CHIEF INVESTMENT OFFICE

Investment Insights

The Great Consolidation: Industry and Equity Market Concentration after the Crisis

July 2020

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As discussed in our recent Chief Investment Office (CIO) Investment Insights "Great" series of reports,[1] the coronavirus pandemic is likely to have a lasting impact on the way we live and work, and could amplify trends in place prior to the crisis. One important example of this is the rise in market concentration, whereby industry market shares have become increasingly concentrated among a few dominant firms. This dynamic has been playing out since the late 1990s, with more than 75% of U.S. industries experiencing a rise in market concentration over the past two decades.[2]

In this fifth installment of the CIO "Great" series, we discuss the prospects for further industry consolidation after the coronavirus crisis. Big companies are likely to get bigger and gain market share from smaller competitors. We outline various factors that could contribute to this rise, including more mergers and acquisitions (M&A), rising corporate bankruptcies, significant balance sheet disparities, strong brand power, a growing preference for industrial policies and an acceleration of digitalization and associated network effects. What's more, the very nature of this crisis has benefited many megacap tech giants as work-from-home policies and stay-at-home orders have increased demand for their products and services—from cloud computing to e-commerce to digital media consumption. As a result, equity markets and performance have also become more concentrated, with the top five tech companies now representing almost a quarter of the total S&P 500 market capitalization. Rising market and industry concentration may have important implications for investors, which we discuss in more details below.

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Data as of 7/21/2020 and subject to change.

INVESTMENT PERSPECTIVE

Evidence[2] has shown that sectors with greater industry concentration have higher stock market performance in recent decades. Meanwhile, firms with larger market shares tend to benefit from higher-than-average profit margins. We continue to favor high-quality names with strong balance sheets, valuable intangible assets and strong cash flow generation. We find that many companies that are able to invest in long-term growth opportunities during the economic downturn—whether through research and development (R&D) or strategic M&A opportunities—have the opportunity to provide greater shareholder returns on the other side of this crisis.

That said, as market concentration intensifies in response to the crisis, so will regulatory pressures on mega-cap names in the technology and communication services sectors and even in some tech-driven consumer discretionary industries, in our view. These risks could add to market volatility in these sectors in the near term and should be carefully weighed against long-term secular growth opportunities in these industries.

In the end, we believe that companies that can grow market share while increasing consumer welfare through new, value-enhancing products and services should stand to benefit in the long term. By contrast, industry giants that exploit market power while reducing economic welfare could be more at risk from shifting political priorities to regulate monopoly power. Against this backdrop, Environmental, Social and Governance (ESG) and diversification have become even more important pillars of portfolio construction in an era of ever-increasing industry concentration.

[1] See CIO Investment Insights: The Great Separation, April 2020; The Great Acceleration, May 2020; The Great Convergence, May 2020; The Great Clash, June 2020.

[2] See Grullon, Larkin and Michaely, "Are U.S. Industries Becoming More Concentrated?," April 2019.

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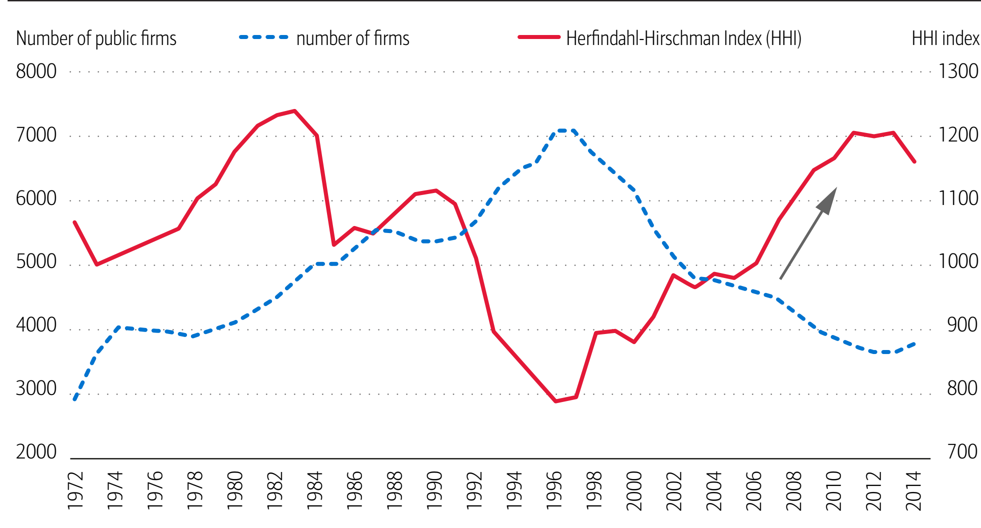
What The Pandemic Has Wrought: Big Companies Are Likely To Get Bigger

