2019
Equipment Leasing & Finance U.S. Economic Outlook

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SUMMARY

Equipment & Software Investment Outlook: Equipment and software investment expanded at a robust rate in the first half of 2018, driven by more preferable tax treatment and a general upswing in the U.S. economy. However, growth slowed in the third quarter and recent data point to a continuation of this trend, providing a weak jumping off point for 2019. The economy remains generally healthy, but the strong growth achieved in Q2 and Q3 is unlikely to be repeated in 2019 as headwinds build. Nonetheless, business conditions in the equipment finance industry remain favorable, and investment in the majority of equipment verticals should post moderate growth for at least the first half of the year.

Over the next three to six months:

- Agricultural Machinery investment growth is likely to slow;
- Construction Machinery investment growth should hold steady;
- Materials Handling Equipment investment is likely to expand at a moderate rate;
- All Other Industrial Equipment investment growth will likely remain weak and may contract;
- Medical Equipment investment growth is expected to slow;
- Mining & Oilfield Machinery investment growth will likely continue to decline;
- Aircraft investment growth should improve;
- Ships & Boats investment growth should accelerate;
- Railroad Equipment investment growth may increase;
- Trucks investment growth is expected to slow;
- Computers investment growth will likely remain stable; and
- Software investment growth should remain solid.

U.S. Capital Investment & Credit Markets: Capital spending continued to expand in 2018, though growth moderated over the course of the year. Going into 2019, the economy's underlying fundamentals should keep capital investment in positive territory, but growth rates are likely to decelerate. Credit market conditions remain generally healthy, with an increase in the supply of credit in the third quarter and subdued financial stress levels. However, demand for credit appears to be weakening (especially among businesses) and some business confidence indices are beginning to slip — which could be a harbinger for a business investment slowdown during the second half of the year.

Overview of the U.S. Economy: The U.S. economy accelerated in 2018, spurred by stronger growth in business investment, a historically healthy labor market, lower tax rates, and increased government spending. Consumers have been the main driver of growth over the past year, and near-record consumer confidence should keep spending levels elevated through at least the first half of 2019. However, residential investment is likely to remain weak, mounting trade frictions will constrain U.S. exports, and the global economy appears to be losing steam. Overall, while the U.S. economy remains healthy, growth is likely to soften in 2019 compared to the previous 12 months.

Bottom Line for the Equipment Finance Sector: After a breakout year in 2018 during which the economy had its strongest performance since 2015 and equipment and software investment posted its fastest growth since 2012, the economy is on good footing heading into the new year. Despite recent slippage, business and consumer confidence remain elevated and the labor market is strong. However, a weakening global outlook and trade-related headwinds will likely dampen U.S. growth, particularly in the second half of the year.

Overall, we expect the economy to grow 2.3% in 2019 (down from an estimated 2.9% in 2018), while we project that equipment and software investment will expand 4.1% (down from an estimated 7.9% in 2018).

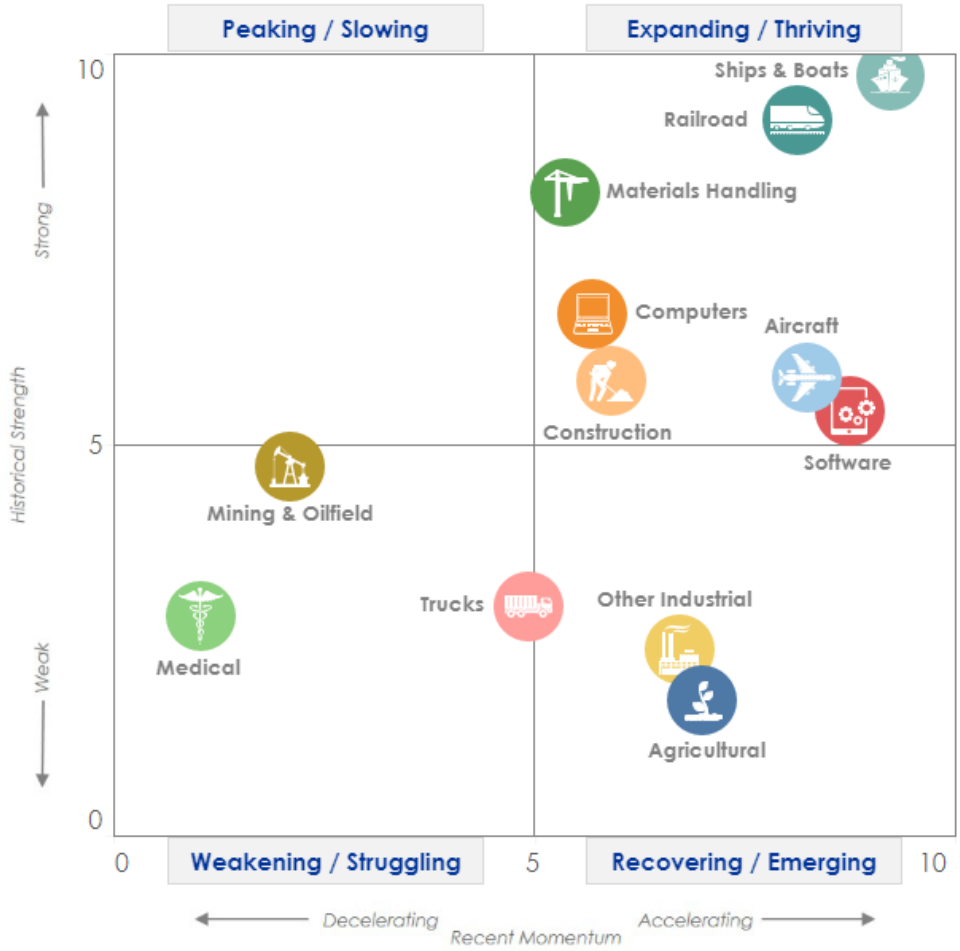
EQUIPMENT & SOFTWARE INVESTMENT OUTLOOK

We expect equipment and software investment to expand by 7.9% in 2018, which would mark the strongest annual growth since 2012. However, we anticipate that equipment & software investment growth will moderate next year to 4.1%, as rising interest rates and a maturing business cycle make investment conditions less favorable. As illustrated in the Momentum Monitor Sector Matrix below, momentum readings are above the long-term historical average (y-axis) in 7 of 12 verticals, and recent momentum (x-axis) accelerated in 9 of 12 verticals.

