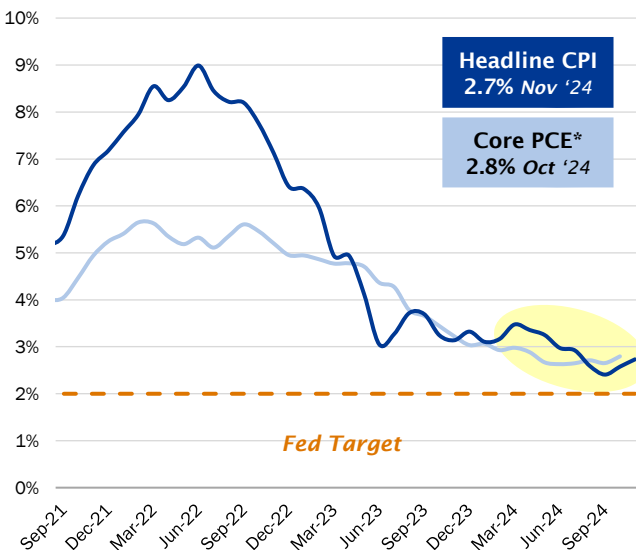


Source: CME FedWatch Tool as of December 5, 2024.

"Overall, I feel like an MMA fighter who keeps getting inflation in a choke hold, waiting for it to tap out, yet it keeps slipping out of my grasp at the last minute. But let me assure you that submission is inevitable — inflation isn't getting out of the octagon."

— Christopher Waller, Federal Reserve Governor, 11/12/2024

### The Path Towards 2% Inflation Has Been Bumpy Y/Y Percent Change



Source: U.S. Bureau of Economic Analysis

\*Note: Core PCE is the Fed's preferred inflation measure and the basis of its 2% target.



## CapEx Finance Index

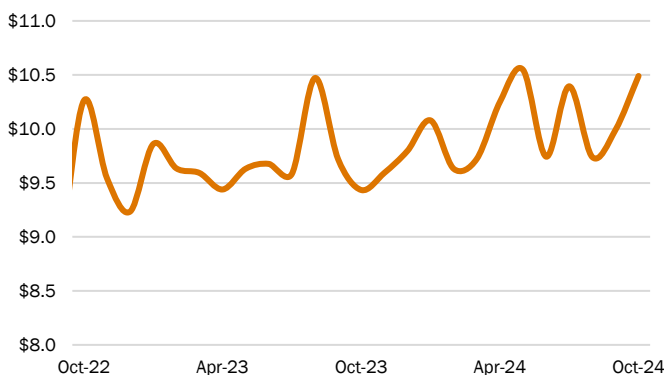
### Demand for Equipment Ticks Up in October

ELFA's [CapEx Finance Index](#) (CFI) reported new business volume (NBV) of \$10.5 billion in October, up 5.1% from September for the largest monthly gain in more than a year. The CFI's improvement was likely aided by the Fed's 50 bps rate cut the previous month, and NBV is now up 3.7% since the beginning of the year.

ELFA's CFI report also found that the share of approved credit applications ticked down for the second consecutive month to 75.1%, among the lowest readings of the past 18 months but still in line with historical norms. Meanwhile, portfolio quality remains strong: charge-offs fell to 0.31% (their lowest level in nearly two years) while the share of loans and leases 30+ days past due edged up slightly to 2.2% but remains muted. If the economy remains on solid footing and interest rates continue to ease in 2025 as expected, demand for leases and loans should strengthen.

### New Business Volume Growth

*Billions of US dollars, seasonally adjusted*



Source: ELFA

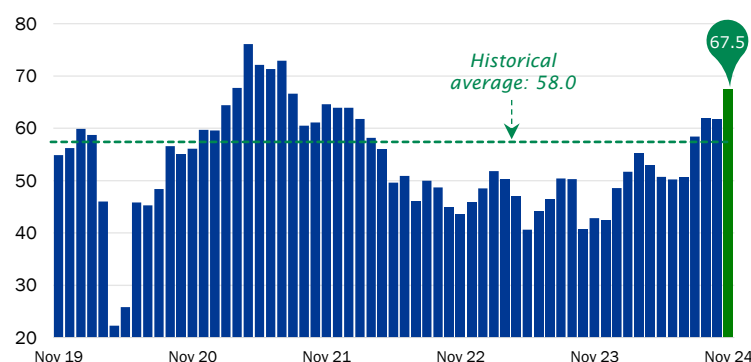
"The October CapEx Finance Index revealed an exceptional start to the fourth quarter for the equipment finance sector. While the Federal Reserve's 50bps rate cut provided a boost, the real story lies in the sector's fundamental strength. Borrowers and lenders alike demonstrated resilience, with healthy credit approvals and robust balance sheets. Looking ahead, this momentum positions the sector to confidently navigate the challenges of 2025, whether it's a slower pace of rate cuts or ongoing inflationary pressures.

