THE REAL ECONOMY

INDUSTRY OUTLOOK

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FALL 2020

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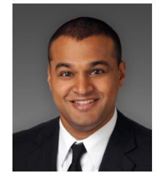

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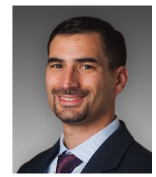

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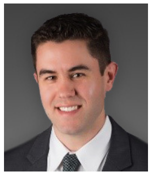

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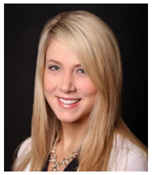

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These are challenging times. Now, more than ever, data-driven analysis can help to mitigate the uncertainty created by the pandemic's exogenous shock to the global economy.

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 effect 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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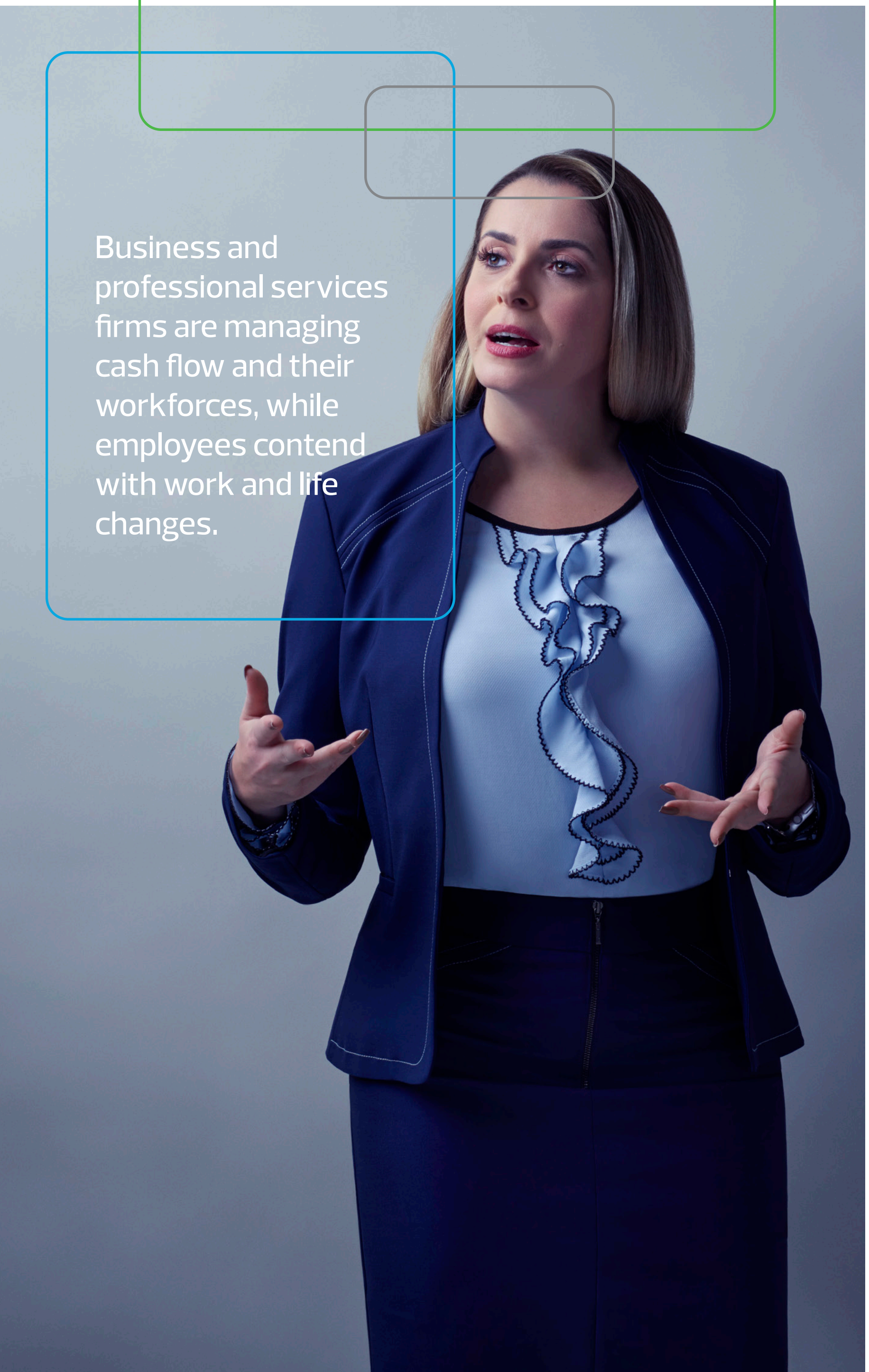


INDUSTRY OUTLOOK:

BUSINESS AND PROFESSIONAL SERVICES

BY MICHAEL GERLACH AND STEPHANIE JOHNSON

BUSINESS AND PROFESSIONAL SERVICES (BPS) firms continue to delicately walk the tightrope of managing cash flow and maintaining their workforces. BPS firms borrowed more Paycheck Protection Program (PPP) loans through June than all but four segments of the U.S. economy (construction, retail, hospitals/health care systems and restaurants). BPS companies that provide recurring or long-term, contractual, project-based services are likely seeing a delayed impact from COVID-19 as project backlogs run their course. Meanwhile, companies providing short-duration, transactional services have felt the effects in real time. The trajectory of the U.S. real economy hinges on the services industry and its ability to continue to employ many Americans.

This outlook centers on three specific subsectors within BPS: law firms, government contractors and workforce solutions. (Workforce solutions are inclusive of staffing solutions, executive search, payroll processing and human capital management.)

KEY TAKEAWAYS

- A drop in legal billings could lead to unintended operating tactics in the fourth quarter.
- The ongoing shift to remote work has broad, long-lasting ramifications for law firms.
- The M&A environment for government contractors has come back to life.
- Uncertainty about the pandemic and election exacerbates the wait for 2021 budget appropriations.
- Human capital management is becoming crucial for BPS companies' operations.
- The pandemic and weakened labor market present several problems for staffing services.

> "It certainly has become more about how do you handle remote. The investments we've made in online, in our SaaS (software-as-a-service) products and mobility in all of our designs have been very helpful because you will still see us as an HR company, but it becomes much more all-encompassing, and that definition of HR gets broader and broader."
>
> Martin Mucci, Paychex president and CEO, August 13 fourth-quarter earnings call

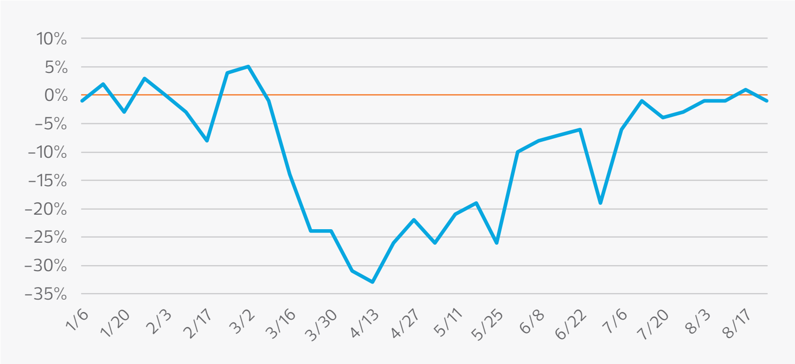
LAW FIRMS

The law firm sector has faced many challenges since the onset of COVID-19. From bookings decreasing drastically, to partner compensation cutbacks, to figuring out how to manage their summer internship programs, firm leaders have been on the edge of their seats since March, asking: What's next? However, as the U.S. economy continues to recover, the sector has begun to edge closer to pre-COVID-19 operations.

Bookings and billings

A recent survey by software company Clio showed that law firm bookings rallied over the summer to a level almost equal to bookings in January of this year.

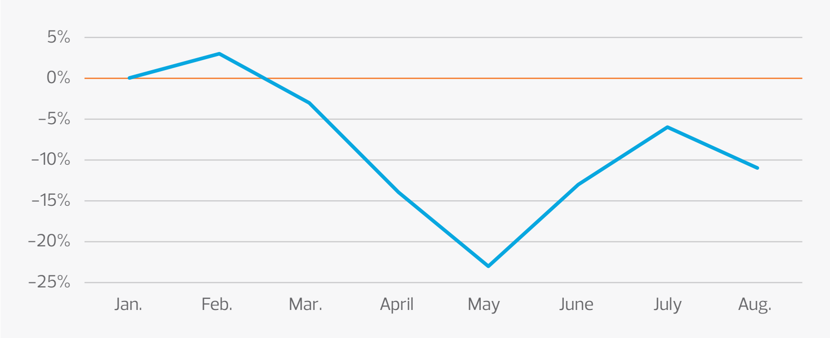
New U.S. legal bookings



Source: Clio

But what does this mean for law firm leadership as they guide their firms into the ever-critical final quarter of the calendar year? In the same study, Clio identified that while bookings are on the rise, associated billings have begun to trend downward again entering the fourth quarter. This could simply be a matter of timing, as new bookings take time to come to close or be billed out by billing attorneys. But it is worth keeping an eye on as cash collections ramp up in the fourth quarter.

New legal billings associated with new U.S. bookings



Source: Clio

Law firm leaders historically look to cash collections during the fourth quarter to determine how successful a year was, and a drop in billings can lead to unintended operating tactics in December. Billing attorneys, under pressure to collect outstanding fees from their largest clients, might be urged to offer large discounts on fees in December if it guarantees they can collect. This, in turn, would mean a drop in top-line revenues for the firm, while allowing partner bonuses and distributions to be paid out in January.

MIDDLE MARKET INSIGHT

Senior partners' need to bill hours is eroding the leverage that many law firms had created by allowing their less experienced attorneys to build experience and skills from more challenging legal work. This will come back to bite them.

Real estate

This year continues to challenge how traditional law has been practiced, a test that promises to last through the end of the pandemic. While many of the Am Law 100 and 200 firms continue to operate in their virtual offices, leaders are beginning to ask themselves if this could be what a firm looks like moving forward. Many firms under lease for their current palatial offices are entering conversations with landlords to discuss future options for reducing square footage per attorney. Internal survey results from many firms have shown that many of their attorneys enjoy the virtual environment and the flexibility it offers them in their everyday lives outside of law. This may be a difficult concept to grasp for many experienced partners in these firms, but the need and desire to have a 300-square-foot office has been replaced by the desire of many attorneys at big firms to work remotely.

Hoarding by partners

The Thomson Reuters Peer Monitor Index measured the second-quarter downturn in demand for legal services at 5.9%, while the average bill rate increased 5.2%. This means that more experienced attorneys with higher billing rates are performing the work. Senior partners' need to bill hours is eroding the leverage that many law firms had created by allowing their less experienced attorneys to build experience and skills from more challenging legal work. This will come back to bite them.

Following the ways in which the Great Recession disrupted the legal profession, many experts noted that entire classes of attorneys lost valuable experience in their careers. This led to those classes looking for opportunities outside of big law firms, which resulted in a group of lost attorneys within. While the pandemic has not been as devastating to the legal profession as the Great Recession was, and while law firm leaders have learned from some of their swift decisions a decade ago, firms are still dealing with the potential of losing valuable leverage as less experienced attorneys bear the brunt of the pandemic.

GOVERNMENT CONTRACTING

While the federal government is a reliable customer to serve amid a raging pandemic, the government contracting community was not fully immune to COVID-19 disruptions during the summer. Contractors active in the intelligence community relied on federal reimbursement through the CARES Act, while those less affected reignited discussions around acquisitions and growth.

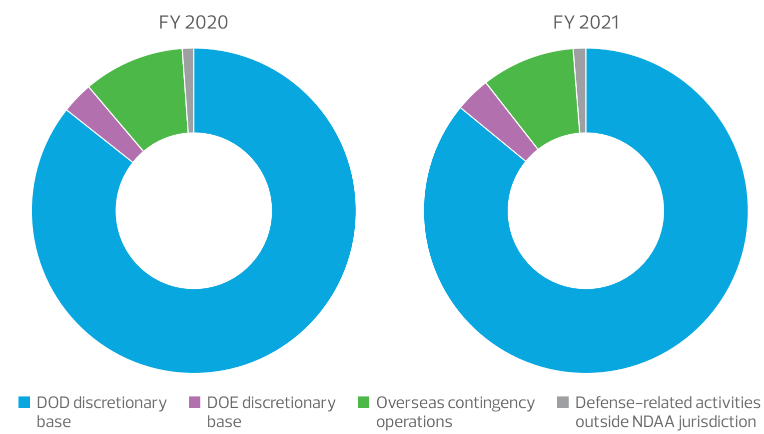
The House of Representatives and Senate each passed their versions of the fiscal year 2021 National Defense Authorization Act (NDAA), but budget reconciliation and budget appropriations will come later in the year, heavily influenced by government officials elected in November. All eyes are on the election, as contractors consider policy and investment priorities under a Trump or Biden presidency.

Budget appropriations and the National Defense Authorization Act

The Senate on July 23 passed its version of the NDAA for fiscal 2021, which began Oct. 1. The bill provides a total of $740.5 billion for national defense programs, including $636.4 billion allocated to the Department of Defense (DoD) and $25.9 billion to Department of Energy (DoE) programs related to national security.

Total funding and allocations among agencies for fiscal 2021 are overwhelmingly consistent with those in fiscal 2020.

NDAA funding allocation



Source: U.S. Senate Committee on Armed Services

"Usually when there's change, there is change for employers. Employers are an instrument of policy of the government. It's how public policy gets effectuated, whether it's through tax or all the various safety policies [such as] these changes in leave policies now to help manage through the health crisis. And so that's [an] incredible opportunity for us to help our clients."

Carlos Rodriguez, ADP president and CEO, July 29 fourth-quarter earnings call

Per the Senate Armed Services Committee, the four priorities of the 2021 NDAA include supporting our troops, their families and the civilian workforce; charting a course for the National Defense Strategy now and into the future; building a modern, innovative and lethal force; and reshaping Pentagon management to maximize performance, accountability and lethality.

The House also passed its version of the bill (H.R. 6395) on July 21. The bill would become law after the House of Representatives and Senate prepare a unified bill in conference. The timeline for passing the 2021 NDAA is slipping, though, as the federal government continues to prioritize its COVID-19 response over passing budget appropriation bills. Congress' calendar and priorities will result in the NDAA (and other budget appropriation bills) not being passed until after the November election or January inauguration. We entered fiscal 2021 under a continuing resolution that maintains spending at levels equal to the prior fiscal year. It is not uncommon for the government fiscal year to begin without fiscal year budget appropriations in place, as continuing resolutions have become commonplace.

CARES Act section 3610 relief

The primary concern of contractors during the pandemic is implementing section 3610 of the CARES Act, which is intended to provide reimbursement for contractors who cannot work in light of the pandemic but must be kept in a ready state to attend to national security needs. This is especially relevant in the intelligence community, where information security is of utmost importance and the workforce is cleared and highly skilled. The Professional Services Council, an industry leader and advocate for government contractors in Washington, submitted a letter to Congress on July 15 and again on Sept. 10, requesting the extension of section 3610 past Sept. 30. Both letters highlighted the negative consequences the absence of an extension would have on the industry, economy and national security. The government answered by extending section 3610 through Dec. 11, 2020, consistent with the rest of the fiscal 2021 continuing resolution package passed on Sept. 30 (H.R. 8337).

Paycheck Protection Program loan forgiveness

PPP loan forgiveness is especially complicated for federal contractors. Guidance and interpretations of loan forgiveness continue to evolve, but federal guidance to date suggests the U.S. government believes it is entitled to a credit to the extent the company participates in contract vehicles subject to Federal Acquisition Regulation part 31. Administering a credit requires a nuanced analysis that considers employee compensation, contract structure, labor distribution and other factors. This leaves contractors considering what PPP funds mean to their existing and future contracts.

MIDDLE MARKET INSIGHT

This may be a difficult concept to grasp for many experienced law firm partners, but the need and desire to have a 300-square-foot office has been replaced by the desire of many attorneys at big firms to work remotely.

"In terms of capital deployment, M&A remains our top priority."

John Mengucci, President and CEO, CACI, August 13 fourth-quarter earnings call

Mergers and acquisitions market warming up

The M&A pipeline for nearly all industry sectors dried up in March and April in light of tightened debt markets during the height of COVID-19 uncertainty. The government contracting M&A pipeline is beginning to replenish as the trend of industry consolidation continues, as founders look for liquidity and as large public companies continue to seek growth, added capabilities and access to a diverse set of government end customers.

Top government services executives highlighted their commitment to acquisition activity as a key strategic driver of growth going forward. Strategic M&A was noted as a near-term strategic initiative in recent earnings calls for CACI, ManTech, Vectrus, PAE, Perspecta, Parsons, Booz Allen Hamilton and others.

Specifically, CACI President and CEO John Mengucci said: "In terms of capital deployment, M&A remains our top priority." PAE President and CEO John Heller acknowledged a "dramatic shift" since July, as they have witnessed many opportunities come to market. ManTech President and CEO Kevin Phillips said his company is "actively reviewing M&A opportunities, as we have seen the market return."

Meanwhile, the middle market government services ecosystem also experienced an active M&A environment this summer. A sampling of noteworthy late summer strategic deals include KBR's purchase of Centauri LLC, Noblis' purchase of Inductive Minds and T-Rex Solutions' purchase of Zot.

Financial buyers such as Arlington Capital Partners, AE Industrial Partners, Carlyle Group, DC Capital Partners, IMB Partners and Sagewind Capital were also active.

Even more active than the government services M&A pipeline was the aerospace and defense marketplace. There was a flurry of transactions in the aerospace and defense products and manufacturing space (such as CACI's purchase of Ascent Vision Technologies in August). Both strategic and financial buyers remain positioned and ready for an increase in assets on the market as the economic recovery continues.

The eventual economic reckoning associated with the trillions of relief and stimulus dollars spent this calendar year will likely contribute to an active fourth quarter for M&A. A reduction in federal spending may be on the horizon in an effort to reduce the rapidly expanding federal deficit. Additionally, the likelihood of higher taxes (especially capital gains) to increase federal and state revenues may be the impetus to get deals done sooner rather than later.

WORKFORCE SOLUTIONS

Staffing married to employment

According to IBISWorld, employment and recruiting agencies in the United States annually generate approximately $24.2 billion in revenue, $1.6 billion in profit (6.7% margin) and $11.9 billion in wages. The industry grew approximately 4.0% annually from 2014 through 2019. Prior to the pandemic, the industry was expected to grow only 0.2% between 2019 and 2024. Sector growth is driven inversely by the nation's unemployment rate, which skyrocketed to more than 14% in April and was 8.4% in August, according to the Bureau of Labor Statistics.

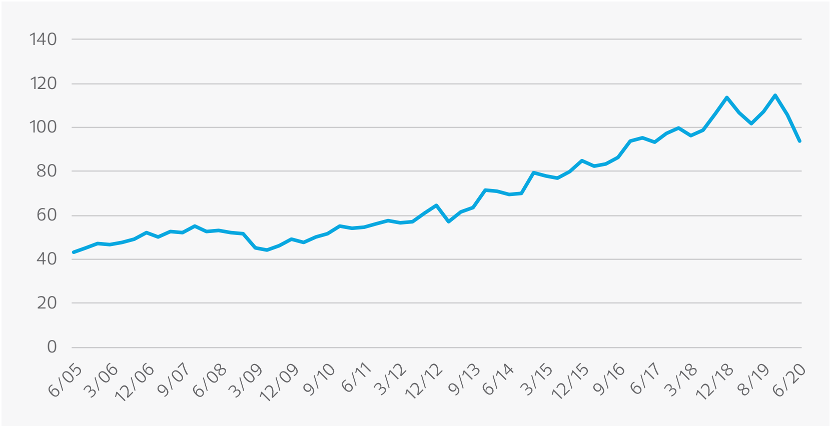
MIDDLE MARKET INSIGHT

All eyes are on the election, as contractors consider policy and investment priorities under a Trump or Biden presidency.

Demand for traditional executive search and staffing services correlates tightly with the national rate of employment. Strong labor markets increase the need for placement services as the competition for talent heats up, while a weakening labor market is problematic for industry players. In addition, businesses tend to hesitate to invest in permanent hires during periods of significant technological advancement or structural change in an industry. Uncertainty around permanent job loss, and the necessity for labor force retraining and restructuring after the pandemic, results in additional hesitation.

The U.S. Department of Commerce Employment Services Index, which measures quarterly sales for the sector, hit a 15-year high in the fourth quarter of 2019. Sales decreased in the first and second quarters of this year, aligning with levels experienced in the second quarter of 2017. We expect further decline in third-quarter data as U.S. businesses continue to weather the COVID-19 storm with lean workforces.

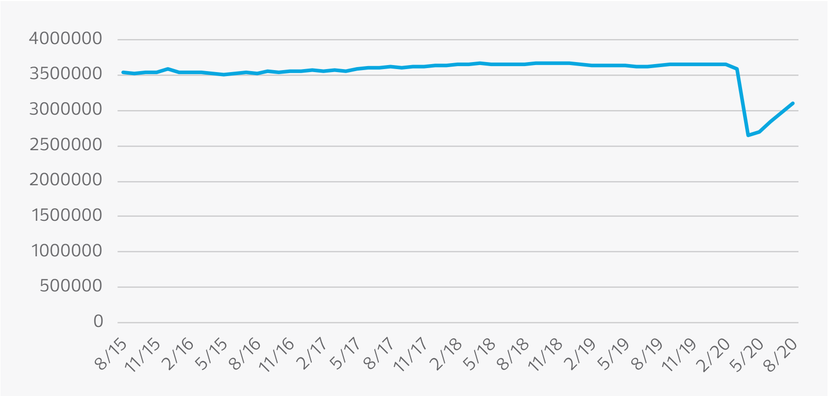
U.S. Department of Commerce service employment services index



Source: Bloomberg; U.S. Census Bureau

The number of U.S. employees on employment services payrolls remained consistent over the last five years (3.51 million to 3.67 million) until the COVID-19 outbreak in March. Total employment bottomed at 2.64 million in April, approximately 870,000 less than the lowest period over the last five years. Employment has gradually increased since, but it remains below pre-pandemic levels.

U.S. employees on nonfarm employment services payrolls (seasonally adjusted)



Source: Bloomberg; Bureau of Labor Statistics

Demand for workforce solutions is also driven by the number of businesses operating in the United States, as every new business must establish a workforce. Companies going out of business due to pandemic lockdowns, as well as shifts in consumer spending, place additional downward pressure on demand. We expect continued headwinds in the employment services sector as government assistance wanes and the consequences of the recession settle in.

Technology disrupting the traditional staffing model

Technology-driven employment platforms, such as LinkedIn and Monster, continue to be disruptors in the employment services sector. It can be difficult for traditional staffing firms to compete with the network effect that stems from widespread adoption of these platforms.

Per the LinkedIn August Workforce Report, more than 169 million workers in the United States have LinkedIn profiles; more than 20,000 companies in the United States use LinkedIn to recruit, and more than 3 million jobs are posted on LinkedIn in the United States every month. However, even LinkedIn was not immune to the challenges caused by the pandemic. The company laid off 960 individuals (roughly 6.0% of its workforce) as communicated in a message to employees in July.

MIDDLE MARKET INSIGHT

One bright spot for payroll processing service providers has been the added complexity associated with payroll tax deferral opportunities, PPP loans and related forgiveness calculations, and other government regulations that accompany relief initiatives.

Additionally, data security is a key risk for businesses with access to large volumes of user data. Monster was notified in September 2019 of a data breach that occurred between 2014 and 2017 when a web server storing user resumes was exposed by a third party. Therefore, technology has the ability to continue to disrupt the industry, but only if data security is prioritized.

Payroll processing in a similar dilemma

Like staffing and executive search firms, demand for payroll processing services is driven by national levels of employment. Leaner workforces and hiring freezes instituted in response to the pandemic have stymied growth.

However, one bright spot for payroll processing service providers has been the added complexity associated with payroll tax deferral opportunities, PPP loans and related forgiveness calculations, and other government regulations that accompany relief initiatives. Solvent firms taking advantage of these benefits will lean on their service providers to help them navigate the complexities.

Payroll service providers have also begun to look toward the election as an opportunity to expand service offerings in light of the pandemic. Carlos Rodriguez, ADP president and CEO, stated as much in ADP's fourth-quarter (fiscal June 30) earnings call with analysts. "We're apolitical as a company. But usually when there's change, there is change for employers," he said. "Employers are an instrument of policy of the government. It's how public policy gets effectuated, whether it's through tax or all the various safety policies [such as] these changes in leave policies now to help manage through the health crisis. And so that's [an] incredible opportunity for us to help our clients. And when there's opportunity to help clients, that's opportunity to sell new business as well."

As U.S. lawmakers implement various initiatives to support and bolster the economic recovery, payroll processing providers will be positioned to help their clients navigate the nuance while also reclaiming growth opportunity from increased employment levels.

New workforce opportunities on the horizon

Human capital management (HCM) is becoming crucial to operations as companies assess how their employees are faring in a remote environment and look to change benefit offerings. By combining cloud-based, next-generation technology and data-driven insights, HCM experts are providing flexible work plans, global compliance and adaptable technology solutions in an effort to build, maintain and equip the best teams for the job with the most suitable people across borders. While investment in HCM may be difficult in the near term due to depressed revenues, firms with enough cash flow will invest to better position themselves for the future.

Paychex President and CEO Martin Mucci discussed the fluid environment during Paychex's recent second-quarter earnings call. Success has begun to center on handling remote work, Mucci said, trumpeting Paychex's investments in online services, software as a service and mobility in all of the company's designs. "You will still see us as a human resources company, but it becomes much more all-encompassing, and that definition of HR gets broader and broader." In the context of Paychex's widening range of services, Mucci forecasted an increased role for data analytics in HR to help clients and people make decisions.

Finally, as U.S. and international communities continue to grapple with the social challenges brought about this year, companies are prioritizing diversity and inclusion (D&I) leadership training, policy enhancements, and their ability to measure impact and meaningful change. For providers that had already begun complementing traditional workforce solutions with HCM consulting, this has allowed the opportunity to reposition underutilized resources by shifting their efforts towards D&I opportunities.

Mark Harris, chief financial officer at Heidrick & Struggles, recently detailed the expectation within his worldwide executive search firm. "With the distributed workforce due to COVID and the sharpened lens on racial and social disparities," he said, "we expect our clients will need more support to help them keep employees engaged around purpose and values, create and maintain inclusive cultures, and understand leadership capabilities."