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

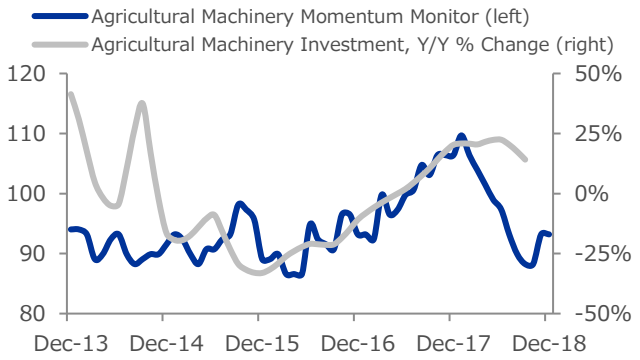


The matrix above summarizes the current values of each of the 12 Equipment & Software Investment Momentum Indices based on two factors: Recent Momentum (x-axis) and Historical Strength (y-axis):

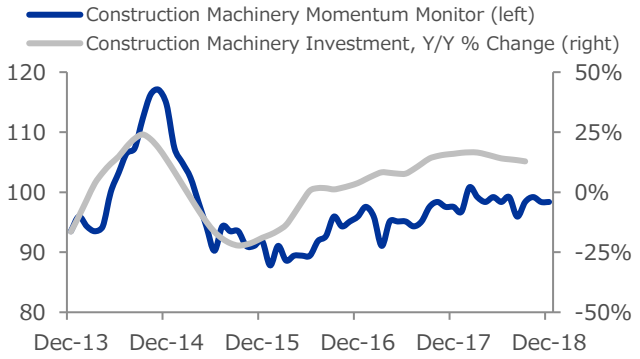
- "Recent Momentum" indicates a vertical's recent acceleration or deceleration in the past month relative to its average movement during the previous 3 months. Ratings closer to "0" indicate rapid deceleration, while ratings near "10" represent rapid acceleration.
- "Historical Strength" reflects a vertical's 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.

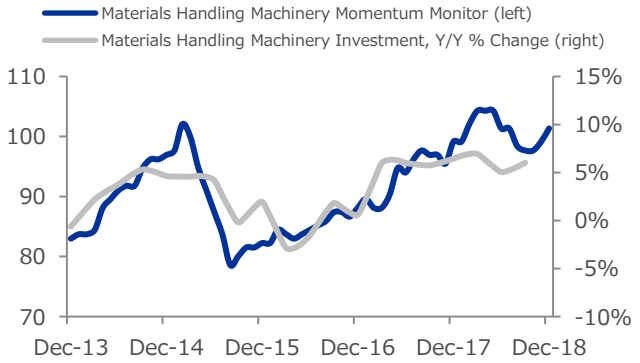
Agricultural Machinery: Investment in Agricultural Machinery fell 5.9% (annualized) in Q3 2018 but is up 14% from one year ago. The Agriculture Momentum Index held steady at 93.2 from November (revised) to December. In October, Lamb & Mutton Production increased 15%, but Average Precipitation in the Central U.S. dropped 40%. Overall, the Index continues to point to slower growth in agricultural machinery investment over the next three to six months.



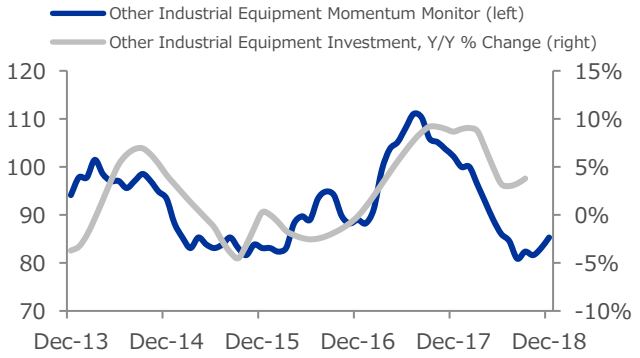
Construction Machinery: Investment in Construction Machinery rose at a 5.6% annual rate in Q3 2018 and is up 13% year-over-year. The Construction Momentum Index was unchanged at 98.4 from November (revised) to December. Shipments of Construction Machinery fell 0.7% in September, but Real Consumer Spending rose 0.4% in October, its eighth consecutive increase. Overall, the Index points to steady growth in construction machinery investment over the next three to six months.



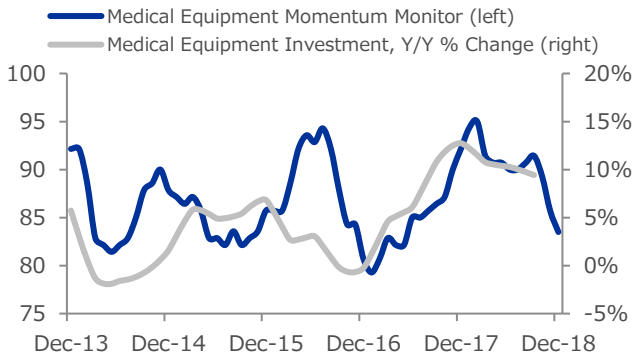
Materials Handling Equipment: Investment in Materials Handling Equipment increased at a 7.6% annual rate in Q3 2018 and is up 6.0% year-over-year. The Materials Handling Momentum Index rose from 99.1 (revised) in November to 101.3 in December. Unfilled Orders of Materials Handling Equipment increased 0.7% in September, and Manufacturing Employment rose 0.3% in October, its largest increase since December 2017. Overall, the Index points to moderate growth in materials handling equipment investment over the next two quarters.



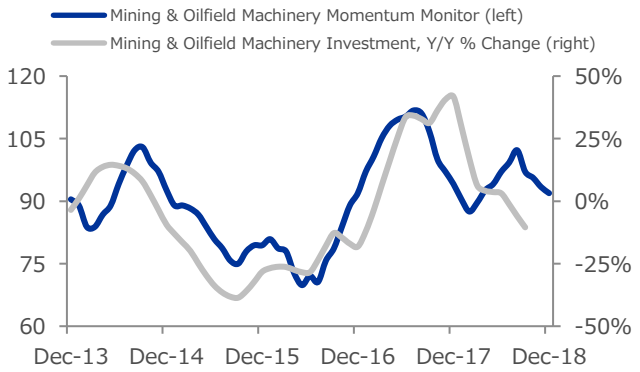
Other Industrial Equipment: Investment in All Other Industrial Equipment rose at an 11% annual rate in Q3 2018 and is up 3.8% from a year ago. The Other Industrial Equipment Momentum Index increased from 83.1 (revised) in November to 85.3 in December. Inventories of Machinery rose 1.2% in September, but Industrial Production for Manufacturing declined 1.5% in October, its sixth decrease over the past seven months. Overall, the Index continues to point to weak and potentially negative growth in other industrial equipment investment over the next three to six months.



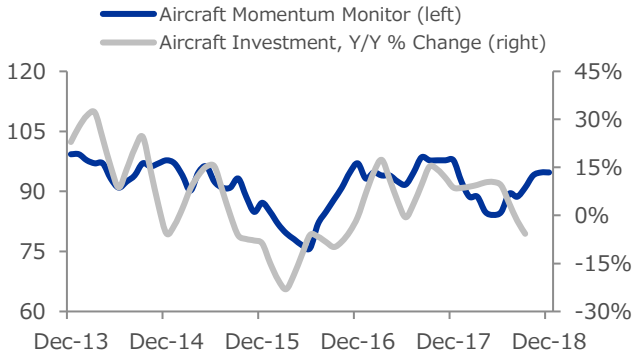
Medical Equipment: Investment in Medical Equipment expanded at an 11% annual rate in Q3 2018 and is up 9.4% year-over-year. The Medical Equipment Momentum Index decreased from 85.7 (revised) in November to 83.5 in December, its third consecutive decline. Manufacturers' New Orders of Non-Defense Capital Goods fell 2.6% in September, while Spending on Hospital Construction declined 1.4% in October. Overall, the Index points to slower growth in medical equipment investment over the next two quarters.



