2019 Equipment Leasing & Finance Industry Horizon Report

CELEBRATING 30 YEARS EQUIPMENT LEASING & FINANCE FOUNDATION
Your Eye on the Future
Established in 1989, the Equipment Leasing & Finance Foundation is a 501c3 non-profit organization dedicated to inspiring thoughtful innovation and contributing to the betterment of the equipment leasing and finance industry. The Foundation accomplishes its mission through development of future-focused studies and reports identifying critical issues that could impact the industry.

Foundation research is independent, predictive, and peer-reviewed by industry experts. It is funded solely through contributions. Contributions to the Foundation are tax-deductible. Support the Foundation by making a 100% tax-deductible gift today at www.LeaseFoundation.org.

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OVERVIEW
The Equipment Leasing & Finance Foundation (Foundation) is pleased to present the 2019 Equipment Leasing & Finance Industry Horizon Report, previously known as the State of the Equipment Finance Industry (SEFI) report. The Industry Horizon Report emphasizes forward-looking economic and industry insights related to the U.S. economy—including near- and medium-term economic risks—based on market insights provided by industry leaders and Keybridge, the Foundation’s researchers.

The opening section of the 2019 Horizon Report presents the results of a Foundation-commissioned survey of equipment end-users conducted in July 2019. The survey, which is more than double the size of last year’s survey, provides the data to estimate the current size of the equipment finance industry, assess the propensity to finance private sector equipment investment for key equipment verticals, and forecast end-user plans to acquire and finance equipment over the next 12 months.

Equipment and software investment grew at a solid clip last year, and the end-user survey proves once again that the equipment finance industry is a crucial channel through which this investment occurs. Nearly 8 in 10 end-users reported using some form of financing to acquire equipment and software in 2018, the highest share since our first end-user survey in 2007.

However, the survey also revealed that a greater percentage of equipment and software investment was acquired without the use of financing than in 2017, likely due to an abundance of cash stemming from the continued economic upswing and lower tax rates. Additional cash on hand, coupled with higher interest rates, drove down the propensity to finance among private businesses, which in turn resulted in a smaller estimate for industry size: roughly $900 billion in 2018. Put simply: more businesses than ever are using financing, but they aren’t financing as much of their acquisitions as they have in the past. However, the increase in cash-based acquisition that occurred last year should be seen as a great opportunity for the industry to grow in the years ahead.

While predicting the future is always a challenge, the second half of the 2019 Horizon Report provides a detailed analysis of recession risk. I am particularly excited to reveal the “Foundation-Keybridge Equipment Finance Industry Recession Monitor,” a customized set of indicators designed by Keybridge to help industry leaders anticipate the timing of the next recession on a monthly basis. While a recession does not appear imminent in the next six months, the Recession Monitor does make clear that industry leaders need to be thinking about how to position their businesses in anticipation of a downturn.

We hope you enjoy the 2019 Horizon Report and the Foundation’s many other research publications.

Jeffry D. Elliott
Chairman, Equipment Leasing & Finance Foundation, October 2019
The U.S. economy exhibited strength throughout most of 2018, a continuation of what is now the longest U.S. economic expansion on record. While an expanding economy is generally positive for the equipment finance industry, the combination of increased profits (and thus more cash on hand) due to tax reform and higher interest rates following four Fed rate hikes led to a significant decline in the propensity to finance equipment investment. With an estimated 50% of total public and private sector equipment and software investment procured via secured loan, lease, or line of credit—roughly in line with 2011–14 levels, but below the 60% estimated in last year’s Horizon Report—the Equipment Leasing & Finance Foundation’s (Foundation) estimate for the size of the equipment finance industry fell below the $1 trillion mark in 2018. Nonetheless, the vast majority of businesses relied on financing for at least part of their equipment and software acquisitions, and Foundation-Keybridge projections suggest that the industry resumed its expansion in 2019.

Looking ahead, while the economy was mostly healthy last year, several key indicators have deteriorated in 2019, and there is increasing evidence that we may be approaching a growth pause or downturn. Based on the latest reading of the new Foundation-Keybridge Equipment Finance Industry Recession Monitor, a recession is unlikely to occur in the next six months. However, there are enough indicators “flashing red” or nearing a tipping point to conclude that a recession in the next year would not be surprising—and a recession in the next 12–24 months is more likely than not.¹

Key findings from the 2019 Equipment Leasing & Finance Industry Horizon Report include:

- Total equipment and software investment continued to grow in 2018, with nominal investment expanding by 5.9% to $1.8 trillion. Based on the results of the Foundation’s end-user survey and analysis by Keybridge, approximately 50% of this investment (and 55% of private sector investment) was financed, resulting in an industry sizing estimate of about $900 billion.

- According to the end-user survey (which focused only on private sector investment), the most common payment method used by businesses to acquire equipment and software in 2018 was leasing (24%), followed by lines of credit (16%), secured loans (12%), and other forms of finance (3%). Among non-financed acquisitions, cash (27%) was the most prevalent payment method, followed by paid-in-full credit card purchases (17%) and “other” (1%).

- The end-user survey also revealed that 79% of respondents who acquired equipment or software in 2018 used at least one form of financing to do so (i.e., lease, secured loan, or line of credit). This represents a substantial increase compared to the Foundation’s 2017 estimate (58%) and a return to levels observed in 2015 (78%) and 2011 (72%).

¹ The latest reading of the new Foundation-Keybridge Equipment Finance Industry Recession Monitor indicates a recession is unlikely to occur in the next six months.
• Of the 12 equipment verticals for which a sufficient number of responses were collected, Office Equipment was most likely to be financed, with an estimated 65% of acquisition volume secured through a lease, loan, or line of credit. Other verticals with relatively high financing activity include Other Industrial Equipment (59%), Agriculture Equipment (59%), Communications Equipment (58%), Medical Equipment (58%), and Automobiles (57%). Materials Handling Equipment (41%) was the least likely to be financed in 2018 among the 12 verticals analyzed.

• Of the five end-user industries for which a sufficient number of responses were collected, Finance and Insurance firms were most likely to use financing (61%), followed by Manufacturing (51%), and Educational Services (47%). In most industries, leasing remains the most popular method of finance used, although Construction firms relied more heavily on loans. More generally, service-sector firms and goods-sector firms had nearly identical propensities to finance (54% vs. 55%), though goods-sector firms were slightly more likely to rely on loans and slightly less likely to use a line of credit compared to service-sector firms.

• The majority of respondents expect the volume of their equipment and software acquisitions to remain the same over the next 12 months (56%), while the share of end-users who expect volume to increase (22%) roughly matches the share who expect it to decrease (21%). Of those who expect acquisitions to increase, the majority (59%) expect to use a financing method to cover at least a portion of the cost.

• As the longest expansion in U.S. history continues, several economic indicators that have historically provided early warning of a downturn suggest that there may be a slowdown ahead. Overall, a recession will pose challenges for most players in the equipment finance industry. However, those challenges might be mitigated by the adjustments equipment finance professionals can make to their portfolios and strategy in the months leading up to a recession and at recession onset.

• Keybridge developed a new recession watch, too—the Foundation-Keybridge Equipment Finance Industry Recession Monitor—intended to help industry professionals anticipate the timing and severity of the next U.S. recession. The Recession Monitor is comprised of a mix of 11 consumer- and business-oriented indicators and calibrated to emphasize the financial and business sectors. It is designed to anticipate when the industry is likely to start to “feel” a recession, even if the downturn has yet to fully materialize throughout the broader U.S. economy.

• Based on the Recession Monitor’s current reading, we believe recession-like conditions for the industry—that is, a full recession or a near-recession that drags down the business and industrial segments of the economy, including the equipment finance industry—are unlikely to occur in the next six months. However, the preponderance of economic data suggest that a recession in the next 6–12 months would not be particularly surprising (though the probability appears to be less than 50%)—and a recession in the next 12–24 months is more likely than not.

