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The Real Economy Industry Outlook 4, Summer 2020

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Our membership in RSM US Alliance has elevated our capabilities in the marketplace, helping to differentiate our firm from the competition while allowing us to maintain our independence and entrepreneurial culture. We have access to a valuable peer network of like-sized firms as well as a broad range of tools, expertise and technical resources.

THE REAL ECONOMY

INDUSTRY OUTLOOK

VOLUME 4
SUMMER 2020

THE POWER OF BEING UNDERSTOOD
AUDIT | TAX | CONSULTING



OUR AUTHORS



JASON ALEXANDER
INDUSTRIALS SENIOR ANALYST,
PRINCIPAL



ANTHONY DECANDIDO
FINANCIAL SERVICES SENIOR
ANALYST, PARTNER



JASON KURUVILLA
FINANCIAL SERVICES SENIOR
ANALYST, PARTNER



TROY MERKEL
REAL ESTATE SENIOR ANALYST,
PARTNER



LAURA DIETZEL
REAL ESTATE SENIOR ANALYST,
PARTNER



KAREN GALIVAN
CONSUMER PRODUCTS SENIOR
ANALYST, PARTNER



CHRIS SHAKER
CONSUMER PRODUCTS SENIOR
ANALYST, PARTNER



PETER CADIGAN
CONSUMER PRODUCTS SENIOR
ANALYST, SENIOR MANAGER



VICTOR KAO
TECHNOLOGY SENIOR ANALYST,
PARTNER



RICK KES
HEALTH CARE SENIOR ANALYST,
PARTNER



KENNEDY CHINYAMUTANGIRA
FINANCIAL SERVICES SENIOR
ANALYST, SENIOR MANAGER



JESSIKA GARIS
HEALTH CARE SENIOR ANALYST,
MANAGER



SHRUTI GUPTA
INDUSTRIALS SENIOR ANALYST,
SENIOR MANAGER



SCOTT HELBERG
REAL ESTATE SENIOR ANALYST,
SENIOR MANAGER



DAVID MAMANE
FINANCIAL SERVICES SENIOR
ANALYST, DIRECTOR



RYAN MCANDREW
REAL ESTATE SENIOR ANALYST,
SENIOR MANAGER



BRANDON KOESER
FINANCIAL SERVICES SENIOR
ANALYST, SENIOR MANAGER



ADAM LOHR
LIFE SCIENCES SENIOR ANALYST,
PARTNER



MATT WOLF
HEALTH CARE SENIOR ANALYST,
DIRECTOR



NICK GRANDY
REAL ESTATE SENIOR ANALYST,
MANAGER



DAVIS NORDELL
TECHNOLOGY SENIOR ANALYST,
SENIOR MANAGER



KURT SHENK
TECHNOLOGY SENIOR ANALYST,
SENIOR MANAGER



STEPHANIE JOHNSON
BUSINESS AND PROFESSIONAL
SERVICES SENIOR ANALYST,
MANAGER



MICHAEL GERLACH
BUSINESS AND PROFESSIONAL
SERVICES SENIOR ANALYST,
PARTNER



ANNE SLATTERY
INDUSTRIALS SENIOR ANALYST,
DIRECTOR



STEVE KEMLER
LIFE SCIENCES SENIOR ANALYST,
DIRECTOR



LORI KALIC
HEALTH CARE SENIOR ANALYST,
PARTNER



These are challenging times. Now, more than ever, data-driven analysis can help to mitigate the uncertainty created by the pandemic's exogenous shock to the global economy.

The Real Economy: Industry Outlook provides a collection of sector-specific insights developed by our RSM US LLP senior industry analysts, a select group of professionals dedicated to studying economic and industry data, market trends and the emerging issues faced by middle market businesses.

Each outlook offers a data-driven approach to industry research, examining the affect of economic factors including the impact of COVID-19, earnings, competitive landscapes, consumer behaviors, capital flows, mergers and acquisitions, supply chains, labor and more.

Should you have questions about any of the following content, please [contact us](#).

Sincerely,

JOSEPH BRUSUELAS, CHIEF ECONOMIST, RSM US LLP

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One of the most important data points for firms emerging from the pandemic and returning to life as they previously knew it is their assessment of how successful remote working was for their staff.

INDUSTRY OUTLOOK:

BUSINESS AND PROFESSIONAL SERVICES



BY MICHAEL GERLACH AND STEPHANIE JOHNSON

BUSINESS AND PROFESSIONAL SERVICES (BPS) firms are grappling with the heightened uncertainty a global pandemic brings. As a result, they are drawing down on their revolving credit facilities and pausing investment in an effort to keep cash on hand for day-to-day operating expenses. Payroll and related workforce decisions are priorities, while business leaders rethink the achievability and timeline of longer-term investments. Firms with strong liquidity positions will eventually seek to reposition for growth and focus on embracing digital transformation. Firms pursuing greater mobility, flexibility and security will likely start by investing in information technology and cybersecurity programs. This outlook centers on two specific sectors within BPS, law firms and government contractors.

LAW FIRMS

Law firms big and small have seen a healthy run of revenue-per-partner growth over the last decade as they reacted to the effects of the Great Recession. (continued)

KEY TAKEAWAYS

- Human capital is of the utmost importance for law firms, including their employees and external client relationships.
- Uncertainty surrounding the economic and public health crises puts a premium on reliable data analysis.
- The government contracting sector is relatively recession-proof because of how policymakers can stimulate the economy through spending, so it is primed for mergers and acquisitions activity and an influx of talented workers.
- Cybersecurity policies and reiterated national security concerns command government contractors' attention.

The legal industry is one built on relationships, and ensuring clients that firms are there to support them in their time of need is vital to maintaining healthy client relationships.



However, as COVID-19 has brought forth a new series of challenges, law firm leaders must draw on what they learned about appropriate staffing levels, investment in innovation and strategic planning after the Great Recession and act swiftly to ensure their firms don't lose the traction they've gained. Many firms must address the following challenges as they look to adjust strategies for new post-pandemic routines.

Liquidity, agility and uncertainty

Firms have been forced to make decisions on furloughs and layoffs, compensation and partner distribution cuts, as well as find other ways to reduce operating expenses. At the same time, they've had to adjust to new ways of growing top-line revenues while working remotely. A firm's liquidity will enable them to continue to be agile as unpredictable results continue to roll in over the course of this summer. Firms should continue to look for ways to expand their current lines of credit, while capitalizing on federal financing alternatives (Paycheck Protection Program, employee retention credits, Main Street Lending Program options). Firms should also look at this time as an opportunity to circumvent the typical fourth quarter collection race most firms run to lessen the demands they place on their lines of credit throughout the rest of the year. Implementing quarterly collection discussions with clients will challenge the status quo, but it can lead to opportunities to invest in other parts of the firm.

Investing in employees from a distance

As much as firms are focused on monitoring all parts of their operations, the single most important aspect during this pandemic has been their human capital. Almost all firms have moved to remote work environments. That has heightened the challenges facing their workforce, as attorneys and staff have

begun balancing the demands of being professionals, parents and caregivers. Firms must continue to support their attorneys and staff with enhanced benefits that show employees how they are valued as part of the firm's culture now more than ever. By doubling down on the benefits provided to the staff, firms can continue to win back some of the capital that has been spent in recent months with cutbacks. Benefits such as telehealth, expanded forms of time off, virtual professional learning opportunities and expanded mental health benefits can show staff that the firm continues to support them. In addition, creating or enhancing mentor, coaching and similar programs can help staff through difficult times caused by COVID-19. As remote work has prompted the move to virtual communications and videoconferencing, staff are experiencing fewer contacts with colleagues, and that can often lead to detachment from the firm. Programs that encourage staff to connect with other members of the firm can create additional avenues to stay in touch and make them feel they are still part of the firm's success.

Remote questions, digital answers

Perhaps the most important data point for firms emerging from the pandemic and returning to life as they previously knew it is their assessment of how successful remote working was for their staff. Were there roadblocks firms overcame, or are there infrastructure issues that continue to cause delays in providing legal services? Are there areas of the firms' operations that need digital enhancements? Are there redundancies in operations that can be remediated through robotic process automation or other forms of artificial intelligence? As firms look to make more of their records accessible outside of the office, access and security challenges present additional obstacles they must overcome. Now is the time for firms to identify how their digital footprint can assist in their strategic goals post-COVID-19.

MIDDLE MARKET INSIGHT

Performing digital, security, privacy and risk assessments are ideal strategic moves for firms looking to reopen their doors and discuss what normal post-pandemic business may look like.

Business intelligence tools

Distressed financial modeling and other management tools came under scrutiny in March and April, as law firm leaders looked to models to help predict what cash flows would look like from the onset of COVID-19. Unfortunately, many firms realized their current models were not up to the test of helping them understand how the pandemic would affect the industries they rely on for revenue growth. As firms look to understand how the remainder of 2020 will turn out, they should invest in powerful business intelligence tools. Tools of this nature can mine a firm's internal and external data to help guide strategic decisions by providing insights into client and industry trends, as well as trends in their own human capital behaviors.

Relationship status

Given the various uncertainties brought on by the pandemic, lawyers should be checking in with their clients. Most of their clients are reeling from disruptions, and there are opportunities to assist clients with implementing strategic decisions. Whether it is determining how to handle layoffs or furloughs, helping clients decide how to discontinue operations of operating units or working through a successful acquisition of a target entity, law firms should begin to strategize how best to work with clients. Virtual communications include certain challenges and communication limitations. But the legal industry is one built on relationships, and ensuring clients that firms are there to support them in their time of need is vital to maintaining healthy client relationships.

Client relationships will be important throughout the remainder of 2020 and into 2021, as legal expenditures will be affected across many industries in the real economy. Gone are the days where corporate legal hires external counsel at will. Now law firms will see an uptick in rate negotiations, as well as an increase in the demand for technology to supplement their legal services. Corporate legal will look to invest in their own infrastructure and will expect law firms to match their investment in their own firms' ability to support their legal needs.

Changing the growth culture

Now that many professionals have adjusted to a remote work environment, checked in on their clients and ensured their relationships are healthy, many law firm leaders are looking to the remainder of 2020 and into 2021, asking how organic top line revenue growth will continue. One very important way to accomplish this is to continue to invest in training and mentoring rising stars within the firms. By providing them with the resources to learn how to interact with prospects and client executives, law firm leaders will empower these rising stars to help foster new relationships, which will eventually help grow revenues of the firms. Growth programs can empower lawyers with the tools necessary to probe prospects and clients for elevated conversations that will ultimately lead to identifying opportunities to provide support for these organizations.

COVID-19 has presented many challenges for law firm leaders to date. By identifying the need to take action on critical business functions highlighted herein, law firms can position themselves for continued success as the economy begins to open up and their clients look for their advisors to assist them.

GOVERNMENT CONTRACTING

Government contracting is big business, with government outlays representing 20.2%–23.4% of U.S. gross domestic product over the last 10 years.¹ The success of these firms depends on government needs and the availability of fiscal resources for public investments.

MIDDLE MARKET INSIGHT

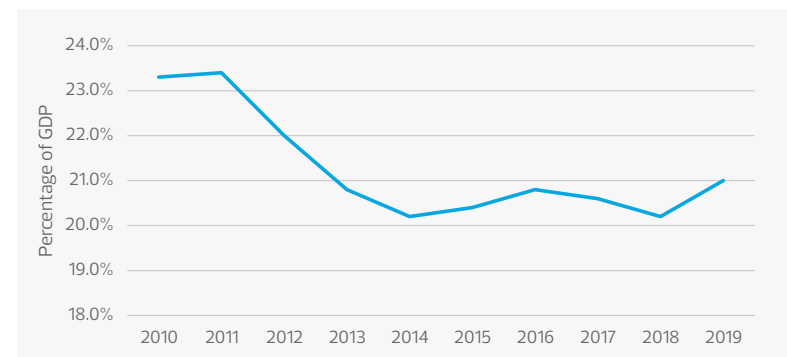
Benefits such as telehealth, expanded forms of time off, virtual professional learning opportunities and expanded mental health benefits can show staff that the firm continues to support them.

Government national interest spending kicks up

Government spending not only continues during periods of economic downturn, but it can also be used as a tool to stimulate the economy, battle unemployment and protect U.S. citizens. Total government spending and defense expenditures remained steady through the first half of

¹ Government fiscal years ending Sept. 30, 2010 through Sept. 30, 2019.

Government outlays as a percentage of GDP

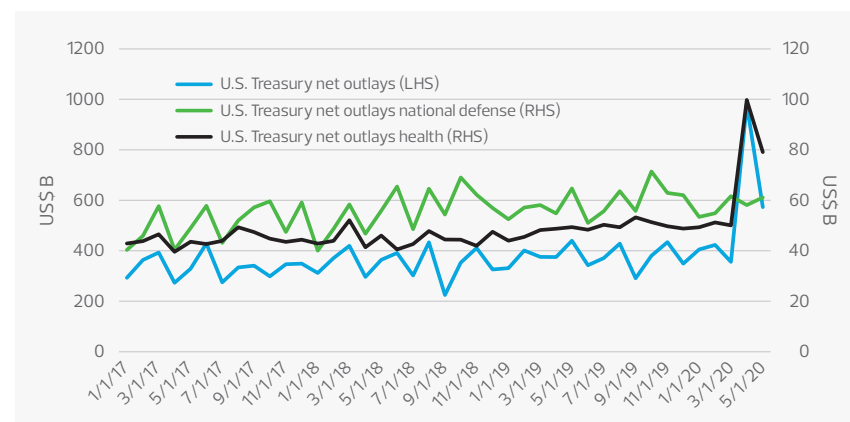


Source: Bloomberg

calendar year 2020, while government health spending peaked at the height of the COVID-19 response.

According to data from the General Services Administration, agencies spent approximately \$14.7 billion as of June 4, 2020, on COVID-19 national interest programs. The vast majority of this amount was attributable to the Department of Health and Human Services (HHS), which includes agencies such as the Centers for Diseases Control and Prevention (CDC).²

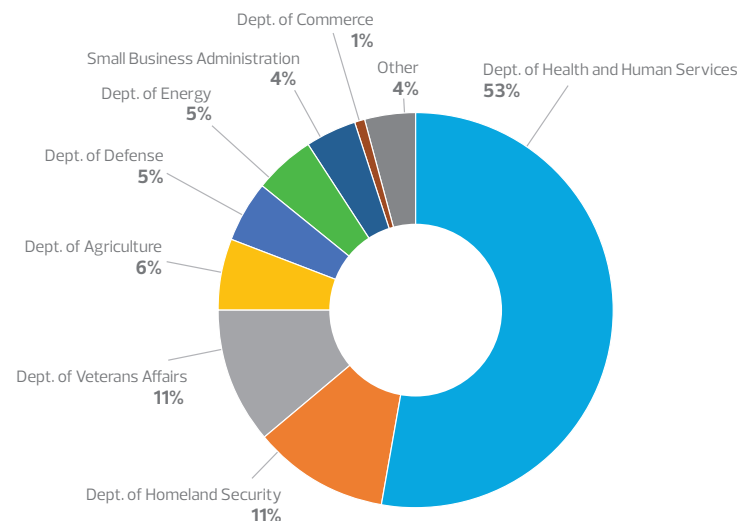
Government national interest spending



Source: Bloomberg; RSM US LLP

While the majority of COVID-19-related spending through May targeted health resources and emergency response, the pandemic highlighted risks relating to U.S. infrastructure, cybersecurity and public health. Government contractors should be poised and ready to meet government needs relating to public health, physical and digital infrastructure and national security.

COVID-19 spending by agency



Source: General Services Administration

Private equity interest seeking transparency

The government contractor middle market is home to many small, highly technical service providers and other high-growth niche players. These companies are attractive to the bigger players in the hunt for growth, added capabilities and access to specific contract vehicles. The result is a robust and dynamic market for acquisitions. While COVID-19 put a pause on the majority of deal flow in the first half of calendar year 2020, matchmaking continues with the expectation of deals closing once debt markets loosen up, and management teams can meet one another physically instead of via videoconferencing.

² Note: The following data was obtained from FPDS-NG. The General Services Administration believes it represents a portion of the work that has been awarded to date. Many contracting offices supporting COVID-19, particularly those relocated to the disaster recovery area, do not have access to their normal contract writing systems and thus have not been able to populate FPDS-NG contemporaneously with the contract awards they have made. Others have not had time to enter data due to the tempo of operations. It is impossible to estimate the impact this may have on the total numbers. As the operations tempo slows we expect that the data will be entered, and thus, the accuracy in terms of total contracts awarded, and dollars obligated, will increase.

MIDDLE MARKET INSIGHT

Recent industry growth, increased government spending during COVID-19, visibility into future cash flows and insulation from recession make government contractors a ripe target for private equity firms seeking stable cash flow streams.

Many private equity firms, particularly those that specialize in the government contracting sector, are implementing investment strategies more akin to strategic rather than financial buyers. Specifically, private equity groups often invest in a platform company and complete one or more bolt-on acquisitions before selling the larger, combined firm. This blending of financial and strategic investment strategies is unique to the sector and drives private company transaction multiples up.

We expect to see M&A activity from strategic and financial buyers in the fourth quarter of 2020 and the year 2021 based on the recession-proof nature of government contracting, limited impact from COVID-19 (excluding companies with exposure to commercial aerospace), and general consolidation in the market.

Cybersecurity of the utmost importance

For government contractors, poor cyber hygiene may not only cost you a customer, it could also threaten national security and burden taxpayers. One of the more infamous hacks was in 2017 when an Australian contractor was hacked, losing F-35 schematics and technical documents. Because of this, the Department of Defense is rolling out a new requirement called the Cybersecurity Maturity Model Certification, which goes into effect July 1, 2020. The CMMC will build upon cybersecurity best practices from well-known standards such as the Defense Federal Acquisition Regulation Supplement and the National Institute of Standards and Technology Special Publication 800-171, but it will require a third-party assessment to help verify reduced risk. This program is a significant step toward reducing cyber-risk within the government's vast network of contractors. While this program applies only to contractors serving the DOD, other departments will likely follow suit.

We recommend all defense contractors prepare for CMMC before it is required for future vehicles and recompetes opportunities on existing vehicles (some of which are this year). The chief information security officer in the Office of the Under Secretary of Defense for Acquisition, Katie Arrington, noted in April that cyber insurance will likely increase in popularity (and necessity) going forward, and cyber hygiene similar to that required under CMMC could determine rates.

Fight for talent

The federal government and its contractors struggled to compete with commercial technology companies for top talent during the recent stretch of low unemployment and a flourishing startup community. Increased unemployment and macroeconomic headwinds could result in more skilled workers looking for less risky positions. Government contractors with full pipelines should maximize the opportunity to position their workforce for the future with young, technologically savvy individuals.

National security and Election Day stakes

All eyes are on the 2020 presidential election, as the winner and their respective party will exert influence over the fiscal year 2021 budget and levels of investment in areas such as transportation, infrastructure, digital transformation and 5G.

Defense and intelligence agencies continue to voice concerns about exposure to enemies via weakening supply chains and adversarial capital, key concerns that were magnified during COVID-19. Undersecretary of Defense Ellen Lord, in her press briefing on acquisition reform and innovation on August 26, 2019, discussed two of the Pentagon's key initiatives to counter economic influence from national state adversaries:

- Committee on Foreign Investment in the United States (CFIUS): A federal committee that has the power to block foreign investment deemed a risk to national security.
- Trusted Capital Marketplace program: A matchmaking program between the government and businesses that need trustworthy sources of capital to deliver on national-security-related products and services.

These programs are a taste of acquisition reform on the horizon for government contractors, particularly those serving the defense and intelligence communities. ■



As companies continue to manage through the crisis and plan for the road ahead, it will take resilience, innovation and transparency to succeed.

INDUSTRY OUTLOOK:

CONSUMER PRODUCTS



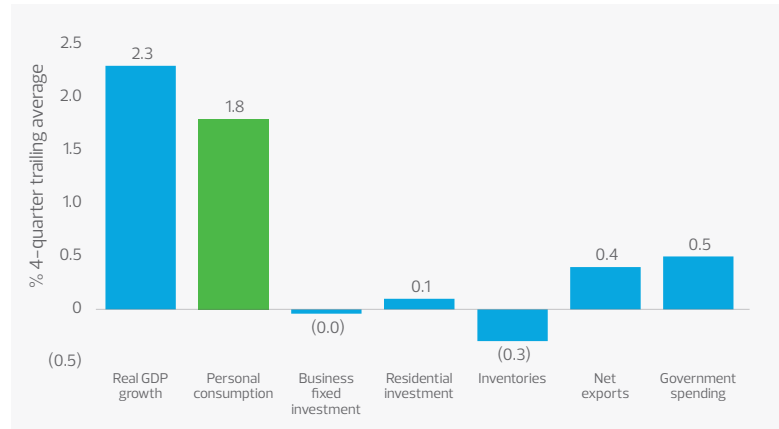
BY PETER CADIGAN, KAREN GALIVAN AND
CHRISTOPHER SHAKER

IN A MATTER of months, the coronavirus and ensuing government responses deteriorated consumer spending, a critical component of economic growth in the United States. Fueled by a strong labor market and rising wages, household consumption was a resilient driver of U.S. economic growth despite headwinds presented by slumping manufacturing and geopolitical turmoil throughout 2019 and heading into 2020. With restaurants and retailers shuttered and consumers sheltering in place while facing depression-like levels of unemployment and uncertainty, spending quickly eroded in the second quarter. Despite this erosion, consumer spending will be a critical part of the recovery. An important focal point of the existing stimulus has been getting cash in the hands of consumers and will continue to be a key factor in policy decisions going forward.

KEY TAKEAWAYS

- Embracing digital transformation is more important now than ever, but consumer products companies should implement a robust and strategic digital road map in order to thrive post-COVID-19.
- Supply chain recovery will continue to be a challenge due to complex geopolitical interdependency and shifting consumer behaviors.
- Reopening doesn't mean recovery, and many consumer products companies will continue to struggle with profitability.
- Center-of-store food and beverage brands will see opportunities as consumers search for shelf staples and healthy food trends.
- With an anticipated scale back in traditional brick-and-mortar retail traffic, digital direct-to-consumer channels will play an important part in shaping the future for consumer products companies, especially in the apparel, beauty and home furnishings sectors.

Contributions to 2019 GDP growth



Source: Bloomberg

While household consumption is expected to increase in the third quarter, behaviors developed during the height of the pandemic will likely reshape how consumers are spending. Before the pandemic, experiential and leisure purchases were taking a growing share of discretionary spending. However, awareness of social distancing could significantly alter that trend as consumers trade restaurant purchases for grocery purchases and travel budgets are reallocated to home improvements. Shifts in such behaviors will be critical to business leaders as they guide their organizations through the survival period and emerge with new short-, intermediate- and long-term plans to thrive in the continuously evolving consumer ecosystem.

RETAIL

COVID-19 accelerates digital evolution

One of the undisputed consequences of the COVID-19 pandemic has been an exponential increase in retail sales through non-brick-and-mortar channels. Evidence is mounting that this trend will not be short term in nature.

Digital evolution is far from a new concept in the consumer ecosystem. To date, this movement has been led by big-box retailers with sufficient capital to invest in innovation and change. According to the RSM Digital Transformation Survey conducted in late 2019, middle market retailers, on the other hand, have struggled getting out of the starting blocks.

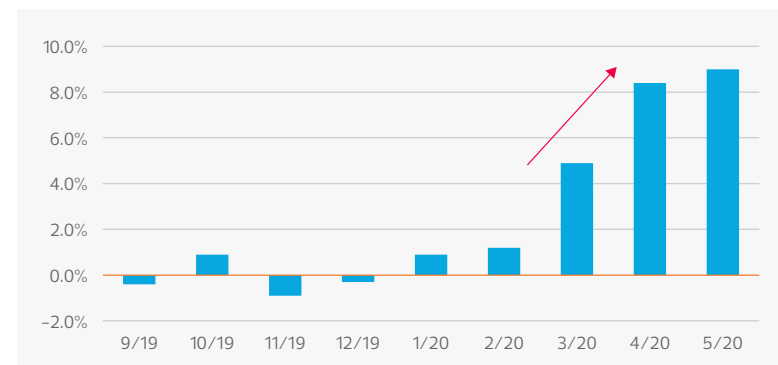
One of the primary responses for why retailers have struggled was that it is difficult for middle market retailers to determine where to make investments and how to measure their return on those investments. The acceleration of the move away from brick-and-mortar and to other shopping channels during the coronavirus pandemic will forever change this narrative. Retailers can no longer view their adaptation to these changing shopping patterns as an investment with a return. Of course, this evolution requires changes to physical space and technology that will need capital investment; however, these changes must be viewed as a necessary cost of doing business as a retailer.

One of the short-term challenges that many retailers face as they emerge from long periods with brick-and-mortar closures is adapting technology and infrastructure to fulfil more orders through delivery and in-store pickup. As retailers reopened across the country in May and June, those that previously did not offer in-store pickup or delivery have been forced to do so. Those that did offer these are seeing increased volumes.

The stress created by the sudden and sharp drop in sales has not left most middle market retailers in a position to have the cash required to make significant systems upgrades in the short term. However, many will find that

Nonstore retail sales

PERCENT CHANGE MONTH-OVER-MONTH



Source: Bloomberg; U.S. Department of Commerce



MIDDLE MARKET INSIGHT

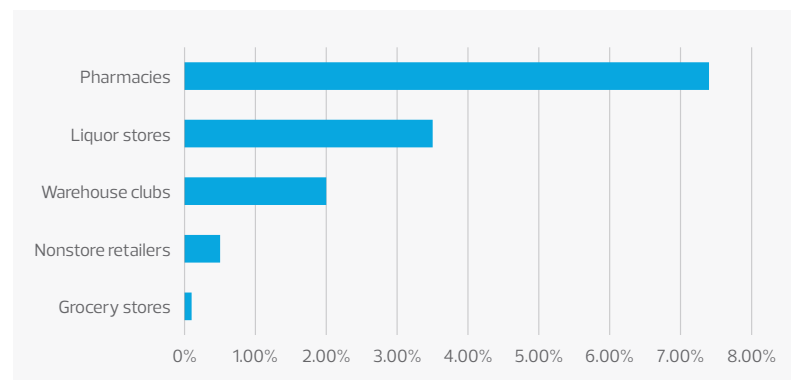
The stress created by the sudden and sharp drop in sales has not left most middle market retailers in a position to have the cash required to make significant systems upgrades in the short term. However, many will find that their current technology licenses include significant unused functionality that can be leveraged to help.

their current technology licenses include significant unused functionality that can be leveraged to help. Longer term, a robust digital strategy will need to be developed and deployed to allow retailers to thrive when the immediate fallout from the pandemic passes.

Supply chain and consumer preference disruption

Starting in China, the coronavirus pandemic has worked its way across the globe, sparing very few links in the complex and geographically diverse consumer supply chain. The different timelines and the severity of how each part of the world has been affected make it very difficult for supply chains

Retail categories with positive year-over-year growth during 2008 recession



Source: Bloomberg; U.S. Department of Commerce

to recover in a linear fashion. Consumer preferences have also been affected by the economic fallout that most households have experienced. Consistent with other historical recessions, consumers are moving back toward value and staple items.

These changes to the consumer landscape represent an opportunity for middle market retailers. Middle market retailers have the ability to be more nimble than their big-box counterparts that are used to buying large, shipping container-size quantities from a concentrated group of suppliers. As we emerge from the recession, retailers will scrutinize product offerings and carry smaller quantities of more products until they can identify and capitalize on short-term trends. Many middle market retailers have already demonstrated this by sourcing and selling personal protective equipment during the height of the pandemic, despite not carrying these items on a regular basis.