INDUSTRY OUTLOOK:

CONSUMER PRODUCTS

BY SETH BACON, PETER CADIGAN, KAREN GALIVAN AND CHRISTOPHER SHAKER

AS CONSUMER PRODUCTS COMPANIES emerge from the cloud of COVID-19, many businesses continue to address existential challenges from declining foot traffic and decreased sales to supply chain disruptions and margin pressures. Companies that embrace innovation and digital strategies, evaluate consumer preferences and leverage multichannel strategies to connect with their customers will look to survive and perhaps thrive in 2021.

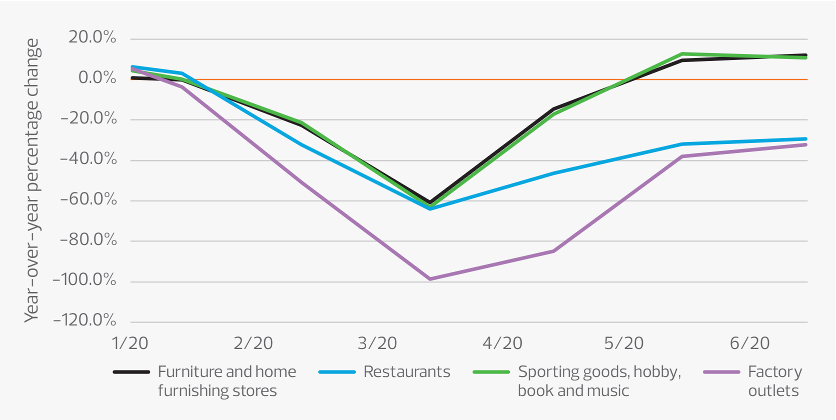
KEY TAKEAWAYS

- Retail bankruptcies will continue, but this strategy could address debt burden and provide access to growth capital.
- The fallout from a decline in traffic coupled with significant margin pressures will likely mean significant reorganization in the restaurant sector.
- Digital commerce remains imperative for consumer products sectors.
- Rapid shifts in consumer preferences provide further fuel for mergers and acquisitions in the beauty industry.
- Innovation is key for food and beverage companies regarding products, packaging and safety measures.
- Across the entire consumer products industry, digital transformation continues to be an important strategic effort.

RETAIL

Many headlines have highlighted the return of retail sales to pre-COVID-19 levels, but the reality, especially in the middle market, is that there is great variation by sector. Restaurants, factory outlets and many mall-based retailers are still nowhere near their pre-pandemic sales figures, while some sectors such as furniture and home furnishings, and sporting goods, have seen a significant recovery in the summer months. The outlook heading into the holiday season and the winter months for many sectors will depend heavily upon an effective virus treatment as well as the timeline for a vaccine.

Sector same-store sales growth



Source: Bloomberg Intelligence

In most of the U.S., restaurants have survived, albeit with severely depressed margins, by expanding their outdoor seating to attract diners who are not yet comfortable dining indoors. Consumers have also ventured to brick and mortar retail locations, either to shop in stores that have been retrofitted for COVID-19 safety, or to pick up items they ordered online. The summer weather, coupled with outdoor activities for kids, had American consumers leaving the house more frequently than they likely will once the snowy winter months arrive.

Retail bankruptcies to continue, but it's not all bad

This holiday season, finding a parking space at the nearest shopping mall will not be a problem. The bankruptcies and store closures thus far in 2020 have been heavily skewed toward mall-based retailers. The impact of these closures goes beyond the stores themselves as many of the closures, such as Neiman Marcus and J.C. Penney, were mall anchors. These store closures negatively affect overall foot traffic in the malls, and consequently, other mall retailers. As a result, retail bankruptcies will continue in the fourth quarter and early in 2021.

While some of the bankruptcies in 2020 saw stores closing their doors for good, bankruptcy restructurings can be an opportunity for retailers to emerge and thrive in the longer term. There are two major challenges that many retailers face that can be addressed through a successful restructuring.

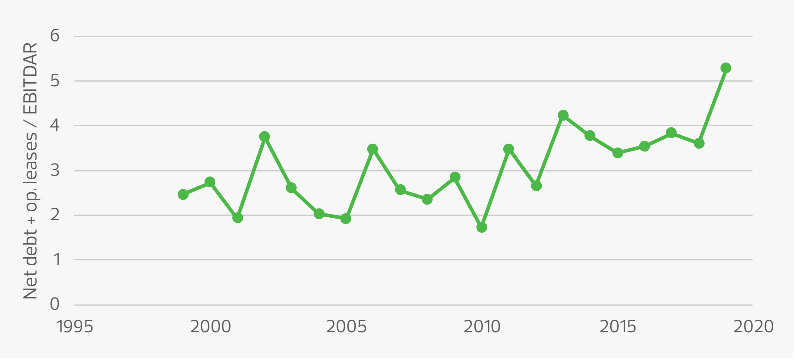
Debt burden

Prior to the digital era, growth in retail meant opening new brick and mortar locations. Consequently, many middle market retailers have carried significant debt on their balance sheets. It's common practice in the retail ecosystem for maturing debt to be refinanced to avoid balloon payments in an industry where cash flow is critical. Bankruptcy restructuring can give retailers the opportunity to adjust their leverage model and right size their balance sheets to emerge with a focus on optimizing their operating model to succeed through the digital evolution.

Digital evolution

It's no secret that the retail operating model has been changing for some time now, and the COVID-19 pandemic has accelerated the shift to multichannel retail. Many traditional retailers, especially those in the middle market, have operating models, technology and physical footprints that are not optimized for the rapid changes to the way consumers shop and purchase in today's retail ecosystem. According to the recent RSM Digital Transformation Survey, some of the largest barriers are access to capital (see debt burden, previously) and contractual obligations. A successful bankruptcy restructuring can help give retailers debt relief, access to growth capital and an opportunity to terminate long-term leases that may be in undesirable locations or that do not meet the ideal footprint for a multichannel operating model.

Retailers are highly leveraged



Source: Bloomberg Intelligence

THE RESTAURANT SECTOR WILL BE GREATLY AFFECTED BY HOW WE'RE ABLE TO MANAGE NEW CORONAVIRUS CASES, AND MORE IMPORTANTLY, HOW THOSE NUMBERS AFFECT THE COMFORT LEVEL OF AMERICANS TO DINE INDOORS.

Increased digital sales exacerbate last-mile pain

Entering Q4 and the holiday season, surveys from Coresight Research and others continue to suggest that consumer behavior adopted during the pandemic will continue. Retailers that invested in infrastructure to support the virtual customer experience will benefit the most in the upcoming holiday season as customer loyalty will be tested as consumers purchase and return more online.

Companies leveraging UPS, FedEx, and the United States Postal Service for last-mile delivery may see an increase in fees as carriers deal with increased volumes and cost increases and look to recoup costs from larger shippers. One method that some companies are employing to combat this fee is to offer customers a discount for picking up in, or outside of, stores. During the pandemic, consumer adoption of buy online pick up in store (BOPIS) and curbside pickup has increased and should be considered by all retailers. In many cases, the changes to operations required to adopt these popular channels can be accomplished in a matter of weeks.

RESTAURANTS

Diners slowly returning?

The summer months saw more and more restaurants reopening after state-imposed restrictions forced many to close early in the pandemic. By the end of the second quarter, restaurants were allowed to operate in nearly all states, and in many cases, at or near full capacity. While overall traffic is still nowhere near pre-COVID-19 levels, many operators have been able to take advantage of improvised outdoor space to capitalize on pent-up demand from consumers eager to dine out after months of eating at home.

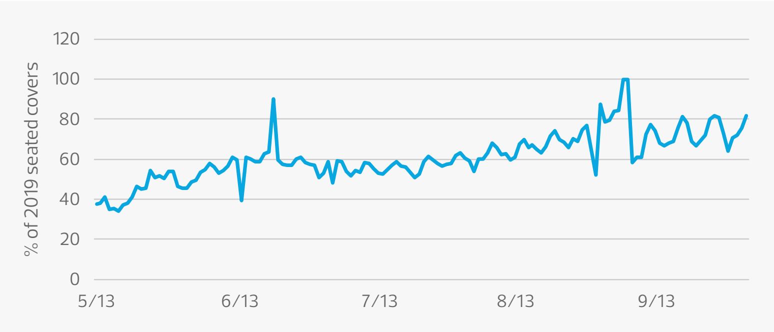
Assuming new case statistics remain stable and no additional restrictions are put in place, the restaurant sector will face its next challenge once the winter months approach: making customers comfortable dining indoors. There's some evidence that suggests that diners are becoming increasingly more comfortable.

The percent of overall seated diners compared to 2019 has fluctuated in the United States from month to month throughout the summer. However, those restaurants that never reopened, as well as the fact that restaurants opened at different times based upon state restrictions, distorts the pattern in the data. A better indication of the trend is the number of seated diners compared to 2019 for only those restaurants that are open in 2020, that were also open during the same time in 2019. This data demonstrates a slight upward trend for dine-in. For most of the United States, there's still time for outdoor dining well into the fall. Like many other sectors, the restaurant sector will be greatly affected by how we're able to manage new coronavirus cases and, more importantly, how those numbers affect the comfort level of Americans to dine indoors.

MIDDLE MARKET INSIGHT

While the pandemic had shoppers return to the center of the store, innovation will also be what keeps them coming back.

Seated diners (open restaurants only)



Source: Open Table

Margin pressures intensify

In the summer edition of The Real Economy: Industry Outlook, we forecasted the significant negative impact to margins resulting from the need for restaurants to reorganize physical space, explore options for outdoor dining and increase the frequency of cleaning efforts. The second quarter results demonstrated that this new operating model is simply not sustainable for the restaurant sector.

Significant degradation to restaurant KPIs

	Q2 2020	Q1 2020	Q2 2019	Q1 2019
Gross margin	14.8%	21.6%	27.1%	25.9%
SG&A rate	24.0%	21.5%	16.9%	15.7%
Operating margin	-8.4%	4.9%	11.2%	10.3%
EBITDA margin	5.1%	15.0%	19.9%	17.9%
Net income margin	-6.9%	3.5%	7.9%	7.6%

Source: Bloomberg

COVID-19 fallout creates opportunity

The fallout from a decline in traffic coupled with significant margin pressures will likely mean a significant reorganization in the restaurant sector. Many restaurants that have closed may not reopen, and some that have reopened may still close for good. The result is that many markets that were previously over-seated may have capacity for growth, creating opportunity for those that survive and for those looking to invest in new locations or concepts. Fine dining aside, the key to future success will be creating an asset-light operating model that caters to the consumers' insistence for on-demand food.

Thus far, despite the challenges faced by the sector, restaurant industry valuations have remained high within the S&P Supercomposite Restaurant Index. The successful operators within the index driving these strong valuations tend to have one thing in common: a strong digital platform and an operating model that supports off-premises dining. For privately held, middle market restaurants, the same is true. Those with that same combination will support stronger valuations. For those without, investors will price in the impact of the current recession and the cost associated with changing unit locations and layouts as well as the required technology investment and the increased complexity to managing the labor equation in the post-COVID-19 environment.

S&P Supercomposite Restaurant index

Source: Bloomberg; RSM US LLP

MIDDLE MARKET INSIGHT

While some of the bankruptcies in 2020 saw stores closing their doors for good, bankruptcy restructurings can be an opportunity for retailers to emerge and thrive in the longer term.

FOR COMPANIES TO STAY AHEAD, THEY NEED TO CONTINUE TO LEVERAGE INSIGHT FROM CONSUMER DATA TO MAKE STRATEGIC DECISIONS AROUND MERCHANDISING, PRICING AND PROMOTIONS.

FASHION, BEAUTY AND HOME

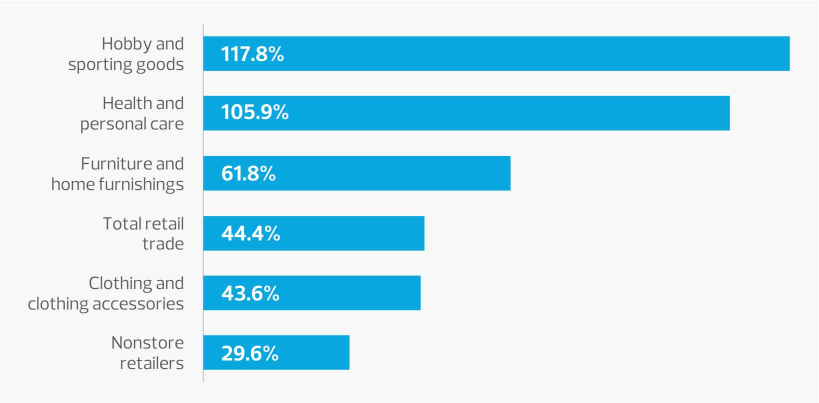
Digital commerce

For apparel companies, digital commerce has gone from a growing sales channel to a means of survival during the pandemic. The closure of department stores and other physical retail businesses—historically relied on to display, promote and sell products—forced fashion, beauty and home furnishings companies to adopt digital channels. Digital commerce continues to be imperative. According to Coresight Research's weekly COVID-19 survey, consumers continue to indicate they are buying more apparel online despite spending less in the category overall.

The accelerated shift toward e-commerce has been a windfall for marketplace giants like Amazon Fashion and Wayfair, with established footprints in the sector. They remain an important channel for many middle market fashion and home companies. However, those companies that have invested in their own direct-to-consumer online sales models have avoided margin eroding fees charged by the marketplaces. They've also benefited from controlling the end-to-end customer experience while gleaning valuable customer data and improving gross margins. In fact, e-commerce growth increased significantly during the second quarter overall and fashion, beauty and home branded companies outpaced that of nonstore retailers, commonly used as a proxy for e-commerce only. Those businesses that had preexisting direct-to-consumer platforms, or were able to pivot early on in the pandemic, saw success.

The online arena for fashion, beauty and home purchases is growing increasingly crowded, though. For companies to stay ahead, they need to continue to leverage insight from consumer data to make strategic decisions around merchandising, pricing and promotions. Adopting innovative technologies like augmented and virtual reality can help companies in the sector create unique, value-added customer experiences to stand out in a crowded field. As physical retailers reopen, it will become even more important to make sure the right inventory is in front of the right customers at a competitive price, whether online or in store.

Year-over-year e-commerce sales growth, Q2 2020 vs. Q2 2019

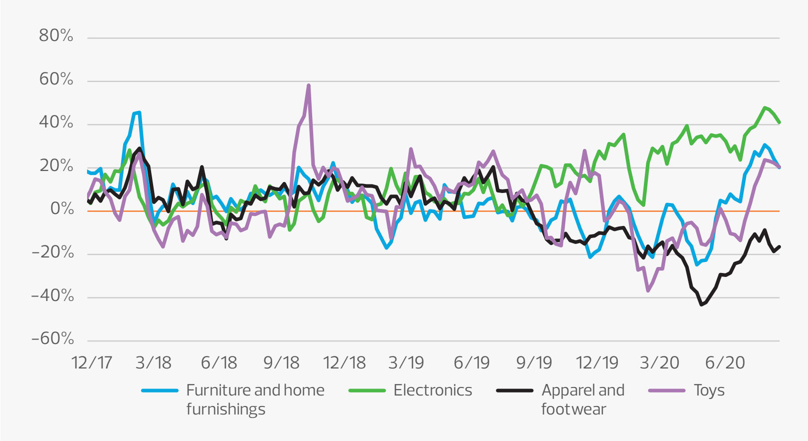


Source: U.S. Census Bureau

Skinny inventory model

Companies in the apparel sector are taking a lean approach to inventory levels heading into a critical holiday shopping season. According to U.S. Census Bureau data, during the onset of the pandemic apparel wholesalers and retailers saw inventory to sales ratios balloon to 6.0 and 18.9, respectively, as stores shuttered and consumers pulled back discretionary spending. Measures such as heavy discounting and selling through off-price channels have allowed some companies to manage inventory levels into the third quarter, while others are sitting on inventory waiting for next season. Looking forward, apparel businesses are mitigating their exposure even as the holiday season approaches. Through September, apparel imports are down 12% from the previous year while overall imports for other discretionary categories are up over 20%. The trend could signal a permanent change as apparel companies weigh the cost of carrying inventory and the potential lost sales and erosion of consumer experience from selling out of popular products too soon. Middle market apparel companies should look for digital tools that will allow them to better understand promotional effectiveness and leverage sell-through data to help them make merchandising decisions and to keep up with rapidly changing consumer preferences.

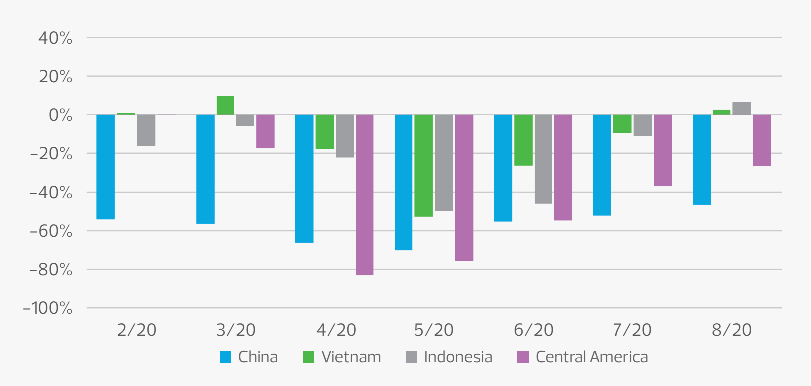
Year-over-year change (rolling four-week avg)



Source: Office of Textiles and Apparel

Apparel companies moving on from China

Year-over-year change in U.S. cotton apparel imports

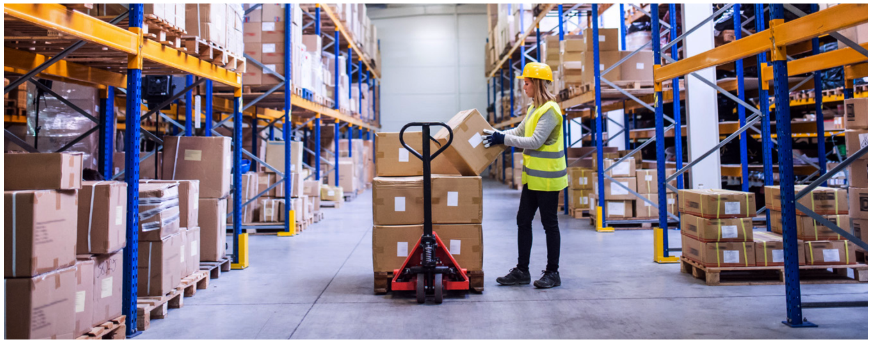


Source: IHS Markit, Bloomberg

Apparel companies continue to look for alternatives to producing in China. In recent years, apparel importers have had to deal with loose intellectual property laws, rising Chinese factory wages, punitive tariffs, supply chain disruptions from the onset of the coronavirus pandemic, and most recently, a potential ban on products using cotton made in the Xinjiang region in response to alleged forced labor and other human rights violations. It's estimated that the western Chinese autonomous region produces 80% of the country's cotton and 22% of the global market. Uncertainty surrounding the ban will only further slow imports coming from China as apparel companies seek alternative sourcing to achieve the same cost effectiveness in production without the risk.

MIDDLE MARKET INSIGHT

Middle market apparel companies should look for digital tools that will allow them to better understand promotional effectiveness and leverage sell-through data to help make merchandising decisions.



APPAREL BUSINESS LEADERS WILL NEED TO WEIGH RISKS, COSTS OF PRODUCTION AND POTENTIAL BENEFITS OF NIMBLE SUPPLY CHAINS WHEN MAKING SOURCING DECISIONS.

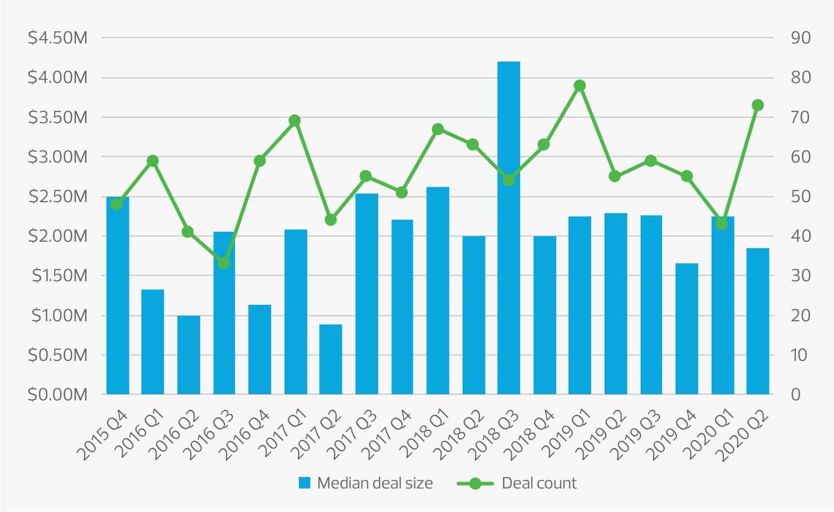
Apparel companies may find geopolitical turmoil even as they move supply chains to new locations. Many south and Southeast Asian countries are still recovering from the impact of COVID-19 and source raw materials such as cotton from China. Moving production closer to the end consumer is an attractive option that allows companies to cut down lead times and develop on-demand supply chains. However, as U.S. companies look to leverage closer-to-home alternatives, production capacity in places such as Central America and the Caribbean basin is still limited and carries higher labor costs. Apparel business leaders will need to weigh risks, costs of production and potential benefits of nimble supply chains when making sourcing decisions; they should also look for technology solutions to reduce the labor inputs and increase efficiency and effectiveness.

Changing consumer preferences fuel beauty mergers and acquisitions

While beauty sales have recovered sooner than other discretionary spending categories, the recovery has largely been affected by significant shifts in consumer behavior. The beauty industry has been relatively immune to past recessions, as consumers saw cosmetics as affordable splurges. The COVID-19 environment saw consumers spending less on color cosmetics and fragrances as they sheltered in place and scaled back going to public places like work, restaurants and events. The pullback was somewhat offset by growth in skincare, haircare and wellness categories as preferences shifted toward personal care. Beauty brands have also found success with DIY products as consumers are reluctant to go back to hair and nail salons and beauty counters, even as those businesses slowly reopen.

Rapid shifts in consumer preferences provide further fuel for mergers and acquisitions in the beauty industry. The big beauty players historically relied on mergers and acquisitions to optimize product offerings and round out brand portfolios. Those efforts will only increase as a new consumer landscape takes shape. These debt heavy conglomerates could look to divest low growth categories to free up capital to deploy on acquisitions of emerging brands. Lower multiples and deal sizes due to COVID-19-related distress or independent brands looking for capital to scale quickly should also contribute to accelerated deal activity in the beauty sector.

North American beauty deal activity



Source: PitchBook Data

INCREASED INNOVATION IN READY-MADE MEALS AND FROZEN FOOD ITEMS ALL WITH A FOCUS ON HEALTHIER INGREDIENTS AND CONVENIENCE ARE A GOOD STRATEGY TO ATTRACT CONSUMERS WHO ARE MORE CONCERNED WITH THE PANDEMIC THAN WITH THE ECONOMY.

FOOD AND BEVERAGE

Innovation

Whether consumers are shopping brick and mortar or online, their choices have been diminished. It is clear that food companies made strides in SKU rationalization to cut costs and improve efficiencies because of the pandemic. In order for companies to sustain sales growth, innovation is key. One way to increase consumer loyalty is through unique offerings. More consumers are preparing meals at home and according to the food industry association, FMI, roughly 39% plan on continuing to purchase food from restaurants less often because they believe it is healthier and cheaper. Sean Jafar, senior manager of syndicated research at Dataessential, suggests the main driver for manufacturers suppling the food service sector to gain market share is by satisfying cravings for foods that consumers have difficulty making at home.

While the pandemic had shoppers return to the center of the store, innovation will also be what keeps them coming back. Increased innovation in ready-made meals and frozen food items all with a focus on healthier ingredients and convenience are a good strategy to attract consumers who are much more concerned with the pandemic than with the economy. Furthermore, food safety is also ripe for innovation. Package innovation for shelf stability and freshness has been a trend even before the pandemic as consumers are clamoring for innovation in serving sizes and safe packaging. Single serve items that are safely wrapped offer consumers the sense of safety in what they are eating; the less their food has been handled, the safer they feel.

Safety and sustainability

Consumers still demand safe, sustainable products at a value-driven price. The U.S. Food and Drug Administration continually monitors and updates the nutrition facts label requirements based on nutrition research and scientific findings. They also continue to improve labeling requirements to make it easier for consumers to understand what is in their food, including clearer information on serving size, calories, fat and sugar. U.S. government regulations continue to shift the focus of food safety from reaction to prevention. Producers and manufacturers will need to continue to train employees and modernize facilities to prevent and respond to contamination outbreaks.

This summer the FDA launched another food initiative called the "New Era of Smarter Food Safety" to aid in compliance of the Food Safety Modernization Act. In their blueprint they outline four categories or "core elements" that they will endeavor to achieve in the next decade. The first is technology-enabled traceability so consumers can be protected from contaminated products and improve speed of identifying the source. The second core element is smarter tools and approaches for prevention and outbreak. In the FDA's FAQs they comment, "The FDA is looking to enhance and strengthen root cause analyses and predictive analytics" in the hopes of modifying practices to avoid identified risks. The third core element falls under new business models and retail food modernization. As e-commerce and advanced innovations in food production and delivery evolve, the FDA is working to make sure food continues to be safe. Finally, they are working to generate a food safety culture. As we have seen, especially in protein and other food manufacturing facilities, containing the COVID-19 virus outbreak proved difficult. This fourth core element aims to

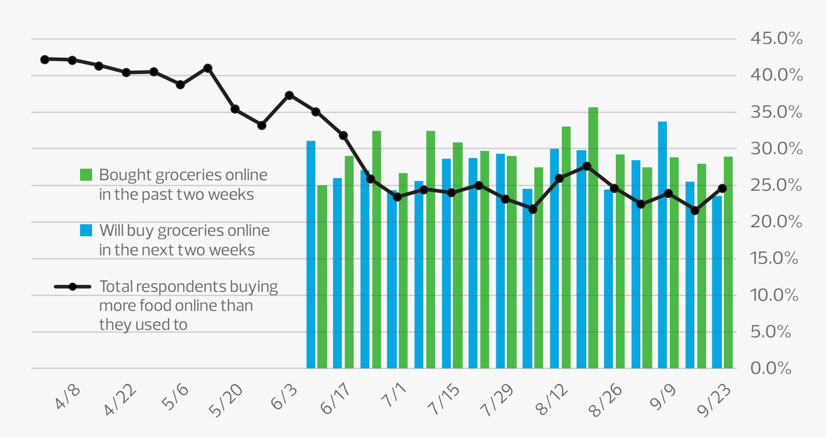
INVESTING IN THE RIGHT TECHNOLOGY TO REACH CUSTOMERS VIA OMNICHANNEL, QUICKLY REACT TO CHANGING CUSTOMER PREFERENCES, CONTROL INVENTORY AND OPTIMIZE SUPPLY CHAINS WILL BE CRITICAL IF COMPANIES WANT TO STAY COMPETITIVE.

improve not only safety of the food but the people who work in the facilities. Digital transformation will be key in keeping up not only with consumer demands, but also making it through the federal regulatory landscape.