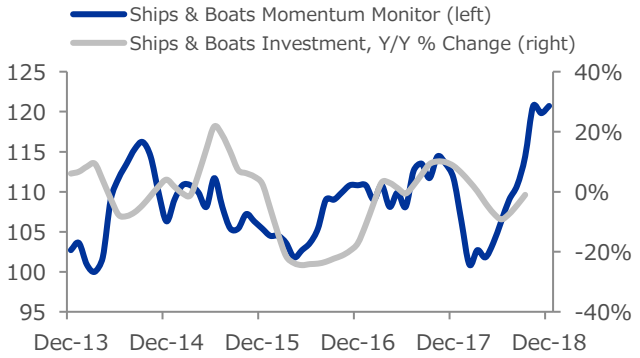
Mining & Oilfield Machinery: Investment in Mining & Oilfield Machinery declined at a 22% annual rate in Q3 2018 and is down 10% year-over-year. The Mining & Oilfield Machinery Momentum Index fell from 93.4 (revised) in November to 91.9 in December. In October, Unemployment in North Dakota rose 3.7%, while Sales of Light Trucks fell 1.4%. Overall, the Index points to continued weakness in mining & oilfield machinery investment over the next three to six months.



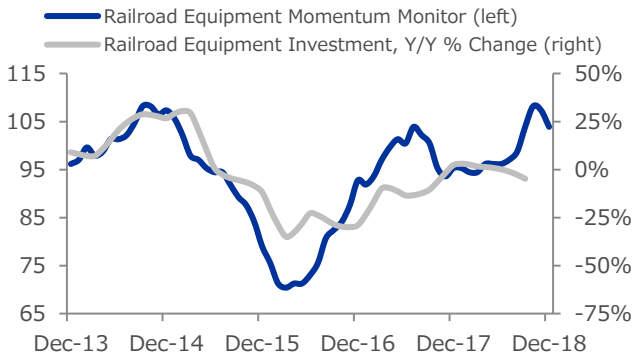
Aircraft: Investment in Aircraft dropped 19% (annualized) in Q3 2018 and is down 5.7% on a year-over-year basis. The Aircraft Momentum Index held steady at 94.7 from November (revised) to December. Exports of Civilian Aircraft jumped 30% in September, its second straight double-digit gain, but Shipments of Non-Defense Aircraft & Parts dropped 14% in October. Overall, the Index points to an improvement in aircraft investment growth over the next two quarters.



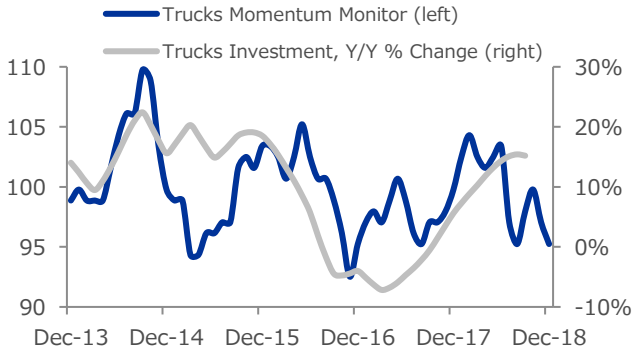
Ships & Boats: Investment in Ships & Boats surged at an annual rate of 52% in Q3 2018 but is down 1.0% year-over-year. The Ships & Boats Momentum Index rose from 119.8 (revised) in November to 120.7 in December. Industrial Production for Ship & Boat Building increased 0.9% in October, while Container Moves at the Port of Houston rose 4.6%. Overall, the Index continues to indicate stronger growth in ships and boats investment over the next three to six months.



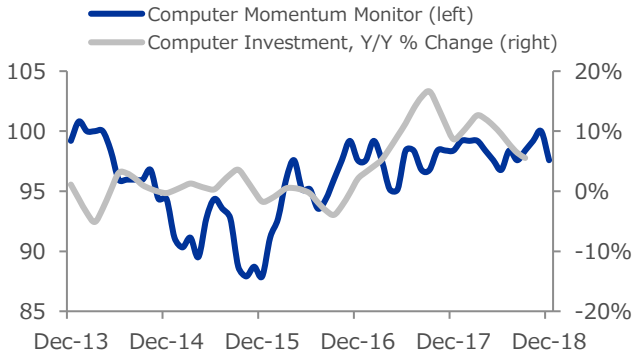
Railroad Equipment: Investment in Railroad Equipment declined at a 15% annual rate in Q3 2018 and is down 4.8% year-over-year. The Railroad Equipment Momentum Index fell from 107.3 (revised) in November to 103.9 in December. Industrial Production for Mining edged down 0.3% in October, but Rail Carloads of Petroleum Products jumped 24%. Overall, despite recent declines, the Index suggests an increase in railroad equipment investment growth over the next two quarters.



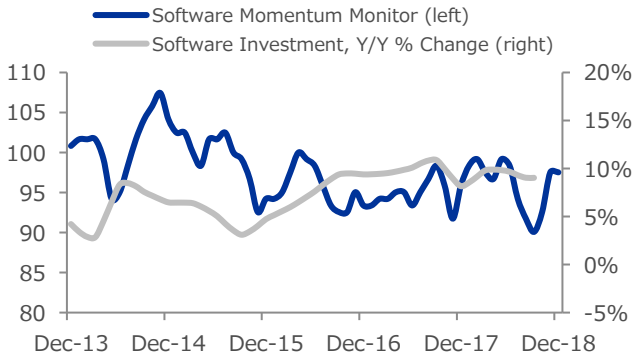
Trucks: Investment in Trucks rose at an 8.5% annual rate in Q3 2018 and is up 15% from year-ago levels. The Trucks Momentum Index declined from 97.1 (revised) in November to 95.2 in December. Average Hourly Earnings for Truck Transportation rose 0.3% in September, but Shipments of Primary Metals decreased 0.9% in October, its sharpest decline since June 2017. Overall, the Index suggests that investment growth in trucks may soften over the next three to six months.



Computers: Investment in Computers decreased at an annual rate of 1.6% in Q3 2018 but is up 5.5% year-over-year. The Computers Momentum Index fell from 100.0 (revised) in November to 97.6 in December. In October, Shipments of Communication Equipment rose 1.8%, but Export Prices of Computers edged down 0.8%. Overall, the Index points to stable growth in computers investment over the next two quarters.



Software: Investment in Software rose at an 8.7% annual rate in Q3 2018 and is up 9.0% year-over-year. The Software Momentum Index held steady at 97.5 from November to December. Shipments of Computers & Related Products increased 2.5% in October, while Business Construction Spending rose 3.4%. Overall, the Index points to continued solid growth in software investment over the next three to six months.



Equipment & Software Investment Annual Growth Forecast

Year-on-Year % Growth Rates

Sector	10-Year Historical Average	Last 4 Quarters	Next 4 Quarters
Agricultural Machinery	1.3%	14.1%	-2 to 6%
Construction Machinery	1.5%	12.8%	5 to 10%
Materials Handling Equipment	2.0%	6.0%	2 to 6%
Other Industrial Equipment	1.3%	3.8%	-5 to 3%
Medical Equipment	4.9%	9.4%	-2 to 5%
Mining & Oilfield Equipment	0.8%	-10.5%	-12 to 2%
Aircraft	1.5%	-5.7%	5 to 10%
Ships & Boats	-1.7%	-1.0%	6 to 12%
Railroad Equipment	-0.5%	-4.8%	4 to 10%
Trucks	11.4%	15.2%	3 to 9%
Computers	4.6%	5.5%	4 to 9%
Software	7.3%	9.0%	4 to 9%

Source: Macrobond Financial, Keybridge (forecasts)

U.S. Capital Investment and Credit Markets

Capital spending has experienced moderate growth in 2018, though equipment and software investment has waned over the course of the year. While sustained economic momentum should carry capital investment into 2019, investment growth may continue to fade next year as the business cycle matures further. Credit market conditions remain healthy, with an increase in the supply of credit in the third quarter and subdued financial stress levels, though demand for credit declined.