Evidence from the previous financial crisis can provide some clues on potential changes in market structure following the pandemic. Indeed, as shown in Exhibit 1, market concentration accelerated during the 2008/2009 Great Financial Crisis, as rising bankruptcies, low firm entry rates and other dynamics caused market power to consolidate among a smaller cohort of industry leaders. The strongest companies emerged stronger due to early cost restructuring, financial discipline, greater R&D and proactive M&A—while weaker competitors cut back on spending.[3] Certain sectors that were most affected by the crisis, such as banking and airlines, saw a wave of M&A megadeals—though in aggregate, M&A deal volumes were relatively modest and only accelerated once the economic expansion gathered pace.

Exhibit 1: Market Concentration vs. Number of Firms



Market concentration measured by the Herfindahl-Hirschman Index (HHI) which is calculated by summing the squared market shares of each firm within an industry, with higher index values representing greater firm concentration. The HHI measure in this chart aggregates industries using a weighting determined by the level of industry sales.
Source: Grullon, Larkin and Michaely, ""Are U.S. Industries Becoming More Concentrated?,"" October 2016.

The current pandemic-induced global recession should have similar features when it comes to market consolidation. Below we outline some of the key drivers of rising industry concentration once the current crisis abates.

1. **More M&A could lead to greater industry consolidation.** Owing to significant economic uncertainty, a preference for cash/liquidity, and a sharp drop in corporate revenues, year-to-date (YTD) M&A volumes are down approximately 50% in the U.S compared with the prior year and down about 40% globally, according to data from Bloomberg. Some companies have even started to pull back on earlier planned deals, and others going through with deals may face a delay in due diligence and approval processes due to the work-from-home environment. That said, there may be a renewed push for M&A deals on the other side of the crisis, once management teams gain more confidence in the sustainability of the economic reopening. An Ernst & Young survey of more than 2,900 global executives showed that 56% of respondents are actively planning to pursue acquisitions in the next 12 months, up from 52% last October.[4] Importantly, strong cash balances, potentially favorable valuations, and an acceleration of the digital economy point to rising demand for M&A.

INDUSTRY CONCENTRATION BY THE NUMBERS

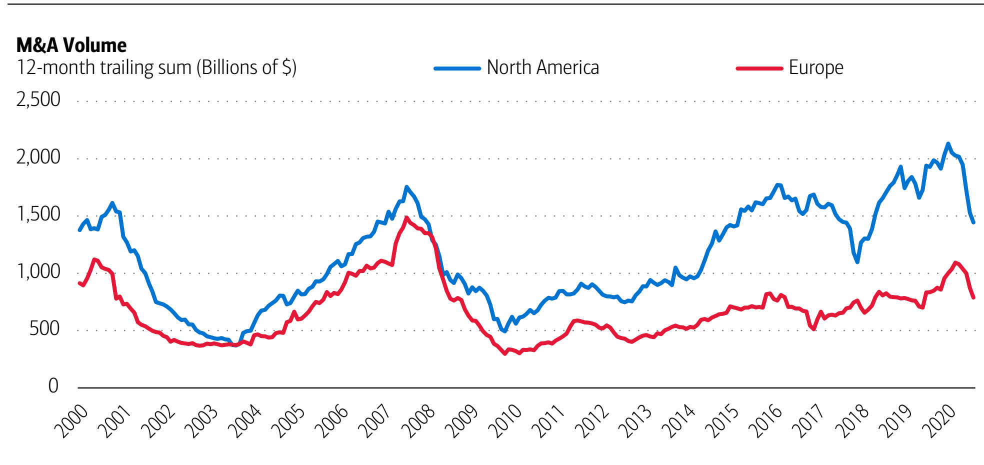
- In the U.S. airline industry today, the top four firms control 80% of the market. In Europe, the top four control only about 40% of the market.
- Two-thirds of U.S. beef is processed by just three firms and in very few plants.
- One firm controls 92% of the total worldwide search engine market as of June 2020.
- The number of U.S. commercial banks has declined from 14,400 banks in 1984 to 4,437 banks today.
- There have been almost 70 hospital mergers per year since 2010.
- Independent restaurants in the U.S. have been gradually losing market share to chain restaurants since the start of the century. In 2000, roughly 67% of restaurant establishments were independents versus just 57% today.
- The "Big Three" record companies control more than two-thirds of record labels.
- The top two firms control 99% of the market for smartphone operating systems in the U.S., up from 73% in 2009.
- Over half of worldwide cloud computing revenues are captured by just two firms.

