

# 2016 Equipment Leasing & Finance U.S. Economic Outlook





EQUIPMENT LEASING & FINANCE

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## Equipment Leasing & Finance Foundation

1825 K STREET • SUITE 900

WASHINGTON, DC 20006

[WWW.LEASEFOUNDATION.ORG](http://WWW.LEASEFOUNDATION.ORG)

202-238-3429

KELLI JONES NIENABER, EXECUTIVE DIRECTOR

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## SUMMARY

**Equipment & Software Investment Outlook:** Lingering headwinds will likely result in moderate equipment and software investment growth in 2016. Although Q4 data are not yet available, we expect 2015 annual growth will be roughly 4.2%, and we expect a similar year of around 4.4% growth in 2016. Weakness in the global economy (particularly China), low commodity prices, and a strong dollar are diminishing businesses' incentive to invest, and these trends are likely to continue. As seen in 2015, some equipment and software verticals will be harmed by their exposure to these headwinds, while other verticals will benefit from signs of strength in the U.S. economy:

- Agriculture Machinery investment growth will likely remain weak over the next three to six months.
- Construction Machinery investment growth may slow somewhat, yet remain solid over the next three to six months.
- Materials Handling Equipment investment growth should remain weak over the next three to six months.
- All Other Industrial Equipment investment growth is likely to slow over the next three to six months.
- Medical Equipment investment growth is expected to stabilize over the next three to six months.
- Mining & Oilfield Machinery investment growth should remain strongly negative over the next three to six months.
- Aircraft investment growth may increase over the next three to six months.
- Ships & Boats investment growth is poised to strengthen in the next three to six months.
- Railroad Equipment investment growth is likely to remain negative over the next three to six months.
- Trucks investment growth should remain steady over the next three to six months.
- Computers investment growth rates appear set to increase moderately over the next three to six months.
- Software investment growth may strengthen over the next three to six months.

**U.S. Capital Investment & Credit Markets:** Mirroring 2015, declines in the energy and manufacturing sectors will weigh on capital spending in 2016, yet small businesses and households should continue to borrow at a steady clip. The U.S. credit system is healthy and financial stress is muted, limiting financial risks going into next year. Solid U.S. economic data are setting the stage for gradual Fed interest rate increases in 2016, which may alleviate spread compression for equipment lessors.

**Overview of the U.S. Economy:** As domestic strength offsets global headwinds, we expect U.S. GDP growth to tick up from 2.6% in 2015 to 2.8% in 2016. Over the last 12 months, several key drivers of growth in recent years faltered, while other sectors that have lagged began to pick up steam. This fundamental shift will underpin U.S. economic expansion in 2016.

- Slowing growth in China will have global ramifications in 2016, particularly for commodity producers and heavy equipment manufacturers. Low commodity prices and a strong dollar have dampened U.S. exports and lowered business confidence in recent months, particularly among large global firms. These trends appear likely to continue into 2016.
- However, revivals in housing and state and local government spending, combined with solid consumption data driven by tightening labor markets and low gasoline prices, are poised to drive growth next year.

**Bottom Line for the Equipment Finance Sector:** Equipment and software investment should continue to expand at a moderate pace in 2016, and a strengthening U.S. economy (spurred largely by consumer spending) and elevated propensity to finance will help drive growth in the equipment finance industry. However, industry confidence recently dipped to a two-year low, suggesting that new business volume data could soften in the first part of the year. Moreover, ongoing pain in the energy and manufacturing sectors and diminished business confidence (particularly among multinational firms) are likely to mute growth. Overall, we expect the U.S. economy to grow 2.8% in 2016, while continued business caution will limit equipment and software investment growth to 4.4%.

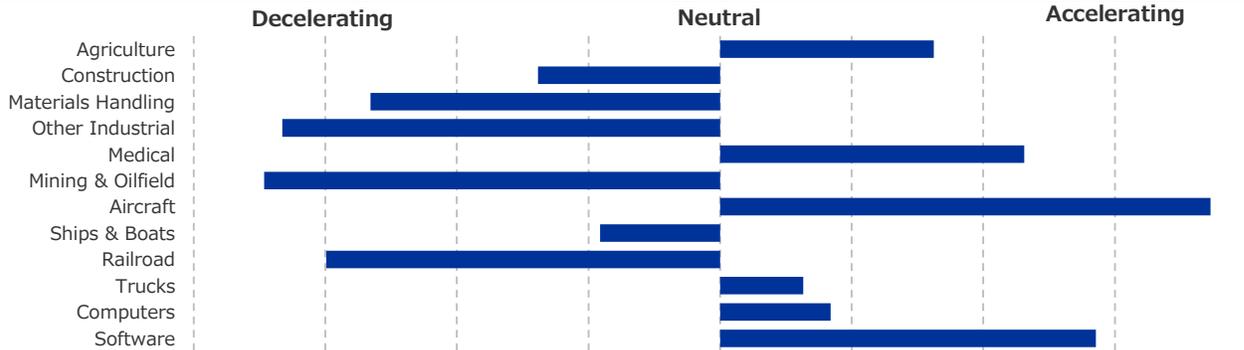
## EQUIPMENT & SOFTWARE INVESTMENT OUTLOOK

In 2016, we project equipment and software investment to increase 4.4%, as the economy continues to grow at a moderate pace but headwinds linger for traditional energy producers, heavy equipment manufacturers, and exporters. While equipment and software investment growth rebounded from a 1.7% annual pace in Q2 to a 7.4% pace in Q3, investment is up only 2.5% year-on-year — the slowest annual growth rate in two years. We expect continued moderate growth in equipment and software investment in Q4 2015 and into 2016.

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

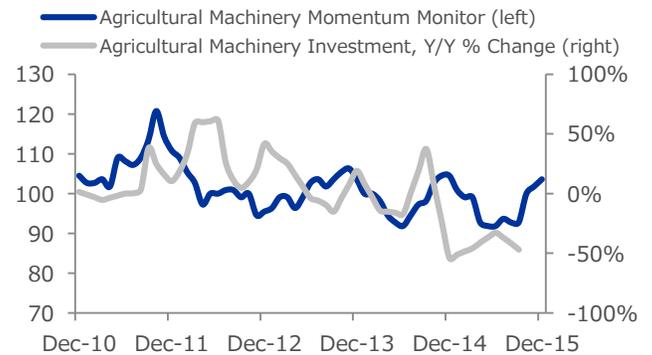
\*For more information on how to interpret the Momentum Monitor, please refer to the Appendices on pages 15-16.

