



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

Business leaders require actionable forward-looking intelligence to make strategic decisions. Accordingly, the Equipment Leasing & Finance Foundation commissioned Keybridge LLC to develop a series of custom leading indicators for the equipment sector. Published 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 an approximate 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 10–20 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.

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

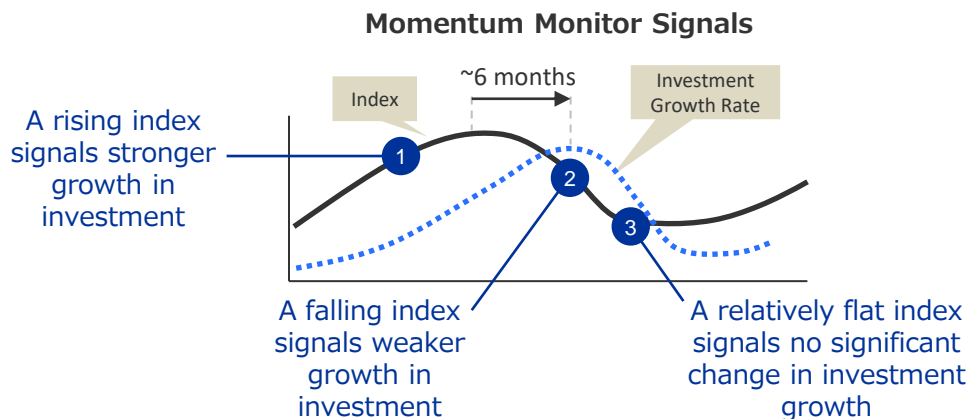
## U.S. Equipment & Software Investment Momentum Monitor – 12 Verticals

- |                                   |                       |
|-----------------------------------|-----------------------|
| 1) Agriculture Machinery          | 7) Aircraft           |
| 2) Construction Machinery         | 8) Ships and Boats    |
| 3) Materials Handling Equipment   | 9) Railroad Equipment |
| 4) All Other industrial Equipment | 10) Trucks            |
| 5) Medical Equipment              | 11) Computers         |
| 6) Mining & Oilfield Machinery    | 12) Software          |

## 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 six 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:

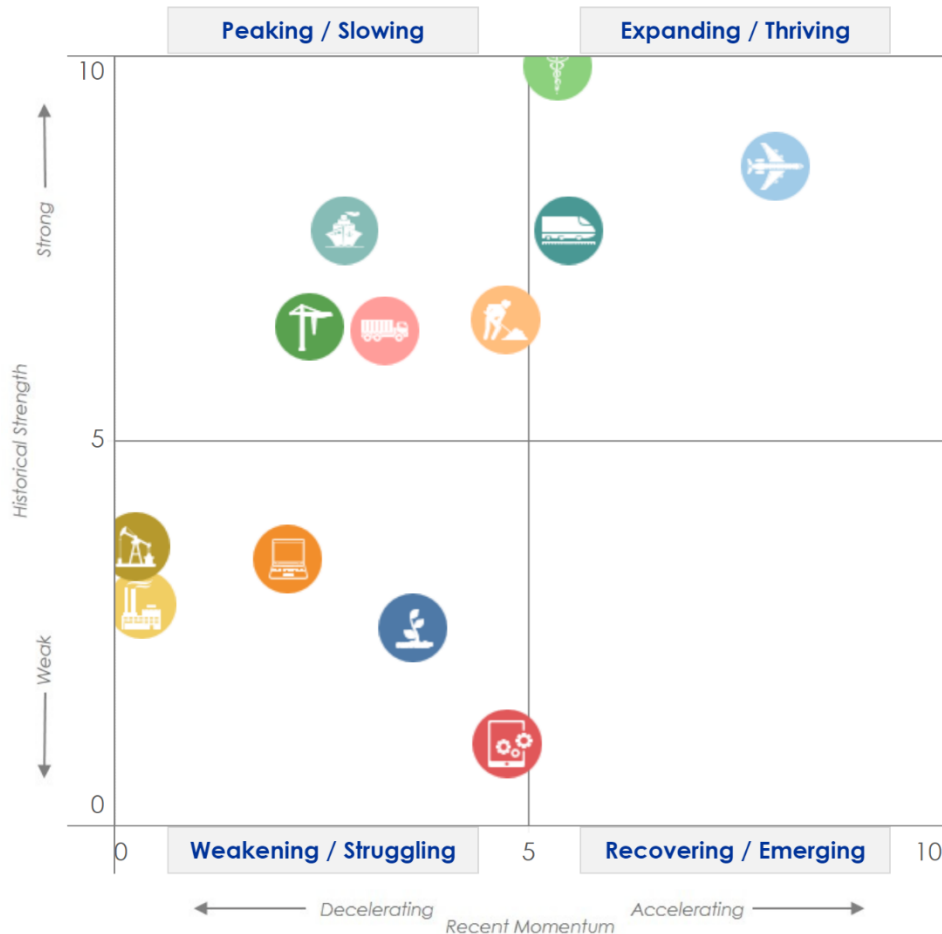
- 1 Investment in Materials Handling Machinery inched up at a 0.3% annualized rate in Q4 2014 and is up 7.3% year-over-year.
- 2 The Materials Handling Momentum Index slipped from 93.5 in February to 92.5 in March.
- 3 A 23% decline in the MNI-Chicago Business Barometer and a spike in Economic Policy 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 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 six 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, the report ends with an interpretation of where investment growth is heading over the next six months based the index's recent movement and historical strength.

