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Q2 Update - April

Equipment Leasing & Finance U.S. Economic Outlook



EQUIPMENT LEASING & FINANCE

FOUNDATION

Your Eye on the Future

EQUIPMENT LEASING & FINANCE ECONOMIC OUTLOOK

April 2020



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Key Trends to Monitor

Consumer Spending
Collapse



Small Business
Sector Health



Government
Stimulus



EXECUTIVE SUMMARY

This outlook acknowledges the substantial uncertainty stemming from both the epidemiology of COVID-19 and the U.S. economy's response to social distancing measures. As such, projections for certain economic indicators are provided as ranges.

Equipment and Software Investment: After slowing to the weakest growth since 2016 last year, E&S investment is expected to plunge along with the rest of the U.S. economy. There are a few industries, however (e.g., medical devices, computers), that should be more resilient.

Momentum Monitor: Momentum readings are below the long term-historical average in 10 of 12 verticals, while 7 of 12 verticals are decelerating. Notably, most of the economic indicators on which the Momentum Monitors are based do not yet reflect the effects of the pandemic.

Capital Investment: Business investment contracted for three consecutive quarters in 2019 and will suffer due to the pandemic. The oil sector is likely to be particularly exposed due to the combination of cratering global demand and a price war.

Manufacturing Sector: Though certain industries critical to public health may see a boost to demand, the broader manufacturing sector faces a sharp downturn in 2020.

Small Businesses: While some Main Street businesses will continue to operate as the country copes with the pandemic, many won't — and most will suffer. The success of federal efforts to help small businesses stay afloat and avoid widespread layoffs and business failures is critical.

U.S. Economy: The U.S. economy is in recession and will suffer a historically deep contraction in the second quarter. However, a timely and well-coordinated policy response of sufficient scale could limit the recession's long-term effects. While the economy will continue to suffer until the public health crisis is resolved, we anticipate a return to growth in the second half of the year.

2020 Annual Projections

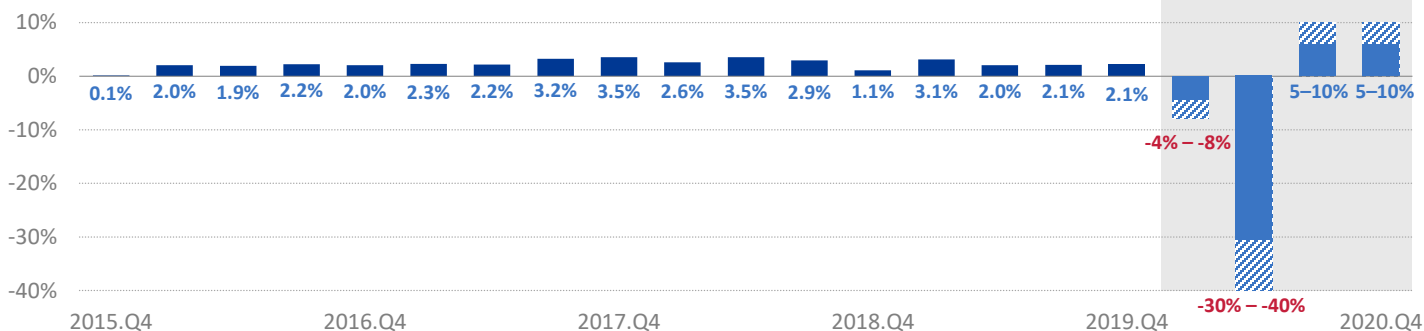
-5.0 to -9.4%
GDP Growth

-8.6 to -13.5%
E&S Investment Growth

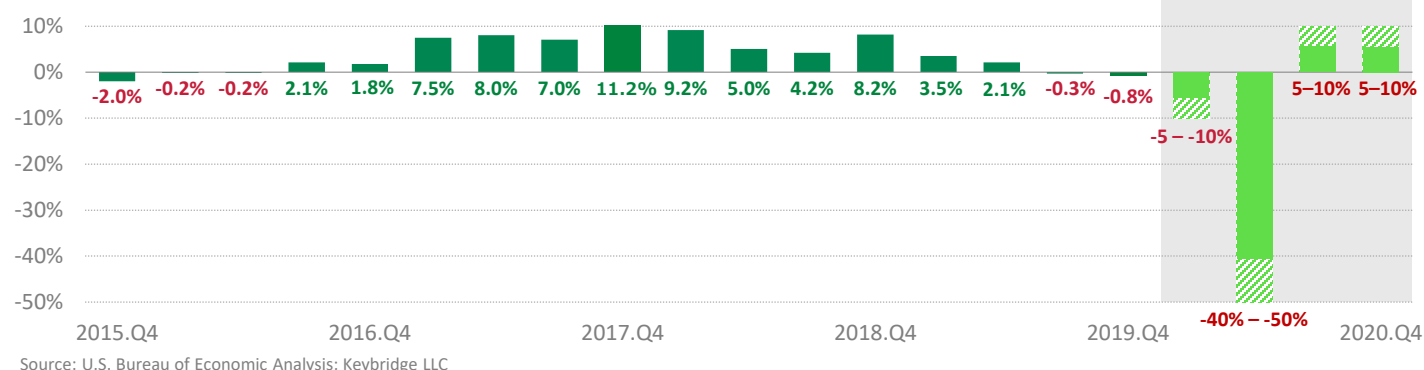
0.6%
Inflation

0 bp
Change in Fed Funds Rate from Current Range

GDP Growth (Seasonally Adjusted Annualized Rate)



Equipment and Software Investment (Seasonally Adjusted Annualized Rate)



Sectoral Performance

E&S underperformed expectations last quarter

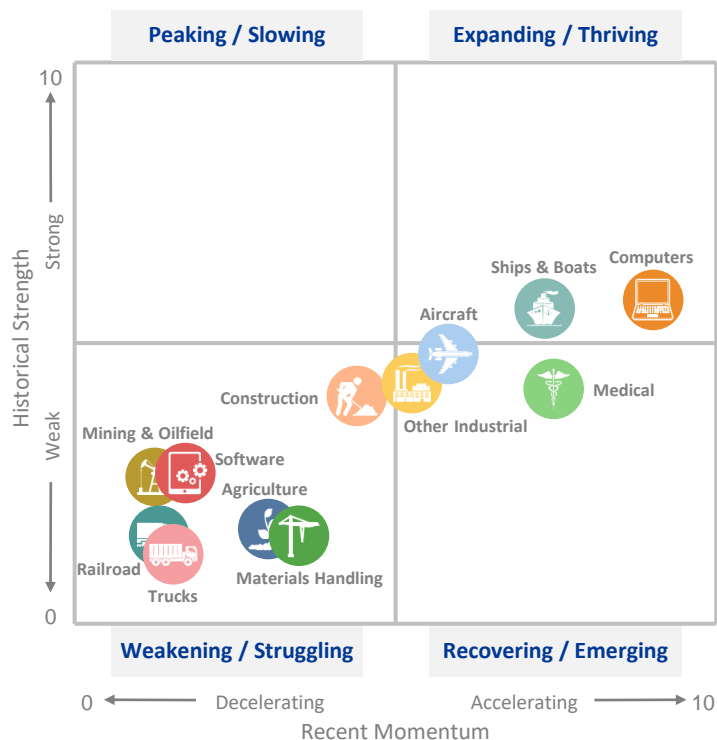
Equipment and Software investment contracted 0.8% (annualized) in Q4 2019, marking the second consecutive quarterly contraction ahead of the COVID outbreak.

Of the 12 verticals tracked by the Foundation, seven experienced negative investment growth in Q4, including three that posted double-digit declines (Construction, Materials Handling, and Other Industrial). Of the five verticals that experienced positive annualized growth, Mining & Oilfield, Aircraft, and Computers fared the best.









Though momentum in a handful of verticals is accelerating, this is mostly because relevant economic indicators do not yet reflect the unprecedented pace of the pandemic's economic damage. For most verticals, the short-term outlook for investment is grim. Transportation and Manufacturing verticals are likely to plummet in the months ahead, as well as Mining & Oilfield equipment due to rock-bottom oil prices. However, there will clearly be strong demand for Medical equipment, and work-from-home policies may provide a buffer for Computers (and potentially Software).