#### Equipment Vertical Momentum Relative to 10-Year Historical Average

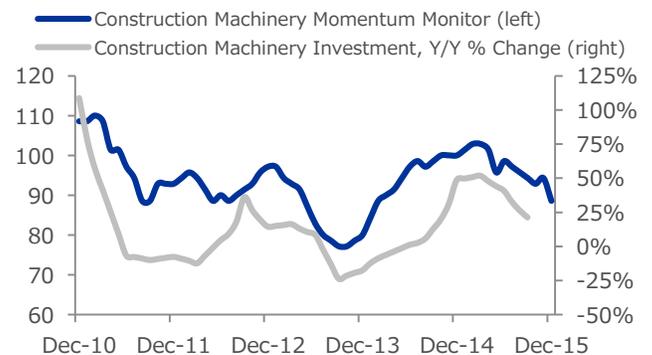


The chart above summarizes the current values of each of the 12 Equipment & Software Investment Momentum Indices relative to the index values for each quarter over the last 10 years. Verticals for which momentum is below the 10-year median are “decelerating,” verticals for which momentum is near the 10-year median are “neutral,” and verticals for which momentum is near the 10-year maximum are “accelerating.” Note that the current momentum trend for each vertical may differ from the current investment volume. For example, a vertical for which the *level* of investment activity is low — but which is exhibiting signs of a comeback in the near future based on the *momentum* suggested by its leading indicators — will be labeled “accelerating” (and vice-versa).

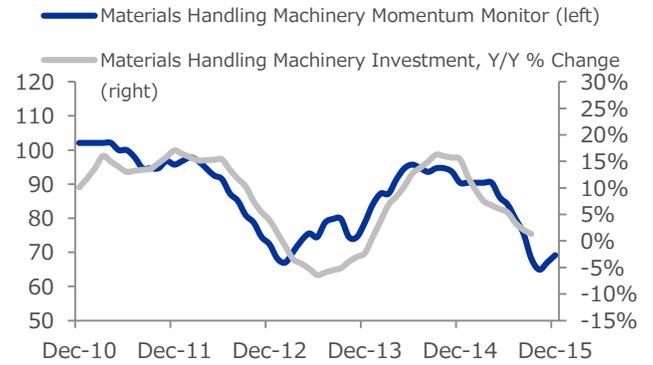
**Agricultural Machinery:** Investment in Agricultural Machinery expanded at an annual rate of 11.0% in Q3 2015, yet is down 47.1% from one year ago. The Agriculture Momentum Index gained from 101.8 (revised) in November to 103.6 in December, an 11-month high. National Average Precipitation jumped 31% and Durable Goods Inventories rose for the second straight month, yet Cattle Exports dropped more than 40%. Overall, the Index indicates that investment growth may accelerate but will likely remain weak over the next three to six months.



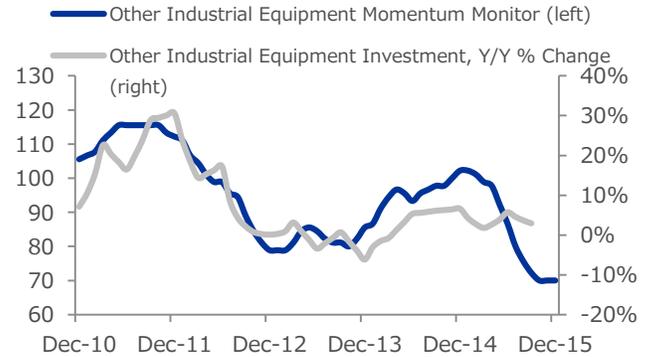
**Construction Machinery:** Investment in Construction Machinery contracted at a 22.3% annual rate in Q3 2015, the largest decline in over two years, yet remains up 21.2% year-over-year. The Construction Momentum Index dropped from 94.3 (revised) in November to 88.6 in December. Housing Starts fell 11% to a seven-month low in October, yet Real Personal Consumption Expenditures has shown steady gains. Overall, the Index points to slower, but still solid growth over the next three to six months.



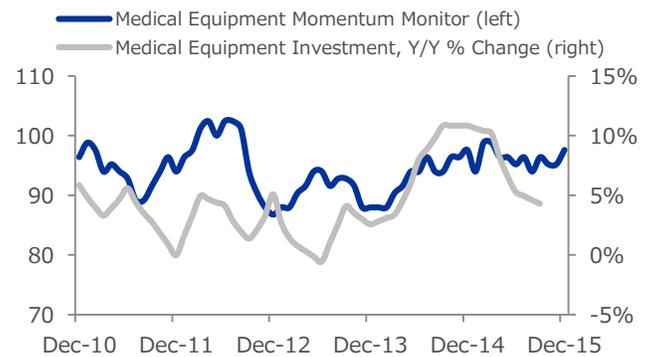
**Materials Handling Equipment:** Investment in Materials Handling Equipment slipped at a 0.7% annual rate in Q3 2015 and is up only 1.3% year-over-year, a seven-quarter low. The Materials Handling Momentum Index increased from 67.0 in November to 69.1 in December. Economic Policy Uncertainty eased 7%, and the S&P Industrials Index rose further in October. Overall, the Index's low level indicates that investment growth will remain weak over the next three to six months.



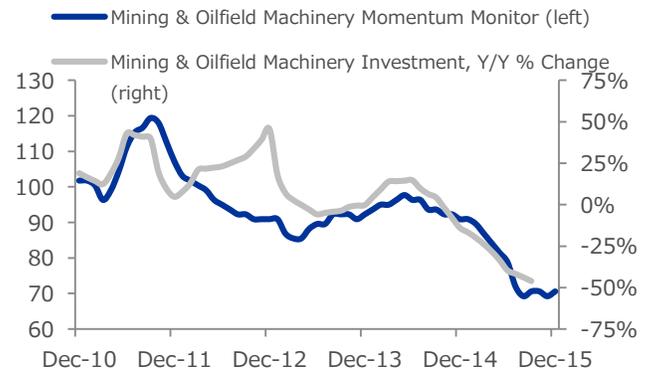
**Other Industrial Equipment:** Investment in All Other Industrial Equipment decreased at a 6.3% annual rate in Q3 2015 but is still up 2.9% year-over-year. The Other Industrial Equipment Momentum Index held steady at 70.0 (revised) from November to December. New Orders of Industrial Machinery increased 1.4%, yet Shipments of Industrial Machinery dipped. Overall, the Index's recent movement and low position continue to suggest that investment growth will slow over the next three to six months.



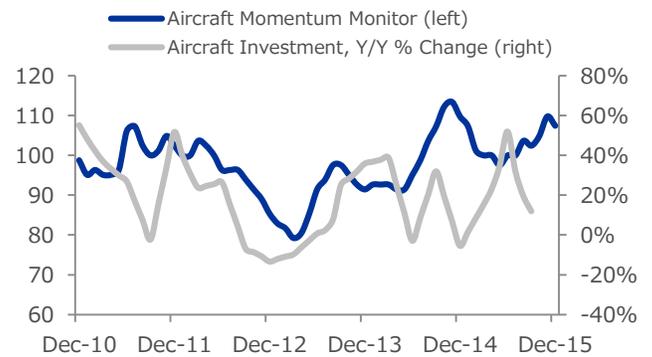
**Medical Equipment:** Investment in Medical Equipment rebounded at a 12.4% annual rate in Q3 2015 and is up 4.3% year-over-year. The Medical Equipment Momentum Index increased from 95.2 (revised) in November to 97.6 in December. Gains in Total Households and in Education & Health Services Employment outweighed a 7% decline in New Orders of Non-defense Capital Goods. Overall, the Index continues to suggest stable growth in medical equipment investment over the next three to six months.



