



February 2017

U.S. Equipment & Software Investment Momentum Monitor



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About the U.S. Equipment & Software Investment Momentum Monitor

require actionable forward-looking intelligence to make decisions. Accordingly, the Equipment Leasing & Finance Foundation commissioned Keybridge LLC to develop a series of custom leading indicators for the equipment sector. monthly, the "U.S. Equipment & Software Investment Momentum Monitor" consists of indices for the 12 equipment and software investment verticals listed below. These indices are designed to identify turning points in their respective investment cycles with a 3 to 6 month lead time.

The Momentum Monitor is based on Keybridge's extensive research which shows that not all movements in economic data are reliable signals of future economic trends. Keybridge has operationalized its research by constructing indices, each comprised of between 10 to 20 highfrequency 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.

The Momentum Monitor covers 12 equipment and software verticals as defined by the U.S. Department of Commerce Bureau of Economic Analysis.

U.S. Equipment & Software Investment Momentum Monitor - 12 Verticals

- 1) Agriculture Machinery
- 2) Construction Machinery
- 3) Materials Handling Equipment
- 4) All Other industrial Equipment
- 5) Medical Equipment
- 6) Mining & Oilfield Machinery

- Aircraft
- Ships and Boats
- 9) Railroad Equipment
- 10) Trucks
- 11) Computers
- 12) Software

NEW FEATURE IN THE MOMENTUM MONITOR REPORT

This month, Keybridge and the Foundation are introducing a new feature to the U.S. Equipment & Software Investment Momentum Monitor. The "Momentum Monitor Sector Matrix" is a new data visualization that provides greater detail on our short-term investment expectations for each equipment vertical, both historically and relative to other verticals. Specifically, the Sector Matrix depicts each vertical on a 2 x 2 matrix based on both Recent Momentum (x-axis) and Historical Strength (y-axis). This capability makes it a better tool than the horizontal bar chart (sometimes called the "heat map") that traditionally accompanied these reports, as the heat map only reflects the current reading relative to the long-term average. Additional detail on how to read and interpret the new Sector Matrix can be found on page 4 of this report.

The Sector Matrix and heat map will be published concurrently in the February and March Momentum Monitor reports, as well as the first quarterly update to the 2017 Equipment Leasing & Finance U.S. Economic Outlook (which will be published in April). Beginning in May, the heat map will no longer appear in either publication.



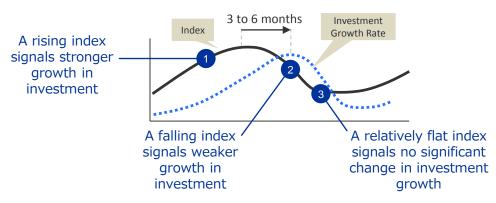


How to Read the Monitor

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. example, there are several simple rules to follow when examining the latest index values:

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

Momentum Monitor Signals



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

Materials Handling Equipment:

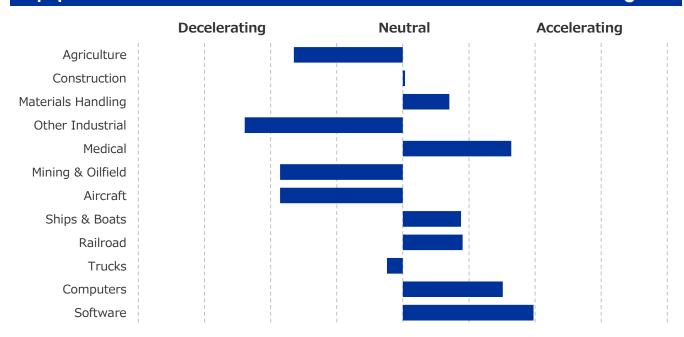
- 1 Investment in Materials Handling Machinery inched up at a 0.3% annualized rate in Q4 2014 and is up 7.3% year-over-year. 2 The Materials Handling Momentum Index slipped from 93.5 in February to 92.5 in March. 3 A 23% decline in the MNI-Chicago Business Barometer and a spike in Economic Policy Uncertainty offset gains in Machinery Sales, Manufacturing Sales, and the ISM Manufacturing Suppliers Deliveries Index.
- 4 The Index's recent trend continues to indicate that growth may moderate over the next three to six months.
- 1) The first sentence reports the latest growth rate for investment in a given vertical. This provides a context for interpreting the order of magnitude of growth over the next 3 to 6 months.
- 2) The second sentence explains the latest movement in the index, indicating whether momentum is accelerating or decelerating.
- 3) The report then describes the recent movements of one or more indicators to help to explain the index's latest reading.
- 4) Finally, report ends the interpretation of where investment growth is heading over the next 3 to 6 months based the index's recent movement and historical strength.