Sources: Thomas Philippon, *The Great Reversal: How America Gave Up on Free Markets*, 2019; Bloomberg; StatCounter; Open Markets Institute; Morgan Stanley; Statista; Federal Reserve of St. Louis all as of June 2020.

[3] Bain Capital, "Beyond the Downturn: Recession Strategies to Take the Lead," 2019.
[4] Ernst & Young, Global Capital Confidence Barometer, 22nd Edition, 1H 2020. As of March 2020

Per the latter, acquisitions could start to pick up as firms look to build out digital capabilities to adapt to the recent shift in consumer preferences. Companies that have lagged behind in developing their digital infrastructure may prefer to acquire firms as opposed to building technologies internally. Others with an already strong digital presence may look to solidify their leadership by buying out smaller competitors or acquiring parts of their supply chain. Furthermore, companies' use of cash post-crisis may be more focused on long-term growth opportunities (M&A and R&D) given political sensitivities around share buybacks. Also underpinning M&A demand: a lower-for-longer rate environment which could provide attractive financing for deals.

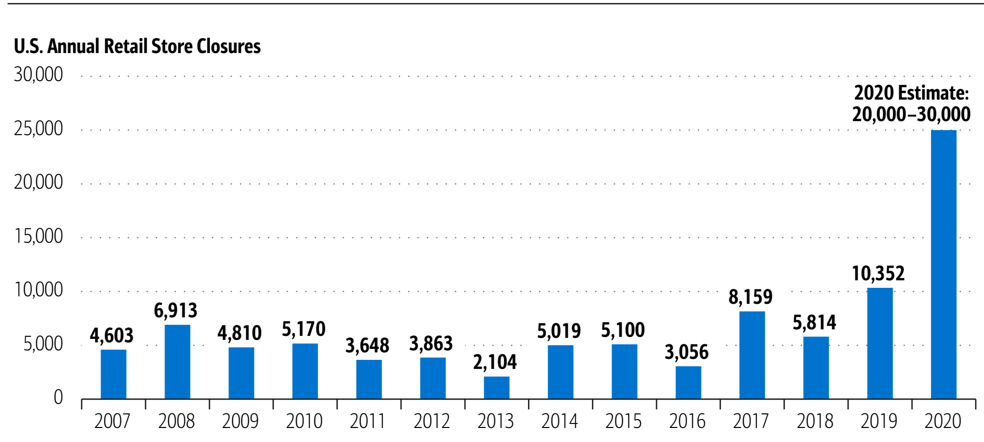
Exhibit 2: M&A volumes poised for a potential rebound once coronavirus uncertainties fade



Source: Bloomberg. Data as of June 2020. Actual year to date data using a twelve month trailing sum.