For more information on how to interpret the Momentum Monitor, please refer to the Appendix B (p. 17). A full breakdown of each industry vertical is available at <https://www.leasefoundation.org/industry-resources/momentum-monitor/>

Momentum Monitor Sector Matrix



Movements to Monitor

Equipment Vertical	Investment Growth		Next 6 Months	Short-Term Outlook
	Q/Q	Y/Y		
Computers 	+30%	+7.9%		Widespread adoption of work-from-home policies could provide a demand boost for computer-related equipment over the next six months.
Medical Equipment 	-2.3%	+0.5%		Surging demand for masks, ventilators, and related supplies should make medical equipment one of this year's few investment bright spots.
Mining & Oilfield 	+22%	+0.8%		The combination of cratering global demand and a Saudi-Russian price war caused oil prices to plummet more than 60% in March, which will deter equipment investment activity in 2020.
Trucks 	-8.2%	+1.8%		Pre-pandemic weakness in the industry will be exacerbated by the collapse of interstate trade and a reluctance to invest in new equipment.

Credit Supply

Consumer and business conditions tighten in Q4

In Q4, credit supply conditions for businesses tightened slightly from the third quarter.

- Banks left standards on C&I loans largely unchanged.
- Banks also left standards unchanged among most types of commercial real estate loans ("CRE"). However, a modest net share (7.3%) of banks reported tightening standards for construction and land development loans.
- According to a special question, a net share of 8.6% of banks expect to tighten standards in 2020 on C&I loans to medium and large firms as risk tolerance has decreased.

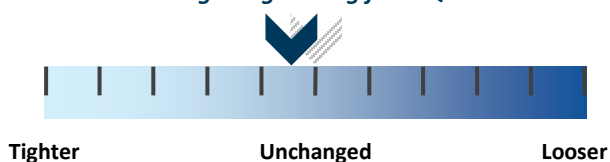
Meanwhile, credit supply conditions for consumers tightened moderately.

- A moderate net share of banks (14%) reported tighter standards on credit card loans, while a modest net share (8.9%) reported tighter standards on auto loans.
- However, banks reportedly left standards on residential real estate ("RRE") loans unchanged.

Net Change in Credit Supply Conditions

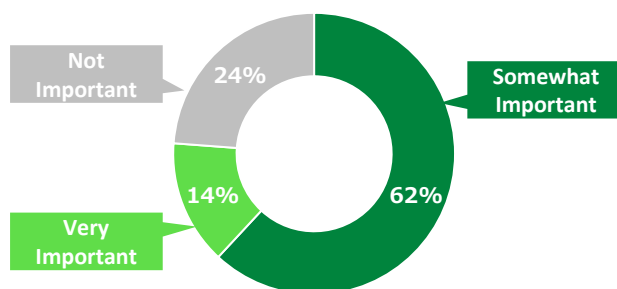
Fed Senior Loan Officer Survey

Slight Tightening from Q3



Economic Conditions as Reason for Credit Tightening

Fed Senior Loan Officer Survey, Percent of Respondents



Source: Federal Reserve Senior Loan Officer Survey

Credit Demand

Demand conditions mixed in Q4

Among businesses, credit demand weakened in the fourth quarter, consistent with the decline in business investment.

- On net, roughly 11% of banks reported weaker demand from firms of all sizes for C&I loans.
- Demand for CRE loans was roughly unchanged on net, but a modest net share (5.8%) reported weaker demand for construction and land development loans.

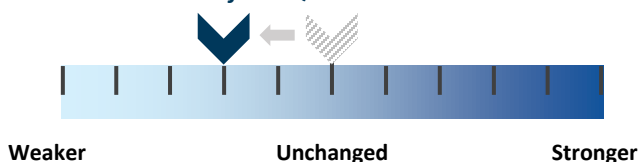
Meanwhile, consumer credit demand strengthened modestly in the fourth quarter.

- Regarding loans to households, a significant net share (21%) of banks report stronger demand for GSE-eligible residential mortgages.
- However, banks reported that demand was unchanged for credit card and other consumer loans, and a modest net share of banks (5.3%) reported weaker demand for auto loans.

Net Change in Credit Supply Conditions

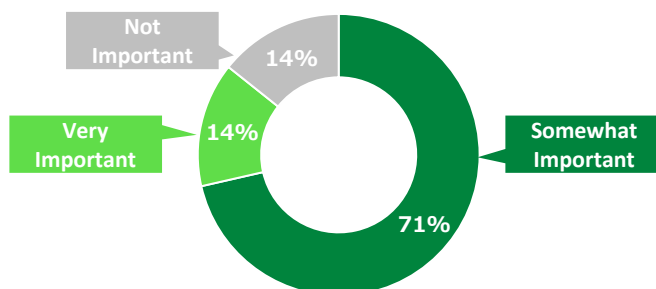
Fed Senior Loan Officer Survey

Moderate decrease from Q3



Lower Demand due to Decreased Business Investment

Fed Senior Loan Officer Survey, Percent of Respondents



Source: Federal Reserve Senior Loan Officer Survey

KEY FINANCIAL INDICATORS

Consumer Finances

Financial stress was relatively low before COVID

Prior to the COVID outbreak, consumers were reasonably well-positioned to handle normal fluctuations in economic conditions. However, due to historic job losses, consumer financial stress will likely rise sharply, and spending will fall.

Based on the latest available pre-pandemic data:

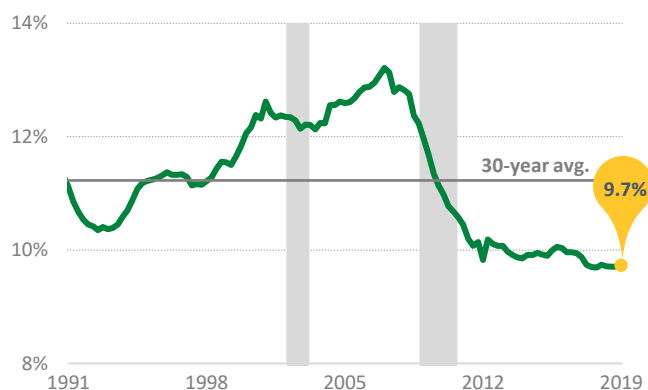
- The household debt-service ratio is near the lowest level on record in Q4, suggesting U.S. consumers were on solid footing prior to the virus outbreak.
- Credit card delinquencies rose to a four-year high in Q4 but remain well-below recession-era levels.
- However, auto loan delinquencies (90+ days) rose to a 10-year high of 4.9% in Q4, suggesting that financial stress could be creeping up, particularly among subprime borrowers.

However, income and job growth were slowing

While the labor market was strong by most measures prior to COVID, there were signs that the consumer-driven economy was losing steam.

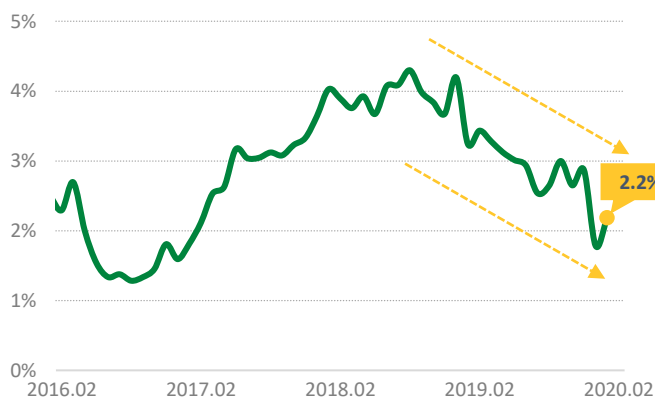
- After peaking above 4% Y/Y growth in mid-2018, real disposable personal income growth has decelerated and had fallen to early 2017 rates even before the pandemic ushered in widespread job loss.
- In light of these trends, it is not surprising that consumers appear to have been tightening their belts prior to COVID. Personal consumption expenditures growth fell from 3.2% in Q3 to 1.8% in Q4 (SAAR), while retail sales fell in February for the second time in three months.