While their smaller size may allow them to be nimble to help with short-term adjustments, it will eventually represent a challenge for middle market retailers as many lack the ability to scale. As a result, longer-term models will contemplate outsourcing fulfillment activities. In April 2020, a Bloomberg Intelligence publication reported that UPS estimated 58% of small and midsize companies would outsource fulfillment in the next five years.

Third-quarter outlook

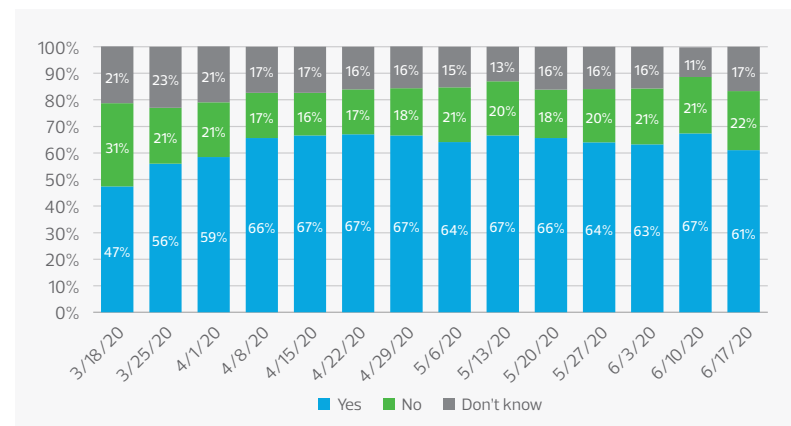
The short-term retail outlook is very hard to forecast, primarily because of the uncertainty surrounding a potential second wave of the coronavirus pandemic. Since the Memorial Day weekend, cases have been rising in two-thirds of the states, with states across the South and Southwest now forming the epicenter

of infection. Early indications from the health community also indicate that the virus may be seasonal, similar to the flu. However, things may be different than they were in early 2020. Better hygiene and social distancing habits, advancements in treatment protocols, as well as better testing and tracing initiatives across the country could allow for a less severe impact the second time around. The pattern of spread may also mimic the first wave, in which certain geographic areas were spared, while others were affected. The resulting economic impact will follow this pattern and different parts of the country will face very different outlooks depending upon the severity of a second wave, or a complete lack thereof. Retailers will have to pay close attention to these patterns as they reopen and plan their operations in the third quarter and into the holiday season.

Businesses should focus investment and promotion, in the near term, on areas that allow the most opportunity to thrive, such as online sales channels and “buy online, pick up in-store” offers, and away from those with higher risk of being affected by an outbreak, such as traditional brick-and-mortar stores. These investments will pay dividends longer term as well, regardless of whether or not there is a second wave.

Post-COVID-19 shopping pattern survey responses

PERCENT OF PEOPLE WHO EXPECT TO BEHAVE DIFFERENTLY/RETAIN THEIR CHANGED WAY OF LIVING IN THE LONG TERM



Source: Coresight Research

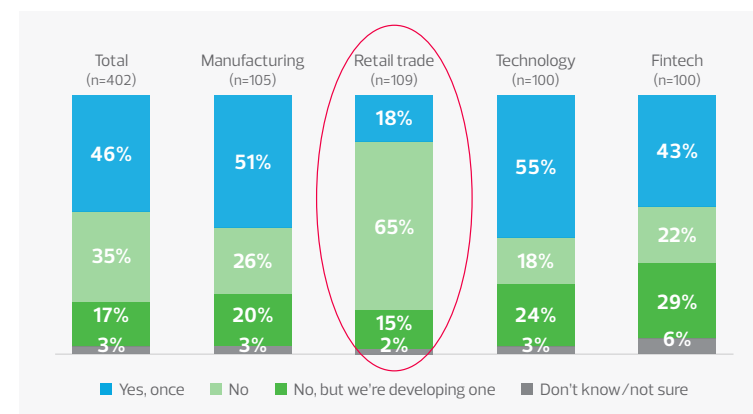
While social distancing may help us reduce the severity of a second wave, it poses a significant challenge to the retail ecosystem. Significant changes to physical retail space are necessary to allow consumers to feel safe shopping at brick-and-mortar locations. These costs, together with depressed sales, have created dismal profitability in the second quarter and will continue to pressure profitability in the third quarter and likely through the holiday season.

The costs associated with effectively reopening are inevitable, so retailers will turn their focus to driving sales as the consumer ecosystem moves out of survival mode and emerges into recovery mode. The digital trend that preceded the pandemic has been accelerated by the required changes to consumer shopping patterns during the first and second quarters of 2020. A continuous survey by Coresight Research that spans March through May 2020 suggests that more than 60% of consumers will continue their new shopping habits that developed during the pandemic. This means that the most successful retailers will have to expand sales and increase profitability through non-brick-and-mortar channels, including social media.

Intermediate-term risk

While it's no surprise that middle market retailers were hard hit by fallout from the COVID-19 pandemic, proprietary RSM data underscores this vulnerability.

Organization has formal business continuity plan that outlines procedures and instructions if unanticipated event interrupts normal business operations



Source: RSM US Middle Market Business Index, Q2 2020 oversample; data collected by the Harris Poll

Some 44% of U.S. retailers lost domestic revenue because of the pandemic, while nearly half experienced disruptions to U.S. operations or production, according to a special industry oversampling included in the proprietary second quarter RSM US Middle Market Business Index, a quarterly measurement of middle market business sentiment.

The oversampling—fielded April 8 to April 23, 2020—included 416 executives in four industries, including 109 in retail. An oversampling adds people to a particular survey category to improve the data's reliability.

One key data point highlighted a potential opportunity for retailers: Some 80% of the retail respondents said they did not have a formal business continuity plan that outlines the procedures and instructions to be followed if an unanticipated event such as a pandemic interrupts their normal business operations. Even worse, of those who did have a formal plan, 50% were only somewhat familiar, or not at all familiar, with that plan. That was higher than the other industries polled.

There is a clear need for better planning. This is a lesson middle market retailers can learn from as the country begins to reopen.

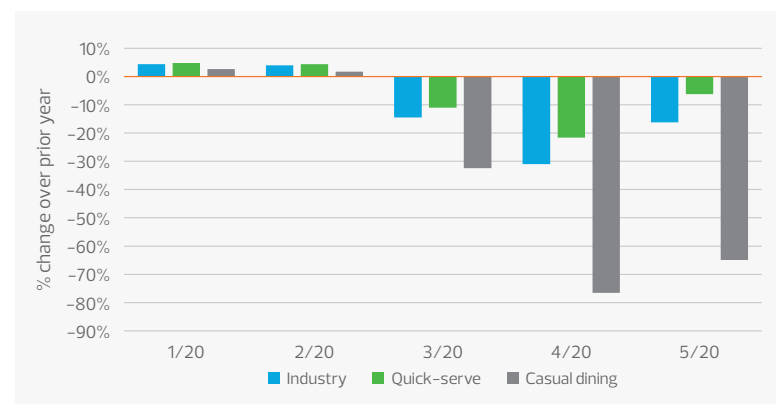
If the United States experiences an ongoing resurgence of rolling outbreaks, or worse, a second wave that is equivalent or more severe than the first, retailers should be prepared. There is no way to completely eliminate the economic fallout, but being prepared can make the difference between closing doors permanently and emerging on the other side.

RESTAURANT

COVID-19 reduced traffic in the first quarter and into the second quarter of 2020. Unsurprisingly, some store sales were down sharply in the last week of March. The impact was felt across all restaurant sectors. However, quick-serves and fast casuals that are asset light and are better suited for an increase in delivery and take out have fared and will continue to fare much better than the casual and fine dining sectors.

Domino's Pizza is a great example of a restaurant that has been able to succeed, thus far, during the pandemic as a result of its existing digital platform, which includes one of the best mobile apps in the industry, and an established delivery model. Other operators with a similar infrastructure heading into the pandemic have also been able to do very well.

Restaurant same-store sales



Source: Bloomberg; Miller Pulse

The cost of reopening

In early to mid-May, restaurants around the country slowly began to reopen. However, states issued very strict guidelines that restaurants must follow in order to minimize the risk associated with a second outbreak. In nearly all states, these guidelines include social distancing within the restaurant, which in many cases results in a significant reduction of the overall restaurant capacity. In addition, lingering fears will make customers wary about returning to a dine-in setting. Many operators will be unable to sustain operations if forced to operate at less than 100% capacity. A combination of good weather and pent-up demand could create an opportunity for those with access to outdoor space to manage some of the capacity lost inside the restaurant.

The cost of reopening doesn't stop with the lost revenue from reduced traffic. Restaurants need to reorganize their physical space, explore options for outdoor dining space, increase the frequency of cleaning efforts and implement contactless payment methods. For those that did not offer it previously, significant investment may be required to accommodate pickup and delivery. In some cases, this may even mean a completely new operating model that includes the use of ghost or dark kitchens, concepts that were on the rise before the pandemic.



MIDDLE MARKET INSIGHT

Middle market restaurants that have strong unit-level management to navigate these headwinds have the best opportunity to succeed and return to profitability on the other side.

It will also be very difficult to properly manage the labor equation in uncertain times. All of this is before considering the reduced margins and additional packaging costs associated with an increase in delivery and takeout.

Finally, fixed costs, most notably rent commitments, were not made under the assumption that units would operate at significantly reduced capacity. In order to survive on lower average unit volume, operators will need to renegotiate with landlords and other stakeholders to match fixed costs to the lower volumes. This is a critical component of any plan for most operators to emerge from the pandemic.

In short, profitability is going to be very difficult in the second half of 2020. Less profitable locations will be closed, and those better suited to the changes required by the new normal will become top-performing units. Early reactions to a "COVID surcharge" in states like California have been negative and likely will not persist. However, menu prices are likely to increase across the country in an effort to combat rising costs, following the trend already seen in grocery store prices.

Restaurant owners will look to find ways to manage cash flows and survive the reopening period on pent-up demand and cost increases, with hopes of returning to profitability if and when a vaccine is found, or we reach herd immunity. Middle market restaurants that have strong unit-level management to navigate these headwinds have the best opportunity to succeed and return to profitability on the other side.

FOOD AND BEVERAGE

As we begin a global economic recession, food and beverage is projected to be the only consumer products sector to have growth in 2020, according to market research firm Euromonitor. This unprecedented time of record unemployment and pandemic conditions will shape consumer spending and put pressure on food manufacturers and distributors already operating on thin margins. Supply and demand disruption and rising operating and transportation costs will translate into higher prices. As companies continue to manage through the crisis and plan for the road ahead, it will take resilience, innovation and transparency to succeed.

Heading back to center

The pandemic caused consumers to head to the center of the grocery store to stock up on shelf staples like canned and frozen foods. As shelter-in-place rules were announced, there was great uncertainty and shoppers were concerned about everything from contagion to food shortages. Stocking up was something they could control during an uncontrollable situation. Shopping the center of the store could last for a few reasons.

Q1 restaurant KPIs trending down, Q2 was worse

	Q1 2020	Q1 2019	Q1 2018	Q1 2017
Gross margin	21.6%	25.9%	26.4%	24.8%
SG&A rate	21.5%	15.7%	15.9%	13.7%
Operating margin	4.9%	10.3%	10.2%	11.2%
EBITDA margin	15.0%	17.9%	10.5%	14.8%
Net income margin	3.5%	7.6%	6.5%	6.6%

Source: Bloomberg

When shoppers turned to e-commerce for their groceries, many websites featured recipes using canned and frozen foods. Consumers are discovering healthy recipes using items such as rice, beans and tuna. They also opted for frozen fruits and vegetables when fresh alternatives were not available. According to a survey from the American Frozen Food Institute, frozen food purchases increased 70% since March 2020. The center aisles also offer healthy and quick scratch-cooking ingredients that meet consumer preferences for both healthy and convenient meals. Finally, the center of the store often offers value with store branded items for the cost-conscious consumer. Center-of-store brands should focus on retaining this new connection with the consumer and develop digital strategies to stay top of mind, whether the consumer shops brick-and-mortar or online.

Food and immunity

"Let food be thy medicine and medicine be thy food." – Hippocrates

During the pandemic, we have seen the healthy food trend evolve. Consumers eat healthy to lose weight, increase energy and sleep better. Now they are looking for ingredients that boost immunity and prevent illness. Shelter-in-place orders and reduced discretionary income caused more people to cook from home, finding it easier to eat healthy. As unemployment grows, so does the loss of medical benefits and consumers are motivated to stay healthy and avoid expensive trips to the doctor.

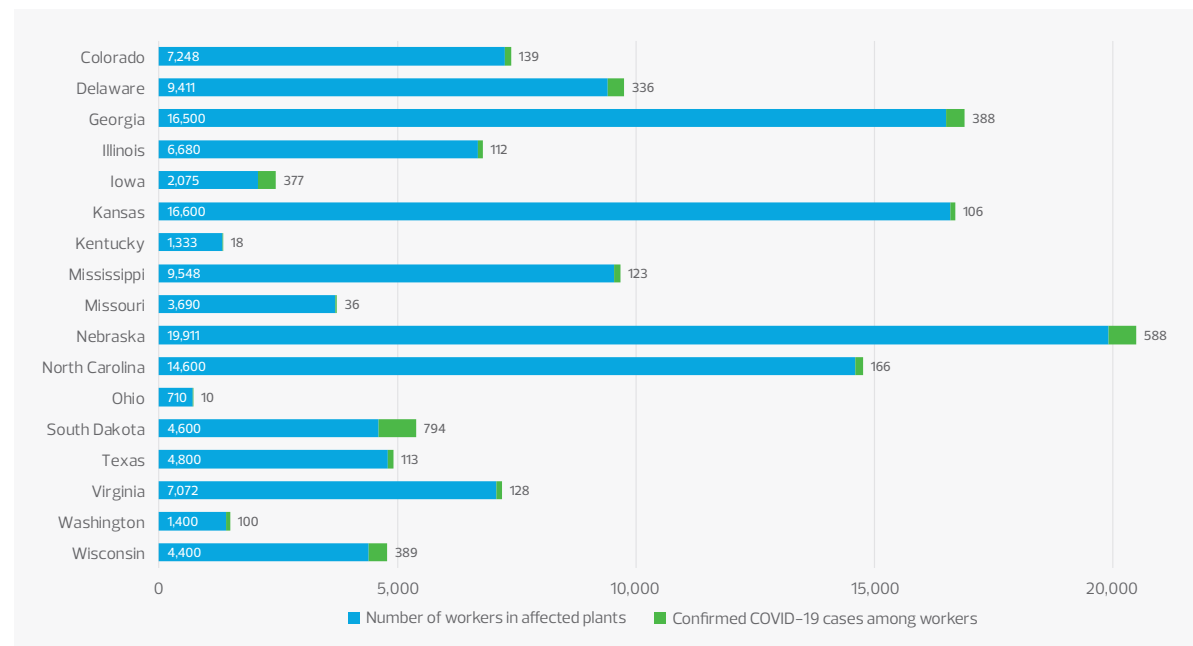
Consumers continue to consider plant-based products as healthy; however, it may be difficult for some manufacturers to pivot. Many smaller plant-based manufacturers focus primarily on restaurants and may not have a retail distribution channel in place. Many consumers may choose to eat plant-based proteins considering potential future meat shortages and higher prices. To be successful, manufacturers will need to get control of their supply chains and distribution channels, and use predictive analytics to be prepared for potential future disruptions.

Meat concerns

As consumers were stockpiling groceries, food manufacturers of all types were running multiple shifts to keep up with demand. Food processors have strict guidelines to keep food safe; however, the pandemic shone an unfavorable light on the meat and poultry processing industry. In early April 2020, the U.S. Centers for Disease Control and Prevention was alerted to several cases of plant workers testing positive for COVID-19. After a monthlong investigation, the CDC found 4,913 cases of COVID-19 and 20 deaths reported from 115 plants in 19 states.

There were several factors that contributed to the quick spread of the virus both from structural and operational constraints to social and economic challenges. The CDC recommended changes such as increased sanitation in high-touch areas, physical distance barriers and face coverings, as well as employee education and improved medical leave benefits. While many

Number of workers in affected meat or poultry plants and confirmed cases of COVID-19



Source: Dyal JW, Grant MP, Broadwater K, et al. "COVID-19 Among Workers in Meat and Poultry Processing Facilities—19 States," April 2020

plants temporarily closed to address the problem, an executive order was issued to keep the plants open. This encouraged another round of panic-buying, causing consumers to see higher prices and limited selection.

Regardless, in a survey performed by Datassential in early May, 69% of U.S. consumers identified themselves as meat eaters. These consumers were also asked about whether a spread of the virus among meat processing facilities would prevent them from future meat purchases. Of the one thousand people surveyed, 39% were concerned but would still buy meat; another 37% were not concerned at all. While these are positive signs for the meat and poultry industry, meat and poultry processors still need to be aware of pricing. The pandemic has made consumers more resourceful and flexible due to the economic downturn and rise in unemployment. While they may not stop eating meat, they most likely will limit their consumption to save money.

FASHION, BEAUTY AND HOME FURNISHINGS

Businesses in the fashion, beauty and home furnishing sectors have been particularly susceptible to the disruptions brought about by the COVID-19 pandemic due to complicated global supply chains and dependence on consumer discretionary spending. While the leaders of these organizations had to adapt to challenges brought about by both supply and demand shocks during the most critical times of the pandemic, adapting their businesses to be resilient to these types of changes will be critical to their recovery and long-term success.

Supply chain disruption

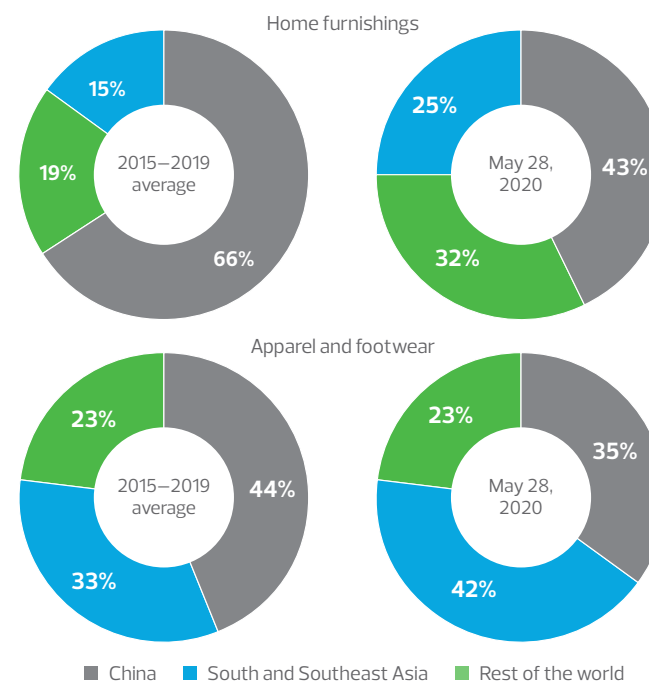
Nearshoring, moving the production of goods closer to consumer-dense markets in the United States and Western Europe, has been an enticing concept to fashion and home furnishings businesses. The cost of uprooting established supply chains and vendor relationships combined with an increased cost of labor have prohibited many companies from making such a change. However, recent geopolitical turmoils combined with the impact of COVID-19 on antiquated supply chain practices are changing the equation on this topic.

Even before the shutdown of Chinese factories in response to the COVID-19 pandemic sent a supply shock into the apparel and home furnishing supply chains, businesses in these sectors were evaluating their dependence on Chinese production. Over the course of the past decade, factories in Southern and Southeast Asia emerged as less expensive alternatives to China and the

introduction of section 301 tariffs on U.S. imports from China to the United States provided further incentives for companies to abandon China. Through May 2020, U.S. furniture imports from China decreased to 43% of total imports of this type from an average of 66% the previous five years. Home furnishing businesses had greater incentives to shift production as their products' inclusion on List 3 subjected them to higher tariffs earlier than many apparel imports. However, apparel products destined for the United States were also beginning to shift toward countries such as Vietnam, Bangladesh and Indonesia.

As demand rebounds, companies may find partners in these countries unwilling or unable to return to legacy production patterns. Many Asian textile producers were left with the cost of holding inventory as wholesale and retail partners in the United States delayed or canceled orders outright.

Composition of U.S. imports of home furnishings and apparel and footwear (in USD)



Source: Bloomberg; IHS Markit

The pandemic has made consumers more resourceful and flexible due to the economic downturn and rise in unemployment. While they may not stop eating meat, they most likely will limit their consumption to save money.



These producers will likely be unwilling to make themselves vulnerable to this type of inventory exposure risk in the future and will require more commitment from importers. Additionally, many textile and apparel producing countries outside of China are operating near poverty levels. Factory shutdowns may mean that critical infrastructure may not be maintained and those countries' resources may be allocated elsewhere as a result of the pandemic. Moreover, factories in these countries with poor working conditions such as lack of ventilation will draw further criticism as consumers continue to become more conscious.

The flexibility and reduced import costs provided by nearshoring production may be more attractive given these limitations on factory capacity and stricter payment terms from legacy Asian partners. Apparel leaders have already acknowledged that the notoriously long lead times that have plagued the sector are ill-suited to adapt to unpredictable consumer behaviors and discretionary spending expected in the aftermath of the coronavirus and ensuing recession. In response, the traditional fashion calendar has been abandoned by many organizations, and digital solutions around sampling and production have allowed companies to accelerate the design process. The further adoption of technology and automation in the production process will also reduce the dependency on the costly labor associated with geographically significant locations.

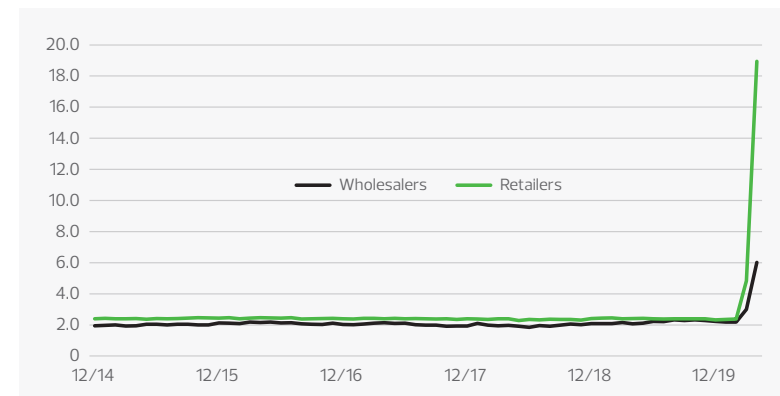
Inventory: The 800-pound gorilla in the warehouse

The abrupt fallout of demand left apparel brands holding on to unprecedented levels of inventory. Retail partners responded to closures of stores and liquidity

issues by postponing, reducing and even canceling many orders. Historically, apparel retailers and wholesalers have maintained inventory-to-sales ratios somewhere below 2.5; however, in April 2020, these escalated to 18.9 and 6.0, respectively. This left companies in this sector with difficult decisions on how to sell through inventory to avoid added costs of holding it, as well as to deal with liquidity issues of their own.

Companies with generic labels and styles have the option of holding on to inventory and reducing future orders as inventory trickles into sales channels. While this strategy won't free up cash immediately, organizations will benefit

Apparel inventory/sales ratio



Source: Bloomberg; U.S. Census Bureau

from fewer and smaller orders until built-up inventory sells through. Other available options include steep discounting through traditional retail channels as well as selling to off-price retailers. Fashion brands relied heavily on steep product discounts for liquidity and driving sales through the 2008 recession and recovery. While this strategy provides the benefit of immediate liquidity, it could come at the cost of long-term brand erosion. Premium and luxury brands will need to consider discounting strategies, like voucher offers, to attract consumers but also promote brand loyalty and value.

Rethinking the direct-to-consumer playbook

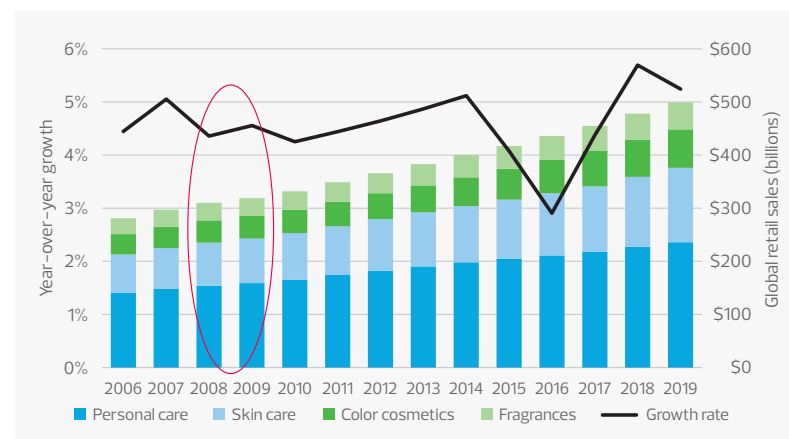
With an anticipated scale back in traditional brick-and-mortar retail traffic, digital direct-to-consumer channels will play an important role in shaping the future of apparel and home furnishings. Before the pandemic, companies in these sectors attracted private equity, venture capital and public investment with the promise of disrupting narrow consumer categories, scaling quickly and taking market share from brands controlled by conglomerates. These companies pumped funds into customer acquisition costs to promote awareness and recognition, with the goal of growing top-line sales with less emphasis on profitability. Recent high-profile IPOs have called into question investors' perception of this business model's ability to maintain top-line growth without an unsustainable marketing spend. The stock price of Casper Sleep Inc., the most recent direct-to-consumer company to go public, has floundered below its IPO price, which had already been revised downward. Casper is only a recent example that the payoff for a high-growth consumer brand may not be as lucrative as technology-driven peers without a proven path toward profitability.

While doubt looms over the idea of a big IPO payday, venture capital and private equity investment multiples will likely also soften. Middle market businesses in this space should rethink how funds from capital raises should be allocated. As the direct-to-consumer space has gotten more crowded and mass consumer businesses are increasing digital spending dollars, the traditional marketing direct-to-consumer playbook has become more expensive to follow. Companies should focus on the return on individual marketing investments from a profitability standpoint to prove growth can be perpetuated in a sustainable fashion. Alternative exit strategies should also be considered. A strategic acquirer may see more value in folding a direct-to-consumer platform into a preexisting business model that investors in public markets might not.