2. **Bankruptcies could accelerate, allowing larger firms to capture greater market share.** According to the June 2020 *Financial Times*, a total of 3,427 companies have filed for Chapter 11 bankruptcy YTD, which is roughly the same pace as the first half of 2008. As distressed companies struggle for survival, it is likely that stronger, more established industry leaders will gain market share. While the Federal Reserve (Fed) has supported the credit markets, a further wave of corporate bankruptcies could materialize once stimulus fades and highly indebted companies struggle to attract financing. Meanwhile, store closures in the retail sector are expected to surge to between 20,000 and 30,000 in 2020, with the coronavirus accelerating the trend from brick-and-mortar to e-commerce (Exhibit 3).

Exhibit 3: Spike in Store Closures Signal Further Consolidation In Retail Industry



Sources: International Council for Shopping Centers, General Merchandise, Apparel, Furniture & Other Merchandise Announced Store Closures. Data as of June 2020.

3. **Industry leaders with stronger balance sheets are likely to prove more resilient during the economic downturn.** These companies may be more able to maintain investments in R&D throughout the business cycle, which could lead to market outperformance and increased market share down the road. By contrast, smaller companies tend to be more heavily indebted and could have less access to financing through capital markets during a crisis, forcing them to dial back spending and investments. Government stimulus to date has helped soften the impact for small- and medium-sized firms, but many could continue to struggle depending on the progression of the virus.

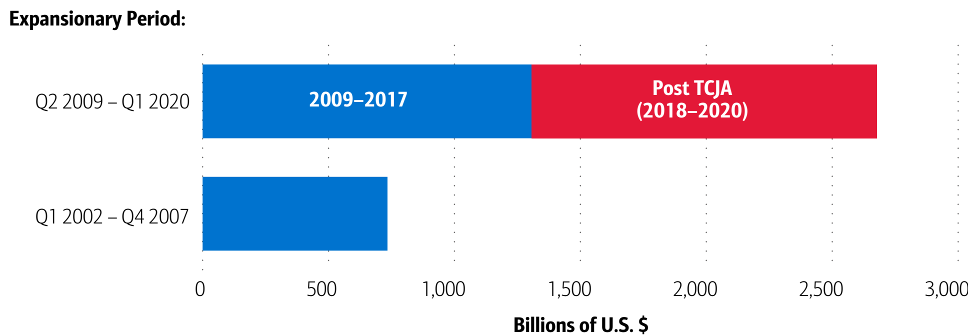
   Leading up to this crisis, the 2017 Tax Cuts and Jobs Act (TCJA) enabled multinational firms to repatriate accumulated foreign earnings, unleashing significant cash holdings from overseas. In total, $1.4 trillion has been brought back to U.S. shores since the beginning of 2018 (Exhibit 4). Meanwhile, cash balances have become increasingly concentrated among a top few megacap companies. In 2019, the top seven cash holders accounted for about 40% of total non-financial cash holdings, up from 20% a decade ago.

Corporate Cash Giants:
M&A and R&D Trends

- While the rest of U.S. M&A activity has lagged behind, the the largest five tech companies have announced about 19 deals YTD, the fastest pace of acquisitions since 2015.[5]
- While nominal R&D investments in the U.S. were up just 3% Year-over-Year (YoY) in Q1 2020, the largest five tech companies increased their R&D spending by 17%.

[5] See the *Financial Times*, "Big Tech Accelerates Acquisition Drive," May 2020.

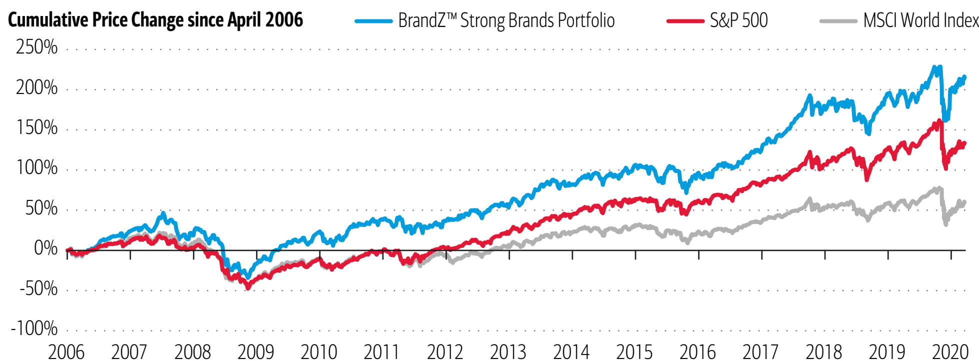
Exhibit 4: U.S. Corporations Repatriations of Foreign Earnings: Then vs. Now



Source: Bureau of Economic Analysis. Data as of June 2020.