U.S. Equipment & Software Investment Momentum Monitor February 2017

Equipment Vertical Momentum Relative to 10-Year Historical Average



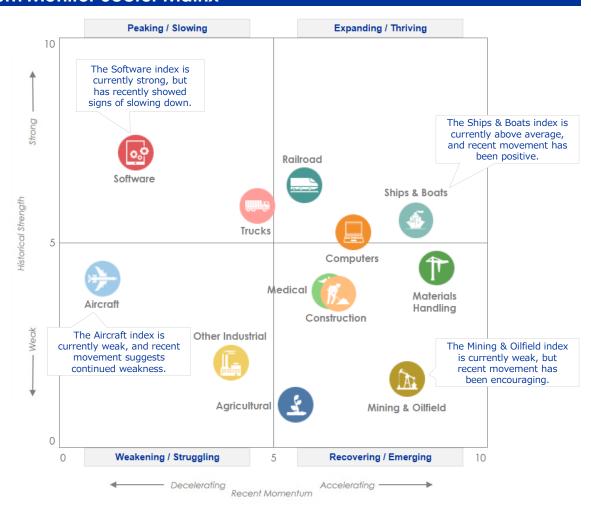
The chart above summarizes the current values of each of the 12 Equipment & Software Investment Momentum Indices relative to the index values for each quarter over the last 10 years. Verticals for which momentum is below the 10-year median are "decelerating," verticals for which momentum is near the 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).





U.S. Equipment & Software Investment Momentum Monitor February 2017

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):

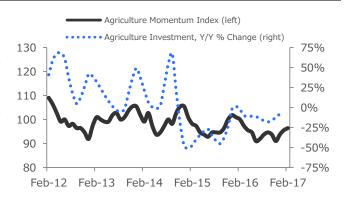
- "Recent Momentum" represents the degree of an indicator's recent acceleration or deceleration in the past month relative to its average movement during the previous 3 months. Ratings closer to "0" represent an indicator that is rapidly decelerating, while ratings closer to "10" represent an indicator that is rapidly accelerating.
- "Historical Strength" represents the strength or weakness of an indicator in the last 3 months 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 is comprised of four quadrants according to each vertical's recent momentum and historical strength readings. If a vertical is located 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 located 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. This makes them potentially attractive targets for new leasing and finance opportunities.



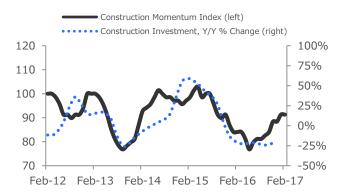
Agriculture Machinery:

Investment in Agricultural Machinery expanded at an annual rate of 9.6% in Q4 2016 and is down 7.8% from one year ago. The Agriculture Momentum Index rose from 95.5 (revised) in January to 96.4 in February. Cattle Exports jumped 85.4% to their highest level since December 2013, and Durable Goods Inventories rose 1.8%, the highest monthly increase since January 2013. Overall, the Index suggests little change in agricultural machinery investment growth over the next three to six months.



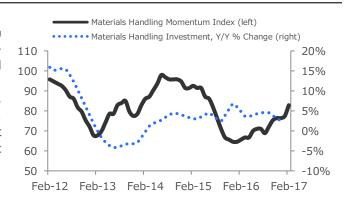
Construction Machinery:

Investment in Construction Machinery fell at a 2.2% annual rate in Q4 2016 (the seventh straight decline), and is down 19.7% year-over-year. However, the Construction Momentum Index held steady at 91.3 from January to February. Real Personal Consumption Expenditures increased 0.3% in December, Construction Machinery Shipments fell 6.5% November. Overall, the Index points to improving construction machinery investment growth over the next two quarters.



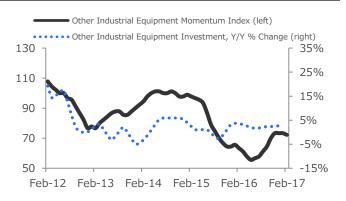
Materials Handling Equipment:

Investment in Materials Handling Equipment rose by a 3.3% annual rate in Q4 2016, and is up 2.5% year-over-year. The Materials Handling Momentum Index jumped from 77.4 (revised) in January to 82.8 in February. Machinery Wholesale Sales increased 1.3% in November, while Real Manufacturing & Trade Sales ticked up 0.1%. Overall, the Index suggests strengthening investment growth in materials handling equipment over the next three to six months.



Other Industrial Equipment:

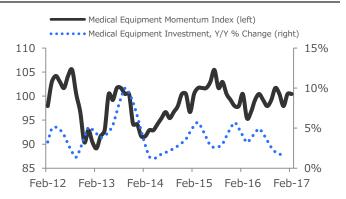
Investment in All Other Industrial Equipment increased by an 11.3% annual rate in Q4 2016, and is up 2.7% from a year ago. The Other Industrial Equipment Momentum Index slipped from 73.3 (revised) in January to 72.2 in February. In December, the Fed Funds Rate jumped 24 basis points to 0.55, but the ISM Chicago Price Paid Index increased 1.9%. Overall, the Index's recent movement suggests little change in other industrial equipment investment growth over the next three to six months.