Beauty resiliency

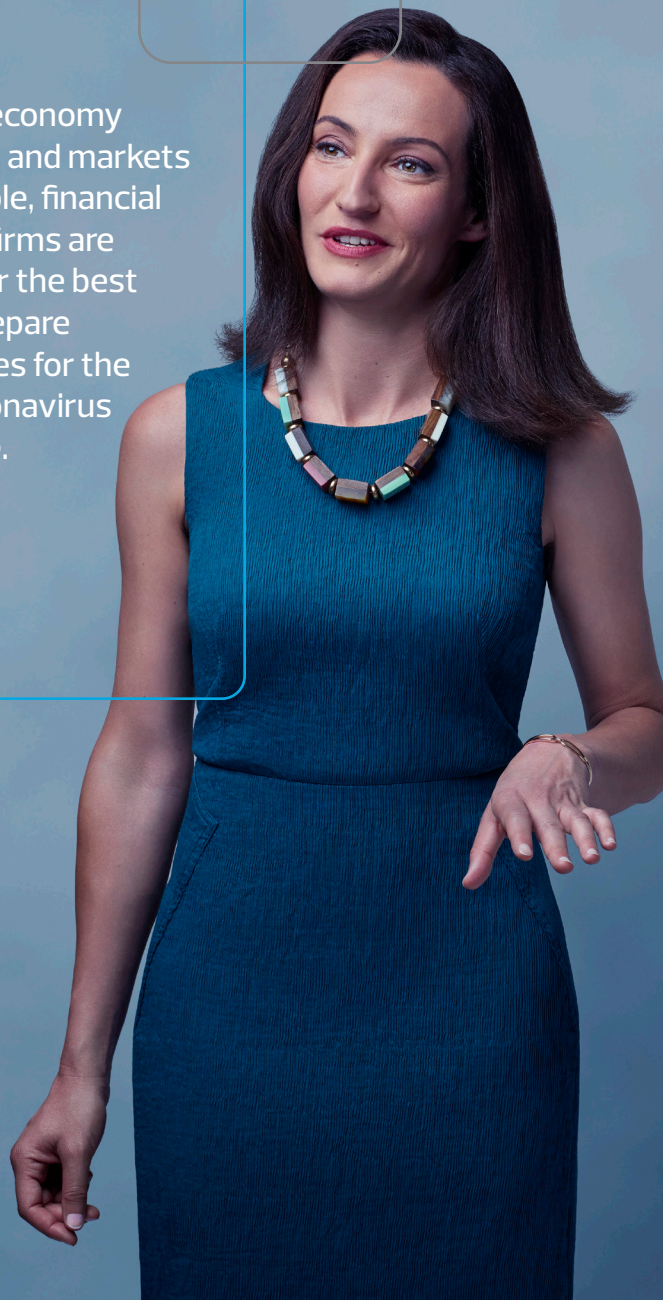
Beauty and personal care consumption has been historically steady even through recessionary periods. While the unique nature of the current recession and the shifts in consumer behavior have tested the resiliency of this sector, the short- and long-term impact will likely shift performance of specific categories rather than result in a pullback in overall sector growth. With consumers confined to homes, nesting purchases have allowed personal care and skin care categories to outperform facial cosmetics and fragrances during March, April and May. As states across the country ease restrictions and consumers return to workplaces, events and restaurants, personal and skin care routines will allow those categories to maintain their strength even as others rebound. This could drive mergers and acquisitions as big beauty players could look to round out their product offerings in high-growth categories by purchasing independent brands looking for liquidity and capital but don't have the digital resources to reach their consumers in the new low-touch marketplace. ■

Global beauty retail sales growth



Source: BEA; BLS; Census; Bloomberg; RSM US LLP

With the economy reopening and markets more stable, financial services firms are looking for the best way to prepare themselves for the post-coronavirus landscape.



INDUSTRY OUTLOOK:

FINANCIAL SERVICES



BY BRANDON KOESER, JASON KURUVILLA, KENNEDY CHINYAMUTANGIRA, DAVID MAMANE AND ANTHONY DECANDIDO

THE CORONAVIRUS PANDEMIC was the perfect storm of sorts for the financial services industry. What began as a supply shock to the economy quickly morphed into a demand shock, and financial services firms were left scrambling to adapt as markets unraveled, working environments changed and the longest running business cycle in American history ended. Now, with the economy reopening and markets more stable, financial services firms are looking for the best way to prepare themselves for the post-coronavirus landscape. From managing credit risks among borrowers to embracing digital initiatives to reemphasizing opportunities for revenue growth, financial services firms are now searching for the best way through an economic landscape that few could have imagined only six months ago.

KEY TAKEAWAYS

- Lenders in banking must decide whether to cut losses or stay the course.
- Cheap credit and the economic recovery create opportunity in capital markets.
- The pandemic has accelerated the emergence of the virtual family office.
- COVID-19 provides a catalyst for digital transformation in the insurance industry.
- RSM has identified five ways the pandemic is changing private equity.
- More losses are on the horizon in private debt markets.

BANKING

LENDERS MUST DECIDE WHETHER TO CUT LOSSES OR STAY THE COURSE

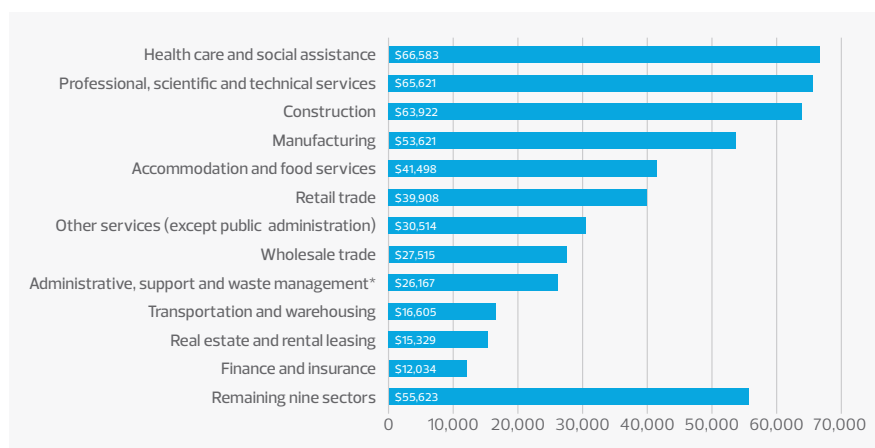
Financial institutions have been busy since the launch of the Paycheck Protection Program (PPP) on April 3. In that time, financial institutions and other lenders have funded more than \$514 billion of the program's \$659 billion in allocated assistance to small and midsize businesses as of June 20.



“We continue to proactively engage with our customers. ... In March, we began providing relief in the form of payment deferrals and forbearances to customers across a wide array of lending products.”

—Greg. D. Carmichael, Chairman and CEO, Fifth Third Bancorp

PPP loans issued by sector (US\$ M)



Source: Small Business Administration *and remediation services

But that, in a sense, was the easy part. Now, the lenders are facing a new challenge. As the economic recovery begins to take shape, lenders are in the early stages of processing nearly 4.5 million applications for PPP loan forgiveness, giving them a better picture of their borrowers' financial condition.

It is at this point that financial institutions will be faced with a dilemma: Do they mitigate future credit losses over commitments to borrowers, or do they bear down and work with borrowers through the sharpest economic downturn in recent history?

To find the answer, they will have to look beyond the traditional economic data, which often summarizes events that have taken place, and consider using alternative data that has a more forward-looking focus.

It's clear that the assistance provided through the PPP and the recently launched Main Street Lending Program has been sorely needed for those businesses hit hard by the coronavirus pandemic. Yet these loans, even if they are ultimately forgiven, are only part of the answer. It will take a long time for businesses to even partially recover from the supply and demand shocks that brought the economy to a dead stop.

MIDDLE MARKET INSIGHT

Financial institutions will be faced with difficult decisions on extending future credit should the government assistance not be enough for some borrowers.

Already, many financial institutions have also offered loan modifications to help businesses weather liquidity challenges. But for some borrowers in industries that have been hit harder than others, forbearance will eventually lead to loan losses.

In the end, financial institutions will be faced with difficult decisions on extending future credit should the government assistance not be enough for some borrowers.

This is especially the case for businesses in higher-risk sectors like leisure and hospitality, restaurant, retail, manufacturing, and energy exploration. Lenders to businesses in these industries will need to understand not only the specific financial situation of their borrowers, but also the industry as a whole. While all industries have been affected, the recovery of each will look very different.

To assist in monitoring their credit risk, lenders should not only look to leverage the financial information their borrowers make available, as well as economic information published by myriad sources, but they should also seek out alternative data sources to assist in this process. Examples of using such data may include:

- Analyzing reservation data from OpenTable to assess how and when consumers are returning to dining establishments
- Analyzing TSA traveler data to study patterns that may help in assessing recovery of hospitality and leisure businesses
- Analyzing payment transaction activity from First Data to understand when customers are returning to retail establishments and how much they are spending

As financial institutions have become a conduit for providing government assistance to small and midsize businesses, the effort required to help their borrowers weather an unprecedented economic storm while at the same time protect their bank from credit losses is far from over.

THE TAKEAWAY: Understanding borrowers' needs will not stop with simply knowing their current financial state. It will increasingly become important to look for alternative ways to assess their performance and determine what recovery will look like to navigate the remainder of 2020.

CAPITAL MARKETS

CHEAP CREDIT AND THE ECONOMIC RECOVERY

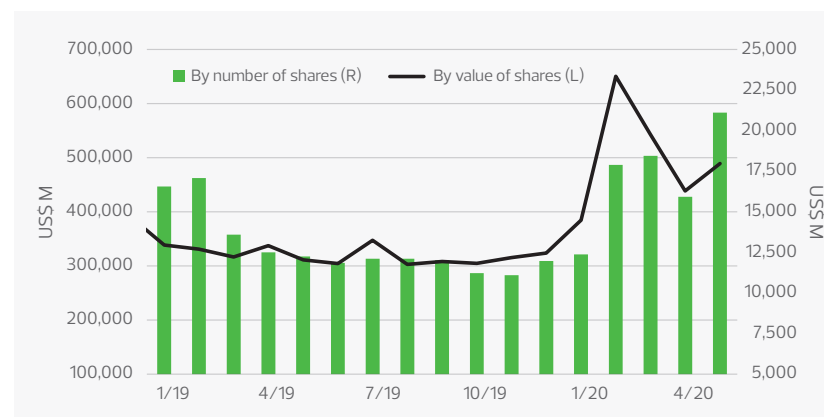
As the longest-running business cycle in U.S. history came to a sudden halt during the first half of 2020, the shock that reverberated through the capital markets affected businesses and industries in different ways.

With financial conditions tightening and as uncertainty grew, underwriting slowed for high-yield borrowers and mergers that weren't nearly complete were shelved.

Yet at the same time, as the volatility on Wall Street increased and the major indices lost years' worth of value, traders, speculators and short sellers capitalized on this volatility as a record or near-record number of securities and values of securities exchanged hands and bets were made on where the bottom would land.

Exchange volume

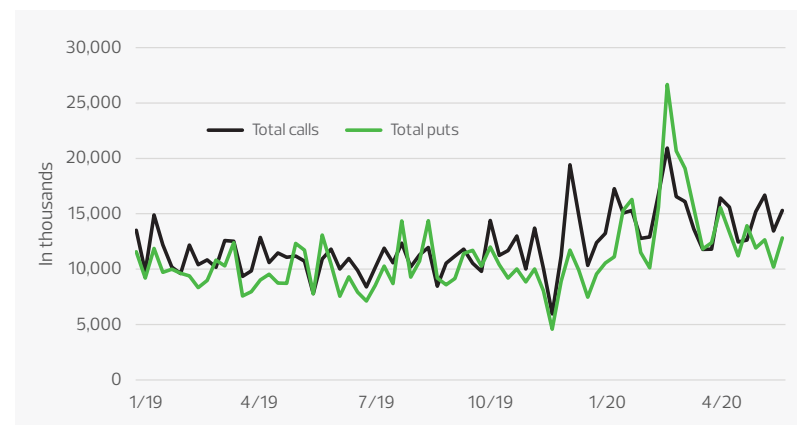
DAILY AVERAGE TRADING ACTIVITY BY MONTH FOR U.S. EXCHANGES



Source: Bloomberg; RSM US LLP

Total U.S. option trading volume

REPRESENTS TOTAL EQUITY AND INDEX OPTION VOLUME ON A DAILY BASIS FOR ALL OPRA EXCHANGES



Source: Bloomberg; RSM US LLP

Now, as the macroeconomic data points to a floor on the current recession and markets show strong signs of price recovery, the outlook for the second half of 2020 is beginning to come into focus.

With financial conditions improving and support from the Federal Reserve and U.S. Treasury blunting the steepest economic decline in generations, a combination of confidence and cheap credit has companies and municipalities looking for liquidity to help them navigate the remainder of the current crisis.

This has resulted, for example, in corporations tapping into the public debt markets at a rate never seen before. By the end of May, according to Bloomberg, corporations had issued more than \$1 trillion in debt, an amount that in 2019 was not reached until the end of November.

Although this has led profit generation at the onset of the current recession, the pace of bond issuances is likely to subside as companies replenish their reserves and build liquidity that will be needed to return to the next normal.

MIDDLE MARKET INSIGHT

The pace of bond issuances is likely to subside as companies replenish their reserves and build liquidity that will be needed to return to the next normal.

Investment banking advisory activities tied to mergers and acquisitions will continue to feel the pain in the second half of the year as business challenges tied to the economy reopening and the continuing effects of the coronavirus pandemic contribute to a softer deal pipeline.

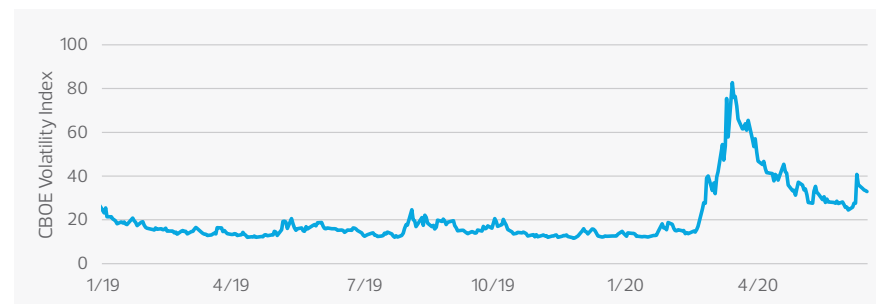
But as the recovery gets underway, prospects of so-called cheap deals paired with a potential backlog of pending deals will create opportunity late in the third quarter and in the fourth quarter, reversing the double-digit declines in deal count seen in both the first quarter and second quarter and thereby delivering marginal increases in advisory revenues.

With volatility remaining elevated compared to pre-coronavirus levels, trading activities will look to continue the momentum. This will be built on the perceived uncertainty from investors surrounding a reopening economy after an abrupt shutdown, and the effectiveness of the government programs implemented to combat the economic downturn.

Strong trading revenues during the first half of 2020 will most likely subside in the second half of the year, but offer continued revenue support to organizations that can react and benefit from shorter and narrower periods of volatility.

CBOE Volatility Index

VOLATILITY ELEVATED COMPARED TO PRE-CORONAVIRUS PANDEMIC LEVELS



Source: Bloomberg; RSM US LLP

FAMILY OFFICES

THE EMERGENCE OF THE VIRTUAL OFFICE

As the human and economic toll of the coronavirus mounted in the first half of 2020, organizations of all kinds were forced to consider what the future of their operations would look like in a post COVID-19 world. Family offices were no exception.

Rapidly fading are the days when a family office would hire the right staff members, provide a space where they could work and then convene the family members a couple of times a year to discuss the strategy.

Most of these physical offices now stand empty as working from home has become the new normal. At the same time, family members—especially the younger generation—have been demanding ever more access to the office's day-to-day workings as the economy has experienced wrenching change.

The answer, for many family offices, is to become a virtual family office.

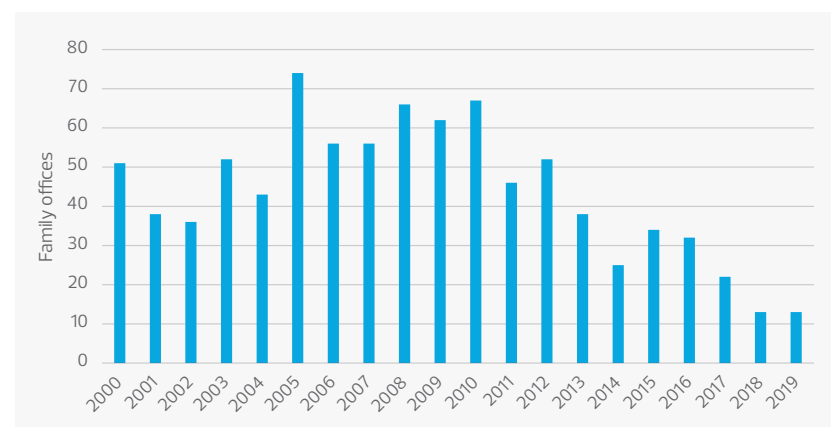
But getting there has not been easy. Many family offices were simply not equipped with the technology to support a seamless remote work environment. They needed to quickly upgrade their technology and temporarily outsource back-office functions—all of which changed the way offices met the needs of individual family members.

As this coronavirus pandemic heads into the second half of 2020, family offices will have little choice but to evolve as the digital transformation is forcing them to begin exploring the new world of a virtual family office.

Second business

Family offices have existed in many shapes and sizes since the 19th century, serving names like Rockefeller, Morgan, Rothschild and others. According to PitchBook, a research firm that compiles data on family offices, there are more than 1,900 offices around the globe, with more than 800 in the United States.

Family offices created per year



Source: Pitchbook; RSM US LLP

And there is no set approach. In some cases, multifamily offices provide investment management services to a range of families. In others, a single family office has several generations to support.

Increasing costs

Families are dealing with a number of issues such as cybersecurity, tax law changes, regulation updates, family dynamics and the digital transformation. With all of these variables in play, the mobility and intellectual horsepower of the single-family or multifamily office structure is debatable.

In addition, there are a number of vulnerabilities in the traditional family office structure that were exposed during the pandemic. A perfect example of this was outdated technology where working from home was a challenge. As

MIDDLE MARKET INSIGHT

The traditional structure of the family office might limit its ability to meet the family's goals, especially as the younger generation plays a more important role.

the costs to manage the business climb and performance fades because of economic conditions, the structure of the office might limit the ability to meet the family's goals.

The next generation

According to Bloomberg, millennials are set to inherit about \$30 trillion from their parents in the coming decades.

Those in the next generation share very different characteristics from their parents. First, they are always connected. This is a generation that grew up with technology and demands full transparency to data and information with no disruption. Second, this is a generation that expects immediate results. They live faster-paced lives and demand immediate changes when problems arise.

Digital transformation

A virtual family office is the ideal structure to do more with less by leveraging outside specialized expertise, embracing emerging technologies and deploying resources more quickly. This structure allows the family to have a leaner staff that is focused on the biggest goals for the family. In addition, there is no need to have a physical office because everything can be done remotely.

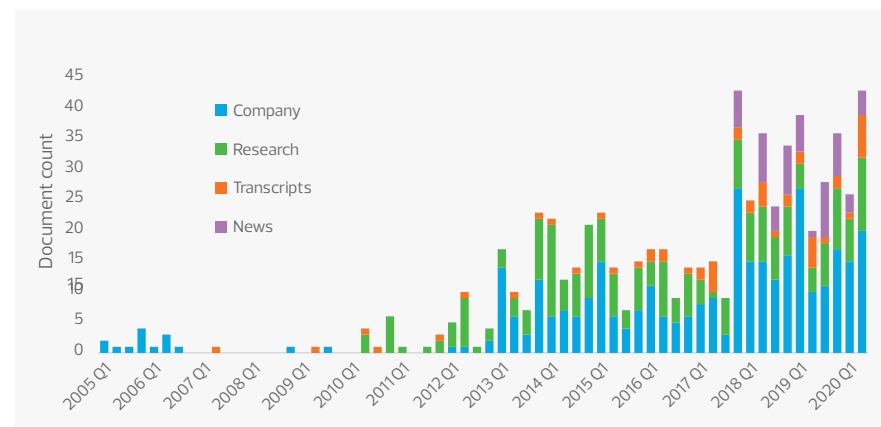
As the next generation is about to take the reins of the office, a single platform holistically focused on the family that provides real-time data and transparency will be adopted more quickly than the older office structures.

INSURANCE

A CATALYST FOR DIGITAL TRANSFORMATION

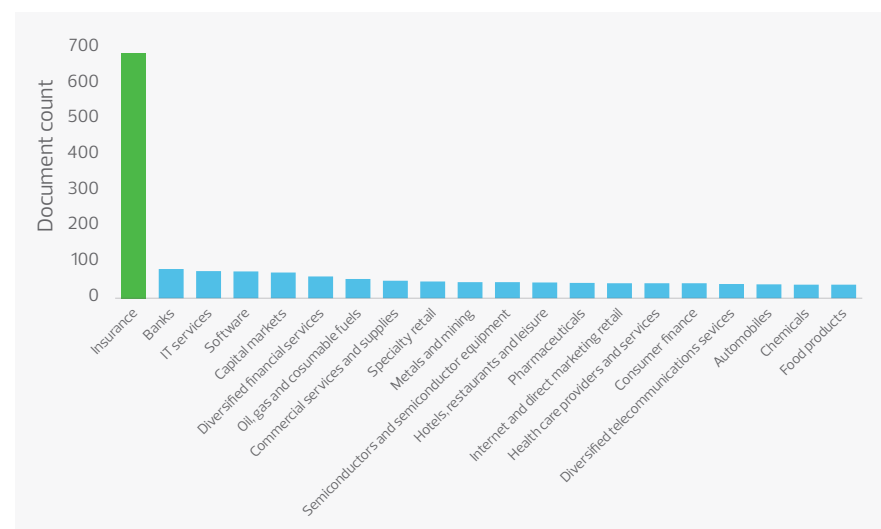
Insurance companies are responding to the coronavirus crisis by adopting premium relief initiatives, offering payment deferral plans and expanding coverages.

Digital transformation in insurance, focusing on the customers



Source: AlphaSense Amplified Intelligence; RSM US LLP

Discussion of digital transformation since 2005, by industry



Source: AlphaSense Amplified Intelligence; RSM US LLP

The industry is also accelerating its digital transformation strategies, focusing on customer experience as buying preferences shift online and away from the traditional face-to-face agency model.

At RSM, we have identified three core areas where insurance companies are accelerating the digital transformation to respond to the needs of their customers and shareholders in the wake of COVID-19:

Driving customer acquisition

As risk exposures change as a result of the COVID-19 crisis, consumer demand is increasing for new insurance products like usage-based automobile coverage, Internet of Things-enabled life insurance solutions and cyber-risk insurance.

MIDDLE MARKET INSIGHT

Middle market insurance carriers have lagged substantially behind their larger competitors from a strategy perspective in recent years and have little choice but to embrace new technologies.

The accelerated pace of innovation across other industries is fundamentally changing what customers expect from their insurance carriers. As a result, leading companies are leveraging these technologies in simplifying their customer acquisition process while maintaining underwriting quality. In addition, companies are collaborating with technology-based distribution platforms to modernize their user interface and to simplify the insurance-buying experience.

Enhancing the customer experience

For a number of years, the insurance industry has invested in digital tools and capabilities to streamline the end-to-end customer experience, from binding a policy to paying a claim and all communications in between.

But consumer adoption of technologies such as web portals, mobile applications and internet-enabled devices has historically been slow to modest at best in the insurance industry. The current COVID-19 environment has provided a tangible purpose for digital platforms and how they can be leveraged as an integral part of firm strategy in the new economy.

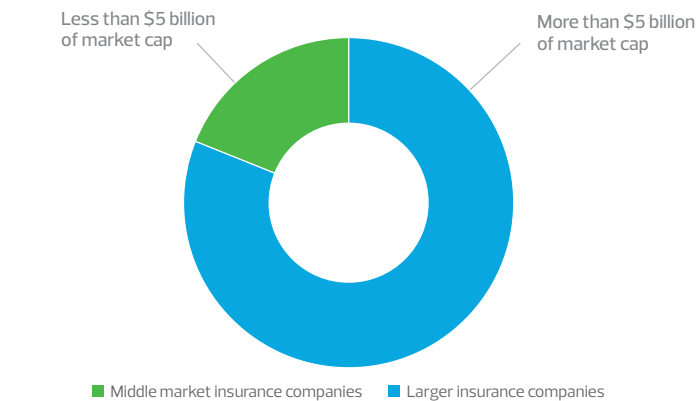
Fueling growth

Revenue growth will be challenging for insurance companies in a post-COVID economy, particularly for personal lines. People are driving less as more companies allow their employees to work remotely. On top of this, with higher unemployment, people have less income, and near-zero interest rates will constrain insurance company growth and profitability.

Innovation within product offerings will be critical for carriers to meet prior premium growth expectations. With the top-line headwinds come shareholder pressures to lower costs and operating expenses to maintain profitability.

As much as digital transformation has accelerated in the insurance industry in recent years, middle market insurance carriers have lagged substantially behind their larger competitors from a strategy perspective. Also, middle market companies rely even more heavily on outdated, legacy systems and technologies. Companies will need to adapt in order to ensure their long-term survival.

Proportion of mentions of "accelerated digital transformation" in insurers' articles and earnings calls



PRIVATE EQUITY

5 WAYS COVID-19 IS CHANGING THE INDUSTRY

The future of private equity work is being changed by the day, and innovative practices are needed to drive more lucrative deals.

Here are five lasting changes for private equity firms that will follow COVID-19:

People remain your No. 1 asset...

Private equity firms already attract the best and brightest in corporate America, including top performers from Fortune 500 companies and elite banking firms. This won't change. But the methods taken to do so will. Virtual interviews will need to include aptitude tests to measure critical thinking skills, learning ability and problem solving.

And determining emotional intelligence will be equally important to establishing the type of trust that will be needed to work alongside management teams in a remote setting. LinkedIn, for example, is expanding its curriculum to engage more of its users with soft skills that private equity firms will need.

...Yet data is becoming increasingly important

Data handling has the chance to revolutionize deal-making. Without having the benefit of physical access to evaluate company performance, analysts will instead look for alternative data sources to determine the areas for greatest earnings impact.

Alternative data sets will reveal strategic movements within companies and help track when companies are hiring or firing employees, interacting with customers, moving product and other metrics that offer insight into a company's performance.

As talent disperses, offices fade

Investment managers will stretch for talent outside of their geographic region as the in-office workforce diminishes. New York, Chicago and San Francisco have long been the hotbeds for finance talent, but that will change as private equity staff increasingly work outside of concentrated urban neighborhoods. Firms will find that lavish office spaces are overly costly.

MIDDLE MARKET INSIGHT

Lean private equity firms will focus on their front-office deal functions and leave back-office responsibilities to the outside firms.

The fluid workweek and gender diversity

Private equity has a culture for competition that is not easily compatible with family life. Private equity professionals managing parental responsibilities amid the pandemic have learned to schedule around other commitments. This is difficult and trying—especially as parents manage home schooling—but a positive aspect is that men and women are sharing childcare duties more regularly.

Outsourcing will grow

Limited partner and regulatory requirements for greater transparency are driving the need for substantial investments in technology, which middle market firms aren't always willing to make. Lean private equity firms will focus on their front-office deal functions and leave back-office responsibilities to the outside firms. Human resources, fund administration and regulatory compliance will be one less worry for investment managers looking to make deals.

PRIVATE DEBT MARKETS

MORE LOSSES ARE ON THE HORIZON

Before the current economic crisis, middle market companies benefited from an abundance of capital pouring into private debt markets in search of yield. This enabled them to borrow at attractive rates with loose restrictions, as competition among lenders intensified.