• Looking ahead, equipment finance industry professionals should keep their eyes on the performance of U.S. consumers, who continue to buoy the U.S. economy amidst slowing business activity.
END-USER SURVEY
Sizing the Market for Equipment Finance

Over the last decade, the Foundation has commissioned several surveys of equipment end-users to evaluate the size and expected growth of the equipment finance industry. The first survey was conducted in 2007 and estimated the industry’s size at nearly $600 billion, or 55% of total equipment and software investment. Subsequent end-user surveys have found that the industry has grown substantially since the end of the Great Recession, hovering around $1 trillion since 2015.

In 2018, Keybridge began working with the Foundation to update the end-user survey and develop additional breakdowns on equipment verticals to match the verticals tracked by the Foundation-Keybridge Equipment and Software Investment Momentum Monitor. This year, we have continued this effort by more than doubling the survey sample while maintaining its overall representativeness of the universe of equipment end-users.

Working closely with Concentrix, a Cincinnati-based market research and technology firm, Keybridge surveyed over 550 businesses that acquired equipment or software in 2018. Surveys were collected from respondents who self-identified as a CEO, CFO, COO, or other company official knowledgeable about company expenditures and how those expenditures are funded. Respondents reflect a diverse mix of small, medium, and large firms across a range of industries with varying equipment needs, providing a reliable snapshot of overall equipment acquisition trends.

The survey, which was conducted electronically, was in the field from July 11-25, 2019 and focused on equipment acquisitions that occurred in calendar year 2018 and plans to invest in equipment in 2019.

Estimating the Size of the Equipment Finance Industry

Equipment and software investment growth in 2018 maintained the healthy pace set the preceding year, with nominal investment expanding by 5.9% according to the U.S. Department of Commerce—up slightly from the 5% (revised) nominal growth observed in 2017. Investment growth in 2018 was driven by several factors, including the continuation of a broad economic upswing, lower tax rates, a healthy labor market, and strong business and consumer confidence.

The 2019 end-user survey revealed that 55% of private-sector equipment investment was financed using leases, secured loans, or lines of credit in 2018. Combined with Keybridge’s estimate of public-sector equipment financing activity, the overall share of 2018 equipment investment that was financed (i.e., the “propensity to finance”) was 50%. This estimate is significantly lower than the 60–62% share observed from 2015–2017 (including 60% in 2017 as reported in last year’s Horizon Report) but is in line with levels seen between 2005–2014. Due to the lower propensity to finance
estimated for 2018, the Foundation estimates that the size of the equipment finance industry at the end of 2018 was roughly $900 billion. However, the survey also found that nearly 80% of firms who acquired equipment or software in 2018 used at least one form of financing to do so. This result suggests that while businesses may have financed less of their total equipment and software acquisition volume, most take advantage of the benefits financing offers.

The decline in the propensity to finance captured by the 2019 end-user survey likely reflects a combination of factors:

- Strong economic growth and lower corporate tax rates meant that businesses had more cash on hand in 2018, and thus more flexibility in how they chose to fund equipment acquisitions. This year’s end-user survey reflects these trends: the share of respondents reporting after-tax profitability over the last year rose to 87%, up from 79% in the 2018 end-user survey, while the share reporting a loss fell in half (from 10% to 5%).

- The Federal Reserve raised interest rates 100 basis points over the course of 2018, and rates are up 200+ basis points since the Foundation’s 2016-17 market sizing study that found a 68% propensity to finance among private sector end-users. Higher interest rates lead to higher financing costs, which can make financing less attractive when acquiring equipment.

- Variations in survey sampling also likely account for a degree of change in the propensity to finance. This year’s end-user survey collected a larger volume of usable responses (556) than past efforts, with responses drawn from small, medium, and large businesses across a variety of industries. The larger sample size and the way in which respondents are distributed across industries should result in a more representative and reliable estimate with a reduced margin of error. For example, in 2018, more than one-quarter of all end-user respondents self-identified as belonging to a single service-sector industry (Professional, Scientific, and Technical Services), and the propensity to finance associated with this sub-sector was higher than for most industries. This, in turn, drove the overall propensity to finance for service-sector firms higher (71%) relative to goods-sector firms (51%). This year’s survey, however, resulted in a more evenly-distributed sample of respondents across service and goods-sector firms and yielded roughly equal finance propensities among services- and goods-sector industries (54% vs. 55%).

Figure 1: Equipment Finance Industry Size, Billions of Dollars

Sources: BEA; previous Foundation end-user surveys; Keybridge LLC. Note: The generic term “equipment finance” is used to denote public and private equipment and software acquired via lease, secured loan, or line of credit. Non-financed equipment is acquired through cash, credit card (paid in full), or another method.
The 2011, 2015, 2017, and 2018 equipment finance estimates are based on surveys of equipment end-users conducted in 2012, 2016, 2018, and 2019. To estimate the industry’s size in the remaining years, Keybridge relies on two principal components: total private equipment and software investment; and the propensity to finance those investments.

- Equipment and software investment is reported on a quarterly basis by the U.S. Bureau of Economic Analysis (BEA). Estimates are subject to regular revisions, which may cause the historical estimates presented in Figure 1 above to differ slightly from prior years’ reports.

- The propensity to finance is estimated using a Keybridge-constructed index called the Propensity to Finance Equipment Index (PFEI). The PFEI is a composite of two separate measures: (1) the ratio of the share of commercial and industrial (C&I) loans that go towards equipment purchases vs. total nominal equipment and software investment, and (2) a trend comparison of new business volume as measured by the Equipment Leasing and Finance Association’s (ELFA) Monthly Leasing and Finance Index (MLFI-25) vs. total nominal equipment and software investment. Both measures are converted to an index and then combined to yield the final PFEI. An adjustment factor is also applied to account for the reality that public sector equipment and software acquisitions (which comprise roughly 10% of overall investment) are less likely to be financed than private sector acquisitions.

### A Note on Industry Sizing

Estimating the size of the equipment finance industry is a complicated task, and over the years a variety of methods have been used to produce different measurements that offer various insights into industry size. For example:

- **MLFI-25**: Since 2001, ELFA has conducted a monthly survey of select Association members to produce the Monthly Leasing and Finance Index, or MLFI-25. This index reflects the economic activity of 25 companies representing a cross section of the equipment finance industry and includes data on new business volume (among other measures). However, while the MLFI-25 offers a useful summary view of industry performance compared to prior years (e.g., annual growth rates), it does not attempt to estimate the industry’s overall size.

- **SEFA**: Another ELFA survey, the annual Survey of Equipment Finance Activity (SEFA), provides a more comprehensive picture of the industry than the MLFI-25. The SEFA offers detailed data on a variety of industry performance indicators for banks, captives, and independents using data from more than 100 equipment finance firms (the typical response rate is around 30% of ELFA member companies). However, SEFA data are not extrapolated to produce industry-wide projections, which results in an underestimate of the true size of the industry. Moreover, because the SEFA is focused on equipment finance industry members, it likely does not fully account for equipment acquisitions that are financed under more generic forms of credit, such as commercial and industry (C&I) loans or non-descript lines of credit.

- **End-User Survey**: In three of the last four years (as well as in 2007 and 2012), the Foundation has conducted an end-user survey to estimate the volume of leased and financed equipment by end-user industry, asset class, profitability, and other differentiators. This survey facilitates the calculation of an overall “propensity to finance” figure that, when applied to BEA data on overall equipment and software investment, reveals a more comprehensive industry sizing estimate that accounts for generic leasing and financing activity used to acquire equipment.

Of the three methods described above, the Foundation believes that the most recent edition of the end-user survey provides the most reliable estimate of the industry’s size. As such, Figure 1 represents the Foundation’s “official” estimate and forecast of equipment leasing and finance activity.
Looking ahead, the industry sizing forecast for 2019–2022 presented in Figure 1 suggests that the industry is likely to resume its expansionary path. However, it is important to note that while the 2019 projection is based on the current PFEI reading and the Foundation’s forecasts for equipment and software investment published in its quarterly Equipment Leasing & Finance U.S. Economic Outlook series, the projections for 2020–2022 rely solely on historical investment and financing trends that have occurred since 2005. As such, they are likely to be overly optimistic if the propensity to finance plateaus or continues to decline in 2019, or if the economy slows or slides into recession in the next 12–18 months. In December 2019, the Foundation will publish its 2020 U.S. Economic Outlook, which will contain an annual forecast for equipment and software investment in 2020—and, by extension, provide an early indication of whether the industry’s growth rate will ultimately exceed or fall short of historical trends.