# U.S. Equipment & Software Investment Momentum Monitor

## November 2022

### Momentum Monitor Sector Matrix



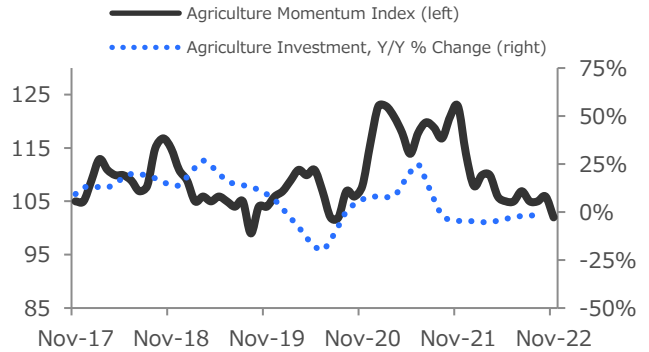
The matrix above summarizes the current values of each of the 12 Equipment & Software Investment Momentum Indices based on two factors: Recent Momentum (x-axis) and Historical Strength (y-axis):

- **"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 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 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 two 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 two quarters. This makes them potentially attractive targets for new short-term leasing and finance opportunities.

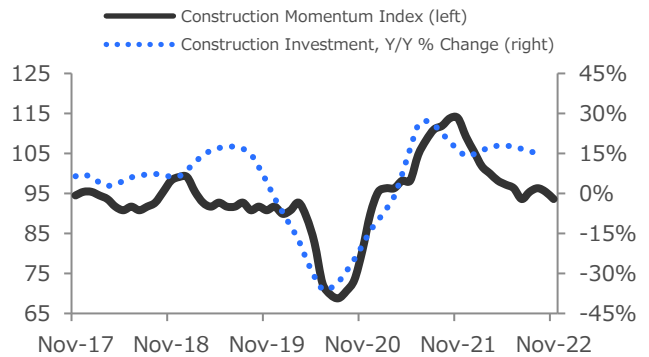
**Agriculture Machinery:**

Investment in Agricultural Machinery fell 9.0% (annualized) in Q3 2022 and was down 2.0% from one year ago. The Agriculture Momentum Index dropped from 105.9 in October to 102.0 in November. In September, Agricultural Machinery Industrial Production eased 3.0% and Shipments of Farm Machinery & Equipment fell 8.1%. Overall, the Index's position and recent movement suggest that agriculture machinery investment growth is likely to remain weak over the coming six months.