Overall, we expect equipment and software investment will expand by 7.9% in 2018 once Q4 data are released, which would represent the strongest year of growth since 2012. We also anticipate that the Federal Reserve will raise its benchmark interest rate once more in December, for a total of four rate hikes in 2018.

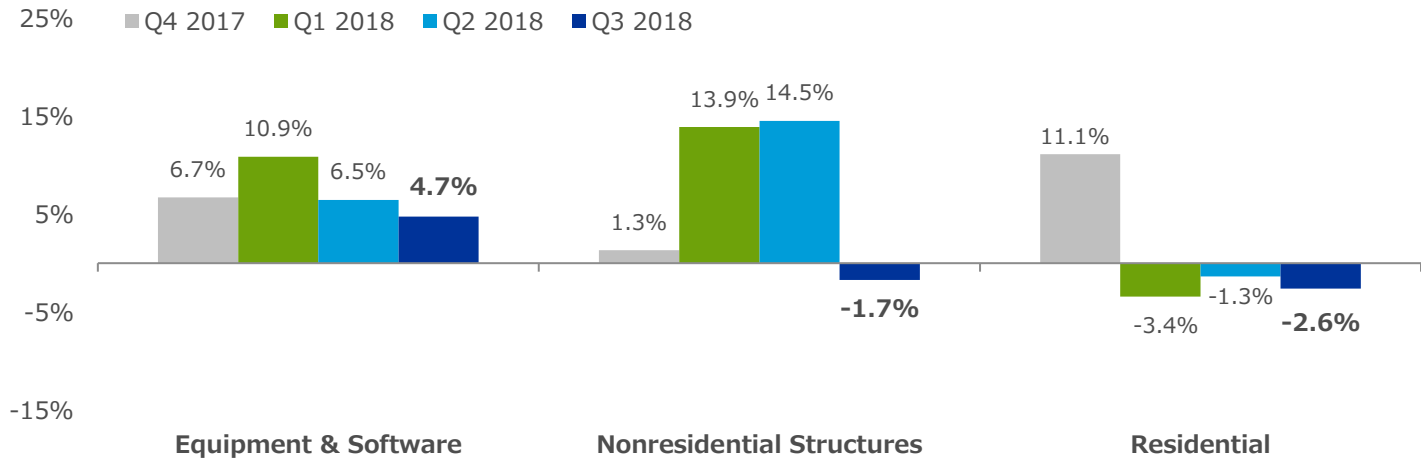
Looking ahead to 2019, our forecast for equipment and software investment growth is 4.1%, which is slower than the growth experienced in 2017 (6.9%) and 2018. We also anticipate two additional rate hikes in 2019.

Recent Trends in U.S. Capital Investment

Equipment and software investment growth slowed further to a 4.7% annualized rate in the third quarter. Investment in nonresidential structures contracted 1.7% (annualized) in Q3 after posting double-digit gains in each of the previous two quarters. Residential investment also declined, falling at a 2.6% annualized pace in the third quarter — the fifth decrease in the last six quarters and third in a row.

Investment Growth Rates

Quarter-on-Quarter, Seasonally Adjusted Annualized Growth Rate



Source: Macrobond Financial

- **Equipment Leasing and Financing:** New business volume growth for the equipment finance industry has been healthy throughout 2018. According to the ELFA Monthly Leasing and Finance Index ("MLFI-25"), the industry gained $8.9 billion in new business volume in October, up 6.0% from its year-ago level and up 4.5% year-to-date. Consistent with steady growth in new business volume and a business cycle in its late stages, financial stress has begun to creep up, but the industry's portfolio performance remains solid by historical standards. In October, 30-day delinquencies rose one tenth of a percent to 1.70%, but the measure remains well below pre-recession levels. Meanwhile, charge-offs edged down to 0.37% in October, and its current level remains below nearly three-quarters of all historical readings.

The Foundation's Monthly Confidence Index for the Equipment Finance Industry ("MCI-EFI") fell 4.7 points to 58.5 in November and is now at its lowest point in two years. A majority (57%) of industry executives rated the current U.S. economy as "excellent," but 11% of executives expect business conditions to worsen over the next four months (a belief that no respondents held in the previous month). Executives noted that recent stock market volatility and uncertainty around the effects of the midterm elections have caused some businesses to delay planned capital expenditures, especially in the small- and middle-ticket markets. However, many executives still expect to see the usual end-of-quarter, end-of-year spike in new business activity in December.

Looking ahead, the equipment leasing and finance industry appears poised to continue expanding into 2019. However, growth is likely to moderate as the effect of tax cuts wanes and the business cycle matures further, while rising interest rates will continue to put upward pressure on financial stress.

- **Equipment Verticals**: Equipment and software investment sustained moderate growth in the third quarter of 2018. Of the 12 equipment verticals tracked by the Foundation, seven experienced positive annualized growth and three posted double-digit gains, including Ships & Boats (+52%), Medical Equipment (+11%), and Other Industrial Equipment (+11%). Five equipment verticals experienced declines in investment growth in Q3, most notably Mining & Oilfield Equipment (-22%), Aircraft (-19%), and Railroad Equipment (-15%).

  Looking ahead, we expect the majority of equipment verticals to experience moderate investment growth during the first half of the year, including aircraft, software, computers, railroad, and ships and boats. At the same time, growth may have peaked in other industries (e.g., agriculture, trucking, and medical), while the oil and mining sector is also facing investment constraints due to a combination of oil supply and demand factors.

- **Other Factors:** Most measures of health in the industrial sector paint a picture of solid (though potentially slowing) growth. The ISM Manufacturing Purchasing Managers' Index (PMI) increased from 57.7 in October to 59.3 in November, remaining above the expansionary threshold set at 50, suggesting continued growth in the manufacturing sector. Furthermore, industrial production edged up 0.1 percentage point to 109.1 in October, climbing to a new all-time high for the fourth straight month. However, capacity utilization ticked down from 78.5% to 78.4% in October, and remains below the 80% expansionary threshold that historically indicates an imminent surge in capital spending. Meanwhile, new orders of durable goods (an indicator of same-quarter business activity) fell 4.4% from September to October — driven by a sharp decline in demand for transportation equipment — but is 7.5% above its year-ago level. Similarly, shipments of durable goods (an indicator of next-quarter business activity) fell 0.6% on a monthly basis in October, but is up 8.8% over the last 12 months.

Recent Trends in Credit Markets

Credit market conditions remained generally healthy in the third quarter. Credit supply increased compared to the previous quarter and financial stress remains muted by historical standards, indicating that credit markets still have room to grow. However, the demand for credit weakened in Q3 (especially among businesses), which mirrors the marked Q3 slowdown in business investment.