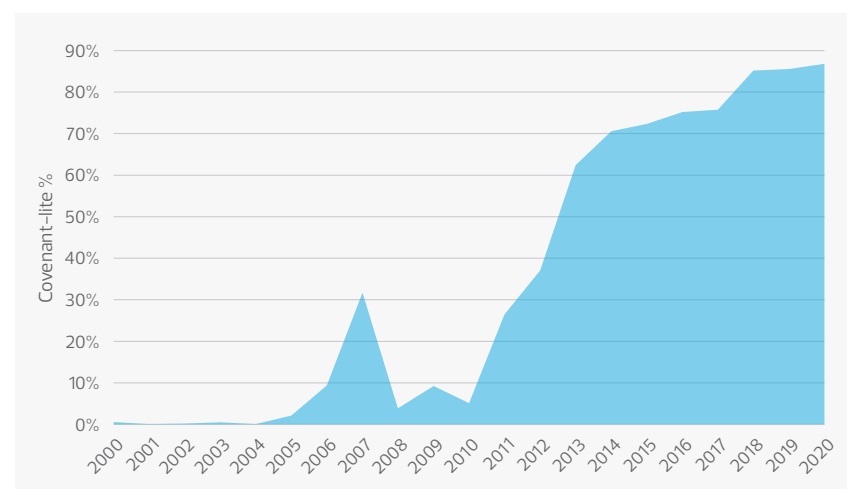
Now the pendulum has swung in favor of lenders who will now be able to dictate pricing and terms as borrowers scramble for liquidity and battle for survival.

The next two quarters will bring about a wave of defaults and a spike in loan portfolio losses for private lenders who overextended before the crisis. New capital flowing into leveraged loans and distressed debt markets can expect opportunities for better risk-adjusted returns to be plentiful as companies that endured a downturn during the shutdown begin to emerge from the crisis.

In the years leading up to the current credit crisis, lending standards had deteriorated as a low interest rate environment (including negative yields in parts of the global markets) forced institutional investors to reach for returns in alternative asset classes such as private debt. This boosted the issuance of covenant-lite loans, which are defined as loans with no maintenance covenants.

Market observers warned that excesses in the private debt markets were harboring companies with weak fundamentals. Such companies managed to avoid default as the steady flow of capital allowed for easy means to refinance or increase leverage even further. Liquidity in the leveraged loan market was also bolstered by a robust market for new issuances of collateralized loan obligations, which facilitated the repackaging and redistribution of corporate loans that is reminiscent of the mortgage-backed securities that brought down the financial system in 2008–09.

Percentage of covenant-lite loans to total loans issuances



Source: LCD, an offering of S&P Global Market Intelligence

The coronavirus created the economic shock that many had feared would spell trouble for companies that were overburdened with debt. Loan defaults have risen as companies experienced a sudden loss of revenue and cash flows from the drop in consumer demand. The number of loan defaults in the first five months of 2020 has already surpassed the full-year total for each year since 2009, based on data from S&P Global Market Intelligence.

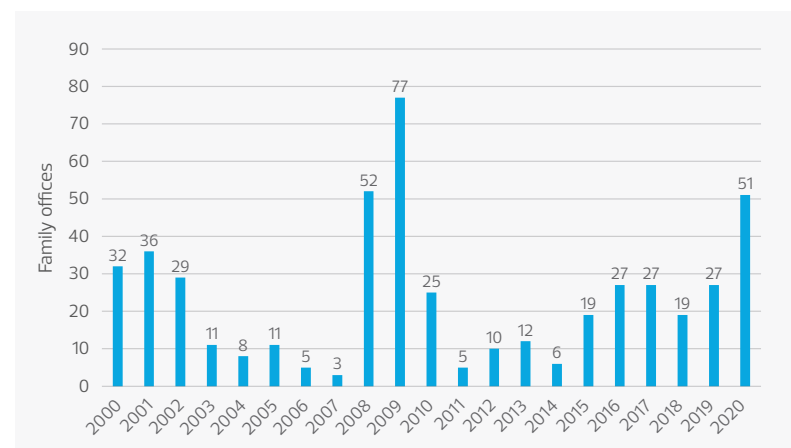
As states lift shelter-in-place orders and businesses reopen, the credit risk associated with certain businesses will diminish. However, default rates are not expected to slow and may continue to rise over the remainder of the year, even as commerce returns to normal. While income will be restored for some businesses, and certain industries will experience a boost from the release of pent-up demand, others will continue to struggle as consumers

“The acceleration of everything digital from how we advise clients to how we sell, to how we provide solutions, pay claims and provide services will be a permanent benefit coming out of the crisis.”

—CEO Dean Arthur Connor, Sun Life Financial, May 6, 2020, earnings call



LCD loan default list



Source: LCD, an offering of S&P Global Market Intelligence

defer discretionary expenditures and other products fall out of favor in the aftermath of the coronavirus.

Managing credit exposures has become a key focus for lenders, which will result in loan underwriting standards tightening. This will prove restrictive for so-called zombie companies that had, until now, benefited from a lapse in standards. Expect more of these companies to continue experiencing distress over the next two quarters. The weak interest and cash flow coverage ratios that have so far been masked by the lack of maintenance covenants, and

MIDDLE MARKET INSIGHT

Managing credit exposures has become a key focus for lenders, which will result in loan underwriting standards tightening.

the ability to tap a vibrant private debt market will be revealed in the form of defaults and bankruptcies.

Loan terms will swing in favor of lenders as providers of capital will be able to lend on their terms. This environment will be attractive for distressed credit investors with a longer-term horizon as they will pick up good-quality credits facing temporary dislocation at attractive bids.

For private debt asset managers with dry powder or access to cash, the next two quarters will present opportunities. Capital deployed in private debt markets in the next two quarters will enjoy better pricing, more credit protections and less competition for higher-quality borrowers. ■

Other trends contributing to the expansion of telehealth throughout the third quarter include the use of telehealth for virtual urgent care and emergency department visits.



INDUSTRY OUTLOOK: **HEALTH CARE**

BY JESSIKA GARIS, LORI KALIC, RICK KES AND
MATT WOLF



HEALTH CARE systems and providers have been tested in ways that just months ago may not have ever been imagined: meeting patient care needs during the COVID-19 global health crisis, managing a newly formed remote workforce, addressing a significantly affected bottom line. Health care organizations have faced these difficult times and are braced for more, hopefully better prepared during the second virus wave. Still, from challenges often come innovation and hope, and many health care systems are finding new ways to structure their organizations and care for their communities, often using digital strategies to help bridge the gaps.

KEY TAKEAWAYS

- The health care labor market has contracted during the current recession due to a number of factors.
- COVID-19 and the demand destruction related to social distancing and deferral of nonurgent procedures are affecting health care organizations and their workforce in ways few predicted.
- Many private equity firms have significantly reduced or put on hold new deal sourcing in order to better focus on managing their current portfolios of companies through the pandemic.
- As deals do return, more transactions of distressed assets and organizations could occur along with a more complicated deal environment and lower transaction multiples.
- Telehealth continues to gain momentum as patients delay face-to-face visits due to COVID-19 concerns.



MIDDLE MARKET INSIGHT

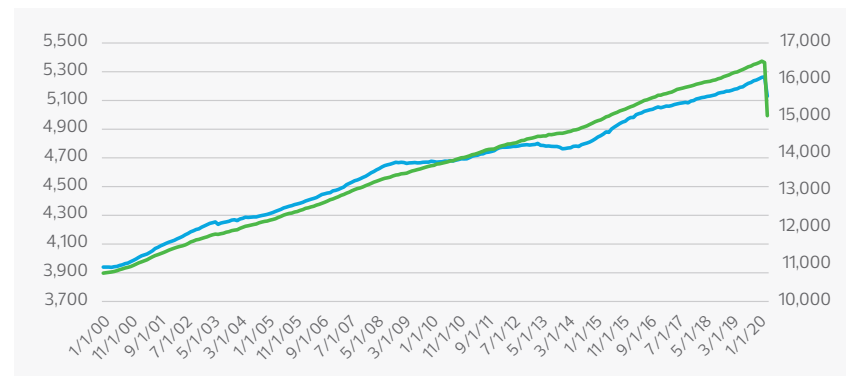
Our view is that we will see a slow rebound in procedure volumes, similar to the overall economy, emulating somewhat of a Nike swoosh rebound, with potential easing of volumes once backlogs and other more macroeconomic factors relating to overall employment levels.

The health care labor market has been tested

The health care labor market has contracted during a recession. The April report showed a loss of more than 22 million total jobs, including 1.4 million health care jobs. Most of these were ambulatory and outpatient providers (primarily dental), but 134,000 of the job losses were from acute care providers.

The May nonfarm payrolls report surprised markets with a gain of 2.5 million jobs, after the disastrous reports in March and April. Health care rebounded. Of the 1.2 million ambulatory jobs lost in April, nearly 380,000 came back in May as prohibitions on elective surgeries began lifting. However, hospitals lost an additional 26,000 jobs. Unemployment claims data suggests the current unemployed count is around 21 million.

Health care lost jobs during a recession for the first time in this century



Source: Bloomberg LP; RSM US LLP

Furloughed employees should show up as unemployed in the official payroll data. However, the concept is vague and categorization will depend on how the surveyors interpreted the respondents' answers. Given how many health systems, providers and other health care organizations have furloughed employees, the actual reduction in health care labor employed in the United States is understated by the official data.

This reduction in employed health care labor is atypical during a recession. During the global financial crisis, the health care ecosystem actually added 600,000 jobs during a time when almost every other ecosystem was shedding them.

Of the employees who remain in health care, many are now working remotely for the first time. Health care providers have historically resisted virtual work trends. The pandemic has now required that administrative staff and many clinicians who are not directly treating COVID-19 patients work virtually. Some degree of virtual work will become part of the next normal for labor in an ecosystem that has traditionally required physical co-location of employees.

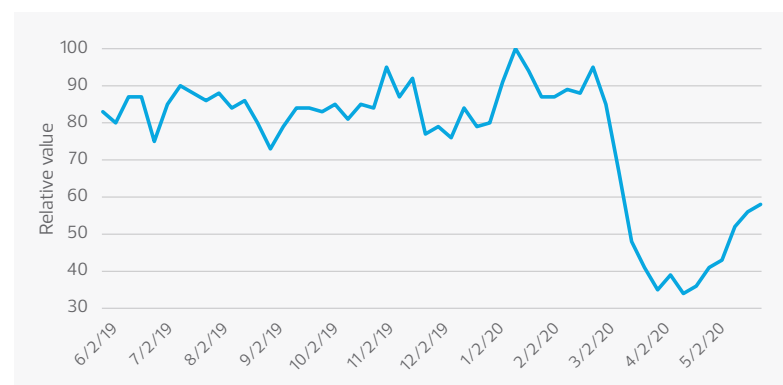
COVID-19 and the demand destruction related to social distancing and prohibitions on elective surgeries are affecting health care and health care labor in ways few predicted.

When (or if) elective surgeries will fully recover

Outside of the health care industry, many people may assume the health care ecosystem would be somewhat insulated during the coronavirus pandemic, when, in fact, the industry has seen activity that would indicate quite the contrary. One of the main factors driving the precipitous drop of activity was

as a result of a tweet on March 14 from U.S. Surgeon General Jerome Adams urging health care providers to forgo providing nonurgent procedures. In concert with that, many governors also made either recommendations or orders causing health care providers to delay nonurgent procedures. These announcements from government officials effectively halted a significant portion of health care providers' volumes. Now that many of these state mandates and recommendations have been lifting, providers are starting to see patient volumes slowly returning. The question remains, however, when (or if) will these procedures fully recover? And yet as some states ease restrictions on these procedures, others are issuing executive orders to suspend procedures, as seen as recently as June 25 when Texas Governor Greg Abbott issued an executive order to do just that in four large counties in Texas.

Google searches for knee replacements



Source: Bloomberg LP; RSM US LLP

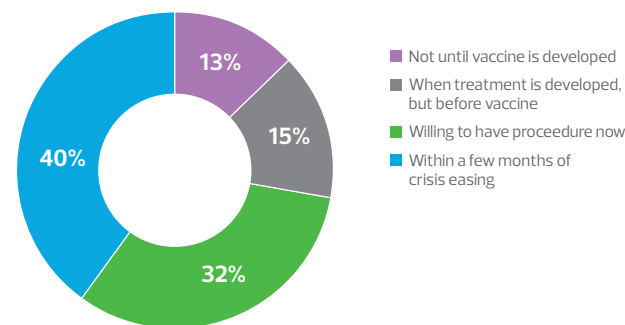
The term elective procedure has caused confusion among industry insiders and the general public. The term may indicate something like a cosmetic or nonmedically required surgery. Whereas many providers refrained from providing any procedure that was not urgent or that "can be delayed without undue risk to the current or future health of the patient" as stated by Governor Tim Waltz of Minnesota. Therefore, medical procedures like knee replacements and other similar procedures, which are medically necessary but not urgent, were delayed.

As the graph indicates, Google searches for the term "knee replacements" dropped to a 12-month low starting early March and continued until a modest rebound in early May. Many economists, including RSM Chief Economist Joe Brusuelas, have base case economic recoveries that look like a Nike swoosh. If so, is that what we are seeing early indications of with the data found in Google searches? Time will tell.

Our view is that we will see a slow rebound in procedure volumes, similar to the overall economy, emulating somewhat of a Nike swoosh rebound, with potential easing of volumes once backlogs and other more macroeconomic factors relating to overall employment levels. So in effect, a Nike swoosh rebound has a risk of dropping and starting over after the effect of one of these factors (i.e., the backlog) runs its course. One basis for that perspective is that health care continues to be dominated by the force that dominates other industries, and thus, the economy overall—the consumer. Consumer behavior and confidence will drive their willingness and likelihood of returning to the operating room.

JP Morgan surveyed approximately 550 individuals and what they found may not show as quick of a recovery as health care providers may have hoped for. Over a third of the respondents are planning to wait for a treatment or vaccine before undergoing a procedure. In their research, they did bifurcate those who had an elective procedure deferred and those who did not. The pie chart shows the result of the respondent's views on rescheduling. These data points reaffirmed JP Morgan's view that the coronavirus would have lasting impacts well beyond the second quarter of 2020.

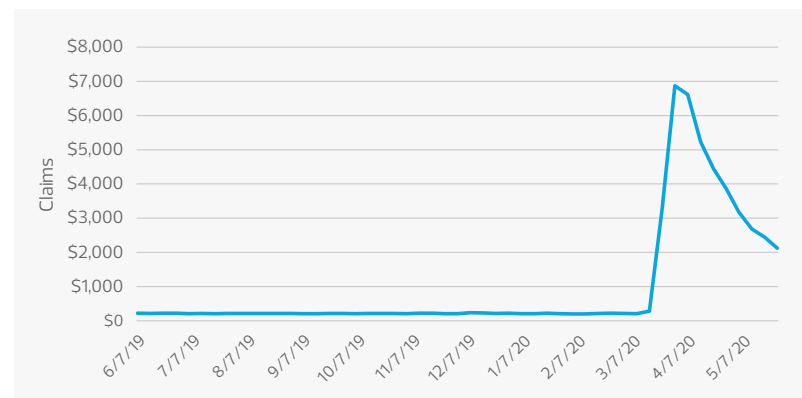
Survey respondents' time frames for rescheduling medical procedures



Source: JP Morgan; Bloomberg

Employment levels also directly affect our view of a recovery for health care. This is due to the obvious linkage between employment and employer-sponsored health insurance. As unemployment has grown to an estimated 20%, our concern is people will lose their employer-sponsored health insurance, and as a result, consumers will opt to forgo procedures that are not urgent in nature or simply be unable to pay their patient responsibility portion.

Initial jobless claims



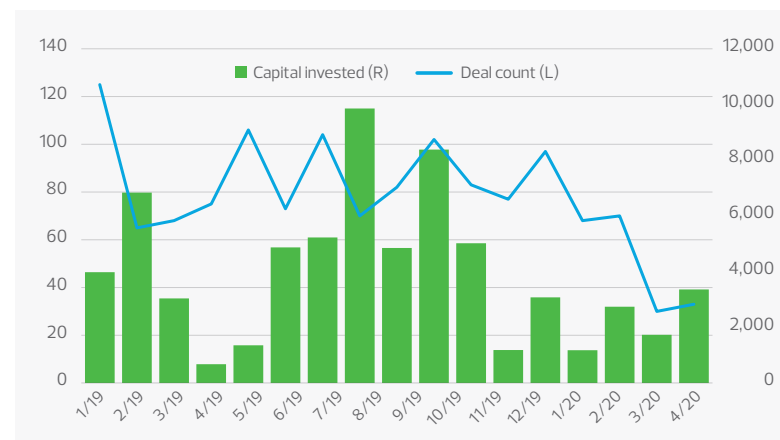
Source: Bloomberg

Merger and acquisition activity depressed, will come back changed

The marked decline in second quarter deal activity will reverse course in the next six to 12 months barring any disruptive events such as another prohibition of elective surgeries due to a second wave of COVID-19, widespread civil unrest or massive regulatory change reducing investor confidence.

Deal volume in April and May of 2020 reported 63 private equity-backed acquisitions of health care providers or service organizations, down 75% year-over-year. The deal process for many of the deals that did close in Q2 had begun before the nationwide stay-at-home orders and prohibitions on elective surgeries.

Private equity-backed health care services deals decline year-over-year



Source: Bloomberg LP; RSM US LLP

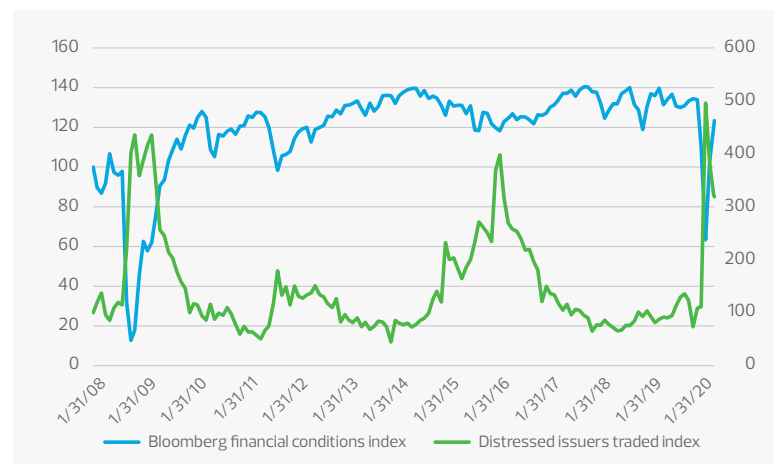
Many private equity firms have significantly reduced or put on hold new deal sourcing in order to better focus on managing their current portfolios of companies through the pandemic. Strategic buyers, e.g., health systems and hospitals, have similarly put on hold or even canceled planned mergers and acquisitions. The recent cancellation of the \$6 billion Beaumont and Summa merger, which had been in discussions for at least a year, is just one large example.

Health care organizations of all stripes may also be wary of (and potentially precluded from) engaging in merger and acquisition activity while simultaneously receiving federal relief funds. As health care becomes a larger political issue, the scrutiny over deals will rise.

As deals do return, we expect to see more transactions of distressed assets and organizations, a more complicated deal environment and lower transaction multiples.

We will see an increase in the number of distressed transactions. The financial markets experienced a significant shock and saw incredible trading activity in distressed debt, which surpassed levels seen during the global financial crisis. A higher volume of distressed bonds has a clear negative correlation to overall financial conditions.

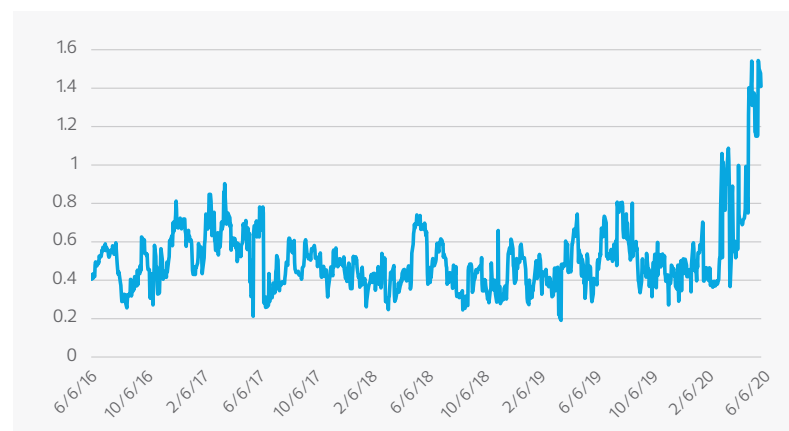
Distressed issuers traded tops global financial crisis



Source: Bloomberg LP; RSM US LLP

More specific to health care, spreads between AA- and BBB-rated municipal bonds have increased to recent highs, with AA munis trading at a nearly 60% premium to BBB. This suggests investors are more heavily discounting underperforming health care assets.

AA – BBB muni spread



Source: Bloomberg LP; RSM US LLP

Furthermore, COVID-19 has directly or indirectly caused at least 1,954, or 1 in 6, health care site closures, according to the Kaiser Family Foundation. This underscores the financial pressure and tough decisions health care organizations and, particularly, providers will face over the coming months.

The financing environment will also be more challenging for the deals that do emerge. Pro forma adjustments will be under significantly more scrutiny than in quarters past. Both strategic and financial buyers will approach due diligence with renewed skepticism. This will also likely lead to more complex considerations, i.e., less cash and more earn outs, incentive units and other noncash proceeds.

We also expect the “covenant lite” debt environment of the past few years will remain in the past. As record numbers of organizations seek financing, lenders will have to compete less for deals, and thus, be less willing to bend on covenants.

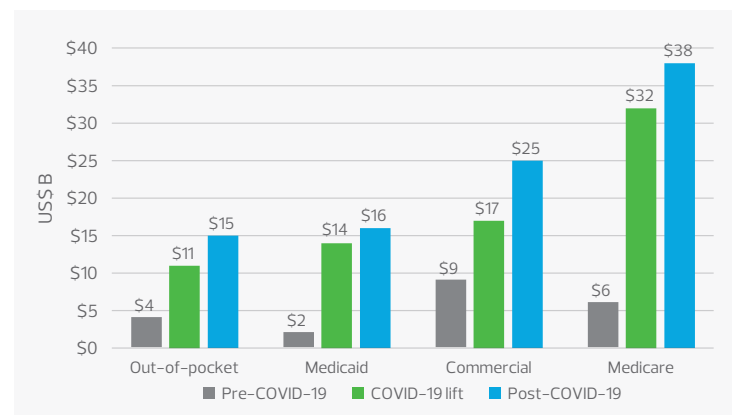
Ultimately, we expect to see lower valuation multiples in the short- and medium-term. Valuation multiples are a price and they are generally guided by the forces of supply and demand like most prices. As the number of organizations seeking financing or sale (the supply) increases, and the investor demand for those assets remains relatively consistent, the price (or multiple) will decrease. We expect demand to remain consistent or decrease over the medium-term given current capital commitments to private equity funds, and how financial and strategic buyers will generally focus on running existing operations rather than acquiring new ones.

Rapid expansion of virtual visits

Telehealth continues to gain momentum as patients delay face-to-face visits due to COVID-19 concerns. Pre-COVID-19, we saw a slow-moving trend toward virtual visits which we believed would continue to expand over the next five years. Barriers contributing to the slow growth before COVID-19 included lack of reimbursement from state and federal agencies, physicians' willingness to embrace the use of telehealth, and patient exposure to virtual visits.

However, the recent pandemic has broken many of the barriers propelling the use of telehealth within a matter of weeks. According to Fair Health research, telehealth claim lines increased by 4,347% nationally, from 0.17% of medical claim lines in March 2019 to 7.52% in March 2020. Many health care providers have seen a huge uptick in virtual visits within the past two months. The Providence Medical Group experienced an increase from 700 visits a month to 70,000 visits a week after ramping up their telehealth platform in March.

Telehealth estimated market 2020



Source: CMS, Centers for Disease Control and Prevention and PSC estimates

In response to COVID-19, the Centers for Medicare & Medicaid Services has issued temporary waivers to allow for increased reimbursements related to telehealth visits. According to the CMS, "Medicare can pay for office, hospital and other visits furnished via telehealth across the country and including in patient's places of residence." These visits are considered the same as in-person visits and are paid at the same rate as regular, in-person visits. Before this waiver, Medicare could only pay for telehealth on a limited basis: when the person receiving the service is in a designated rural area and when they leave their home and go to a clinic, hospital or certain other types of medical facilities for the service.

CMS said that it would "extend this authority to use telecommunications for the duration of the public health emergency." However, there has been no clarification on whether these waivers will be permanent. Regulatory agencies such as the Federal Trade Commission's Office of Policy Planning, Bureau of Economics, Bureau of Competition and Office of the General Counsel submitted a comment to the CMS on its Interim Final Rule with Comment Period on June 2, 2020, related to the waivers. The organizations support the permanent elimination of restrictive Medicare payment requirements for telehealth. As a result of the CMS issuing relaxed guidance on reimbursements, many commercial payers have also

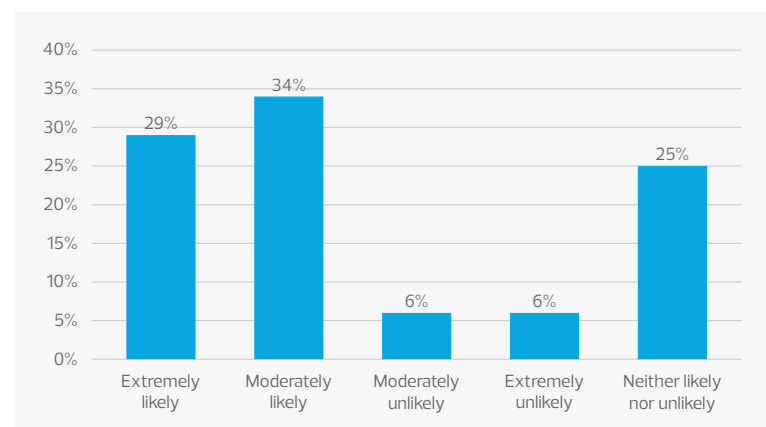
Requirement description	Pre-COVID-19	Waivers issued during public health emergency
Limitations on types of practitioners able to provide telehealth services	Doctors Nurse practitioners Physician assistants Certain others could deliver telehealth services	Physical therapists Occupational therapists Speech language pathologists
Expansion of the types of health care providers that can provide using telehealth technology	Billing for services furnished in the hospital setting only	Hospitals may bill for services furnished remotely by hospital-based practitioners to Medicare patients registered as hospital outpatients, including when the patient is at home when the home is serving as a temporary provider-based department of the hospital
Billing for telehealth services and patient education services	Patient must be located in the hospital setting	Hospitals may bill as the originating site for telehealth services furnished by hospital-based practitioners to Medicare patients registered as hospital outpatients, including when the patient is located at home
Payments for behavioral health and patient education services	Medicare would pay for certain services conducted by audio-only telephone between beneficiaries and their doctors and other clinicians	Medicare will pay for many behavioral health and patient education services; CMS is also increasing payments for these telephone visits to match payments for similar office and outpatient visits
Payments for Medicare telehealth services provided by rural health clinics and federally qualified health clinics	Clinics could not be paid to provide telehealth expertise as "distant sites"	Medicare beneficiaries located in rural and other medically underserved areas will have more options to access care from their home without having to travel
Video requirement for certain telephone evaluation and management services	Medicare beneficiaries are required to have access to interactive audio-video technology for Medicare telehealth services	Medicare beneficiaries will be able to use an audio-only telephone to get these services

Source: RSM US LLP

followed suit. UnitedHealth Group provides virtual primary care physician visits with \$0 copays. Humana also offers \$0 copay for virtual visits and \$5 copay for lab tests and prescriptions. As the pandemic begins to alleviate, we are watching closely to see if the CMS will make some of the waivers permanent. It is critical that providers continue receiving the reimbursements for telehealth services in order to maintain the momentum of the current telehealth growth.