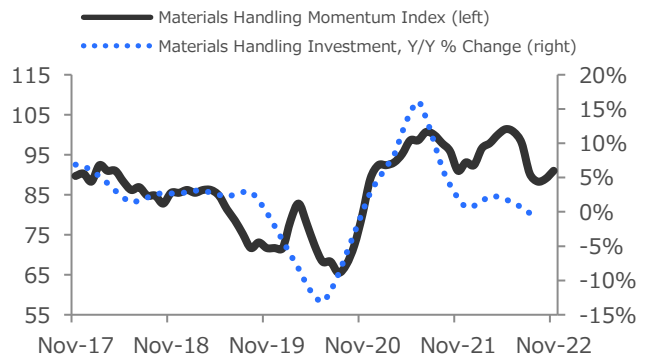
**Construction Machinery:**

Investment in Construction Machinery jumped 9.4% (annualized) in Q3 2022 and was 15% above its year-ago level. The Construction Momentum Index eased from 95.4 in October (revised) to 93.6 in November. The Commercial Property Price Index fell 7.3% while the Conference Board Consumer Confidence Index dropped 7.5% in October. Overall, the Index's position suggests that construction machinery investment growth is likely to ease over the coming two quarters.



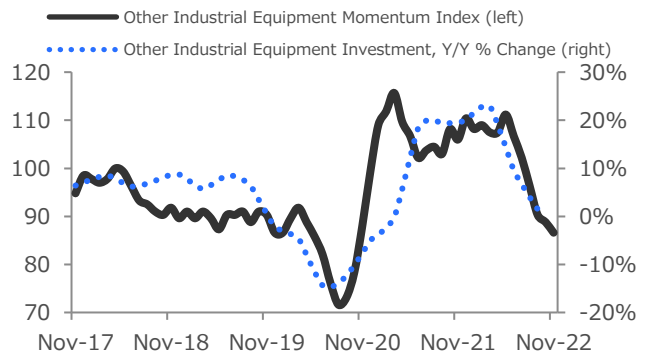
**Materials Handling Equipment:**

Investment in Materials Handling Equipment dropped 7.8% (annualized) in Q3 2022 and was 1.0% below year-ago levels. The Materials Handling Momentum Index rose from 89.0 in October (revised) to 91.0 in November. In September, Durable Manufacturing Industrial Production rose 0.5% and the NFIB Capex Sub-Index rose 7.7%. Overall, the Index's recent movement and position suggest that materials handling equipment investment growth may pick up slightly over the next two quarters.



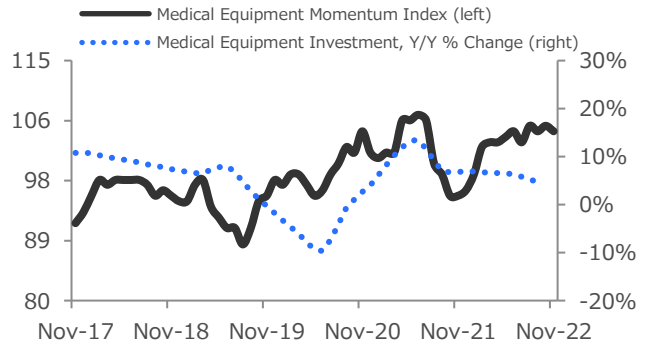
**Other Industrial Equipment:**

Investment in All Other Industrial Equipment fell at a 15% (annualized) rate in Q3 2022 but was up 1.4% Y/Y. The Other Industrial Equipment Momentum Index declined from 88.8 in October (revised) to 86.6 in November. The Nominal Emerging Market Economies Index rose 2.6% in September while the Unemployment Rate rose to 3.7% in October. Overall, the Index's position and recent movement suggest that other industrial equipment investment growth may continue to decelerate over the coming six months.