Household Debt Service Ratio



Source: Federal Reserve

Real Disposable Income (Y/Y Change)



Source: Bureau of Economic Analysis

Fed Policy Corner

Fed Acts aggressively to dampen COVID impact

- The Fed has taken extraordinary measures to increase liquidity in the financial system in response to COVID.
- After an emergency 50 bps rate cut in early March, the Fed cut rates again in mid-March to 0-25 bps — equivalent to levels during the financial crisis.
- Furthermore, the Fed announced what amounts to a blank check to purchase Treasuries and mortgage backed securities, in addition to measures supporting debt from companies and state & local governments.

"Everything is on the table. There is more we can do if necessary. This is a planned, organized, partial shutdown of the U.S. economy. The overall goal is to keep everyone, households and businesses, whole. It is a huge shock and we are trying to cope with it and keep it under control."

— St. Louis Fed President James Bullard, March 2020

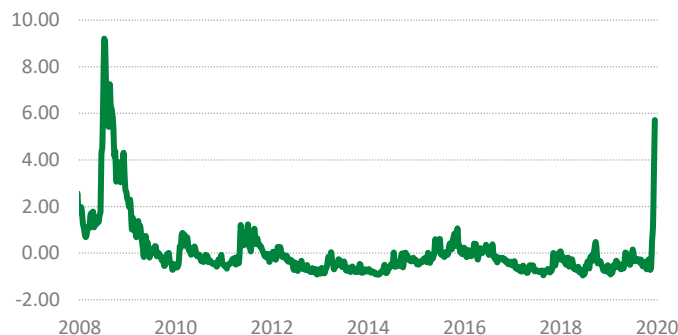
Business Performance

Financial stress rose in Q4, will likely skyrocket in 2020

Measures of financial stress ticked up in Q4 2019 and are expected to explode upward in the weeks and months ahead.

- C&I loan delinquencies inched up in Q4 to 1.14%, the highest level since late 2017, but still well below the long-term average. This suggests that businesses were relatively well positioned to service debt prior to COVID.
- However, non-financial corporate business debt is at the highest level on record, and the St. Louis Fed Financial stress index spiked in mid-March.
- Financial stress for businesses will undoubtedly rise as the COVID pandemic worsens in the United States, with rising bankruptcies, corporate restructuring, and mergers and buyouts a likely byproduct.

St. Louis Fed Financial Stress Index



Source: Federal Reserve Bank of St. Louis

Business loan demand and health set to decline

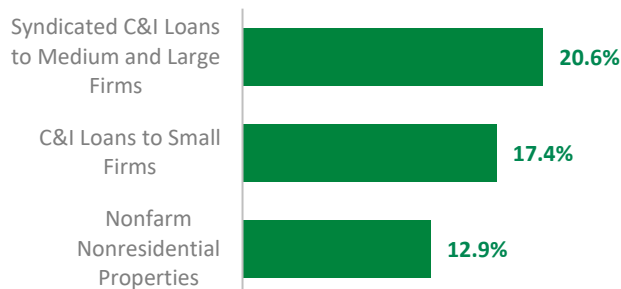
Although C&I loan volume peaked in mid-March, there was evidence that loan demand was falling prior to COVID. In January, the Fed Senior Loan Officer Survey reported:

- A 20% net share of banks expected the health of higher-risk C&I loans to large and middle-market firms to deteriorate in 2020, while a 17% net share of banks expected that the health of C&I loans to small firms would worsen.
- A net 13% of banks expect health of loans to nonfarm nonresidential structures to worsen.

As uncertainty surrounding the outbreak rises, demand for C&I loans will drop and C&I loan health will deteriorate.

Outlook for the Health of Various Loan Categories

Net Share of Banks that Expect Loan Quality to Deteriorate



Source: Fed Senior Loan Officer Survey

Treasury yields fall sharply

As investors seek less risky assets due to elevated volatility amid the COVID outbreak, U.S. Treasury yields have fallen to all-time lows.

- Treasury yields have experienced heightened volatility, with rates on 10-year notes peaking in mid-March at 1.2% just over a week after bottoming out at 0.54%.
- Negative yields are certainly possible and have already occurred at short maturities.
- Although parts of the yield curve are inverted at the shorter end, the 10-year/2-year spread (Keybridge's preferred metric) has reverted after inverting in August. Such a reversion pattern is typical just before a recession.

Treasury Yields

Monthly Average



Source: U.S. Treasury

Main Street 2020

Main Street highly vulnerable to COVID

Prior to COVID, small business activity was generally healthy, though also showing signs of moderation relative to 2018-19. As the outbreak unfolds on a national scale, Main Street will be highly vulnerable to its economic impact.

The PayNet Small Business Lending Index (3MMA) remained elevated in February, though there were some areas of concern over the last few months:

- Lending in the information sector is down 14% from a year ago and fell on an annual basis for the tenth consecutive month.
- Lending in the transportation sector fell 9.2% year-over-year in February, declining at the sharpest annual pace since mid-2017.

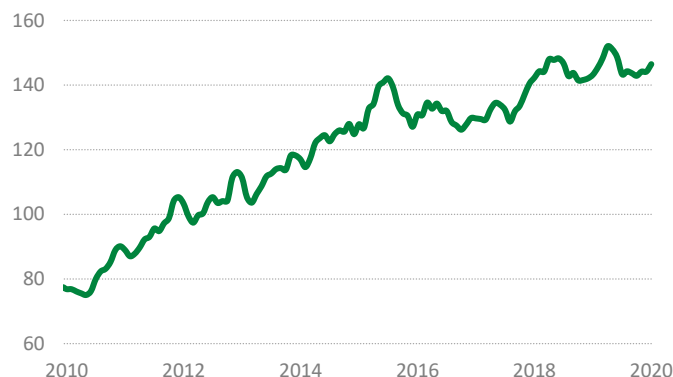
The NFIB Small Business Optimism Index began to show the impact of the pandemic on Main Street in March, plunging 8.1 points — the largest one-month decline in the history of the index.

- The Index was dragged down by expectations for real sales, which plummeted 31 points to a reading of -12%.
- Similarly, employment expectations, expansion plans, and expectations for the economy all took huge hits.
- NFIB survey respondents also reported plans to cut back on capital spending in the next six months as economic conditions deteriorate.

As the latest NFIB survey data suggest, while small businesses were in a generally healthy position in early 2020, the COVID pandemic is a seismic event that will dramatically alter the short- and medium-term fortunes of Main Street.

- Small businesses have already laid off millions of workers, and continued uncertainty surrounding the pandemic's length and magnitude will further challenge the sector.
- According to a Goldman Sachs survey of small business owners, 96% had felt the impact of COVID by mid-March, and only half believed their businesses could continue to operate over the next three months.

PayNet Small Business Lending Index
3-Month Moving Average



Source: PayNet

NFIB Small Business Optimism Index



Source: NFIB

A 2016 JP Morgan Chase report found that the median cash buffer for small businesses is 27 days.

EQUIPMENT FINANCE INDUSTRY CONDITIONS

MLFI-25

New business volume likely to decline amid COVID

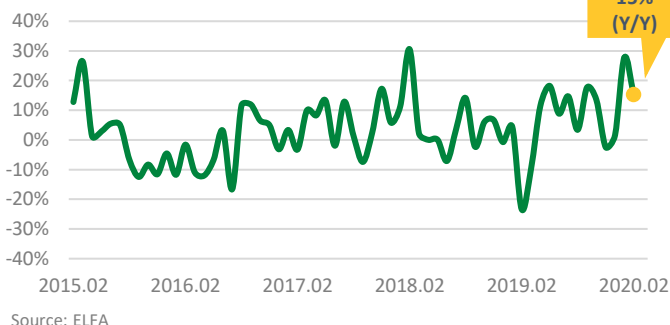
ELFA's March Monthly Leasing and Finance Index pointed to solid year-over-year growth, but the survey was conducted before COVID and thus does not reflect recent events.

- New business volume in February was \$6.8 billion, a 15% year-over-year increase. Year-to-date, cumulative new business volume was up 22% compared to 2019.
- 30-day delinquencies held at 2.00% but are up 20 basis points from a year ago.
- Charge-offs rose 4 basis points in February to 0.51% and are up 16 basis points from a year ago.