— Leigh Lytle, President and CEO, ELFA

## MCI-EFI

### Industry Confidence Rosy in the Fourth Quarter

#### Monthly Confidence Index – Equipment Finance Industry



Source: ELFF

"Political uncertainty has had an impact [on the industry], but with the election behind us, businesses will need to continue to operate and look to grow. Delinquency has hopefully leveled, and lenders are licking their wounds and looking forward."

— Charles Jones, Senior Vice President, 1st Equipment Finance

In November, the Foundation's [Monthly Confidence Index for the Equipment Finance Industry](#) (MCI-EFI) improved to 67.5, its highest index reading in more than three years. Notably, the survey was in the field during the election, with roughly half of responses submitted prior to the election and the remainder submitted afterward.

- 43% of respondents expect near-term business conditions to improve (up from 40% last month), while 7% expect them to worsen (up from 3%).
- 48% of respondents expect demand for leases and loans to fund capex will increase over the next four months (up from 45%), while 7% expected demand to decline (down from 14%).
- 38% of respondents expect greater access to capital over the next four months (up from 28%), while no respondent expected credit access to worsen.
- 60% of respondents expect the U.S. economy to improve over the next six months, up sharply from 38% in October.

# U.S. ECONOMIC OVERVIEW

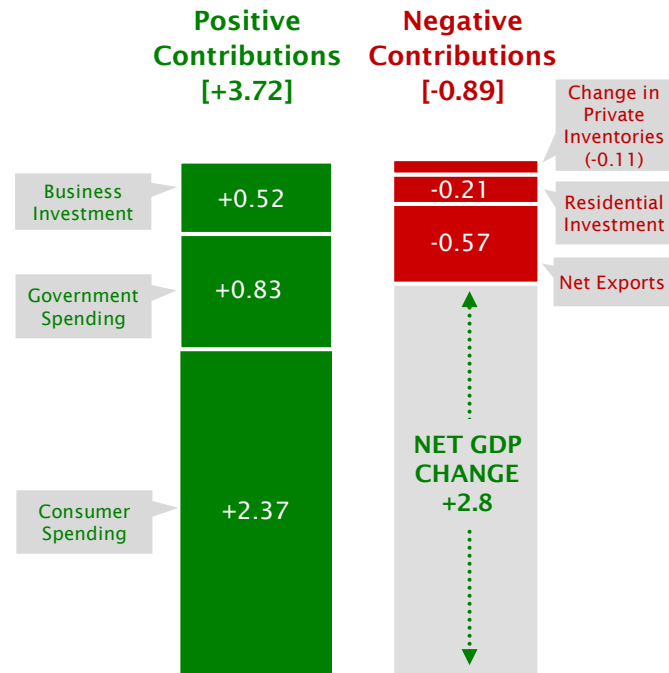
## State of the U.S. Economy

### Consumers Fuel Growth Again in Q3

The U.S. economy expanded at a solid 2.8% annualized rate in Q3, the second consecutive quarter of healthy growth. Growth was driven by consumer spending, business investment, and government spending. Net exports were a significant drag on growth, while residential investment and private inventories detracted modestly from the expansion.

- **Consumer spending** expanded 2.8% (annualized) in Q3. Spending on services grew 2.6%, essentially unchanged from Q2, but spending on goods strengthened significantly to 5.6%, with both durable goods (+7.6%) and nondurable goods (+4.6%) posting strong gains.
- **Government spending** picked up again in Q3 (5.0% annualized), mostly due to robust 13.9% growth in federal defense spending.
- **Equipment & software investment** climbed 7.5% (annualized), led by strong demand for aircraft equipment (which has more than doubled over the last two quarters) and information processing equipment. Industrial equipment expanded modestly after contracting slightly in Q2.
- **Resident investment** fell 5.0% (annualized), its second consecutive negative quarter. While lower interest rates could spur demand for housing construction in 2025, construction employment growth has slowed in recent months and could be a key wildcard in 2025.