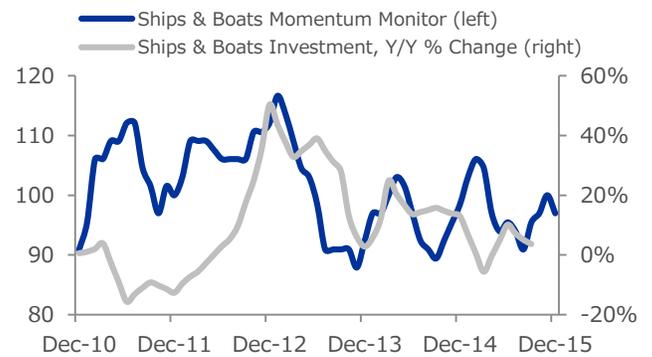
**Mining & Oilfield Machinery:** Investment in Mining & Oilfield Machinery fell at a 42.7% annual rate in Q3 2015 and is now down 46.1% year-over-year, a 13-year low. The Mining & Oilfield Machinery Momentum Index ticked up from 69.2 (revised) in November to 70.6 in December, only the second increase in a year. The Oil Rig Count fell to a 5-year low in November, while Economic Policy Uncertainty declined for the second consecutive month. The Index points to continued weakness in mining & oilfield machinery investment over the next three to six months.



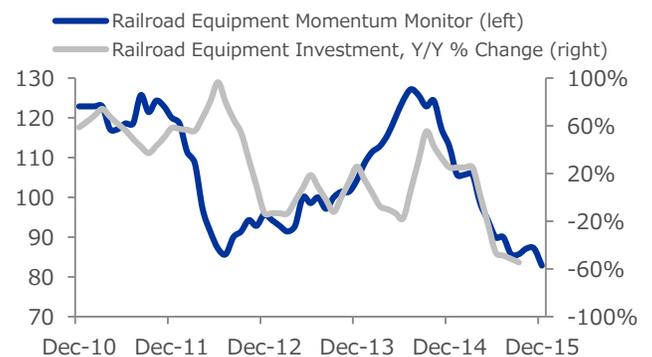
**Aircraft:** Investment in Aircraft increased at a 27.3% annual rate in Q3 2015 and is up 11.9% on a year-over-year basis. The Aircraft Momentum Index dipped from November's one-year high of 109.8 to 107.4 in December. The ISM Non-manufacturing New Orders Index fell 4.5 points, and Capacity Utilization slipped to 77.5%. Overall, the Index's elevated level suggests stronger aircraft investment growth over the next three to six months.



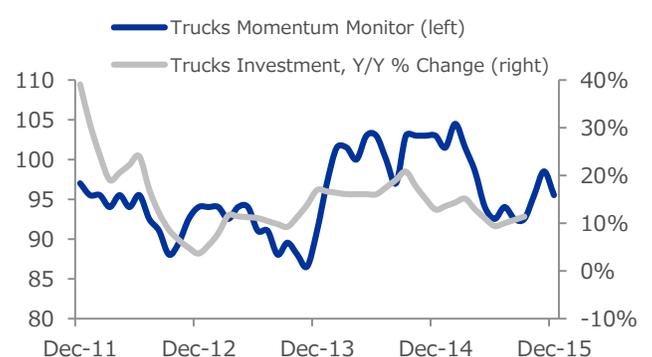
**Ships & Boats:** Investment in Ships & Boats expanded at an annual rate of 3.4% in Q3 2015, and is up 3.7% year-over-year. The Ships & Boats Momentum Index slipped from 100.0 (revised) in November to 97.0 in December. New Orders of Ships & Boats rose 6.6%; however, Raw Steel Production fell for the third straight month. Overall, the Index suggests potential for stronger investment growth over the next three to six months.



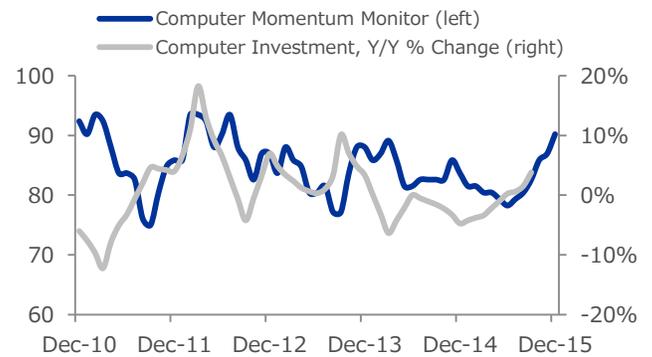
**Railroad Equipment:** Investment in Railroad Equipment rebounded at a 48.8% annual rate in Q3 2015 yet remains down 54.5% year-over-year, an all-time low. The Railroad Equipment Momentum Index fell from 87.1 (revised) in November to 82.9 in December. Petroleum Carloads declined to a three-year low, yet Machine Tool Orders rebounded 12%. Overall, the Index's low position continues to indicate negative growth in railroad equipment investment over the next three to six months.



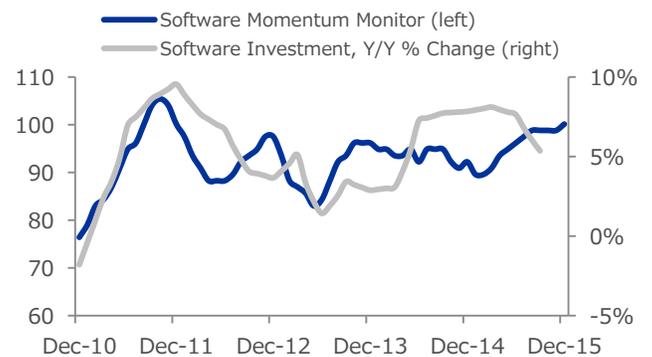
**Trucks:** Investment in Trucks increased at a 21.0% annual rate in Q3 2015 and is up 11.4% year-over-year. The Trucks Momentum Index declined from November's seven-month high of 98.5 (revised) to 95.5 in December. Light Trucks & Vehicles Shipments dropped 4%, while the Unemployment Rate held steady at 5.0%, its lowest level since mid-2008. Overall, the Index's recent movement suggests continued moderate growth in truck investment over the next three to six months.



**Computers:** Investment in Computers grew at an annual rate of 19.2% in Q3 2015, and is now up 3.8% on a year-over-year basis (a two-year high). The Computers Momentum Index climbed from 87.0 (revised) in November to 90.2 in December, its highest level since 2012. Electronic Computer Shipments declined for the third straight month, yet Consumer Expectations ticked up in November. Overall, the Index's recent movement points to stronger computer investment growth over the next three to six months.



**Software:** Investment in Software ticked up at a 1.0% annual rate in Q3 2015 and is up 5.4% year-over-year. The Software Momentum Index rose from 98.8 (revised) in November to 100.1 in December, a four-year high. The S&P 500 Internet & Software Index rebounded sharply, and the NASDAQ Composite Index increased. However, the ISM Non-manufacturing Employment Index fell 4.2 points last month. Overall, the Index suggests somewhat faster investment growth over the next three to six months.