Summary of Credit Conditions

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

- **Credit Supply & Pricing:** The supply of credit for businesses increased in the third quarter. According to the October Fed Loan Officer Survey, standards and terms for commercial and industrial ("C&I") loans generally eased, with more than a third of banks reporting narrower loan rate spreads on C&I loans to large and middle-market firms. Competition among lenders continues to play an outsized role in lending conditions: all banks who reportedly eased standards or terms on C&I loans indicated that increased competition was an important factor. Banks also cited increased risk tolerance and a more favorable/less uncertain economic outlook as factors they considered in deciding to ease standards or terms. Meanwhile, standards for commercial real estate ("CRE") loans generally remained unchanged over the third quarter, though standards for CRE construction and land development loans experienced a modest tightening.

  Regarding lending to households, the October Fed Loan Officer Report revealed that the supply of credit either increased or held steady across all major categories of consumer loans. Banks reportedly eased standards for residential real estate ("RRE") loans in the third quarter, while standards for auto loans, consumer credit card loans, and other consumer loans saw little change on balance. In a special question, banks reported that a flattening yield curve has not affected lending standards thus far this year, but also indicated that if the yield curve does invert, they would begin tightening standards across every major loan category.

- **Credit Demand:** Business demand for credit weakened in the third quarter. According to the October Fed Loan Officer Survey, demand fell for C&I loans as well as most types of CRE loans, though demand was unchanged for CRE loans secured for multifamily properties. Credit demand typically tracks business confidence fairly closely, and by some measures confidence has slipped recently: for example, the National Federation of Independent Business (NFIB) Small Business Optimism Index fell 0.5% in October after a 0.8% drop in September, and Business Roundtable's CEO Economic Outlook Index decreased 1.6% to 109.3 in Q3, its second consecutive decline. However, other measures of small business confidence remain robust, including the Wells Fargo / Gallup Small Business Optimism Index which climbed 11% to an all-time high of 118 in Q3 and the Thomson Reuters / PayNet Small Business Lending Index ("SBLI"), which jumped 15 points to 148.2 in October — its third-highest reading since the series began in 2005.

  Consumer demand for credit was a mixed bag in Q3. The October Fed Loan Officer Survey reported that demand weakened for RRE loans, was unchanged for auto loans and consumer credit card loans, and strengthened for other types of consumer loans in the third quarter. Data on consumer loan growth convey fluctuating demand: after exceeding expectations in August, growth in deposits and loans to consumers fell short of expectations in September with a modest 3.3% expansion. Notably, revolving credit declined in September for the third time in six months, signaling that consumers continue to prudently manage credit and remain well-positioned to pay back debt. Consumer confidence levels remain elevated, which should translate to sustained healthy consumer spending growth in the first half of 2019.

- **Financial Stress:** U.S. credit markets remain healthy, though certain measures of financial stress have recently experienced an uptick. The St. Louis Fed Financial Stress Index rose from -1.3 in September to -0.8 in November, but the current level remains in the bottom quarter of all readings. Meanwhile, the Kansas City Fed Financial Stress Index climbed from -0.7 in August to -0.3 in October, its highest level in nearly two years. However, delinquency rates do not yet signal an erosion in credit quality: loan delinquencies decreased to 1.00% in Q3 and have fallen consistently over the past two years, while lease delinquencies edged down to 1.02% in the third quarter.

- **Other Factors:** Ten-year Treasury yields climbed from 2.82% in August to 3.23% in October, reaching the highest level since 2011. After oscillating in October and early November, ten-year Treasury yields dropped to 2.92% in early December following remarks from Federal Reserve officials suggesting the potential for a slowdown in the current rate hike schedule. Notably, the spread between 2-year and 10-year Treasury yields narrowed sharply to just 11 basis points in early December, and the 2-year / 5-year spread inverted for the first time in this business cycle. These developments raise concerns regarding the economy's long-term growth prospects, as historically an inverted yield curve has been a reliable indicator of a recession in the following 1–2 years.

Update on Fed Policy

The market consensus is that the Federal Reserve will raise its benchmark interest rate at its December meeting by 25 basis points, bringing the upper bound to 2.50%. The economy has exhibited strong economic momentum in 2018, which has led to three Fed rate increases thus far. A fourth rate increase in December meeting is highly likely.

According to projections from the Federal Reserve's September meeting, Fed officials are divided regarding expectations for the rate hike schedule in 2019, with equal numbers forecasting two, three, and four rate hikes in the coming year. However, recent statements from senior officials, including Fed Chair Jerome Powell, have indicated that the Fed may slow or even halt rate hikes in 2019 given that interest rates are considered close to neutral and the effects of the 2018 rate increases have not yet been fully realized. We expect the Fed to raise rates twice in 2019, though a worsening global outlook could further delay planned rate hikes.

OVERVIEW OF THE U.S. ECONOMY

After a strong performance throughout much of last year, the U.S. economy appears likely to moderate in 2019. Consumer spending should remain a bright spot during the first half of the year, spurred by a historically strong labor market, rising wages, and a lower overall tax burden. However, residential investment appears unlikely to recover as higher interest rates continue to dampen demand, while U.S. exports will continue to be constrained by a combination of weakening global growth, tariffs, and a strengthening dollar. Business investment will be an important factor to watch in 2019, as the recent deceleration in business fixed investment could be a blip or an early indication of a broader economic slowdown.

GDP growth eased slightly in the third quarter of 2018, but the economy still grew at a robust 3.5% rate after expanding 4.2% in Q2. We expect growth to weaken considerably in Q4 and the beginning of 2019 compared to these levels, however, as the combined effects of waning fiscal stimulus, rising interest rates, escalating trade conflicts, and slowing global growth weigh on the U.S. economy. If Q4 economic data are indeed soft as anticipated, it will provide a lower jump-off point for the economy in 2019 and tamp down the consensus growth forecast.

Overall, we project the U.S. economy to grow 2.3% in 2019 — similar to the growth level experienced in 2017 and below the consensus estimate of 2.4 – 2.7%.

Recent Trends in the U.S. Economy

The U.S. economy accelerated in 2018, posting two of the strongest quarters of growth since the recession and approaching 3% growth on the year (though we expect the final annual growth rate to fall just short of this level). However, recent trends suggest that the economy is likely to soften in the months ahead. On the positive side, a historically healthy labor market and near-record consumer confidence should keep consumption levels elevated. However, prospects for business investment growth next year are highly uncertain after the latest GDP report revealed disappointing equipment investment growth and a contraction in structures investment. Similarly, net exports have suffered under the combined weight of trade conflicts and slowing global growth and appear unlikely to improve unless the Trump administration abruptly changes course on trade policy.

Indicator	Recent Activity
Consumption	Consumer spending rose at an annualized rate of 3.6%, a healthy reading.
Equipment & Software Investment	Equipment & software investment grew by 4.7% (annualized), a notable deceleration from the robust growth of late-2017 and early-2018.
Residential Investment	Residential investment fell 2.6% (annualized), its fifth decline in six quarters.
Government Expenditures	Government spending rose 2.6% (annualized), the strongest growth in over two years.
Net Exports	Net exports collapsed in Q3 as exports fell to -4.4% (annualized) growth while imports surged 9.2% (annualized).

As 2019 approaches, the economy is generally in good shape, but there are several reasons to dial back expectations compared to the robust growth that occurred in mid-2018. Growth will largely depend on whether U.S. consumers — spurred on by low unemployment, rising wages, a lower tax burden, and relatively low debt levels — continue to spend at healthy levels in the face of rising headwinds, including weak residential investment, rising interest rates, slowing global growth, and worsening trade frictions.