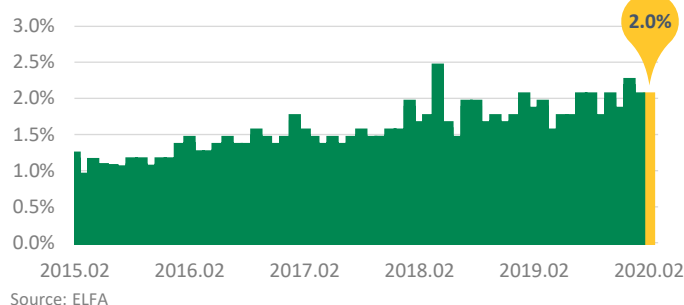
The robust volume data captured in the February MLFI-25 will no doubt take a turn in succeeding months as the coronavirus pandemic puts a damper on business growth and expansion and equipment acquisition plans.

Ralph Petta, President & CEO, ELFA

New Business Volume (\$ Billions)

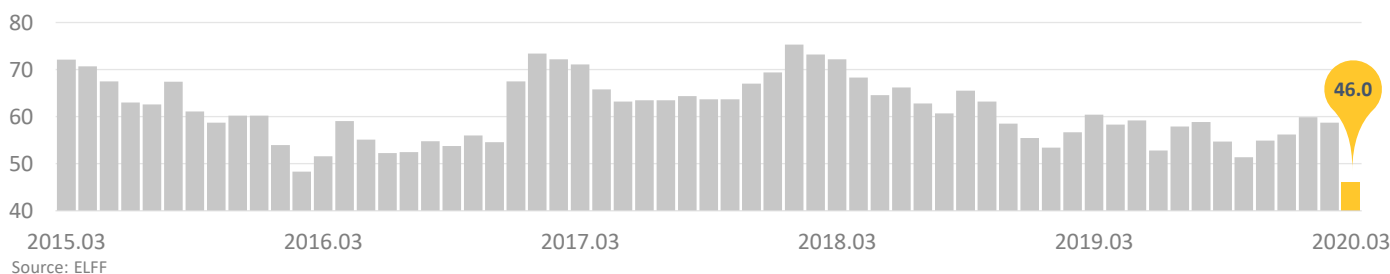


Aging of Receivables Over 30 Days (Percent)



MCI-EFI

The MCI-EFI fell to the lowest level on record in March



The Monthly Confidence Index for the Equipment Finance Industry ("MCI-EFI") dropped 12.7 points to 46.0 in March, its lowest level since the series began in 2009.

- Nearly half (48.2%) of executives responded that they believe business conditions will worsen in March, up from 3.9% last month.
- 37% of industry executives expect demand for loans and leases to fund capital expenditures will decline over the next four months, an increase from 3.9% in February.
- 48% of industry executives expect U.S. economic conditions to worsen in the next six months.

Expectations for demand for loans and leases to fund capital expenditures*



*Note: Diffusion index of the difference in the share of respondents who believe demand for loans / leases will increase vs. decrease.

Source: ELFF

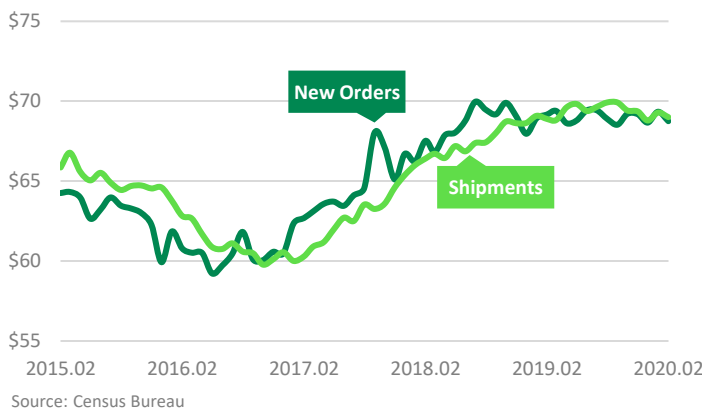
Manufacturing Focus

As demand plummets due to COVID, the manufacturing sector will likely suffer.

The manufacturing sector contracted for much of last year, and the pandemic is likely to further weaken the sector until the virus is contained and economic activity resumes.

- In February (i.e., pre-COVID), new orders for non-defense manufactured goods excluding aircraft (a leading indicator of future industry performance) fell 0.9% from January, the third decline in the last four months.
- Year-over-year growth in new orders for nondefense manufactured goods eased 0.6% in February, the first annual decline since October.
- Shipments of nondefense capital goods excluding aircraft (a coincident indicator of industry performance) fell 0.8% in February and were down 1.3% from a year prior, the largest annual decline since 2016.

Shipments vs. New Orders of Core Capital Goods
\$ Billion (seasonally adjusted)

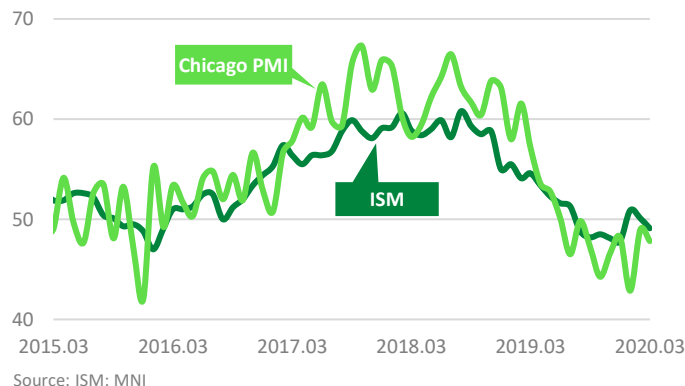


Both the ISM and Chicago Region PMIs were in contractionary territory prior to COVID

The ISM and Chicago Business Barometer have both declined significantly from 2018 peaks and are likely to fall further into contractionary territory in the months ahead.

- In March, the ISM manufacturing PMI fell 1.0 point to 49.1, indicating sector contraction. The New Orders subindex plunged 7.6 points while the New Export Orders subindex fell 4.6 points.
- Meanwhile, the Chicago Business Barometer declined 1.1 points to 47.8 in March, the ninth straight monthly reading signaling contraction.

Purchasing Managers' Indices (PMI)
Institute for Supply Management (ISM) & Chicago MNI

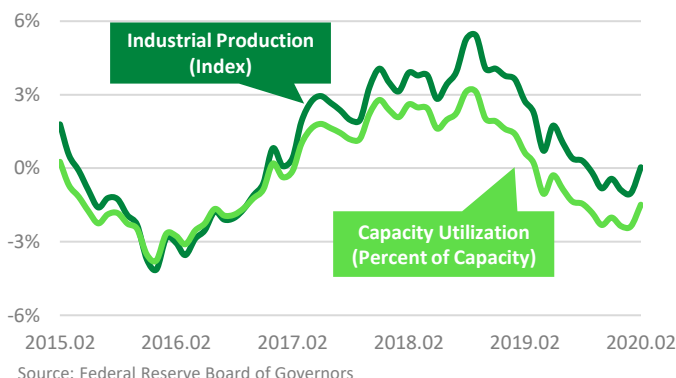


Likewise, industrial production and capacity utilization were weak prior to the outbreak

Industrial production and capacity utilization remained weak in February. Although both indicators had shown signs of potential improvement in recent months, COVID will result in both demand and supply shocks that will likely suppress industrial activity for the next 3–6 months.

- Industrial production edged up 0.6% in February and is flat year-over-year. However, manufacturing output was still below its year-ago level in February and is expected to decline further once the pandemic's effects are fully factored in.
- Capacity utilization inched up 0.3 percentage point in February to 77.0% but is down 1.5% from a year ago. Again, March data are likely to be substantially worse.

IP and Capacity Utilization
Year-over-year Percent Change



U.S. ECONOMIC OVERVIEW

2019: A Year in Review

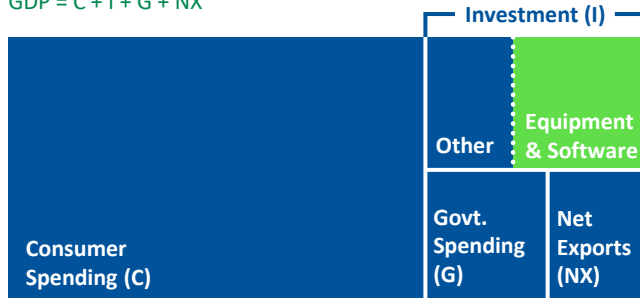
2019 was generally healthy for the U.S. economy

The U.S. economy grew at a 2.3% rate last year, the slowest annual expansion since 2016 but in line with longer-term growth trends.