## Equipment & Software Investment Annual Growth Forecast

Year-on-Year % Growth Rates

Sector	10-Year Average	Last 4 Quarters	Next 4 Quarters
Agricultural Machinery	1.7%	-47.1%	-8 to 2%
Construction Machinery	7.8%	21.2%	7 to 14%
Materials Handling Equipment	2.4%	1.3%	-4 to 4%
Other Industrial Equipment	2.6%	2.9%	-4 to 4%
Medical Equipment	4.2%	4.3%	5 to 10%
Mining & Oilfield Equipment	11.1%	-46.1%	-15 to -5%
Aircraft	8.2%	11.9%	8 to 14%
Ships & Boats	6.1%	3.7%	4 to 10%
Railroad Equipment	10.9%	-54.5%	-15 to -5%
Trucks	18.0%	11.4%	6 to 14%
Computers	6.4%	3.8%	5 to 10%
Software	4.3%	5.4%	4 to 8%

Source: Macrobond Financial, Keybridge (forecasts)

## U.S. CAPITAL INVESTMENT AND CREDIT MARKETS

Global uncertainty and manufacturing weakness are weighing on businesses' willingness to expand, and these headwinds should limit investment growth again in 2016. While equipment and software investment recently increased after disappointing in the first half of the year, other measures of business activity and confidence continue to stagnate or slip. Following a year of slower industry growth, several business investment verticals (e.g., medical, IT, aircraft) are poised to gain momentum in the coming months, while others (e.g., mining and oilfield, railroad, industrial) are likely to struggle.

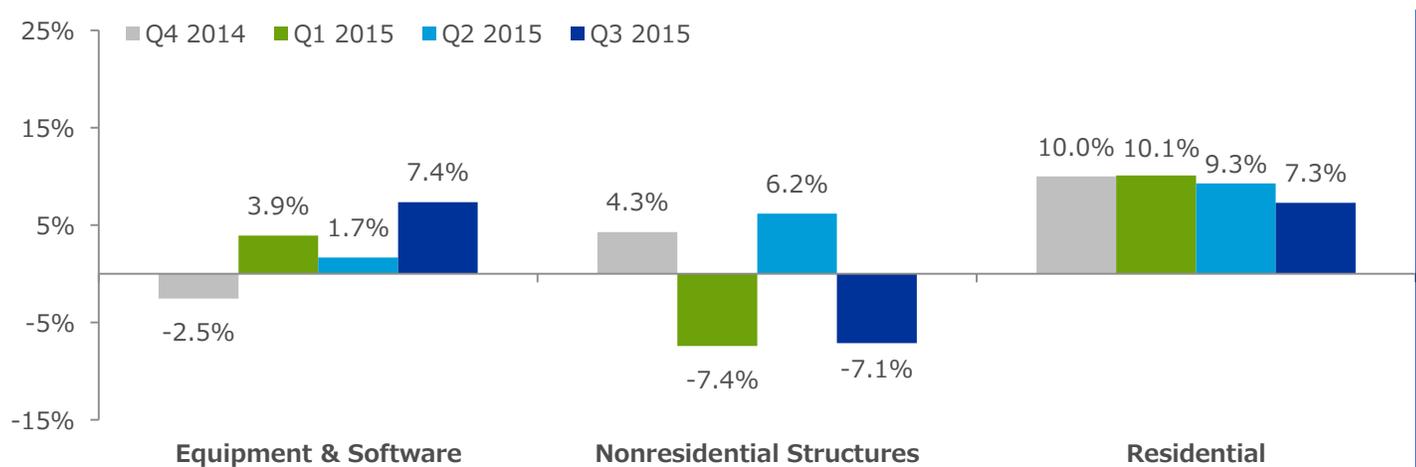
After seven years of zero interest rates, the Fed is likely to raise short-term interest rates several times in 2016. Despite some nervousness surrounding the world economy, demand for credit has steadily risen, credit standards have generally held steady, and financial stress has remained muted. While a steady path of rate increases is not guaranteed — another crisis abroad or weaker economic data at home could convince the Fed to delay — 2016 should be the year that interest rates finally begin to normalize.

### Recent Trends in U.S. Capital Investment

Equipment and Software Investment growth increased from a 1.7% annual rate in Q2 to 7.4% in the third quarter — its fastest pace in a year. Residential Investment expanded 7.3% in the third quarter (down slightly from 9.3% in Q2), while Investment in Nonresidential Structures declined 7.1%, the third contraction in the last five quarters.

### Investment Growth Rates

Quarter-on-Quarter, Seasonally Adjusted Annualized Growth Rate



Source: Macrobond Financial

- Equipment Leasing and Financing:** The industry remains on sound footing, but recent data point to slowing growth this year and next. According to the October [ELFA Monthly Leasing and Finance Index \(MLFI-25\)](#), cumulative new business volume is up just 2.5% from a year ago — a sharp deceleration from last year's 8.7% pace. The charge-off rate held steady at 0.27% in October which, while the highest reading in 18 months, still suggests strong portfolio performance. Meanwhile, credit approvals slowly climbed through much of 2015 before dipping from 80.5% in September to 80.1% in October. Overall, a rising propensity to finance fueled continued growth in the equipment finance industry in 2015 even as the pace of capital spending growth fell. Now, however, industry expansion may moderate.

Further, as noted in the [Foundation's 2015 Q4 Economic Outlook](#), a slower pace of economic growth and nervousness surrounding the global economy may also be dampening industry confidence. The [Foundation's Monthly Confidence Index for the Equipment Finance Industry \(MCI-EFI\)](#) eased to 58.7 in October — a nearly two-year low — before rising slightly to 60.2 in November. Notably, and more relevant to the outlook for 2016, less than 20 percent of respondents expect business conditions and the U.S. economy to improve over the next four months.

- Equipment Verticals:** After posting a sharp contraction in the second quarter, Railroad equipment investment jumped at a 48.8% annual rate in Q3, the fastest pace out of the 12 equipment and software verticals tracked by the Foundation (although investment has fallen by more than 50% from year-ago levels). Meanwhile, Mining & Oilfield Machinery investment plummeted at an annual rate of 42.7% and was the worst-performing vertical in the third quarter. Other key movements included the second consecutive contraction in Construction equipment investment (-22.3% annual rate) and solid growth in Aircraft (+27.3% annual rate) and Computers (+19.2% annual rate).
- Other Factors:** An industrial sector slump has persisted throughout 2015 and is unlikely to ease significantly next year. For instance, the ISM Manufacturing Index declined for the fifth consecutive month, and the November reading of 48.6 indicates that the manufacturing industry is now contracting. Similarly, industrial production slipped 0.2% in October — its second straight decline. Other data, however, are more positive. For example, manufacturing output increased 0.4% in October, its fastest growth since July, while new orders of manufactured goods rebounded 1.5% in October.

## Recent Trends in Credit Markets

A struggling industrial sector and lingering global economic uncertainty have hurt business confidence (particularly for large multinational firms), and we expect these headwinds to persist into 2016. However, U.S. credit markets have largely normalized, and borrowing by businesses and households is showing consistent growth. Financial stress remains subdued, and business loan and lease delinquencies remain at historically low levels. Despite continued risks abroad, stronger footing for the U.S. economy should lead to a continued expansion of credit supply and demand over the next year.