- **Q3 GDP:** The U.S. economy grew at an annualized rate of 3.5% in the third quarter, the second straight quarter of robust growth. Consumer spending remained strong at 3.6% growth in Q3 while government spending increased by 2.6% rate. However, nonresidential fixed investment fell to a 2.5% growth rate — a sharp deceleration from the strong growth seen in the first two quarters of 2018. This overall growth rate was pulled down by a collapse in nonresidential structures investment (-1.7% annualized growth) and a slowdown in equipment & software investment (+4.7% annualized growth). Residential investment contracted by an annualized -2.6%, marking its fifth decline in the last six quarters. Net exports subtracted 1.9 percentage points from GDP, driven by worsening trade conflicts and slowing global demand. Meanwhile, a massive expansion in inventories added almost 2.3 percentage points to GDP growth, likely reflecting business stockpiling efforts in advance of a new round of tariffs on Chinese imports in early 2019.

- **Inflation:** Inflationary pressures have eased recently after building in the beginning of the year. In the first half of 2018, year-on-year growth in the consumer price index accelerated sharply; headline inflation reached a high of 2.9% in June, while core inflation (which excludes volatile food and energy prices) climbed to 2.4% in July. Since then, however, inflationary measures have moderated: headline inflation rose to 2.5% in October after falling sharply the previous month, while core inflation declined from 2.2% to 2.1%.

  Looking ahead, inflation is likely to remain in the low 2% range in the first half of the year, as the combination of a substantial decline in oil prices and a strong dollar should help offset faster wage growth. However, a slight increase in inflation is possible in the 4th quarter due to base effects unless oil prices continue to fall.

- **Growth Forecasts:** The *Economist* Poll of Forecasters for October estimated a growth rate of 2.5% for 2019, while the *Wall Street Journal* consensus forecasts 2.3% growth. These estimates are at the lower end of the Federal Reserve's September "central tendency" forecast of 2.4–2.7% growth for 2019.

Economic Tailwinds

A historically strong labor market continues to add jobs despite a low unemployment rate, which has helped to fuel an acceleration in consumer spending.

- **Strong Labor Market:** Despite a multi-decade low unemployment rate of 3.7%, the U.S. economy has added jobs at a rapid rate of 213,000 per month through October — well above the 2017 average of 182,000 jobs per month. As would be expected in a tight labor market, wage growth is accelerating: average hourly earnings for private-sector workers increased 3.1% year-over-year in October, the fastest pace in nearly a decade. Meanwhile, the prime-age (25-54 years old) labor force participation rate has climbed this year and is now at its highest level since 2010, indicating that workers who were previously out of the labor force are being drawn back in by better hiring conditions. Finally, although initial claims for unemployment insurance (a leading indicator of labor market downturns) have edged up in recent weeks, they are still very low by historical standards. Job gains should moderate next year as the labor market tightens further, and unemployment claims may continue to rise, but the U.S. labor market is currently at one of its healthiest points in recent history and should remain solid throughout 2019.

- **Healthy Consumer Spending:** Consumer spending has been one of the key components of the recent surge in U.S. economic growth, growing 3.8% and 3.6% (annualized) in Q2 and Q3, respectively. Spending has been buoyed by recent tax cuts, a healthy labor market, and record-high consumer confidence — though interestingly, it has consistently fallen short of what would be expected given the near-record levels of consumer confidence experienced over the last two years.

Regardless, consumer credit markets have shown few signs of broad deterioration, as credit card delinquency rates have remained virtually unchanged from a year ago. Indeed, preliminary estimates of consumer spending on Black Friday and Cyber Monday reveal that online spending was up nearly 20% from last year, setting a record that underscores the current sentiment of U.S. consumers. Overall, recent data suggest that consumer spending should continue to drive economic growth in 2019.

Economic Headwinds

Heading into 2019, the most significant headwinds to U.S. economic growth are blowing from overseas. The outlook for the global economy has worsened considerably over the last quarter, with growth slowing in China, Europe, and other major emerging markets. China, Japan, and Germany (the world's second, third, and fourth-largest economies) all experienced slowdowns or contractions in the third quarter, driven by a combination of new international trade restrictions and tightening credit conditions. The global growth slowdown caused by these factors is beginning to weigh on the U.S. economy in the fourth quarter, and this trend appears likely to continue in 2019.

- **Increased Trade Pressures:** The conflict between the United States and China over trade policy has escalated further over the last quarter:

  (1) The United States imposed a 10% tariff on another $250 billion of Chinese goods in September and is scheduled to increase the tariff to 25% in January.

  (2) China retaliated by setting a 10% tariff on $60 billion of U.S. goods.

  (3) U.S. officials implemented policy changes designed to prevent China from gaining access to sensitive American technology, which has further restricted investment flows between the two countries.

These actions have significantly increased uncertainty surrounding the future direction of U.S.-China economic relations and are beginning to take their toll on global economic growth, especially in China. For example, global equity markets have had a relatively bad year, but the China Shanghai Composite Index, down 25% on the year, has fared particularly poorly. Auto sales in China are noticeably weak, posting negative annual growth for the first time in over two decades, and business confidence and inflation have also eased. Collectively, recent data suggest that the Chinese economy could be on the verge of a significant slowdown, triggered in part by trade tensions with the United States. Slowing economic growth in China would compound preexisting risks associated with China's massive debt burden, currently estimated at 300% total debt to GDP — raising the possibility of a disorderly credit crunch or banking crisis.

The immense size of the Chinese economy means that even a moderate economic slowdown would have substantial ripple effects across the globe. Already, the Euro area economy appears to be suffering from the effects of declining Chinese demand for European automobiles and other exports. Although U.S. economic growth has withstood this headwind thus far, additional trade restrictions with China (and their corresponding negative effects on the global economy) would reduce U.S. GDP growth by several tenths next year according to most estimates, unless the two countries settle their dispute.

- **Global Credit Tightening:** A second major factor weighing on U.S. and global growth is tightening credit conditions. In the United States, the combination of rising interest rates and quantitative tightening via the Fed's balance sheet selloff have negatively affected housing and auto markets, as large consumer purchases become increasingly unaffordable. Rising rates are likewise sparking concerns about the serviceability of domestic corporate debt as well as the health of the leveraged loan market. Globally, the same conditions are contributing to major currency depreciation in several key

emerging markets (most notably Argentina, Turkey, and South Africa) as rising U.S. interest rates draw capital out of emerging market assets and into safer investments, including U.S. Treasuries. Moreover, concerns regarding the quality and amount of corporate debt are of even greater overseas: for example, a recent McKinsey study estimates that while only 6% of U.S. corporate bonds are issued by insolvent companies, the same measure is 18% for Indian corporate bonds and 24% for Chinese and Brazilian corporate bonds. If U.S. interest rates continue to rise as expected, the share of risky corporate debt will increase, raising the possibility of an emerging market financial crisis. Rising interest rates also may be contributing to financial market volatility in Europe, where a weakening and overindebted Italian banking system adds to widespread concern about Italy's sovereign debt obligations and the potential for a renewed Eurozone crisis. Given that most signs point to continued quantitative tightening and additional interest rate hikes from the Fed next year, these risks may intensify or spread to other countries.