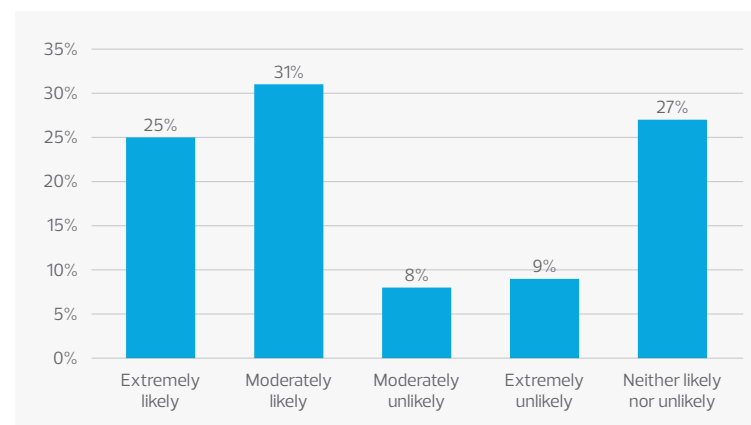
Other trends contributing to the expansion of telehealth throughout the third quarter include the use of telehealth for virtual urgent care and emergency department visits. Cigna and Humana now offer urgent care visits through third-party platforms. In addition, telehealth behavioral health visits are also increasing as a result of COVID-19 amid the pandemic's effects on people's mental health. A recent survey by the Piper Sandler Company suggests 63% of consumers were likely to use telehealth for physician services and 56% for mental health.

Patient likelihood of using telehealth instead of an in-person doctor visit



Source: Piper Sandler Company (PSC) survey of 1K consumers

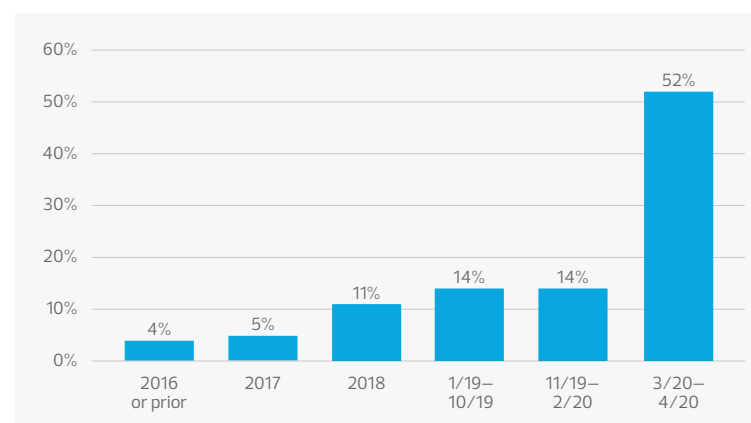
Patient likelihood of using telehealth instead of an in-person visit for mental health services



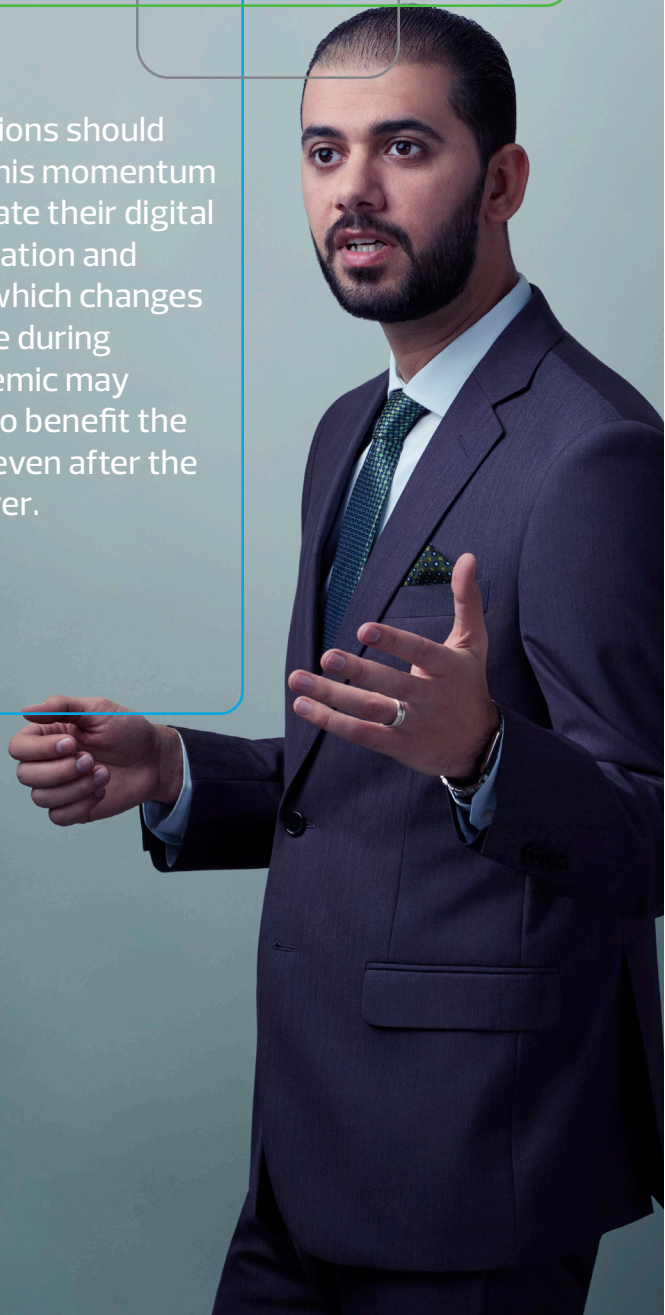
Source: Piper Sandler Company (PSC) survey of 1K consumers

Managing the patient experience to mirror digital retail will be critical for health care organizations to maintain a competitive advantage throughout the remainder of the year. Patients are not going to want to go back to a full facing health care experience. Research suggests an increase penetration to make telehealth a dominant substitute for primary care and urgent care triaging, according to Piper Sandler Company. ■

Timing of patients' first telehealth visit



Source: Piper Sandler Company (PSC) survey of 1K consumers



Organizations should seize on this momentum to accelerate their digital transformation and evaluate which changes they made during this pandemic may continue to benefit the business even after the crisis is over.

INDUSTRY OUTLOOK: **INDUSTRIALS**

BY JASON ALEXANDER, SHRUTI GUPTA AND ANNE SLATTERY



Amid pandemic uncertainty, investment in digital technologies will lead the way

COMPANIES IN THE industrials sector face significant challenges from the fallout of the global COVID-19 pandemic. Traditional business models have proven inadequate to deal with the disruptions, but the good news is that organizations responded to this crisis and evolved at a pace that would have previously been unheard of. Organizations should seize on this momentum to accelerate their digital transformation and evaluate which changes they made during this pandemic may continue to benefit the business even after the crisis is over. Those that fail to transform risk fading into irrelevance.

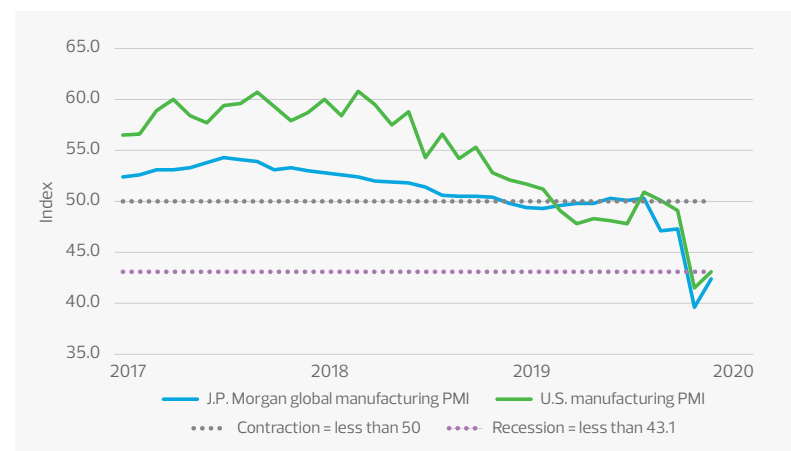
In January 2020, the global manufacturing sector expanded at its fastest pace in nine months, and business optimism was at its highest level in more than a year. By May, the world had become a very different place. Global manufacturing output fell for a fourth successive month, and April and May saw the sharpest month-to-month drop in production since the first quarter of 2009. It is clear the COVID-19 pandemic has negatively affected global manufacturing performance, driven by shutdowns across the globe.

KEY TAKEAWAYS

- Connected worker technologies and automation are crucial for enhancing productivity.
- Cloud migration will continue to allow businesses to navigate disruptions with flexibility.
- Greater supply chain visibility will increase resiliency in the auto industry.
- Additive manufacturing technologies will pave the way for crucial advances.
- Adoption of advanced digital technologies will be an investment focus for oil and gas companies.

The J.P. Morgan Global Manufacturing PMI—a composite index produced by J.P. Morgan and IHS Markit—registered 42.4 in May, up from 39.6 in April, but well below the 50.4 reading registered in January. According to the index's accompanying survey, rates of contraction for output, new orders, new export business, quantity of purchases and future output remained at depressed readings not seen since the Great Recession of 2008–09.

Global and U.S. manufacturing PMI



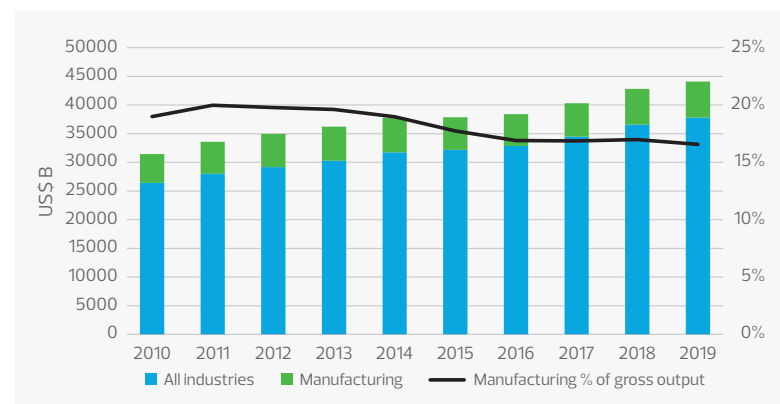
The average index reading over the past two months supports the position that worldwide manufacturing output will fall steeply in the second quarter, dropping at a similar rate to that seen at the height of the global financial crisis in the first quarter of 2009. While many large countries extended their pandemic-induced lockdowns in April, May showed signs of life. Factories slowly began to come back online as governments eased lockdown measures, which helped moderate the overall rate of decline.

The marked downturn in global manufacturing activity led to sharp cutbacks in employment, purchasing and stock holdings during May. Supply chains also remained under extreme stress, with average vendor lead times lengthening to one of the greatest extents in the survey's history.

The current challenges facing the global and U.S. manufacturing sector follow what has been an uneven recovery in the industry since the Great Recession. The gains since that global downturn have been largely confined to just a

few sectors: transportation equipment, food and fabricated metals. Overall, manufacturing output as a share of U.S. gross domestic product steadily declined between 2002 and 2019. Productivity growth, a key indicator of competitiveness, has been falling since 2005 and now is close to zero according to data from the U.S. Bureau of Labor Statistics.

Gross output by industry



Digital solutions to accelerate industrials' path forward

Companies that have been nimble and operating at peak efficiency during the pandemic were enabled by their prior investments in information technology infrastructure and digital technologies. Overall, industrials companies are at varying stages of embracing new digital technologies of the Fourth Industrial Revolution, also referred to as Industry 4.0, which allow manufacturers to revolutionize traditional supply chains and processes into more interconnected systems. Large organizations such as General Electric, Honeywell and Schneider Electric have invested heavily in this area, developed digital platforms specifically for the industrials industry, and pivoted their business models toward becoming industrial software-centric companies.

On the other end of the spectrum, there are traditional manufacturing processes and organizations yet to be transformed by the tremendous potential that smart manufacturing technologies provide. The future of industrials manufacturing lies in smart technologies and companies, irrespective of their digital maturity levels, should exploit the possibilities that the Fourth Industrial Revolution brings to remain relevant and grow.

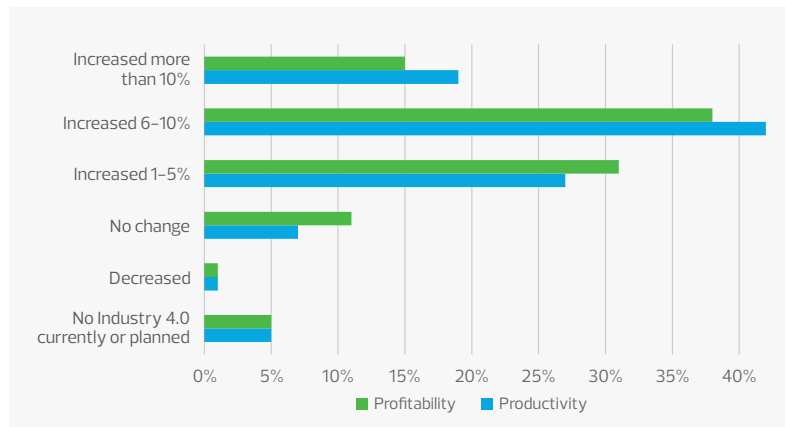
"We have worked quickly to mitigate disruption to our supply chain by using alternative sources, increasing air freight as needed, redirecting orders to other distribution centers and prioritizing the redistribution of the most impactful parts."

–CEO Jim Umpleby, Caterpillar, April 28, 2020, earnings call



Given the prolonged downtrend in productivity and the prospect of navigating through a difficult environment in which revenue and margin face compression, we expect more companies to explore digital technologies. It is now very evident that the COVID-19 pandemic forced many companies in the industrials ecosystem to shift course and move at a frantic pace. In order to minimize the impact of the pandemic on their business, companies have implemented more innovative ways of operating.

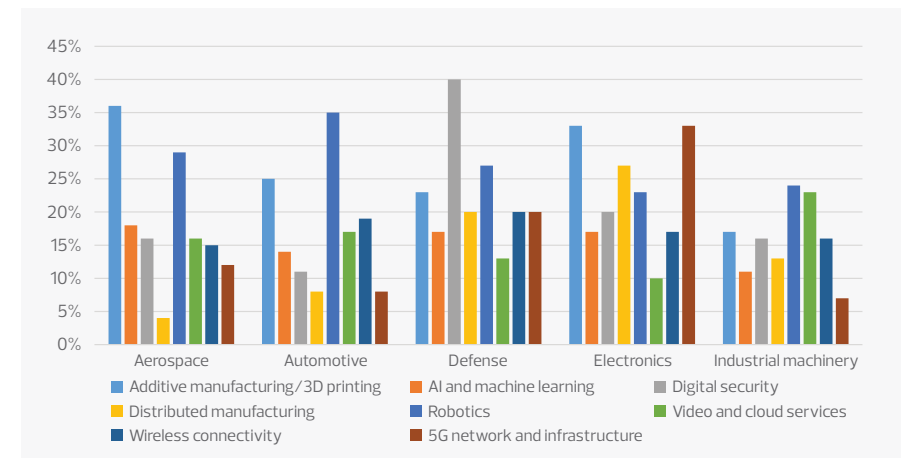
Impact of Industry 4.0 plants and processes on productivity and profitability in 2019



Source: The MPI Group 2020 Industry 4.0 Study—based on data from 679 global manufacturers

The ongoing COVID-19 crisis has encouraged otherwise reluctant manufacturers to think about expediting their digital journeys by taking advantage of certain workforce and operational solutions that could continue as longer-term solutions even after the pandemic has dissipated. In an April [survey](#), manufacturing industry association SME asked its members what technology they planned to invest in after the pandemic. Results of the survey showed 3D printing and robotics were the most popular options selected.

Investments that companies plan to make post-pandemic



Source: SME; RSM US LLP

Working remotely has become the new norm for employees at many companies, but there are a significant number of jobs within the industrials ecosystem where remote work is not an option. Factories depend on operators to keep machines running, and in most cases, it is simply not possible for them to work remotely. It is possible, however, to limit the number of people needed to maintain operations, and technology is the key to achieving this.

As industrials companies return to work, the following solutions could help organizations build on any gains they have achieved over the past few months:

1. Connected worker technologies—currently, machine repairs require the operator to reach out to service technicians or senior-level shop floor personnel for support because they possess the domain knowledge. In some cases, the required knowledge may reside in a different facility or with the original equipment manufacturer. Human contact is also required for training new or existing workers on machines or guiding them through standard operating procedures. Augmented reality solutions can eliminate worker-to-worker contact for repair, service and training needs. These technologies enable workers to operate more independently by using on-demand access to domain knowledge, instructions, assist manuals and other resources in a hands-free digital format. Longer-term, connected worker technologies could also help make domain knowledge more accessible to new and less-experienced employees as senior-level shop floor personnel retire.

2. Migrating to the cloud—while cloud technologies are not new, discrete and process-oriented manufacturing companies have generally been hesitant to migrate their core and operational applications from on-site premises to the cloud. However, the cloud allows industrials companies more flexibility to proactively shift inventory, reallocate manufacturing resources and customize products. Cloud platforms open the door to use more intelligent technologies such as the Industrial Internet of Things or digital twins. Cloud technologies can also enable asset-performance management solutions that allow supervisors to have insights into how their facilities, lines and individual assets are performing, even while being remote.

3. Automation—the pandemic has strengthened the motivation to diversify supply chains and reshore manufacturing operations, especially for segments that are critical for national defense and sustainability. Advances in robotics and automation have drastically increased productivity across manufacturing processes, and thereby, reduced the impact of low-cost

labor considerations in on-shoring and off-shoring decisions. In addition, replacing manual processes with automated alternatives can help mitigate workforce availability challenges now and later.

4. Additive manufacturing—3D printing technologies have moved from prototype applications to production of tools and finished products. In situations of supply chain and workforce disruptions for health or geopolitical reasons, additive manufacturing technologies can provide efficient value chain solutions to reduce working capital, enable production on demand, reduce supply chain complexity, modify production processes to reduce the number of tools or parts involved, and reduce the frequency of human intervention. Additive manufacturing-enabled business models such as microfactories, shared factories or toolless productions are gaining traction and may provide critical advantages as manufacturing evolves.

Automotive industry resilience will be tested

U.S. new car sales have been averaging approximately 17 million units over the last five years, and analysts had already predicted a reduction in sales of between 7%–10% for 2020 before the pandemic even hit. The supply chain shocks that began at the start of 2020 due to the COVID-19 outbreak in China's Hubei province, a major component hub serving OEMs around the world, have been intensified by worldwide demand-side shocks. In light of that disruption, [IHS Markit](#) cut its forecasts for 2020 global light vehicle sales by 22%, to 69.6 million units. U.S. auto sales have plummeted since the pandemic began to grip the country in March, with April sales down 46% compared to the same time the previous year. Analysts forecast an improvement in May, but still expect a year-over-year decline of more than 30%. While the current environment presents significant challenges, it also should spur OEMs and their entire value chain to revisit their strategy and business models, and implement new, more agile models, while implementing short-term actions to mitigate risk exposure.

Auto factory floors will not be the same

Automakers and their suppliers are taking extreme steps to maintain the health and safety of critical shop floor employees, including:

- Adjusting production techniques
- Reconfiguring work spaces (for example, adding plastic barriers)
- Checking workers' temperatures before entry



MIDDLE MARKET INSIGHT

Middle market companies have historically underinvested in technology. There are signs of change, though; an RSM survey performed in Q4 2019 found that over 31% of manufacturing respondents indicated that digital transformation is the single most important strategic priority.

- Requesting certification that workers don't have symptoms
- Staggering shifts to limit the number of people on the floor at any given time
- Restricting employees from congregating in common areas
- Requiring all on-site personnel to wear masks and gloves
- Requiring shared tools to be cleaned and sanitized before each use

In addition, organizations should use this time to reassess high-touch repetitive processes that can be better addressed using automation.

Enabling a remote workforce

In addition to production staff, there are a significant number of managers, engineering teams and support staff that play a vital role in maintaining efficient plant operations. Engineers must understand the processes and data so they can diagnose and solve problems, while managers must be able to react to problems on the floor that affect production planning and overall equipment effectiveness. Therefore, it should be no surprise that technology to enable connectivity was the third most cited investment priority for the automotive industry in the recent survey conducted by SME, a nonprofit manufacturing industry association.

Remote workforce considerations are one area where businesses should take advantage of advanced technologies such as the Industrial Internet of Things, monitor and control software and edge computing. When combined, these

technologies allow organizations to collect, organize and analyze data on-site in real time, connecting critical applications with critical equipment or enabling advanced and remote monitoring and control.

Taking the necessary steps to enable remote monitoring and other contingency plans will not only support business continuity today, but will serve as the foundation for greater resilience going forward.

Supply chain resiliency must increase

If there is one thing this pandemic has highlighted, it is the need for greater transparency and resiliency in global automotive supply chains. Advanced supply chains using analytics and artificial intelligence represent a shift away from the current reactive models in place, equipping automakers and their suppliers to identify and respond to changes in real time. This is especially important for middle market companies, which have historically underinvested in technology. There are signs of change, though; an RSM survey performed in Q4 2019 found that over 31% of manufacturing respondents indicated that digital transformation is the single most important strategic priority. More and more organizations will need to invest in their IT infrastructure to create a more flexible and scalable environment to meet the requirements of advanced digital technologies, and the increasing amount of data created.

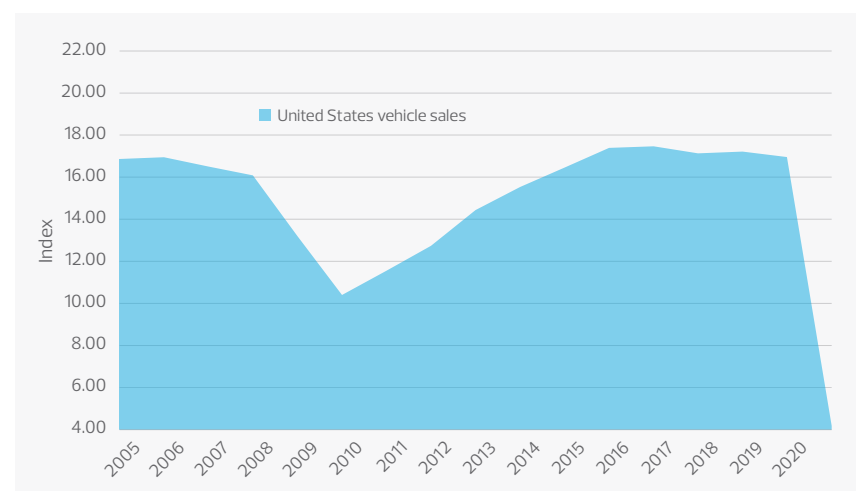
Blockchain technology will be another driving force in supply chain management. Automakers were already moving down this path before the pandemic, but we expect the pace of adoption to pick up. Earlier this year,

BMW Group announced plans to roll out its blockchain supply chain solution PartChain to 10 of its suppliers over the remaining course of the year. BMW had been testing the platform since 2019; and in the long term, the company aims to create “an open platform that will allow data within supply chains to be exchanged and shared safely and anonymized across the industry,” said Andreas Wendt, a member of BMW AG's Board of Management, in a [statement](#) in March of this year.

Shifts in demand from financially strained consumers

The pandemic has put significant financial strain on U.S. consumers, whose spending declined 13.6% in April, according to the U.S. Bureau of Economic Analysis, with significant declines in durable goods, nondurable goods and services. That is the largest drop on record since data collection began in 1959. Spending on durable goods like vehicles declined the most. Given this backdrop, we expect U.S. car sales will slowly begin to recover in the coming months as regions of the country emerge from coronavirus-induced lockdowns, car dealerships reopen and pent-up consumer demand is released. We do not expect a V-shaped recovery in sales similar to what followed the Great Recession; after U.S. auto sales hit a low of 10.4 million in 2009, sales rebounded over the next seven years to peak at 17.5 million in 2016.

United States vehicle sales



Source: Bloomberg; RSM US LLP

Nevertheless, we do expect significant evolution in the way in which consumers look to purchase vehicles. Given the significant amount of uncertainty surrounding the virus and the lack of a vaccine, there may be a shift toward online sales in order to reduce human contact and create a digital sales process for wary consumers.

This moment could also serve as a catalyst for OEMs to rethink the overall sales model. Consumers are increasingly drawn to digital retail experiences, but the current automotive value chain puts significant distance between companies and their customers. With continued advances in technology, effectively turning cars into large smart devices, the ability to collect, analyze and act on data cars generate will be key to automakers better understanding their customers' wants and behaviors.

Oil and gas sector adoption of digital technologies will grow

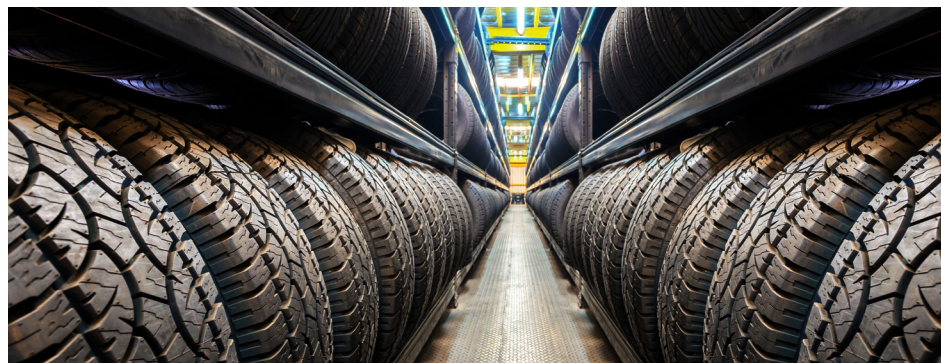
Players big and small across the oil and gas value chain are looking to digital technologies to achieve cost and operational efficiencies, boost safety metrics and reduce negative environmental effects. In 2019 alone, 27 new artificial intelligence and analytics partnerships were announced in the oil sector, according to figures from Bloomberg. Technologies such as AI, robotics, enterprise cloud solutions and blockchain are contributing to significant advancements across the industry.

Throughout the oil and gas space, the degree to which organizations have adopted advanced technologies varies greatly. We explore the use of digital technologies along the value chain below:

Upstream: Exploration and production activities are at the forefront of adopting digital technologies. Geologists have used AI for decades, especially for seismic technology. The use of AI to interpret seismic data allows for faster and more accurate identification of faults that in some cases could not be detected by other methods. Onshore and offshore drilling have also widely adopted digital technology, as evidenced by fully automated drilling rigs, real-time monitoring of drilling activity and remote operations. In October 2018, Norwegian energy company Equinor launched the world's first fully automated oil and gas platform, the Oseberg H. This platform is completely unmanned, has no living facilities on-site and requires only one to two maintenance visits per year. This type of advancement is expected to improve safety, drive revenue growth and reduce the carbon footprint.

"We're cautiously optimistic as we see demand resuming."

—Mary Barra, CEO and Chairman, General Motors,
June 17, 2020, interview on CNBC



Midstream: The United States alone has nearly 2.5 million miles of oil and gas pipeline that transport petroleum products from their source to the market. This vast and complex transportation network requires significant maintenance, presents safety issues and is highly regulated. Additionally, disparate data sources and dated assets make digitalization a challenge. Despite these roadblocks, the industry has made significant progress toward minimizing human intervention, automating maintenance procedures and optimizing networks. Many operators have adopted the use of drones to detect leaks and take real-time video footage. An even more advanced technique is the use of digital replica modeling tools, or digital twins, which allows operators to view simulations of operational scenarios based on real-time data, which can drastically improve decision-making capabilities.