A Closer Look at Methods of Finance

According to surveyed equipment end-users, the most common financing method used by private businesses to acquire equipment and software in 2018 continues to be leasing, with nearly one-quarter of purchase volume (24%) acquired via lease (see Figure 2). While this marks a steep decline from the record-setting 48% observed in 2017, the share of end-users relying on leases as captured by prior Foundation end-user surveys has historically ranged from 17% in 2006 to 39% in 2015—making this year’s figure consistent with the long-term average. The relative decline in the use of leases compared to last year could be related to an improved survey sample this year but may also reflect recent changes to the corporate tax code. Specifically, given the newness of the law and its many complexities, the share of end-users who finance equipment acquisitions via leasing may continue to exhibit volatility until businesses have fully internalized the tax code changes and adjusted their business practices accordingly.

In contrast to leases, all other methods of payment showed increases in use by private businesses. As shown in Figure 2, in 2018, about 16% of private sector equipment and software acquisitions were financed through lines of credit (up from 9%) and 12% through secured loans (up from 8%). An additional 3% were supported using forms of financing that respondents considered to fall outside of these three major forms (e.g., “short-term rentals,” “monthly payments,”
Among non-financed acquisitions, cash (27%, up from 23%) remained the most prevalent payment method, followed by paid-in-full credit card (17%, up from 10%).

Among private sector end-users, the propensity to finance in 2018 fell to 55%, down significantly from the 65% observed in 2017, but in line with levels observed in 2011–2014. Largely due to the macroeconomic factors outlined above, this change is manifest in private business’ rising use of cash to pay for equipment. Last year’s survey anticipated this shift, as more than two-thirds of respondents who expected to acquire more equipment in 2018 than the previous year expected to use cash to do so—more than double the share who expected to use loans, leases, or lines of credit. The lower propensity to finance in 2018 is also reflected in the rising share of businesses who chose to use credit cards paid in full to make equipment purchases, which returned to its historical average after dropping off in 2017.

**Method of Finance by Equipment Vertical**

As shown in Figure 3, of the 17 equipment verticals included in the survey, 12 received a sufficient number of responses to allow for a breakdown by type of finance (up from nine last year). In general, this year’s survey yielded a narrower range in the propensity to finance across equipment verticals compared to last year's survey (41–65% in 2018 vs. 45–88% in 2017), possibly due to the availability of a larger sample size. Office Equipment was the most likely vertical to be financed in 2018, with an estimated 65% of acquisition volume secured through a lease, loan, or line of credit, followed by Other Industrial Equipment (59%) and Agriculture Equipment (59%). Materials Handling Equipment (41%) was the least likely to be financed in 2018 among the 12 verticals analyzed.

**Figure 3: Equipment Finance Methods by Equipment Vertical, 2018**

<table>
<thead>
<tr>
<th>Equipment Vertical</th>
<th>Lease</th>
<th>Loan</th>
<th>Line of Credit</th>
<th>Other Finance</th>
<th>Cash</th>
<th>Credit Card</th>
<th>Other</th>
<th>Total Nominal Investment (2018)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Equipment</td>
<td>27%</td>
<td>13%</td>
<td>21%</td>
<td>4%</td>
<td>11%</td>
<td>23%</td>
<td></td>
<td>$5 Billion</td>
</tr>
<tr>
<td>Other Industrial</td>
<td>28%</td>
<td>18%</td>
<td>11%</td>
<td>28%</td>
<td>12%</td>
<td></td>
<td></td>
<td>$246 Billion</td>
</tr>
<tr>
<td>Agriculture</td>
<td>20%</td>
<td>18%</td>
<td>19%</td>
<td>24%</td>
<td>16%</td>
<td></td>
<td></td>
<td>$39 Billion</td>
</tr>
<tr>
<td>Communication</td>
<td>33%</td>
<td>11%</td>
<td>12%</td>
<td>18%</td>
<td>22%</td>
<td></td>
<td></td>
<td>$133 Billion</td>
</tr>
<tr>
<td>Medical</td>
<td>31%</td>
<td>14%</td>
<td>11%</td>
<td>10%</td>
<td>30%</td>
<td></td>
<td></td>
<td>$101 Billion</td>
</tr>
<tr>
<td>Automobiles</td>
<td>21%</td>
<td>17%</td>
<td>17%</td>
<td>27%</td>
<td>14%</td>
<td></td>
<td></td>
<td>$27 Billion</td>
</tr>
<tr>
<td>Trucks</td>
<td>18%</td>
<td>13%</td>
<td>24%</td>
<td>22%</td>
<td>22%</td>
<td></td>
<td></td>
<td>$208 Billion</td>
</tr>
<tr>
<td>Construction</td>
<td>17%</td>
<td>23%</td>
<td>12%</td>
<td>35%</td>
<td>9%</td>
<td></td>
<td></td>
<td>$50 Billion</td>
</tr>
<tr>
<td>Furniture &amp; Fixtures</td>
<td>26%</td>
<td>12%</td>
<td>15%</td>
<td>22%</td>
<td>22%</td>
<td></td>
<td></td>
<td>$50 Billion</td>
</tr>
<tr>
<td>Computers</td>
<td>30%</td>
<td>10%</td>
<td>12%</td>
<td>25%</td>
<td>21%</td>
<td></td>
<td></td>
<td>$119 Billion</td>
</tr>
<tr>
<td>Software</td>
<td>20%</td>
<td>4%</td>
<td>25%</td>
<td>34%</td>
<td>12%</td>
<td></td>
<td></td>
<td>$380 Billion</td>
</tr>
<tr>
<td>Materials Handling</td>
<td>18%</td>
<td>10%</td>
<td>9%</td>
<td>49%</td>
<td>10%</td>
<td></td>
<td></td>
<td>$89 Billion</td>
</tr>
</tbody>
</table>

Source: 2019 Foundation end-user survey; BEA

Note: Equipment verticals not shown did not receive a sufficient number of responses to produce statistically viable results. Shares 3% or less are not labeled.
Method of Finance by End-User Industry

Roughly two-thirds of respondents to the 2019 end-user survey represented service-sector industries (e.g., Professional Services, Health Care, Educational Services, Real Estate), while 32% represented goods-sector industries (e.g., Manufacturing, Construction, Agriculture, Textiles). As shown in Figure 4, the propensity to finance for service-sector firms was nearly identical to that of goods-sector firms (54% vs. 55%), though goods-sector firms were more likely to rely on loans and less likely to use a line of credit compared to service-sector firms. Compared to 2017, service-sector firms observed a redistribution of financing methods away from leasing and towards lines of credit, while also relying more heavily on credit cards paid in full to fund equipment and software acquisitions. Goods-sector firms, on the other hand, appear to have largely maintained the payments behaviors observed in the previous year.

Figure 4: Methods of Acquiring Equipment and Software, by General End-User Industry, 2018

This year’s end-user survey also permits a similar breakdown by type of finance across five specific industries: Construction; Educational Services; Finance and Insurance; Manufacturing; and Professional Services (see Figure 5). Among these industries, Finance and Insurance end-users were most likely to use financing (61%), followed by Manufacturing (51%), and Educational Services (47%). The relatively high propensity to finance among Finance & Insurance end-users was driven by their reliance on Office Equipment and Communications Equipment, which as shown in Figure 3 were among the most likely equipment verticals to be financed. In most industries, leasing remains the most popular method of finance used, although Construction relied more heavily on loans. Notably, the share of Professional Services firms relying on financing to fund equipment purchases declined sharply compared to 2017 (45% vs. 77%). This decline was driven by a reduced reliance on leases and an increased reliance on cash.

Method of Finance by End-User Size

This year’s Horizon Report also includes an assessment of finance methods with a breakdown by end-user size, measured both by annual sales and by number of employees. Overall use of financing remains generally stable across sales brackets, ranging from 53 – 63% of acquisition volume (see Figure 6). However, companies with more than $100 million in sales were the least likely to use financing (53%) and most likely to use cash (29%), suggesting that large cash flows derived from larger revenue—and, presumably, a lower tax burden compared to the previous year—allowed for reduced dependence on financing. Small firms with less than $1 million in annual sales were also relatively less reliant on financing (54%) compared to mid-sized firms, instead primarily funding acquisitions using credit cards paid in full (27%) or cash (17%). These general trends are largely consistent with those found in prior end-user surveys.