### Contributions to GDP Growth Q3 2024



Source: Bureau of Economic Analysis

### The Economy is Poised for Growth in 2025

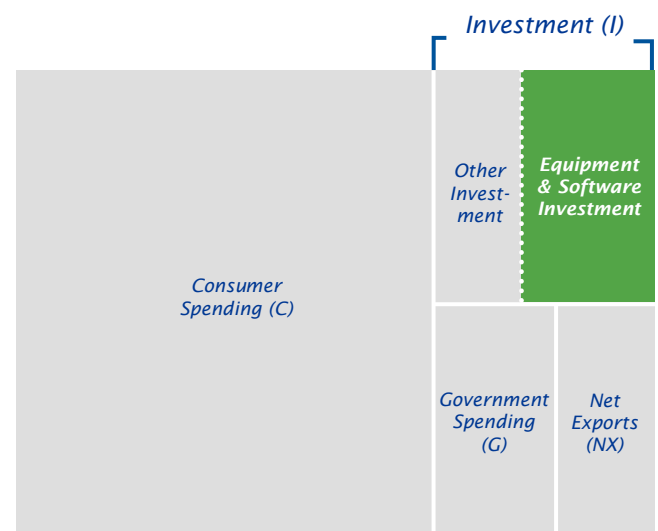
The U.S. economy continues to perform remarkably well compared to its international peers. Despite the unprecedented downturn in early 2020, the U.S. economy is roughly 11% larger in inflation-adjusted terms than it was at the end of 2019, faring far better than other major economies such as Italy (5.6%), Canada (5.5%), France (3.6%), Japan (3.0%), and Germany (0%).

Three key factors have boosted the U.S. economy in 2024 and set the stage for continued economic growth in 2025: a strong labor market, rising household wealth, and remarkably resilient consumer spending. Although job growth has slowed and unemployment has risen this year, the labor market remains healthy, as does consumer demand. Meanwhile, gains in the stock market and housing market have added more than \$8 trillion in household wealth over the last year alone.

Looking ahead, consumers and businesses alike are feeling more optimistic about their prospects in 2025. The stock market has similarly been up since the election in anticipation of lower taxes and less regulation, which means that household wealth should continue to rise and encourage consumer spending. Still, the policy landscape under a new administration and unified Congress is uncertain, and tariffs, taxes, and industrial policy will be key factors to watch.

### Composition of Gross Domestic Product (GDP)

$$GDP = C + I + G + NX$$



Source: Keybridge LLC. Rectangles drawn to scale, based on BEA data.

Trump’s Second Term: Tariffs

Modest tariffs may have little effect, but an aggressive tariff regime would harm growth

Tariffs were a central component of President Trump’s economic strategy during his first term. In 2018, Trump imposed broad-based tariffs on all Chinese imports and additional, targeted tariffs on specific goods such as aluminum, steel, washing machines, and solar panels. The newly reelected President campaigned on a tariff-centric platform, and after winning reelection he proposed 25% tariffs on Mexico and Canada and a 100% tariff on Brazil, Russia, India, and China.

Most economists argue that tariffs distort markets, harm U.S. consumers, and lead to retaliatory measures that harm U.S. exporters. Still, it is instructive to examine the real-world impact of the 2018 tariffs to assess the benefits and weigh whether they have been worth the costs.

- **Revenue:** Tariffs generated roughly \$80 billion in revenue in 2023. The Tax Policy Center estimates that a 10% tariff on all imported goods and a 60% tariff on Chinese imports would raise around \$280 billion per year on net, equivalent to ~7% of tax proceeds.
- **Trade balance:** The U.S. trade deficit for goods was -\$73.6 billion when the tariffs were first implemented in January 2018. By the end of 2019, the trade deficit had narrowed slightly to -\$68.5 billion but then ballooned to -\$83.4 billion in 2020, fueled by pandemic consumption.
- **Consumer impact:** According to the Tax Foundation, tariff-related price increases imposed the equivalent of a \$200-300 tax increase on U.S. consumers.
- **U.S. employment:** While some domestic industries such as steel manufacturing have benefitted from tariffs, researchers from the Federal Reserve Board concluded the U.S. manufacturing employment fell -1.4% on net, as import protections were more than offset by rising input costs and retaliatory tariffs from U.S. trade partners.