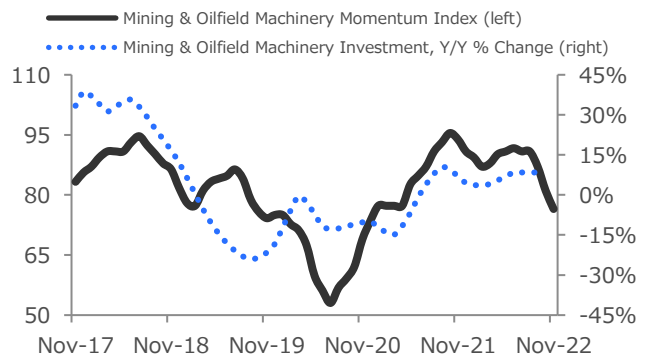
**Medical Equipment:**

Investment in Medical Equipment dropped 2.6% (annualized) in Q3 2022 but was up 4.6% year-over-year. The Medical Equipment Momentum Index slipped from 105.5 in October (revised) to 104.7 in November. Disability Program Social Security Assistance fell 7.2% and the NFIB Small Business Survey Earnings Sub-Index dropped 6.1% in September. Overall, the Index's position and recent movement suggest that medical equipment investment growth will likely sidewind over the coming six months.



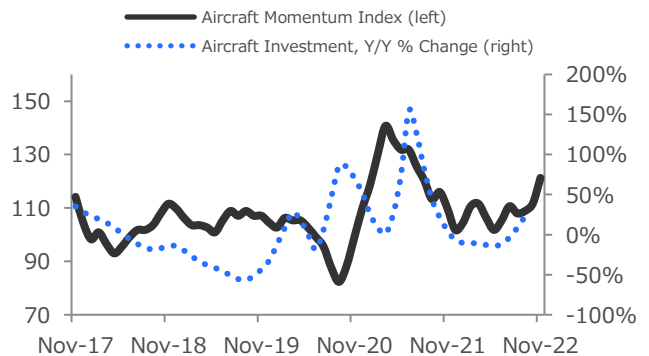
**Mining & Oilfield Machinery:**

Investment in Mining & Oilfield Machinery rose 13% (annualized) in Q3 2022 and was 8.5% above year-ago levels. The Mining & Oilfield Machinery Momentum Index dropped from 81.1 in October (revised) to 76.5 in November. In September, Capacity Utilization for Natural Gas Distribution eased 0.2% while Motor Gasoline Production eased 1.4%. The current position and recent movement of the Index suggest that mining & oilfield machinery investment growth may begin to slow over the coming two quarters.



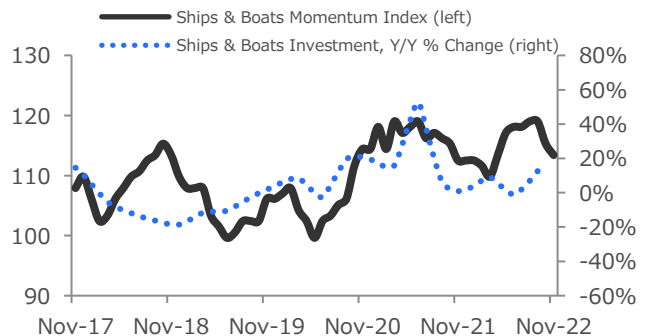
**Aircraft:**

Investment in Aircraft surged at a 313% (annualized) rate in Q3 2022 and was 23% above year-ago levels. The Aircraft Momentum Index jumped from 111.6 in October (revised) to 121.3 in November. In September, Southwest Airline's Market Cap rose 18% and Civilian Aircraft Exports rose 17%. Overall, the Index's position and recent movement suggest that aircraft investment growth may continue to improve over the coming two quarters.