Among financing methods, leasing was the most popular across most firm sales categories, though mid-size firms with between $5 and $50 million in sales used lines of credit and loans more frequently than they did leases.
Figure 5: Methods of Acquiring Equipment and Software, by Select End-User Industry, 2018

Source: 2019 Foundation end-user survey
Note: Industries not shown did not receive a sufficient number of responses to produce statistically viable results.

Figure 6: Method of Finance by End-User Size (Sales), 2018

Source: 2019 Foundation end-user survey
Looking at the same question as defined by a firm’s number of employees rather than its sales revenue, the same trends emerge. Specifically, small firms (i.e., those with fewer than 100 employees) and large firms (i.e., those with more than 1,000 employees) were less likely to finance their equipment acquisition and more likely to use cash than mid-size firms. Mid-size firms with between 100 and 1,000 employees were relatively more likely to rely on leases, loans, and lines of credit to meet their financing needs (see Figure 7).

**Figure 7: Method of Finance by End-User Size (# of Employees), 2018**

Source: 2019 Foundation end-user survey

### A Closer Look at Lenders

Banks were the key players in the equipment finance industry in 2018, which is consistent with the findings of prior end-user surveys. However, survey results indicate that the playing field is leveling. As shown in Figure 8, about 43% of equipment and software finance volume came from bank lenders (down from 57% in 2017), while 33% came from manufacturers and vendors (up from 21% in 2017) and 12% from independents (down slightly from 16% in 2017).
Figure 8: Equipment Finance Market Segmentation, 2018

Source: 2019 Foundation end-user survey

**Lenders by Equipment Vertical**

Among specific equipment verticals, banks captured the largest share of financing activity for Trucks (70%), Construction Equipment (55%), Computers (53%), Industrial Equipment (45%), Agriculture Equipment (45%), Furniture and Fixtures (41%), and Materials Handling Equipment (41%) (see Figure 9). Manufacturers/Captives finance the greatest share of acquisition volume for Office Equipment (41%), Software (38%), Communications Equipment (38%), and Medical Equipment (37%), and rival banks with respect to Furniture and Fixtures (38%) and Automobiles (27%). Independents did not comprise the largest share in any of the 12 verticals reported but had a significant footprint in financing acquisitions of Automobiles (20%), Communications Equipment (15%), Materials Handling Equipment (15%), and Furniture and Fixtures (14%).

**Lenders by End-User Industry**

As shown in Figure 10, a breakdown of lenders by industry shows that banks were responsible for the bulk of financing obtained in the Educational Services (75%), Construction (66%), and Manufacturing (45%) industries. These industries tend to acquire equipment from verticals more likely to be financed through banks, including Trucks, Construction Equipment, Industrial Equipment, and Materials Handling Equipment for businesses in the Construction and Manufacturing industries, and Computers and Furniture and Fixtures for those in the Education Services industry. Captives comprised the largest share of financing among Finance and Insurance (39%) and Professional Services (42%) companies, which correspond with Captives’ activity in Office Equipment, Software, and Communications Equipment. Similarly, independents were also active in the Finance and Insurance (17%) and Professional Services (14%) industries, matching their relative proclivity for financing Communications Equipment and Furniture and Fixtures.
Figure 9: Equipment Finance Market Segmentation by Equipment Vertical, 2018

![Figure 9](image_url)

Source: 2019 Foundation end-user survey
Note: Equipment verticals not shown did not receive a sufficient number of responses to produce statistically viable results.

Figure 10: Type of Lender by End-User Industry, 2018

![Figure 10](image_url)

Source: 2019 Foundation end-user survey
Note: Industries not shown did not receive a sufficient number of responses to produce statistically viable results.
A Closer Look at Reasons for Financing

In aggregate, end-users who chose to finance their equipment and software acquisitions were equally likely to cite protection from equipment obsolescence (48%), tax advantages (47%), and the optimization of cash flow (47%) as the primary reasons for choosing financing over cash or credit card (paid in full) to make purchases. Notably, while the shares of end-users citing tax advantages and optimization of cash flow remain largely unchanged from last year, the share of firms citing protections from equipment obsolescence rose ten percentage points from 2017 and more than 15 points since 2015—suggesting that financing is an increasingly important tool firms use to gain access to the most up-to-date equipment and technology.

At a more granular level, end-users in the Finance and Insurance industry were more likely to indicate that their decision to finance acquisitions stems from a desire for protection from equipment obsolescence. Construction firm end-users were more likely to point to tax advantages as a reason to finance acquisitions, while firms in the Educational Services and Health Care industries were more likely to indicate that their use of financing arises from an interest in optimizing cash flow. (Note that most respondents selected multiple reasons for using financing over cash.)

Figure II: Reasons for Using Financing over Cash or Cash-Equivalent, By End-User Industry, 2018

Source: 2019 Foundation end-user survey
State-Level Equipment Financing

While BEA’s 2018 business investment data is not sufficiently granular to compute reliable estimates of state-level equipment and software financing activity, state estimates can be produced by combining BEA’s industry-level private investment data from 2017 with equipment-specific financing propensities derived from this year’s end-user survey. The results of this analysis are presented in Figure 12.

- Roughly half of the private sector’s 2017 equipment finance volume occurred in the largest seven states: California ($120 billion; 15% of private sector equipment and software finance volume), New York ($71 billion; 9% of private sector volume), Texas ($67 billion; 8.4%), Florida ($38 billion, 4.8%), Illinois ($35 billion; 4.4%), Pennsylvania ($33 billion; 4.1%), and Ohio ($27 billion; 3.4%). These states also represented the largest financing volume in 2016.

- Relative to 2016 financing levels, regions that performed the best in 2017 include the District of Columbia, Washington, Georgia, and California. States in which private equipment and software financing activity fell the most tend to be agriculture-dependent states such as North Dakota, South Dakota, Iowa, and Nebraska.

- Relative to private sector GDP, private equipment and software finance comprised the largest share of the state economy in Nebraska (6.2%), South Dakota (6.0%), and Delaware (5.9%). Meanwhile, states where the equipment finance industry comprised the smallest share of private GDP include Wyoming (4.4%), New Mexico (4.4%), and Alaska (4.4%).
Figure 12: Equipment & Software Finance by State (2017), Billions of Dollars

Sources: BEA, Keybridge LLC, 2019 Foundation end-user survey. Note: Estimates are produced using the latest end-user survey data on the propensity to finance various types of equipment and software in 2018, but these propensities are applied to 2017 investment data and exclude public sector financing due to industry-level data availability. As a result, state estimates will not sum precisely to the industry sizing estimate in Figure 1.
Planning Ahead: The Next 12 Months

In addition to collecting information relevant for sizing the equipment finance industry in 2018, the end-user survey asks businesses to disclose their plans for investing in equipment over the next twelve months (i.e., from August 2019 – July 2020). As shown in Figure 13, the majority of respondents did not anticipate any change in the volume of equipment and software they intend to acquire over the next 12 months, while a roughly equal percentage expect their acquisitions will increase (22%) vs. decrease (21%). Of those who anticipate an increase, nearly two-thirds expect their acquisitions to grow by less than 50%. The most commonly selected equipment investment verticals among end-users who plan to boost their equipment and software acquisition were Computers (41%), Software (29%), Office Equipment (27%), and Communications Equipment (24%)—all of which tend to be concentrated in the services sector. Conversely, fewer than 10% respondents indicated plans to increase investment in equipment typically associated with the goods sector, including Agriculture Equipment, Automobiles, Materials Handling Equipment, and Other Industrial Equipment.

Figure 13: Anticipated Change in Equipment Acquisition, Next 12 Months

Source: 2019 Foundation end-user survey
This aggregate trend is echoed when examining the data through an industry lens. At least half of end-users in each of the six industries analyzed indicated that they expect their volume of equipment and software acquisition to stay the same over the next twelve months (see Figure 14). That said, end-users in the Finance and Insurance and Health Care industries are more likely to expect volume to increase than decrease, likely due to the strong performance of both industries in 2019. On the other hand, less than 20% of Construction firms expect equipment acquisitions to increase—and less than 10% of Professional Services firms expect an increase—suggesting that these industries and the equipment verticals on which they rely may disappoint over the next 12 months.