While recent threats may be more about “setting a tone” and framing future negotiations — indeed, Mexico was previously threatened with a 25% tariff in 2019 before the country agreed to take stronger measures to curb illegal immigration — tariffs are likely to be a key component of the new Administration’s economic policy. President Trump has been on the record about his affinity for tariffs for more than four decades: it is a core belief, as well as a common theme of his campaign. Broad-based tariffs on Chinese imports are highly likely, and tariffs on other trading partners, including the European Union, are in play.

The likelihood of retaliatory tariffs is also high. China is likely to respond with reciprocal tariffs on U.S. goods, as they did in 2018. Moreover, a 10% across-the-board tariff likely would be met with a tit-for-tat response from major U.S. trading partners such as Canada, Mexico, and the European Union, which collectively represent roughly half of U.S. goods exports (China represents just 8% of U.S. goods exports.) This would likely increase the cost of equipment and may have unpredictable effects on global supply chains.

Even if the worst of the tariffs are not enacted, the “will they or won’t they” negotiating tactic creates uncertainty for U.S. businesses, many of whom have near-shored to Canada or Mexico since the pandemic. This uncertainty, along with the potential for selectively applied rates and exemptions that could undermine transparency and fairness, could be a headwind to investment for some firms. At the same time, domestic manufacturers of tariff-impacted imports are likely to benefit, creating opportunities for equipment finance firms that serve this part of the market.

The industry- and firm-specific impacts of a full-fledged trade war are difficult to predict, and it is possible that President Trump sees more value in threatening broad-based tariffs as a negotiating tactic than actually implementing them. Still, as the author of *The Art of the Deal* surely knows, a threat is not an effective negotiating strategy unless it is viewed as credible.

Three Potential Tariff Policy Scenarios

Scenario		Expected GDP Impact		Expected Inflation Impact	
Posturing/ Negotiation	Broad-based tariffs are threatened, but tariffs are mostly targeted at China		Negligible impact		Negligible, beyond a few targeted sectors.
Moderate Implementation	10% across-the-board, 60% against China with room for exceptions/carve-outs.		Modest to moderate negative impact, though dependent on extent of exceptions.		Non-negligible across-the-board price increases; Fed may slow rate cut trajectory
Heavy Implementation	10-20% across-the-board, 100% against China, 25% on Mexico, Canada, and others.		Moderate to substantial negative impact.		Substantial across-the-board price increases; Fed likely pauses rate cuts.



## Trump's Second Term: Taxes

### The equipment finance industry should benefit from the extension of key tax provisions

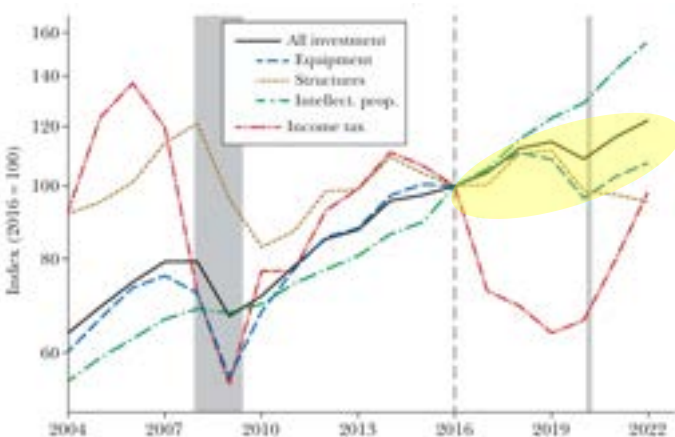
With many provisions of the 2017 Tax Cuts and Jobs Act set to expire at the end of 2025, Washington is gearing up for a historic tax year. When the Tax Cuts and Jobs Act (TCJA) was passed, the New York Times described it as the “most sweeping tax overhaul in decades.” With a Republican-controlled Congress, most of the TCJA’s provisions are likely to be extended, and it is possible that corporate and individual tax rates could be further reduced. Research suggests that extending provisions under the TCJA should provide a boost to the economy compared to an alternative scenario in which they are allowed to expire. However, the high price tag of cuts may hinder growth in the long run unless they are paired with spending decreases.