Digital acceleration

There has been a great deal of discussion about consumers switching to online shopping from traditional brick and mortar because of the pandemic. As mentioned earlier and further supported by Coresight data, grocery purchases online have slowed, but remained in a consistent trend of an average of 30% to 40% of people surveyed reporting they will continue to purchase groceries online.

Weekly online grocery sales

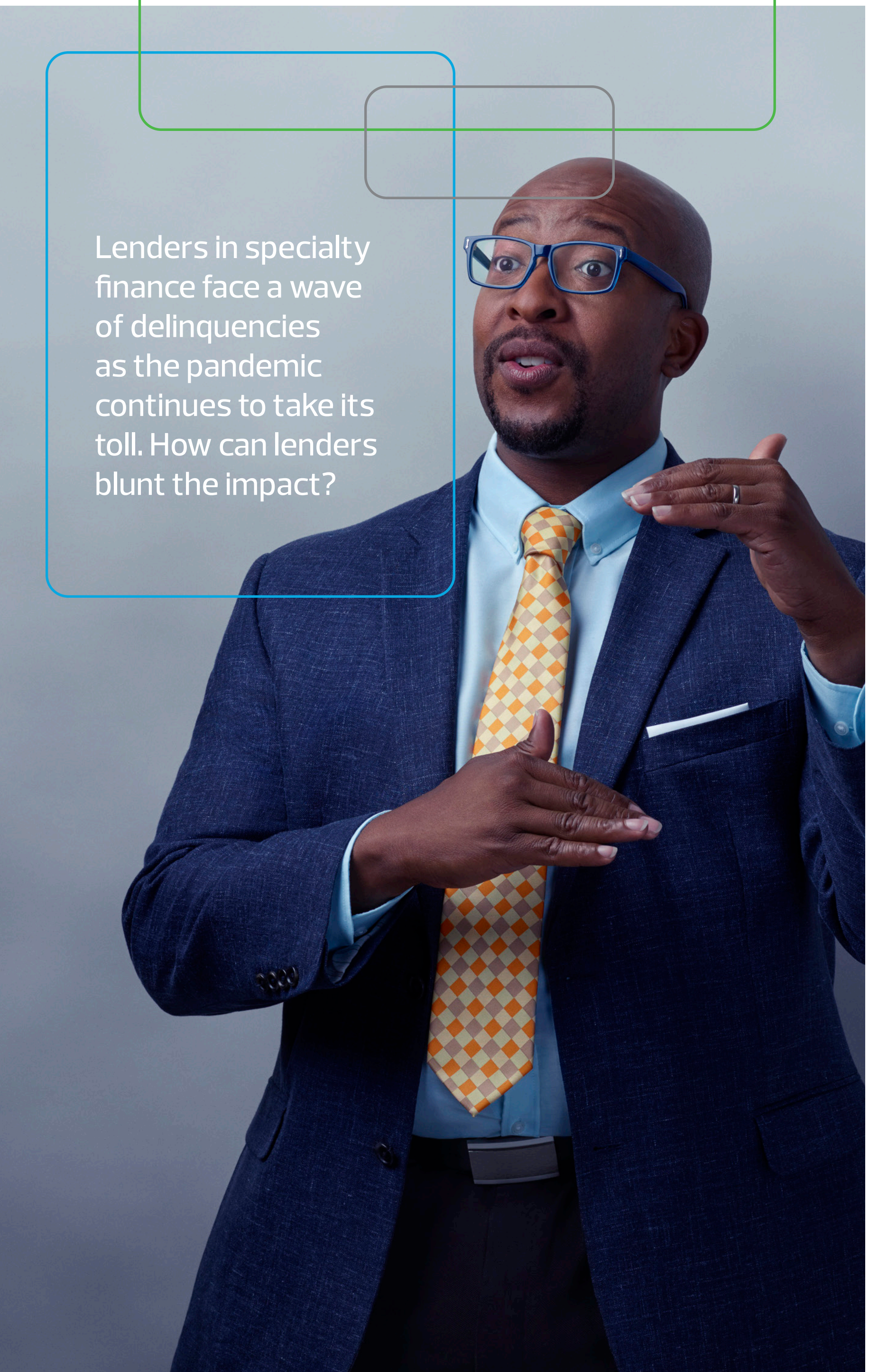


Source: Coresight

Middle market food and beverage manufacturers and distributors should continue to invest in e-commerce to sustain long-term growth. E-commerce as a term encapsulates a variety of important functions. Investing in the right technology to reach customers via omnichannel, quickly react to changing customer preferences, control inventory and optimize supply chains will be critical if companies want to stay competitive and be ready for any other unplanned disruptions. Larger consumer packaged food companies have been better able to handle supply chain disruptions as they have more sophisticated tools to handle inventory, thus making it difficult for smaller and midsized companies to compete. As the pandemic continues, we expect to see smaller bolt-on acquisitions that increase share in an existing category, expand a geographic footprint or increase sales in other categories.

MIDDLE MARKET INSIGHT

Fine dining aside, the key to future success will be creating an asset-light operating model that caters to consumers' insistence for on-demand food.



Lenders in specialty finance face a wave of delinquencies as the pandemic continues to take its toll. How can lenders blunt the impact?

INDUSTRY OUTLOOK:

FINANCIAL SERVICES

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

AS THE FINANCIAL SERVICES INDUSTRY continues to be upended by the coronavirus pandemic, businesses of all kinds are having to rethink their strategies. Banks are looking to technology to maintain margins in a low-interest rate environment. In venture capital, the traditional initial public offering is now not the only way to go public as alternative approaches like special purpose acquisition companies (SPACs) and direct listings become more common. Auto insurers are quickly realizing that the key to their future lies in data. And specialty finance companies are girding for a wave of delinquencies and defaults as the pandemic drags on. Across the financial services industry, just about the only thing certain is that the pace of change is accelerating.

KEY TAKEAWAYS

- **Specialty finance:** Lenders in specialty finance face a wave of delinquencies as the economy deteriorates.
- **Private equity:** Secondary fund buyers are poised for potential upside once the pandemic eases.
- **Insurance:** The use of telematics is disrupting the way the industry operates—and now Tesla is about to enter the market.
- **Venture capital:** SPACs and direct listings have disrupted the way companies go public.
- **Financial institutions:** Banks can restore profitability through smart, targeted investments in technology.
- **Mergers and acquisitions:** Deal flow among middle market private equity firms has suffered, but the top of the market is doing well.

> "Loss absorption capacity ... prepares us to navigate the elevated [net charge-off] activity we are expecting in the coming quarters."
>
> Jennifer LaClair, chief financial officer, Ally Financial, earnings call on June 30, 2020.

A gathering storm in consumer lending

The federal government's fiscal response to the coronavirus pandemic, along with lenders' quick actions to modify repayment terms, helped ease early on what already was a severe economic shock in the consumer finance markets. But now, with the government's stimulus program running out and loan delinquencies poised to surge, lenders are facing difficult choices if they are to weather the economic storm.

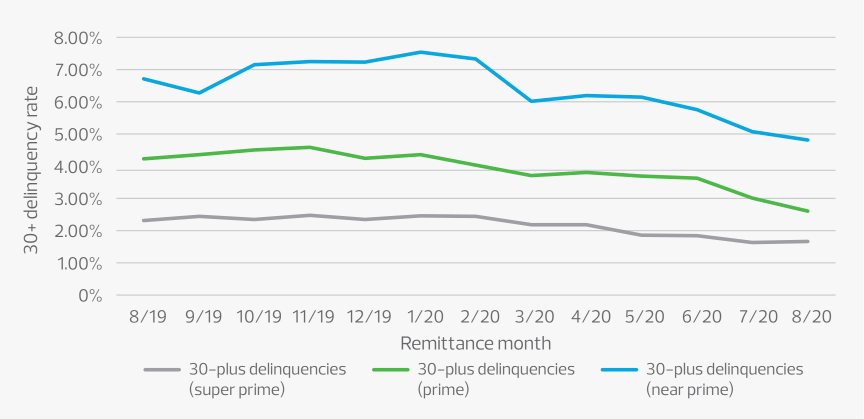
The CARES Act, signed into law March 27, authorized one-time $1,200 payments to many taxpayers, expanded eligibility for federal unemployment benefits and temporarily increased the amount of money paid to the millions who were thrown out of work.

At the same time, many lenders eased repayment terms on loans. Reports from the Kroll Bond Rating Agency compiled from loan-level performance data show that lenders modified repayment terms throughout the spring, with the percentage of modifications peaking in June across the credit spectrum.

For instance, approximately 16% of near-prime consumer loans, defined as those loans included in securitizations with a weighted-average FICO score of between 630 and 660, included a loan modification. This compares to less than 4% reported on remittance reports during each of the first four months of 2020. For prime consumer loans, defined as those loans included in securitizations with a weighted average FICO score of between 680 and 710, less than 2% had modifications during each of the first four months of remittance reports for 2020. This peaked at approximately 10% in June's remittance reports.

The effect was a decline in loan delinquency rates and annualized net losses—no small accomplishment during an unprecedented health and economic crisis.

30-plus day delinquencies for rated consumer loan collateralized portfolios



Source: KBRA marketplace consumer loan indicies: August 2020

Note: Super-prime represents loans collateralizing consumer loan securitizations with a weighted average FICO score of between 710 and 740. Prime represents those with weighted average FICO scores between 680 and 710. Near prime represents those with weighted average FICO scores between 630 and 660.

But with the expiration of the temporary federal unemployment benefits at the end of July, talks over a new round of fiscal stimulus proceeding in fits and starts in Congress and the end of many loan modifications, delinquencies and losses are expected to increase in the last quarter of 2020.

How can lenders weather the storm of increased losses?

- **Maintain a focus on customer engagement.** Staying close to customers is critical to loan servicing and collections. This includes multiplatform engagement beyond the traditional face-to-face interaction at brick-and-mortar stores. Customers of traditional loan companies increasingly are digitally savvy and are seeking ways to interact with their lenders through a variety of on-demand options, including mobile applications that allow for customer inquiries as well as payment options.
- **Don't let up on digital transformation.** In response, lenders should maintain investment in digitally transforming their businesses to meet customer needs and behaviors. This includes developing and supporting more mobile and interactive communication channels.
- **Revise cash flow forecasting.** Companies should ensure that forecasts and budgets are revised to reflect expected declines in cash receipts. Companies may need to alter their underwriting criteria or reconsider the types of loans they want to originate if cash receipts fail to provide sufficient cash flow to finance growth. Companies will also need to evaluate the impact that revised projections will have on their own compliance with lender covenants.

Consumer lenders across the credit spectrum should be prepared to handle increased losses from their portfolios during the fourth quarter absent any further stimulus programs aimed at the consumer. Such companies have been able to stave off many delinquencies and losses, but the tide is quickly turning.

Secondary fund buyers poised for substantial upside

What if you had the chance to invest in a fund at a 50% discount? How much capital would you seek and how quickly could you deploy it? Investors may have that chance in the months and years ahead as the economy recovers with a vehicle known in the private equity world as secondary fund investments.

Secondary fund investments involve buying and selling preexisting investor commitments to private equity funds. They are purchases of funds that are three to seven years old with existing underlying companies and are often driven by an investor's need for liquidity.

Generally, primary investors set and execute an operating agenda and forecast returns in the later years of a fund, while secondary funds hope to receive those returns in a shorter investment period.

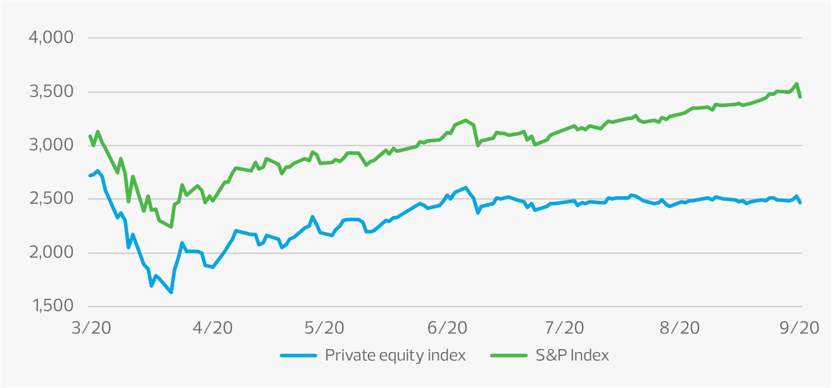
MIDDLE MARKET INSIGHT

Customers increasingly are digitally savvy and are seeking ways to interact with their lenders through a variety of on-demand options.

The pandemic has caused a significant price dislocation that makes it difficult to determine the true value of risk assets. A drop in risk asset prices harms investors with a short-term mindset seeking liquidity, but poor economic conditions offer upside for those with capital and a long-term investing horizon.

LPX AG is a leading research firm in the field of alternative investing, and it manages an index that contains the largest private equity companies listed in global stock exchanges. The index composition is diversified across all industry categories, regions and vintage years. After reaching a high score of 3,133 Feb. 19, the index plummeted to 1,627 by March 23, and since then has leveled off around 2,400 since mid-May. Meanwhile, the S&P 500 staged a swift recovery over the spring and summer, leaving many investors struggling to make sense of its rise despite overall poor economic fundamentals.

Private equity vs. S&P Index



Source: Bloomberg

The current macros in alternative investing play well for middle market secondary managers. Liquidity remains an important issue for all alternative funds and one that presents a significant opportunity for secondary fund returns. With record amounts of investable capital, there is a strong foundation between capital available and attractive buying opportunities of depleted risk asset prices.

“This gives us a unique advantage in terms of information.”

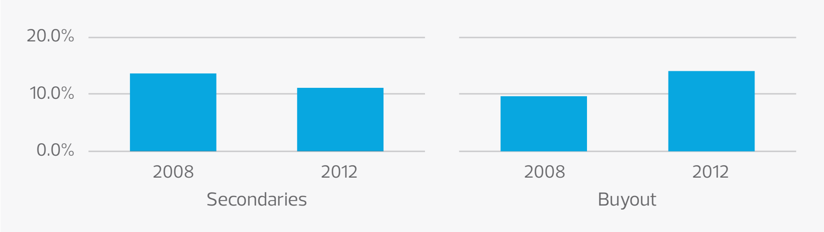
Zachary Kirkhorn, Tesla's chief financial officer, on the data-gathering abilities of Tesla cars and developing an insurance product, from Tesla's second-quarter earnings call on June 30, 2020.

An investor with exposure to fitness centers or gyms, for example, has been upended because of closures during the health crisis. Even with reopenings happening state by state, these companies have lost substantial earnings, and the funds that hold these investments have taken material write-downs. If the investor had plans to dispose of its investment in a set time frame, a secondary buyer would offer liquidation and benefit from buying an investment that has upside.

The financial crisis of 2008-09 sets a good example for what may follow a pandemic recovery. As net asset values declined in private equity funds, fund valuations became even more attractive for secondary investors, and substantial discounts to these lower net asset values allowed secondary buyers to purchase some of the strongest funds at attractive target returns.

In the period following the Great Recession, middle market secondaries—funds with $1 billion in assets under management and with vintage years beginning in 2008—outperformed buyout strategies by roughly 4 percentage points, or 13.5% compared to 9.7%. As the market recovered, buyout funds fared better, and funds beginning in 2012 later surpassed 14% returns.

Middle market fund internal rate of return by strategy



Source: Bloomberg

Secondary fund managers are struggling through fundraising amid COVID-19, no different from most other alternative funds. With on-site meetings paused for the most part, diligence isn't happening at the same pace as it was pre-COVID, despite available dry powder. Through August, secondaries raised $29.6 billion compared to $68.1 billion targeted, or 43% achieved. But these marks are better than buyout strategies who achieved only 37%, and we expect this may be a trend to follow through the pandemic.

The auto industry's data revolution: How will insurers adapt?

The pandemic continues to change how businesses operate, and the auto insurance industry is no exception. The use of telematics has been a critical technology for auto insurers in monitoring the impact of COVID-19. The insurers that had already launched usage-based insurance products powered by telematics were able to identify changes in driving behavior quickly, and provide lower insurance premiums as a result.

This swift action of insurers early in the second quarter has in turn opened the eyes of their customers, who saw the link between lower vehicle use and an immediate reduction in insurance premiums. As the future of work and return-to-office initiatives remains uncertain, people realize that they may be driving less and will be working from home for an extended period.

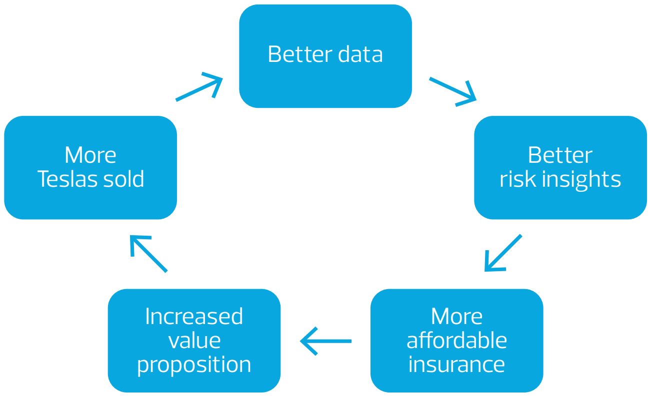
This has prompted drivers to become more open to usage-based insurance products, enabled through telematics. In earnings calls over the summer, insurance carriers reported significant increases in the adoption of mobile applications, telematics and usage-based insurance offerings, which is key to the success of these programs and the quality of the data collected.

Early-stage telematics was achieved primarily through onboard devices (often referred to as dongles) that drivers had to install in their vehicles. The technology was primitive, lacked scalability and was expensive to administer. With the advancement of technologies in mobile devices (accelerometers, gyroscopes and internet connectivity), mobile apps have quickly become the preferred solution for insurers to deploy telematics programs. But mobile devices are limited to detecting speed, acceleration, hard braking or sudden cornering, with little additional information about the vehicle or its surroundings.

Enter Tesla, with its array of beautifully designed electric cars that essentially act as data collection machines on wheels. Tesla's telematics data, gathered with sensors, cameras and radar equipment, is an enormous competitive advantage that Tesla has on any auto insurer, and Tesla plans on using it. In Tesla's second-quarter earnings call, Elon Musk, Tesla's founder and chief executive, announced the expansion of the insurance strategy through Tesla Insurance.

Tesla Insurance will be able to use the data captured by the car to create a profile of the driver, to assess the likelihood of an accident and to estimate an appropriate insurance premium to charge that customer. A future where your car can provide real-time driving behavior feedback might be only a software update away.

Imagine entering a destination into your GPS and the car returning projections of insurance premiums alongside expected time of arrival and battery usage. Every policyholder would be able to control and mitigate the risk, resulting in lower insurance premiums and total cost of ownership for a Tesla.



As the value proposition of owning a Tesla increases and more vehicles hit the road, data is continuously gathered to improve Tesla's artificial intelligence and full self-driving (FSD) capabilities. Musk has been quoted as saying that full self-driving, or Level 5 autonomy, may arrive as soon as the end of 2020 with the launch of the RoboTaxi network shortly after. This would pose an existential challenge for the auto insurance industry.

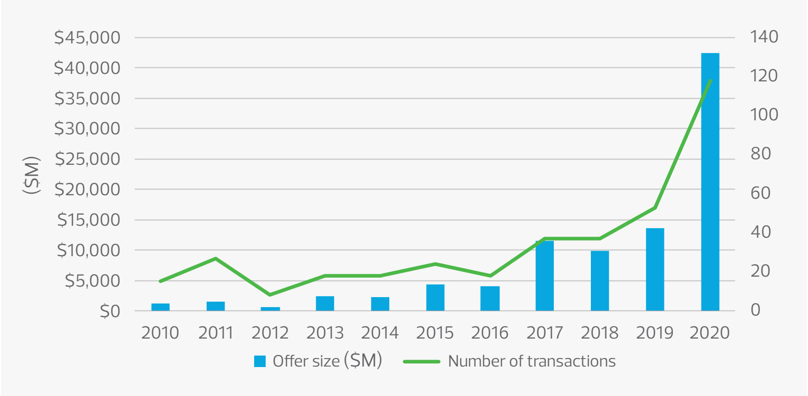
FSD will not care about your age, or your gender, or your driving record, which are all variables used by auto insurers to segment and price risks. All FSD pilots will exhibit the same driving behaviors and will eventually outperform their human counterparts. Once the RoboTaxi network goes live, driving on your own will make less and less financial sense.

The auto insurance industry collects billions of dollars of revenue and employs tens of thousands of people. Insurers need to begin preparing for the long-term threat of FSD capabilities that will cascade through their companies and the broader economy.

Venture capital exits and investment opportunities

This year has seen venture capital exit strategies upended as uncertainty put mergers and acquisitions on hold, and volatile capital markets made the traditional IPO challenging. As a result, alternative options like special purpose acquisition companies, or SPACs, and, to a lesser extent, direct listings have become more common.

SPAC deal volume by dollar value and count



Source: Bloomberg LP, RSM US LLP

MIDDLE MARKET INSIGHT

As SPACs have gained momentum, the deal terms and structures have evolved to offer more flexibility to sponsors and target companies.

SPACs emerged as an alternative by offering a clearer exit point to private companies through a pre-assembled pool of capital, avoiding some of the complications of pricing an offering in a shaky market. SPACs also offer target companies more leverage to negotiate better terms and the ability to raise more capital. The stock price performance of SPACs post-merger has also shown SPACs to be more effective at avoiding the so-called IPO-pop that may leave target companies with a sense of having left money on the table.

As SPACs have gained momentum, the deal terms and structures have evolved to offer more flexibility to sponsors and target companies, which has strengthened their appeal. Still, limitations exist that suggest this option will not entirely supplant the traditional IPO.

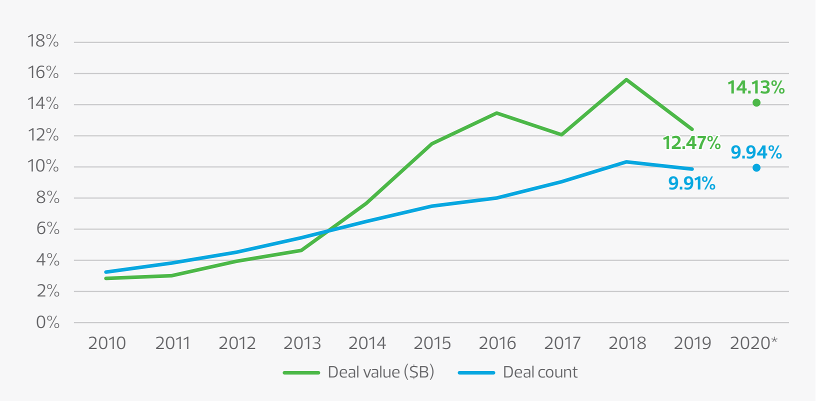
A SPAC will often put up only a portion of the total proceeds, and additional equity financing has to be lined up to complete the merger through a private investment in public equity (PIPE). SPACs also have a limited time to complete the merger. Identifying a suitable target, getting the target ready for the public market and securing the financing can be challenging within the typical 24-month prescribed period.

As fundraising conditions improve, sponsors may prefer to revert to the pooled vehicle, given its ability to invest in multiple deals and a less restrictive timeline. For companies targeted by a SPAC, this option is compelling. But only a limited universe of companies will attract interest from SPAC sponsors who will be selective with their bets because they get one shot for each SPAC raised, leaving most other startups out of play.

The buzz around direct listings will also continue, yet a significant pickup in companies pursuing this route is also unlikely. Established companies with steady cash flows and no immediate need to raise cash may prefer this route as a way to offer investors liquidity. But the majority of venture capital-backed companies need the capital, the support of underwriters and the restriction period to help smooth volatility in post-IPO share price performance.

On the investment side, fintech has emerged as one of the verticals attracting capital and interesting investment opportunities. According to PitchBook, the total global venture capital deal activity in fintech as a percentage of total venture capital deal activity has been growing since 2010. At the end of August, the percentage of venture capital deal value and the deal count has exceeded 2019's percentage. The interest in fintech has been amplified by the pandemic, which accelerated consumer behaviors like online banking and online shopping. The shifting behaviors have propelled businesses to accelerate their plans to adopt more digital business models and have sprung new business models that are digital by default.

Global VC deal activity in fintech as percentage of global VC deal activity



Source: FDIC; RSM US LLP

Venture capital firms' interest in fintech is likely to continue as new business models allow tech companies to embed financial services products into their current service offerings. Embedding financial services is the practice of integrating a traditional product like a loan or credit card within a nontraditional financial service platform like Amazon or Uber.

One of the best examples of embedded finance is the rise of online payment options like buy now, pay later (BNPL). Providers of banking as a service (BaaS), which have also flourished during the pandemic, are working to deliver compliance, payments, loans and multiple other capabilities as a service in a highly customizable approach.

"We are seeing increased adoption raised with about 75% of all transactions now occurring through our digital channels."

Greg Carmichael, chief executive, Fifth Third Bancorp, second-quarter earnings call on July 23, 2020.

The emergence of additional exit options beyond the traditional IPO or acquisition route should continue to be a positive development for deal flow, especially in evolving and fast-changing ecosystems like fintech, which have novel business models that demand greater flexibility. We expect to continue seeing more exits via SPACs and direct listings even as traditional exit options will continue to hold sway.

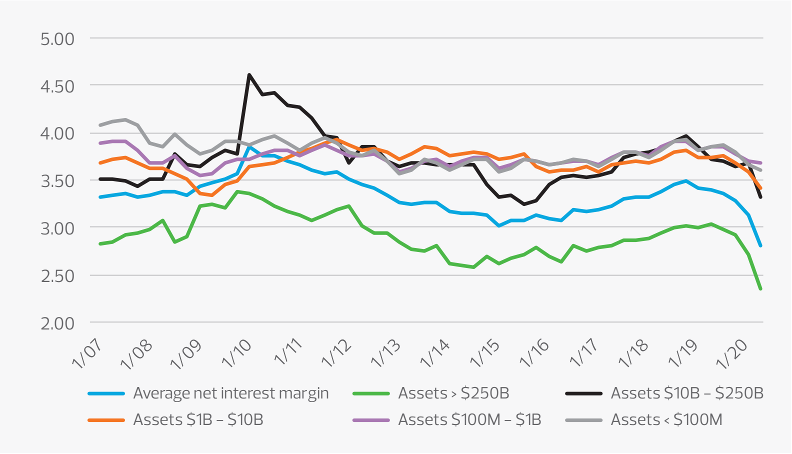
As banks' margins shrink, technology offers a way out

Despite the federal government's distribution of $525 billion in Paycheck Protection Program loans to help keep small and midsize businesses open, the recession and related monetary policy response have combined to create a perfect storm of increasing credit risk and shrinking margins for financial institutions. This has all taken place while a fundamental new reality was realized—traditional banking as we know it is changing.