- Credit Supply & Pricing:** On net, credit availability and pricing were generally unchanged from the last quarter. The October Fed Loan Officer Survey reported a modest tightening of standards for commercial and industrial (“C&I”) loans, and several banks increased premiums on riskier loans, citing a more uncertain economic outlook. Lending standards for commercial real estate loans were virtually unchanged, and banks slightly eased their standards on consumer loans, including credit card and auto loans.

### Summary of Credit Conditions

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

- Credit Demand:** With U.S. credit markets largely healed, credit demand is steadily increasing from consumers and most businesses. C&I loans were up 11.0% year-on-year in October, roughly matching the pace of growth seen throughout 2015. Moreover, although banks reported little change in C&I loan demand in the October Fed Loan Officer Survey, demand for both commercial real estate and consumer loans strengthened modestly.

However, recent uncertainty in the global economy appears to be dampening business investment, particularly from large multinational firms. Notably, the Q4 2015 Business Roundtable CEO Economic Outlook Survey reported a third straight drop in CEOs’ capital spending expectations, indicating nervousness surrounding the global economy and exports. At the

same time, both the Thomson Reuters / PayNet Small Business Lending Index (“SBLI”) and the National Federal of Independent Business (“NFIB”) Small Business Optimism Index remain healthy at pre-recession levels, demonstrating renewed confidence from small businesses. This discrepancy between large and small firm optimism reflects a struggling U.S. export sector. In 2015, financial firms and heavy manufacturers were hit by global economic turbulence, sharp commodity price drops, and a strong U.S. dollar, but small businesses were more insulated from these international headwinds and reaped the benefits of increased U.S. consumer sentiment and spending.

- **Financial Stress:** Turmoil in global financial markets is an ongoing concern, but financial stress is largely subdued in the United States. The Kanas City and St. Louis Fed Financial Stress Indices have ticked up in recent months, but both are below their long-term averages. Moreover, business lending continues to exhibit strong portfolio performance. The C&I loan delinquency rate (0.9% in Q3) remains near an all-time low, and the lease delinquency rate held steady at 0.8% from the second quarter to the third — nearly 50% below its historical average of 1.5%. Loan and lease delinquencies may have bottomed out in the past year and may rise in 2016, but by historical standards financial stress should remain muted.
- **Other Factors:** As the global economy hit speed bumps and the U.S. economy stood as a relative beacon of strength, 10-Year Treasury yields stayed low throughout 2015 and currently hover around 2.2%. We expect that as the Fed increases interest rates throughout 2016 (see “Update on Fed Policy” below), it will put upward pressure on Treasury yields. However, as noted in the Q4 2015 Outlook, further evidence of weakness in the world economy could tilt investors towards comparatively safe U.S. Treasuries and keep yields low, despite Fed action.

## Update on Fed Policy

Despite headwinds from abroad, we expect the Fed to gradually raise short-term interest rates over the course of 2016 given recent signs of stronger footing for the U.S. economy. The Federal Open Market Committee (“FOMC”), the Fed’s policymaking committee, chose not to raise interest rates in October, but economic data released in the fourth quarter (including robust employment gains in October and November) has paved the way for imminent rate hikes. These gradual rate increases may alleviate pressure on equipment finance margins, at least somewhat. Rising interest rates may also lead hesitant households and businesses to commit to investments in anticipation of further increases in the near future — which could boost investment activity.

Fed officials, however, have repeatedly stressed that short-term rates will stay at historically low levels for months or even years after the first rate hike. As shown in their September projections, all sixteen FOMC members expect interest rates to remain below 4% at the end of 2018, compared to a 6.6% average from 1971 to 2008.

## OVERVIEW OF THE U.S. ECONOMY

We expect domestic economic tailwinds to outweigh global risks and propel the U.S. economy to another year of moderate growth in 2016. Specifically, construction, small businesses, and state and local governments all strengthened in 2015; along with a healthy labor market, these trends are set to fuel growth in 2016. Conversely, manufacturing, energy, and exports lagged in 2015, and global economic turbulence and energy sector cuts remain significant concerns. Overall, 2015 can be viewed as a transition year for the U.S. economy, as sectors that have driven growth over the last few years weakened and former laggards built momentum. This pivot is poised to continue in 2016.

Looking back to the third quarter, the U.S. economy moderated, expanding 2.1% following robust 3.9% growth in Q2. Income gains and strong consumer spending drove growth, while the slowing global economy, a still-struggling energy sector, and declines in business inventories were economic headwinds. Following blockbuster 298,000 job gains in October, payrolls grew by a sturdy 211,000 in November, quelling fears of a faltering labor market. At the same time, low energy prices have kept headline inflation subdued — but faster wage growth and the “13<sup>th</sup>-month effect” may cause inflationary pressures to increase over the coming year.

*Looking forward, we project the U.S. economy to grow 2.8% in 2016 — slightly above consensus estimates.*

### Recent Trends in the U.S. Economy

Despite continued weakness in manufacturing and energy, economic fundamentals are gaining momentum and should drive economic expansion in 2016, with is reflected in our preliminary 2016 GDP growth estimate of 2.8%. We expect growth in 2015 to come in around 2.6%, with economic momentum picking up in the fourth quarter and providing a solid springboard for 2016. Headline inflation remains muted, but a combination of rising wages and the “13<sup>th</sup>-month” effect of oil prices will likely drive inflation toward the Fed’s target rate of 2.0% in the coming months.

- Q3 GDP:** The U.S. economy cooled in the third quarter, with growth slowing to 2.1% after robust 3.9% growth in Q2. The combination of a sharp reduction in business inventories and reduced net exports cut nearly a full percentage point from GDP growth, while a 7.1% contraction in nonresidential structure investment reflects a sense of economic uneasiness among businesses in the energy and manufacturing sectors. On the bright side, consumer spending increased at a solid 3.0% pace and remains the foundation for continued expansion. Moreover, overall business equipment investment growth picked up from

Indicator	Recent Activity
Consumption	Consumer spending growth slipped, yet maintained a strong 3.0% annual pace in Q3
Equipment & Software Investment	Equipment & software investment grew 7.4% (annualized), its fastest pace in four quarters
Residential Investment	Residential investment growth slowed from an annual pace of 9.3% to 7.3%
Government Expenditures	Government expenditures increased 1.7% (annualized), down from 2.6% in Q2
Net Exports	Export growth slowed to 0.9% (annualized), while Import growth fell for the third straight quarter

just 0.3% in the second quarter to 9.5% in Q3, its best performance in a year. Finally, housing investment and government spending both made positive contributions to third quarter growth, although both decelerated from Q2 levels.

- **Inflation:** Low energy prices continue to suppress inflation. However, we expect inflation to gradually rise going forward, in large part due to the combination of increased oil price stability and the so-called “13<sup>th</sup> month effect.” Specifically, after CPI bottomed out in January 2015 after oil prices plummeted to less than \$50 / barrel, prices in early 2016 (i.e., 13 months after the price slump began) can remain relatively low yet still show positive inflation growth because inflation is calculated on a year-over-year basis. In addition, tightening labor markets should lead to further wage growth, which will place additional upward pressure on inflation in the coming months. In November, average hourly earnings were up 2.3% year-on-year, down from 2.5% in October but still near the fastest growth pace experienced since the end of the recession.