Additional Factors to Watch

While it is likely that business investment will fall short of the strong, tax cut-fueled growth rate that occurred in early 2018, the outlook for capex spending remains generally positive for the first half of the yea, though a slowdown in Q3 or Q4 is possible. Meanwhile, volatile oil prices create challenges and opportunities for the U.S. oil sector, while the exceptionally weak performance of the U.S. housing sector shows little sign of abating — though a modest rebound is possible. Finally, a return to divided government could pave the way for bipartisan compromise on a small set of issues (including infrastructure spending), but there are plenty of reasons to be skeptical.

- **Business Investment Slowdown?:** Nonresidential fixed investment disappointed in the third quarter, expanding at just 2.5% (annualized) after expanding 11.5% and 8.7% in Q1 and Q2. Recent economic data have been mixed, leaving lingering questions as to whether investment slowdown constitutes a blip or a harbinger of things to come. Measures of business confidence (e.g., NFIB's Small Business Optimism Index and Business Roundtable CEO Economic Outlook Index) remain elevated by historically standards, but have eased over the last quarter. The Foundation's Monthly Confidence Index likewise fell markedly in November, and the same holds true for other measures of business activity (e.g., the ISM Manufacturing and Non-Manufacturing Purchasing Managers Indices). On balance, business investment should grow at a modest to moderate pace in 2019 (our forecast for equipment and software investment growth, which is closely related to business investment, is 4.1%). However, a more significant deceleration next year is possible if trade tensions and tightening credit conditions continue to erode business confidence.
- **Oil Sector Uncertainty:** Elevated oil prices led to strong oilfield investment during the first three quarters of 2018, as evidenced by the nearly 20% year-to-date increase in the number of U.S. oil rigs. However, oil prices have plummeted from multi-year highs attained in early October, with WTI prices falling to $53/barrel and Brent prices falling to $60/barrel as of early December. Battered by a combination of supply and demand factors (e.g., surging U.S. production, a cooling global economy, and sanction waivers for Iranian crude), oil has entered a bear market. Global oil demand is expected to weaken further, as evidenced by OPEC and IEA both lowering their demand forecasts for 2019. The supply-side picture is less clear, but overall, oil prices are likely to remain muted, with U.S. prices even lower than global prices. Over time, the WTI/Brent price differential could incentivize U.S. producers to invest more heavily in pipeline and export capacity in order to take advantage of higher global oil prices, but pipeline projects typically take years to approve and complete.
- **Housing Sector: Continued Weakness?** Residential investment has contracted in five of the last six quarters, leaving housing as the weakest sector of the U.S. economy. Although demand for new homes remains strong, supply-side factors

have slowed building activity. Rising costs for labor, lumber, and metals continue to weigh on homebuilder optimism. For example, the NAHB/Wells Fargo Housing Market Index — a key measure of homebuilder sentiment and a leading indicator of economic downturns — recently fell to its lowest point in over two years. Meanwhile, the combination of elevated home prices and rising interest rates have begun to weigh on demand, as the share of consumers who believe now is a good time to buy a home has fallen from 73% to 66% over the last 12 months according to the University of Michigan's Survey of Consumers. Similarly, existing home sales have declined on an annual basis for eight consecutive months in 2018.

Looking ahead, there are no clear indications of an imminent housing sector rebound, as most of the headwinds inhibiting growth in 2018 remain. However, the prolonged period of housing sector weakness does raise the possibility of modest improvement in 2019, particularly if the Fed slows its pace of rate increases (as expected) and the Trump administration reverses course or negotiates agreements with China and other key trading partners to reduce tariffs (and, by extension, input prices).

- **Return to Divided Government:** The midterm elections resulted in a 40-seat swing in the House of Representatives, ushering in Democratic leadership for the first time since 2010. Although Republicans increased their majority in the Senate, losing control of the House changes the dynamic in Washington and could lead to a return of political brinksmanship and dysfunction that characterized Congress during much of the Obama administration (e.g., battles over funding the government and, potentially, raising the debt ceiling, which will be necessary this summer). On the other hand, there are also several issues for which a bipartisan compromise is possible, including pharmaceutical pricing, privacy and data security, criminal justice reform, and a long-rumored spending package for infrastructure improvements. One factor that may complicate these efforts, however, is that Democratic leaders have signaled their intent to launch a broad array of investigations related to the Trump administration's policies and conduct over the last two years, which may pit Democratic committee chairman, Republican ranking members, and their respective committee staff against one other in public and highly partisan battles, making efforts to collaborate on legislation more challenging.

Projections for Key Economic Indicators

Indicator	2017	2018e	2019 Quarterly Estimates				2019e
			Q1e	Q2e	Q3e	Q4e	
Real GDP (SAAR %)	2.2%	2.9%	2.0%	2.0%	1.7%	1.4%	2.3%
Real Investment in Equipment & Software (SAAR %)	6.9%	7.9%	4.1%	3.6%	3.2%	2.6%	4.1%
Inflation (year-on-year %)	2.1%	2.5%	2.0%	2.1%	2.1%	2.2%	2.1%
Federal Funds Target Rate (upper bound, end of period)	1.50%	2.50%	2.75%	3.00%	3.00%	3.00%	3.00%
10-year Treasury Rate (end of period)	2.40%	3.20%	3.30%	3.45%	3.50%	3.50%	3.50%
Total Payroll Growth (in thousands)	+2,188	+2,450	+570	+525	+470	+430	+1,995

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	2016		2017				2018		
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Real Gross Domestic Product (SAAR %)									
GDP	1.9%	1.8%	1.8%	3.0%	2.8%	2.3%	2.2%	4.2%	3.5%
Consumer Spending	2.7%	2.6%	1.8%	2.9%	2.2%	3.9%	0.5%	3.8%	3.6%
Gross Private Fixed Investment	-0.4%	8.1%	4.9%	5.7%	8.8%	0.8%	9.6%	-0.5%	15.1%
Inv: Equipment & Software	2.0%	2.4%	9.7%	10.5%	10.1%	6.7%	10.9%	6.5%	4.7%
Inv: Agricultural Machinery	-9.8%	-4.4%	0.6%	24.6%	24.5%	34.1%	1.2%	32.9%	-5.9%
Inv: Construction Machinery	-12.2%	11.1%	18.3%	16.8%	10.3%	18.8%	20.5%	7.3%	5.6%
Inv: Materials Handling Equipment	4.7%	3.4%	7.5%	8.4%	3.7%	6.1%	9.5%	1.0%	7.6%
Inv: All Other Industrial Equipment	-0.8%	6.7%	5.0%	16.5%	8.9%	4.7%	5.3%	-5.4%	11.2%
Inv: Medical Equipment	-3.6%	7.7%	12.8%	8.1%	14.8%	15.4%	5.1%	6.2%	11.3%
Inv: Mining & Oilfield Machinery	47.1%	-23.9%	104.4%	39.4%	37.1%	3.5%	-35.7%	24.1%	-22.1%
Inv: Aircraft	-19.0%	-23.6%	71.6%	-8.1%	46.5%	-39.6%	76.9%	-8.8%	-19.0%
Inv: Ships & Boats	-25.9%	21.5%	10.6%	-1.9%	7.9%	18.9%	-20.1%	-33.7%	52.1%
Inv: Railroad Equipment	-9.9%	-26.3%	3.0%	-18.2%	3.4%	25.7%	0.1%	-22.9%	-15.5%
Inv: Trucks	-11.1%	-0.2%	-5.9%	-1.2%	5.3%	27.0%	11.9%	14.1%	8.5%
Inv: Computers	-5.3%	12.3%	11.5%	29.4%	14.1%	-15.3%	28.7%	15.6%	-1.6%
Inv: Software	8.1%	7.5%	11.7%	13.1%	11.3%	-2.6%	18.6%	12.5%	8.7%
Credit Conditions									
Nonfinancial Sector Debt (% of SAAR GDP)	69.3%	69.4%	69.8%	69.4%	70.0%	70.1%	70.4%	69.9%	69.8%
Loan Delinquency Rate	1.6%	1.6%	1.5%	1.3%	1.3%	1.2%	1.1%	1.1%	1.0%
Lease Delinquency Rate	1.0%	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Net Tightening of C&I Loan Standards	8.5%	1.5%	1.4%	-2.8%	-3.9%	-8.5%	-10.0%	-11.3%	-15.9%

