2019 Equipment Leasing & Finance U.S. Economic Outlook

Q4 Update — October

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EQUIPMENT LEASING & FINANCE FOUNDATION

Your Eye on the Future

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SUMMARY

Equipment & Software Investment Outlook: Equipment and software investment growth decelerated for the second consecutive quarter in Q2 but remained positive, primarily due to moderate annualized growth in software (equipment investment was essentially flat). Although a recession in the next six months appears unlikely, business conditions for the equipment finance industry are also unlikely to improve materially over the rest of the year, particularly for equipment verticals that serve the manufacturing sector.

Over the next three to six months:

- Agricultural Machinery investment growth (Y/Y) should improve;
- Construction Machinery investment growth (Y/Y) is likely to grow at a moderate pace;
- Materials Handling Equipment investment growth (Y/Y) will likely remain weak;
- All Other Industrial Equipment investment growth (Y/Y) is likely to remain modest;
- Medical Equipment investment growth (Y/Y) should strengthen;
- Mining & Oilfield Machinery investment growth (Y/Y) is likely to remain weak;
- Aircraft investment growth (Y/Y) is likely to remain negative;
- Ships & Boats investment growth (Y/Y) should remain weak;
- Railroad Equipment investment growth (Y/Y) is likely to weaken;
- Trucks investment (Y/Y) is expected to remain positive;
- Computers investment growth (Y/Y) will likely continue to weaken; and
- Software investment growth (Y/Y) should continue expanding at a moderate pace.

U.S. Capital Investment & Credit Markets: Capital spending has been noticeably weaker in 2019 and may slow further over the remainder of the year due to heightened trade uncertainty and industrial sector weakness. Credit market conditions, remain healthy, however, despite tightening credit conditions for commercial real estate and consumer loans and somewhat weaker demand for business loans. Financial stress has ticked up in 2019 by most measures but remains at healthy levels overall.

Overview of the U.S. Economy: U.S. economic growth decelerated to 2.0% in the second quarter, down from to 3.1% growth in Q1. Consumer spending — the foundation of the U.S. economy — improved significantly and is a key driver of economic growth, but the manufacturing sector and business investment remain weak. Although robust consumer spending will likely remain a tailwind over the remainder of the year and the U.S. housing sector is showing signs of improvement, trade tensions with China, equity market volatility, and decelerating job creation are key potential risks as 2019 draws to a close.

Bottom Line for the Equipment Finance Sector: Equipment and software investment growth slowed significantly during the first half of 2019, and we expect this trend to continue over the remainder of the year. Most measures of business confidence are well below 2018 highs and trending downward, while measures of consumer optimism have also declined in recent months (though they remain high by historical standards, reflecting a strong labor market and solid wage growth). Global growth expectations are also softening, which has negatively affected the U.S. manufacturing industry.

Overall, we expect the economy to grow 2.2% in 2019, down from our previous estimate of 2.5% and driven primarily by consumer spending. Meanwhile, we expect equipment and software investment to expand 3.9% this year, unchanged from our previous estimate.

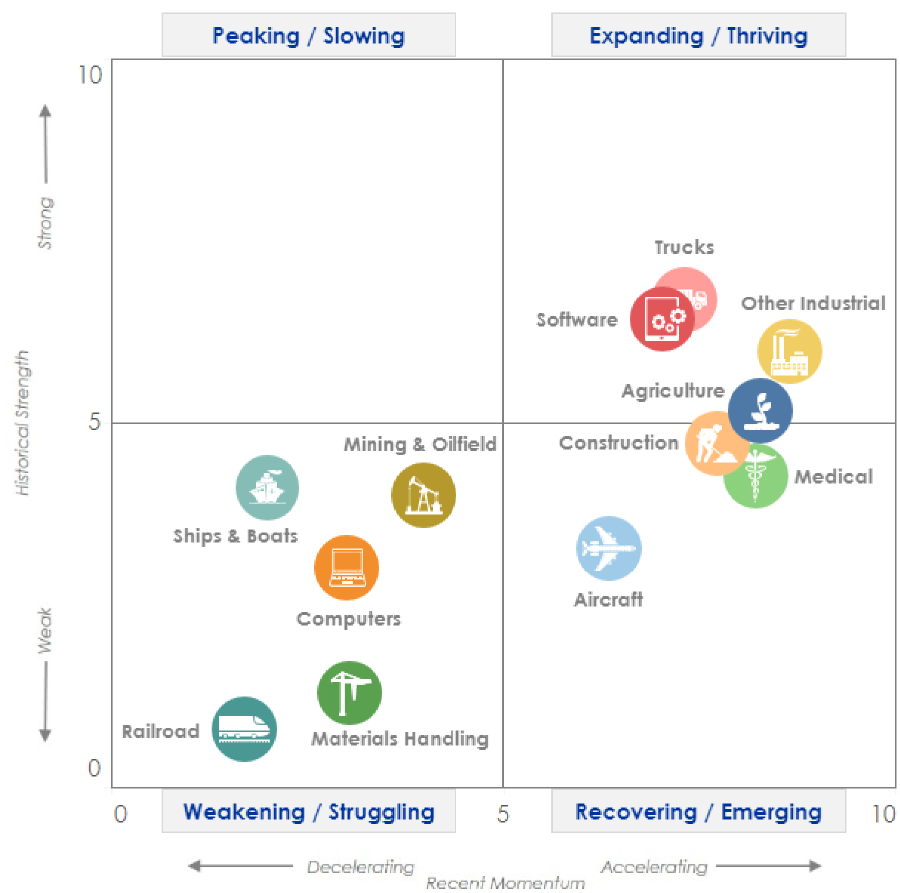
EQUIPMENT & SOFTWARE INVESTMENT OUTLOOK

We expect equipment and software investment to expand by 3.9% in 2019, reflecting uncertainty surrounding trade policy and global economic conditions, in addition to a maturing business cycle. As illustrated in the Momentum Monitor Sector Matrix below, momentum readings are below the long-term historical average (y-axis) in 8 of 12 verticals, however 7 of the 12 verticals saw recent momentum (x-axis) accelerate in October.

Foundation-Keybridge U.S. Equipment & Software Investment Momentum Monitor

*For more information on how to interpret the Momentum Monitor, please refer to the Appendices on pages 18–19.

Momentum Monitor Sector Matrix

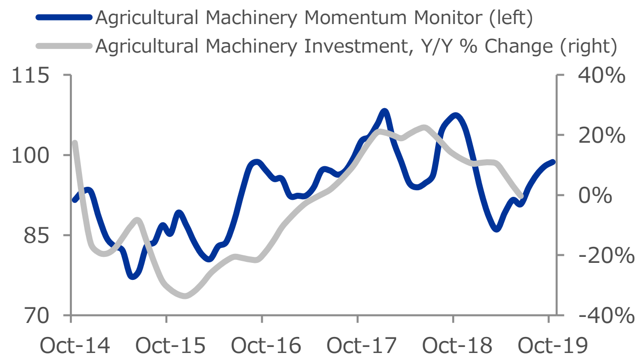


The matrix above summarizes the current values of each of the 12 Equipment & Software Investment Momentum Indices based on two factors: Recent Momentum (x-axis) and Historical Strength (y-axis):

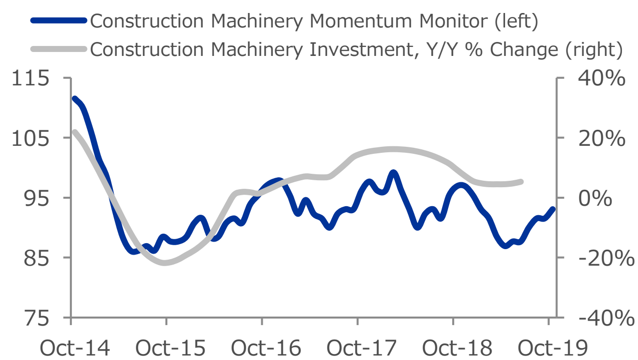
- “Recent Momentum" indicates a vertical’s recent acceleration or deceleration in the past month relative to its average movement during the previous 3 months. Ratings closer to "0" indicate rapid deceleration, while ratings near “10” represent rapid acceleration.
- "Historical Strength" reflects a vertical’s 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 resides 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 investment levels may fall over the next 1-2 quarters. Verticals in the bottom-right quadrant, however, have momentum readings that are below average, but recent movement shows promise — suggesting that investment levels may rise over the next 1-2 quarters.