4. **Most strong brands should emerge stronger from the crisis.** Large cap, established and trusted brands that were able to maintain supply chains during the crisis, could gain greater market share and build upon already strong customer loyalty. Companies with superior brand power tend to have better access to credit markets and rebound faster after recessions (Exhibit 5). According to Brand Finance, the majority of the top 50 ranked retail brands are e-commerce brands or well-known brands with strong e-commerce capabilities.

Exhibit 5: Strong brands recovered faster following the financial crisis of 2008



Sources: Kantar, BrandZ. Data as of July 16, 2020.

5. **Governments' embrace of national champions[6] and industrial policy after the crisis could suggest greater market concentration.** Significant state intervention during the crisis, while necessary to prevent a more severe economic slide into depression, could have important implications for the structure of markets post-crisis, including greater state ownership of companies and a shift toward industrial policy. Over the past few years, leaders in Germany and France have voiced their support for policy changes to support European champions. Meanwhile, the European Union (EU) has embraced an industrial strategy "to ensure that European businesses remain fit to achieve their ambitions while coping with global competition."[7] This could lead to a greater acceptance of consolidation within European industries. Meanwhile, the race to develop 5G networks and to set the digital standards of the future could incentivize governments to prop up national champions. Governments will look to strike a careful balance to ensure that greater market concentration does not stifle competition, reduce productivity, or increase inequalities.

6. **An acceleration of the digital economy may lead to greater network effects.** Platform companies like e-commerce providers, digital payments platforms or social networks benefit from scale. The more users join a platform, the more valuable the services on the platform become, which entices more people to sign up for or use the platform (Exhibit 6). This has a natural tendency to lead to greater concentration of market share. What's more, as companies accumulate more users, they also capture larger and larger quantities of consumer data, which powers algorithms and artificial intelligence used to more efficiently advertise and personalize the customer experience.

In the end, higher industry concentration begets more concentration. As large names gain market power, smaller competitors and/or suppliers may also attempt to scale up to more efficiently compete with industry giants or improve bargaining power. For example, as explained by *The Economist*, during the 2015-2016 M&A boom, an extremely concentrated market for internet search led internet travel search companies to combine, which further incentivized hotel firms to consolidate.[8]

Across industries, we find that drugstore chains, home improvement stores and telecom providers are among the most concentrated industries (based on publicly listed U.S. companies' annual sales). As shown in Exhibit 7, the market share of the top four firms within various industries—from internet services to managed healthcare to airlines—is in excess of 80%. This is the case for almost half of all industries with greater than $150 billion in annual revenue—including many tech industries such as internet retail, computer hardware, and internet software and services.

STATE SUPPORT OF INDUSTRY

"Japan Plans National Champion to Challenge Huawei."[I]

"Lufthansa's shareholders have voted through a €9bn bailout package that gives the German government a stake in the group."[II]

"France's Aerospace Industry to Get $17 Billion in Government Support."[III]

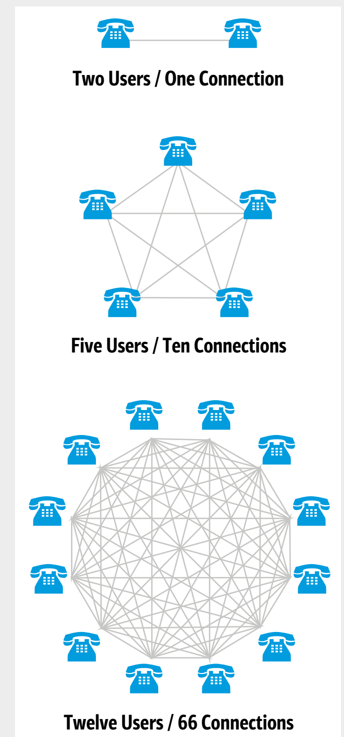
"Germany, France Want to Create Stronger European Champions—Merkel"[IV]

"Troubled Shipping Lines Turn to State Support."[V]

"Japan to Fund Firms to Shift Production Out of China."[VI]

I Wall Street Journal, June 25, 2020.
II Financial Times, June 25, 2020.
III New York Times, June 9, 2020.
IV Reuters, May 18 2020.
V Wall Street Journal, May 29 2020.
VI Bloomberg, April 8 2020.