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	2017		2018										
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Employment													
Change in Total Payrolls (thousands)	216	175	176	324	155	175	268	208	165	286	118	250	-
Change in Private Payrolls (thousands)	217	174	188	321	153	174	260	192	137	267	121	246	-
Unemployment Rate	4.1%	4.1%	4.1%	4.1%	4.1%	3.9%	3.8%	4.0%	3.9%	3.9%	3.7%	3.7%	-
Business Activity													
Industrial Production	105.3	105.8	105.4	105.9	106.4	107.7	106.8	107.5	107.9	108.8	109.0	109.1	-
Capacity Utilization	77.1%	77.3%	77.0%	77.2%	77.5%	78.2%	77.5%	77.8%	78.0%	78.5%	78.5%	78.4%	-
PMI Composite Index	58.2	59.3	59.1	60.8	59.3	57.3	58.7	60.2	58.1	61.3	59.8	57.7	59.3
NFIB Small Business Optimism Index	107.5	104.9	106.9	107.6	104.7	104.8	107.8	107.2	107.9	108.8	107.9	107.4	-
Consumer Activity													
Consumer Confidence	128.6	123.1	124.3	130.0	127.0	125.6	128.8	127.1	127.9	134.7	135.3	137.9	135.7
Personal Consumption (M/M % Chg)	0.5%	0.1%	-0.1%	-0.3%	0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.1%	0.4%	-
Retail Sales (M/M % Chg)	0.7%	0.0%	-0.1%	0.1%	0.7%	0.3%	1.2%	0.2%	0.6%	-0.1%	-0.1%	0.8%	-
Lending Activity													
C&I Loans (M/M % Chg)	-0.1%	0.1%	0.3%	0.1%	0.9%	2.1%	0.1%	0.9%	0.7%	-0.1%	0.0%	0.7%	-
MLFI-25 New Business Volume (Bil.$)	7.50	12.80	6.90	7.70	9.10	7.90	7.70	9.10	8.20	8.90	8.50	8.90	-
MLFI-25 Avg Losses as a % of Net Rec.	0.42%	0.48%	0.34%	0.28%	0.51%	0.30%	0.31%	0.33%	0.31%	0.29%	0.40%	0.37%	-
MLFI-25 Credit Approval Ratio	73.6%	77.6%	76.9%	74.2%	75.2%	76.2%	76.8%	75.8%	76.2%	76.4%	75.7%	76.5%	-
Interest Rates (% avg of period)													
Fed Funds Target Rate (Lower Bound)	1.00%	1.25%	1.25%	1.25%	1.50%	1.50%	1.50%	1.75%	1.75%	1.75%	2.00%	2.00%	2.00%
1-Year Treasury Rate	1.56%	1.70%	1.80%	1.96%	2.06%	2.15%	2.27%	2.33%	2.39%	2.45%	2.56%	2.65%	2.70%
3-Year Treasury Rate	1.81%	1.96%	2.15%	2.36%	2.42%	2.52%	2.66%	2.65%	2.70%	2.71%	2.84%	2.94%	2.91%
10-Year Treasury Rate	2.35%	2.40%	2.58%	2.86%	2.84%	2.87%	2.98%	2.91%	2.89%	2.89%	3.00%	3.15%	3.12%
30-Year Treasury Rate	2.80%	2.77%	2.88%	3.13%	3.09%	3.07%	3.13%	3.05%	3.01%	3.04%	3.15%	3.34%	3.36%
AAA Corporate Bond Yield	3.57%	3.51%	3.55%	3.82%	3.87%	3.85%	4.00%	3.96%	3.87%	3.89%	3.98%	4.14%	4.22%
BAA Corporate Bond Yield	4.27%	4.22%	4.26%	4.51%	4.64%	4.67%	4.83%	4.84%	4.79%	4.77%	4.88%	5.07%	5.21%
Prices													
Headline Inflation (Y/Y % Chg)	2.2%	2.1%	2.1%	2.2%	2.4%	2.5%	2.8%	2.9%	2.9%	2.7%	2.3%	2.5%	-
Core Inflation (Y/Y % Chg)	1.7%	1.8%	1.8%	1.8%	2.1%	2.1%	2.2%	2.3%	2.4%	2.2%	2.2%	2.1%	-
Oil Price (West Texas Int., $/barrel)	57.4	60.46	64.82	61.43	64.87	68.56	66.98	74.13	69.88	69.84	73.16	65.31	50.78

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 report is the full 2019 Annual Outlook, and quarterly updates will follow in April, July, and October. 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

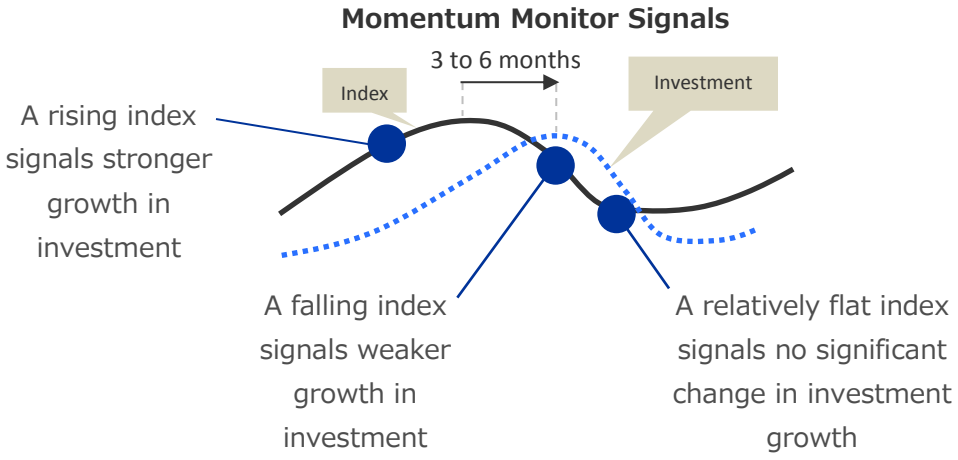
Business leaders require actionable forward-looking intelligence to make strategic decisions. Accordingly, the Foundation commissioned Keybridge LLC to develop a series of custom leading indicators for the equipment sector. The Foundation-Keybridge Equipment & Software Investment Momentum Monitor consists 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.



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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