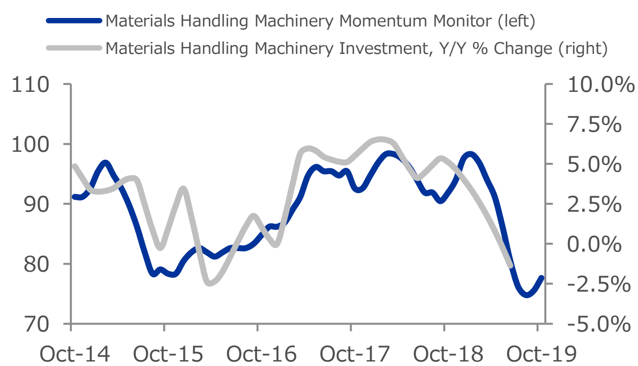
Agricultural Machinery: Investment in Agricultural Machinery fell 11% (annualized) in Q2 2019 and eased 0.3% from one year ago. The Agriculture Momentum Index improved from 97.9 (revised) in September to 98.7 in October, the highest level since late 2018. Wholesale Trade of Miscellaneous Durable Goods improved 0.7% in July, and Shipments of Farm Machinery & Equipment rose 3.2% in August. Overall, the Index continues to point to improved agricultural machinery investment growth over the next three to six months.



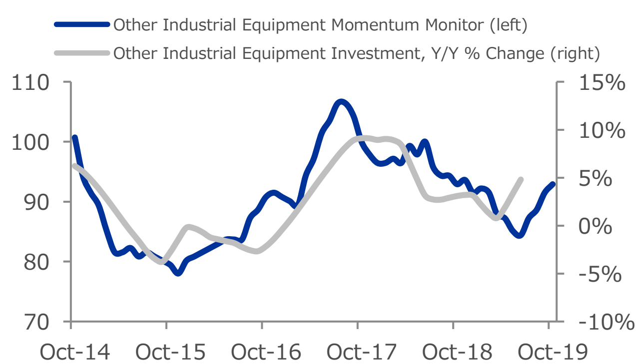
Construction Machinery: Investment in Construction Machinery grew at a 14% annualized rate in Q2 2019 and is up 5.3% year-over-year. The Construction Momentum Index increased from 91.5 (revised) in September to 93.1 in October. In August, New Privately-Owned Houses increased 10%, while Shipments of Construction Machinery rose 8.0%, the strongest growth since July 2012. Overall, the Index suggests moderate growth in construction machinery investment over the next three to six months.



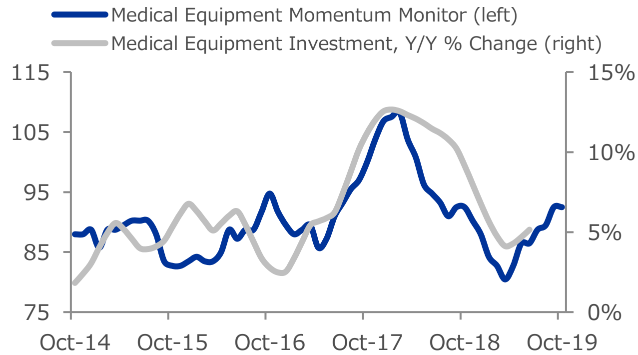
Materials Handling Equipment: Investment in Materials Handling Equipment dropped at an 11% annualized rate in Q2 2019 and is down 1.4% year-over-year. The Materials Handling Momentum Index rose from 75.5 (revised) in September to 77.6 in October but remains weak by historical standards. Total Energy Consumption fell 3.2% in June, while the Chicago Business Barometer decreased 6.5% in September. Overall, the Index points to continued weakness in handling equipment investment growth over the next two quarters.



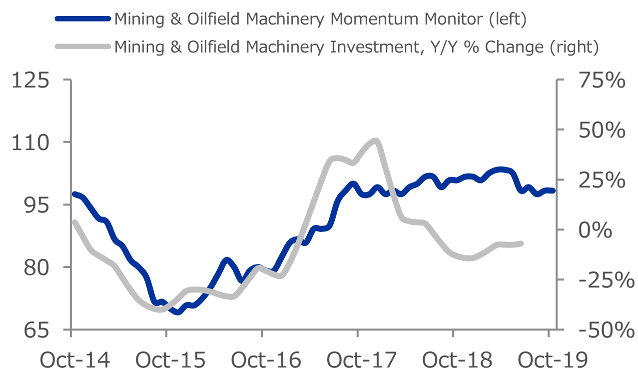
Other Industrial Equipment: Investment in All Other Industrial Equipment increased at an 8.9% annualized rate in Q2 2019 and improved 4.8% from a year ago. The Other Industrial Equipment Momentum Index inched up from 91.5 (revised) in September to 92.9 in October. Industrial Production for Total Machinery increased 1.6% in August, while Nonfarm Payrolls edged up 0.1% in September. Overall, the Index continues to suggest modest growth in industrial equipment investment over the next three to six months.



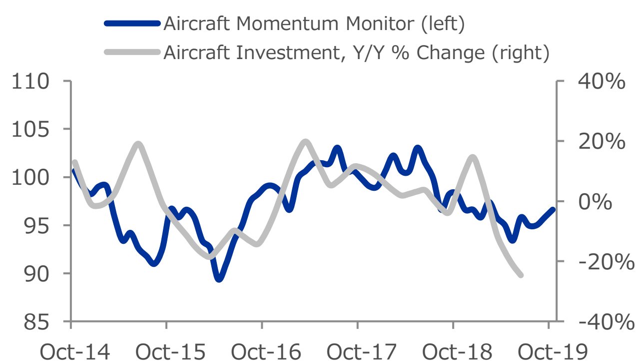
Medical Equipment: Investment in Medical Equipment increased at an 11% annualized rate in Q2 2019 and is up 5.1% year-over-year. The Medical Equipment Momentum Index held steady at 92.5 from September (revised) to October. In August, the Consumer Price Index for Dental Services rose 0.3%, while the Consumer Price Index for Medical Care Services rose 0.9%, the fastest growth in three years. Overall, the Index points to stronger growth in medical equipment investment over the next two quarters.



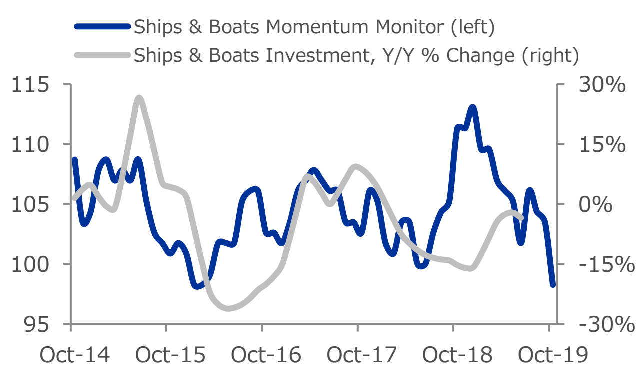
Mining & Oilfield Machinery: Investment in Mining & Oilfield Machinery surged at a 32% annualized rate in Q2 2019 but remains down 7% year-over-year. The Mining & Oilfield Machinery Momentum Index held steady at 98.3 from September to October. Motor Gasoline Production decreased 1.1% in July, but Industrial Production for Natural Gas Distribution rose 0.5% August. Overall, the Index points to continued weakness in mining & oilfield machinery investment growth over the next three to six months.