Following two monthly declines, the Consumer Price Index (“CPI”) rose 0.2% in October, driven by higher food, energy, and shelter prices. As of October, headline CPI is up 0.2% on a year-over-year basis, slightly higher than 0.0% in September. Energy prices, despite a small gain in October, remain down 17.1% from a year prior. At the same time, “core” CPI (which excludes more volatile food and energy prices) has demonstrated consistent gains and moderate underlying price pressure. For the second consecutive month, core CPI increased 0.2% in October, and prices are now up 1.9% year-on-year (also unchanged from September).

- **Growth Forecasts:** The December *Economist* Poll of Forecasters calls for 2.5% GDP growth in 2016, unchanged from November. The Federal Reserve’s September “central tendency” forecast for 2016 growth is in the range of 2.2% – 2.6%, below its 2.4 – 2.7% projection in June.

## Economic Tailwinds

Several elements of the U.S. economy should drive expansion in 2016:

- **Job Growth Back on Track:** The nearly-healed labor market should provide the foundation for economic momentum and stronger growth in 2016. Although the labor force participation rate remains near its lowest point in nearly four decades (due to both demographic and economic reasons), most other indicators point to a healthy labor market. Driven by robust service sector hiring, job growth surged to 298,000 in October and posted a solid 211,000 pace in November. Additionally, the unemployment rate held steady at 5.0% (a seven-year low), job openings are hovering near record-highs, and initial unemployment claims remain near 40-year lows.
- **Optimistic Consumers:** Continued gains in real income (in part due to higher wages and lower gas prices) are encouraging more confidence from consumers, and recent data suggest that consumers will spend more freely in coming months. The University of Michigan’s Consumer Sentiment estimate rose to 91.3 in November, while the Conference Board’s Consumer Confidence Index recently reached an eight-month high. Household borrowing is another sign of consumer optimism, as consumer credit jumped at a 9.9% annual rate in September, the fastest pace since April 2014.
- **Housing Sector Strength:** The U.S. housing market gained momentum in 2015 and is poised to serve as an economic bright spot in 2016. The National Association of Home Builders (“NAHB”) Housing Market Index reached a 10-year high in October, reflecting positive builder sentiment, and existing home sales are on track for their strongest year since 2006. Moreover, despite falling 11% in October, housing starts are still up 34% since February, and housing permits — a bellwether for home construction — rose 4.1% in October. A continued housing market expansion should lead to new well-paying jobs in construction and related industries (the economy added 46,000 construction jobs in November), while also boosting construction investment and spending on household appliances and furniture.

Fed policy could also impact housing. While rising interest rates will drive mortgage rates higher and may decrease home affordability, they may also encourage consumers who have been on the fence about purchasing a new home to pull the trigger before rates rise further.

- **Service Sector Expansion:** As manufacturing weakened in 2015, the service industry accelerated. Over the next year, continued expansion in the service industry could fuel hiring, wage gains, and improved consumer spending. The ISM Non-manufacturing Index climbed to a 10-year high in July and now remains at pre-recession levels, indicating solid expansion in services. Further, robust service hiring drove October and November's strong job gains; professional and business services employment jumped 90,000 in October (up from a 52,000 average over the previous twelve months), while the healthcare, retail trade, and food service industries have each added more than 70,000 jobs over the past two months.

## Economic Headwinds

Although the U.S. economy is somewhat insulated from world growth pains, several global headwinds remain risks. Specifically:

- **Slowing China:** China's economy is a major global headwind with implications for 2016 growth. Chinese exports have declined for four consecutive months, including -6.9% in October (year-over-year). Meanwhile, imports unexpectedly fell 18.8% year-on-year in October, reflecting weak domestic demand, and industrial production decelerated further.

While the direct impact of China's slowdown on the U.S. economy is limited (only about 7% of U.S. exports go to China), emerging markets like Brazil are much more sensitive to lower Chinese demand and the subsequent slump in commodities prices. China's neighbors will also feel some pain; Japan's economy contracted 0.8% in the third quarter in part due to softer industrial machinery demand from China. In short, if China's economic woes are sustained, they will have ripple effects throughout the global marketplace, which the United States will feel both directly and indirectly.

- **Export & Energy Sector Woes:** After faltering in 2015, the energy and export sectors are likely to struggle in 2016. The combination of a strong dollar, weaker emerging market demand, and falling prices of oil and other commodities hammered U.S. exporters in 2015, particularly energy producers and related equipment manufacturers. The U.S. dollar is up nearly 10% year-on-year and continues to hurt U.S. firms' global competitiveness. At the same time, the West Texas Intermediate crude oil price has fallen to around \$40/barrel, copper prices have slumped largely due to lower Chinese demand, and the Baltic Dry Index — which measures the cost of shipping commodities globally — recent dipped to an all-time low.

Combined with efficiency gains that have enabled U.S. producers to extract oil at far lower costs, these factors have driven the U.S. oil rig count to a five-year low and oil investment growth to its weakest level in over a decade — with neither likely to rebound anytime soon. Moreover, U.S. goods exports are down 10% year-on-year (compared to 1.1% annual growth in services exports). In particular, exports of industrial supplies and materials are 17% below year-ago levels, the second largest year-on-year drop since 2009. Caterpillar, for example, is expected to export fewer excavators to China in 2015 than they sold in a single month in 2011.

- **Manufacturing Stagnation:** A rebound in industrial activity remains elusive, and a significant revival is unlikely in 2016. The ISM Manufacturing Index fell to 48.6 in November, its lowest reading since June 2009 and below the 50-point threshold indicating expansion. Meanwhile, industrial production slipped 0.2% in October, and capacity utilization dipped to 77.5%. A closer look at the data, however, suggests that some of the headwinds hurting manufacturing could be easing, which may provide some breathing room for industrial production and investment. For example, manufacturing output posted its strongest monthly gain since July, while durable goods orders increased 3.0% in October.

## Additional Factors to Watch

Going into 2016, several wild cards could also sway U.S. economic growth:

- State and Local Government Spending:** After years of spending cuts and budget uncertainty, state and local governments appear to be on more secure financial footing and poised to consistently contribute to economic growth. In Q2, state and local spending surged at a 4.3% annual rate (the fastest pace since 2001) and maintained a solid clip in Q3, increasing 2.6%. Increased state and local government spending includes construction projects, which should benefit the equipment industry.
- Wage Growth and Consumer Spending:** Solid hiring, rising wages, and strong household spending should fuel growth in 2016. For much of the recovery, income growth has outpaced spending due to consumer deleveraging and diminished confidence. More recently, however, tightening labor markets have begun to drive up wages, boosting income and increasing consumer confidence and spending. At 5.0%, the unemployment rate is already at a level consistent with full employment, and pressure is building for employers to boost wages in order to attract high quality employees. Meanwhile, in each of the last two quarters, consumer spending grew at a robust 3%+ annual rate and contributed substantially to GDP growth, while the personal savings rate fell to 4.9% in 2015 after averaging 5.8% since the end of the recession.
- Fed Interest Rate Policy:** All eyes are on the Fed as it weighs interest rate hikes in coming months. Robust job growth this fall has nearly guaranteed a December lift-off, and we expect continued gradual rate increases next year. Moreover, if inflation reaches the Fed's 2% target rate sooner than expected due to upward pressure on wages and/or an unexpected oil price increase, the Fed could be compelled to quicken its pace of interest rate normalization. By all accounts, the Fed will strive to avoid surprising markets, as this could induce market volatility that leads to further appreciation of the dollar and short-term economic pain. On the other hand, well-timed and consistent interest rate increases could also encourage hesitant households and businesses to commit to investments before rates rise even higher.