For many institutions, the concern isn't so much that banking will never return to the way it operated before the virus. Rather, it's the speed at which these changes are taking place. It's time to adapt or risk being left behind.

While the second half will prove to be the turning point leading to the increasing concerns over credit quality given the uncertainty over economic recovery, the release of the Federal Deposit Insurance Corporation's Quarterly Banking Profile for the second quarter clearly showed the impact of low rates. Net income for the quarter declined roughly 70% over the same quarter in 2019, driven by a record contraction in net interest margin to 2.81%—the lowest level reported in the FDIC Quarterly Banking Profile.

Net interest margin in total and by asset size



Source: FDIC; RSM US LLP

While the data shows that larger financial institutions have clearly felt the pain brought about by this low-rate environment first, it is only a matter of time until smaller institutions see the contraction in margin given the Federal Reserve's recent commentary indicating it is likely to hold rates at their current levels through 2023.

Despite the decline in profitability, the prevailing time-tested method to offset such revenue declines of cutting expenses will simply not provide the same economic benefit over the long run as it did during previous economic downturns or crises.

WHILE CONCERNS AROUND DECLINING MARGINS AND CREDIT QUALITY WILL PERSIST, BANKS MUST ALSO EVALUATE THEIR TECHNOLOGY INVESTMENTS, ESPECIALLY WHEN IT COMES TO TECHNOLOGY THAT STREAMLINES THE BACK OFFICE, IMPROVES TOP-LINE REVENUES AND PROMOTES A NEW WORKING ENVIRONMENT.

In yesterday's environment, the traditional methods of banking—such as reliance on branch activities—were still widely viewed as being critically important to banking infrastructure, even as they evolve.

In today's environment, as financial institutions were forced to close branches because of state-implemented restrictions, banks were forced to pivot, becoming almost fully reliant on technology and digital tools to conduct business with customers and borrowers.

In tomorrow's environment, when we emerge from this pandemic, the use and purpose of the branch will certainly look and feel different.

Throughout this pandemic, J.D. Power has been conducting a survey to gauge how people will act when the crisis is over. When asked in April about how in-person interactions would look with a bank or financial services provider once the crisis was over, 46% of respondents said they would go back to pre-COVID behaviors.

But when the same question was asked in August, only 34% of respondents indicated that they would go back to pre-COVID behaviors. The change, as reported by the survey, is that consumers were becoming much more likely to use digital channels like online or mobile banking.

These responses should not come as a surprise. The longer consumers and businesses live and operate in this environment, the more likely the behaviors change, which will affect how banks interact with their customers and borrowers.

It is now that bank leaders need to assess how they balance profitability with long-term investments to ensure that as the low-rate environment persists, it doesn't become the drag on revenue that leads to a more difficult operating situation.

The path forward may be long and difficult, but one thing is certain: Banks that aren't evaluating digital and innovative options will fall behind.

During the Barclays Global Financial Services Conference in September, where some of the largest public banks provided updates to investors on financial measures as well as strategic initiatives, several themes emerged—cost reduction and management, branch rationalization or review, and innovation and digital transformation.

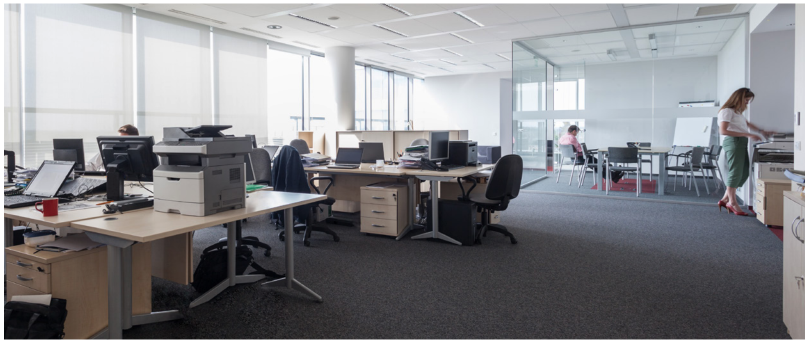
None of these themes are new. But the importance of each has changed.

According to a search of public company filings during the great financial crisis, banks referred to digital transformation and innovation roughly 600 times from December 2007 through June 2009. A similar search since February 2020 until mid-September came back with nearly 4,000 references.

While concerns around declining margins and credit quality will persist, banks must also evaluate their technology investments. Here are some key areas to focus on:

- **Technology that streamlines the back office.** Simply reducing headcount solves one issue in cost management but not all, which is why making strategic investments in streamlining and innovating back-office processes and operations becomes critical to long-term success.

PRIVATE EQUITY FIRMS ARE LEFT TO PRIORITIZE THEIR EXISTING PORTFOLIO INVESTMENTS AND MUST MEASURE THE CONTINUING UNCERTAINTY. WITH MANY MIDDLE MARKET COMPANIES STILL FRAIL, AND WITH MARKET PRICING STILL ELEVATED, IT'S NO WONDER THAT MANAGERS HAVE FAVORED ADD-ONS.



- **Technology that improves top-line revenues.** Top-line revenue does not grow simply by making investments in back-office technologies, which is why consideration must be given to solutions that maximize efforts to grow revenues. These include leveraging data to make decisions and improving the customer experience that will allow a bank to grow in a less branch-reliant environment.
- **Technology that promotes a new working environment.** As many banks pivoted to a remote environment, the adoption of these technologies will lead to a radically different working environment that will make remote or alternative working arrangements an option.

While we don't expect branch banking to disappear, we do expect it to change. And while banks may view all three technology investment alternatives as reasonable options to adapt and survive in tomorrow's next normal, it is important to know that a failure to appropriately invest in all three will lead to challenges that may be far greater than what they are experiencing today.

The only way is up for middle market private equity firms

Deal-making and fundraising among middle market private equity firms remained slow through June as the COVID-19 health crisis continued to weigh on the economy.

The number of middle market deals—those of $1 billion or less—totaled only 1,048 through the first six months of 2020, representing $147.1 billion of assets, a projected 39% decline from the previous year, according to PitchBook.

This represents a projected $191.1 billion decrease in middle market dollars from the prior year and indicates that many investment managers are taking a disciplined approach despite record levels of dry powder.

The size of the deals has also plunged, with the median declining from $200 million per deal in 2019 to $167 million in 2020. As managers grow more careful, they are holding positions longer to ensure that they are able to complete operating agendas and to mitigate the business disruption. This is reflected in median holding times, which have increased from 5.24 years in 2019 to 5.46 through June 30.

Adding to the standoff in deal-making, median enterprise value multiples remain elevated, measuring 12.1 times as of June 30 compared to 12.0 times in 2019, despite poor economic fundamentals.

Private equity firms are left to prioritize their existing portfolio investments and must measure the continuing uncertainty. With many middle market companies still frail, and with market pricing still elevated, it's no wonder that managers have favored add-ons. Through June, 72.5% of all middle market deals were add-ons, which is the highest total over the past 10 years and more than 10% higher than the next highest year, in 2019.

Not all news is bad, however. With fewer on-site meetings, investment managers have upgraded their technology to improve virtual interactions. And as we see from our clients, a growing number of staff members are returning to the office, even if only under abridged hours. Interest in new deals is poised to grow through the end of the year.

MIDDLE MARKET INSIGHT

Insurers need to begin preparing for the long-term threat of full self-driving capabilities that will cascade through their companies.

Although the year will finish softer than 2019, funds in the $1 billion to $5 billion assets-under-management category will fare much better. These larger private equity firms tend to have more established business continuity and more resources. Because of this, they often receive allocations and hold deep relationships from the major allocators.

The same is not always true for middle market firms. Through June 30, private equity fundraising in the below $500 million category has been disproportionately affected by COVID-19 and is on pace for a 39% decline in fundraising, compared to only a 32% decline for larger funds in the $500 million category and up. This is likely because middle market firms often lack people and financial resources to move swiftly, and instead, prefer a first-to-follow approach.

Still, to put this into context, middle market fundraising after the Great Recession was $17.0 billion, and is now on pace to be $24.8 billion, so don't send out any alarm signals just yet.

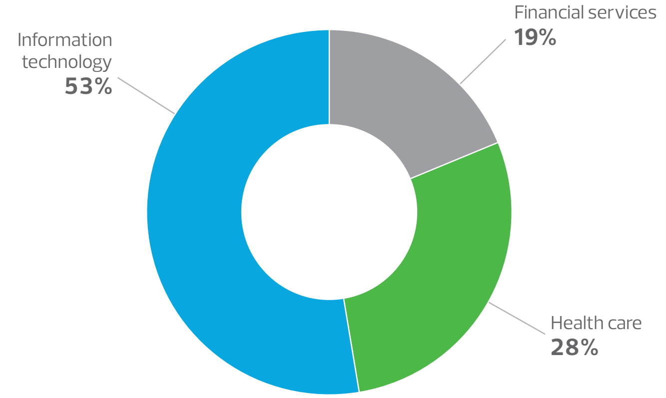
As middle market private equity firms have struggled, this is not the case at a rarified end of the market. Known as ultraprivate equity, it has attracted a growing number of [family offices] that are enticed by the potential of reaping significant gains from direct investments.

A number of families have exited highly successful direct investments recently. One example was the IPO of Snowflake, a cloud-based data warehousing company that attracted money from several families over the course of its incubation as a private company. On the first day of trading, its shares more than doubled, and have largely held on to those gains.

With examples like Snowflake, the shift to ultraprivate equity will only gain momentum. What characterizes this new subset of private equity is investors' ability to invest without a traditional asset manager. These investors with a longer time horizon will have the greatest flexibility to manage the terms of any deal, while reducing outside costs.

And they are concentrating their investments in a few sectors. The last 1,800-plus deals made by [family offices] were in three main industries: information technology, financial services and health care, according to PitchBook.

Family offices focused on key industries



Source: PitchBook; RSM US LLP

The outlook remains bright, regardless of the current pandemic. Even as middle market firms try to find their footing in an uncertain market, they are poised to end the year on an upswing. And the world of ultraprivate equity will continue to grow with a focus on the industries that have been vital to establishing and maintaining our new normal.

MIDDLE MARKET INSIGHT

Through June, 72.5% of all middle market deals were add-ons, the highest total in 10 years.

> The rapid deployment of telehealth and virtual health solutions in response to the pandemic has accelerated the opportunity for these solutions to influence the future of health care.

INDUSTRY OUTLOOK:

HEALTH CARE

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

AS THE PANDEMIC'S IMPACT on the health care industry continues, health systems, hospitals, physician practices and more look to address challenges and find opportunities to meet the growing needs of patients and their communities. From embracing price transparency considerations to finding new areas for investment and deal-making in digital health solutions, the outlook for health care in a challenging environment is one of great transformation amid ongoing uncertainty.

KEY TAKEAWAYS

- Health care organizations should continue to lean into price transparency efforts.
- Deal volume remains depressed, but healthtech creates investment interest.
- Elective procedure delays cause sweeping impact from health care organizations to patients.
- While most clinical roles will return to standard onsite work eventually, a portion of the nonclinical roles within the health care setting will likely remain remote.

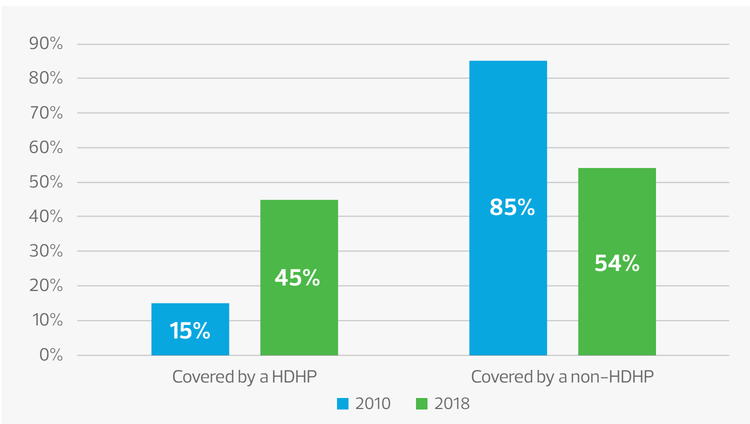
Patient demand for price transparency will increase

The regulatory considerations related to price transparency have been a routinely covered topic for over a year now. Last June, President Trump issued an executive order focused on price and quality transparency. Subsequently, the U.S. Department of Health and Human Services issued the regulations that need to be followed. The regulatory considerations are one aspect of price transparency; another is the furtherance of the overall trend of consumerism in the health care ecosystem.

As shown by the following chart, considerably more people were covered by high deductible health plans (HDHPs) in 2018 than in 2010, and we would expect this trend to continue to grow through 2021. The effect of this change is consumers are now engaged in the economics of health care in ways they were not before. Additionally,

ONE WAY PATIENTS HAVE BEEN ABLE TO PAY FOR THE PORTION OF THE HEALTH CARE SERVICES THEY RECEIVE IS THROUGH HEALTH SAVINGS ACCOUNTS.

Prevalence of high deductible plans tripled since 2010

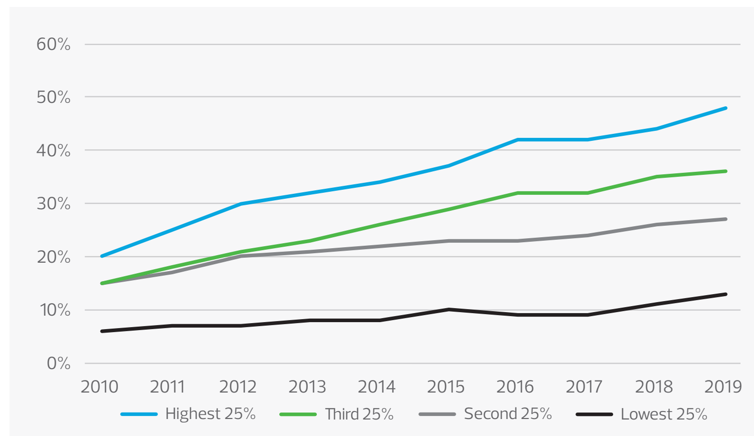


Source: U.S. Bureau of Labor Statistics

hospitals have a larger issue in collecting for their services as collecting from a patient can be more difficult, especially if that patient has low-income. One way patients have been able to pay for the portion of the health care services they receive is through health savings accounts (HSAs). These are often partially funded with employer contributions. However, as the chart indicates, lower wage earners have less access to HSAs, thus potentially further compromising the ability for health care providers to collect from these patients.

As consumerism continues to force patients to make decisions based on value, their need for price transparency becomes critical. If one compares shopping for a medical procedure to buying a vehicle, it is easy to understand why a

Percentage of private industry workers with access to HSAs by wage categories



Source: U.S. Bureau of Labor Statistics

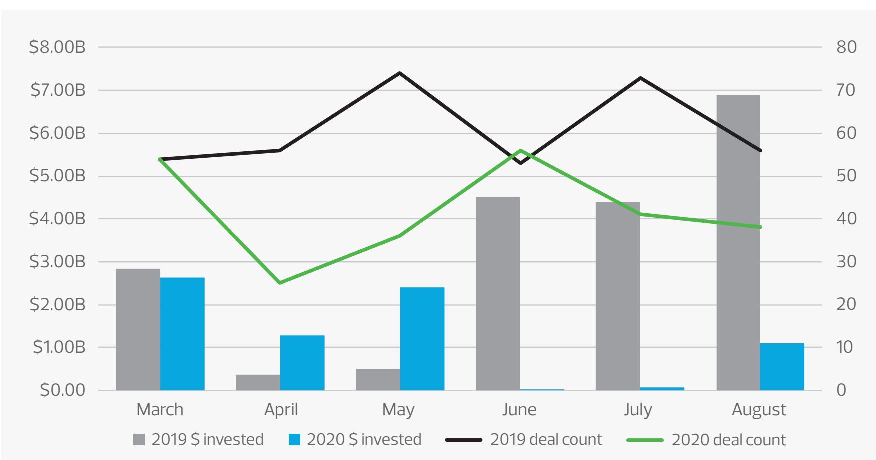
higher trim level of the same vehicle costs more; it comes with more options and likely a better experience. However, as a consumer, you want to see both the price and the options that are different between the two trims before making your decision of which one to buy. This doesn't exist in most of the health care ecosystem. It would be nearly impossible for you as a consumer to evaluate the true value of a procedure without those two components. In 2010, this was not as important to the consumer as they had far less at stake, there were fewer people covered by deductibles; additionally, the deductibles today are much higher. According to the U.S. Bureau of Labor Statistics, in 2018, the median deductible for in-network services was $3,000.

The outlook into the next quarter and further into 2020 for the health care ecosystem calls for consumers continuing to demand price transparency. They demand transparency be provided to them in a manner similar to their experience with other services, i.e., they want to be able to make decisions using data and electronic tools, likely on a mobile application. We continue to recommend to providers and payors the more consumer-centric you can become, the more likely you are to be successful in the new environment. Consumers are buying cars on services like Carvana and using tools like Redfin to sell their homes; they are using digital applications for a significant portion of their lives and for purchases we thought were too sacred for a digital environment even just a few years ago. We urge organizations to consider their ability to lean into the movement.

Depressed deal flow, but digital health solutions show promise

Health care deal flow in the second and third quarters was reduced to $7.5 billion from $19.5 billion over the same period in 2019, according to data compiled by Pitchbook. This $12 billion decrease can be attributed to uncertainty surrounding COVID-19 and its effects on health care and the economy. Deal volume declined to 250 from 366 total deals reported over this same period last year as many smaller, less complex deals (the type that does not typically report a dollar investment size) continued to close.

COVID-19 reduced Q2 and Q3 deal flow by $12 billion year over year



Source: PitchBook Data

MIDDLE MARKET INSIGHT

The impact of delayed elective procedures is beyond financial. These delays are causing deteriorations in health, worsening quality of life, increased disability and decreased work capability for patients.

Would-be investors or acquirers were hit with a slew of challenging dynamics: prohibitions on nonemergent or elective surgeries, changes to telehealth reimbursement and regulatory requirements, and preparing for increased hospitalizations. In response to these challenges, many such market participants focused efforts on running existing organizations and put deal-making on the back burner.

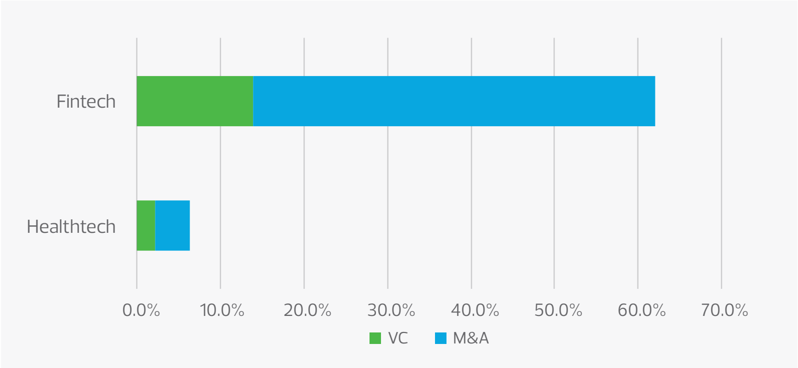
During this time, the deals that did close often did so at depressed multiples compared to pre-pandemic times. As sellers seek quick cash or look to align with bigger partners the supply of available organizations to invest in or acquire increases. The demand has decreased, as mentioned previously. This increase in supply and decrease in demand will push the valuations down. We expect this trend to continue, particularly in the physician practice space even as demand for deals recovers.

Despite this extraordinary reduction in deal activity, we saw the first signs of what may be a changing health care deal environment. Multiplan, a health care cost analytics provider and third-party administrator, will go public through a special purpose acquisition company (SPAC) at an approximate $11 billion enterprise valuation. While deals involving SPACs were somewhat uncommon in most industries until recently, they were nearly unheard of in health care. Other notable health care deals include virtual care platform Teledoc's $15 billion acquisition of virtual chronic condition management provider Livongo, Bright Health's $635 million capital raise and AmWell's $742 million capital raise with a post-initial public offering valuation of $5 billion that was preempted by Alphabet's Google investing $100 million.

The common thread here is these companies all focus on digital health solutions. If we compare health care to financial services, another highly regulated industry, we see that investment in digital solutions and (nonmedical) innovation in health care has seriously lagged.

COVID-19 WILL CONTINUE TO AFFECT THE HEALTH CARE ECOSYSTEM AND CERTAINLY THE HEALTH CARE DEAL ENVIRONMENT FOR YEARS TO COME.

Investment in disruptive innovation post-financial crisis as a portion of sector revenue



Source: PitchBook Data

The rapid deployment of telehealth and virtual health solutions in response to the pandemic has accelerated the opportunity for these solutions to influence the future of health care. Strategic and financial investors will seek opportunities in this space.

Furthermore, as traditional health care service provider consolidation opportunities become less attractive, we expect to see increased attention to health care deals that do not include direct reimbursement risk, particularly from financial buyers such as private equity sponsors.

Political uncertainty will likely factor into the future of the deal environment of this highly regulated ecosystem. Increased uncertainty, regardless of the source, generally dampens deal activity. In the past, hospital consolidation attracted consistent attention from health policy researchers and state attorneys general. As deal volume picks up and remains consistently high, we expect that scrutiny will expand to additional subsectors within the ecosystem.

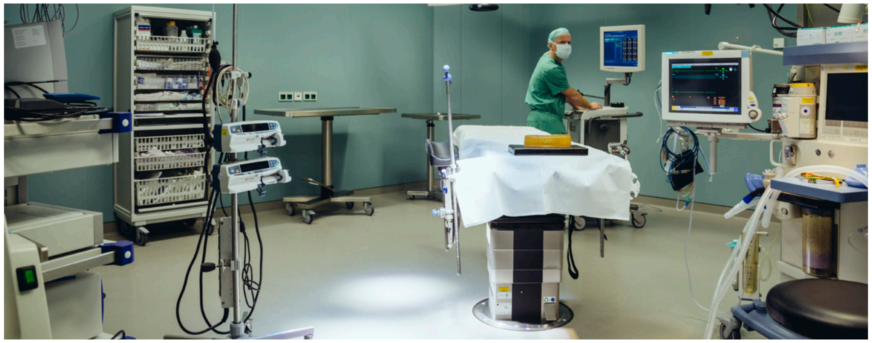
COVID-19 will continue to affect the health care ecosystem and certainly the health care deal environment for years to come. As we all adjust to the next normal, uncertainty decreases, and executives and investors begin traveling more regularly, we expect deal volume will rebound to and eventually exceed pre-pandemic levels. The mix between investments in physical health care providers and digital health solutions may, however, have changed for good.

Impact of delays in elective procedures

In March 2020, the Centers for Medicare and Medicaid Services announced that elective surgeries and nonessential medical and surgical procedures should be delayed until the COVID-19 pandemic ends in an effort to preserve personal protective equipment for front-line workers. Faced with having to make an incredibly difficult decision, health care providers considered bed capacity, patient health risk and quantity of available personal protective equipment in deciding which elective procedures would be delayed.

Using data from 359 hospitals across 71 countries, the World Economic Forum reported that CovidSurg Collaborative used a statistical model to predict that 28.4 million elective surgeries worldwide would be canceled in the 12-week period since March; each additional week of disruption could cause 2.4 million more cancellations globally and more than 300,000 in the United States; and the backlog could take 45 weeks to clear.

AS TRADITIONAL HEALTH CARE SERVICE PROVIDER CONSOLIDATION OPPORTUNITIES BECOME LESS ATTRACTIVE, WE EXPECT TO SEE INCREASED ATTENTION TO HEALTH CARE DEALS THAT DO NOT INCLUDE DIRECT REIMBURSEMENT RISK.



Best estimates of canceled operations over a 12-week period of peak disruption (by specialty group)

Cancer surgery specialty group	Normal volumes	Estimated cancellations	12-week cancellation rate
Colorectal	1,353,952	486,563	35.9%
Gynacology	834,839	328,505	39.3%
Head and neck	959,190	373,603	38.9%
Plastics	505,294	178,362	35.3%
Upper gastrointestinal and hepatobilary	1,258,862	498,885	39.6%
Urology	1,250,175	458,151	36.6%

Source: CovidSurg

Canceled operations due to COVID-19's strain on health care services

Over six months into the pandemic, COVID-19 and the resulting delays in elective procedures have wreaked havoc on health care infrastructures across the country. Estimates indicate that U.S. hospitals are losing more than a billion dollars per day, and the American Hospital Association is reporting that hospitals are losing more than $50 billion per month.

Hospital operating margins are down a full 96% since the start of 2020 compared to the same seven-month period in 2019, not including Coronavirus Aid, Relief and Economic Act funding and even with federal relief, operating margins are still down 28% year to date compared to January-July 2019, according to Kaufman Hall's August 2020 *National Hospital Flash Report*. These declines come as hospitals experience flat revenue performance, continued high-per-patient expenses, and falling volumes causing some hospitals to lay off staff, cut hours for medical providers and even file for bankruptcy.

Kaufman Hall's report shares that hospitals nationwide saw a fifth consecutive month of volumes falling below 2019's performance and below budget across most metrics, although July volumes showed some signs of recovery month to month. Emergency department visits continued to show the most significant declines falling 17% compared to the same seven-month period in 2019.

National volume observations (volumes % change)

	Budget variance	Month-over-month	Year-over-year
Discharges	-7.5%	6.2%	-6.7%
Adjusted discharges	-5.8%	6.1%	-6.8%
Adjusted patient days	-0.4%	6.5%	-3.6%
Average length of stay	2.9%	1.0%	3.4%
ED visits	-13.1%	9.7%	-16.8%
Operating room minutes	4.0%	3.2%	-0.8%

Source: KaufmanHall, National Hospital Flash Report, August 2020

The impact of delayed elective procedures is beyond financial. These delays are causing deteriorations in health, worsening quality of life, increased disability and decreased work capability for patients, according to a study published in the *British Journal of Surgery*. Considering the backlog and the capacity restrictions, excessive delays in elective procedures could also cause unnecessary death. While the full impact isn't yet known, the cancellation or postponement of cancer surgeries alone, estimated at 38% by CovidSurg Collaborative, will significantly affect the well-being of current cancer patients and delays in the diagnoses of others at a later stage of their disease.