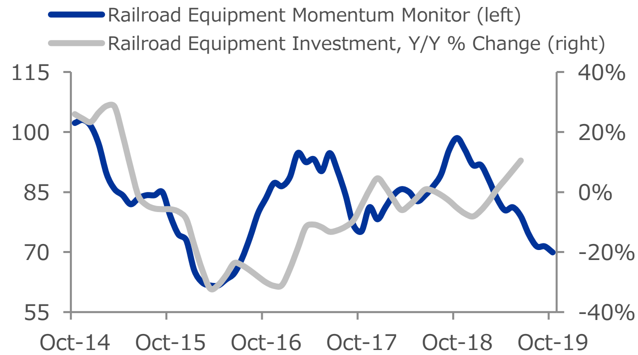
Aircraft: Investment in Aircraft fell 43% (annualized) in Q2 2019 and is down 25% on a year-over-year basis. The Aircraft Momentum Index edged up from 95.8 (revised) in September to 96.6 in October. In August, Civilian Aircraft Exports dropped 33%, the fifth double-digit decline in the past year, and Manufacturers' Inventories of Defense Capital Goods pulled back 1.2%. Overall, the Index points to continued negative growth in aircraft investment over the next two quarters.



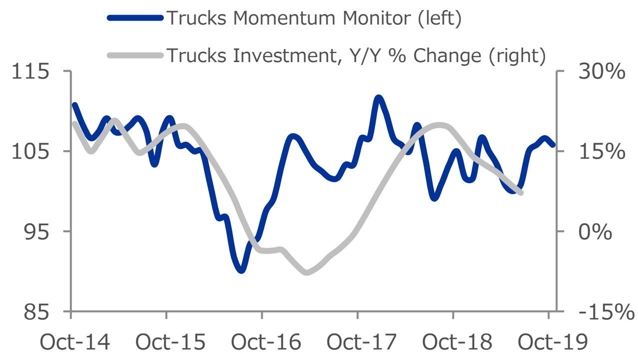
Ships & Boats: Investment in Ships & Boats declined at an annualized rate of 33% in Q2 2019 and is down 3.5% year-over-year. The Ships & Boats Momentum Index slipped from 103.5 (revised) in September to 98.3 in October. Houston Shipping Container Traffic eased 0.3% in August, while the ISM Manufacturing Employment Index fell 1.1 points in September, the ninth decline in the past year. Overall, the Index's movement this year — and particularly over the last quarter — suggests that ships and boats investment growth will remain weak over the next three to six months.



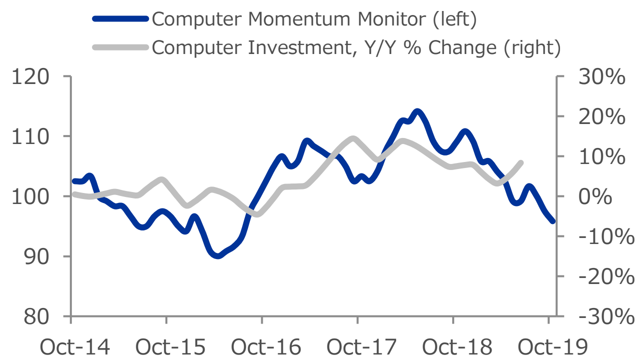
Railroad Equipment: Investment in Railroad Equipment accelerated at a 35% annualized rate in Q2 2019 and is up 10% year-over-year. The Railroad Equipment Momentum Index eased from 71.4 (revised) in September to 69.9 in October, the lowest level since July 2016. In September, Rail Carloads of Petroleum Products fell 5.0%, the sixth decline in the past year, while Rail Carloads of Metallic Ores & Metals fell 5.5%. Overall, the Index continues to suggest weaker growth in railroad equipment investment over the next three to six months.



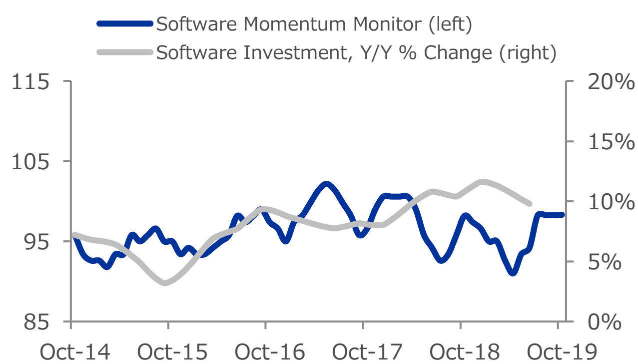
Trucks: Investment in Trucks edged up at a 0.6% annualized rate in Q2 2019 and is up 7.2% from year-ago levels. The Trucks Momentum Index pulled back slightly from 106.6 (revised) in September to 105.8 in October. In August, Earnings for Freight Trucking rose 0.9%, and Manufacturers' Inventories of Light Trucks & Utility Vehicles increased 2.5%, the strongest growth since January. Overall, the Index continues to suggest positive growth in trucks investment over the next three to six months.



Computers: Investment in Computers surged at an annualized rate of 35% in Q2 2019 and is up 8.3% year-over-year. The Computers Momentum Index eased from 97.5 in September to 95.8 in October, its lowest reading in over three years. New Orders for Electromedical Products decreased 1.0% in August, and the ISM Manufacturing PMI dropped 1.3 points in September, the sixth consecutive decline. Overall, the Index points to slower growth in computers investment over the next two quarters.



Software: Investment in Software improved at a 5.8% annualized rate in Q2 2019 and is up 10% year-over-year. The Software Momentum Index held steady at 98.3 from September (revised) to October, maintaining the highest level since April 2018. In September, the Nasdaq Composite Index increased 0.5% and IBM's Market Cap increased 7.3%. Overall, the Index points to continued moderate growth in software investment over the next two quarters.



Equipment & Software Investment Annual Growth Forecast

Year-on-Year % Growth Rates

Sector	10-Year Historical Average	Last 4 Quarters	Next 4 Quarters
Agricultural Machinery	2.1%	-0.3	-4 to 5%
Construction Machinery	8.9%	5.3	0 to 7%
Materials Handling Equipment	4.2%	-1.4	-9 to -2%
Other Industrial Equipment	3.9%	4.8	-3 to 4%
Medical Equipment	6.6%	5.1	4 to 10%
Mining & Oilfield Equipment	2.9%	-7.1	-4 to 4%
Aircraft	6.2%	-24.7	-8 to 4%
Ships & Boats	-1.9%	-3.6	-4 to 3%
Railroad Equipment	5.1%	7.7	-10 to 2%
Trucks	27.3%	7.0	0 to 6%
Computers	5.6%	8.6	0 to 5%
Software	7.9%	9.6	6 to 12%

Source: Macrobond Financial, Keybridge (forecasts)

U.S. Capital Investment and Credit Markets

Capital spending has eased throughout 2019 and may well decline further over the remainder of the year due to heightened trade uncertainty and industrial sector weakness. Credit market conditions remain healthy across the board, though banks reported that business demand for credit eased in the second quarter. Financial stress has ticked up in 2019 by most measures but remains at healthy levels overall.