- **Consumer spending**, the largest component of the economy, was the primary growth driver for most of 2019 and expanded at a healthy 2.6% rate on the year.
- **Equipment and software (E&S) investment**, a subset of overall business investment and the lifeblood of the equipment finance industry, rose 3.4% last year. This represents the slowest annual growth rate since 2016.
- **Net exports** suffered from significant volatility throughout the year due to the trade war with China and subtracted 0.2 percentage point from full-year growth.
- **Government Spending**: Government spending expanded 2.3% in 2019, the fastest growth since 2009.
- **Other Investment**: Other investment was a drag on growth in 2019. Structures investment fell to -4.3% in 2019 while residential investment contracted -1.5%.

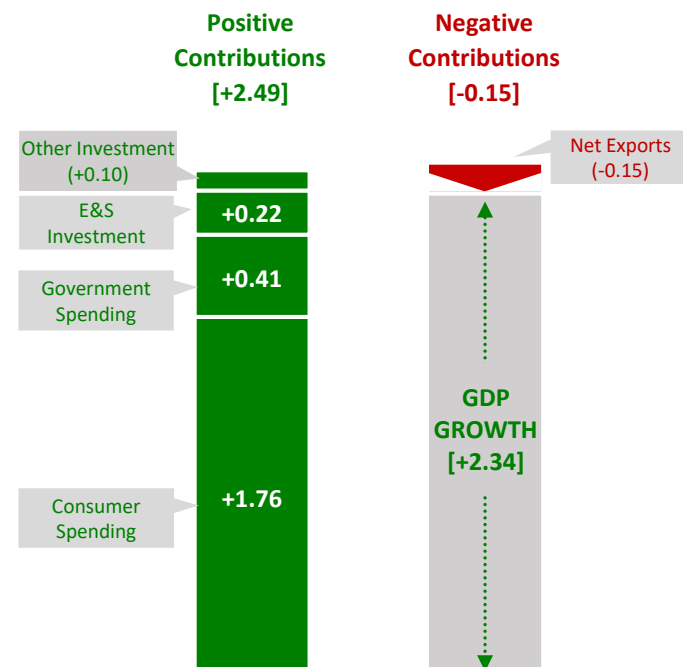
Composition of Gross Domestic Product (GDP)

$$GDP = C + I + G + NX$$



Source: Bureau of Economic Analysis (BEA)

Contributions to GDP Growth 2019



Source: Bureau of Economic Analysis (BEA)

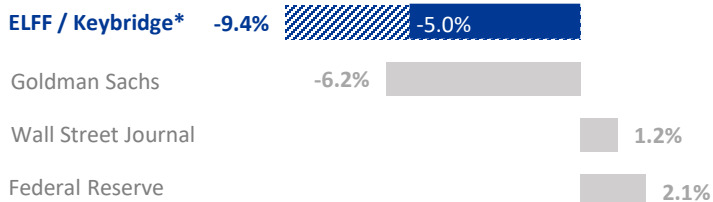
2020: The Year Ahead

Record U.S. economic expansion will end in 2020

While last year the economy was generally healthy, 2020 is likely to be among the most challenging peacetime years for the U.S. economy in history. A recession is already underway.

- The COVID pandemic spreading across the globe has brought nations to their knees, including the United States.
- Roughly 10 million people filed for unemployment benefits in March, with millions more expected to file in April. Small businesses will bear the brunt of the damage.
- Until the public health crisis is resolved, the economy will continue to sputter. However, we expect Q3 and Q4 to be an improvement over Q2, which should produce strong annualized growth rates. Nonetheless, the economy will be smaller at the end of 2020 than it was at the start.

2020 Growth Forecasts



*Range reflects uncertainty of epidemiology of COVID-19.

2020 may prove to be the sharpest downturn since the Great Depression.

Dr. Robert Wescott
President, Keybridge LLC

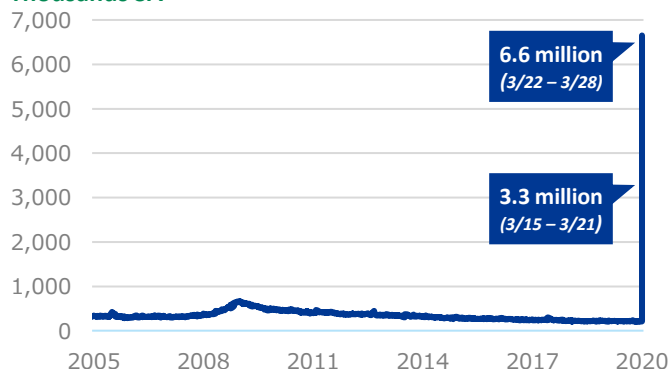
Historic Job Losses & Plummeting Consumer Confidence

Social distancing leads to millions of lost jobs

While the United States has thus far chosen not to pursue a national lockdown, the COVID pandemic has led to federal “social distancing” recommendations and state-decreed shelter-in-place orders that cover most of the U.S. population. This response has led to millions of lost jobs nearly overnight.

- The impact has been especially acute for small businesses, half of which do not have enough cash on hand to cover a month of expenses according to research from JPMorgan.
- Initial claims for unemployment insurance surged to an unprecedented level of almost **3.3 million** in the week ending March 20 — nearly five times the previous record — and doubled to **6.6 million** the following week.
- Though April’s unemployment rate jumped to 4.4%, it did not show the full effects of this unemployment surge due to the timing of data collection. We expect unemployment to rise above 15% by the end of June.

Initial Jobless Claims Thousands SA



Source: Department of Labor

“With more than 10 million jobs lost, March 2020 will likely go down as the worst month for the U.S. labor market in history. Peak unemployment could approach 20% in Q2.”

Jeff Jensen
Vice President, Keybridge LLC

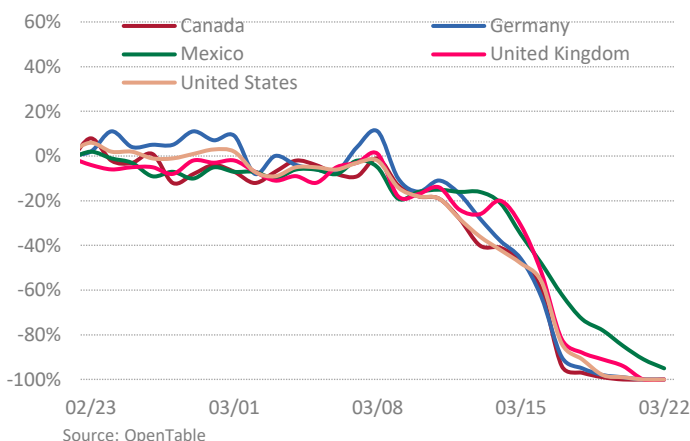
Lost Income & Plunging Consumption

Consumer spending set to suffer massive decline

Although consumer spending was generally healthy on the eve of the COVID pandemic, there is little precedent for the collapse in consumption that is currently underway.

- While some industries have been able to continue operations — particularly those that do not depend on face-to-face interactions with their customers — many others have scaled back hours of operation, delayed or cancelled planned investment, and laid off workers.
- As the public health crisis worsens and the economic slowdown wears on, additional layoffs are highly likely and consumer spending will suffer.
- While traditional economic indicators are just beginning to reflect the economic collapse, proprietary data maintained by the private sector offers a sneak-peak at what is to come.
 - For example, data released by the online reservation site OpenTable shows that restaurant bookings have fallen to essentially zero around the world.

Daily Seated Diners at OpenTable Network Restaurants % Change Y/Y



“We expect to see annualized consumer spending fall 20–30% in the second quarter.”