#### What were the main economic effects of the TCJA’s corporate tax provisions?

- Corporate investment increased by 8-14%, driven by the lower tax rate and bonus depreciation (see chart).
- Corporations repatriated hundreds of billions of dollars in foreign income, generating a one-time tax revenue increase of \$30 billion. However, the overall tax burden on foreign income is about the same as it was pre-TCJA,
- Overall, the lower corporate tax rate led to a decline in corporate tax revenue by ~40%.
- The corporate savings led to ~1% increase in real wages — not insignificant, but less than White House projections. Shareholders appear to have been the primary direct beneficiary, via stock buybacks.
- The overall effect of corporate tax reform boosted annual GDP growth by ~0.1% per year.

Sources: Chodorow-Reich, G., Zidar, O., & Zwick, E. (2024). *Lessons from the biggest business tax cut in US history*; Chodorow-Reich, G., Zidar, O., Smith, M., & Zwick, E. (2023). *Tax policy and investment in a global economy*.

#### TCJA Impact on Corporate Tax Revenue and Investment



Source: Chodorow-Reich, G., Zidar, O., & Zwick, E. (2024).

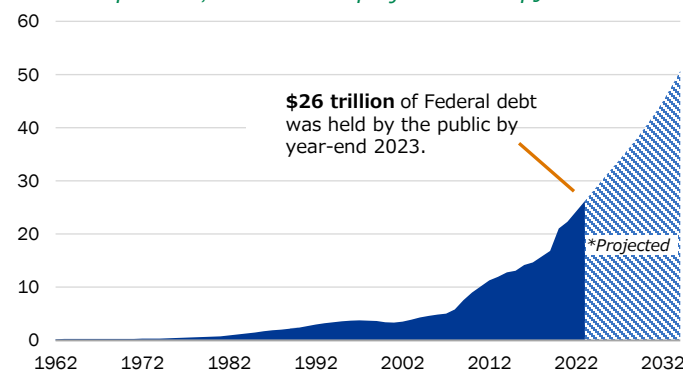
In the months ahead, Congress will consider whether to extend many of TCJA’s provisions that are set to expire. This includes individual provisions (e.g., lower marginal tax rates and higher standard deductions for individuals, caps on state and local tax deductions, higher child tax credits, and higher estate tax exemption) and business provisions (e.g., qualified business income deductions for small businesses, bonus depreciation, and limits on the deductibility of interest payments). In addition, renewable energy tax credits put in place under the Inflation Reduction Act may be eliminated to raise revenue for other purposes, such as increasing the child tax credit, exempting certain income from taxation, or further lowering the corporate tax rate for U.S. manufacturers. Finally, certain TCJA provisions used as “pay-fors” in the original law may not be extended, such as requirements to amortize R&D expense deductions and limits on non-corporate business losses.

Given that Republicans control both houses of Congress and the Presidency, there is reason to be optimistic that the final tax package will be favorable to businesses, including equipment finance firms. For example, if full bonus depreciation is reinstated, which began to phase out in 2023, capital investments could accelerate, especially among smaller firms. Similarly, if the corporate tax rate is lowered to 15% for U.S. manufacturers, this could provide a near-term investment boost for industrial equipment.

However, President Trump’s tax and spending priorities are expected to add nearly \$8 trillion to the federal debt over the next decade. With the debt-to-GDP ratio already above 100% (and rising), mainstream economists continue to worry about the long-term implications of the country’s fiscal health. Future taxpayers may ultimately bear the burden of increased federal debt, but in the current political climate neither party appears interested in confronting this risk. This appears unlikely to change unless (or until) markets force them to do so.

#### Federal Debt Held by the Public Growing Rapidly

Trillions of dollars, CBO baseline projections as of June 2024



\*Projections assume expiring TCJA provisions are not extended and exclude new spending priorities.

Source: Congressional Budget Office, 2024.