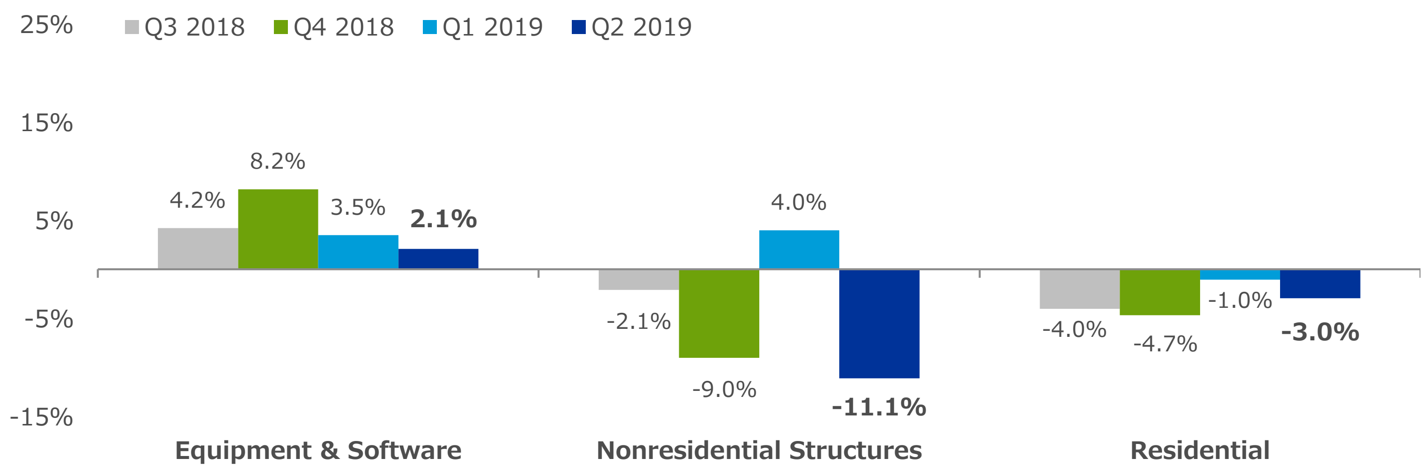
As we anticipated, investment growth continued to decelerate in the second quarter, and as such our annual forecast for equipment and software investment growth remains at 3.9%, roughly half the 7.7% pace of growth experienced last year. Following two interest rate hikes in the third quarter, we expect the Federal Reserve to cut its benchmark interest rate one more time in 2019 due to a recent spate of weak economic data and relatively muted inflation.

Recent Trends in U.S. Capital Investment

Equipment and software investment growth decelerated for the third consecutive quarter to 2.1% (annualized) in the second quarter, down from 3.5% in Q1 2019 and 8.2% in Q4 2018. Investment in nonresidential structures dropped 11.1% (annualized), the third quarterly decline in the past year. Meanwhile, residential investment decreased 3.0% (annualized), its sixth consecutive quarter of negative growth.

Investment Growth Rates

Quarter-on-Quarter, Seasonally Adjusted Annualized Rate



Source: Macrobond Financial

- **Equipment Leasing and Financing:** After a weak start to 2019, new business volume growth in the equipment finance industry is now above year-ago levels but remains relatively modest. According to the ELFA Monthly Leasing and Finance Index ("MLFI-25"), the industry gained $9.2 billion in new business volume in August, up 3% on both a year-over-year and year-to-date basis. Portfolio performance has slipped in recent months but remains generally healthy: 30-day delinquencies held steady at 2.0% in August, up ten percentage points from a year ago, while average charge-offs (0.42%) are 13 percentage points above year-ago levels.

  The Foundation's Monthly Confidence Index for the Equipment Finance Industry ("MCI-EFI") declined 4.2 points to 54.7 in September and is now 16% below its reading 12 months ago. Most surveyed industry executives expect business conditions to stay the same over the next four months, though 14% expect business conditions to worsen (up from 7% in August).

The share of industry executives who rate the current U.S. economy as "excellent" declined 17 percentage points to 20% in September, while 80% executives rate the economy as fair. The majority of executives (70%) indicate they believe the U.S. economy will stay the same over the next six months, but more than one-quarter believe economic conditions will worsen over the next six months. Executives noted that economic and industry expansion may be impeded by waning confidence trade tensions, but they also believe that most economic fundamentals remain solid.

- **Equipment Verticals**: Equipment and software investment growth slowed to 2.1% in the second quarter, the weakest pace since late 2016. Of the 12 equipment verticals tracked by the Foundation, eight experienced positive annualized growth and five posted double-digit gains in the second quarter, including Computers (+35%), Railroad Equipment (+35%), Mining & Oilfield Equipment (+32%), Construction Machinery (+14%), and Medical Equipment (+11%). Four verticals experienced declines in investment growth in the second quarter, each of which posted double-digit drops: Aircraft (-43%), Ships & Boats (-33%), Agricultural Machinery (-11%), and Materials Handling Equipment (-11%). The near-term outlook is mixed, with several verticals set to weaken over the next 3–6 months (particularly those in the transportation sector) while service-sector verticals are expected to remain generally resilient.

- **Other Factors:** The industrial sector clearly softened over the first half of the year and remains weak. For example, the ISM Purchasing Manager's Index is now in contractionary territory, falling to 47.8 (-20% Y/Y) in September. New orders of non-defense capital goods excluding aircraft (a leading indicator of next-quarter business activity) decreased 0.4% in August after a flat July. Additionally, the U.S. trade deficit widened to $54.9 billion in August, driven by a $0.8 billion increase in the goods deficit (though exports did grow across the board, particularly in the industrial supplies sector).

  However, there are signs that industrial activity may improve, at least marginally, in the months ahead. Shipments of core capital goods, a typically reliable leading indicator of same-quarter business activity, rose 0.3% in August and are up 1.4% on a yearly basis, while both Industrial Production (+0.6%) and Capacity Utilization (+0.4 point) improved in August after several months of decline.

Recent Trends in Credit Markets

Business and consumer credit market conditions remained generally healthy in Q2. The supply of credit to both businesses and consumers tightened modestly in Q2, while business demand for credit pulled back slightly over the same period. Financial stress ticked up but remains at healthy levels.

- **Credit Supply & Pricing:** Credit supply conditions for businesses tightened in aggregate over the past quarter. According to the July Fed Loan Officer Survey, a modest net share of banks tightened standards over the past three months across all major commercial real estate ("CRE") loan categories, particularly for loans secured by multifamily residential properties. Banks left standards for commercial and industrial ("C&I") loans to large- and medium-sized firms essentially unchanged in the second quarter, though a modest net share of banks reported easing C&I loan standards to small firms.

Summary of Credit Conditions

Factor	Conditions Compared With Last Quarter
Supply	Slight Decrease
Demand	Slight Decrease
Financial Stress	Slight Increase

Regarding consumers, a moderate net share of banks (8.5%) tightened standards for credit card loans over the past three months, while a modest net share of banks (4.4%) also tightened terms and conditions on new and existing credit card accounts. Meanwhile, a moderate net share of banks reported tightening standards for personal loans but kept terms for auto loans and most categories of residential real estate ("RRE") loans essentially unchanged in the second quarter.

- **Credit Demand:** Business demand for credit eased slightly over the past three months. According to the July Fed Loan Officer Survey, demand for C&I loans remained basically unchanged on net from large and middle-market firms and eased among small firms, due in part decreasing need for inventory, investment in plant & equipment, and M&A financing. Likewise, demand for CRE loans remained essentially unchanged except for construction & land development loans, which weakened. Although private nonresidential construction spending contracted on an annual basis for the fourth consecutive month in August, confidence in the construction industry remains elevated: the NAHB-Wells Fargo Housing Market Index has rebounded from a multi-year low last December and improved again in September, while the USG Corporation-Chamber of Commerce Commercial Construction Index achieved a record high in Q3.

  Measures of business confidence and activity are mixed depending on size. Both the NFIB Small Business Optimism Index and the PayNet Small Business Lending Index ("SBLI") are down from recent peaks but remain elevated by historical standards. However, the Business Roundtable CEO Economic Outlook Survey declined 10.3 points from Q2 2019 to 79.2 in Q3, its sixth consecutive quarterly decline and its steepest drop since 2012. Businesses that are more exposed to a slowing global economy and heightened trade uncertainty appear to be less confident about their growth prospects than "Main Street" businesses.