**Figure 14: Anticipated Change in Equipment Acquisition, Next 12 Months, by End-User Industry**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Increase</th>
<th>Stay the Same</th>
<th>Decrease</th>
<th>Prefer Not to Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance and Insurance</td>
<td>33%</td>
<td>50%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>31%</td>
<td>50%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>22%</td>
<td>64%</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Educational Services</td>
<td>21%</td>
<td>54%</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>19%</td>
<td>63%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Professional, Scientific, and</td>
<td>9%</td>
<td>53%</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>Technical Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: 2019 Foundation end-user survey

**Anticipated Methods of Finance**

As shown in Figure 15, of the respondents who expect acquisitions to increase, a plurality (40%) anticipate paying for at least a portion of the cost in cash, while 59% of respondents expect to use at least one form of financing (i.e., lease, secured loan, or line of credit). If respondents follow through with these plans, that could portend further declines in the propensity to finance over the next 12 months, as this would represent a 20-point decline in the share of end-users who use some form of financing when acquiring equipment or software.

**Figure 15: Finance Methods to Increase Equipment Acquisition, Next 12 Months**

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>40%</td>
</tr>
<tr>
<td>Credit Card</td>
<td>40%</td>
</tr>
<tr>
<td>Lease</td>
<td>32%</td>
</tr>
<tr>
<td>Line of Credit</td>
<td>30%</td>
</tr>
<tr>
<td>Loan</td>
<td>28%</td>
</tr>
</tbody>
</table>

Source: 2019 Foundation end-user survey. Note: Only respondents who intend to increase equipment acquisition over the next 12 months are shown. Respondents were allowed to select multiple payment methods, so percentages will not sum to 100%.
Factors Influencing Equipment Financing Decisions

Regarding the external factors most likely to influence their decision to lease or finance additional equipment over the next 12 months, “general economic conditions” (42%) emerged as the most important factor—down from 51% in 2018, but again topping the list as it did in the 2012 and 2016 surveys (see Figure 16). End-users also frequently mentioned technology advancements and/or obsolescence (35%), up from 28% in 2018 and 16–18% in 2012 and 2016. End-users appear to be paying more attention to the Federal Reserve’s interest rate policies (16%, up from 5% in 2018) perhaps in response to the impact of the Fed’s interest rate increases on the cost of borrowing in 2018 and in anticipation of rate cuts in late 2019 and 2020. Additionally, while just 5% of respondents indicated that “trade policy conditions” would influence their near-term acquisition decisions in last year’s survey—tied for the least-cited factor—that share nearly quadrupled to 18% in 2019, resulting in trade policy becoming the 4th-most cited factor in this year’s survey. Not surprisingly, nearly half of respondents reported that trade policy has become a more significant factor influencing their equipment acquisition plans than it was 12 months ago, reflecting heightened trade tensions in the U.S. economy.

Figure 16: External Factors Affecting Equipment Acquisition, Next 12 Months

<table>
<thead>
<tr>
<th>Factor</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>General economic conditions</td>
<td>28%</td>
<td>26%</td>
</tr>
<tr>
<td>Technology advancements and/or obsolescence</td>
<td>15%</td>
<td>18%</td>
</tr>
<tr>
<td>Availability of tax incentives</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Trade policy conditions (e.g., trade agreements, tariffs)</td>
<td>15%</td>
<td>16%</td>
</tr>
<tr>
<td>Federal reserve interest rate / monetary policy</td>
<td>16%</td>
<td>13%</td>
</tr>
<tr>
<td>Uncertainty surrounding business regulations*</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Accessibility of credit markets</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Uncertainty surrounding taxes</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Elimination of off-balance sheet financing</td>
<td>15%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: 2019 Foundation end-user survey. Note: Many respondents selected multiple factors, so percentages will not sum to 100%.
*The 2018 end-user survey combined the answer options “Uncertainty surrounding business regulations” and “Uncertainty surrounding taxes.”

New vs. Used Equipment Acquisition

Given changes to the federal tax code under the Tax Cuts and Jobs Act of 2017 (TCJA), equipment end-users were also asked whether they expect the share of used equipment as a percentage of overall equipment acquisitions to change in the next 12 months compared to 2018. As illustrated in Figure 17, respondents were mixed on this topic, with 21% expecting the share of used equipment to increase, 37% expecting the share of used equipment to decrease, and 29% expecting no change (12% were unsure). In comparison, in 2018 about 19% of businesses anticipated acquiring more used equipment, 22% anticipated acquiring less used equipment, and 35% expected no change, and 25% were unsure. These changes may suggest that over the past year, businesses have developed a clearer understanding of the impact of tax reform on their equipment acquisition costs, with a plurality developing a preference for new equipment over used.
Alternatively, they could suggest that companies expect sales to remain robust and are willing to pay a premium for new equipment rather than “settle” for used equipment, regardless of tax code changes.

**Figure 17: Plans to Acquire New vs. Used Equipment Over Next 12 Months**

At an industry level, respondents were more likely to expect used equipment to comprise a smaller portion of their acquisitions over the next 12 months than a larger share. This is particularly true for industries relying on Computers, Software, and Communications Equipment, including Health Care (58% less used vs. 27% more used), Finance and Insurance (42% vs. 13%), and Professional Services (26% vs. 16%). That said, one-third of businesses in the Finance and Insurance and Professional Services industries and about one-quarter of businesses in the Construction and Educational Services industries are unsure of the breakdown of their acquisitions between new and used equipment. Given that almost one in four firms remains unsure of their preferences, the share of those acquiring new vs. used equipment may remain volatile over the next year as firms continue to develop their understanding of the TCJA.

**Figure 18: Plans to Acquire New vs. Used Equipment Over Next 12 Months, by End-User Industry**

Source: 2019 Foundation end-user survey
FUTURE
In recent months, the “R” word—recession—has floated to the top of the economic and financial news cycle. Amid concern surrounding stock market turbulence, sinking bond yields, a global growth slowdown, and an ongoing trade war, investors and business leaders have sounded the alarm about the possibility that the U.S. economy might soon begin to contract after more than ten years of growth—the longest economic expansion in U.S. history.

The concern is justified. Over the past year, economists have essentially been sitting in “recession watch” mode given signs that the economy might be well into the later stages of the current expansion. A late-cycle economic growth surge (as seen in 2017-18), a series of interest rate hikes by the Federal Reserve (from late 2015–early 2019), and multi-year lows in the unemployment rate, among other signals, all tend to point to the kind of economic exhaustion seen in the months leading up to every U.S. recession of the past few decades. Recent decisions by the Federal Reserve to lower the federal funds rate are also consistent with the notion that the current business cycle may be running out of steam.

Equipment finance industry professionals should likewise be on watch for a recession. If the economy were to contract, the “pie” of available investment opportunities would likely shrink, existing customers would be more hesitant to take on new financing, and delinquencies and defaults would almost certainly rise. Although spreads tend to widen during an economic downturn, the resulting increased profitability is likely to present itself only to a small slice of the sector.

Overall, a recession will pose challenges for most players in the equipment finance industry. But those challenges might be mitigated by the adjustments equipment finance professionals can make to their portfolios and strategies in the months leading up to a recession and at the recession’s onset. For this reason, Keybridge has developed a new recession watch tool—the Foundation-Keybridge Equipment Finance Industry Recession Monitor—designed to help industry professionals anticipate the timing and severity of the next U.S. economic recession.

The Concept

There is a plethora of readily available economic and financial data, but it can be challenging to know which data to consider when attempting to gauge the timing and depth of a future recession. Most data move somewhat idiosyncratically or according to a shorter or longer cycle than the overall U.S. business cycle, so few indicators can independently predict a recession. Given these challenges, the Foundation-Keybridge Equipment Finance Industry Recession Monitor is based on a variety of indicators and attempts to strike the right balance between including too many and too few indicators. Finding this balance is important.
• An underspecified model (i.e., one with not enough indicators) might fail to detect a pending recession if it is driven by a different mix of factors than previous recessions. Alternatively, it might falsely signal a recession by overemphasizing the importance a weak component of the economy at the expense of the larger economic picture.