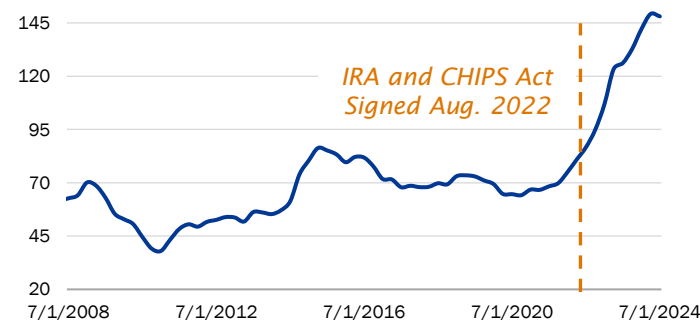
## Trump's Second Term: Industrial Policy

**Policy priorities are likely to shift, but the effect on equipment demand is unclear.**

The Biden administration's industrial policy represents the most significant civil industrial investment in the United States since the New Deal. The Inflation Reduction Act (IRA), CHIPS Act, and Infrastructure Investment and Jobs Act (IIJA) have directed hundreds of billions of dollars in public investment toward renewable energy, domestic manufacturing, and infrastructure development projects. However, administrative and permitting delays, reporting requirements, and private investment gaps have hindered the policy's full economic impact, and a significant share of funding has yet to be obligated and could be rescinded.

- Historic industrial investment strengthened manufacturing construction and boosted industry growth. Since late 2019, manufacturing construction investment has increased by 215%, real public infrastructure spending has increased by 9%, nearly 100% of high-poverty counties have received funds, and clean energy investments in low-income areas has doubled. The Semiconductor Industry Association estimates that the CHIPS Act's \$39 billion in incentives spurred an additional \$450 billion in private investments and led to the creation of 58,000 jobs. A comprehensive economic assessment of President Biden's foray into industrial policy is premature, but early indications are that the investments carried a hefty price tag but helped spur growth in key industries.
- That doesn't mean that the policy is living up to its full potential, however. Nearly 40% of new manufacturing investments are delayed, and less than 17% of the \$1.1 trillion provided by the IRA, CHIPS Act, IIJA, and American Rescue Plan had been spent as of April 2024. Unobligated IRA funding could be rescinded and tax incentives favoring renewable energy could be repealed to help pay for tax cuts in 2025. However, both will require congressional approval, and given that nearly 80% of clean energy investments have been spent in congressional districts held by Republicans (see map), the necessary votes could be difficult to secure.

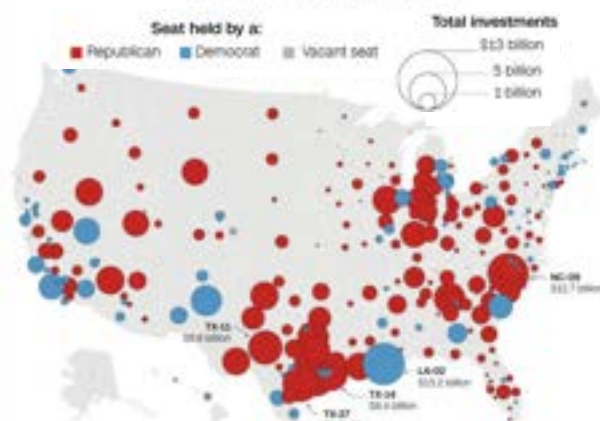
### Real Investment in Manufacturing Structures Nonresidential, billions of dollars



Source: Congressional Budget Office, 2024.

The loss of these funds and incentives could have implications for the equipment finance industry, particularly among firms focused on clean energy, sustainability, or infrastructure development. These have been growth areas for the industry in recent years: indeed, according to the Foundation's 2024 Industry Horizon Report, nearly one-third of equipment and software was acquired to support energy-related, climate-related, or other environmental purposes in 2023. However, we expect private markets to continue prioritizing clean energy and sustainability investments, irrespective of the income administration's policies.

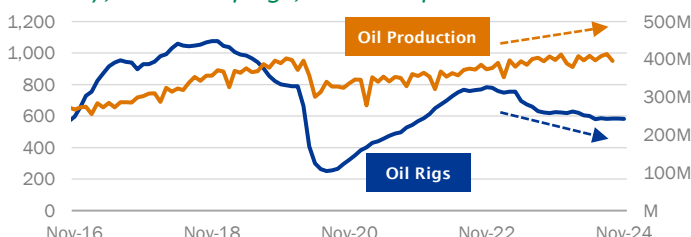
### Announced Clean Energy Investment by District



Sources: Rhodium Group, MIT Center for Energy and Environmental Policy Research, CNN

While renewable energy producers may find less support from the Trump Administration than they have over the last four years, the oil and gas industry should benefit from a renewed focus on U.S. energy dominance. Oil and gas producers are likely to face fewer permitting and regulatory hurdles, which should provide a lift for equipment demand. At the same time, domestic oil production is already at an all-time high, largely due to improved drilling techniques and AI tools that have dramatically improved drilling output and efficiency. These technological advances are a double-edged sword for equipment manufacturers, however, as producers have increased production levels while reducing the number of active oil rigs (see below).