  Consumer demand for credit increased in the second quarter, as banks reported stronger demand across most categories of consumer and RRE loans. A likely contributor to expanding credit demand is consumer optimism, which remains elevated. However, cracks may be beginning to appear in the consumer outlook. The University of Michigan's Index of Consumer Sentiment remains in favorable territory but "shows signs of erosion" according to the survey's director, while the Conference Board's Consumer Confidence Index fell 9 points to 125.1 in September as "the escalation of trade and tariff tensions in late August rattled consumers" according to the Conference Board.

- **Financial Stress:** While financial stress appears to have risen somewhat over the past few months, it remains subdued. For example, the Kansas City Fed Financial Stress Index increased from -0.51 in July to -0.32 in August, while the St. Louis Fed Financial Stress Index ticked up from -1.4 to -1.3 during the same period and held steady in September. However, the below-zero readings suggest that financial stress is below the market's long-run average. Meanwhile, loan delinquencies fell to 1.05% in Q2, after rising in Q1 for the first time since 2016 to 1.13%. Likewise, lease delinquencies eased to 1.10% in Q2, after rising to their highest level since early 2011 in Q1. The PayNet Small Business Delinquency Index (SBDI) 31–90 Days Past Due ticked up to 1.59% in August, its highest level since late 2011 and up 14% on a yearly basis, but essentially equal to the long-term average.

- **Other Factors:** After plunging roughly 60 basis points during August to 1.47% in early September, ten-year Treasury yields rebounded to the 1.50–1.70 range by early October. Yields on 30-year notes experienced similar declines in August, dropping 60 basis points between late July and mid-august before rising to around 2.07% in early October, while short term interest rates have fallen to around 1.75% in October from 2.1% in late July. While parts of the yield curve have been inverted for months, the 10-year / 2-year spread — Keybridge's preferred spread for predicting a recession in the next 12–

18 months — inverted for the first time since the Great Recession in late August. While such a short-lived and shallow inversion does not by itself signal a recession, it has been a historically reliable leading indicator of prior recessions.

Update on Fed Policy

The Federal Reserve adopted a "wait-and-see" approach to monetary policy and held rates steady through the first half of 2019 but has cut the federal funds rate twice in Q3 — the first rate cuts since 2007. The federal funds rate is now at 1.75-2.0%. Fed Chairman Jerome Powell has argued that these cuts are a mid-cycle adjustment rather the beginning of a long-term easing cycle, but has also signaled an openness to addition cuts, particularly in light of muted inflation and the U.S.-China trade war amplifying a global slowdown.

As market-watchers have looked to the Fed for certainty in interest rate policy, Fed officials have become increasingly divided over how to respond global trade risks over which the Fed has little control. Additionally, the Fed intervened in the repo market in mid-September, injecting capital to return repo rates to normal levels. The capital injection may be a short-term solution to liquidity imbalances, but it is worth monitoring due to its implications for future monetary policy. In light of recent policy actions and statements from Fed officials, we expect the Fed to cut interest rates once more in 2019.

OVERVIEW OF THE U.S. ECONOMY

U.S. economic performance has been uneven in 2019, but the expansion should continue through at least the rest of the year. Consumer spending, which began the year on a weak note, has since rebounded and is now the key factor driving growth. However, U.S. businesses have pulled back on investment spending as rising geopolitical uncertainty buffets business confidence, and a near-term capex turnaround is unlikely. Meanwhile, escalating trade tensions with China and other trading partners continue to dampen global economic activity and depress demand for U.S. exports.

While the U.S. economy does not appear to be on the brink of a recession, there remains only modest upside potential for growth in the months ahead. Several global economies are experiencing sharp manufacturing downturns, which have been exacerbated by uncertainty surrounding U.S. trade policy. Factors to watch abound, including the future of U.S. relations with China and the health of China's economy. Domestically, U.S. financial markets continue to outperform those of most other developed nations, but heightened volatility in the stock market this year raises the specter of a serious market correction — which, if realized, would likely cause consumers to cut spending. On a more positive note, the U.S. housing sector has recently shown signs of improvement, a welcome development following six consecutive quarters of negative investment growth.

Overall, we project the U.S. economy will grow at an annualized rate of 2.2% in 2019, slower than our 2.5% estimate published in July.

Recent Trends in the U.S. Economy

Though the economy slowed in Q2 compared to the first quarter, the backbone of the U.S. economy — the American consumer — regained its footing. Consumer spending was robust, but businesses pulled back noticeably and several of the one-off factors that propelled the economy forward in Q1 were a drag on growth in Q2, including private inventories (which saw a huge drawdown) and exports (which fell sharply due to escalating trade tensions). There is a notable divergence between the service-providing sector of the economy, which remains generally health, and the goods-producing sector, which has contracted for two consecutive quarters.

Indicator	Recent Activity
Consumption	Consumer spending rose at an annualized rate of 4.6%, a robust growth rate.
Equipment & Software Investment	Equipment & software investment growth slowed to 2.1% (annualized).
Residential Investment	Residential investment fell 3.0% (annualized), the sixth straight quarterly decline.
Government Expenditures	Government spending jumped 4.8% (annualized), an acceleration from Q1.
Net Exports	Net exports deteriorated in Q2, subtracting 0.68 percentage point from growth as exports fell 5.7% and imports were unchanged.

- **GDP:** The U.S. economy expanded at an annualized rate of 2.0% in the second quarter after growing 3.1% in Q1. Growth was supported by a surge in consumer spending (+4.6% annualized, the strongest reading in more than four years). However, consumers were essentially the economy's only bright spot, as business investment contracted -1.0% (annualized), dragged down by a double-digit decline in nonresidential structures investment (-11.1%) and meager growth equipment & software investment (+2.1%). Meanwhile, residential investment (-3.0%) contracted for the sixth quarter in a row, while net exports (-0.68 percentage point) and private inventories (-0.91 percentage point) were each a substantial drag on growth.

- **Inflation:** Though headline inflation remains relatively muted due to low energy prices, core inflation has risen during the second half of the year. Core CPI inflation has accelerated for three consecutive months and is now at its highest annual growth rate since 2008 (2.4%). Higher tariffs and new duties on consumer goods could put further upward pressure on core inflation later this year, especially if wage growth remains near 3%.

- **Growth Forecasts:** The *Economist* Poll of Forecasters for September estimated a growth rate of 2.2% for 2019, while the *Wall Street Journal* consensus forecast also calls for 2.2% growth. A recent poll by the National Association for Business Economists expects growth of 2.3% this year and a 47% likelihood of a recession starting by the end of 2020 — in line with the Foundation's expectations. These estimates are in line with the Federal Reserve's September "central tendency" forecast of 2.1-2.3% growth for 2019.

Economic Tailwinds

Consumer debt levels remain manageable relative to disposable income and both delinquencies and defaults are at or near historical lows. Coupled with elevated consumer confidence, consumers powered the economy forward in the second quarter — a trend that should continue over the rest of the year.

- **Low consumer financial stress:** Despite being 10 years into the current business cycle, consumers continue to exhibit low financial stress by most measures. Charge-off rates for all loans hover near post-recession lows while delinquency rates reached a historic low in Q2, suggesting that defaults are unlikely to rise in the near term. The share of outstanding consumer debt in any stage of delinquency is at 4.4%, the lowest level since 2006, and the share of outstanding debt that is severely delinquent has been at or below 2% since early 2015. Additionally, consumer financial health has been buoyed by looser monetary policy, which has spurred homebuyers to take advantage of lower borrowing costs by refinancing their mortgages. Likewise, while the share of credit card credit that is delinquent 90+ days has increased from post-recession lows, it remains well below levels experienced prior to the Great Recession. Credit card credit as a share of disposable income remains low by historical standards, which suggests that consumers are managing revolving debt levels responsibly. Student loan debt continues to grow and could pose issues for some consumers over time, and delinquency rates have risen for subprime auto loans over the last year. Overall, however, consumer financial stress is quite low, which bodes well for consumers heading into 2020.