• An overspecified model (i.e., one with too many indicators) may include too much “noise” and thus fail to provide a clear signal of recession risk until it is too late.

Keybridge assessed hundreds of high-frequency indicators from a variety of sources covering all segments of the U.S. economy and settled on a set of 11 that have a strong track record of independently anticipating a U.S. economic recession without an excess of false signals. The resulting Recession Monitor contains a mix of consumer- and business-oriented indicators but is calibrated to emphasize the financial and business sectors. By giving slightly more weight to the sectors of the economy most relevant to the equipment finance industry, the tool is designed to anticipate when the industry is likely to start to “feel” a recession, even if the downturn has yet to fully materialize throughout the broader U.S. economy.

The Indicators

Below is a brief description and assessment of each of the 11 key indicators that make up the Equipment Finance Industry Recession Monitor. For each indicator, Keybridge identified a threshold that the indicator has historically crossed in the months immediately prior to a recession and otherwise crossed only rarely, if ever. Each indicator is assigned a color based on the indicator’s recent behavior – “green” for when the indicator is safely above (or, for certain indicators, below) its threshold, “yellow” for when the indicator is nearing its threshold, and “red” for when the indicator has crossed its threshold at least once within the period in which it typically leads a recession (e.g., within the last year). The indicators are listed in the order of their typical lead time (i.e., the amount of time that passes between when an indicator first passes its recession threshold and when the recession begins), with those providing the earliest warning listed first:

(1) Conference Board: Consumer Expectations – Present Situation Spread

(2) 10 Year / 2 Year Treasury Yield Spread (the “Yield Curve”)

(3) National Association of Home Builders (NAHB) Housing Market Index

(4) Employment in Elkhart, IN

(5) Conference Board: Leading Economic Index

(6) National Federation of Independent Business (NFIB) Capex Plans Index

(7) Delinquency Rate on Commercial & Industrial (C&I) Loans

(8) Capacity Utilization

(9) Consumer Confidence / Unemployment Rate

(10) Chemical Activity Barometer

(11) University of Michigan: Household Durable Purchasing Sentiment Index
(1) **Conference Board: Consumer Expectations – Present Situation Spread**

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Activity</td>
<td>Spread is less than or equal to 30 for three consecutive months</td>
<td>1–3 years</td>
<td>-73</td>
</tr>
</tbody>
</table>

**Description:** The Conference Board: Consumer Expectations – Present Situation spread is the difference between the two major components of the Conference Board’s Consumer Confidence Index. A wider spread of at least 30 points between these components has been shown to reliably precede downturns with a long lead of 1–3 years. The intuition behind this indicator is simple: the faintest, earliest indication that a recession may be coming appears when consumer express significantly more optimism about their present situation than about their expectations for how things will be six months from now. This indicator first crossed its threshold in January 2016, suggesting that a recession has been “in the works” for a few years.
(2) 10-Year / 2-Year Treasury Yield Spread (the “Yield Curve”)

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td>Spread between 10-year and 2-year yields on U.S. Treasuries turns negative (‘inversion’)</td>
<td>1–2 years</td>
<td>9 bp</td>
</tr>
</tbody>
</table>

Description: The 10-year / 2-year yield curve is a common measure of the spread between long-term and short-term government bond yields. When short-term yields rise above long-term yields, investors are thought to be worried about the near-term health of the economy and to have implicitly assumed an additional degree of risk associated with holding short-term bonds. The “yield curve” is a famed recession indicator that, while effective, has a long and variable lead time. The 10-year / 2-year spread only recently inverted at the end of August 2019, which would normally indicate that a recession lies 1–2 years away. Although the 10/2 spread has since recovered and is no longer negative, the current reading will remain in the red zone until two years have passed since the latest inversion date.
(3) National Association of Home Builders (NAHB) Housing Market Index

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>Index declines more than 15% year-over-year for three consecutive months</td>
<td>6–18 months</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Description: The NAHB Housing Market Index is based on a monthly confidence survey of home builders that asks respondents to rate market conditions for new home sales. Because the housing market tends to lead the broader business cycle, a sustained, precipitous drop in the index by at least 15% year-over-year has historically led recessions by around 12 months, on average. At present, the index is relatively weak—it has frequently been below year-ago levels over the last several months and has occasionally been in the “yellow” zone—but it has not fallen enough to trip the recession threshold.
(4) Employment in Elkhart, IN

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Market / Consumer Activity</td>
<td>Employment falls 3% or more compared to the prior year</td>
<td>6–12 months</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

**Description:** Elkhart, Indiana is the U.S. capital of recreational vehicle (RV) manufacturing, comprising more than 65% of the RV industry. Since “big-ticket” items like RVs are among the first goods consumers pull back on in an environment of economic uncertainty, the RV industry is especially sensitive to downturns in consumer confidence and consumer health. Therefore, an early signal that consumers are faltering is deterioration in the Elkhart labor market. Although employment levels are essentially flat compared to this point last year and were slightly negative earlier this year, they have yet to fall below their recession-signaling threshold of -3%.
(5) Conference Board: Leading Economic Index

Conference Board: Leading Economic Index

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Index declines compared to the previous year</td>
<td>6-12 months</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

Description: The Conference Board Leading Economic Index is a “catch-all” indicator that offers a broad assessment of national economic growth. A composite of ten economic and financial series, the index is modeled to fit peaks and troughs in the business cycle. Although the index has decelerated on a year-over-year basis in recent months (indicating a slowing of economic activity), it currently sits above its recession threshold.
(6) National Federation of Independent Business (NFIB) Capex Plans Index

National Federation of Independent Business (NFIB) Capex Plans Index

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Activity</td>
<td>Index falls below -5% year-on-year for three consecutive months</td>
<td>3–12 months</td>
<td>-15%</td>
</tr>
</tbody>
</table>

Description: The NFIB Index is based on a survey of hundreds of U.S. small businesses that queries business owners about their plans and expectations for the coming months. Among the survey’s sub-indexes, the “plans to make capital outlays” component has historically been the best indicator of an impending recession in the coming year. This indicator hit its recession threshold last February and has been negative year-over-year for almost all of 2019, including -15% Y/Y in August.
(7) Delinquency Rate on Commercial & Industrial (C&I) Loans

**Description:** The delinquency rate on all C&I loans is a good indicator of business financial stress. When delinquencies rise, it signals that businesses are facing a broad deterioration in economic conditions that prevents them from meeting their financial obligations. In the year leading up to each of the last three recessions, the rate rose for at least two quarters in a row. It also rose for several consecutive quarters in 2015–16, coinciding with a “mini-recession” in the manufacturing sector and a growth pause in the overall economy. Although C&I loan delinquencies surged in the first quarter of 2019, they fell by a notable 8 percentage points in the second quarter and have held below their 2017 and 2018 levels. Overall, however, businesses appear to be in solid financial health, lending support to the possibility that a recession might not be imminent.
(8) Capacity Utilization

**Capacity Utilization**

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business / Industrial Activity</td>
<td>Capacity utilization falls for three consecutive months</td>
<td>0–6 months</td>
<td>0.4 pp</td>
</tr>
</tbody>
</table>

**Description:** Capacity utilization is the percent of capacity in mining, manufacturing, and utilities that is currently being used. As a rule of thumb, readings above 80% of capacity indicate that those industries are currently running “hot,” or over capacity, while readings under 80% indicate there may be “slack,” or spare capacity, in those sectors of the economy. Capacity utilization is an imperfect recession indicator because of a secular decline in its composite industries over the last couple of decades. However, consistent declines in capacity utilization within a short period of time are a definite source of worry: specifically, three consecutive monthly declines tend to lead recessions by a matter of months.