And then there's the impact to mental health. Physicians have reported a drastic increase in patient anxiety over delays in their elective procedures, according to an article in the *Washington Examiner*, which have resulted in patients believing they have more symptoms, making it harder for physicians to tell which symptoms are real and which are not. Physicians also noted an increase in opioid use in patients who had their elective procedures delayed and potential increases in emergency cases and unnecessary complications, according to the article.

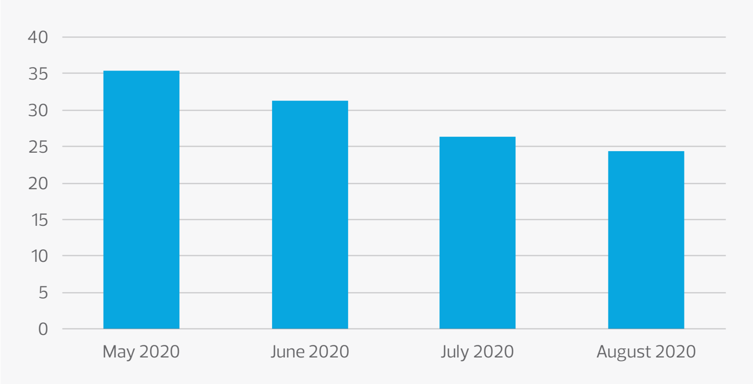
Many unknowns exist when it comes to COVID-19, but this is certain: the pandemic has created significant volatility on hospital operations economically and has taken a toll on the health of society's most vulnerable individuals, both physically and mentally.

The journey to work

The pandemic accelerated working from home within the health care industry. While some believe working from home will not be permanent, many employees appear to enjoy the flexibility that remote work has created and seek some form of a permanent work-from-home arrangement. As a result, it appears the industry may not return to standard office work policies. Health care organizations that most effectively embrace the new work-from-home culture will be better positioned to attract and retain top talent as health care employment stabilizes.

There is still much uncertainty regarding the future of work within the health care industry. As reflected in our last outlook, the reduction in health care labor is atypical during a recession and the industry is still slowly recovering. At the start of the pandemic, health care organizations were forced to reduce head count and required administrative staff and many clinicians who were not directly treating COVID-19 patients to work from home. According to HCA Healthcare, over 90% of their support staff was moved to working from home during Q1 2020 and more than 40,000 employees were migrated to a remote workforce in one week. However, in August 2020, we saw a continued decline in remote workers and a slight increase in hiring, which may suggest that people are slowly returning to the office.

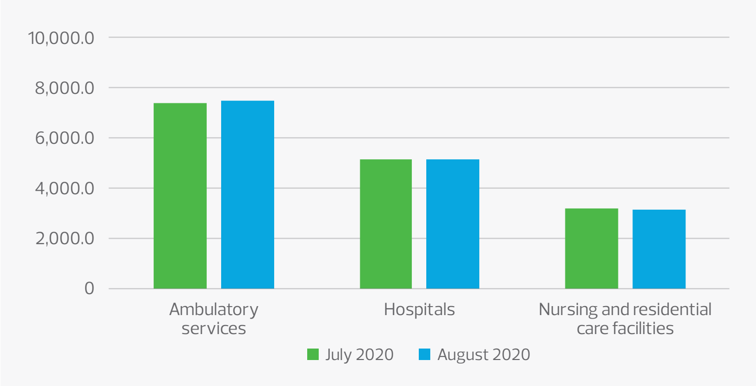
Percent of employed people who teleworked at some point in the last four weeks because of the COVID-19 pandemic



Source: U.S. Bureau of Labor Statistics

There was a slight resurgence of health care employment in August. This could be a result of the reinstatement of elective surgeries. According to data reported by the U.S. Bureau of Labor Statistics, health care employment increased by 75,000 compared to July 2020 (or to the year-ago period). There were gains in physician offices (27,000-plus), dentist offices (22,000-plus), hospitals (14,000-plus), and home health care services (12,000-plus). Job losses continued in nursing and residential care facilities (14,000-minus).

Health care employment change (in thousands)



Source: U.S. Bureau of Labor Statistics

MIDDLE MARKET INSIGHT

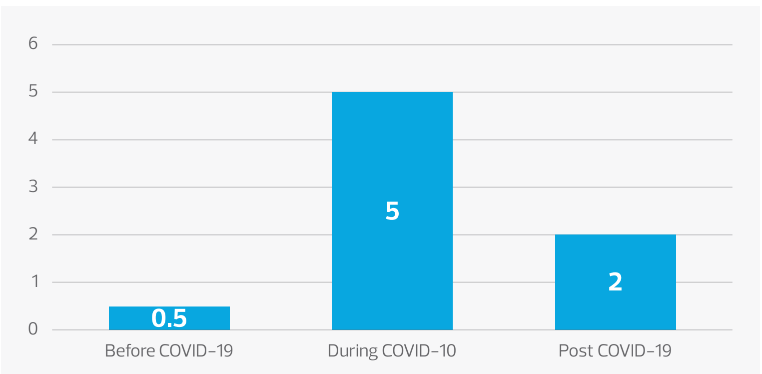
Health care organizations that most effectively embrace the new work-from-home culture will be better positioned to attract and retain top talent as health care employment stabilizes.

There have been 17,896 remote job postings within the ambulatory health care services and hospital setting over the past recent weeks, according to Economic Modeling, LLC's job postings dashboard. The top remote job postings are listed in the chart with telemarketers, clinical and counseling/school psychologist, substance abuse/behavioral counselors, and mental health social workers increase over 200% from the prior year.

Why are people still working remotely?

We are still in the midst of a global pandemic, and employees remain concerned about their own health and safety. Many people are hesitant to return back to the office, and some cannot due to personal commitments such as at home child care/schooling. Also, many employees love the flexibility that working from home brings and have now experienced it firsthand. A recent Global Work-from-Home Experience Survey indicated that on average people would like to work from home two days a week post pandemic.

Median days per week working at home



Source: Global Work-from-Home Experience Survey, 2020

Younger generations are changing the future of work with their desire to work remote. Millennials and Gen Z workers make up 38% of the current workforce and will reach 58% within the next decade, according to recent reports. In addition, the Global Work from Home Survey indicates 60% of the millennials surveyed would give up their office space to work from home.

The rise of millennials within the health care setting has changed the health care provider profile, even before the pandemic. Millennial providers focus on technology to connect and treat patients in more convenient and remote ways. Providers can be reached in many ways thanks to advancement in technology. For example, telehealth allows providers to treat patients anytime and anywhere. Remote work apps and tools such as Slack, Zoom and Microsoft Teams can make working remote easier and collaborative. These apps and tools are leveraged by younger generations on a daily basis.

The pandemic has forced so many to work from home, and the health care industry is no exception. While most of the clinical roles will return to patient facing, we believe a portion of the nonclinical roles within the health care setting will remain remote. We know the health care industry is slow to adopt change and technology; but the adoption of remote work apps and tools by younger generations coupled with the increase in telehealth and patient preference to stay at home, creates a work environment primed for flexibility in work arrangements. The next few months will show us how willing people are to return to the office and how many organizations are adapting to employees' desires to remain at home. ■

MIDDLE MARKET INSIGHT

Political uncertainty will likely factor into the future of the deal environment of this highly regulated ecosystem.

Industrials production began growing again in May, but the manufacturing, automotive and energy sectors still have a lot of progress to make before they reach pre-pandemic levels of production.

INDUSTRY OUTLOOK:

INDUSTRIALS

Companies zero in on supply chain, ESG and automation's labor impact

BY JASON ALEXANDER, SHRUTI GUPTA AND ANNE SLATTERY

AS INDUSTRIALS COMPANIES pivot to succeed long term in this environment of prolonged disruption, business leaders are evaluating all possible routes for increasing efficiency and resilience. A greater sense of urgency is compelling businesses to reassess their supply chains and the impacts of automation on the workforce, while also responding to growing demand for making environmental, social and governance (ESG) issues a priority.

Industrials production began growing again in May after the calamitous, pandemic-induced drop earlier in the year, Federal Reserve data shows. But even though production showed growth in June, July and August as well, that growth appears to have moderated. The manufacturing, automotive and energy sectors still have a lot of progress to make before they reach pre-pandemic levels of production.

KEY TAKEAWAYS

- Manufacturers should explore digitization to address supply chain weaknesses.
- ESG issues have become a top consideration for customers and other stakeholders, and companies must evolve accordingly.
- Businesses need to examine whether manufacturing jobs lost to technology or pandemic-related disruptions can be recovered, or whether such losses are permanent.
- As manufacturers seek to manage risk more effectively while seeking growth, we expect the use of regional manufacturing hubs to expand.

AS COMPANIES HAVE RESTARTED OPERATIONS AND MOVED INTO THE RECOVERY PHASE, THEY FACE THE QUESTION OF WHAT MANUFACTURING AND ITS SUPPLY CHAINS WILL LOOK LIKE IN THE FUTURE.

The reimagining of global supply chains

Many organizations' business continuity plans have fallen short in adapting to disruption from the pandemic, especially during the early days of the crisis. Businesses in the United States and globally had to act swiftly to mitigate supply chain shocks as the flow of materials from China ground to a halt. It is now very clear that organizations that invested in digital solutions were better positioned to weather this storm, proving more agile than peers that did not make such investments. As companies have restarted operations and moved into the recovery phase, they face the question of what manufacturing and its supply chains will look like in the future.

These considerations will require companies to assess just how much they rely on a system that has become increasingly globalized over the past three decades. U.S. manufacturing production and supply chains have shifted dramatically, shaped by the relocation of some elements of production to countries with lower-cost labor (China has arguably been the largest beneficiary of this long-term trend). As international production and supply chains have grown more complex, companies' indirect exposure to their suppliers' supply chains has become an increasingly important factor.

Manufacturers have adapted their business models to take advantage of highly interconnected international supply chains, which greatly reduce their operating costs. Over the past few years, however, rising labor costs and growing geopolitical tensions have spurred more organizations to question globalization across many manufacturing sectors, especially for organizations dependent on China. A Gartner, Inc. survey of 260 global supply chain leaders in February and March "found that 33% had moved sourcing and manufacturing activities out of China or plan to do so in the next two to three years," and 25% indicated that they have "already regionalized or localized manufacturing to be closer to demand." There remain concerns that these trends may accelerate due to the pandemic and the potential for future outbreaks.

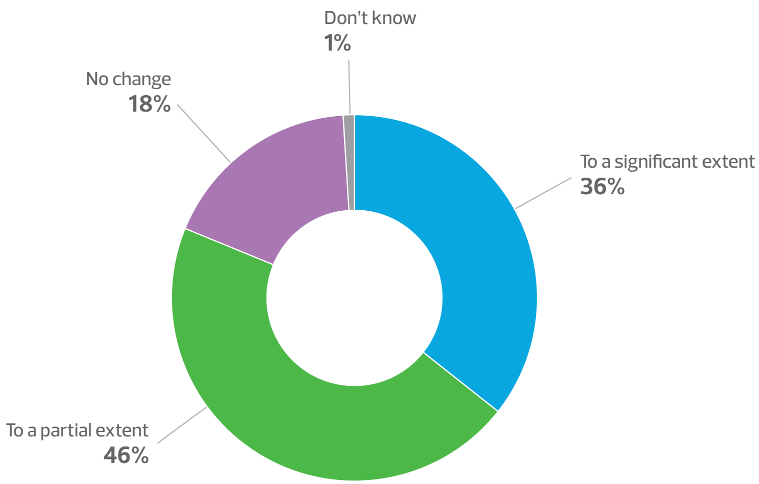
We expect organizations to undertake a rigorous analysis of their strategy and business model, especially as it relates to their global supply chains. The current environment should serve as an opportunity for organizations to evaluate the role of Industry 4.0 technologies on their organization. The concept of Industry 4.0—a term often used to describe the Fourth Industrial Revolution—is that advanced analytics, intelligent robotics and the Internet of Things will infuse all aspects of manufacturing and supply chains, revolutionizing processes and delivering enhanced productivity, agility and fostering innovation throughout an organization's entire value chain. We also expect an acceleration in the development of regional manufacturing hubs as organizations focus on developing additional sources that are completely independent of China. However, we do not expect this to be the norm for products that are labor intensive or designed for consumption in local markets.

Manufacturers need to act now to uncover and address supply chain weaknesses. Below are several trends that may help businesses do so, and we expect these trends to accelerate post-pandemic:

- **Further digitization of supply chains.** Manufacturers have been forced to develop resilience and agility in real time to deal with the pandemic, while simultaneously managing their liquidity and overall financial position. This could lead to diverging paths for organizations; some organizations might accelerate their digital transformation efforts while others are in cash preservation mode, delaying their Industry 4.0 initiatives. Consequently, as more businesses emerge from the crisis, the case for further digitization at scale will likely be stronger than ever. To that point, 82% of respondents to a recent Manufacturing Leadership Council survey indicated the pandemic brought about a greater sense of urgency about Industry 4.0 (described in the survey as "M4.0" or Manufacturing 4.0) digitization at their company to either a partial or a significant extent. As more organizations implement advanced technologies, interaction between businesses serves as the foundation for the supply chain to turn into a digital platform where all participants have access to a vast amount of data. That will enable parties to more effectively measure demand and achieve more flexibility, visibility and stability in the value chain.

COVID-19 has added urgency to M4.0 investment

A Manufacturing Leadership Council survey asked companies to what extent the pandemic has created a greater sense of urgency about M4.0 digitization within leadership ranks

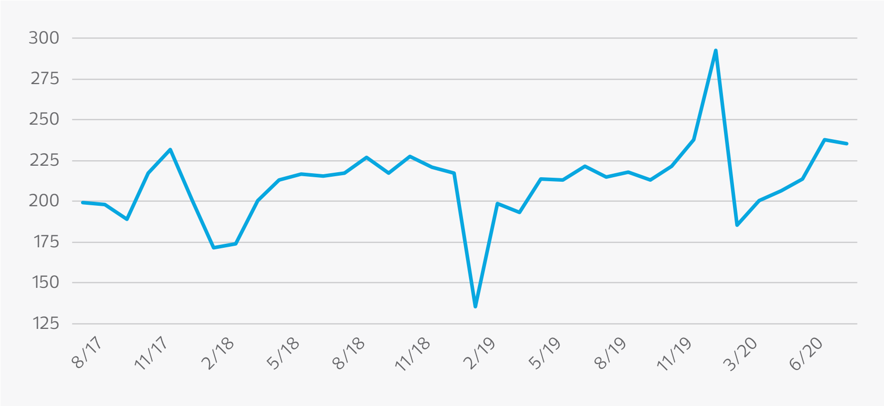


Source: Manufacturing Leadership Council, RSM US LLP

- **Growth in regional manufacturing innovation hubs.** "Companies in two-thirds of global sectors in North America have either implemented or announced plans to pull at least a portion of their supply chains out of China," according to a February report from BofA Global Research, "while companies in 50% of country-sectors in the Asia Pacific (ex-China) region are doing likewise." As manufacturers seek to manage risk while fueling growth, we expect further development and greater use of regional manufacturing innovation hubs. The idea behind regional hubs is that local businesses, governments, economic development agencies and educational institutions would create a powerful collective to set a path for the growth of regional manufacturing. Better proximity to consumers, the supply of skilled labor and ecosystem synergies are all attractive benefits to the manufacturing hub model. This may also lead to more robust local supply chains, as it is more likely that intercontinental trade will shift toward final goods or components closer to the finished product.

The growth manufacturers seek will typically come from new markets and demographics, as well as the development of new products and services to meet shifting customer demands. These shifts will require meeting new consumption patterns and preferences, as well as providing goods and services in new locations and formats. In response, manufacturers will have an opportunity to develop nimble, regional supply chains that meet both commercial expectations and long-term sustainability aspirations.

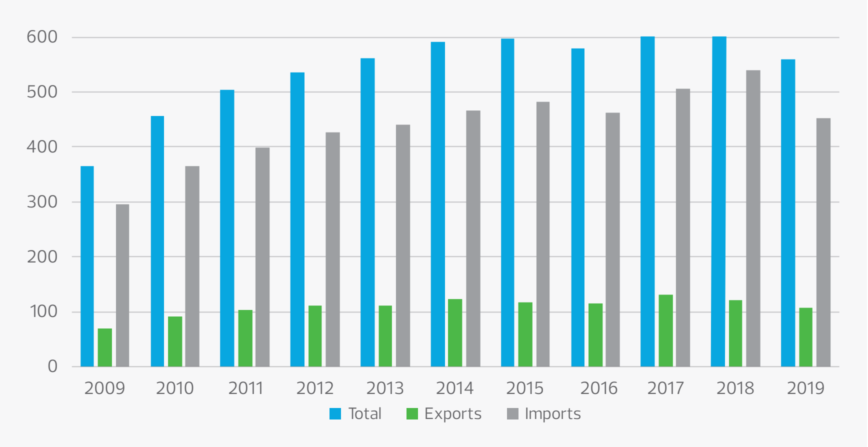
Value of monthly exports from China by month (in billion U.S. dollars)



Source: General Administration of Customs of the People's Republic of China, RSM US LLP

IMPROVING THE QUALITY AND SCOPE OF SUPPLY CHAIN DISCLOSURE WILL ENABLE BUSINESSES TO STAND READY SHOULD REGULATORY REQUIREMENTS INCREASE.

Total value of U.S. trade in goods (export and import) with China from 2009 to 2019 (in billion U.S. dollars)



Source: United States Census Bureau, RSM US LLP

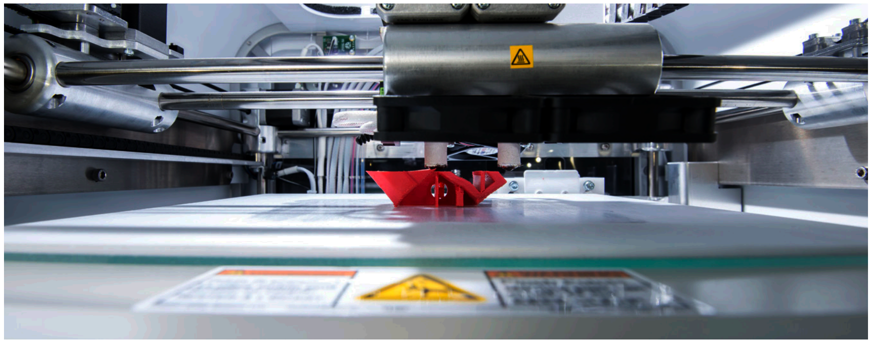
- **Supply chain transparency and disclosure will increase.** Manufacturers are continuously challenged to deliver value to their customers, invest in their workforce, deal fairly and ethically with suppliers, support the communities in which they operate, while also delivering long-term value for shareholders. In the context of high levels of uncertainty about the future of globalization and regulations that shape mandatory corporate disclosures about sourcing practices, organizations need to prepare for a variety of possible future scenarios by enhancing both visibility into supply chain practices and disclosures about those practices. Greater transparency will support businesses in the case that geopolitical tensions shift global free trade policies in favor of economic nationalism and will be valuable should free trade continue. Likewise, improving the quality and scope of supply chain disclosure will enable businesses to stand ready should regulatory requirements increase and to weather the increased stakeholder scrutiny due to the increased focus on issues related to ESG practices.

Beyond financial metrics: Companies prioritize ESG

Financial metrics are no longer the only key factors management teams and investors consider when making business and investment decisions. Climate risk, carbon footprint, supply chain diversity and responsible investing are all core concepts of sustainability that have become increasingly common in the business world over the last decade, including in the industrials space.

The three central factors used in measuring sustainability are ESG issues. These issues have become a consideration for a variety of stakeholders: investors increasingly use ESG criteria when they vet potential investments; prospective employees take these values into account while weighing job opportunities; and consumers, more and more, demand consideration of sustainability from companies they patronize.

The impact of ESG demands on U.S. middle market industrials suppliers is slow, but it will accelerate as the suppliers' larger customers increasingly incorporate these values in their procurement practices and policies. Another factor in ESG adoption is the fact that the U.S. industrials sector lags behind other developed nations when it comes to emission regulations and goals.



IT IS CLEAR THAT ESG VALUES ARE GOOD FOR BUSINESS; THE NOTION THAT SUSTAINABILITY COMES WITH A FINANCIAL TRADE-OFF IS AN IDEA OF THE PAST.

According to the RSM US Middle Market Business Index Environmental, Social and Governance Special Report, only 39% of middle market executives said they were familiar with ESG criteria to evaluate the performance of organizations. Further, among that 39%, there was a divide between bigger and smaller companies' familiarity with the use of ESG criteria, by 55% versus 27%.

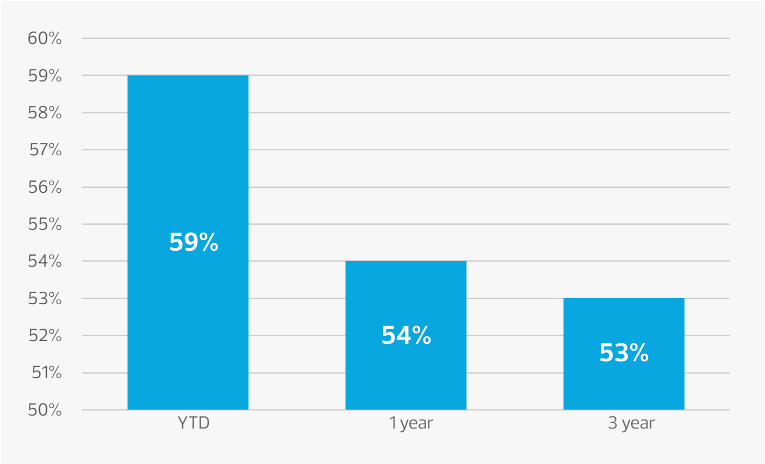
A growing focus on ESG requires organizations not only to rethink their asset allocation strategy but also to bolster disclosures and general communication around ESG initiatives and performance. The motives behind and benefits of ESG vary among organizations and industries, but here are several foundational drivers who are common across the board:

- **Superior financial performance:** While investors and business leaders have debated the value proposition of ESG in recent years, case studies have shown that sustainable organizations do not risk the bottom line, and "in fact, quite the opposite," according to a 2019 McKinsey report: "A strong ESG proposition correlates with higher equity returns, from both a tilt and momentum perspective."

  Just like investors, consumers are increasingly considering sustainability when making buying decisions. Given these considerations, it is clear that ESG values are good for business; the notion that sustainability comes with a financial trade-off is an idea of the past.

- **Resilience:** Even before 2020, ESG proponents were making claims that sustainability and resilience went hand in hand. Enter the COVID-19 pandemic, a real-time stress test for the theory that ESG-focused companies are more resilient than their less sustainable peers. As of March, 59% of U.S. ESG-focused exchange-traded funds (ETFs) were outperforming the S&P 500 index while 60% of European ESG-focused ETFs were outperforming the MSCI Europe Index, according to Bloomberg research from earlier this year. So far, the market is indicating that an organization's investment in sustainability is correlated with its ability to weather tough economic conditions.

Percent of U.S. ESG ETFs beating S&P 500 Index



Source: Bloomberg Intelligence, RSM US LLP

- **Risk management:** The focus areas inherent to sustainability are key factors in risk avoidance and management. Regardless of the industry, ESG issues or disputes can be time-consuming and costly. Preemptive attention to matters such as labor relations, carbon footprint, community impact and corporate culture positions sustainable organizations to deal with fewer regulatory and legal issues.

MIDDLE MARKET INSIGHT

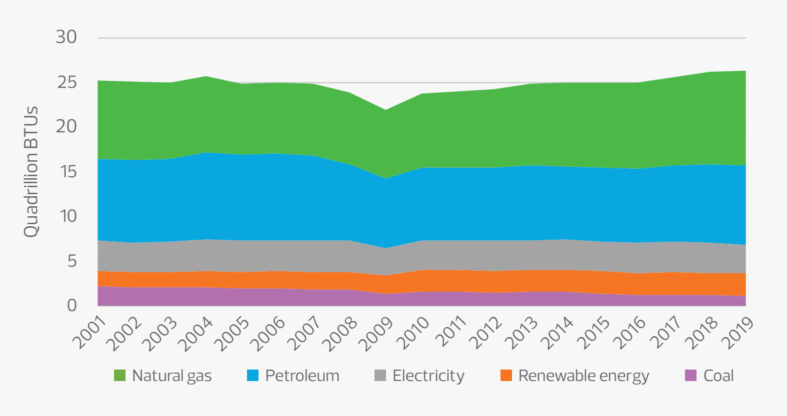
The impact of ESG demands on U.S. middle market industrials suppliers is slow, but it will accelerate as the suppliers' larger customers increasingly incorporate these values in their procurement practices and policies.

While climate change can be a challenge to certain industries, e.g., coal and oil, the global focus on this topic provides an opportunity for other industries that can help end markets reduce their carbon footprint. This is especially relevant for electric equipment manufacturers who serve the heating, cooling and lighting needs of their end markets. The pandemic has increased the focus on circular economy principles, which promote minimum wastage in the entire product life cycle.

The energy industry, by nature, is highly exposed to a range of ESG issues, and therefore, ripe for such initiatives, especially in the environmental space. However, as recent oil price tumult continues to rock the industry, it remains to be seen whether changing priorities and budget cuts will shift the focus from ESG efforts.

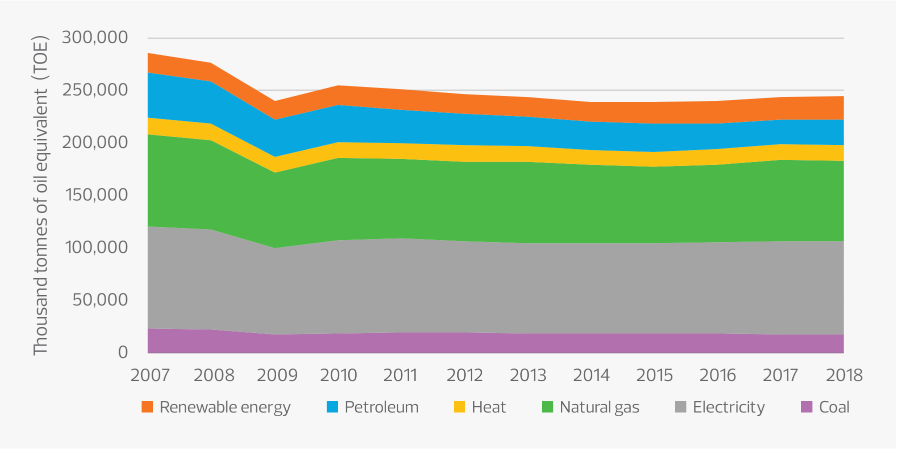
In a survey conducted by BloombergNEF in partnership with the industry website Smart Energy Decisions, 55% of survey respondents selected budget as their greatest concern resulting from the pandemic, "as it relates to sustainability," according to an August report from BloombergNEF. However, large energy companies are less at risk here than middle market companies. Large multinationals across the value chain have demonstrated their investment in ESG initiatives, especially around environmental issues like greenhouse gas emissions, water management and spill prevention, to name a few. BP, Baker Hughes, Total, Royal Dutch Shell, ExxonMobil and many more have committed to achieving net-zero carbon emissions by 2050. Peruse the websites of these companies and you will find pages dedicated to sustainability. These types of commitments will protect the sustainability initiatives and related budgets of these large, integrated organizations. For the middle market, less diversification and tighter budgets mean there is more risk that sustainability efforts will fall to the bottom of the priority list.