- **Robust Consumer Spending:** Consumer spending, which accounts for more than two-thirds of U.S. GDP, was highlighted as a factor to watch in the Q3 Outlook due to weak Q1 consumer activity and the potential for a sustained consumer slowdown. However, consumers bounced back in the second quarter, with real consumer spending growth reaching 4.7%. Spending on durable goods (which is usually where consumers first pull back when incomes are feeling pinched) was especially strong at 13% growth, the fastest pace in six years. While it is perhaps unlikely that consumers can maintain this torrid spending pace, there are few signs of a pronounced slowdown: debt levels remain manageable for most consumers and consumer confidence remains elevated. These factors should help to help support healthy spending for the rest of the year and make a near-term recession unlikely.

Economic Headwinds

The trade war between the U.S. and China has contributed to a notable global economic slowdown concentrated in the manufacturing sectors of several key trading partners, a development that has contributed to reduced business confidence.

- **Global Manufacturing Slowdown:** Manufacturing activity around the world has taken a massive hit from slowing global growth and an escalating trade war between the United States and China.
    - In the **United States**, the manufacturing sector was officially in a recession after the completion of the second quarter. Though there have been signs that the contraction may have "bottomed out" in August, it is not yet clear if a recovery is underway, as the ISM Manufacturing PMI fell into contractionary territory in August for the first time since 2016.
    - **China** is enduring a broad-based economic slowdown that has seen industrial production slip to its lowest growth rate in over a decade. Ongoing stimulus efforts appear to have done little to prop up the domestic manufacturing sector, which also suffers from crippling debt loads.
    - **Europe** also has been hard-hit by faltering global demand for manufactured goods, which has plunged the German manufacturing sector into its deepest recession in a decade and has fueled concerns that the rest of the German economy may soon follow suit. Given that Germany has the eurozone's largest economy, a recession there presents a contagion risk to the rest of Europe.

  There are few reasons to expect dramatic recoveries in the manufacturing sectors mentioned above. China's worsening slowdown reflects structural economic and financial issues rather than cyclical factors, which will depress demand for manufactured goods around the world. Coupled with a trade war with the United States that has no end in sight, the global manufacturing weakness will likely persist into 2020.

- **Waning Business Optimism:** The uncertainty spreading throughout the global economy that has been partially fueled by the U.S. trade war with China is increasingly weighing on U.S. business confidence. For example, the Business Roundtable's CEO Economic Outlook Index declined for the sixth consecutive quarter in September, with worsening geopolitical and trade uncertainty cited as the key factors driving the decline. Similarly, the National Association of Manufacturers' (NAM) Manufacturing Outlook Index tumbled to its lowest point in three years in the third quarter. Given falling business optimism, it is no surprise that business investment contracted in the second quarter for the first time since 2016, and there is little reason to believe the situation will improve anytime soon: NAM respondents expect just 1.1% growth for capital investments over the next twelve months.

  On the bright side, U.S. small businesses are more upbeat: the NFIB Small Business Optimism Index is still elevated while the Wells Fargo/Gallup Small Business Index recently reached a new all-time high. However, despite these strong headline numbers, there is reason for concern. For example, according to the NFIB survey, small business' sales expectations for the next three months are near their lowest point since the 2016 election. Additionally, while it is still in the top 10% of readings, the PayNet SBLI pulled back 5.5% on an annual basis in August, and the 3-month moving average fell below its year-ago level for the first time in over two years. If small business optimism continues to fall, businesses both large and small could pull back on hiring plans — which, in turn, could portend the end of the current business cycle.

Additional Factors to Watch

The outlook for the remainder of 2019 hinges on several factors, with the balance tilted toward the downside. The biggest unknown is the U.S. conflict with China, which has expanded to fronts beyond trade. Domestically, encouraging data from the U.S. housing market could be evidence that it is finally emerging from its protracted slump, but the labor market, while still strong, has shown some signs of softening. Finally, financial markets have continued to reach new record highs, but there are several external risk factors that could trigger a substantial decline — which, if realized, would likely harm consumer confidence and spending.

- **China relations?** Relations between the United States and China continue to be strained. The Trump administration has alternated from threatening ever higher tariffs to showing a willingness to make concessions, leading to occasional wild swings in U.S. equity markets. Both countries have drafted "blacklists" intended to prevent specific businesses from operating in the other's country, ostensibly for security reasons. The U.S. has also threatened third-party nations with punishment if they source hardware — especially related to 5G infrastructure — from Chinese telecom firms.

  China, meanwhile, is contending with pro-democracy protests in Hong Kong that have threatened the "one country, two systems" rule of law that has prevailed since control of Hong Kong was ceded back to China in 1997. While the protests began as opposition to a specific piece of legislation related to extradition of criminal fugitives, they have evolved into broad, anti-Beijing protests. In response, both the U.S. House of Representatives and Senate have taken up bills that would ramp up pressure on authorities in Beijing.

  What began as a trade war between the world's largest economies has morphed into a strategic engagement on several different fronts. Even if the U.S. administration decided that it wanted a "trade deal" in the near term, the chances that China will enact meaningful changes to its economy and political governance are slim. There is potential for a limited trade deal that could remove, at least temporarily, a headwind from the global growth picture, but the larger Pandora's Box of engagement on fronts beyond trade will be difficult to shut.

- **Housing market improvement?** While the housing market has been sluggish over the past two years, recent data suggest there is potential for a modest improvement in the months ahead.
  - Residential investment has averaged -3.6% (annualized) since early 2018, and growth has been negative in 10 of the last 13 quarters. This poor performance underscores a variety of headwinds facing the industry: buildable lots remain scarce, an exceptionally tight labor market has contributed to labor shortages, and trade tensions have put upward pressure on the cost of materials. These headwinds have implications for potential homebuyers: the share of U.S. consumers who view current home-buying conditions positively remains near post-recession lows, and mortgage applications fell more than 11% from mid-August to mid-September.
  - However, several metrics suggest the housing market could improve over the next one to two quarters. For example, in August, housing starts were up 7% from year-ago levels while permits increased more than 12%, the strongest growth since March 2017. Additionally, 30-year fixed mortgage rates have been below 4.0% since mid-June, in part due to the Federal Reserve easing interest rates by 50 basis points during Q3. This is likely part of the reason why New Home Sales jumped 7% in August and 18% on a year-over-year basis, while Existing Home Sales increased 1.3% — the fastest pace since May 2017. While the limited availability of affordable housing units will likely prevent a true breakout, a modest improvement in the housing market over the next 1–2 quarters would not be surprising.

- **Employment outlook?** The labor market has long been a growth engine for the U.S. economy, as U.S. employers have added to their payrolls for a record 108 consecutive months (and counting). Year-over-year wage growth has been at or near 3% for more than a year while the unemployment rate has been 4% or lower since early 2018. Importantly, the strong job market is also reaching demographic groups that are typically the last to benefit during an expansion: unemployment among African Americans, Hispanic Americans, and those with less than a high school education is near the lowest level on record. Businesses continually report that finding and retaining qualified workers is among their most pressing near-term challenges, suggesting that hiring should remain positive in the near term.