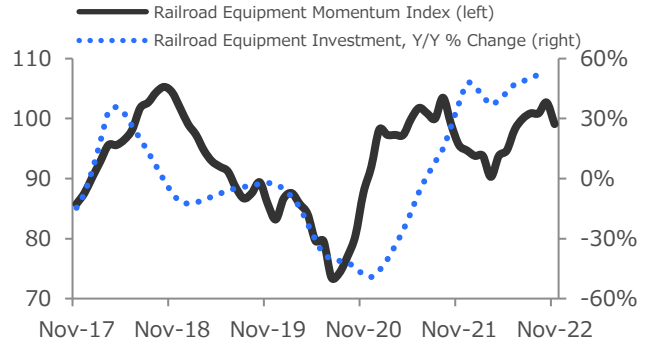
**Ships & Boats:**

Investment in Ships & Boats jumped at an annualized rate of 34% in Q3 2022 and was 13% above its year-ago level. The Ships & Boats Momentum Index fell from 115.3 in October (revised) to 113.4 in November. In September, the Ship and Boat Building Producer Price Index was flat, and Exports of BP-Based Other Feed Grains fell 53%. Overall, the Index's position and recent movement suggests that ships & boats investment growth is unlikely to accelerate over the coming six months.



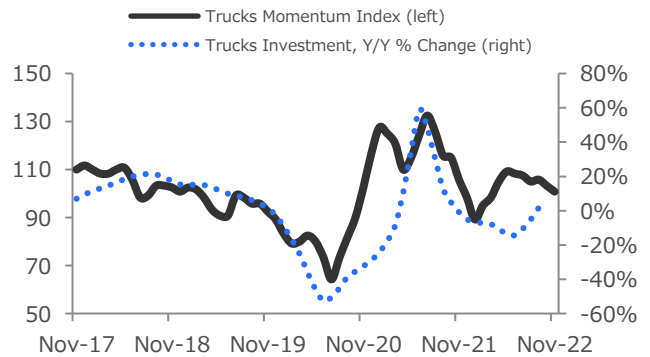
**Railroad Equipment:**

Investment in Railroad Equipment increased 86% (annualized) in Q3 2022 and was up 52% year-over-year. The Railroad Equipment Momentum Index dipped from 102.7 in October (revised) to 99.1 in November. In September, Railroad Rolling Stock Industrial Production fell 3.0% while Crude Oil and Petroleum Products Exports were flat in October. Overall, the current position and recent movement of the Index suggest that railroad equipment investment growth will likely remain strong over the coming six months.



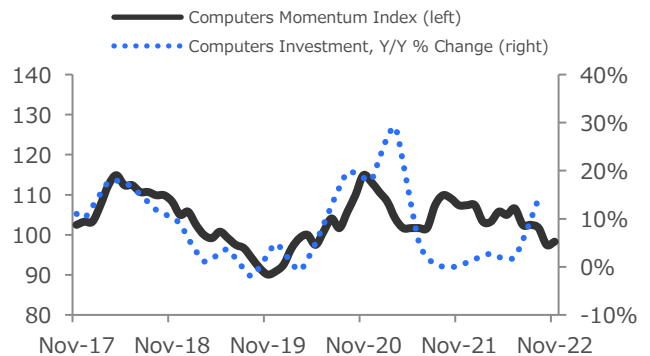
**Trucks:**

Investment in Trucks rose 44% (annualized) in Q3 2022 and was 1.8% above year-ago levels. The Trucks Momentum Index fell from 103.3 in October (revised) to 100.8 in November. In October, the ISM Manufacturing Index fell 1.4% while Shipments of Primary Metals fell 2.0% in September. Overall, the position and recent movement of the Index indicate that trucks investment is unlikely to improve significantly in the coming two quarters.



**Computers:**

Investment in Computers surged 60% (annualized) in Q3 2022 and was up 14% year-over-year. The Computers Momentum Index improved from 97.5 in October (revised) to 98.3 in November. Total Revolving Debt increased 1.5% in August, and Capacity Utilization for Computer & Electronic Product Manufacturing rose 0.5% in September. Overall, the Index's position and recent movement suggest that computers investment growth is unlikely to continue accelerating over the coming six months.



**Software:**

Investment in Software rose 8.0% (annualized) in Q3 2022 and was up 10% from a year prior. The Software Momentum Index rose from 87.1 in October (revised) to 91.0 in November. In September, Non-Residential Construction Spending rose 1.0%, and IBM's share price surged 16% in October. Overall, despite improvement this month, the Index's position suggests that software investment growth will likely ease over the coming two quarters.