## Projections for Key Economic Indicators

Indicator	2014	2015e	2016 Quarterly Estimates				2016e
			Q1e	Q2e	Q3e	Q4e	
Real GDP (SAAR %)	2.4%	2.6%	2.6%	2.9%	2.8%	2.9%	2.8%
Real Investment in Equipment & Software (SAAR %)	6.0%	4.2%	3.8%	4.2%	4.6%	4.0%	4.4%
Inflation (year-on-year %)	1.6%	0.1%	1.4%	1.9%	2.1%	2.2%	2.0%
Federal Funds Target Rate (lower bound, end of period)	0.00%	0.25%	0.50%	0.75%	1.00%	1.25%	1.25%
10-year Treasury Rate (end of period)	2.2%	2.3%	2.5%	2.7%	2.9%	3.1%	3.1%
Total Payroll Growth (in thousands)	+3,116	+2,538	+575	+610	+585	+580	+2,350

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	2013		2014				2015		
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
<b>Real Gross Domestic Product (SAAR %)</b>									
GDP	3.0%	3.8%	-0.9%	4.6%	4.3%	2.1%	0.6%	3.9%	2.1%
Consumer Spending	1.7%	3.5%	1.3%	3.8%	3.5%	4.3%	1.8%	3.6%	3.0%
Gross Private Fixed Investment	13.7%	4.2%	-2.5%	12.6%	7.4%	2.1%	8.6%	5.0%	-0.3%
Inv: Equipment & Software	-1.1%	12.4%	4.6%	6.8%	14.9%	-2.5%	3.9%	1.7%	7.4%
Inv: Agricultural Machinery	-62.1%	425.2%	-48.5%	-53.9%	185.6%	-93.5%	-0.4%	8.6%	11.0%
Inv: Construction Machinery	-8.8%	-19.5%	22.7%	16.1%	41.2%	143.2%	33.2%	-14.2%	-22.3%
Inv: Materials Handling Equipment	2.7%	7.9%	25.1%	16.4%	16.3%	4.7%	-5.8%	7.6%	-0.7%
Inv: All Other Industrial Equipment	1.1%	-12.0%	21.8%	13.5%	4.2%	-10.4%	1.2%	32.1%	-6.3%
Inv: Medical Equipment	5.3%	3.9%	7.5%	15.7%	16.8%	3.9%	5.0%	-3.5%	12.4%
Inv: Mining & Oilfield Machinery	31.9%	-0.2%	7.4%	22.6%	-9.9%	-53.8%	-33.8%	-51.9%	-42.7%
Inv: Aircraft	26.6%	228.2%	-39.2%	-64.9%	332.6%	-13.5%	34.8%	5.8%	27.3%
Inv: Ships & Boats	22.5%	-6.8%	126.8%	-35.5%	31.8%	-15.5%	10.4%	19.6%	3.4%
Inv: Railroad Equipment	-76.8%	-54.3%	-55.5%	191.4%	190.7%	-34.9%	-55.7%	-90.1%	48.8%
Inv: Trucks	-4.1%	24.4%	19.6%	27.2%	12.6%	-5.2%	29.5%	3.8%	21.0%
Inv: Computers	10.3%	9.8%	-25.0%	10.1%	3.6%	-3.7%	-20.6%	27.6%	19.2%
Inv: Software	8.1%	5.1%	8.1%	7.8%	10.0%	5.5%	9.2%	5.9%	1.0%
<b>Credit Conditions</b>									
Nonfinancial Sector Debt (% of SAAR GDP)	66.9%	66.7%	67.5%	67.2%	67.3%	68.2%	69.2%	69.7%	-
Loan Delinquency Rate	1.0%	0.9%	0.9%	0.8%	0.8%	0.7%	0.8%	0.8%	0.9%
Lease Delinquency Rate	0.9%	0.9%	0.8%	0.7%	0.8%	0.7%	0.7%	0.8%	0.8%
Net Tightening of C&I Loan Standards	-18.1%	-8.3%	-13.7%	-11.1%	-10.7%	-10.5%	-5.5%	-5.3%	-7.0%

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	2014							2015					
	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov
<b>Employment</b>													
Change in Total Payrolls (thousands)	423	329	201	266	119	187	260	245	223	153	145	298	211
Change in Private Payrolls (thousands)	414	319	202	261	117	189	252	218	195	125	165	304	197
Unemployment Rate	5.8%	5.6%	5.7%	5.5%	5.5%	5.4%	5.5%	5.3%	5.3%	5.1%	5.1%	5.0%	5.0%
<b>Business Activity</b>													
Industrial Production	107.8	107.9	107.6	107.4	107.2	107.1	106.7	106.7	107.5	107.6	107.4	107.2	-
Capacity Utilization	79.0%	79.0%	78.7%	78.4%	78.2%	78.0%	77.6%	77.5%	78.0%	78.0%	77.7%	77.5%	-
PMI Composite Index	57.6	55.1	53.5	52.9	51.5	51.5	52.8	53.5	52.7	51.1	50.2	50.1	48.6
NFIB Small Business Optimism Index	98.1	100.4	97.9	98.0	95.2	96.9	98.3	94.1	95.4	95.9	96.1	96.1	-
<b>Consumer Activity</b>													
Consumer Confidence	91.0	93.1	103.8	98.8	101.4	94.3	94.6	99.8	91.0	101.3	102.6	99.1	90.4
Personal Consumption (M/M % Chg)	0.4%	0.2%	0.1%	0.0%	0.3%	0.3%	0.6%	0.1%	0.2%	0.3%	0.1%	0.1%	-
Retail Sales (M/M % Chg)	0.5%	-0.9%	-0.8%	-0.5%	1.5%	0.0%	1.2%	0.0%	0.8%	0.0%	0.0%	0.1%	-
<b>Lending Activity</b>													
C&I Loans (M/M % Chg)	1.1%	1.1%	1.0%	1.0%	1.5%	0.6%	0.9%	0.9%	0.4%	0.7%	0.3%	0.9%	-
MLFI-25 New Business Volume (Bil.\$)	6.9	13.1	6.8	6.2	9.1	8.3	7.3	9.7	8.4	6.9	8.4	7.7	-
MLFI-25 Avg Losses as a % of Net Rec.	0.17%	0.23%	0.16%	0.22%	0.20%	0.19%	0.23%	0.22%	0.19%	0.22%	0.27%	0.27%	-
MLFI-25 Credit Approval Ratio	78.7%	78.9%	77.6%	77.8%	78.3%	78.3%	78.9%	79.0%	78.6%	79.3%	80.5%	80.1%	-
<b>Interest Rates (% avg of period)</b>													
Fed Funds Target Rate (Lower Bound)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1-Year Treasury Rate	0.13	0.21	0.20	0.22	0.25	0.23	0.24	0.28	0.30	0.38	0.37	0.26	0.48
3-Year Treasury Rate	0.96	1.06	0.90	0.99	1.02	0.87	0.98	1.07	1.03	1.03	1.01	0.93	1.21
10-Year Treasury Rate	2.33	2.21	1.88	1.98	2.04	1.94	2.20	2.36	2.32	2.17	2.17	2.07	2.26
30-Year Treasury Rate	3.04	2.83	2.46	2.57	2.63	2.59	2.96	3.11	3.07	2.86	2.95	2.89	3.03
AAA Corporate Bond Yield	3.92	3.79	3.46	3.61	3.64	3.52	3.98	4.19	4.15	4.04	4.07	3.95	4.06
BAA Corporate Bond Yield	4.79	4.74	4.45	4.51	4.54	4.48	4.89	5.13	5.20	5.19	5.34	5.34	5.46
<b>Prices</b>													
Headline Inflation (Y/Y % Chg)	1.3%	0.8%	-0.1%	0.0%	-0.1%	-0.2%	0.0%	0.1%	0.2%	0.2%	0.0%	0.2%	-
Core Inflation (Y/Y % Chg)	1.7%	1.6%	1.6%	1.7%	1.8%	1.8%	1.7%	1.8%	1.8%	1.8%	1.9%	1.9%	-
Oil Price (West Texas Int., \$/barrel)	65.94	53.45	47.79	49.84	47.72	59.62	60.25	59.48	47.11	49.20	45.06	46.60	40.43