U.S. industrials sector energy use by source



Source: U.S. Energy Information Administration, Monthly Energy Review, August 2020

Western Europe industrials sector energy use by source



Source: Eurostat, Energy statistics—supply, transformation and consumption

IT IS CRUCIAL THAT COMPANIES PRIORITIZE SUSTAINABILITY EFFORTS TO AVOID FALLING BEHIND AND TO POSITION THEMSELVES TO EMERGE STRONGER ON THE OTHER SIDE OF THE DOWNTURN.

At the same time, the importance of ESG in the face of the pandemic and the economic downturn is higher than ever. "A crash in demand for oil products during the pandemic magnifies the need for oil and gas companies to diversify their business models and report on resiliency to investors" according to Bloomberg. For middle market companies, resiliency will be key to survival. Additionally, regulation and external pressures on the environment are increasing by the day.

According to RSM's ESG report, only 32% of middle market executives said that environmental issues received support from their company. However, a significantly higher number, 60%, indicated that the environment was a high priority. This gap demonstrates the need for middle market companies to accelerate ESG initiatives.

Middle market companies, as suppliers to larger companies, should broaden their collaboration to understand how they can help meet end-market emission goals and incorporate smart technologies to reduce energy costs and stay relevant. In collaboration with their customers, middle market companies can develop digitally enabled service offerings that would not only deepen customer engagement but also provide a recurring source of revenue. It is crucial that companies prioritize sustainability efforts to avoid falling behind and to position themselves to emerge stronger on the other side of the downturn.

MIDDLE MARKET INSIGHT

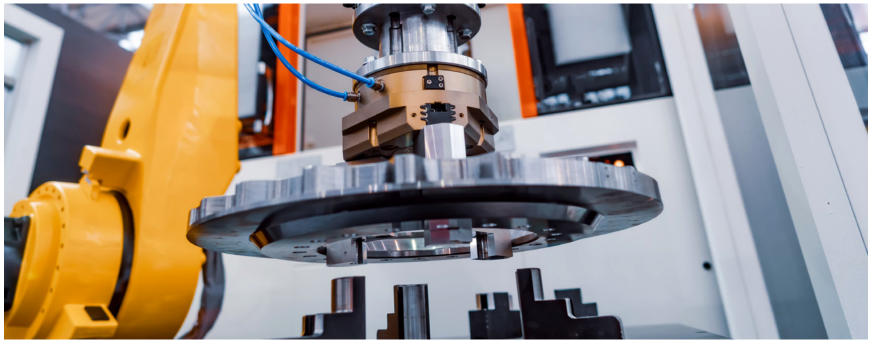
Companies might slow rehiring efforts in order to explore what the right level and composition of labor make the most sense. Any permanent restructuring efforts may free up resources for reinvestment.

Pandemic increases the need for greater workforce agility

In manufacturing, labor issues such as plant safety and the availability of workers with necessary skill sets have always been at the forefront. With the increasing importance of digital technologies, disruptions in business operations and reshoring of supply chains, discussions around the changing role of labor in manufacturing are increasing. Companies need to examine whether manufacturing jobs lost to pandemic-related disruptions can be recovered, or whether these changes to the manufacturing labor profile are permanent.

Whether because of the pandemic or other major events, companies are constantly thinking of how to navigate uncertainty. Since the pandemic has accelerated the need for industrials automation and digital transformation solutions to address safety, flexibility and resilience, companies might slow rehiring efforts in order to explore what the right level and composition of labor make the most sense. Many industrials companies continue to follow aggressive cost containment measures, including shifting temporary workforce reductions to permanent reductions. Such permanent restructuring efforts may free up resources for reinvestment.

As a supply chain resiliency measure, many companies are inclined to manufacture their high-value products in multiple locations. In such cases, the geographic dispersion of production labor becomes more relevant. For companies that are planning to expand their North American manufacturing



MIDDLE MARKET INSIGHT

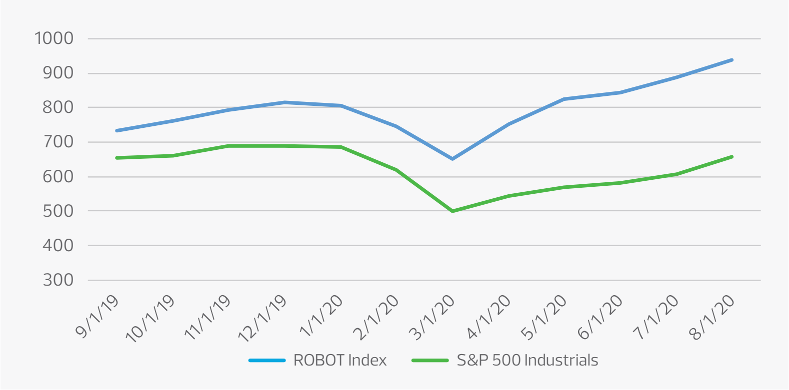
As suppliers to larger companies, middle market companies should broaden their collaboration to understand how they can help meet end-market emission goals and incorporate smart technologies to reduce energy costs and stay relevant.

footprint and supply chains, relevant investments in automation and technologies become critical to maintain cost efficiencies. Companies are considering flexible manufacturing technologies such as robots that can be multipurposed to perform material loading and unloading, material handling, packaging and inspection, and other line activities. Companies are also increasingly exploring remote monitoring capabilities; augmented reality and other connected worker solutions can shift a segment of supervisory workforce away from the shop floor.

With all these geographic and technology developments, it is possible that companies may focus their automation investments more on the actual production processes and have labor more heavily involved in preproduction and post-production activities. "The importance of nonproduction segments will increase across all geographies, as differentiation shifts to innovation and customer experience," according to a 2018 World Economic Forum report on The New Production Workforce.

There is little direct data on the extent of labor displaced because of technology or what role technology adoption plays in the delayed recovery of manufacturing jobs. However, companies providing and/or applying robotic and automation solutions, as reflected by the ROBOT Index, have performed fairly better than broader industrials benchmarks. The ROBOT Index, provided by ROBO Global, is a benchmark for investors to track the performance of the robotics and automation industry. Levels of interest in 3D printing and robotics have also increased significantly. These technologies—automation, robotics and 3D printing—can simplify the manufacturing process and increase the efficiency of manufacturing workers, reducing the number of labor hours on the shop floor. For every single robot installed, 1.6 manufacturing workers are displaced; this is according to a 2018 robotics report by Oxford Economics. At the same time, while technology adoption has been increasing over the past two decades, productivity has not. This could be attributed to a lack of proper measurement methodologies and has been a widely debated subject.

Robotic and automation companies are faring better



Source: Bloomberg, RSM US LLP

It will take a while before we are able to understand the precise effects of these supply chains and technology-related developments on the extent of labor enablement or elimination, skills replacement or enhancement. But it is clear that as companies use advanced technologies to get leaner and more efficient, the role of labor—especially production labor—will continue to change.

> We expect the resilience the life sciences industry has shown to continue into 2021 as researchers make progress on vital work related to the coronavirus and a wide range of other diseases.

INDUSTRY OUTLOOK:

LIFE SCIENCES

Life sciences continues to be a bright spot in a still-struggling broader economy

BY ADAM LOHR AND STEVE KEMLER

THE LIFE SCIENCES INDUSTRY has been in the spotlight for much of 2020 as government officials and the public pin their hopes for economic recovery on the discovery of an effective vaccine for COVID-19. While some of the initial rush of excitement around the industry has moderated as the pandemic has worn on, life sciences continues to be a very active market for both private investments and initial public offerings.

The clinical trials pipeline also seems to be recalibrating after a flood of COVID-19-related clinical trials sidelined research on other diseases earlier this year. Overall, we expect the resilience the life sciences industry has shown to continue into 2021 as researchers make progress on vital work related to the coronavirus and a wide range of other diseases.

KEY TAKEAWAYS

- The Q2 surge behind life sciences is beginning to ease as some stability returns to the broader market, but we expect this industry to remain a primary focus for investors.
- Companies should at least consider mounting pressure to repatriate aspects of production when designing and forecasting long-term supply chains.
- A rapid recovery in employment for life sciences companies will reignite the race for talent that characterizes hiring in this industry.

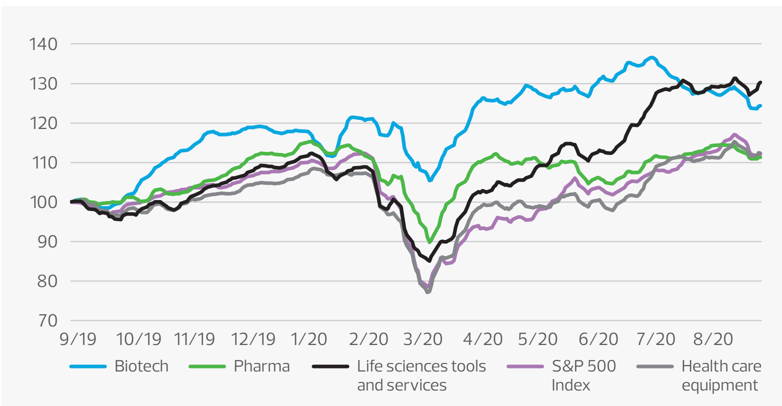
A bright spot

Much of the world has spent the last two quarters under some form of lockdown, hoping for a therapy or vaccine that will put an end to the pandemic and the fallout that has crippled economies, sent national deficits skyrocketing, and kept the population out of work and school. Much rests on that hope, because, as RSM chief economist Joe Brusuelas frankly put it: "No vaccine, no recovery."

Now, as the initial shock of the pandemic has lessened, we can look ahead to where the economy and the life sciences ecosystem are headed. While many industries have been focused on the year that could have been, life sciences has fared better than the rest of the U.S. economy, except for some big tech stocks and a handful of now essential work-from-home players like Zoom.

Performance of S&P 500 vs. life science sectors

NORMALIZED TO 100 AS OF SEPTEMBER 1, 2020



Source: Bloomberg

Acknowledging that the market is not the economy, we do see current year performance as a positive sign for life sciences, especially when compared to the high-performing S&P 500. Each of the life sciences sectors has been on par or far in advance of the broader market, with biotech and life sciences tools and services leading the pack. Given pharma's more established portfolio and the fact that all the primary vaccine candidates are biologics, we are not surprised that pharma's performance has matched the market. The excitement around biotech and a potential vaccine has started to wane as development of a critical few vaccine candidates has reached warp speed and retail investors start to place bets elsewhere in a rebounding market.

MIDDLE MARKET INSIGHT

The rapid recovery for life sciences companies will restart the race for talent that characterizes hiring in this industry.

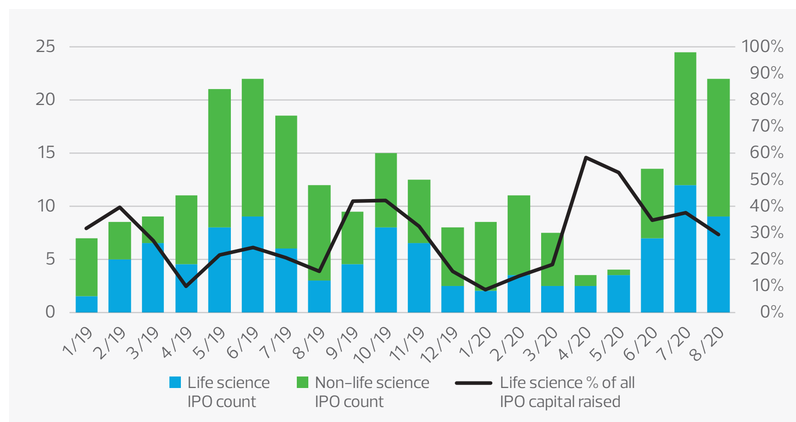
Life sciences tools and services are benefiting from a strong tail wind in demand for testing services and supplies, reagents and other components to support ongoing trials, COVID-19 tests and the manufacture of vaccines. We believe this demand will persist well into 2021 as a vaccine is hopefully made available and testing continues within an increasingly open economy.

The focus on COVID-19 therapies, critical medical devices and testing capabilities has provided a halo effect for the life sciences industry. But looking past the market hype and politics of bringing a vaccine to market, we believe life sciences will remain a primary focus for investment and innovation. Life sciences capital markets are as strong as ever, supply chains have proven resilient, and clinical trials have rebounded to support the overall ecosystem for the long term.

A primary player in public markets

As many industries suffer depressionary shocks from the economic shutdown, and the Federal Reserve keeps interest rates near zero to support spending, life sciences companies have been attractive targets in the public and private markets for investors who see the long-term potential of the industry.

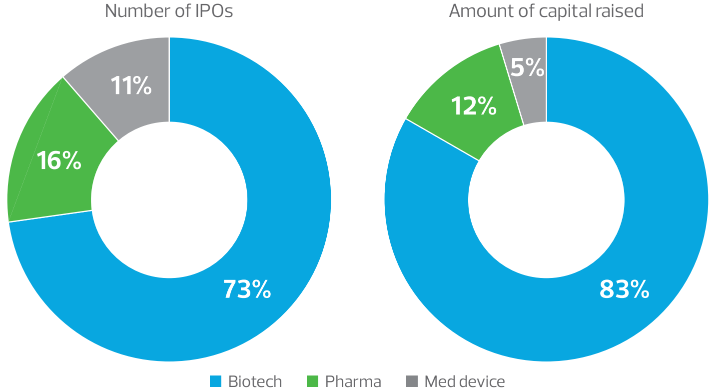
Life science IPOs vs. all other industries



Source: Bloomberg

GIVEN THE RESILIENCE OF LIFE SCIENCES THROUGH THE PANDEMIC, WE HAVE NO REASON TO EXPECT THAT PRIVATE INVESTMENT ACTIVITY THROUGH THE REMAINDER OF 2020 WILL SLOW IN ANY SIGNIFICANT FASHION.

Life sciences IPO activity by sector



Source: Bloomberg

Looking only at initial public offerings for life sciences companies, it would be hard to tell we have been in a global recession. Other than special purpose acquisition companies (commonly known as SPACs), which have seen a resurgence during the pandemic as a faster and less cumbersome alternative to public listing, there are no other sectors that have approached the performance of life sciences. Biotech, which made up the vast majority of IPOs during 2020, was likely able to benefit from an increased level of understanding and excitement from both retail and institutional investors driven by the sector's efforts to find therapies and a vaccine for COVID-19.

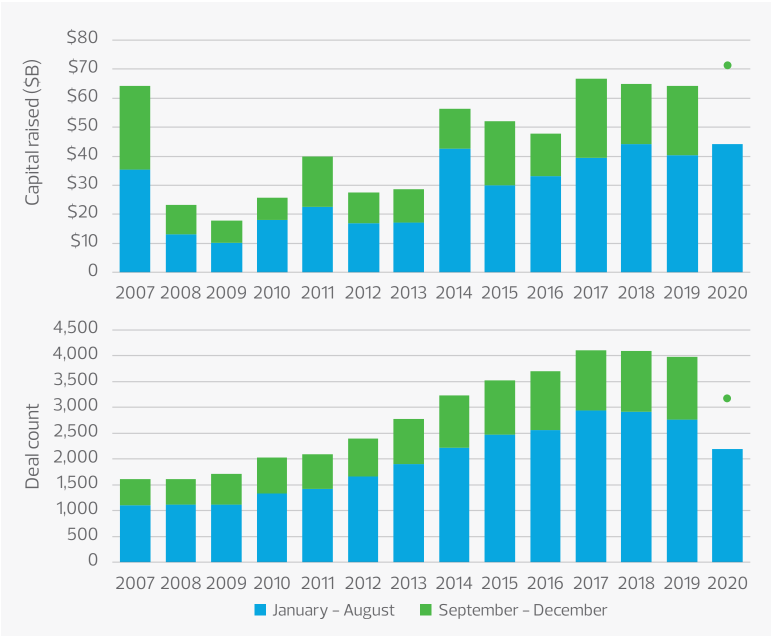
The Q2 surge is beginning to ease as stability returns to the broader market, but we expect life sciences to remain a primary focus for public investment, as the industry has represented 40% of all non-SPAC IPOs in the United States since 2018. Looking ahead, we expect biotech to remain the most active sector in life sciences as these companies bring innovative new therapies and technologies to market and serve as growth catalysts and targets for large biopharmaceutical companies. As a point of reference, about 60% of all life sciences IPOs over the last three years have been in biotech.

Private investment reaches new peak

Even with the disruption of clinical trials and a defensive position by many private investors during the pandemic, life sciences has remained a very active market for private equity and venture capital.

Private investment in life sciences companies was at its highest level ever between January and August 2020, according to our analysis of PitchBook data, and that is even after excluding Vilex and Squadron Capital's $62 billion acquisition of medical device maker DT MedTech in July (which we removed from the below analysis as it was a major outlier). The amount of life sciences capital raised is even more impressive given that the deal count through August is 24% lower than the three-year average. The slowdown in deals is to be expected in a recessionary environment as funds monitor and protect existing portfolios and wait to see if there are opportunistic deals to be had. Investments to date have skewed toward the ends of the spectrum between large investments and buyouts of later stage companies with high probability assets, and smaller add-on rounds to support early stage companies that have been disrupted by the pandemic.

Life sciences private equity and venture capital



Source: Data—PitchBook; Analysis—RSM US LLP

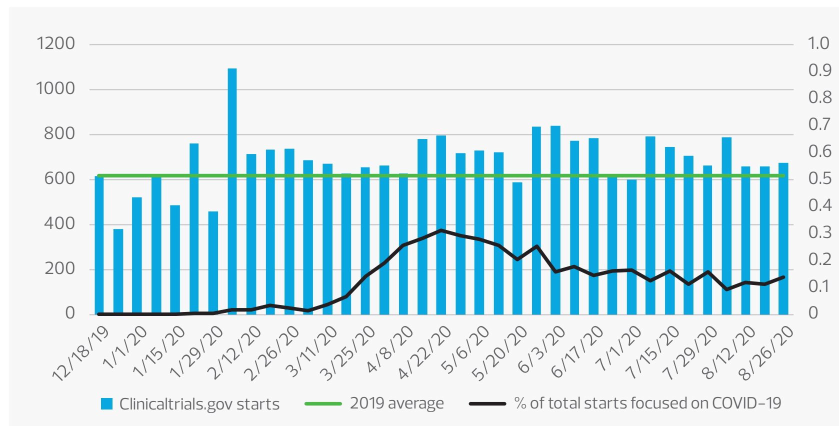
Over the last decade, an average of 69% of private deals and 64% of private capital investments in life sciences take place between January and August each year, an RSM analysis of PitchBook data shows. Those levels of activity remained relatively unchanged even during the Great Recession. Given the resilience of life sciences through the pandemic, we have no reason to expect that private investment activity through the remainder of 2020 will slow in any significant fashion. Especially as the life sciences public markets continue to provide above-average returns, interest rates are expected to be held near zero for the foreseeable future, and the broader economy continues to experience increased political and pandemic driven volatility.

Rapid rebound in clinical trials

The pandemic forced researchers and clinical trial managers to contend with a new set of obstacles, including travel restrictions, remote work, economic instability and concerns from patients about visiting medical facilities. Many sponsors diverted attention away from their core pipeline and toward efforts to develop and test COVID-19 treatments and therapies. Globally, the number of patients who entered clinical trials in April this year plummeted 79% compared to April 2019, according to a survey conducted by Medidata early in the pandemic. At the same time, there was an explosion in the number of new trial starts related to COVID-19; globally, nearly a quarter of all new trials in April 2020 focused on the disease, and in the United States that figure was 30%.

The fear was that these challenges and the focus on COVID-19 would significantly disrupt the clinical trial pipeline and have long lasting repercussions for the life sciences ecosystem. Fortunately, those fears did not materialize. Even during the peak of the pandemic in the United States, the weekly number of new trial starts registered with clinicaltrials.gov remained above the 2019 average. According to an August clinical trials survey by Medidata, 41% of clinical trial professionals stated that the pandemic was now having little to no impact on their ongoing trials, and 58% were optimistic about the future of clinical trials. This is a very welcome change of sentiment, and it speaks to how robust and resourceful the U.S. clinical trial ecosystem is.

Total clinical trial starts vs. % of clinical trial starts focused on COVID-19

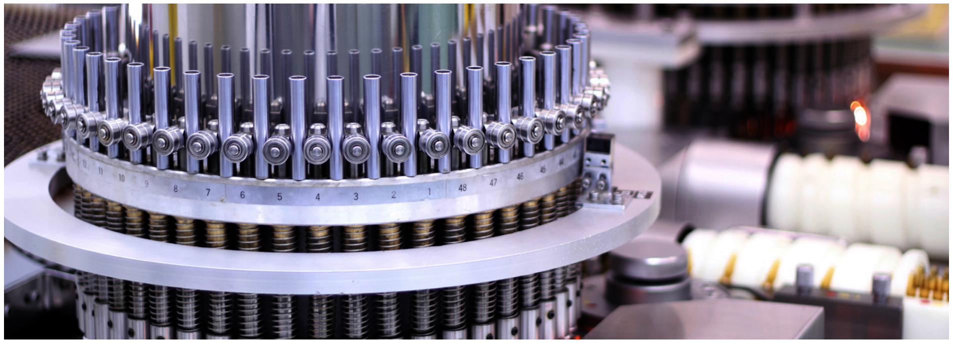


Source: Clinicaltrials.gov; Trial Insights

However, much like the economic recovery which has come swiftly for some and will remain slow and frustrating for many others, the rebound in clinical trials has favored the therapeutic areas that have seen the most investment and promise over the last several years.

Medidata reported that oncology has been leading the pack in terms of trial enrollment, and as of July was ahead of 2019 metrics. Based on our analysis of clinical trial data from Trial Insights, studies associated with

THE FOCUS ON COVID-19 THERAPIES, CRITICAL MEDICAL DEVICES AND TESTING CAPABILITIES HAS PROVIDED A HALO EFFECT FOR THE LIFE SCIENCES INDUSTRY.



neoplasms (related to oncology) had one of the lowest rates of terminated or suspended trials between May and August across all major indications. Only dermatological, joint and congenital studies saw a slower occurrence of trial suspension or termination.

The September announcement of Gilead's $21 billion acquisition of Immunomedics is a market reflection of the importance of oncology within life sciences. The deal aims to expand Gilead's oncology portfolio with what is anticipated to be a successful breast cancer therapy. The antibody-drug conjugate technology this therapy uses also has the potential to work across tumor types. This is a further push by Gilead, like many other large drug companies, to expand into immuno-oncology, which according to EvaluatePharma's 2020 annual industry report is expected to "grow at a CAGR (compound annual growth rate) of 20.2% between 2019 and 2026."

From a recruitment perspective, trials related to the central nervous system are likely the only other therapeutic area to fully recover by the end of Q3; but we do see the overall increase in recruitment numbers as a positive sign that patients are comfortable and engaged in trials again.

Domestic life sciences manufacturing is unlikely to recover without structural change

The number of discussions about repatriating production of life sciences products in the United States has been increasing as economic and nationalist pressures rise in response to the pandemic. The crisis has also heightened awareness of just how global the life sciences supply chain has become. While the rhetoric around reshoring may seem omnipresent in the media and from politicians, the reality is that any major change is highly unlikely in the near term. Still, the life sciences ecosystem should at least consider this mounting pressure when designing and forecasting the long-term supply chain for products in the development pipeline.

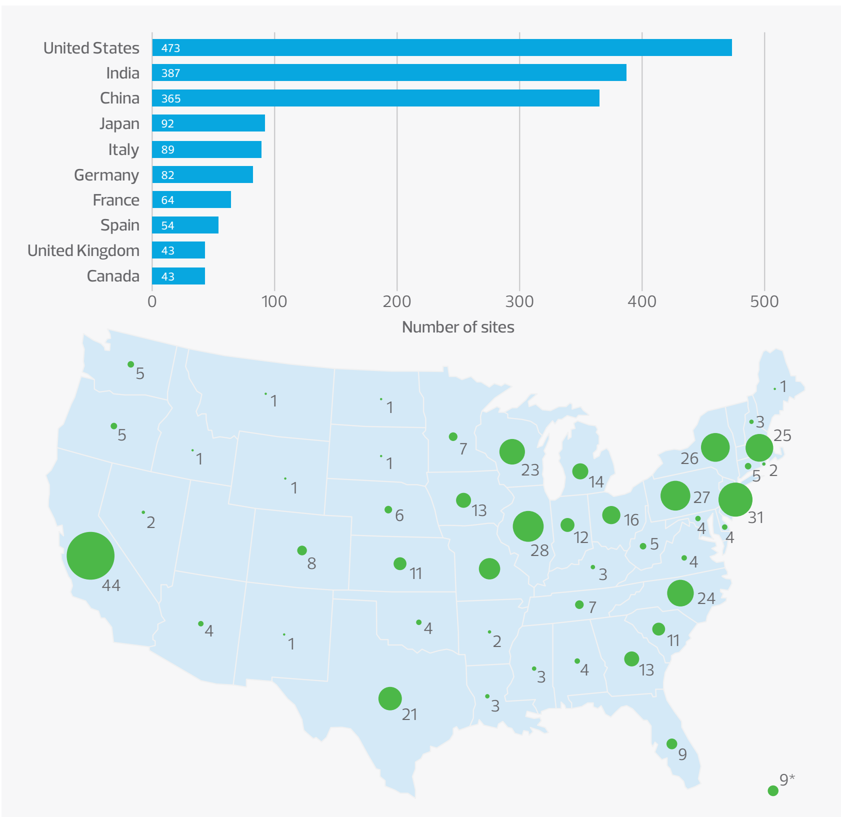
In 2019, branded drugs accounted for 80% of drug spending ($511.4 billion) in the United States but only 9.8% of prescriptions dispensed, according to data from health care analytics company IQVIA. Net margins for specialty manufacturers who make generic drugs average 18.2% compared to 28.1% for branded drug manufacturers, according to a 2017 study from the University of Southern California. Given the lower margins, generic drug manufacturing will continue to be less profitable in the United States and companies in this space are less likely than branded drug manufacturers to have a domestic supply chain.