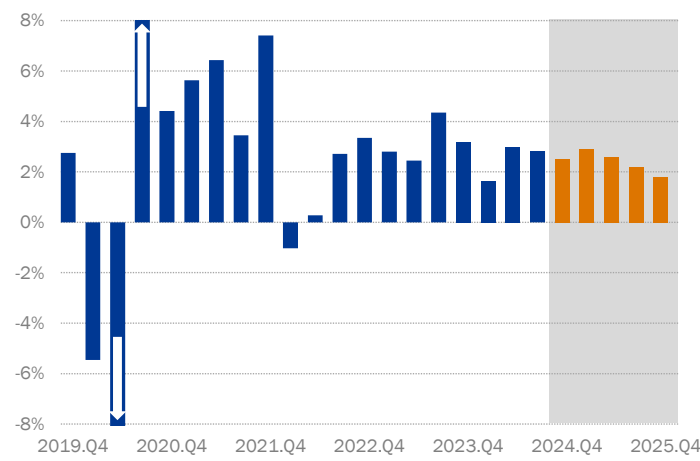
### Domestic Oil Rigs vs Oil Production Monthly, number of rigs, millions of barrels



Source: U.S. Energy Information Administration; Baker Hughes.

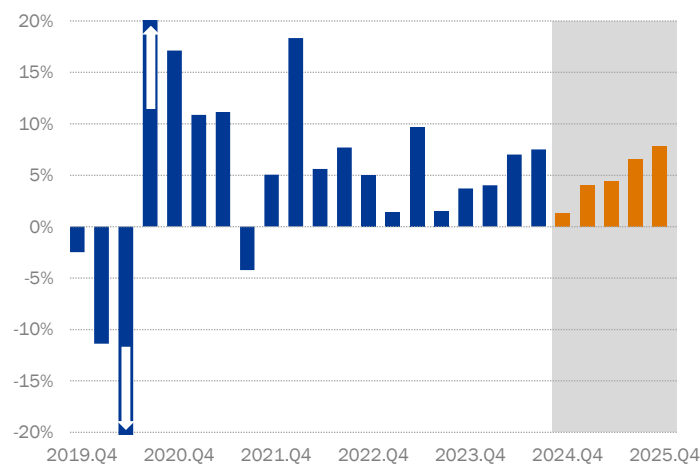
# APPENDIX A | KEYBRIDGE FORECASTS

Real GDP Growth (% SAAR)



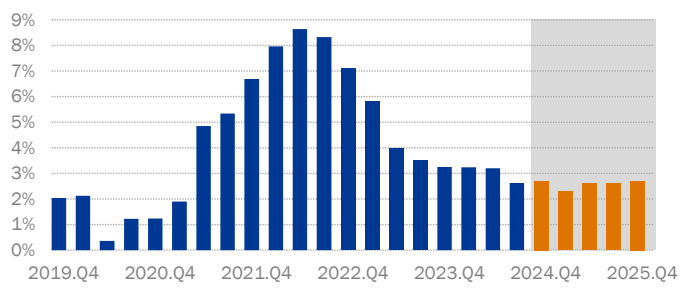
Source: Bureau of Economic Analysis; Keybridge LLC

Real Equipment & Software Investment Growth (% SAAR)



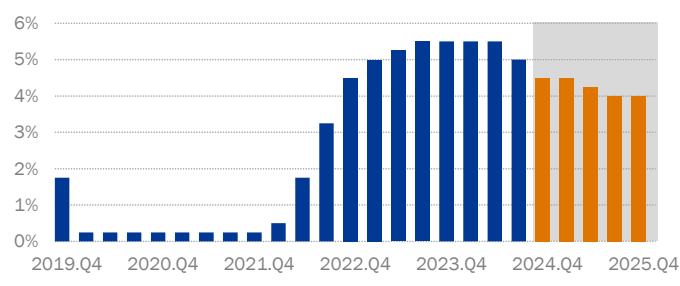
Source: Bureau of Economic Analysis; Keybridge LLC

CPI Inflation (year-on-year %, end of period)