## **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 (“Momentum Monitor”), described below, is published on a monthly basis.

This report is the full 2016 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**

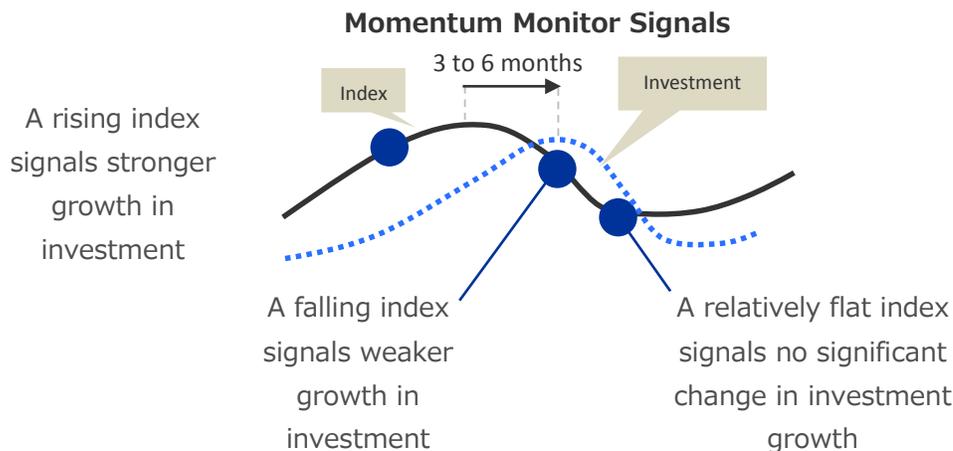
Business leaders require actionable forward-looking intelligence to make strategic decisions. Accordingly, the Foundation commissioned Keybridge LLC to develop a series of custom leading indicators for the equipment sector. The [Foundation-Keybridge Equipment & Software Investment Momentum Monitor](#) 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 three-to-six month lead time.

The Momentum Monitor is based on Keybridge’s extensive research which shows that not all movements in economic data are reliable signals of future economic trends. Keybridge has operationalized its research by constructing indices, each comprised of between 10 to 20 high-frequency indicators. These indicators undergo rigorous testing to determine the optimal thresholds at which their short-term fluctuations are economically meaningful. In simpler terms, the Momentum Monitor sifts out the “noise” in the data and identifies the dominant trends. As a result, each Momentum Monitor index is statistically optimized to signal turning points in the investment cycle without giving false readings of shifts in momentum.

## HOW TO READ THE MOMENTUM MONITOR

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.

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## **ABOUT KEYBRIDGE**

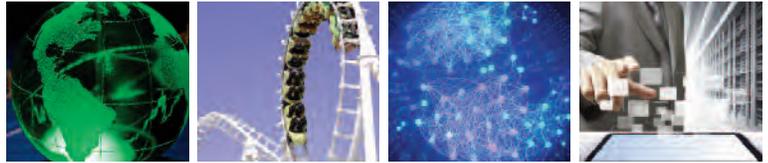
Keybridge is a public policy economics consulting firm. Keybridge provides analytical support and strategic advice to a select clientele that includes Fortune 500 companies, global financial firms, G-7 governments, premier industry associations, and non-profit organizations. Keybridge's experience and 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 interdisciplinary 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.





## Independent, Future-Focused Industry Research

### The Equipment Leasing & Finance Foundation

Established in 1989, the Equipment Leasing & Finance Foundation is a 501c3 non-profit organization dedicated to providing future-oriented, in-depth, independent research for and about the \$903 billion equipment finance industry.

### Future-Focused Research

The Foundation provides comprehensive, forward-looking research for business leaders, academics and others interested in the industry. Resources include the State of the Equipment Finance Industry report, Industry Future Council report and strategic market studies available at no cost to donors in the Foundation's online library. [www.store.leasefoundation.org](http://www.store.leasefoundation.org)

### Equipment Leasing & Finance U.S. Economic Outlook

This comprehensive report analyzes global and domestic trends impacting capital spending and economic growth in the coming year. It identifies key signposts specific to the equipment finance industry and features Momentum Monitors that identify turning points for 12 verticals in their respective investment cycles. The outlooks are updated quarterly.

[www.leasefoundation.org/research/eo](http://www.leasefoundation.org/research/eo)

### Monthly Confidence Index

Through a monthly survey of the industry's executive leadership, we've established a confidence index related to the equipment finance sector and the U.S. economy. The results provide greater understanding of prevailing business conditions and expectations for the future.

[www.leasefoundation.org/research/mci](http://www.leasefoundation.org/research/mci)

### Journal of Equipment Lease Financing

The only scholarly periodical dedicated to equipment leasing, the Journal spotlights industry research, case studies and trends. Published three times a year, the *Journal* reaches thousands of professionals, academics, libraries and government and financial institutions. Article contributions are welcome.

[www.leasefoundation.org/research/jelf](http://www.leasefoundation.org/research/jelf)

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**1825 K STREET • SUITE 900**

**WASHINGTON, DC 20006**

**WWW.LEASEFOUNDATION.ORG**

**202-238-3429**

**KELLI JONES NIENABER, EXECUTIVE DIRECTOR**