Downstream: Refiners must constantly adapt to changes in demand for oil products and the supply available at any given time. Growth in refining capacity is expected to be near 12.9 million barrels per day by 2024, according to Bloomberg. This growth, coupled with the reduction in demand related to COVID-19, leaves room for only the most competitive players. This means that the move toward digitization to increase efficiency is more important now than ever. Refineries are using technologies such as AI, sensors and drones to increase efficiency and enhance monitoring capabilities. Refineries' use of sensors to measure vibration, temperature and acoustics allows operators to monitor the condition of assets in real time. Further downstream, for instance, Shell has piloted the use of AI to detect dangerous consumer behavior at the pump, such as lighting a cigarette. Companies can use image recognition and video analytics to alert gas station attendants when a customer engages in such dangerous behavior.

Energy sector must maintain momentum

Oil companies are expected to spend \$1.3 billion on advanced analytics alone in 2021, according to Bloomberg. Approximately 75% of this spend is projected to come from the top 20 majors, illustrating the spread between the majors and other players. For the majors, recent earnings calls indicate that although oil and gas operators and service providers are focused on cash conservation in the current economic downturn, digital transformation strategies remain intact. It remains to be seen whether business needs unrelated to the pandemic will continue to guide those strategies, or whether priorities will shift due to remote work and travel restrictions tied to COVID-19. Outcomes will vary depending on the size, portfolio and cash position of each organization.

Current conditions may cause some midsize companies to double down on the aspects of technology most crucial to keep operations running, such as cloud computing, while pulling back technology spending related to accelerating operations. Major oil companies and oil field services conglomerates that are in a favorable cash position and have more experience aggressively adopting advanced technologies are more likely to continue down the path of investing in innovation, even during this economic crisis. In Halliburton's first quarter investor's call this year, the company's chief financial officer said that "the downturn accelerates the adoption of digital technologies by our customers and by Halliburton." However, smaller or midsize organizations that came into the pandemic at a less mature state than the majors will likely focus their spending on technology necessary to keep the business running.

Technology-enabled ecosystems and business models will define industrials' future

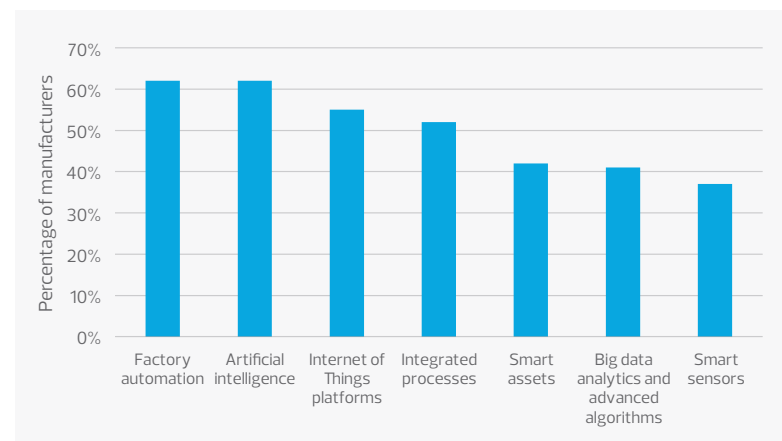
While the pandemic has been a source of enormous challenges for many organizations, the economic disruption it has caused also gives industrials companies a chance to redefine their strategy. Addressing any vulnerabilities the pandemic has highlighted can help companies become more resilient as they chart a path forward. In this era of change, organizations should reexamine traditional models of workforce, operation, competition and business in light of any possibilities that this new economic environment provides.

Over the past few years, multi-industrials companies have simplified their businesses by focusing on their core product offerings. They have also embraced a digital future by offering Industrial Internet of Things platforms and analytic solutions to customers taking advantage of their extensive industrial expertise. This is a move toward an asset-light model, which represents a deviation from the traditional equipment intensive industrial framework. This is also a move toward a sustained subscription-based revenue model. This approach is gaining traction in the industrials world with companies creating offerings such as equipment as a service, platform as a service, manufacturing as a service and analytics as a service. These subscription-based models can augment or substitute existing revenue models and increase after-sales service revenues. Such models can also be beneficial to the OEM/service provider and the customer, because value is based on outcomes.

Digitization is also causing a redrawing of traditional industry boundaries by enabling companies to compete in multiple sectors and redefining customers, competitors and partners. Industrials companies are exploiting their domain expertise and foraying into tech platforms, which were previously considered the domain of the technology industry. The pandemic has led to staunch collaboration not only between industrials competitors but also between industrials companies and health care companies to meet exigent market needs. As business-to-business distribution transitions toward an online marketplace, especially in light of Amazon entering this space, companies need to decide whether to view distributors as channel partners or competitors. It will likely become more common for companies to define their business models not by how they compete against traditional industry peers but by how effectively they collaborate with businesses across a range of sectors to create a more customer-centric model.

In order to evolve with these changes, companies must use real-time data to empower their strategic decision-making processes, and integrate digital solutions such as AI and IIoT into their operating models. Companies need to modernize their existing technologies and increase their investments to improve their IT productivity. Historically, middle market companies typically underinvest in their technology infrastructure. Now is the time for companies to invest in the development of digital acumen across their organizations, reskilling employees to prepare for the digital future. Executive leadership must embrace digital culture in order to make it an organizationwide priority, and should make a long-term commitment to digital evolution both during and well after the current economic downturn. ■

Technologies most likely considered to make up Industry 4.0



Source: The MPI Group 2020 Industry 4.0 study – based on data from 679 global manufacturers

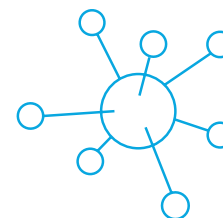
The process of developing a COVID-19 vaccine remains difficult, but the fact that academia, industry and the government are working together to speed up development and manufacturing capabilities is encouraging for the long-term health of the ecosystem.



INDUSTRY OUTLOOK:

LIFE SCIENCES

BY ADAM LOHR AND STEVE KEMLER



LIFE SCIENCES, THRUST INTO THE SPOTLIGHT, FINDS ITSELF IN A STRONG POSITION FOR GROWTH

THE LIFE SCIENCES ecosystem enters the second half of 2020 poised for growth, with strong capital markets and signs of improved public perception. This is due in no small part to the fundamentals that have made it one of the most lucrative segments in the global economy for the last two decades: a highly skilled workforce, technological innovation, and an underlying mission to improve public health and quality of life.

A shot of life to the economy

The COVID-19 pandemic has devastated lives and economies across the globe, and life sciences companies are squarely in the spotlight as the need has exploded for personal protective equipment, the development and distribution of test kits, therapies, and hopefully a vaccine for the new coronavirus. The industry is leveraging technology and collaboration to respond to these needs at a rapid pace.

KEY TAKEAWAYS

- Despite the recession, there are signs of strength for life sciences in both public markets and private investment.
- The pandemic has pushed companies to reallocate resources toward COVID-19, causing disruption in the clinical trial pipeline.
- The hot topics of health care and drug pricing reform have taken a backseat as the country deals with the fallout of the pandemic and recession.



MIDDLE MARKET INSIGHT

As market volatility and uncertainty have grown during the pandemic, we anticipated a breakdown in investment into what are highly capital intensive and often risky endeavors in the life sciences space. However, that investment window never really closed and appears to be wide-open for the second half of the year.

The time between sequencing the COVID-19 genome to the first clinical trials of therapies and vaccines was months, not years, and some experts believe that a vaccine could be approved and distributed (on a limited basis) by the end of the year. According to [National Geographic](#), the mumps vaccine, considered the fastest ever approved, took four years to go from collecting viral samples to licensing. The process of developing a COVID-19 vaccine remains difficult, but the fact that academia, industry and the government are working together to speed up development and manufacturing capabilities is encouraging for the long-term health of the ecosystem.

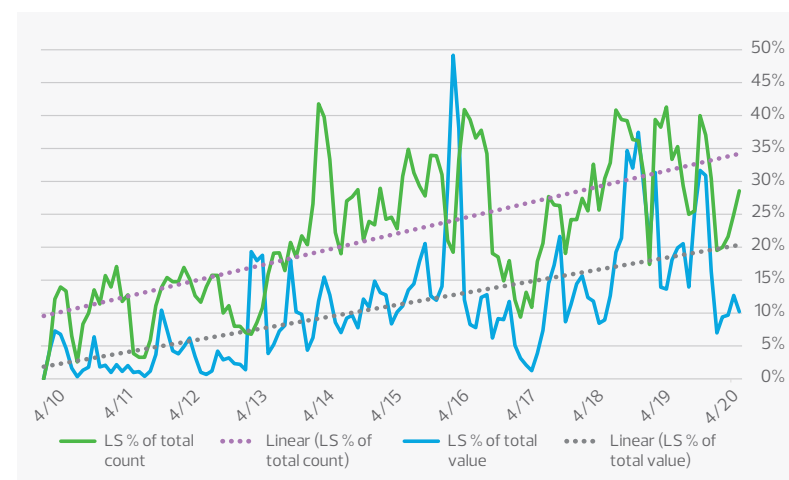
Infection rates, deaths, high unemployment and lost wages because of the pandemic are all factors driving the enormous momentum to find a vaccine quickly. Second- and third-degree ripple effects to public health will also have major long-term effects on the U.S. economy and health care system; specifically, the deferral of routine medical care and nonemergency surgeries, undiagnosed or ignored illnesses, and mental health issues. Additionally, the disruption to clinical trials and stalled progress on experimental medicines for non-COVID-19 diseases may take years to recover from. The good news is that social and political awareness of these risks is increasing, and the importance of a robust life sciences ecosystem is reflected in public conversation and capital markets.

Resilient capital markets

Coming out of the Great Recession, the public's investment focus has shifted to high-tech and scientific sectors and away from the traditional economy. While the overall number of publicly traded companies has continued to [decline](#), the life sciences ecosystem has made up a disproportionate percentage of the

Life sciences IPOs as a percentage of all IPOs

3-MONTH MOVING AVERAGE



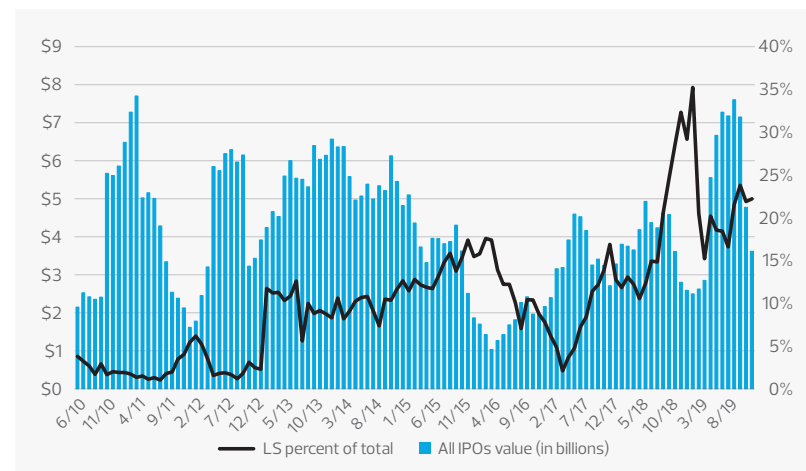
Source: Bloomberg

initial public offering market in recent years, accounting for approximately 30% of IPOs in the United States since January 2019.

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IPO capital—life sciences as a percent of all IPOs

200-DAY MOVING AVERAGE



Between March and May, while the United States experienced a peak in the COVID-19 crisis, nine companies went public on U.S. exchanges; eight of them were life sciences companies. Over that same period, only 21 U.S. companies announced plans for an IPO, 14 of which were in the life sciences sector (none focused on vaccines or treatments specifically related to COVID-19). We believe this illustrates two positive points for the life sciences public market: market valuations and enterprise fundamentals for companies in the industry remain strong, and the IPO market and public investment will quickly accelerate in Q3 and Q4 (likely focused on biotechnology).

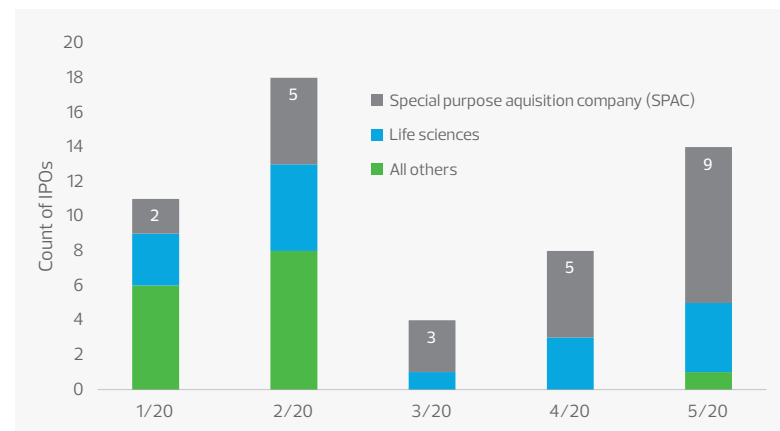
Public markets are not the only portion of the capital markets that remain robust for life sciences. Private investment (e.g., venture capital and private equity) into U.S. life sciences companies exceeded \$50 billion in each of the last three years, according to an RSM analysis of PitchBook data. This represents approximately 12% of all private investment capital and 18% of all deal flow

2020 life science VC and PE deals by sector

Biotechnology	32%
Drug discovery	18%
Diagnostic equipment	11%
Therapeutic devices	10%
Surgical devices	8%
Pharmaceutical	6%
Monitoring equipment	5%
Other health care technology systems	4%
Drug delivery	3%
Other devices and supplies	3%

Source: Pitchbook

Life sciences IPOs vs. all other industry IPOs in 2020



during that time. In 2020, even as the private capital valves were turned off for much of the market, life sciences investment continued to flow. From January to May 2020, the industry saw a year-over-year increase in invested capital of 34%. In comparison, the rest of the market saw a 26% decline. In general, private investment activity so far in 2020 falls into two categories:

- Large investments or buyouts of later stage companies (5% of deals and 58% of capital went to companies with an average of six investment rounds)
- Additional rounds to support early stage companies (50% of investments were \$3 million or less)

The large proportion of early stage support is driven by a need for additional liquidity during the economic downturn. These investments are often a direct response to disruptions in clinical trials and the achievement of milestone payments.

Corporate investment and mergers and acquisitions activity are two areas where investors have remained on the sidelines. Since January 2019, corporate investors have funneled \$320 billion into life sciences targets, accounting for about 20% of the \$1.6 trillion that such investors have made into all U.S. targets. While the proportionate number of corporate investments into life sciences has remained consistent in 2020 (approximately 10% of all deals), the amount of funding from corporate investors has

declined from 20% of all investments to just 12%. This is partially due to a lack of megadeals (greater than \$10 billion) taking place in 2020, but also points to the fact that enterprises are protecting their balance sheets and waiting to see what shape the recovery takes. If we ultimately see a steep V-shaped recovery, it will likely mean dry powder is quickly put to work in the second half of the year, but a protracted recovery will result in corporations going bargain hunting for viable but capital-hungry targets.

The nature of these investments and the broader capital market activity illustrates two primary themes: first, that the pandemic has caused disruption to the cadence of product pipelines and commercialization plans, resulting in a need for additional capital inflows to support operations; and second, that there is a significant amount of optimism about the longer-term viability of these companies and their developments, even if there is uncertainty about the velocity of economic recovery.

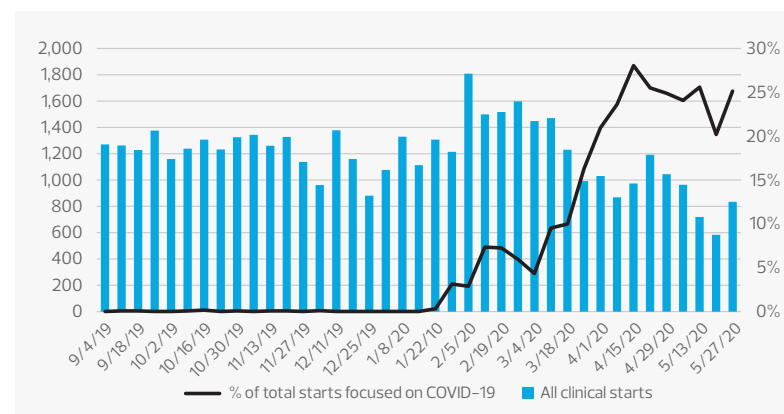
Disruption of the clinical trial pipeline

Supply and demand shocks are reverberating throughout the economy, and the clinical trial pipeline is no exception. The pandemic pushed researchers to reallocate limited resources to COVID-19-specific therapies, while at the same time social distancing and lockdown orders have made it increasingly difficult for organizations to recruit patients and conduct trials. According to the results of a clinical trials site [survey](#) conducted by Medidata in April, 69% of respondents stated that COVID-19 has affected their ability to conduct ongoing trials, while 78% believe COVID-19 has affected their ability to initiate new trials.

Further, according to [data publicly reported](#) by biotech companies and aggregated by industry news site BioPharmaDive, 240 active clinical trials being conducted by 100 different companies experienced disruption due to COVID-19. Based upon our analysis of global clinical trial data collected by Scientist.com through its Trial Insights database, there has been a 15% year-over-year decrease in global clinical trial starts during the period from January through May. That decrease is deceptively low given that more than 3,000 COVID-19-related clinical trials were registered in 2020. If COVID-19-specific trials are excluded from total new trial starts, then we see a 25% decrease in global trials year over year.

The life sciences ecosystem has never experienced a shock of this magnitude, and the effects appear to be more pronounced in the global markets than for U.S. companies. While not perfectly analogous, when

Global clinical trial starts vs. percent of clinical trial starts focused on COVID-19



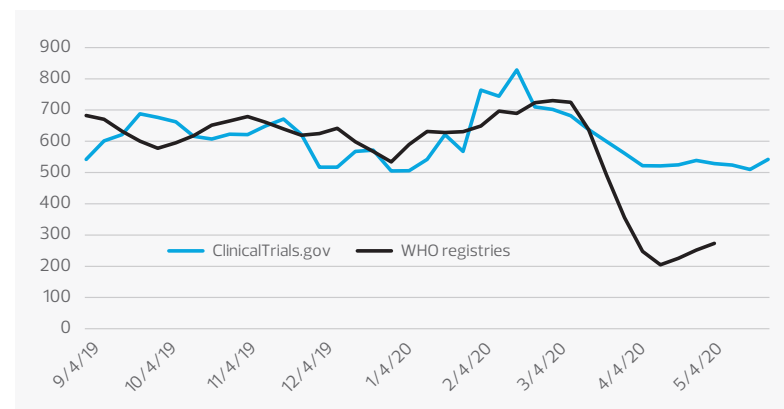
Source: Scientist.com and Trial Insights

comparing unique new trial starts registered on the U.S. National Library of Medicine's [ClinicalTrials.gov](#) database to the World Health Organization's registry, we see significantly more stability in the U.S.-specific data set.

Given that the majority of research into COVID-19 is being conducted by U.S. companies and the number of non-COVID-19 trials has remained robust, we believe these results are indicative of a temporary disruption to the U.S. clinical trial pipeline but that the industry will be able to recover by Q4 2020.

Non-COVID-19 clinical trial starts

3-MONTH MOVING AVERAGE



Source: Scientist.com and Trial Insights

Globally, however, access to capital and the repair of broken supply chains present more systemic challenges that are likely to persist into 2021. China is likely the exception, as it was the first economy to come out of lockdown and its life sciences industry continues to benefit from significant state support in a long-term effort to become a biopharma superpower. Continuing tensions between the United States and China regarding trade, supply chain dependence and the origins of the coronavirus are likely to accelerate a shift in the way U.S. life sciences companies approach their supply chains. This could manifest through repatriation to the United States or as a greater supply chain shift to India and Southeast Asia.

Drug pricing

Though China's life expectancy and infant mortality rates have improved and caught up with those in the United States, China still spends significantly less on health care than the United States does. China's health care spending as a share of the nation's gross domestic product is three times less than the equivalent figure in the United States, according to data from the U.S. Centers for Medicare and Medicaid Services. The average annual out-of-pocket health care spend per capita in China is a fraction of the \$12,000 per capita spent in the United States. These stats are also reflective of prescription drug spending, partially because China has a massive patient pool and its government wants to avoid stressing the country's medical insurance fund.

The United States is not likely to experience the same aggressive pricing controls and government negotiating tactics as seen in China, but there had already been a rising chorus calling for health care and drug pricing reform here before the pandemic. The coronavirus has shifted much of the conversation away from drug pricing and toward the innovation and production efforts of drug developers in the race for a COVID-19 vaccine or therapy.

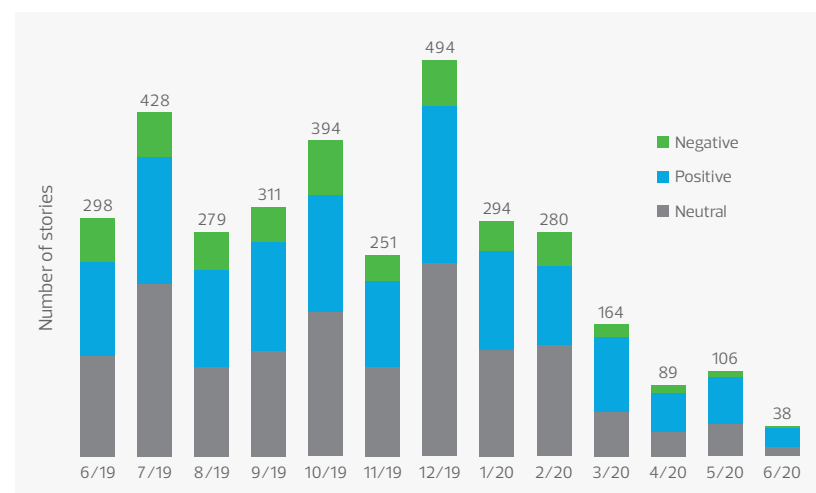
While public sentiment toward pharma and biotech has been improving, it pales in comparison to the pressure that will be put on Medicaid and Medicare budgets as tens of millions of unemployed Americans transition off employer-funded insurance programs. Combined with a loss of state and federal income tax revenues, this is likely to restart the drug pricing debate on Capitol Hill.

As the 2020 presidential election draws near, lawmakers will not want to be seen as impediments to a COVID-19 vaccine or therapy, but also need some policy position to take with them on the campaign trail. As such, we expect more posturing than substantive changes, and Medicare Part D reform is low-

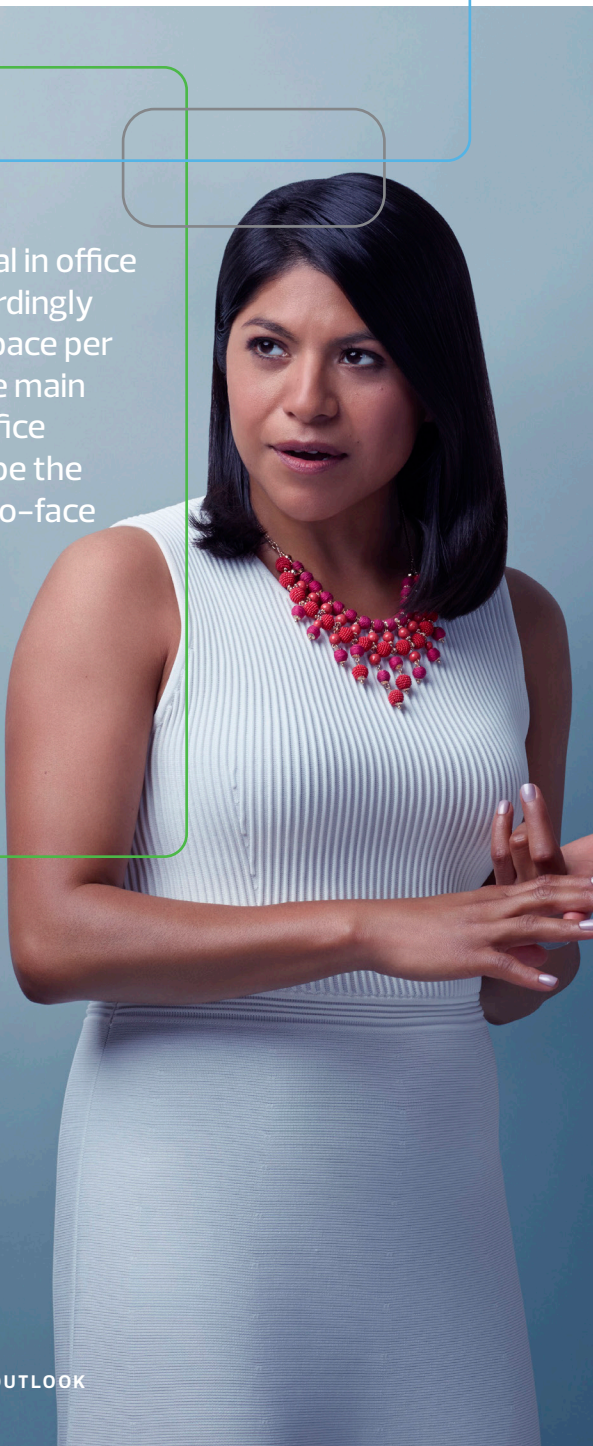
hanging fruit considering both the House and Senate have proposed Part D reform legislation. Any measures as aggressive as an international pricing index for Medicare Part B or granting the government authority to negotiate drug prices are unlikely, especially since bipartisan drug-pricing legislation currently excludes such language.

While more aggressive drug pricing reform measures seem unlikely this year, we would not be surprised to see proposals that would encourage competition among generics or provide an easier path to market for biosimilar products. The optics of supporting free market competition as opposed to stifling innovation is a safer path in what will be a very contentious election cycle. The economy, civil rights and COVID-19 have taken center stage in 2020, and health care and drug pricing reform will just have to wait for their turn in the spotlight. ■

News volume and sentiment related to drug pricing reform



Source: Quid



The next normal in office space will accordingly require more space per worker, and the main driver for in-office work time will be the need for face-to-face collaboration.

INDUSTRY OUTLOOK:

REAL ESTATE

BY LAURA DIETZEL, NICK GRANDY, SCOTT HELBERG, RYAN MCANDREW AND TROY MERKEL



REMOTE WORK, the near-halt of travel, continued migration to secondary cities and declining asset values are just some of the myriad trends facing the real estate industry in an unprecedented pandemic-driven environment. Across the commercial and residential landscape, digital transformation is accelerating as property owners, managers and developers look to touchless transactions, virtual platforms and other innovative technologies to minimize operational risk, lower costs and drive efficiencies in a competitive marketplace. Middle market companies on the forefront of these advances stand to do well under this new normal.

KEY TAKEAWAYS

- All real estate sectors will embrace touchless technologies to ensure the safety of staff and occupants.
- Office spaces will dramatically reconfigure to allow more space per worker, while collaboration becomes the main driver of in-office activity.
- Enhanced remote work experiences will facilitate home purchases farther away from the top-tier cities that house corporate headquarters.
- Virtual experiences will become standard for buying and selling homes.
- Beleaguered hotels will sharply alter their practices and common areas to ensure guest safety.
- Many retail properties, already pressured by online commerce, will transform to other commercial uses.
- Creative leasing arrangements will be more prevalent as landlords try to improve liquidity and cash flow.
- Fundraising will remain depressed, with funds relying on existing investors for growth.
- Due diligence will be hampered by the inability to have firsthand property experiences.
- The construction sector will wring efficiencies from virtual tools such as 3-D modeling and site management platforms.