The latest capacity utilization reading is modestly positive, but the measure fell for 5 consecutive months beginning in December 2018, putting it in the red zone until at least the end of 2019. It is worth noting that capacity utilization tends to be more sensitive and subject to false signals than many of the other measures included in the recession watch tool — for example, it was consistently down month-to-month during the manufacturing contraction of 2015-16, even though the U.S. economy did not technically enter a recession during that period.
(9) **Consumer Confidence / Unemployment Rate**

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Activity /</td>
<td>3-month moving average falls below –6% year-over-year</td>
<td>0–6 months</td>
<td>6.5%</td>
</tr>
<tr>
<td>Labor Market</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description:** The Conference Board's Consumer Confidence Index, a measure of consumer optimism, is a coincident indicator that historically moves in step with the business cycle. The unemployment rate, on the other hand, tends to lag the broader economy because employers often hesitate to lay off workers immediately at the beginning of a downturn. Statistically, the ratio of a coincident to a lagging indicator tends to have leading properties. At present, the year-on-year change in the 3-month moving average of this ratio sits well above its recession threshold of -6%, reflecting strength in both the labor markets and consumer outlook.
(10) Chemical Activity Barometer

**Chemical Activity Barometer**

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business / Industrial Activity</td>
<td>Index falls below year-ago level for three consecutive months</td>
<td>0–6 months</td>
<td>-0.2%</td>
</tr>
</tbody>
</table>

**Description:** The Chemical Activity Barometer is a composite index of activity across a range of chemicals sectors. The index includes indicators relating to hours worked in chemicals industries, stock market data, chemical price information, end-user sales-to-inventory ratios, and others. Because of the centrality of chemical activity to the broader industrial sector, this index can be understood as a gauge of overall U.S. manufacturing and industrial health. When the Chemical Activity Barometer falls compared to the prior year for at least three months in a row, a recession often follows within about three months. Interestingly, the Barometer has floated back and forth across threshold over the entire course of 2019, making it more difficult to interpret its signal. The fluctuations in the index could indicate that the manufacturing sector is in the middle of a moderate slowdown that may or may not spread to the broader U.S. economy. The current reading of -0.2% Y/Y in September is the second consecutive month of negative year-over-year change, putting it in the “yellow” zone.
### University of Michigan: Household Durable Purchasing Sentiment Index

<table>
<thead>
<tr>
<th>Type</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Activity</td>
<td>Three-month moving average falls more than 10% compared to the prior year</td>
<td>0–3 months</td>
<td>-4.5%</td>
</tr>
</tbody>
</table>

**Description:** A subcomponent of the University of Michigan Consumer Sentiment Index, the Household Durable Purchasing Sentiment Index measures consumers’ impressions of whether now is a good time to purchase large household durable goods like furniture and appliances. Along with recreational goods such as RVs, household durables are another group of goods for which consumers tend to cut back on spending just before the economy sours. Although the index has been negative year-over-year for each of the past 11 months, it has yet to fall dramatically enough to trigger a recession warning (though it has been in the “yellow” zone earlier in the year).
Recession Watch: Overall Assessment

Recession prediction is more of an art than a science (and a tricky one at that). Even when analyzing a small set of the most reliable leading indicators, points of contradiction are evident. For example, the Conference Board: Consumer Expectations—Present Situation Spread crossed its recession threshold in early 2016 and has been signaling a high likelihood of recession for the last three years. Meanwhile, the 10-year / 2-year yield curve—another reliable recession indicator with a long lead time—inverted only recently, suggesting that the next recession is likely a year or more away. Furthermore, one of the indicators with a short lead time (Capacity Utilization) is already flashing red, while other short-term indicators, such as Consumer Confidence / Unemployment and the UM Household Durable Purchasing Sentiment Index, remain green.

Taking all these factors into account, a general picture nonetheless emerges. In composing an overall assessment, Keybridge uses a few rules of thumb to help determine when to “call” an imminent recession (i.e., occurring within the next six months):

1) The Yield Curve must have inverted within the last two years;
2) A majority of indicators are flashing red; and
3) The red indicators span across various segments of the economy (e.g., consumer, business, labor market, housing, financial).

Teetering on the Edge

With 4 out of 11 indicators in the Equipment Finance Industry Recession Monitor (including the yield curve) flashing red, only two additional indicators need to cross their thresholds before an imminent recession becomes, in our view, more likely than not in the next six months. As it stands, however, until one or two more indicators flip we believe recession-like conditions for the industry—that is, a full recession or a near-recession that drags down the business and industrial segments of the economy, including the equipment finance industry—is unlikely in the next six months. Nonetheless, based on the preponderance of economic data, Keybridge believes a recession in the next 6–12 months would not be particularly surprising (though the probability appears to be less than 50%)—and a recession in the next 12–24 months is more likely than not.

Note: the bolded arrow represents the number of “red” indicators (i.e., those that have exceeded their recession threshold within the period of time designated for each indicator’s lead time (e.g., 0–6 months for Capacity Utilization). The dashed arrow represents the additional number of “yellow” indicators that have not yet exceed their recession threshold but are at heightened risk of doing so in the next 3 months based on the seasoned judgement of Keybridge economists.
Recession Watch Tool Indicator Table

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Threshold</th>
<th>Typical Lead Time</th>
<th>Current Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Expectations – Present Situation Index Spread</td>
<td>Spread is less than or equal to 30 for three consecutive months</td>
<td>1–3 years</td>
<td>−73</td>
</tr>
<tr>
<td>Yield Curve</td>
<td>Spread between 10-year and 2-year yields on U.S. Treasuries turns negative (‘inversion’)</td>
<td>1–2 years</td>
<td>9 bp</td>
</tr>
<tr>
<td>NAHB Housing Market Index</td>
<td>Index declines more than 15% year-over-year for three consecutive months</td>
<td>6–18 months</td>
<td>1.5%</td>
</tr>
<tr>
<td>Elkhart Employment</td>
<td>Employment falls 3% or more compared to the prior year</td>
<td>6–12 months</td>
<td>0.3%</td>
</tr>
<tr>
<td>Leading Economic Index</td>
<td>Index declines compared to the previous year</td>
<td>6–12 months</td>
<td>1.1%</td>
</tr>
<tr>
<td>NFIB Capex Index</td>
<td>Index falls below −5% year-on-year for three consecutive months</td>
<td>3–12 months</td>
<td>−15%</td>
</tr>
<tr>
<td>C&amp;I Loan Delinquency Rate</td>
<td>Delinquency rate rises for two consecutive quarters</td>
<td>0–3 quarters</td>
<td>−8.0 pp</td>
</tr>
<tr>
<td>Capacity Utilization</td>
<td>Capacity utilization falls for three consecutive months</td>
<td>0–6 months</td>
<td>0.4 pp</td>
</tr>
<tr>
<td>Consumer Confidence / Unemployment Rate</td>
<td>3-month moving average falls below −6% year-over-year</td>
<td>0–6 months</td>
<td>6.5%</td>
</tr>
<tr>
<td>Chemical Activity Barometer</td>
<td>Index falls below year-ago level for three consecutive months</td>
<td>0–6 months</td>
<td>−0.2%</td>
</tr>
<tr>
<td>UM Household Durable Purchasing Sentiment Index</td>
<td>Three-month moving average falls more than 10% compared to the prior year</td>
<td>0–3 months</td>
<td>−4.5%</td>
</tr>
</tbody>
</table>

Will U.S. Consumers Pull Us Through?

Of the 11 recession indicators, those that are closely associated with business activity are the most worrying. Meanwhile, consumers and the labor market are mostly holding up—in fact, real consumer spending in Q2 2019 grew at its fastest pace in 10 years, though more recent data hasn’t been quite as strong. Perhaps the best illustration of this lopsidedness is the recession watch tool’s only “total economy” measure: The Conference Board’s Leading Economic Index. Although the Index’s growth has slowed over the last several months—a reflection of flagging business confidence and an ongoing contraction in the U.S. manufacturing sector—it remains positive due to the health of the broader economy and, more precisely, the spending power of the U.S. consumer.

For the time being, it appears that consumers will determine whether the U.S. economy tips over the edge or manages to pull itself back into the safe zone. Industry leaders should keep a close eye on the Conference Board’s Leading
Economic Index, the other consumer measures from the recession watch tool, and other measures of consumption (e.g., retail sales) to determine whether consumers can continue to keep the next recession at bay over the next 6–12 months.

Can the Fed, Congress, or President Save Us?