The high cost of U.S. manufacturing becomes especially critical in the manufacturing of active pharmaceutical ingredients (API). In Teva Pharmaceuticals' Q2 earnings call, President Kåre Schultz said, "It's also true that there [have] been discussions about getting API manufacturing ... back into the U.S. It's a fact that it has basically all left the U.S. within the last 30 years. So there is nothing left, which means that getting it back for real would take probably 10, 20 years and would have to depend on major structural changes" in pricing and other factors.

The economics of drug manufacturing ultimately determine the logistical sites and supply chains that pharmaceutical companies select. While U.S. companies continue to be powerhouses in developing innovative, safe, and effective drugs and medical devices, much of the raw materials and active pharmaceutical ingredients for this work still come from overseas because of the lower costs and looser regulations. API and finished drug form (FDF) manufacturing globally is very opaque. In 2019 testimony to Congress, Janet Woodcock, director of the Food and Drug Administration Center for Drug Evaluation and Research, said that "although CDER can describe the locations of API manufacturing facilities, we cannot determine with any precision the volume of API that China is actually producing, or the volume of APIs manufactured in China that is entering the U.S. market, either directly or indirectly by incorporation into finished dosages manufactured in China or other parts of the world."

Based on the limited data provided by the FDA, we are left using manufacturing sites as the best proxy for the amount of manufacturing taking place in the United States and other countries. Manufacturing sites may produce API, FDF or both, according to Woodcock's 2019 testimony. Pharmaceutical companies

Pharmaceutical manufacturing site distribution



Source: Food and Drug Administration

*Puerto Rico

often identify multiple manufacturing sites as able to produce a given API or FDF, and manufacturers "are not required to report to the FDA whether they are actually producing an API at a facility, and if they are, the volume they are producing," per her testimony.

Within the life sciences ecosystem, there is a growing concern that potential reshoring efforts would increase costs, put upward pressure on drug prices as margins shrink and create a concentration risk for life-saving medications should a domestic crisis take place. If there is an appetite in the United States to make structural changes to the pharmaceutical industry, it is more likely to be focused on reducing drug costs than reshoring supply chains.

As life sciences hiring rebounds, so do skilled labor shortages

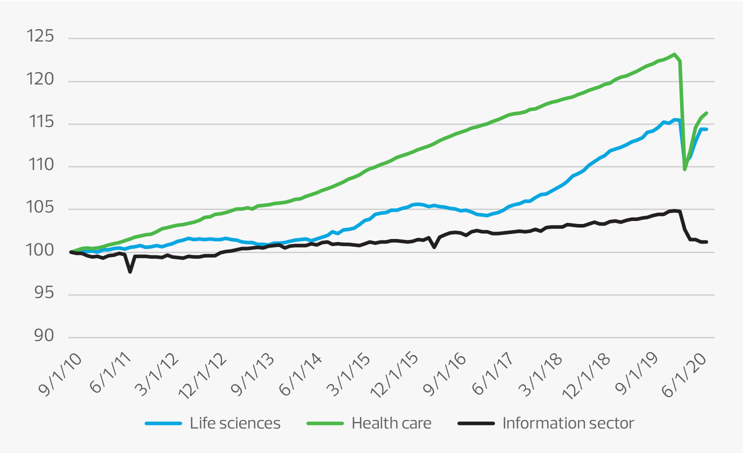
Amongst the turmoil of the current labor market and mass unemployment, life sciences employment has nearly recovered to pre-pandemic levels. Like nearly all industries, life sciences saw significant decreases in payrolls in Q2, but was able to quickly recover to levels last seen in October 2019. By comparison, the health care sector is currently at September 2017 employment levels. Other industries have fared still worse.

To assess employment trends in the life sciences ecosystem, we monitor monthly data from the Bureau of Labor Statistics Establishment Payroll Survey and compare life sciences to heath care, which represents the delivery of life sciences products; and the information sector, which represents the competition for skilled technical talent.

MIDDLE MARKET INSIGHT

If there is an appetite in the United States to make structural changes to the pharmaceutical industry, it is more likely to be focused on reducing drug costs than reshoring supply chains.

Labor market growth in current business cycle



Source: Bureau of Labor Statistics 100 equals the employment level as of 09/30/2010 for each index

This rapid recovery in employment for life sciences companies will restart the race for talent that characterizes hiring in this industry. In the biotech hub of Boston, competition for talent between firms is the primary challenge to hiring, according to industry nonprofit group MassBioEd. The immigration landscape is also a significant factor for hiring within the life sciences industry; in 2014, 52% of biomedical researchers in the United States were foreign-born, according to a 2017 article in *Nature* (that number includes naturalized citizens and noncitizens). And U.S. demand for foreign-born skilled workers has grown in recent years. The number of new approvals for H-1B visas—which allow foreigners to work in the United States in specialty occupations—climbed steadily from 193,000 in 2010 to 389,000 in 2019, according to data from U.S. Citizenship and Immigration Services. While this represents a significant increase in the total number of applications approved, the percentage of applications approved has dropped from 94% in 2010 to 85% in 2019.

Life sciences companies have always competed with the technology and information sectors for highly skilled workers such as data scientists, programmers and engineers. Now, both life sciences and tech companies are also competing with financial institutions, business and professional services firms, and nearly every other industry as they work to redefine their businesses using data sciences, machine learning and artificial intelligence. Without increased access to skilled talent through either increasing science, technology, engineering and mathematics education domestically or allowing skilled immigration, life sciences companies should expect an increasingly competitive landscape for talent in the coming years.

While the search for talent will remain tough, the industry finds itself well-capitalized and in a strong position as the end of 2020 approaches. Demand for some life sciences products and services has helped make the industry more resilient than expected during the pandemic. The urgent need for COVID-19 vaccines, therapies, and related products such as personal protective equipment, ventilators and testing supplies, when combined with closer attention from the public and investors, has given the ecosystem a significant boost in 2020. We expect the life sciences industry to remain at above-average performance even as the broader economy makes steady progress toward recovery.

MIDDLE MARKET INSIGHT

Life sciences capital markets are as strong as ever, supply chains have proven resilient, and clinical trials have rebounded to support the overall ecosystem for the long term.

Employers and employees alike have discovered the ability to work from home is both viable and productive.

INDUSTRY OUTLOOK:

REAL ESTATE

BY LAURA DIETZEL, SCOTT HELBERG AND TROY MERKEL

THE COVID-19 PANDEMIC has greatly disrupted the real estate industry, accelerating digital transformation and prompting a host of new operational standards. Closures and restrictions are having an immediate impact on most sectors. While these setbacks have lingered longer than many anticipated, they are short-term in nature. Longer-term trends are emerging, including increased flexibility and migration, which are set to have a lasting impact on where we live, work and learn.

KEY TAKEAWAYS

- The housing market is experiencing steady recovery, but supply has not kept pace.
- Demand for affordable homes is driven largely by the pandemic-induced shift to remote work.
- Many once city-centric corporations are embracing hub-and-spoke office models to accommodate employee migration to the suburbs.
- Offices are reconfiguring to ensure safety and social distancing protocols, making newer properties and those in the suburbs increasingly attractive.
- Student housing is undergoing trends similar to the corporate office, as higher education is pressured to embrace new safety protocols at a time when revenue is declining.

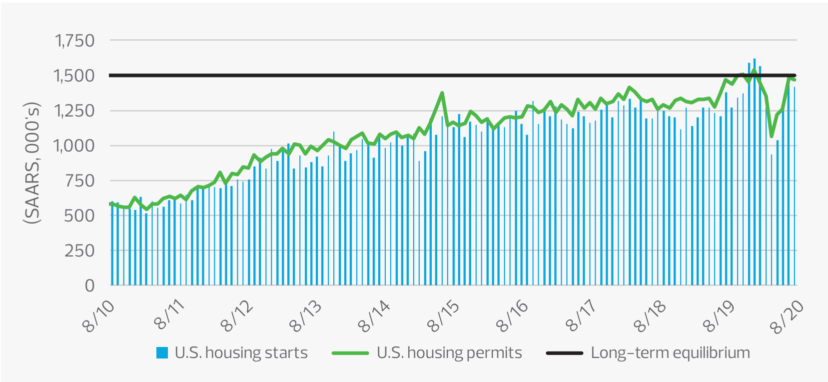
"Our strategy in the current market condition is to be patient with longer-term sales and enable price appreciation to offset future cost escalations and maximize margin while selling only more current inventory improves our inventory turn."

Stuart Miller, board chairman, Lennar, third-quarter earnings call, September 15, 2020.

Housing recovery has staying power

We entered 2020 with a bullish outlook on housing, expecting that for the first time since the Great Recession, new home starts would reach the 1.5 million annualized rate we believe is necessary to sustain market equilibrium. Then came the spring, normally the start of the home-buying season, but with the country experiencing the height of the pandemic, homebuyer traffic fell through the floor and builder confidence followed suit. Homebuilders reduced production and housing starts fell to 934,000, while permits plummeted to 1,066,000. This stall in the marketplace threatened to significantly reduce the much-needed housing supply, which has been woefully low for much of the past decade.

Housing bounces back to long-term equilibrium

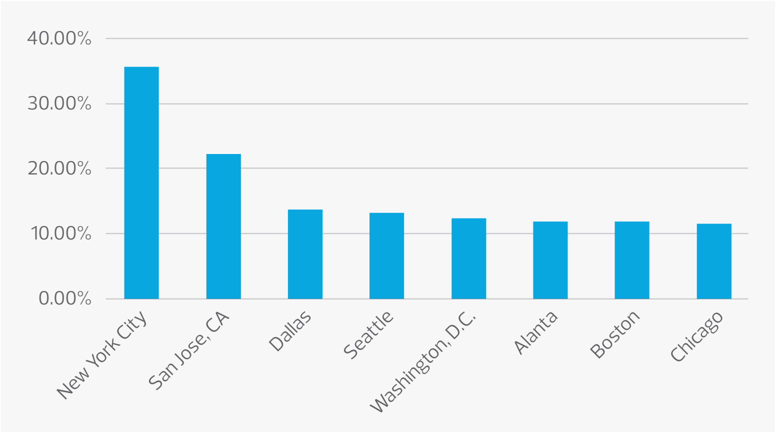


Source: U.S. Census Bureau

Since April, when confidence and leading market indicators bottomed out, the housing market has experienced a steep and steady recovery. The Homebuyer Traffic Index reached a 10-year high of 65 in August, according to the National Association of Home Builders. Fueled by low interest rates, the 30-year mortgage rate stands at 3.17% as of the middle of September, according to the Mortgage Bankers Association, down 95 basis points from a year ago, as millennial homebuyers come of age. More affordable mortgages have sent homebuilder confidence through the roof, with the NAHB traffic index rising to 84 as of the most recent NAHB survey released in August, matching the exuberance shown at the start of 2020.

Increased demand for homeownership in the suburbs is being aided by the recent shift to remote work spurred by the pandemic. Employers and employees alike have discovered the ability to work from home is both viable and productive. Unshackled from downtown offices and daily commutes, homebuyers are looking for houses in more affordable markets with space for a home office. Nationally, home searches outside of prospective buyers' current metro areas have steadily increased by 27% through the end of second quarter, according to Redfin.com. In major metros such as New York City, that figure rose to 35.7%, with the majority of homeseekers looking to Atlanta and Philadelphia as potential destinations. These moves indicate that the work-from-home trend is here to stay and the single-family housing market will benefit as it races to meet demand.

Homebuyers searching to move away

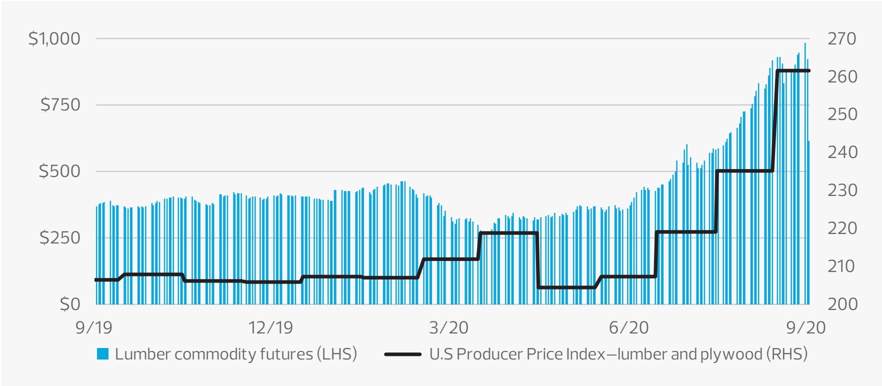


Source: Redfin.com

New home inventory from confident homebuyers will be critical to sustain the market. Existing single-family inventories continue to run at about 1.3 million for 2020, a sustained low level of supply not seen in the past 40 years. Much supply has been sedated as baby boomers continue to age in place, a trend likely to increase as concerns over the impact of COVID-19 on densely populated elderly communities such as nursing homes weighs on relocation decisions. Meanwhile, the rise in telemedicine, accelerated by regulatory changes made to accommodate the health care industry during the pandemic, will help enable the elderly cohort to stay in their homes longer than any previous generation. The continued lack of supply and high demand, as illustrated by homebuyer traffic, leaves the market with only a three-month supply. All of these factors have led to an incredibly hot housing market that is driving home prices up 8.2% year-over-year through July.

Still, some homebuilders caution that headwinds remain. Rising land prices and a complex regulatory environment have been regularly cited by the industry for decades as persistent constraints. Meanwhile, soaring lumber costs fueled by large-scale forest fires in the tree-rich areas of the northwestern United States present major concern for homebuilders. Since June, lumber futures have soared 155%, a rate that has left many builders reevaluating their long-term strategies. The wildfire damage is also leading to price volatility, underscored by a $300 one-day drop on Sept. 16.

Wildfires have sent lumber prices soaring



Source: Bloomberg

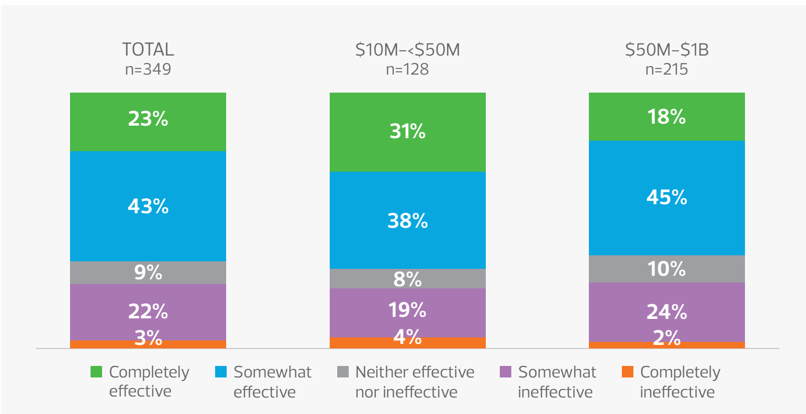
One way to offset rising costs is for homebuilders to use their leverage in an undersupplied market to drive up prices. On a third-quarter earnings call, Stuart Miller, board chairman for Lennar, one of the largest homebuilders in the country, identified such a plan: "As we witnessed Lennar prices accelerate throughout the quarter, we deliberately sold today's current inventory and limited sales on tomorrow's yet-to-be started homes. Our strategy in the current market condition is to be patient with longer-term sales and enable price appreciation to offset future cost escalations and maximize margin while selling only more current inventory improves our inventory turn."

Squaring up the office with remote work

As pandemic-induced migration away from high-priced urban centers continues, the U.S. office segment is left coping with the fallout. The need to work from home the majority of the time, if not entirely, now offers workers greater flexibility in where they live. At the same time, employers are recognizing that the shift to remote work did not cause productivity to collapse, as many originally expected. Sixty-six percent of executives said that their remote workers were "completely effective or somewhat effective" in their jobs, according to the third-quarter RSM US Middle Market Business Index survey.

> "For many companies, Slate included, culture is a key competitive advantage. Our view is that companies will not risk their ability to attract and retain the best people just to save money on office space."
>
> Steve Hodgson, the CEO of Slate Office REIT, July 31 Q2 earnings call

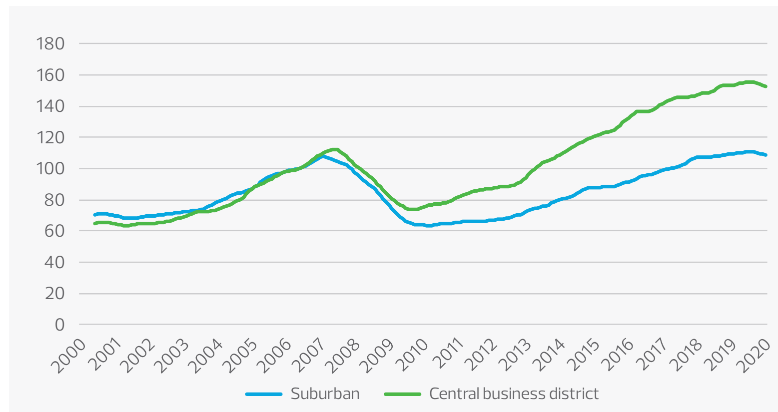
Overall effectiveness of employees' efforts to work remotely



Source: RSM US Middle Market Business Index, Q3 2020

As more employees seek affordable homes farther from pricey urban locations, in particular New York and San Jose, organizations are increasingly embracing "hub-and-spoke" models to accommodate them, reducing the property value gap between the city and the suburbs. Hub-and-spoke calls for maintaining downtown headquarters, perhaps at a reduced size compared to before the pandemic, and then establishing a network of smaller offices in nearby suburban locations where employees and clients are based. And as the workforce incrementally reenters the traditional office, social distancing and safety measures will continue to be priorities, reversing the long-term trend of office densification. Companies and office landlords alike are responding with new protocols. These trends are expected to narrow the pricing and appreciation difference between suburban office and central business district office, which has been widening the RCA commercial property price index gap between the two asset classes, since the Great Recession.

RCA commercial property price index – office



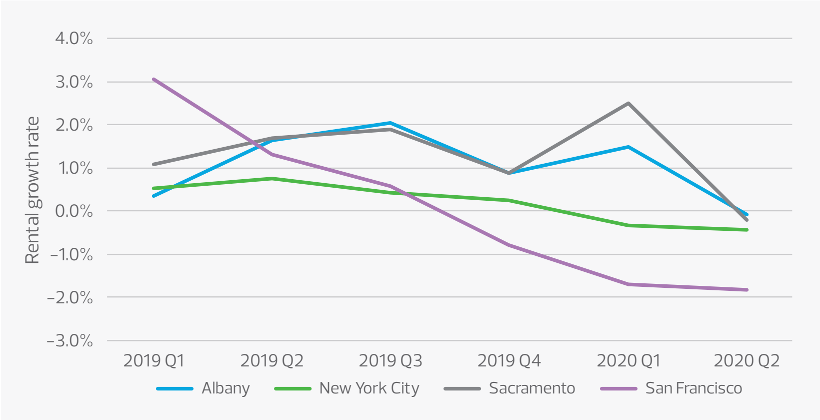
Source: Real Capital Analytics; Bloomberg

Historically, office vacancy rates have been a primary indicator of market trends. In the current pandemic, though, companies continue to pay rent even if their workers are not physically in the office. Office rent receipt rates remained above 96% through July, according to NAREIT, which represents real estate investment trusts. Comparatively, office occupancy stands at just 10% to 15% in major national markets, CoStar data shows. As the economic downturn began only earlier this year, many office tenants are still in the midst of their existing long-term leases. Not yet being forced to make a decision allows them an opportunity to gauge how their needs for space best fit their future company strategies. While office vacancy rates have increased in San Francisco and New York, they remain well below the national average.

> "Although we don't expect a full return to normalcy in fall 2020, universities are focused on the policies and procedures necessary to promote a safe environment in the delivery of their academic curriculum this fall. Our leasing trends and consumer sentiment at this time make us cautiously optimistic that we are on a path that many would have considered a best-case scenario at the outset of this pandemic."
>
> Bill Bayless, CEO for American Campus Communities, July 21, Q2 earnings call

Residential property, on the other hand, involves shorter leases, and migration away from cities is already having an impact on vacancy rates. The multifamily vacancy rate in San Francisco has grown four percentage points in the first three quarters of 2020, now exceeding the national average. Rent growth in the office sector has been a better reflection of the current struggle for demand in major metropolitan markets. Even pre-pandemic, office rent growth had been on a decline for the last six quarters in gateway cities such as New York and San Francisco while nearby secondary cities showed stronger growth.

Offices in major metros hit hardest



Source: CoStar

It is important to note that cities as we know them will not come to an end. Once a successful vaccine for COVID-19 is distributed, people will return. Cities will continue to attract younger generations seeking the excitement and convenience of urban life, and they remain essential hubs for collaboration and innovation. Companies will have difficulty maintaining company loyalty and culture in the work-from-home environment. Steve Hodgson, CEO of Slate Office REIT, echoed this view in the company's recent second-quarter earnings call. "For many companies, Slate included, culture is a key competitive advantage," he said. "Our view is that companies will not risk their ability to attract and retain the best people just to save money on office space."

In order to best meet the needs of their organizations and staff, we expect companies will gravitate to a hybrid work model: individual-based work will be performed at or near the employee's home and collaborative work will be done in the office. This will lead to a resurgence of the hub-and-spoke model.

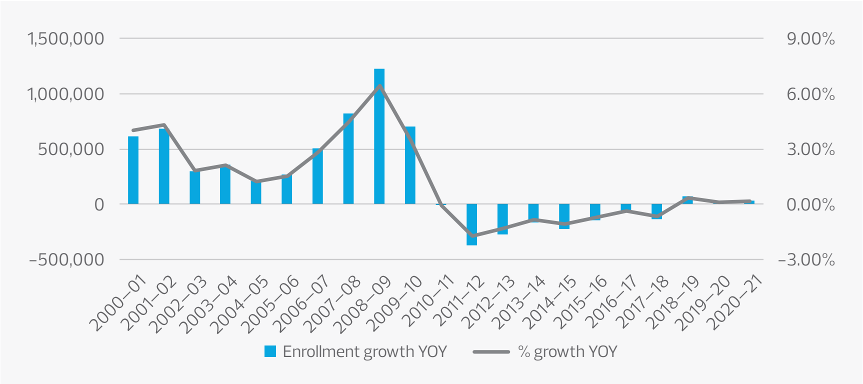
Over the past decade, the average space per office employee severely declined to under 200 square feet, according to research firm JLL. Cubicles were piled next to each other with recycled air pumped through the building. When employees eventually do come back to the office, the workspace will look very different. Companies will deploy measures to ensure health, safety and social distancing, including temperature checks, high frequency cleaning and the installation of state-of-the-art HVAC equipment. Class A properties and newly constructed office buildings that provide these features will become more attractive when compared to existing properties that require retrofitting, along with suburban offices that serve workers who have migrated away from urban centers.

Office property owners and investors need to be aware of these emerging trends in order to stay competitive in the market and to remain profitable. The reversal of office densification and desire for a safe work environment will push landlords to redesign existing floor plans and implement new procedures. There is still plenty of opportunity in the office sector with proper repositioning and tailoring to new tenant demands.

Student housing 2.0

For investors in student housing, the coronavirus has upended what was long considered a sector immune to economic cycles. After the Great Recession, investment in student housing skyrocketed, tripling in volume to $11 billion between 2014 and 2019, according to CBRE research. Demographics during this period were favorable as students returned to campuses for higher education in droves amid bleak job prospects. Enrollment in post-secondary education grew by 4.51% and 6.46% respectively during the 2007–08 and 2008–09 school years, well above the average 1.3% 20-year annual average rate, according to the National Center for Education Statistics (NCES).

Post-secondary institution enrollment growth



Source: National Center for Education Statistics

While demand for higher education tends to be inversely related to strong economic performance, the NCES is generally forecasting an average 0.2% increase in enrollment annually for the next decade based on overall population trends. But even if enrollment remains steady, it's becoming abundantly clear that the future of higher education now includes some form of remote learning that will affect on-and off-campus housing dynamics. Promisingly, leasing numbers through fall 2020 show that students are opting in for an on-campus experience, regardless of whether their classes are in-person or online. Nearly 90% of beds were pre-leased for the fall 2020 semester, a figure just 340 basis points below the year-ago comparable leasing rate as tracked by RealPage.

Across industries, the pandemic has accelerated digital transformation trends, including investment in technology, and higher education is no different: Institutions are offering virtual learning platforms that carry incremental costs, intensifying competition for market share as universities and students choose among a myriad platforms vying for attention in the virtual learning world.

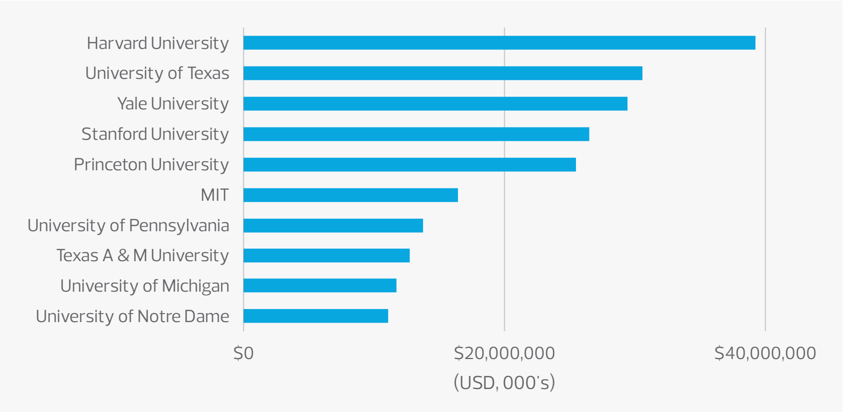
Understanding future demographic and technology trends affecting higher education is increasingly important as there will most certainly be further consolidation. This school year will be characterized by survival of the fittest: many colleges and universities are falling short of their funding expectations for the 2020–21 school year as enrollment stalls and virtual offerings don't produce the same revenue streams as live classes and room and board. *The Chronicle of Higher Education* reported that out of nearly 3,000 colleges tracked, 37.3% are moving forward with some sort of in-person model, another 33% were planning predominantly online experiences, and the remaining 30% were either undecided or have other plans.

The threat of a worsening pandemic and reports of emerging hot spots across college campuses as students return is worrisome for this school year. Spikes in positive tests continue to be reported across campuses with responses varying by institution: The University of North Carolina at Chapel Hill and Notre Dame flipped from in-person classes to mainly online classes due to outbreaks while others shifted to fully remote learning for a semester or other period of remote learning before resumption of in-person instruction. If we've learned anything since the reopening of campuses for the 2020–21 school year, operational flexibility is key for schools. Meanwhile, tuition-paying students are now demanding tiered pricing for in-person and virtual instruction and the default to virtual will cause higher education institutions to take greater revenue hits in the short term.