Jeff Jensen
Vice President, Keybridge LLC

Rising Consumer Financial Stress

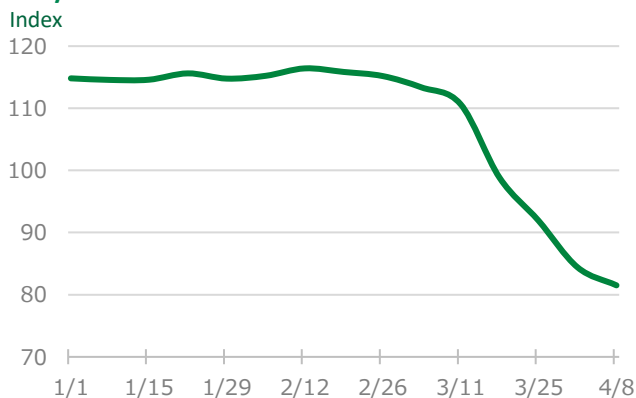
Unemployment spike will trigger rising delinquencies, defaults, and bankruptcies

Debt burdens were relatively low leading up to the COVID pandemic, which may help mitigate some of the adverse effects of lost jobs and incomes.

However, 10 million people lost their jobs in second half of March, and many millions more are likely to follow. These consumers — along with millions of others who have had hours or wages cut in response to sagging demand — will be less able to make credit card, mortgage, and auto loan payments, putting severe stress on both the U.S. economy and financial sector businesses lending to these borrowers. A major reason to be concerned about the state of Americans' finances is the fact that 39% of adults would be unable to cover a \$400 emergency expense like a car repair or broken appliance using cash or a cash equivalent, according to a recent Federal Reserve survey.

The CARES Act, which provides enhanced unemployment insurance and direct cash payments for low- and middle-income households (among other assistance) should help mitigate some of the damage to consumers — though additional federal support will likely be necessary. But looking ahead, we still expect consumer financial stress to climb rapidly, including rising delinquencies, defaults, and bankruptcies. Indeed, the suddenness of the coming increase may lead to the temporary enactment of debt forbearance policies and expanded bankruptcy protections to avoid overwhelming the system and mitigate the negative economic consequences of the pandemic.

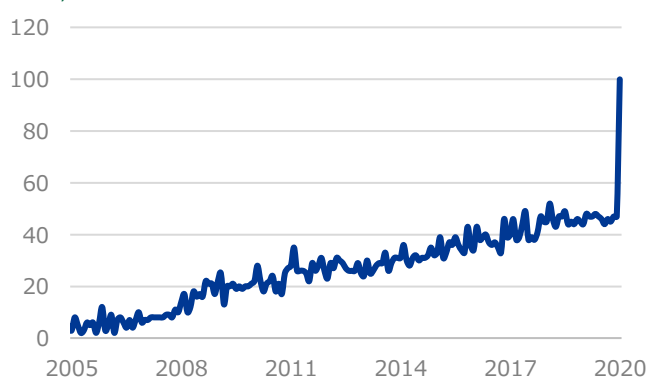
Daily Consumer Sentiment



Source: Morning Consult

Google Trends Search: "Can't pay"

Index, 100 = Peak search volume



Source: Google

Potential Mitigating Factors?

"Bottom Up" policies target consumers

"Bottom Up" policy responses intervene on the individual level to alleviate financial stress. The CARES Act includes several examples, including:

- \$1,200 payments to adults (and \$500 per child) for most American households (high-income earners are excluded).
- An extra \$600/week for unemployed workers (16 weeks);
- A Pandemic Unemployment Assistance program to help gig workers, freelancers, and contractors that are traditionally ineligible for unemployment benefits.

Some states have taken additional bottom-up measures:

- California has put a moratorium on evictions until May 31;
- New York has waived deposit and withdrawal fees for credit card, as well as ATM fees.

"Top Down" policies: target businesses

"Top Down" policies focus on helping employers weather the crisis and avoid layoffs, as well as lenders facing liquidity issues due to a sudden halting of debt payments. The CARES Act includes several examples, including:

- Forgivable SBA loans for firms that maintain payrolls;
- A \$50 billion + fund aimed at keeping airlines solvent while consumers are reluctant to fly;

In addition, the Federal Reserve announced a new "Main Street Lending Program" that will target firms too large for small business grants and too small to access capital markets. The Fed also announced it will begin purchasing debt backed by SBA's emergency small-business lending program.

While bottom-up policies often grab the headlines, top-down policies are critical to mitigating the longer-term fallout and avoiding a cascade of small business failures.

Negative Industry Impact

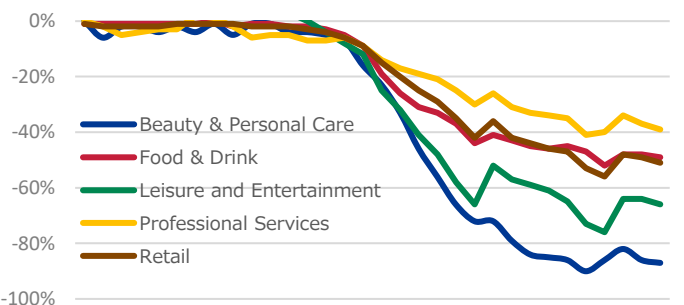
Service industry bears brunt of coronavirus impact

The service sector has been severely impacted by COVID in recent weeks, as evidenced by the IHS Markit Non-Manufacturing PMI plummeting to an all-time low in March. More than 90% of the U.S. population is under stay-at-home orders, which has shuttered non-essential businesses across the country and caused an economic catastrophe.

- **Tourism and Hospitality:** Hotels are experiencing collapsing demand and are expected to lay off more than four million workers in total. A quick recovery is unlikely.
- **Restaurants:** Many restaurants remain open for takeout and delivery, but most are still taking a large hit to revenues and laying off staff due to the loss of in-person business. Restaurants typically operate on tight margins (2–6% on average), so a few weeks or months of reduced business will likely affect solvency rates.
- **Travel:** Passenger air travel is down 90% compared to last year, and a recovery in the near term is unlikely. Boeing, already struggling with the fallout from the 737 MAX incidents, shut down all aircraft production for weeks.
- **Oil:** The oil sector faces a massive demand shock that may result in a 30 million barrel per day global oversupply. As a result, oil prices have plunged, and global storage capacity is nearing its limit. Though there have been talks of a new OPEC+ agreement, prices are expected to fall further — and could enter negative territory for the first time ever.
- **Personal Services:** Barbershops, movie theaters, and other personal services are obviously suffering, but their losses may continue even after stay-at-home orders are lifted. Early evidence from China shows that consumers remain wary, particularly for non-essential services.

As previously discussed, the CARES Act could mitigate some damage to these industries through tax benefits and low-interest loans, while extraordinary Federal Reserve actions and new lending facilities will also help soften the blow.

Share of Local Businesses Open vs Same Day in January Percent



Source: Homebase

Financial Market Turmoil

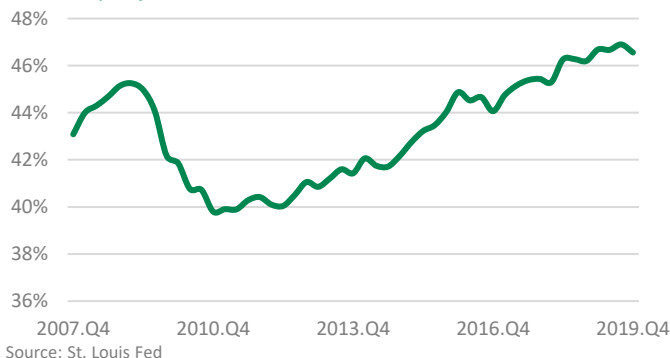
Equity markets experience massive swings

After falling 34% from its peak on February 19th the S&P 500 Index has rebounded somewhat but remains ~20% below all-time highs (as of April 8th). The Fed has responded with unprecedented interventions, including a target fed funds rate of zero, trillions of dollars of repo, and large-scale asset purchases that for the first time include corporate bonds.

Troublingly, corporate debt levels were already at all-time highs before the pandemic, with total debt topping \$1 trillion and reaching almost half of GDP in late 2019. The oil and travel industries are particularly indebted; for example, many cruise lines have gone into heavy debt after purchasing new ships in recent years. Debt levels are likely to worsen in the months ahead due to the economic impact of the pandemic.