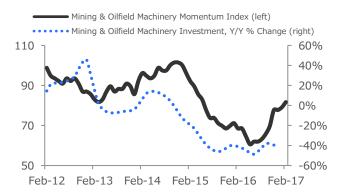
Medical Equipment:

Investment in Medical Equipment expanded at a 9.1% annual rate in Q4 2016 and is up 1.8% year-over-year. The Medical Equipment Momentum Index held steady at 100.5 from January (revised) to February. The Monthly Household Estimate rose 0.6%, the largest month-onmonth increase in two years, but New Orders of Non-Defense Capital Goods dropped 19.4%, the greatest decrease in 27 months. Overall, the Index continues to suggest the potential for faster medical investment growth over the next three to six months.



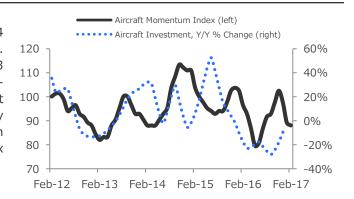
Mining & Oilfield Machinery:

Investment in Mining & Oilfield Machinery declined at a 43.6% annual rate in Q4 2016 and is down 41.6% year-over-year. The Mining & Oilfield Machinery Momentum Index rose from 79.1 (revised) in January to 81.7 in February, its strongest reading in 20 months. In December, Industrial Production of Natural Gas jumped 12.0% after three months of decline, but Oil & Petroleum Product Imports fell 10.3%. Overall, the Index points to improved mining & oilfield investment growth over the next two quarters.



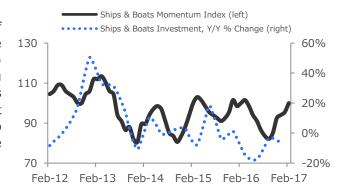
Aircraft:

Investment in Aircraft rose at a 19.7% annual rate in Q4 2016 and remains down 9.4% on a year-over-year basis. The Aircraft Momentum Index ticked down from 89.3 (revised) in January to 88.0 in February. The ISM Non-Manufacturing New Orders Index increased 5.7%, but Overseas Tourism fell 5.7%, the fourth straight monthly decline. Overall, the Index continues to signal a decline in aircraft investment growth over the next three to six months.



Ships & Boats:

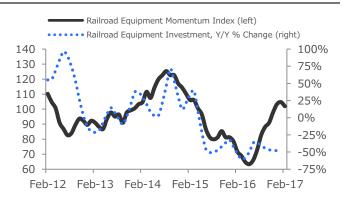
Investment in Ships & Boats fell at an annual rate of 3.7% in Q4 2016 and is down 6.4% year-over-year. The Ships & Boats Momentum Index rose from 95.5 (revised) in January to 100.0 in February. The ISM Manufacturing Employment Index ticked up 0.6% in December (its fourth straight increase), but the Agricultural Product Trade Balance fell 10.3%. Overall, the Index points to improved investment growth in ships & boats over the next three to six months.





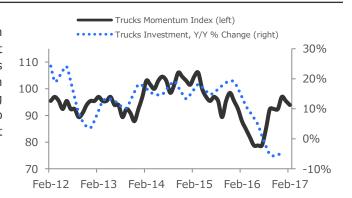
Railroad Equipment:

Investment in Railroad Equipment decreased at a 25.1% annual rate in Q4 2016 but remains down 47.8% year-over-year. The Railroad Equipment Momentum Index fell from 104.7 (revised) in January to 101.9 in February. Although Mining Exports rose 7.6% in November to their highest level in two years, Coal Production fell 6.7% in December. Overall, the Index continues to point to a rebound in railroad equipment investment growth over the next two quarters.



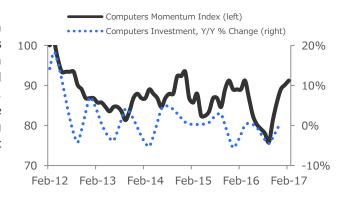
Trucks:

Investment in Trucks expanded at a 9.5% annual rate in Q4 2016 and is down 4.6% from year-ago levels (the first year-over-year decline since 2009). The Trucks Momentum Index decreased from 95.5 (revised) in January to 93.9 in February. In December, Housing Starts increased 11.3%. Overall, the Index continues to signal stronger investment growth in trucks over the next two quarters.



Computers:

Investment in Computers fell at an annual rate of 8.2% in Q4 2016 but is up 0.8% year-over-year. The Computers Momentum Index rose from 90.1 in January to 91.2 in February. Appliance & Electronic Retail Sales surged 29.8% in November, the greatest increase in two years, while Computer & Electronic Industrial Production rose 0.9%. Overall, the Index points to strengthening computers investment growth over the next three to six months.



Software:

Investment in Software rose by a 3.9% annual rate in Q4 2016, and is up 5.7% year-over-year. The Software Momentum Index slipped from 98.7 (revised) in January to 97.4 in February. Consumer Revolving Credit rose 1.1% in November, but was offset by a notable 7.0% increase in the Yen/Dollar Exchange Rate in December. Overall, the Index's elevated position indicates that software investment growth should remain solid over the next two quarters, but momentum is decelerating.