However, it is also true that job growth has slowed markedly in 2019. The U.S. economy has added an average of 158,000 nonfarm jobs per month this year — still sufficient to outpace population growth, but well below the 223,000 monthly pace of 2018. Job growth in certain key sectors has been particularly tepid, including manufacturing (+5,500/month in 2019 vs. +22,000/month in 2018) and construction (+14,000/month in 2019 vs. +25,600/month in 2018). Similarly, the national job openings rate, while still elevated by historical levels, dropped to 4.5% in July and is now at its lowest level since March 2018. Together, these indicators suggest that while the labor market is by no means poised for collapse, job growth is unlikely to accelerate and may slow further, especially if a worsening trade war bites into firms' hiring plans. A hiring slowdown would put downward pressure on consumer confidence and, by extension, consumer spending.

- **Equity market turmoil?** The past year has been particularly volatile for U.S. financial markets, reflecting significant and growing geopolitical and economic uncertainty. The stock market is currently near an all-time high but appears to be overvalued by some measures (e.g., the S&P 500 Shiller Cyclically-Adjusted Price/Earnings Ratio was 29 in August, nearly 5 points above its 10-year average). Given that stock market performance is strongly correlated with consumer confidence, if a significant correction were to occur, a pullback in consumer spending would be a likely consequence.

  However, on a more positive note, there is evidence that foreign investors, facing a deteriorating global outlook and negative interest-bearing investment opportunities abroad, are turning to U.S. markets as a "safe haven" of sorts, which could keep the bull market going, lifting consumer confidence providing a further boost to consumer confidence in the process. As such, equity markets warrant extra attention throughout the final quarter of 2019 and into the new year.

Projections for Key Economic Indicators

Indicator	2017	2018	2019 Quarterly Estimates				2019e
			Q1	Q2	Q3e	Q4e	
Real GDP (SAAR %)	2.4%	2.9%	3.1%	2.0%	1.6%	1.8%	2.2%
Real Investment in Equipment & Software (SAAR %)	5.5%	7.7%	3.5%	2.1%	1.7%	1.5%	3.9%
Inflation (year-on-year %)	2.1%	2.4%	1.6%	1.9%	1.7%	1.8%	1.8%
Federal Funds Target Rate (upper bound, end of period)	1.5%	2.5%	2.5%	2.5%	2.00%	1.75%	1.75%
10-year Treasury Rate (end of period)	2.40%	2.70%	2.40%	2.00%	1.68%	1.35%	1.35%
Total Payroll Growth (in thousands)	+2153	+2679	+521	+456	+470	+425	+1872

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' standard method for reporting growth in the national accounts data.

QUARTERLY DATA

Indicator	2017			2018				2019	
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Real Gross Domestic Product (SAAR %)									
GDP	2.2%	3.2%	3.5%	2.6%	3.5%	2.9%	1.1%	3.1%	2.0%
Consumer Spending	2.4%	2.4%	4.6%	1.7%	4.0%	3.5%	1.4%	1.1%	4.6%
Gross Private Fixed Investment	3.6%	7.4%	4.7%	6.2%	-1.8%	13.7%	3.0%	6.2%	-6.3%
Inv: Equipment & Software	8.0%	7.0%	11.2%	9.2%	5.0%	4.2%	8.2%	3.5%	2.1%
Inv: Agricultural Machinery	18.4%	26.8%	36.2%	-2.3%	33.2%	-2.2%	16.8%	-2.5%	-11.3%
Inv: Construction Machinery	15.9%	10.7%	22.4%	15.6%	10.7%	-1.9%	-1.3%	11.2%	14.2%
Inv: Materials Handling Equipment	9.8%	0.2%	7.1%	8.2%	1.2%	5.0%	1.9%	-1.0%	-10.7%
Inv: All Other Industrial Equipment	13.7%	7.4%	8.2%	4.5%	-6.9%	6.5%	9.1%	-4.6%	8.9%
Inv: Medical Equipment	9.6%	14.6%	14.8%	10.4%	6.3%	9.6%	1.1%	-0.2%	10.5%
Inv: Mining & Oilfield Machinery	46.2%	42.1%	-6.7%	-34.1%	28.8%	-21.7%	-18.4%	-11.4%	32.0%
Inv: Aircraft	2.6%	-5.7%	-4.1%	16.1%	9.8%	-29.7%	92.6%	-58.1%	-43.2%
Inv: Ships & Boats	-19.5%	31.3%	-0.8%	-30.5%	-36.0%	23.2%	-8.5%	15.7%	-33.5%
Inv: Railroad Equipment	-29.4%	7.3%	22.2%	-15.6%	-6.5%	-7.8%	-2.0%	22.6%	34.6%
Inv: Trucks	-1.3%	6.6%	34.7%	20.6%	15.9%	8.0%	11.9%	8.6%	0.6%
Inv: Computers	21.8%	15.2%	-8.4%	30.3%	10.8%	0.4%	-6.7%	9.2%	34.7%
Inv: Software	5.4%	9.8%	5.9%	17.5%	10.3%	8.3%	10.6%	14.7%	5.8%
Credit Conditions									
Nonfinancial Sector Debt (% of SAAR GDP)	72.1%	72.2%	72.3%	72.2%	73.1%	73.0%	73.3%	73.8%	73.8%
Loan Delinquency Rate	1.3%	1.3%	1.2%	1.1%	1.1%	1.0%	1.0%	1.1%	1.1%
Lease Delinquency Rate	1.0%	1.0%	1.0%	0.9%	1.0%	1.0%	1.0%	1.2%	1.1%
Net Tightening of C&I Loan Standards	-2.8%	-3.9%	-8.5%	-10.0%	-11.3%	-15.9%	-15.9%	2.8%	-4.2%

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' standard method for reporting growth in the national accounts data.

MONTHLY DATA

Indicator	2018				2019								
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Employment													
Change in Total Payrolls (thousands)	108	277	196	227	312	56	153	216	62	178	166	168	136
Change in Private Payrolls (thousands)	108	285	200	224	297	46	153	195	81	161	122	122	114
Unemployment Rate	3.7%	3.8%	3.7%	3.9%	4.0%	3.8%	3.8%	3.6%	3.6%	3.7%	3.7%	3.7%	3.5%
Business Activity													
Industrial Production	109.7	109.9	110.5	110.6	110.1	109.6	109.7	109.0	109.2	109.4	109.2	109.9	-
Capacity Utilization	79.3%	79.3%	79.6%	79.5%	79.0%	78.5%	78.4%	77.8%	77.8%	77.8%	77.5%	77.9%	-
PMI Composite Index	59.5	57.5	58.8	54.3	56.6	54.2	55.3	52.8	52.1	51.7	51.2	49.1	47.8
NFIB Small Business Optimism Index	107.9	107.4	104.8	104.4	101.2	101.7	101.8	103.5	105.0	103.3	104.7	103.1	-
Consumer Activity													
Consumer Confidence	135.3	137.9	136.4	126.6	121.7	131.4	124.2	129.2	131.3	124.3	135.8	134.2	125.1
Personal Consumption (M/M % Chg)	0.0%	0.4%	0.3%	-0.9%	0.6%	-0.2%	0.8%	0.4%	0.3%	0.2%	0.3%	0.1%	-
Retail Sales (M/M % Chg)	-0.1%	1.2%	-0.1%	-2.0%	1.5%	-0.5%	1.8%	0.4%	0.5%	0.4%	0.8%	0.4%	-
Lending Activity													
C&I Loans (M/M % Chg)	0.3%	0.7%	1.2%	1.5%	0.8%	0.4%	0.6%	0.1%	0.1%	0.2%	0.0%	0.5%	-
MLFI-25 New Business Volume (Bil.$)	8.50	8.90	8.00	12.70	7.20	5.90	8.20	8.80	9.10	9.90	9.40	9.20	-
MLFI-25 Avg Losses as a % of Net Rec.	0.40%	0.37%	0.37%	0.55%	0.35%	0.35%	0.37%	0.32%	0.46%	0.33%	0.37%	0.42%	-
MLFI-25 Credit Approval Ratio	75.7%	76.5%	77.2%	77.9%	76.1%	76.0%	75.3%	76.8%	75.9%	77.0%	75.7%	76.6%	-
Interest Rates (% avg of period)													
Fed Funds Target Rate (Lower Bound)	2.00%	2.00%	2.00%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.00%	1.75%
1-Year Treasury Rate	2.56%	2.65%	2.70%	2.66%	2.58%	2.55%	2.49%	2.42%	2.34%	2.00%	1.96%	1.77%	1.80%
3-Year Treasury Rate	2.84%	2.94%	2.91%	2.67%	2.52%	2.48%	2.37%	2.31%	2.16%	1.78%	1.80%	1.51%	1.59%
10-Year Treasury Rate	3.00%	3.15%	3.12%	2.83%	2.71%	2.68%	2.57%	2.53%	2.40%	2.07%	2.06%	1.63%	1.70%
30-Year Treasury Rate	3.15%	3.34%	3.36%	3.10%	3.04%	3.02%	2.98%	2.94%	2.82%	2.57%	2.57%	2.12%	2.16%
AAA Corporate Bond Yield	3.98%	4.14%	4.22%	4.02%	3.93%	3.79%	3.77%	3.70%	3.67%	3.42%	3.29%	2.98%	3.03%
BAA Corporate Bond Yield	4.88%	5.07%	5.22%	5.13%	5.12%	4.95%	4.84%	4.70%	4.63%	4.46%	4.28%	3.87%	3.91%
Prices													
Headline Inflation (Y/Y % Chg)	2.3%	2.5%	2.2%	1.9%	1.6%	1.5%	1.9%	2.0%	1.8%	1.6%	1.8%	1.7%	-
Core Inflation (Y/Y % Chg)	2.2%	2.1%	2.2%	2.2%	2.2%	2.1%	2.0%	2.1%	2.0%	2.1%	2.2%	2.4%	-
Oil Price (West Texas Int., $/barrel)	73.16	65.31	50.78	45.15	53.84	57.21	60.19	63.83	53.49	58.2	58.53	55.07	54.09