With a target Fed Funds rate of zero and short-term treasury rates slipping into negative territory, the equipment finance industry will face an ultra-low rate environment for the foreseeable future.

Corporate Debt as Share of GDP Seasonally Adjusted



Source: St. Louis Fed

Potential Growth

Medical equipment industry may see uptick

Some companies and industries, such as medical equipment and cleaning supplies manufacturers, will likely see an uptick in demand. California alone has requested 500 million N95 masks and more than 1 billion gloves.

By invoking the Defense Production Act (DPA), the President can compel manufacturers to produce essential personal protective equipment (PPE) like masks, gloves, and ventilators. This action will lead U.S. manufacturers to adopt a wartime footing in support of the nation's health. As a result, firms that are mobilized under the DPA stand a better chance of weathering the pandemic storm.

Government Response

How much can Congress mitigate the damage?

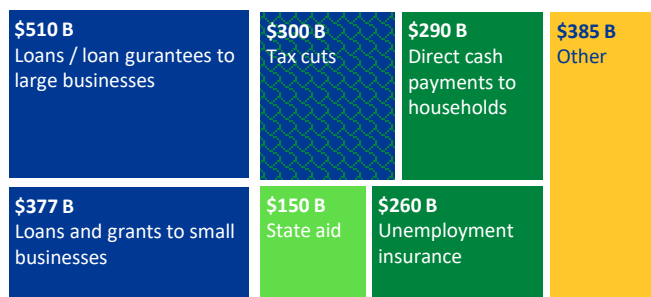
In anticipation of the economic and public health effects of coronavirus, Congress passed three bipartisan relief packages in March. The first two bills funded vaccine development, paid sick leave for most employees, and free coronavirus testing. The third bill (the CARES Act) provides \$2.3 trillion in fiscal stimulus to consumers, businesses, and states, including:

- \$510 billion in loans and aid to large businesses;
- \$377 billion in loans to small businesses — most of which is forgiven if the employer maintains pre-crisis payrolls;
- \$300 billion in tax relief (over 90% of which is directed at businesses);
- \$290 billion in direct household payments via tax rebates;
- \$260 billion in expanded unemployment benefits;
- \$150 billion in state and local government support;
- \$72 billion in support for transportation providers & industries (including airlines).

Congress may provide additional fiscal stimulus in the form of more direct payments to consumers, increased funding for small business loans, debt forbearance, or infrastructure spending, in subsequent legislation. However, a fourth relief package appears unlikely to pass until May at the earliest.

CARES Act Funding Breakdown

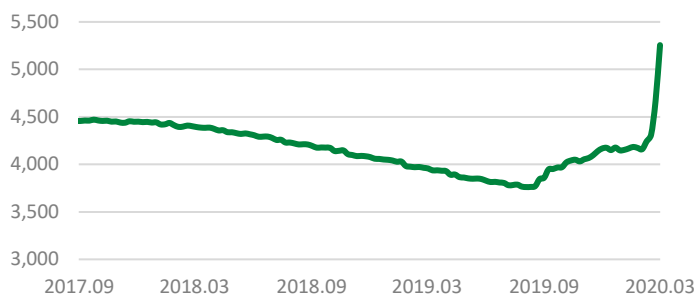
Billions of Dollars



Source: U.S. Senate, Bloomberg News

Federal Reserve Assets

Billions of Dollars



Source: St. Louis Fed

Federal Government Impact

How will coronavirus affect policy choices?

In the short run, the federal government is focused primarily on controlling the spread of COVID, dealing with the public health effects, and providing a cushion for households and businesses. These efforts, while badly needed, will lead to large increases in the federal deficit.

- The U.S. national debt reached 105% of GDP in 2019 Q3, and the CARES Act — with a cost of roughly 10% of GDP — will drive this number higher.
- Federal tax revenue will fall sharply in the months ahead, while automatic stabilization programs such as Medicaid and SNAP food benefits will further increase spending.

Additionally, normal government functions will likely be affected. Agencies such as EPA have suspended or curtailed regular enforcement activity, the Census Bureau has postponed in-person contact efforts (potentially inhibiting its ability to accurately count hard-to-reach populations), and SBA's lending activity will be put into overdrive.

If the virus is not sufficiently contained by the fall, in-person voting could become a public health issue. Congress provided some funding to states for vote-by-mail in the CARES Act, but it is likely insufficient to fund nationwide voting changes.

State & Local Government Impact

Rising costs and lower revenues for states

Unemployment claims rose sharply in the last two weeks of March and are expected to increase further in the coming weeks. This will impact state budgets in multiple ways.

- Unemployment benefits will skyrocket, and state unemployment trust funds will be drawn down at levels that could easily surpass the 2008–09 recession.
- The widespread closure of businesses will sharply reduce sales tax collection, while the unemployment spike will also reduce income tax revenue.
- Given that most states are required balance their budgets, governors may need to cut services and planned investments. CARES Act assistance will help but is unlikely to fully plug the funding shortfall.

Municipal budgets will face similar revenue shortfalls, which will likely lead to funding cuts in education, transit, and infrastructure projects across the country.

China Shutdown and Recovery

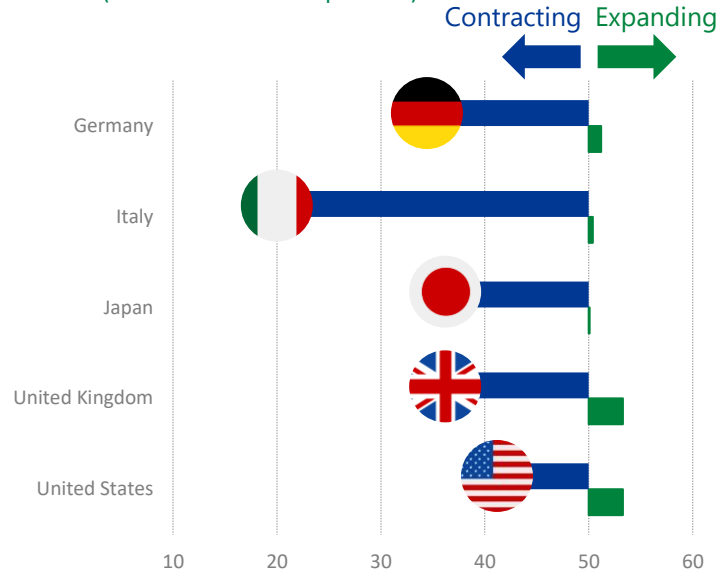
Twin supply and demand shocks rock global economy

The virus that originated in China's Hubei province caused major disruptions to global supply chains in January and February as tens of millions of people were placed under strict quarantine. Surveys show that nearly 75% of US firms suffered direct supply chain disruptions during this period as the virus caused Chinese output metrics to plummet to all-time lows. Though these measures of activity recovered in March, few market watchers outside of China believe the country has returned to "business as usual."

While the public health situation has improved over the last three months, China's path to economic recovery will likely be slow and uncertain due to several factors:

- China's role in supply chains for apparel, smartphones, semiconductors, and other goods means that it remains in the crosshairs due to cratering global demand;
- The potential for a second wave of COVID is a risk that, if realized, could again bring the Chinese economy to a halt;
- Several Chinese lenders have reported double-digit increases in credit card delinquencies. Widespread consumer defaults could trigger a financial meltdown.

Markit Composite PMIs: January (Green) vs. March (Blue)
Level (over 50 indicates expansion)



Source: IHS Markit

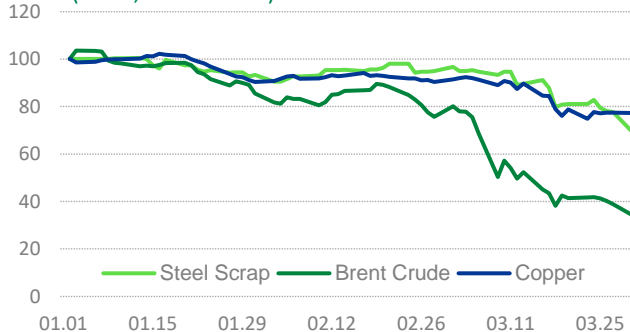
Commodity Price Weakness

Oil and Metals Prices Signal Weak Export Demand

Commodity prices have come under intense pressure in recent weeks due to plunging global economic activity. Copper and steel prices have fallen 20–30% while oil prices have collapsed to the lowest levels in decades. Low commodity prices reflect the new reality of weak global export demand, which will have negative impacts on several industry end-user markets, including transportation and energy extraction.