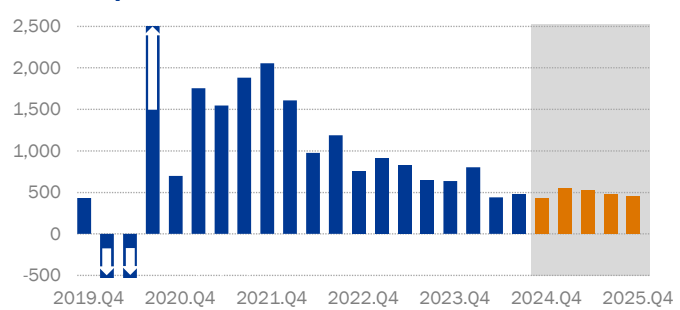
Source: Bureau of Labor Statistics; Keybridge LLC

Fed Funds Target (upper bound, end of period)



Source: Federal Reserve Board of Governors; Keybridge LLC

Total Payroll Growth (thousands)



Source: Bureau of Labor Statistics; Keybridge LLC

INDICATOR	2023	2024e	2025 QUARTERLY ESTIMATES				2025e
			Q1e	Q2e	Q3e	Q4e	
Real GDP* (SAAR)	2.9%	2.8%	2.9%	2.6%	2.2%	1.8%	2.7%
Real Investment in Equipment & Software (SAAR)	4.8%	4.8%	4.0%	4.4%	6.6%	7.8%	4.7%
Inflation (Headline CPI, Y/Y %, end of period)	4.1%	2.9%	2.3%	2.6%	2.6%	2.7%	2.7% (end-of-year)
Federal Funds Target Rate (upper bound, end of period)	5.50%	4.50%	4.50%	4.25%	4.00%	4.00%	4.00% (end-of-year)
Non-Farm Payroll Growth (thousands)	3,013	2,146	550	525	475	450	2,000

\*Note: SAAR % refers to the annualized rate of change in seasonally adjusted data from one quarter to the next, which is the Bureau of Economic Analysis' ("BEA") standard method for reporting growth in the national accounts data. The BEA defines annual GDP growth as the % change in the average level of quarterly GDP from one year to the next. Some organizations (including the Federal Reserve) report GDP growth on a Q4/Q4 basis, which can result in differing reported growth rates.

### About the Momentum Monitor

Business leaders require actionable forward-looking intelligence to make strategic decisions. Accordingly, the Foundation commissioned Keybridge LLC to develop a series of custom leading indicators for the equipment sector. The [Foundation-Keybridge Equipment & Software Investment Momentum Monitor](#) consists of indices for 12 equipment and software investment verticals. These indices are designed to identify turning points in their respective investment cycles with a ~6-month lead time.

The Momentum Monitor is based on Keybridge's extensive research which shows that not all movements in economic data are reliable signals of future economic trends. Keybridge has operationalized its research by constructing indices, each comprised of between 15 to 20 high-frequency indicators. These indicators undergo rigorous testing to determine the optimal thresholds at which their short-term fluctuations are economically meaningful. In simpler terms, the Momentum Monitor sifts out the "noise" in the data and identifies the dominant trends. As a result, each Momentum Monitor index is statistically optimized to signal turning points in the investment cycle without giving false readings of shifts in momentum.

### How to Read the Momentum Monitor

The Momentum Monitor Matrix summarizes the current values of each of the 12 Equipment & Software Investment Momentum Indices based on two factors: Recent Momentum (x-axis) and Historical Strength (y-axis):

- "Recent Momentum" indicates a vertical's recent acceleration or deceleration in the past month relative to its average movement during the previous 3 months. Ratings closer to "0" indicate rapid deceleration, while ratings near "10" represent rapid acceleration.
- "Historical Strength" reflects a vertical's strength in the past month relative to its typical level since 1999. Ratings closer to "0" represent an indicator that is weaker than average, while ratings closer to "10" represent an indicator that is stronger than average.

The matrix consists of four quadrants based on readings for each vertical's recent momentum and historical strength. If a vertical falls in the top-left quadrant, its momentum reading is higher than average, but positive movement has slowed (and perhaps reversed) in recent months — suggesting that Y/Y investment growth may slow over the next two quarters. Verticals in the bottom-right quadrant, however, have momentum readings that are below average, but recent movement shows promise — suggesting that Y/Y investment growth may increase over the next two quarters.