"It's hard to envision a more difficult operating environment than what we are experiencing today, and I don't even want to try to sugarcoat it."

Ryan Marshall, CEO, PulteGroup Inc., April 23, 2020, earnings call



ACCELERATED TECH TRENDS WILL LIKELY HAVE LASTING IMPACT ON REAL ESTATE

The new office

As COVID-19 spread across North America in March and stay-in-place orders mounted, millions of office workers found themselves compelled to work from home. By April, 63% of workers surveyed were working remotely to mitigate the spread of the virus, according to [one Gallup Poll](#).

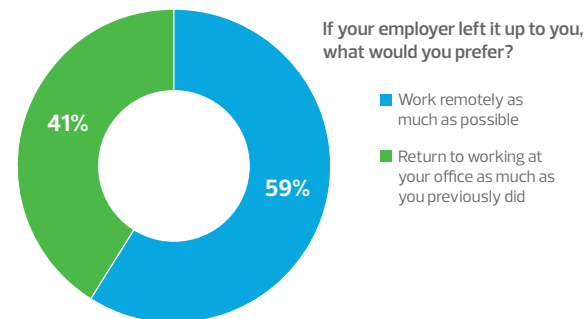
As employees headed home, business owners across the United States and Canada worried about how to manage a remote workforce: How would employees stay productive and focused? Would home broadband be able to handle the spike in daytime traffic? These concerns were soon put to rest as the pre-COVID-19 trend of digital transformation accelerated. The use of video conferencing and remote-access tools allowed employees to stay productive. Surprisingly, they appeared to work harder away from the office. According to an analysis of server activity by NordVPN, the average workday increased by three hours during the lockdown period of mid-March through the end of April. Broadband services, already primed for higher use by years of Netflix and other data-heavy streaming services, met the increased demand by boosting service, and they were ready for daytime action.

The stigma of remote working began to lift. Employers, led by tech giants Facebook, Twitter and Amazon, announced that they would allow workers to work remotely for the long term. This transition is possible due to the rise

in technology platforms that enable sharing of ideas and workflow, which began with the popularization of email in early 90s, and has been building for the past 30 years. With employees able to choose to work remotely and companies able to reduce the fixed cost of office space, the traditional office will need to change.

The next normal in office space will accordingly require more space per worker, and the main driver for in-office work time will be the need for face-to-face collaboration. Individual "heads down" work will be performed in the comfort of home rather than in an isolated cubicle. Video conferencing setups in small team rooms will be more prevalent in the office to accommodate the hybrid home- and office-work model.

Majority of employees prefer to keep working from home



Source: Gallup Panel; RSM US LLP

Safety precautions to mitigate the spread of disease will become standard, with thermal scanners in building lobbies, negative air pressure ventilation, ultraviolet lighting for cleaning and scannable QR codes on employee mobile devices likely to become standard. Much how 9/11 led to security measures in every office tower across the United States, the coronavirus will have a lasting impact on measures we now take to feel safe in the office.

Residential options

The coronavirus pandemic isn't just changing the office environment, it's also altering residential life, including where we live and how we purchase homes long after shelter-in-place edicts are lifted.

Before the coronavirus, millennial homebuyers were already starting to migrate to secondary cities in search of affordable housing. El Paso, Texas; Grand Rapids, Michigan; Madison, Wisconsin and Oklahoma City were among the locations listed as most popular for millennials to move and put down roots, according to a 2019 report from the National Association of Realtors. Most were seeing such moves as a trade-off: sacrificing future job opportunities for more affordable housing. Technology advancements that now facilitate better remote work experiences may provide these mobile millennials a chance to have both the dream home and the dream job.

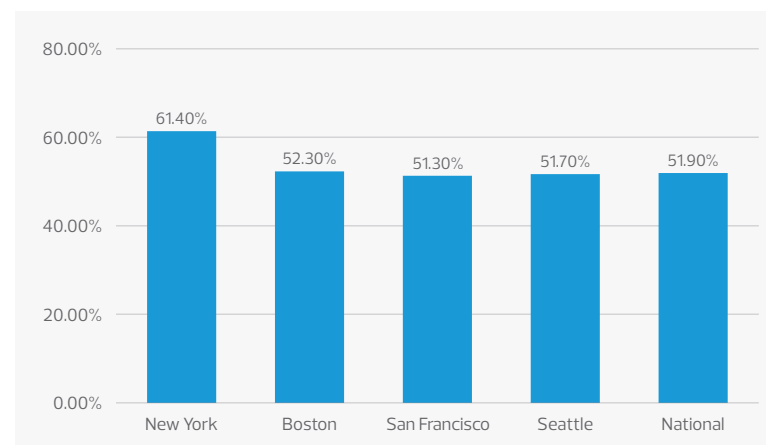
Metro area	Share of millennials to total population (2017)	Share of millennial recent movers to recent movers of any age (2017)
Bakersfield, CA	28%	67%
Durham-Chapel Hill, NC	29%	65%
Denver-Aurora-Lakewood, CO	29%	68%
El Paso, TX	27%	65%
Grand Rapids-Wyoming, MI	27%	73%
Madison, WI	32%	75%
Oklahoma City, OK	29%	61%
Omaha-Council Bluffs, NE-IA	28%	67%
Salt Lake City, UT	31%	61%
Seattle-Tacoma-Bellvue, WA	29%	70%
Average (100 largest metro areas)	25%	54%

Source: National Association of Realtors

Technology hubs such as Seattle, San Francisco and Boston have been attractive to millennials chasing tech jobs. But technology companies, as mentioned above, are now recognizing the burden of fixed costs that come with maintaining elaborate corporate campuses in top-tier cities, and are among the first to embrace a permanent shift to remote work. Meanwhile, bankers, brokers, accountants and lawyers are also debating whether to sustain their elaborate corporate offices.

If the options to work remotely are widely embraced, enabled by cloud services, videoconferencing and similar technologies, the movement toward urbanization over the past two decades may begin to reverse. A survey by Redfin, the real estate listing site, showed that more than 50% of people in major tech hubs, including Seattle and Boston, would move elsewhere if their companies adopted remote work policies. The majority said the desire to live somewhere less expensive was the No. 1 motivation. Who says you can't have your cake and eat it too? Technology advancements, combined with the coronavirus-induced work-from-home experiment of 2020, could be just the antidote to the residential affordability challenges plaguing the country and, in particular, high-cost coastal cities.

Share of workers who would consider moving if they could work remotely all the time



Source: Redfin; RSM US LLP

Not only is technology changing where we choose to buy homes, but also how we purchase them. Before the pandemic, tech-savvy millennials were already more likely to shop for a home online, forcing realtors to adjust their

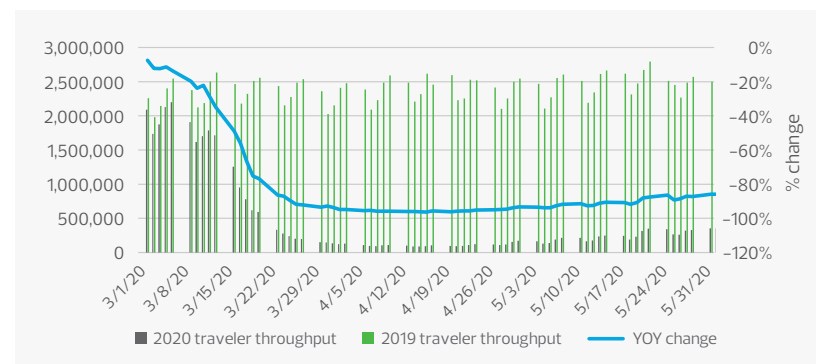
selling practices. With realtors and homebuyers now compelled to meet social-distancing measures, technology-enabled selling has accelerated. Virtual reality tours and 3D floor plans, once a novelty, are becoming a standard for sophisticated realtors. Appraisers are deploying drones to take exterior photos. The stacks of paperwork dispensed by realtors, banks and title companies that made mortgage applications and closings onerous affairs have been quashed, replaced by electronic signatures and e-filing. Homebuyers are readily embracing these conveniences.

While the homebuying process has become easier, the financial burdens and economic stresses that held millennials back from homeownership have become greater. The impact of the current economic downturn—the second recession during the millennials' prime earning years—will likely prevent this generation from experiencing the prosperity enjoyed by their parents and grandparents. Unemployment has skyrocketed and wage growth has regressed, pushing their dreams of homeownership further away, and perhaps permanently out of sight. To further compound matters, some members of Generation Z are now part of the workforce; many in this cohort will be subject to the same plight of economic instability that is driving down homeownership rates.

HOSPITALITY

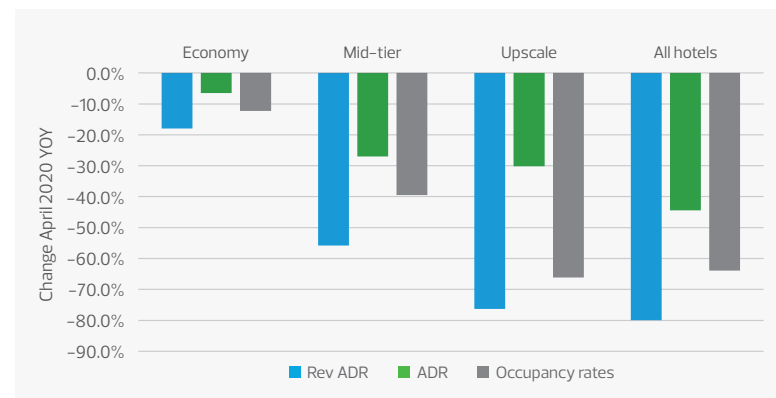
As the human toll of the pandemic has mounted, so too, has the economic one; North America is coping with record-setting unemployment on par with the Great Depression of the 1930s, and companies are facing continued uncertainty about the severity of the virus, its duration and consequential

TSA traveler throughput emerges from the bottom



Source: Bloomberg; RSM US LLP

Economy hotels outperform midtier and upscale segments



Source: STR; RSM US LLP

impact on their businesses. In an effort to conserve cash and keep workforces healthy, many have limited nonessential business travel and told employees to work from home while state and local governments have asked citizens to comply with stay-at-home orders through the majority of the second quarter. Even as more states loosen quarantine restrictions, true lasting economic resurgence will only be guaranteed when the virus is either contained or appropriate therapies and vaccines are developed that allow consumers to feel safe fully participating in the recovery.

The hospitality industry is arguably the most negatively affected sector of the U.S. economy as a result of the pandemic. Since COVID-19's onset in mid-March, travel-related job losses have accounted for 38% of total job losses and unemployment in the travel industry stands at 51%, more than double its peak in 1933 during the Great Depression. As a result of the pandemic, domestic travel spending next year is projected to decline by \$519 billion, representing \$1.2 trillion in total economic losses—a staggering nine times the hit after 9/11. The hospitality industry overall is being forced to significantly change its operational emphasis away from interconnected personal guest experiences to stopgap measures focused on the protection of guests and their peace of mind.

Segment data shows that in terms of performance, the industry's budget-oriented economy lodging segment has been more insulated than midtier and upscale hotels, which are more dependent on group-leisure, business-leisure and fly-to destination-leisure travel. The economy segment has continued to cater to its customers, including those deemed essential workers such as

construction professionals who must travel to job sites. Most inventory in this segment is located in suburban and small metro areas, not hard-hit urban, resort and airport-adjacent spots.

MIDDLE MARKET INSIGHT

Seeking to lure consumers back to hotels and resorts, owners and operators will need to invest significant capital in existing and emerging technologies focused on touchless experiences that ensure health safety.

Guests should expect a movement away from face-to-face check-ins, dining reservations and concierge services to digital processes that encourage social distancing, including mobile apps, QR codes and touch screens throughout public spaces. Room service may be delivered in buffer zones and housekeeping services to be limited during guest stays. Hotels are already reallocating space in common areas such as large conference and meeting rooms, fitness rooms, clubs, bars and restaurants to ensure proper distancing. These moves are expected to drive revenue and help them bounce back more quickly.

Global hotel groups, including Hyatt, Marriott, Four Seasons and Hilton, have announced extensive safety measures—incorporating ultraviolet-emitting robots and electrostatic sprayers to sanitize surfaces, partnering with disinfectant makers like Lysol's Reckitt Benckiser for brand reliability and enlisting help from health care experts to design new safety guidelines. Meanwhile, the unintended consequences of extended property closings and the lack of water use could result in the increased concentration of the bacteria responsible for Legionnaires' disease, a potentially fatal respiratory condition. Hotels will need to test and disinfect water as needed to begin normal operations.

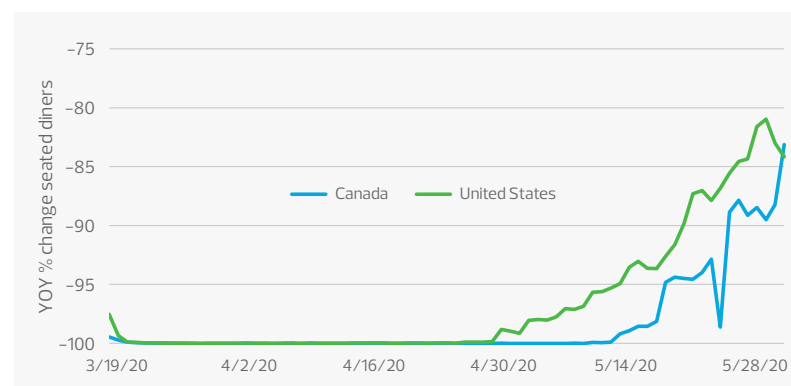
In an effort to create cleanliness protocols that last long after the initial pandemic response, hotels will invest in available technology for building and space management to ensure better ventilation, air and water quality, to monitor humidity levels and to control the number of people in common areas to prevent overdensification.

RETAIL

Property owners across the commercial real estate spectrum have tried to strengthen their cash positions during the pandemic. Many have demanded rent relief and explored creative ways to terminate or suspend their leases. The most acute pain has been felt by retail property owners whose tenants have been forced to stay closed to honor pandemic-induced social-distancing requirements. With many tenants refusing to pay rent while their stores were shuttered, landlords have been negotiating workarounds. But their own bills are piling up; default letters to tenants are accumulating as landlords seek to preserve their legal rights under executed lease agreements. In the month of April alone, retail mall landlords received just a quarter of expected rent payments; according to CoStar, an estimated \$7.4 billion went unpaid, a staggering 45% of what is owed.

Adding insult to injury for retailers, there is no guarantee that American shoppers will pick up where they left off once the novel coronavirus is contained. If reservations on the online platform Open Table are any indication, consumers are hesitant to resume life as normal. Results from the shutdown period beginning mid-March through the week of May 28 show diner activity down more than 80% in the United States and Canada year-over-year.

Diners are slowly coming back



Source: OpenTable; RSM US LLP

Retailers were struggling with systemic changes even before the onset of the pandemic, as bankruptcies and store closures were exacerbated by changing consumer preferences such as increased online purchasing. Landlords, realizing they have a vested interest in their tenants' long-term survival, have

provided relief through rent abatement periods, interest-free repayment options, rent waivers for fixed time periods, and flexible rent payments tied to retailers' sales performance.

OFFICE

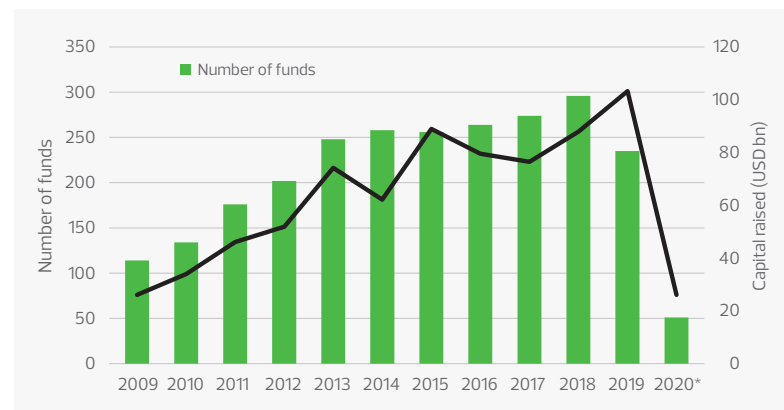
Office landlords have fared a bit better, having been able to collect most of their rent during the pandemic, but there is evidence that with each passing month of rising unemployment, economic uncertainty, and more recently, civil unrest—particularly in urban commercial districts—an increasing number of tenants are withholding rent payments. This will have a cascading impact on the financial markets, making landlords' mortgage payments more challenging. Even so, institutional investors such as pension managers continue to invest in CorePlus office markets due to their stable rents and cash flows. If tenants stop paying rent, pension payments may be curtailed. Many of the largest pension fund investors in real estate are teachers unions and state and municipal workers, including firefighters and police. The unintended consequences of delinquent commercial rent payments could reverberate through the economy.

Batter up! A commercial real estate capital markets preview

Throughout most of the longest period of economic expansion in U.S. history dating back to 1854, commercial real estate investors commonly asked, "What inning are we in?" The cycle of growth continued to expand to the point where many professionals felt the market was in extra innings, with little insight on when it would flip. The COVID-19 pandemic brought the economy into a recession, and we are now in the first inning of a new cycle.

Before 2020, the fundraising landscape was already starting to show areas of concern. Even as capital in 2019 reached a record \$103 billion, the number of players had shrunk to 235 funds, the fewest in seven years. Money was tending to gravitate toward the largest real estate fund managers, leaving middle market organizations fighting to meet their targets. The advent of the pandemic did not, of course, ease this struggle. Executives are unable to hold live, face-to-face meet-and-greets to develop personal connections with potential investors. Funds will be required to rely on existing investors from previous funds to meet new capital demands. Fund managers should continue to expect competition in fundraising. There will be an influx of new real estate funds hitting the market as managers look to take advantage of opportunistic valuations and not be bogged down by pre-COVID-19 assets in the portfolio. With overall uncertainty surrounding the economy, many investors will stay in a wait-and-see mode to understand and quantify the market impacts before doling out additional capital.

Real estate fundraising

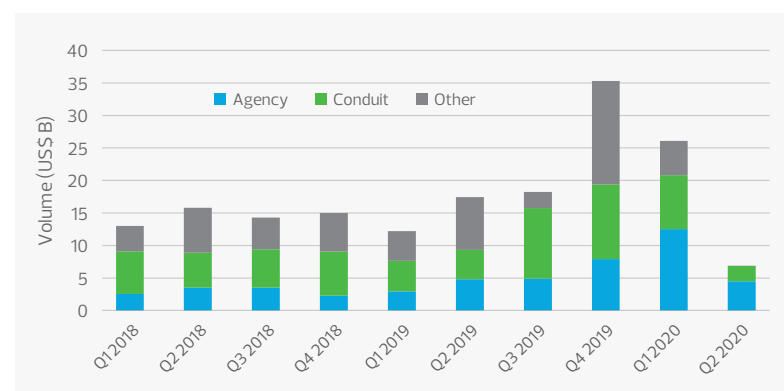


Source: Preqin

*through May 2020

Companies not actively fundraising have been waiting for pricing to fall; they are now in prime position for acquisitions, with more than \$195 billion of dry powder in commercial real estate funds. The credit market has been tight. During the first quarter of 2020, commercial mortgage-backed securities issuance volume declined by a third from the prior quarter. Even in the current low-interest-rate environment, many lenders have increased loan-to-value minimums for conservative measures to offset rising forbearance of other loan investments. In short, cash continues to be king, and all-cash buyers will be first to take advantage of the distressed market.

CMBS issuances



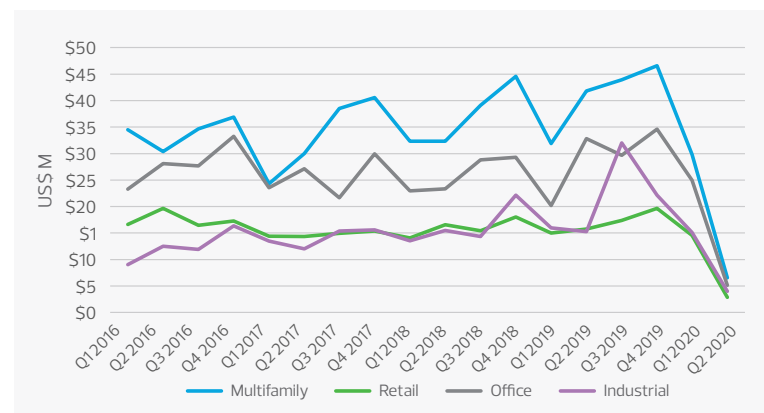
Source: Preqin; RSM US LLP

Overall transaction activity will lag for some time, resulting in few comparables in the market to set pricing. Due diligence will be problematic, hampered by the difficulties viewing properties amid social distancing requirements, closures and struggles to accurately project future rent payments. It's important to keep in mind that this recession differs from the one ended in 2008. It will be vital for real estate professionals to properly factor in the risk profile of potential investments, including the geographic and sector considerations of assets.

MIDDLE MARKET INSIGHT

This downturn is pandemic-driven, and as such, capital will be much more available when the transaction market opens up.

Sales volume freefall (\$)



Source: CoStar; RSM US LLP

As the economic cycle restarts, both core and opportunistic strategies will be able to ramp up quickly. Core assets will be viewed highly during a time when rent payments are unstable in certain sectors. Triple-net leases, especially those for tenants in essential services, will continue as a beacon of success in real estate. Opportunistic strategists will be able to acquire distressed properties at bargain prices, but they must be ready to reposition them as the economy recovers. Value-added-based strategies will face the greatest difficulty. Tenant turnover in the apartments sector, for example, will stall as many residents choose to delay moving from their current domiciles.

Improvements to existing units will be delayed amid social distancing strictures that forbid work inside units, as well as an overall slowdown in construction.

Geography remains a core factor in real estate, and will gain importance during an uneven recovery across the country. Tourism was hit particularly hard in the first half of 2020, underscored by gas prices that held below \$2 per gallon. Cities reliant on tourism such as Las Vegas and Houston may not see properties regain their 2019 values for several years. By contrast, Seattle and other technology hubs should recover quickly and continue to attract capital. Alarmist headlines warning that the coronavirus will drive urban populations to the suburbs are likely proven to be untrue; people still yearn for a sense of community and social interaction. While there may be some suburban migration, especially in pricey markets like New York City, more affordable metro areas like Austin, Texas and Nashville, Tennessee will see continued population growth; as previously indicated, they may look even more desirable to the new ranks of permanent remote workers.

The steady rise of e-commerce has allowed the industrial market to remain strong, as distribution centers for Amazon and its rivals remain in high demand. Last-mile facilities will continue to draw attention, even at comparably higher prices. The prominent use of Wi-Fi networks at home and the continued focus on 5G, data centers will remain at the forefront of real estate's next normal. Multifamily properties will also experience quicker recovery. Rent payments have remained steady throughout the economic shutdown. People still need shelter and they value it immensely. If nothing else, the coronavirus has slowed construction for housing that continues to be in short supply. While rents will be depressed in the short term, they should recover quickly in most geographic markets.

Office and senior housing present a mixed bag, having each received negative attention during the pandemic. Despite the reported increased productivity of employees working from home, dedicated office space remains essential. People still strive for interaction with their peers, and organizations will need to build loyalty from staff. As noted earlier in this report, office space will adapt and continue to be a core fixture to help companies meet the need for face-to-face interaction among employees. Tenant demand will likely push lease terms down as tenants look for increased flexibility given the uncertainty related to the future of work long term; many companies have seen sustainable success in a working from home environment. Desk hoteling will likely diminish amid safety risks, but coworking spaces will continue to gain in popularity as another option for tenants in the office market.

Along with the negative media attention of recent months, senior housing has had to battle oversupply. Advances in telemedicine and related technology are allowing baby boomers to age in place longer, depressing demand, especially in independent living facilities. The needs-based subsectors—assisted living and skilled nursing facilities—should see quicker returns. The elderly will not have the same level of flexibility to delay moving into this type of housing compared to independent living.

Lastly, retail and hotel properties will face the longest recovery. The retail market had been a victim of oversupply since the 1980s, as many Class B and C retail properties went through closures and repositioning. Movie theaters—popular installments in malls—will face significant struggles to reopen amid social distancing constraints and continued demand for digital entertainment from Netflix, Amazon Prime and other providers, underscored by the success of direct-to-consumer studio releases. Retail assets will continue to be repositioned, likely for mixed use.

MIDDLE MARKET INSIGHT

The blurring of the work and home life experience will continue to draw those looking for convenience and proximity to leisure offerings.

Meanwhile, the pandemic-stricken hospitality sector saw guest occupancy fall to single digits in some key markets, while airlines tracked daily declines of more than 2 million travelers, compared to the prior year. On the upside, extended-stay residences have shown some resiliency in the crisis; luxury brand hotels, however, will require a long time to rebound. This will likely lead to consolidation in the space for opportunistic investors.

Most hospitality CEOs do not expect hotel revenue per available room, or RevPAR, to return to pre-crisis levels until 2023. As such, valuation of reeling hotel properties has become a difficult, if not impossible, venture for both buyers and sellers attempting to predict occupancy levels for both leisure and business travelers in the coming years. The hotel deals market has effectively become frozen, with sales volumes falling to unprecedented levels. In April, for example, it dropped to \$42 million, from more than \$1 billion in March and about \$1.75 billion for February. The speed in which the industry flexed and became illiquid is staggering, compared to the previous financial crisis: the Great Recession's rock bottom during April 2009 saw hospitality volume decline to \$127 million following months of reduced trading. Buyers and sellers have varying expectations of value; and until there are concessions, or realistic measuring sticks, the market will remain frozen.

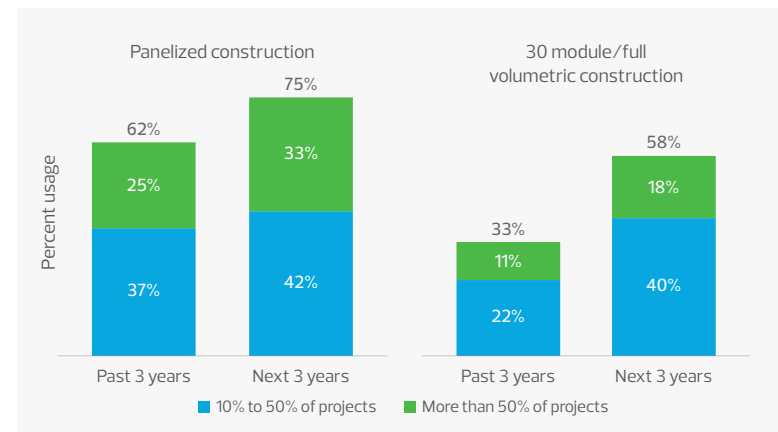
Interestingly, U.S. hotel supply is growing at a record pace. In March, a record total of rooms under construction surpassed 215,000, but much like the aftermath of the Great Recession, when construction peaked at 211,000 rooms, the pace is expected to slowly decrease as capital is retained to support failing operations or maintain existing properties. The number of U.S. hotel projects moving from the planning stage to a deferred status spiked to 21 projects in March and an additional 17 projects in April, from just two projects in February. There have been fewer cancellations, with a high during that three-month period of seven in March.