About the Outlook

The Equipment Leasing & Finance Foundation (the Foundation) recognizes that with the wide variety and increasing complexity of economic data available to the public, the best way to utilize key equipment investment data is to have it all in one place, where business leaders can access it easily and quickly, thus assisting them in making the best business decisions.

The Foundation partnered with Keybridge LLC to produce this economic outlook, highlighting key trends in equipment investment and placing them in the context of the broader U.S. economic climate. The outlook report also includes an analysis of domestic capital spending as well as an evaluation of how capital spending is affected by various related and exogenous factors, both currently and in the foreseeable future. Additionally, the outlook includes custom leading indicators for 12 equipment and software verticals. The Foundation-Keybridge U.S. Equipment & Software Investment Momentum Monitor, described below, is published monthly.

This Q4 report is the third and final update to the 2019 Annual Outlook. This research was guided by a steering committee of dedicated industry volunteers who gave their time and expertise by providing comments and suggestions throughout the development of the report.

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 3-6 month lead time.

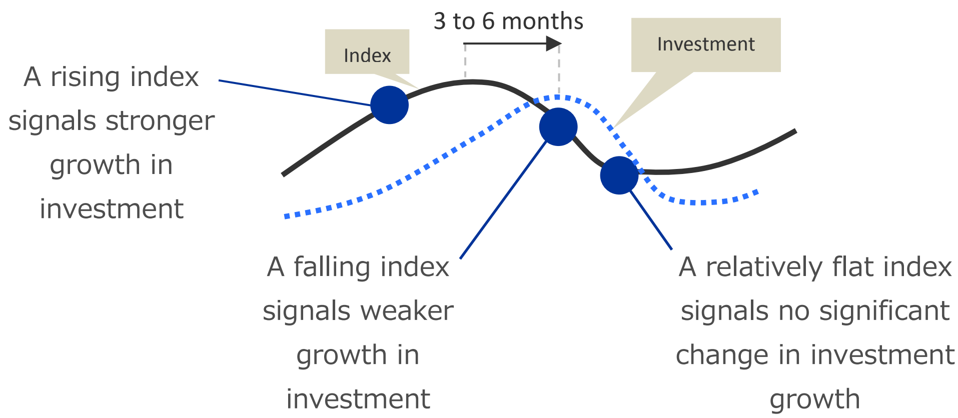
The Momentum Monitor is based on Keybridge's extensive research which shows that not all movements in economic data are reliable signals of future economic trends. Keybridge has operationalized its research by constructing indices, each comprised of 15–20 high-frequency indicators. These indicators undergo 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

Each Momentum Monitor index provides a signal of the direction and magnitude of growth in equipment investment over the next 3 to 6 months. It is important to note that index values do not correspond to particular growth rates. Instead, the Momentum Monitor indices should be interpreted within the context of prior index readings and investment growth rates. For example, there are several simple rules to follow when examining the latest index values:

1. A rising index signals that growth in investment will accelerate from the current rate;
2. A falling index signals that growth in investment will decelerate from the current rate; and
3. No change in the index signals no meaningful change from the current growth rate.

Momentum Monitor Signals



To help the reader interpret the latest Momentum Monitor signals, a summary report for each equipment vertical follows a specific outline:

Materials Handling Equipment:
1 Investment in Materials Handling Machinery inched up at a 0.3% annualized rate in Q4 2014 and is up 7.3% year-over-year. 2 The Materials Handling Momentum Index slipped from 93.5 in February to 92.5 in March. 3 A 23% decline in the MNI-Chicago Business Barometer and a spike in Economic Policy Uncertainty offset gains in Machinery Sales, Manufacturing Sales, and the ISM Manufacturing Suppliers Deliveries Index. 4 The Index's recent trend continues to indicate that growth may moderate over the next three to six months.

1 The first sentence reports the latest growth rate for investment in a given vertical. This provides a context for interpreting the order of magnitude of growth over the next 3 to 6 months.

2 The second sentence explains the latest movement in the index, indicating whether momentum is accelerating or decelerating.

3 The report then describes the specific indicators driving the latest index value. This allows readers to understand the key drivers of the outlook.

4 Finally, the report ends with an interpretation of where investment growth is heading over the next 3 to 6 months.

ABOUT KEYBRIDGE

Keybridge is a public policy economics consulting firm. Keybridge provides analytical support and strategic advice to a select clientele that includes Fortune 500 companies, global financial firms, G-7 governments, premier industry associations, and non-profit organizations. Keybridge's experience and expertise make it uniquely suited to assist organizations that frequently operate at the interface of business, economics, and public policy.

Founded in 2001, Keybridge's mission is to provide balanced, credible, and timely technical analysis and strategic insights that inform business decisions and drive public policy debates. Our dedication to the principles of sound analysis, clear communication, and unmatched client service guide our work and serve as the foundation of our success.

Keybridge's senior staff is comprised of experts with distinguished academic credentials and extensive experience in the areas of economics and public policy. On a day-to-day basis, Keybridge principals work closely with clients to develop strategy and conduct timely analysis. For longer-term projects and highly specialized topics, the firm leverages its network of advisers — including world-class experts in the fields of econometrics, energy, and finance — to build project teams tailored to clients' unique needs.

Keybridge provides clients with access to a full suite of analytical services, including macroeconomic risk assessments, econometric modeling studies, policy impact studies, qualitative policy evaluations, and survey design and analysis. For clients requiring regular consultations, Keybridge offers on-going strategic advisory services in the areas of macroeconomic trends and risks, international trade and finance, and energy and environmental economics. Keybridge also assembles and manages inter-disciplinary teams of experts to conduct thought leadership projects to assist clients with building competitive advantages or reforming policy debates through the development, sharing, and application of innovative ideas. Keybridge's principals are regularly asked to present research and share insights with economic, financial, and policy audiences around the world, including corporate strategic planning committees, congressional committees, and international conferences.

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