Amid the revenue shortfalls, higher education isn't catching a break from state and local governments that are themselves strapped for cash with some not yet fully recovered from the great financial crisis. In fact, the Federal Reserve is closely monitoring the situation. In New England for example, the Federal Reserve Bank of Boston has identified 71 financially vulnerable higher education institutions within New England; this classification is given to those schools that have experienced enrollment decline over the last decade and have limited endowments to see them through the downturn. Even though the CARES Act authorized upward of $14 billion in emergency relief for higher education, the financial costs of the pandemic to colleges and universities nationally had surpassed the appropriated amounts by late April.

In conjunction with underwriting the impact of emerging educational technology platforms on future campus enrollment, student housing investors are underwriting the financial health of the universities they are invested in around making bets on the so-called "haves" and leaving behind the "have nots." The top institutions with the best enrollment and endowments will continue to command the greatest investment competition.

Top 10 university endowments



Source: NCES

The loss of public funding means universities are getting creative with available budgets. The dated housing stock on many campuses originally built for communal living has fallen out of favor and is favorably positioning student housing players for increased public-private partnerships to solve for current and future housing needs. On average, the country's largest 175 universities can house only 21.5% of their undergraduate population in on-campus student housing, RealPage data shows.

Bill Bayless, CEO for American Campus Communities, the largest provider of student housing, noted cautious optimism for the sector on a July earnings call. "Although we don't expect a full return to normalcy in fall 2020, universities are focused on the policies and procedures necessary to promote a safe environment in the delivery of their academic curriculum this fall," he said, adding that "our leasing trends and consumer sentiment at this time make us cautiously optimistic that we are on a path that many would have considered a best-case scenario at the outset of this pandemic."

As the pandemic leaves its mark on higher education, student housing will look very different. Not unlike office properties, student housing will embrace new protocols for safety and social distancing, as schools reassess inventory needs going forward and the sector sees more consolidation.

MIDDLE MARKET INSIGHT

The need to work from home the majority of the time, if not entirely, now offers workers greater flexibility in where they live. At the same time, employers are recognizing that the shift to remote work did not cause productivity to collapse, as many originally expected. Businesses are taking advantage of the new hybrid work model to reassess their property needs for the future.

The technology, media and telecom sectors are playing a crucial role in keeping people and businesses connected as the pandemic continues.

INDUSTRY OUTLOOK:

TECHNOLOGY, MEDIA AND TELECOM

A changing environment presents opportunities

BY VICTOR KAO, DAVIS NORDELL, KURT SHENK AND DAVID STUART

THE TECHNOLOGY, MEDIA AND TELECOM sectors are undergoing a significant amount of change. While technology jobs have not been immune to COVID-19, the industry has been more resilient than others. With the cloud and cloud security moving to the forefront, 5G becoming more of a reality, and telecom and streaming services providing critical connectivity and distractions during the pandemic, several opportunities exist for companies that can match products and services with demand.

KEY TAKEAWAYS

- Cloud spending is projected to increase, with IaaS, PaaS and SaaS solutions slated for increased growth.
- Cloud security solutions are becoming more popular and are a potential area for accelerated growth in the coming year.
- While unemployment has risen, the technology sector has been buoyed by work-from-home strategies.
- 5G devices and remote high-speed access networks are coming quickly to North American markets.
- Security has become a top priority for stakeholders as more key information is transmitted with mobile technology.
- The future of streaming is bright, although we may see more consolidation and bundling to align with consumer demand.

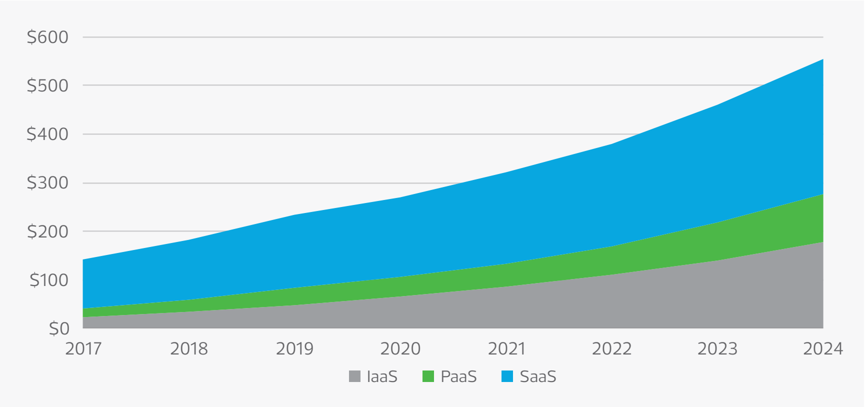
THE SOFTWARE-AS-A-SERVICE MARKET IS APPROXIMATELY $164 BILLION IN SIZE TODAY AND SPENDING ON SAAS REPRESENTS NEARLY TWO-THIRDS OF ALL CLOUD SPENDING.

Spending on the cloud remains resilient

The technology, media and telecom 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. Spending on cloud solutions remains an area of strength for the technology sector despite the pandemic according to the International Data Corporation (IDC):

- The projected spending of $66 billion on infrastructure-as-a-service (IaaS) in 2020 is expected to reach $177 billion by 2024, representing a compound annual growth rate (CAGR) of 29%. Companies like Amazon, Microsoft and Google are well-positioned for continued growth and are noted as leaders within the Gartner IaaS Magic Quadrant.
- In 2020, IDC estimates that $41 billion will be spent within the platform-as-a-service (PaaS) market. The pandemic has slowed the PaaS estimated growth rate to 14% this year, compared to the 41% growth experienced in 2018 and 2017. Growth rate estimates increase in the outer years, with estimates that spending will reach $100 billion in 2024.
- Since 2014, the software-as-a-service (SaaS) industry has experienced a CAGR of 23%, as workloads migrate to the cloud. The SaaS market is approximately $164 billion in size today and spending on SaaS represents nearly two-thirds of all cloud spending. The IDC estimates that the industry will grow at a rate of 13% through 2024.

Cloud market spending forecast (billions)



Source: International Data Corporation; Bloomberg

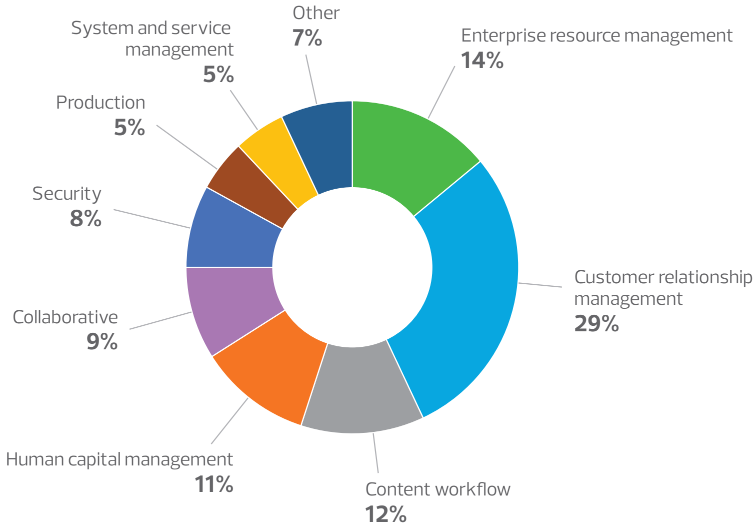
Security is a top growth segment for the SaaS industry

The SaaS market was largely born in 2014. Adobe was one of the first movers in the software industry to migrate from an on-premises offering to the cloud. The move ultimately paid off, as Adobe's stock has appreciated more than seven-fold since January 2014, and was trading at over $500 a share in early September 2020. In the current environment, some SaaS companies have gone to market with a freemium model in hopes that free trials will drive adoption. As a result of this strategy, a sales recovery for many SaaS companies won't begin until late in 2020 and into 2021. Despite the headwinds that the pandemic has created, many SaaS companies continue to chase the $164 billion market.

Security represents 8% of SaaS spending, according to the IDC. However, the pandemic has provided tailwinds for the security industry, and security is currently one of the hottest SaaS verticals. The increase in demand has been experienced as many employees and security administrators continue to work from home in the midst of the COVID-19 pandemic. As the remote workforce has increased the number of devices used to enter company networks this year, we expect there to be a nice tailwind for increased spending on cloud security solutions.

Bloomberg estimates that only 20% of the security market has been captured by SaaS providers, presenting an opportunity for security SaaS companies that can help companies safely migrate workloads to the cloud. Leaders in the cloud security space include companies such as endpoint security provider Crowdstrike, which had one of the best IPOs in 2019 and has continued to experience significant growth. We anticipate that SaaS security providers will experience continued accelerated growth through the rest of this year and into 2021.

SaaS market by application



Source: International Data Corporation; Bloomberg

Tech jobs have not been spared in the pandemic, but growth of remote work helps some

Before the pandemic, unemployment in the technology sector was at a five-decade low and was far below the overall U.S. unemployment rate. Though unemployment has risen for some parts of the technology sector as the pandemic has gripped the country, there have been some early signs that the industry employment levels have bottomed out. In fact, the August 2020 jobs report has motioned a W-shaped recovery for the information industry job market.

Though the worst of the information industry jobs data might be behind us, the recovery is expected to take several years to reach pre-pandemic levels as companies seek to do more with less and leverage technology in new ways. Continued innovation is still critical for many technology companies, and their commitment to research and development will benefit job recovery in the coming quarters.

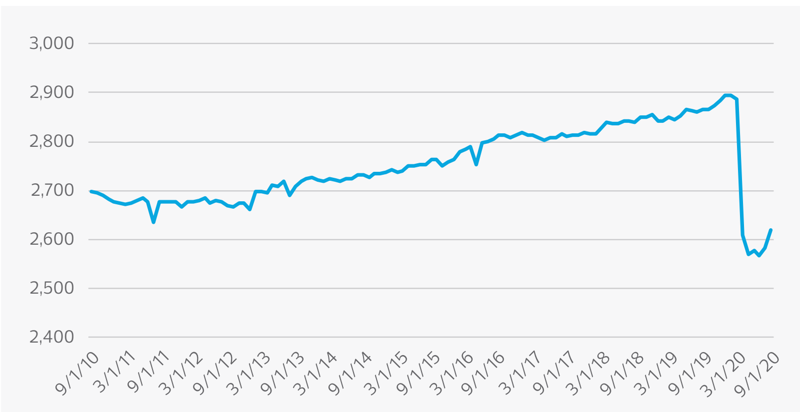
Additionally, the recovery will be enabled by the ability for many technology companies to work remotely. Even before COVID-19, large portions of the technology workforce were partially or fully remote. Many Silicon Valley companies such as Facebook and Twitter have announced plans to allow many of their employees to work remotely indefinitely.

MIDDLE MARKET INSIGHT

History has shown that technology industry trends that originate 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, as companies such as Canadian-domiciled Shopify have latched onto this idea of remote work. We anticipate that more middle market technology businesses will provide remote options for a larger portion of their workforce moving forward.

TECHNOLOGY FIRMS AND STARTUPS HAVE BEEN AN ATTRACTIVE INVESTMENT OPPORTUNITY FOR VENTURE CAPITAL FIRMS FOR SOME TIME NOW, BUT A RECENT TREND HAS SHOWN A MORE DIVERSE GROUP OF INVESTORS ARE FINDING AN APPETITE FOR VENTURE DEAL-MAKING.

U.S. employees on nonfarm payrolls (information sector)



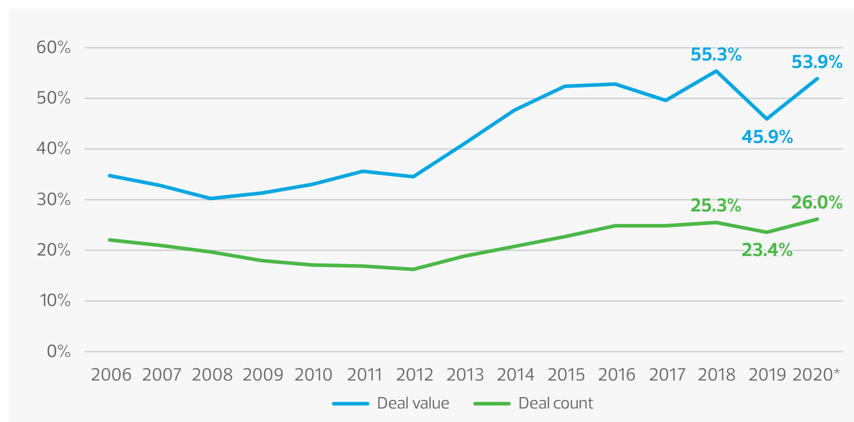
Source: Bureau of Labor Statistics

Healthy amount of capital available to tech firms

Technology firms and startups alike have been an attractive investment opportunity for venture capital (VC) firms for some time now, but a recent trend has shown a more diverse group of investors are finding an appetite for venture deal-making. Nontraditional investors, including corporate venture capital (CVC), private equity investors, government and sovereign wealth funds, and family offices have found the technology industry a land of opportunity for their growing amounts of capital, given the sector's rise in popularity and ability to continue strong growth in the midst of a global pandemic.

CVC has garnered the most attention, as large tech firms amass stockpiles of cash and have used investments in tech startups as a supplement to their overall research and development programs. According to data gathered by PitchBook, 2018 was a banner year for CVC involvement in overall venture capital deals and overall deal values by participating in 25.3% of all deals and making up 55.3% of the overall deal values for the year. 2019 and 2020 continued to show a high level of participation and elevated deal values with CVC participation as depicted in the chart below.

Deals with CVC participation as proportion of overall U.S. VC deals



Source: PitchBook, Silicon Valley Bank

MIDDLE MARKET INSIGHT

The software sector has been the leading area for deals involving CVC, experiencing a significant rise in overall percentage of VC deals going back to the mid-2000s. In our view, we expect this trend to continue as nontraditional investors continue to view venture-like investments in technology firms as a significant opportunity for market-leading returns.

5G CAPEX is increasing and the devices are coming fast

In March, Samsung released its S20 series of smartphones, its first 5G-enabled device. As expected, Apple is following Samsung's lead with its flagship iPhone 12 5G device. As the build out of the 5G network continues to grow, we expect a number of additional 5G-enabled smartphones will come to the market soon and that wearable and smart home devices are not far behind.

Our expectations align with GSMA's research as we expect operators will invest up to $1 trillion in 5G networks, but that most of the investment will be back-loaded. Global 5G investment is expected to happen in three broad waves as outlined below:

- **Wave 1:** Early deployments (2018–20)—China, United States, South Korea and Japan
- **Wave 2:** Ramp-up (2021–23)—European investment acceleration
- **Wave 3:** Wider spread (2024 and beyond)—Latin America, the Middle East and North Africa, the Commonwealth of Independent States and other parts of Africa

Remote high-speed access is also coming

In December 2019, the FCC announced plans to launch a $9 billion 5G fund for rural America. In some areas, this will replace previously planned and federally supported 4G LTE rollouts. In addition to these investments in the 5G rollout, the FCC has supported the proposed buildout of high-speed low earth orbit satellite internet by granting approval for a nearly 12,000-satellite constellation to Space X's Starlink network. In July, it also granted approval for an additional 3,236-satellite constellation from Amazon's proposed Kuiper project that Amazon has said it will invest more than $10 billion into.

The rollout of these services is coming soon as Starlink has already launched over 700 satellites, making it the largest satellite constellation, with plans to increase its rate of deployment. It has also increased its initial request for user terminals from 1 million to 5 million, after nearly 700,000 people in the United States registered interest in the service. The company has already begun private beta testing and has promised initial service will be available to some rural customers in the United States and Canada before the end of this year, with rapidly expanded near-global coverage available in 2021.

The company has indicated that once fully optimized through the final deployment, the system will be able to provide high bandwidth of up to 1Gbps per user. Although slower than 5G, 1Gpbs is still roughly 10 times faster than current 4G speeds and would be available in the most rural environments across the globe.

Securing a remote workforce essential in pandemic environment

Telecommunications technology continues to be the backbone for a remote workforce, remote and distanced learning, and digital social environments. As enterprises undergo analysis on a more permanent remote workplace, securing those work environments is a top priority for business leaders.

According to a study conducted by Risk Based Security, over 7,000 data breaches were reported in 2019, with the greatest number of breaches occurring within the information technology sector. And in a recent survey conducted by Verizon, on a scale of 1 to 10, corporate IT leaders were asked how important mobile was to their overall business strategy—83% of them responded 8 or higher.

The growth of mobile-enabled technology, telehealth and telemedicine, and e-commerce and collaboration tools is bringing valuable, private and protected information to more and more endpoints and creating greater levels of exposure to a security compromise. In the same Verizon survey, 39% of respondents reported a compromise, up from 33% in the prior year's survey.

Continued successful growth of remote work, digital customer and consumer experiences, and overall enterprise growth will require companies to evaluate and properly deploy next-generation security solutions empowered by leading-edge telecommunications technology.

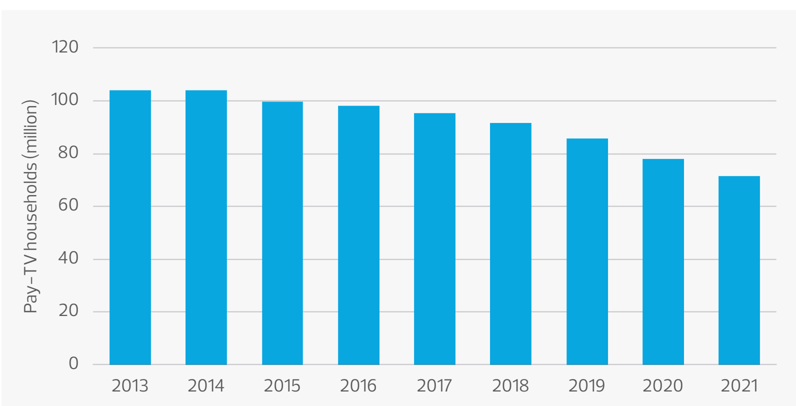
WHEN THE PANDEMIC STARTED IN THE UNITED STATES, IT GAVE VIRTUALLY ALL STREAMING PLATFORMS A BOOST AS PEOPLE SHELTERED IN PLACE AND SOUGHT NEW WAYS TO KEEP THEMSELVES ENTERTAINED. BUT NOW, DISCERNING CONSUMERS HAVE ZEROED IN ON WHICH PLATFORMS WORK AND WHICH DON'T.

The future of streaming is changing post-COVID-19

Unless you're one of the 78.1 million people who is still holding on to traditional cable TV, you've helped streaming continue to take off and become the new medium for content delivery and distribution.

When the pandemic started in the United States, it gave virtually all streaming platforms a boost as people sheltered in place and sought new ways to keep themselves entertained.

U.S. consumers continue to cut the cord



Source: Kagan, RSM US LLP

Overwhelmed consumers: Within the last year, discerning consumers have zeroed in on which platforms work and which don't. Competition has become tougher in what was already a saturated market. The streaming ecosystem is more delineated now than ever, as just within the last year we had powerhouse entrants into the streaming market such as Disney+, AppleTV+, Peacock, HBO Max and Quibi.

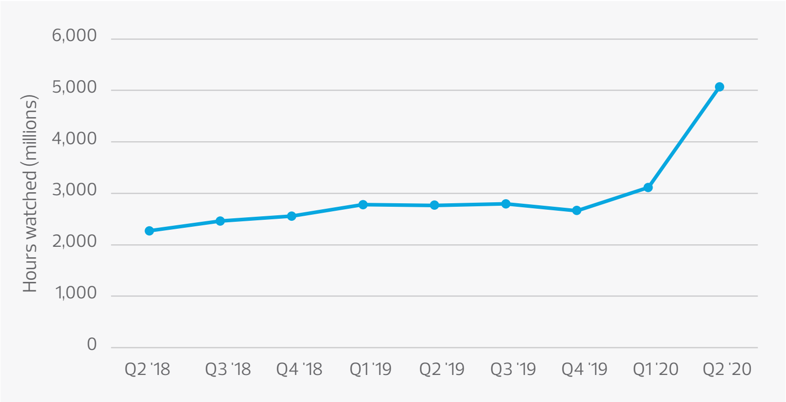
MIDDLE MARKET INSIGHT

According to a recent *Wall Street Journal*-Harris poll, on average Americans have 3.6 streaming services. That number has continued to rise as the streaming market broadens into various streaming models such as subscription video on demand, advertising video on demand (AVOD), transactional video on demand, and now premium video on demand with Disney+ premium to access movies for limited time, such as Mulan.

This highly fragmented model has overwhelmed and confused consumers, but has opened opportunities and challenges for multivideo platform devices (MVPD) such as YouTube TV or over-the-top devices such as Apple TV, Roku or Amazon Fire. These companies now must figure out how to consolidate this market and monetize on a product to allow for simplicity and one-stop shopping.

Fighting for your free time: To make matters even more complicated, video gaming and esports have seen significant growth during the COVID-19 pandemic as live sports temporarily paused, and more users resorted to playing video games during their free time. According to data from Stream Hatchet, Twitch streaming hours nearly doubled in Q2 to 5 billion hours. Streaming platforms and services are not just competing among each other, but are fighting for your free time as well.

Twitch streaming hours per quarter



Source: Stream Hatchet, RSM US LLP

What's ahead for streaming?: The future of streaming continues to be bright, and streaming continues to be a primary platform and means of delivering content to our devices and homes. With so many options, price becomes a more significant factor to consumers; it's why we have seen a larger rise in AVODs to help subsidize the cost to consumers. We expect to see this model continue to grow in popularity, as AVODs such as RokuTV, PlutoTV and Crackle have proven with the growth of their subscribers.

In addition, there's a large re-aggregation opportunity as the streaming market has become heavily saturated with too many options. Consumers are overwhelmed; the more consolidated and simplistic solutions are, the more likely consumers will gravitate toward them. Although MVPDs have had significant declines in subscriptions this year (e.g., AT&T Now), and some have even exited the market (e.g., Sony Playstation Vue), expect to see consolidation and bundling of services at a more affordable price.

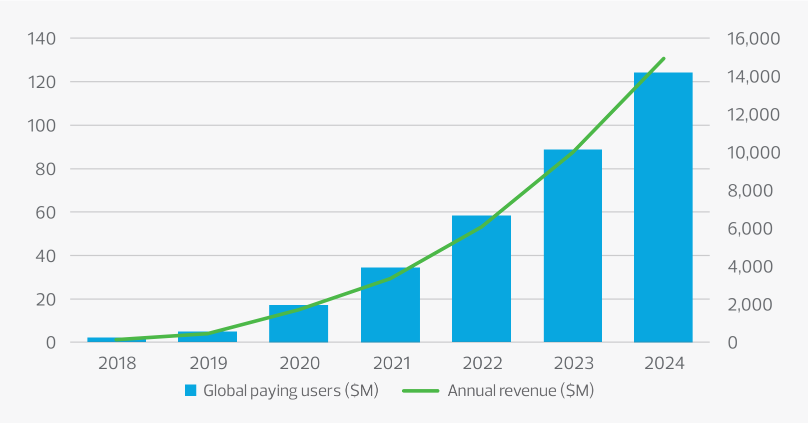
Also, data and algorithmic models are going to be increasingly important in the future. They're what make or break a social media model to entice you to click on that next recommendation to have you engaged in a platform longer. We've all been down that dark abyss, but it's the recommendation algorithms that often determine a consumer's next click. These recommendation engines will be front and center in the near term as a means to generate traffic.

Cloud gaming poised for explosive growth

With the recent groundbreaking announcement of Luna, Amazon's cloud gaming service, cloud gaming is expected to take on a completely new vertical and could make gaming consoles and digital downloads a thing of the past.

According to Kagan, by 2024, the global cloud gaming user base is expected to reach 124.4 million users with an estimated global revenue of $14.93 billion, representing nearly tenfold growth in as little as five years.

Cloud gaming forecast



Source: Kagan of S&P Global Market Intelligence, RSM US LLP

Cloud gaming isn't entirely new. We've seen Google launch Stadia in 2018, followed by Nvidia's G-Force Now, Sony PlayStation NOW and Microsoft's xCloud, with the latter effectively consolidating into Game Pass.

LARGE GAMING AND TECH COMPANIES SUCH AS MICROSOFT, AMAZON, GOOGLE AND NVIDIA ARE PUTTING THEIR BETS ON CLOUD GAMING, AND WE EXPECT TO SEE MORE COMPANIES ENTER THIS SPACE IN THE FUTURE.

What is cloud gaming?: Cloud gaming essentially moves the content and execution off of a consumer's device and onto the cloud, similar to how one would stream a Netflix movie. By opting to download the movie on a device, users avoid any broadband, download speed or latency issues.

Historically, video games needed to be purchased and executed directly on a device, such as a gaming console, PC, mobile device or over-the-top (OTT) set top box such as Apple TV, Amazon Fire or Roku. The content would take the form of a game cartridge, disc (e.g., CD, DVD or BluRay), or a downloadable file.

With cloud gaming, a user can play a game directly from any compatible device. This is game-changing (pun intended), as it eliminates the need of high-cost gaming consoles or gaming PCs which could cost upward of $2,000. By allowing the technology and infrastructure to reside in the cloud, users have the freedom and flexibility to play more advanced games anywhere there is an internet connection, and from a larger list of compatible devices that are not reliant on memory, processing or graphics chips.

A work in progress: While cloud gaming is still in its infancy, this segment does pose some challenges here in the United States. In a hypercompetitive gaming world where every millisecond matters, high bandwidth and low latency will determine much of the success of cloud gaming, particularly as many of the graphic-intensive games require sizeable download and upload transfer speeds. In other words, cloud gaming is very dependent on the household's infrastructure of gigabit or 5G connections. Otherwise, gamers will experience lag, or even worse, the spinning "wheel of death." Until broadband infrastructure catches up, hardcore gamers will still prefer a PC or console.

The success of cloud gaming is also contingent upon the library that supports it. Because the concept is so new, there is not a large volume of games or the quality that would attract some of the more hardcore gamers. Much of this is due to the fact that video games are graphically intense and complex, which results in larger storage and data that would need to be downloaded and uploaded. This limits the titles that are optimal for cloud gaming. Video gaming publishing studios are now considering re-compiling or programming their games more thinly to allow for the same experience which involves more time, resources and costs in a platform that has not proven itself.

The future of cloud gaming: Despite the cloud's challenges, in the distant future, discs and downloadable content could be a thing of the past. Large gaming and tech companies such as Microsoft, Amazon, Google and Nvidia are putting their bets on cloud gaming and we expect to see more companies enter this space in the future.

For further insights, read a recent Gizmodo article featuring RSM's industry eminent Victor Kao, who provides further insight on the unique cloud gaming sector.

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