Construction enters the technology era

As the new cycle of real estate begins, construction enters an era of new technology. As mentioned earlier, COVID-19's impacts will result in accelerated tech advances—much of them designed to assist with safety protocols—being implemented in existing commercial buildings. As these technological improvements change the way real estate is used, construction companies, as well, are more readily embracing new techniques to implement the way construction projects are developed and managed. The use of prefabrication and modular building, building information modeling or BIM, and virtual construction methods are being deployed to design, build and monitor projects.

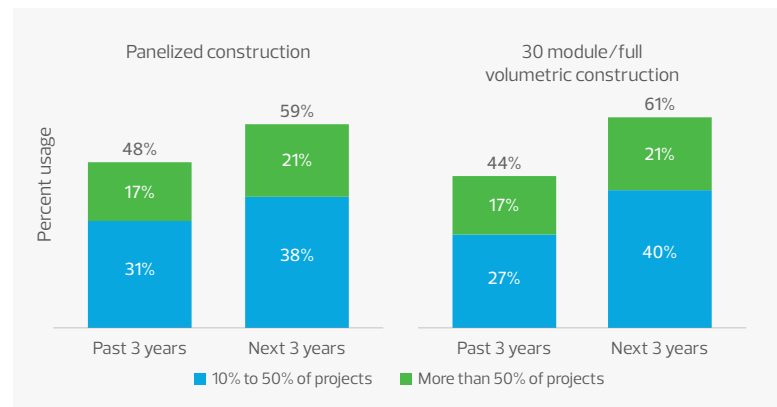
Prefabrication, along with modular construction and virtual construction management tools, which had been gaining popularity since the end of the most recent economic downturn in 2008, will likely see accelerated growth in

Prefabrication



Source: Dodge Data & Analytics; RSM US LLP

Permanent modular construction



Source: Dodge Data & Analytics; RSM US LLP

the new normal under the pandemic. A February 2020 survey from Dodge & Data Analytics shows that construction executives expect double-digit increases in both single-trade and multitrade prefabrication assemblies and permanent modular construction over the next three years. The most significant benefits achieved from these construction techniques are improved project schedule performance, decreased construction costs and better construction quality, the same survey reported.

Prefabrication and modular construction are not just beneficial to project owners, but also to site workers. The ability for contractors to move work off construction sites and into factories helps to control many would-be worker hazards. According to Occupational Safety and Health Administration, of the 4,779 worker fatalities in private industry in 2018, 21.1% were in construction. The construction industry's four leading causes of death, accounting for half of incidents, were falls, being struck by an object, electrocution and/or accidents where a worker's body part is caught, crushed or squeezed between two or more objects. Clearly removing workers from construction sites, and placing them in more controlled settings, can reduce the risk of tragic injuries to the workforce.

Building information modeling, virtual reality, the use of drones and related digital technology are allowing construction companies to improve efficiencies and job safety, while reducing costs and errors resulting from project unknowns. Consider the use of Boston Dynamic's autonomous dog-shaped robot, Spot. In a recent test, one construction company found it could save 20 labor hours in one week by letting Spot take pictures of the job site after work hours. Such reductions factored across multiple job sites and weeks can result in significant efficiency gains.

BIM relies on an intelligent three-dimensional process to give architects, engineers and construction professionals virtual insight into their projects. While traditional modeling typically calls for a handoff after each subsequent phase of development—design, engineering, construction, etc.—BIM's real-time development lets the owner and other stakeholders see how the future project will look, avoiding late changes that typically result in cost overruns and delays.

Demand for most constructions in the private, nongovernment realm is based on identifying opportunities for transformations to residential and commercial real estate. Before the pandemic, many construction companies saw robust backlogs; going forward, opportunities will be largely on the occupant safety protocols and other tenant-driven changes that we identified above. The evolution of real estate is accelerating, and construction companies need to prepare for significant changes. Those who invest in technological tools will be best prepared to hit the home runs in the next cycle of commercial real estate.

It is important to realize that none of the aforementioned trends can be painted with a broad brush. Each property carries its own distinct attributes and characteristics influenced by geography, subsector and a host of other factors. Proper access to data will allow for better understanding of market dynamics and more effective underwriting of potential assets that will allow buyers to take advantage of a lower-priced market. ■



Early estimates for the conferencing market—which had a pre-COVID-19 CAGR of 13.6%—now project nearly 30% growth per year through 2023.

INDUSTRY OUTLOOK:

TECHNOLOGY, MEDIA AND TELECOM



BY VICTOR KAO, DAVIS NORDELL AND KURT SHENK

THE TECHNOLOGY, media and telecom (TMT) sectors are playing a crucial role in keeping people connected as the coronavirus pandemic hobbles the global economy and dramatically changes daily life around the world. Businesses and public entities are especially relying more and more on services provided by tech and telecom companies as large numbers of workers shift to remote work.

While some TMT sectors have been relatively insulated from COVID-19, many areas are continuing to see a ripple effect from the pandemic and the unknown business environment moving forward. For example, the popularity of collaboration technology has surged and telecom companies are buoyed by expanding 5G networks, but broadcasters are facing challenges amid decreased ad revenue.

KEY TAKEAWAYS

- Collaboration technology is projected to continue its significant growth.
- Tech companies are embracing the work-from-home trend, leading to more geographic distribution of talent.
- The tech sector is moving forward with growth by acquisition, while also investing in innovation and research and development.
- Telecom companies have stepped up during the pandemic, providing the backbone for increased use of collaboration and communication tools.
- The further expansion of 5G networks is a critical element of telecom sector growth.
- Broadcasters are facing challenges due to declines in advertising and few live sporting events, but an increase in ad revenue may be on the horizon, and retransmission fees and digital streaming may present new opportunities.
- Video gaming and esports companies have seen dramatic growth during the pandemic and acquisition activity is expected to increase.



"I'm pleased to say that the response to Disney+, in particular, has exceeded even our highest expectations. We have been thrilled with the performance of the service since our initial launch in November, and we continue to expand into other markets."

—Bob Chapek, Disney CEO, May 5, 2020, earnings call

Disruption from the pandemic will continue across all sectors, and companies are implementing multiple strategies to stay nimble, maintain profitability and identify growth opportunities.

Lightning strikes for the collaboration technology market

The COVID-19 pandemic has been a headwind for most technology companies, but the collaboration technology market has seen significant growth during the last quarter. Before the pandemic, the collaborative market was forecast to grow at a 12.4% compound annual growth rate through 2023, according to the International Data Corporation. As a result of COVID-19, a couple of verticals within the collaborative market are anticipated to grow twice as fast.

For example, early estimates for the conferencing market—which had a pre-COVID-19 CAGR of 13.6%—now project nearly 30% growth per year through 2023. Even the growth rates for the email market, which was previously one of the slowest growing verticals within the collaborative market, is expected

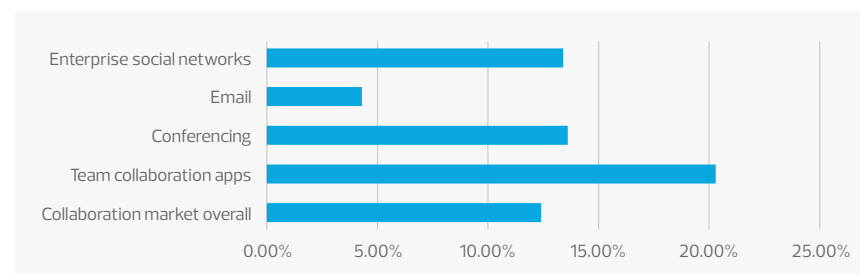
to double over the next three years as rates have increased from 4.3% before COVID-19 to high single-digit CAGRs.

Tech goes more remote

Even before COVID-19, large portions of the technology workforce were partially or fully remote. Twitter made waves in May when CEO Jack Dorsey told employees that they would be allowed to work from home indefinitely. Also, during a livestreamed staff meeting in May, Facebook CEO Mark Zuckerberg said that many employees would be able to work from home permanently, *The New York Times* reported.

"It's clear that (COVID-19) has changed a lot about our lives, and that certainly includes the way that most of us work," Zuckerberg said. "Coming out of this period, I expect that remote work is going to be a growing trend as well." He expects that by the end of this decade, half of Facebook employees will work from home, according to *The Times*.

Pre-COVID-19 forecast, 2019 – 2023



Source: IDC

MIDDLE MARKET INSIGHT

History has shown that technology industry trends that originated in Silicon Valley often foreshadow what is ahead for many middle market tech companies across North America. The early sentiment about the work-from-home trend during this pandemic is no different, and we anticipate that more middle market technology businesses will provide remote options for a larger portion of their workforce.

As more technology jobs go remote, employees who live across North America will not all be able to command the same pay as those living in Silicon Valley. This is likely a positive trend for middle market technology companies, because many tech workers in Silicon Valley still do not earn enough money to be able to buy a home there. If technology workers desire a lower cost of living and the ability to become a homeowner, they may be able to achieve that in one of the many emerging tech hubs across North America. This could lead to better geographic distribution of top technology talent.

Hardware and semiconductors continue the rebuilding of supply chains

The reach of COVID-19 has been felt across the technology sector. For some technology companies like those within the hardware or semiconductor space, the effect of the pandemic has not just been a demand shock. Like many middle market businesses, their supply chains have been dismantled in relatively short order. Though the supply shock was experienced very quickly for many businesses, it is expected that supply chains will take much longer to rebuild to pre-pandemic levels.

As the restoring of supply chains continues, middle market businesses will be reconsidering any geographic and supplier concentration risks. We anticipate that the ramping down of employees within certain geographies or lines of business in recent months will also allow an opportunity for middle market technology companies to consider how digital transformation can play a larger role in the future of their organization.

COVID-19 drops growth rates on software by 10%

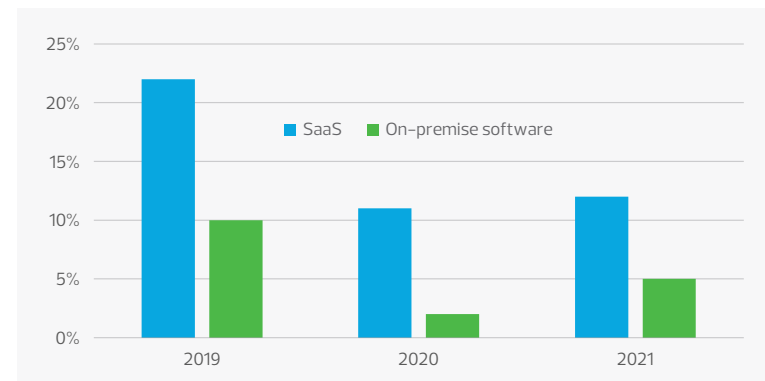
For many software companies, the COVID-19 pandemic has not had a significant impact on how they operate their businesses, but many software companies have been negatively affected as a result of selling into affected segments of the global economy. For example, the IDC and Bloomberg expect the growth in spending on software as a service and on-premise software to drop in 2020 by approximately 10%, when compared to the 2019 growth rates.

Some software verticals, such as online travel, have seen some of the most severe COVID-19 headwinds in recent months and will experience contraction rather than growth this year. The extent of the drop is largely dependent on the

length and severity of the economic downturn sparked by the outbreak. There is a COVID-19 silver lining for some software verticals like telehealth, which has seen significant tailwinds as a result of the pandemic.

Software/on-premise SaaS growth

COVID-19 ADJUSTED



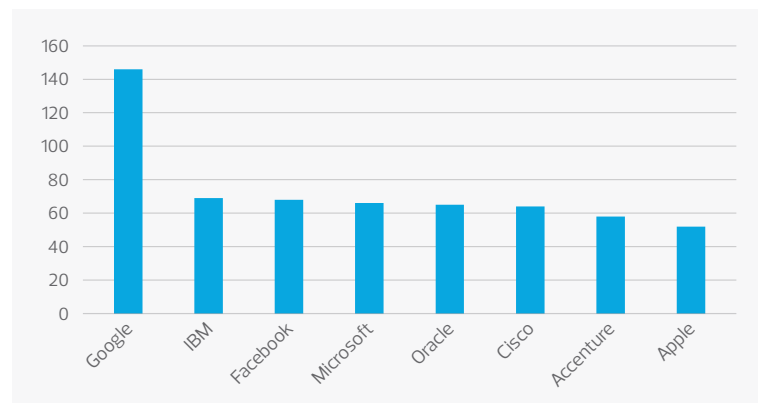
Source: IDC; Bloomberg

Leaders within the tech sector continue to pursue a buy and build strategy

Leaders within various technology sectors have been highly acquisitive in the past decade. Google has been the most active in the M&A market over the last 10 years, completing 146 deals. Before COVID-19, there were some signs of cooling with M&A and private company valuations beginning with the WeWork failed initial public offering in 2019. The COVID-19 pandemic has continued this trend into 2020, but big tech companies have not stopped buying companies within hot verticals such as cloud, cybersecurity, data analytics and collaboration software.

According to Pitchbook data, about 30% less M&A deals occurred in the technology industry since March 1, 2020, compared to the same time period in 2019. Some sizable deals still closed after March 1, 2020, but many of those deals had been started well before the COVID-19 pandemic struck. We anticipate that the volume of M&A deals could heat up in the back half of 2020, as big tech companies with access to liquidity go on a shopping spree.

Number of acquisitions in the past decade



Source: Pitchbook

Big technology companies are not just expected to acquire middle market technology companies. They also continue to invest in their own R&D activities. Former Google CEO Eric Schmidt was quoted as saying, "The strongest brands and the strongest companies will recover more quickly," during a video call with reporters recently. He added that, "the industry leader, if it's well-managed, tends to emerge stronger a year later."

Many large technology companies have been doubling down and continuing to invest in innovation. Overall R&D spending at the five biggest U.S. tech companies continued to rise, even in the first months of the pandemic. These companies spent over \$28 billion on R&D last quarter, which represented an increase of over 15% from the same quarter last year. While we expect Schmidt's comment to be true for big tech companies, each technology vertical also has a leader, and we anticipate the same will be true for many of those middle market industry leaders as well.

Telecom provides the backbone and infrastructure to keep America working, educated and entertained during COVID-19 pandemic

As COVID-19 made its way across the United States, shelter-in-place orders sent America's workforce and student population home, forced to work, collaborate and learn online. American wireless and fixed broadband networks were quickly tested and stepped up, providing the connection backbone to withstand increases in video streaming, virtual private network connections, online gaming, phone calls and collaboration meetings.

In recent investor presentations, Verizon and AT&T reported an increase of nearly 1000% and 400%, respectively, in the use of collaboration tools over their networks. With students, churches, gyms and corporate America all turning on their video cameras on their laptops and mobile devices to stay connected and productive, these wireless networks proved to be up for the challenge of keeping everyone online and connected.

Even Mom was no match for network capacity, with Verizon reporting a peak of more than 800 million calls on Mother's Day, its annual high traffic day—more than twice the amount as usual.

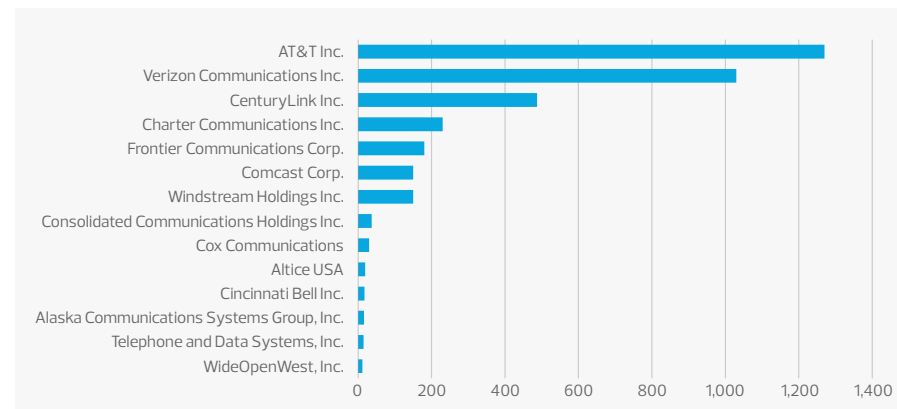
5G deployment is key to telecom sector growth

The uncertainty surrounding consumer behavior and enterprise vitality has not slowed the deployment and commitment to 5G from any of the leading U.S. wireless providers. All three (AT&T, Verizon and CenturyLink) have confirmed in recent earnings calls that their capital commitments and deployment schedules are on or ahead of schedule for 2020 goals.

The 5G opportunity for each of these carriers is too great to risk falling behind in the race to bring this technology to market and remains a key strategy for this calendar year. According to a Bloomberg analysis of company filings, a projected capital expenditure of \$48 billion will be spent on 5G network build-outs this year, a small reduction to 2019 spending for these companies.

U.S. fiber route miles

THOUSANDS



Source: S&P Global Market Intelligence

AT&T and Verizon, the two largest U.S. carriers, continued laying the groundwork for a broad 5G rollout to come later in 2020 by installing 84,000 (54,000 and 30,000, respectively) route miles of fiber during 2019, according to research from S&P Global. The network of fiber combined with the build-out of additional and upgraded cell sites will bring the full set of capabilities promised by 5G to consumers and enterprises before year-end.

These two companies together hold 63% of the combined 3.6 million miles of fiber in the United States and are positioned very well to deliver this transformative new technology across the country before year-end.

As an example of Verizon's dedication to bringing 5G-focused solutions to market, it acquired BlueJeans in the midst of the COVID-19 pandemic. BlueJeans is a videoconferencing platform committed to the security and privacy requirements of the financial services, education and health care sectors.

Verizon CEO Hans Vestberg commented, "We've added BlueJeans as a recent investment into our Verizon Business Group, where we see a great opportunity, where we now add their capabilities both to our existing distribution, but also for the future of 5G, where we think that our video capability will be extremely important."

Telecom remains relatively insulated, for the time being, from COVID-19 impacts

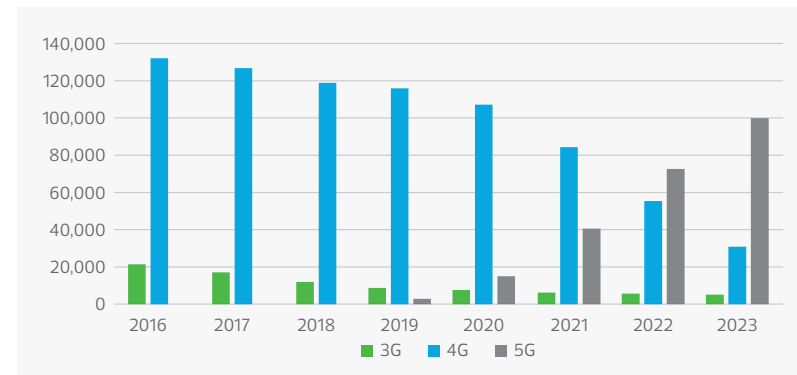
In the near term, telecom service providers remain mostly insulated from COVID-19 losses. Service revenue from wired and wireless providers to both consumers and enterprises should experience an increase from the need to remain connected to friends, family and the workplace, as a return to full office capacity will be slow and extend into the remainder of the year across the country.

However, headwinds may be around the corner with the stress of rising unemployment and loss of business revenue, and the expiration of government support. These factors may lead to a number of consumers who can no longer afford expensive unlimited plans, and small and medium-sized businesses that do not survive the extended lockdowns and the resulting loss of revenue.

On the bright side, despite the global pandemic and increasing geopolitical risks, research from Ovum Intelligence points to strong consumer demand for

the next generation of wireless devices with 5G capabilities. Expectations for 5G device sales in the United States are expected to grow from nearly 15 million in 2020 to just shy of 100 million in 2023. 5G devices will demand a premium sales price and a premium monthly subscription service which we expect will provide a solid revenue growth opportunity for telecom service providers across the country.

U.S. cellular device unit sales—the shift to 5G



Source: Ovum Intelligence; Informa

Major advertising revenue headwinds ahead for TV and radio broadcasting

The TV and radio industries grappled with challenges in the first part of this year as the coronavirus pandemic led to the cancellation of live sports and swift declines in advertisers' marketing budgets. Looking ahead, broadcasters should brace for further declines in ad revenue, even when accounting for possible boosts from auto dealership and political campaign advertisements.

Year-over-year advertising revenue for broadcasters is falling in the second quarter due to tighter marketing budgets and very few live sports events. However, there was a large uptick in local news viewership as COVID-19 gripped the country and Americans sought out crucial information about the pandemic. Daytime television viewership rose 31.3% year-over-year, according to Comscore, and viewership for local and financial news nearly doubled. Record political advertising revenue in the first quarter of 2020 also helped soften the blow from overall declines.

Still, those upticks can only help so much in the face of major companies such as Pepsi and General Motors pulling TV ad commitments and the loss of major sporting events. According to Kagan Media Research, ad agencies expect Q2 revenues to drop below 2009 levels and estimated roughly \$1 billion to \$1.5 billion of ad commitments to have been canceled for the third quarter.

The postponed 2020 Olympics would have brought in more than \$10 billion in advertising revenue with sponsorship deals and promotional events, according to sports market intelligence services, Sportcal. In addition, the cancellation of the NCAA's March Madness college basketball tournament resulted in \$1 billion in lost ad revenue.

A lack of new television content is expected to further affect ad revenue in the near term as new TV production is still on hold because of the pandemic. Sinclair Broadcast Group, for example, has projected a 15% decline in advertising revenue for the year.

There could be some lift in local advertising revenue in the second half of 2020, particularly from car dealerships. U.S. auto sales came to a near halt amid COVID-19, and dealerships will need to be aggressive in advertising in order to turn over lingering inventory. Retransmission agreements—which allow stations to receive fees when their programming is rebroadcast—may also [continue to help broadcasters in 2020](#), as retransmission revenue continues to grow.

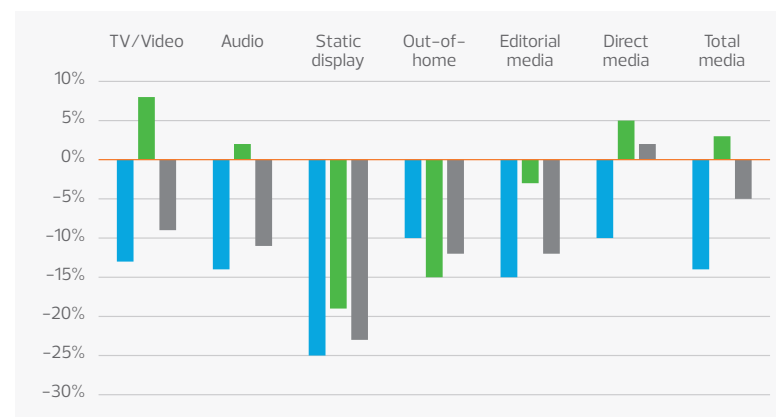
Digital ad revenue continues to be a bright spot, as more Americans have cut the cord during the pandemic, and traffic has increased on streaming platforms such as Apple TV, Roku and Chromecast. TV broadcasters should continue to focus on digital streaming agreements with such platforms, and consider developing their own streaming platforms to drive more viewership to their websites.

“People want entertainment; they want to be able to escape and connect, whether times are difficult or joyous.”

—Reed Hastings, Netflix CEO, April 21, 2020, First Quarter Earnings Release

U.S. media advertising breakdown

PERCENT CHANGE YEAR-OVER-YEAR



Source: Magna Global; RSM US LLP

Video gaming and esports, already growing in the United States, see major lift during pandemic

A rise in video gaming since pandemic shelter-in-place orders went into effect could be the wave the esports industry has been looking for to become a more widespread trend in the United States.

Until more recently, the growing popularity of esports had been most dramatic in Asian countries. The trend is now spreading more in Europe and North America. Even before COVID-19, video gaming and esports were on the rise; consumer spending in the industry as a percentage of total entertainment spending in the United States increased steadily between 2012 and 2019, according to Bloomberg.

Verizon's daily video game traffic has more than doubled since Americans began sheltering in place, according to Verizon data from early April, and that video game traffic increased more than video and web browsing. Week over week, Verizon's gaming traffic continued to grow, according to data from the company later in April.

Verizon network traffic data

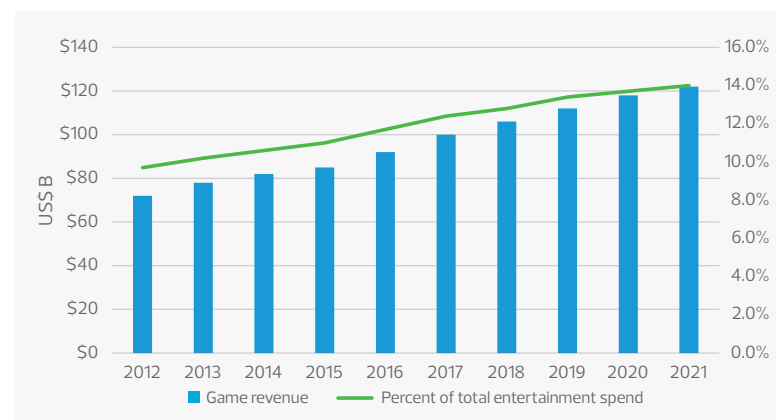
Verizon ISP traffic usage category	Increase compared to typical day	Growth rate change week-over-week (peak hour usage)
April 2, 2020		
Gaming	102%	2%
VPN	40%	4%
Video	30%	3%
Downloads	27%	-25%
Web	24%	0%
April 22, 2020		
Gaming	-1%	71%
VPN	5%	5%
Video	0%	26%
Downloads	-8%	56%
Web	2%	30%

Source: Verizon Network Report; RSM US LLP

The esports industry was already growing before the pandemic, exceeding \$1 billion in revenue in 2019 with year-over-year growth of 15.7%, according to market data from gaming and esports analytics company Newzoo. Just Fortnite and Dota alone, two popular online games, accumulated more than \$35 million in competition prize pools last year. Such lucrative payouts have attracted more gamers to enter the world of competitive video gaming, and the audience eager to watch through streaming platforms is getting bigger as well. As audiences grow, ad revenue and sponsorships follow.

And money is far from the only driver increasing gaming. Live sports have largely been halted because of the pandemic, so gamers and even professional athletes have turned to video game sports such as NBA2K20, Madden NFL 20 and MLB The Show 20 in the meantime. In April, professional NBA players participated in a video game tournament, which [aired on ESPN](#).

Game revenue compared against percent of total entertainment spend



Source: Bloomberg; RSM US LLP

More acquisitions expected

With the popularity and increase in valuation of video gaming and esports, analysts expect the industry to attract more private equity, venture capital funding and targeted acquisitions in the near term. Social and mobile gaming company Zynga—which owns FarmVille and Words with Friends, among others—made waves in early June with the [news that it will acquire Istanbul-based Peak Games](#) for \$1.8 billion. The deal represents the first billion-dollar-plus exit for a startup out of Turkey, according to news site TechCrunch.

Within the gaming industry, mobile gaming is expected to be the fastest-growing segment overall through 2023, [according to Newzoo](#). Mobile game revenue in 2020 is expected to account for nearly half of the \$160 billion in global gaming industry revenue.

Also, large video game companies such as Tencent, Activision Blizzard, Sony, Nintendo and Electronic Arts are in a prime position to capitalize on the growing popularity of esports. Hardware sales from Sony and Nintendo are expected to rise significantly during this economic crisis, much like they did during the Great Recession. ■

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For media inquiries, please contact Terri Andrews, national public relations director, +1 980 233 4710 or terri.andrews@rsmus.com.

For more information on RSM thought leadership, please contact Deborah Cohen, thought leadership director, +1 312 634 3975 or deborah.cohen@rsmus.com.



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