Commodity Prices

Index (Jan 1, 2020 = 100)



Potential for reshoring?

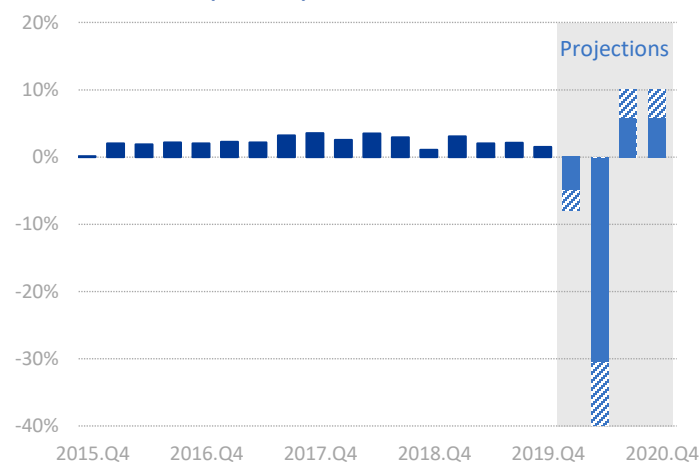
Epidemic Highlights Dependence on China

The pandemic sweeping the globe will likely be the cause of the sharpest economic downturn in U.S. history. Though the cost of the pandemic — both human and economic — will be severe, one potential silver lining is that the near-total shutdown of global supply chains has highlighted just how dependent the U.S. is on other countries, specifically China, for a growing number of strategically important goods like pharmaceuticals and key inputs for high-tech products.

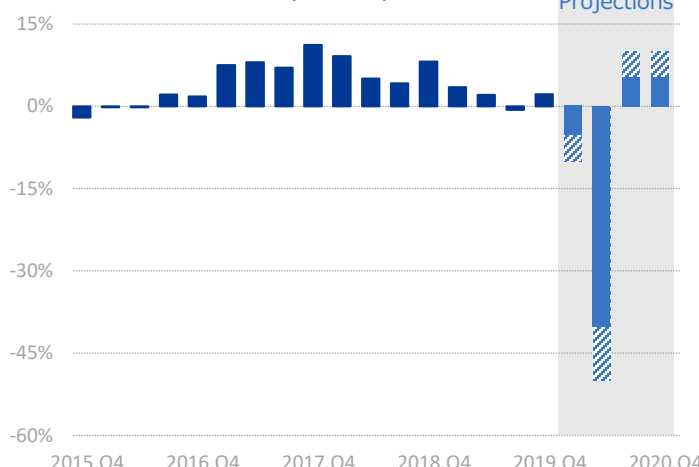
Given China's ambition to unseat the U.S. as the global leader in several strategic industries, U.S. firms will likely continue to reshore some manufacturing capacity that had previously resided in China for cost-cutting reasons. Similarly, U.S. policymakers are learning firsthand that the American medical system is heavily dependent on China for critical supplies, which is likely to drive additional investment in domestic production of medical supplies and devices in the coming years. This may provide an opportunity for equipment finance firms who are positioned to take advantage of this reshoring trend.

APPENDIX A | KEYBRIDGE FORECASTS

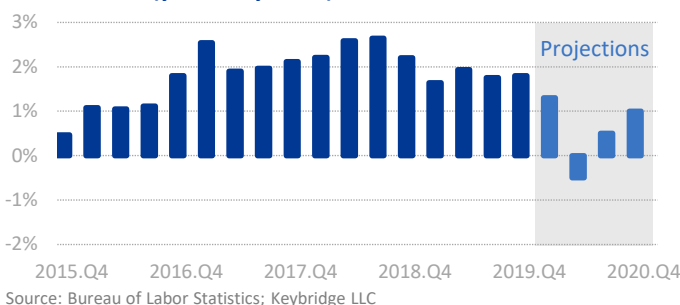
Real GDP Growth (% SAAR)



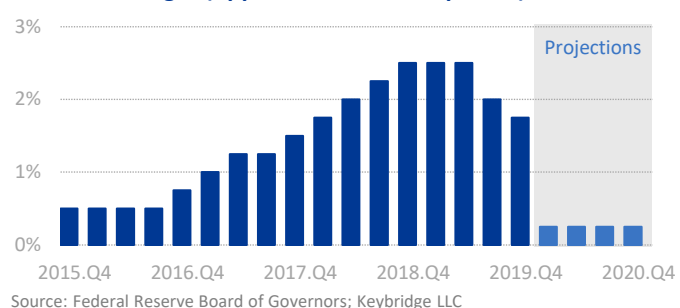
Real Investment Growth (% SAAR)



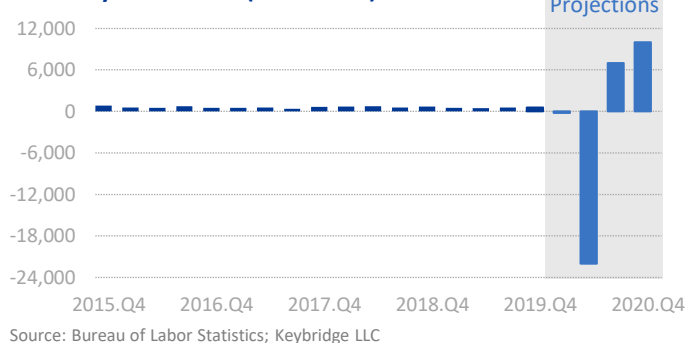
CPI Inflation (year-on-year %)



Fed Funds Target (upper bound, end of period)



Total Payroll Growth (thousands)



INDICATOR	2018	2019	2020 QUARTERLY ESTIMATES				2020e
			Q1e	Q2e	Q3e	Q4e	
Real GDP (SAAR %)	2.9%	2.3%	-4 to -8%	-30 to -40%	5 to 10%	5 to 10%	-5.0 to -9.4%
Real Investment in Equipment & Software (SAAR %)	7.7%	3.4%	-5 to -10%	-40 to -50%	5 to 10%	5 to 10%	-8.6 to -13.5%
Inflation (year-on-year %)	2.4%	1.9%	1.3%	-0.5%	0.5%	1.0%	0.6%
Federal Funds Target Rate (upper bound, end of period)	2.5%	1.75%	0.25%	0.25%	0.25%	0.25%	0.25%
Total Payroll Growth (thousands)	2314	2133	-212	-22,000	7,000	10,000	-5,212

Note: SAAR% refers to the annualized rate of change in seasonally adjusted data from one quarter to the next, which is the Bureau of Economic Analysis' standard method for reporting growth in the national accounts data.

About the Momentum Monitor

Business leaders require actionable forward-looking intelligence to make strategic decisions. Accordingly, the Foundation commissioned Keybridge LLC to develop a series of custom leading indicators for the equipment sector. The [Foundation-Keybridge Equipment & Software Investment Momentum Monitor](#) consists of indices for 12 equipment and software investment verticals. These indices are designed to identify turning points in their respective investment cycles with a 3–6-month lead time.

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

How to Read the Momentum Monitor

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

- "Recent Momentum" indicates a vertical's recent acceleration or deceleration in the past month relative to its average movement during the previous 3 months. Ratings closer to "0" indicate rapid deceleration, while ratings near "10" represent rapid acceleration.
- "Historical Strength" reflects a vertical's strength in the past month relative to its typical level since 1999. Ratings closer to "0" represent an indicator that is weaker than average, while ratings closer to "10" represent an indicator that is stronger than average.

The matrix consists of four quadrants based on readings for each vertical's recent momentum and historical strength. If a vertical falls in the top-left quadrant, its momentum reading is higher than average, but positive movement has slowed (and perhaps reversed) in recent months — suggesting that investment levels may fall over the next 1-2 quarters. Verticals in the bottom-right quadrant, however, have momentum readings that are below average, but recent movement shows promise — suggesting that investment levels may rise over the next 1-2 quarters.