In the immediate lead-up to a recession or at recession onset, standard macroeconomic theory holds that government can inject counter-cyclical economic stimulus to help stave off a recession, or at least reduce its severity. That stimulus can be either fiscal (e.g., increased government spending or lower taxes) or monetary (e.g., interest rate cuts or quantitative easing). As we anticipate a recession sometime in the next 12–24 months, it is tempting to assume that the Federal Reserve, Congress, or President Trump might be able to push through certain measures to avoid or mitigate the next recession. Unfortunately, we believe the combination of less-effective “firefighting equipment” and increased political gridlock significantly undermines this possibility compared to earlier pre-recession periods.

- Although the Federal Reserve has the authority to unilaterally enact stimulative monetary policy on its own, many economists doubt that Fed stimulus will be enough to stave off the next recession. At the beginning of the last two recessions, the Fed dropped its benchmark interest rate by 500 and 525 basis points, respectively. In the current expansion, the Fed only managed to bring its target rate to 2.50% before it began to drop rates again in August. Therefore, the Fed has only half the power to fight the next recession using traditional measures (i.e., setting interest rates) as it has had in previous ones, unless the Fed is prepared to drop rates below zero. Although Europe and Japan have experimented with negative-yielding sovereign debt in recent months, such a development would constitute uncharted territory for the U.S. economy—banks paying to lend out money; investors accepting negative returns in exchange for the relative safety of holding bonds—and would yield highly uncertain (and potentially very negative) results. Moreover, quantitative easing whereby the Fed buys long-term government debt on a large scale may not pack the same punch it did during the last recovery given that the economic environment is likely to involve near-zero or, potentially, below-zero interest rates.

- When it comes to fiscal stimulus, the U.S. economy faces the opposite problem: it might be effective, but it would be a challenge to enact in our current political environment. Much of Congress remains staunchly opposed to substantial increases in government spending, and even if a majority in Congress agreed on the short-term need for fiscal stimulus to shore up the economy, there likely would be major partisan differences regarding the form of this stimulus (i.e., tax cuts vs. spending increases). In addition, a notable expansion in the federal deficit has occurred over the last two years due to the TCJA, which would likely give pause to some members. All things considered, we believe the notion that Congress will step in to blunt the impact of the next recession as it has done in the past is likely wishful thinking.

- Finally, one might be tempted to believe that President Trump could enact certain policy measures to prevent a recession from occurring, especially given the risk that a recession could pose to his reelection chances. Historically speaking, however, the effectiveness of the policy tools at a U.S. president’s disposal to prop up the economy in an election year appears to be fairly limited. For example: going back to 1960, during any rolling 12-month period, the U.S. economy has been in recession 24% of the time. In the 12 months preceding a presidential election, the economy has been in recession 20% of the time—a statistically insignificant difference from the status quo. This suggests that while every president has had a strong incentive to “goose” the economy in an election year (either to improve his own reelection chances or to ensure his successor is a member of his own party), it is far from clear that these efforts have been successful.
How to Use this Report

The 2019 Horizon Report is one of several Foundation publications that contains industry-relevant economic insights to help industry leaders make more informed business decisions.

- The 2019 Horizon Report’s end-user survey offers a detailed look at equipment acquisition and financing decisions for specific equipment verticals and industries, the key factors influencing the decision to use financing (e.g., a business’s industry, size, and profitability; economic conditions; and policy developments), and how financing decisions are likely to evolve over the next year. Equipment finance industry leaders can use this information to better position their businesses for faster growth (e.g., by emphasizing or deemphasizing particular equipment verticals or end-user industries).

- Similarly, the 2019 Horizon Report’s focus on recession risk in this year’s “Future Trends” section can help industry leaders cut through the noise and focus their attention on a curated set of 11 economic indicators that are both relevant to industry performance and have a proven track record of signaling a downturn without an excess of false signals. These indicators comprise the new Foundation/Keybridge Equipment Finance Industry Recession Monitor, published for the first time in this report, which provides industry professionals with a monthly update on the relative risk of a recession or recession-like conditions impacting the equipment finance industry in the next six months.

For more information on how to incorporate the information presented in this report into your business’s strategic and tactical decisions, please refer to the Foundation’s Applied Economics Handbook. The Handbook, originally published in 2016 and updated in 2018, provides industry-tailored insights on how to leverage economic data and tools using applied economics to make more informed business decisions. It is intended to both familiarize industry executives with the concept of applied economics and provide a series of straightforward tools, techniques, and use cases that can be adapted and customized to individual firms.

The Handbook can be accessed for free at the following link:

https://www.store.leasefoundation.org/cvweb/cgi-bin/msascartdll.dll/ProductInfo?productcd=AppEco2018
We extend our gratitude to the steering committee members who guided this project and provided comments and suggestions throughout the drafting process.

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About Keybridge

Keybridge is a boutique economic and public policy consulting firm.

Founded in 2001, Keybridge’s mission is to be the most trusted source of analysis and advice on issues at the forefront of public policy economics. We serve as economists, policy experts, and strategic advisers to a diverse clientele that includes Fortune 500 companies, global financial firms, leading trade associations, non-profit organizations, federal government agencies, and other institutions that operate at the intersection of economics and public policy.

Keybridge is dedicated to delivering analysis and advice that shapes business decisions and drives policy debates. We provide clients with a suite of analytical and advisory services, ranging from economic modeling and investment analysis to policy design and strategic planning. Keybridge specializes in developing creative analytical approaches to complex problems, often using a mix of methods and data sources to triangulate on results and stress test key conclusions. And whether it is through studies, white papers, policy memos, briefings, or presentations, we communicate our work in a clear, concise, and accessible fashion.

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Keybridge’s work is guided by a set of core values. We believe that public policy economics makes a difference, and we have a duty to conduct analysis in a thoughtful and responsible manner. We believe that solving problems at the forefront of public policy economics requires creative thinking and a willingness to question conventional wisdom. We believe that sound decisions demand impartial analysis and that clients are always best served by objective advice. We believe that even the most insightful analysis and advice is useless if it is not communicated clearly. And we believe in developing true partnerships with our clients that enable us to operate as a natural extension of their organization, serving as trusted advisers on all issues at the intersection of economics and public policy.

For more information, please visit our website at www.keybridgedc.com.
Endnotes

1 According to the National Bureau of Economic Research (which is considered the “recession authority” and responsible for determining when recessions begin and end), the technical definition of a recession is “a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales.” This definition is often simplified to two consecutive quarters of negative GDP growth, which is a useful rule of thumb.

2 In other publications, such as the Foundation’s Equipment Leasing & Finance U.S. Economic Outlook, real (i.e. inflation-adjusted) investment is used rather than nominal investment. However, given that survey respondents reported their equipment acquisitions in nominal terms, nominal investment data is consequently used to estimate the industry’s size in order to ensure an apples-to-apples comparison.

3 Careful readers may notice that the industry sizing estimates for historical years in Figure 1 are slightly lower than the estimates published in previous reports. The changes are mostly due to benchmark revisions in BEA’s investment data, as well as revised assumptions concerning the propensity to finance public sector equipment acquisitions in historical years.

4 “Other” payment methods include gifts, rebates, debit cards, barter / trade, stocks, grants, time shares, and private financing.

5 Note: Estimates are produced using the latest end-user survey data on the propensity to finance various types of equipment and software in 2018, but these propensities are applied to 2017 investment data and exclude public sector financing due to industry-level data availability. As a result, state estimates will not sum precisely to the industry sizing estimate in Figure 1.

6 Note: Estimates presented in Figure 12 are not directly comparable to the published estimates shown in Figure 2 of the 2018 Industry Horizon Report due to baseline data revisions. Specifically, since the Foundation published last year’s report, BEA re-baselined its real private investment data to 2012 chained dollars (last year’s Industry Horizon Report used investment totals chained to 2009 dollars). The calculations presented in this report comparing 2017 financing volume to 2016 volume for select states, however, have been adjusted to reflect this change.

7 For more information on the impact of recessions on industry spreads, see ELFF’s 2018 publication entitled “On the Rise: How Inflationary Pressures and Rising Interest Rates Could Impact the Equipment Finance Industry.”
The Equipment Leasing & Finance Foundation

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