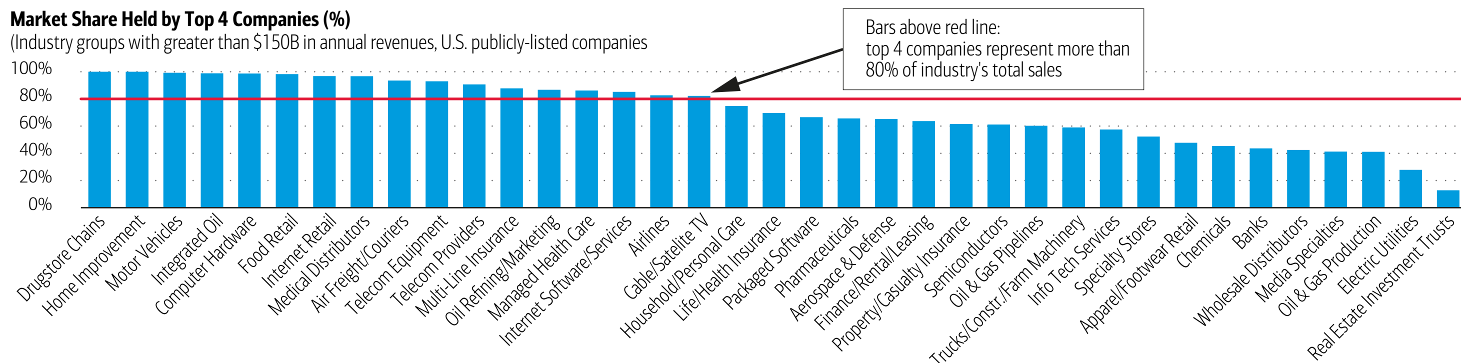
Exhibit 6: Network effects—An Illustration



Source: Applico as of 2019.

6 National Champions are private firms that due to government policy tend to have a more prominent market position in an economy.
7 European Commission, "A New Industrial Strategy for a Globally Competitive, Green and Digital Europe." March 2020.
8 *The Economist*, "Business in America: Too Much of A Good Thing," March 2016.

Exhibit 7: Market Concentration: An Industry Breakdown



Market share was calculated using last fiscal year revenue. Market is all U.S. listed companies, and therefore may not represent the exact market share concentration in certain industries with a large presence of foreign companies or a high percentage of non-listed, private companies. Banks is an aggregate of four sub-industries: major banks, investment banks, savings banks and regional banks. Sources: Chief Investment Office, FactSet. Data as of June 2020.

When it comes to rising market concentration, various industries could face different priorities and different challenges in the months ahead. More resilient industries could see rising demand for acquisitions as large firms look to gain market share, expand into new product/service channels, or acquire new technologies. In this case, it will be less about megacap mergers given regulatory pressures and more about smaller, opportunistic acquisitions. On the other side of the spectrum, distressed industries such as travel & leisure could be more inclined to merge for survival. Below (Exhibit 8), we review sector perspectives on the M&A environment post-coronavirus.

Exhibit 8: U.S. Sector M&A Outlook—Far from One Size Fits All

Financials	• **Banks**—In the current low rate environment, scale could be a strategic priority for U.S. banks to improve efficiency, rationalize the expense base and grow the balance sheet. Banks rife with capital, having suspended share buybacks for the first half of '20, may look to pursue strategic combinations with other banks or non-bank deals that enhance fee-based revenues & leverage the accelerated adoption of their digital platform. • **Payments—**Social distancing and shelter-in-place initiatives have rapidly accelerated the adoption of digital payments. Mass adoption could pull forward growth that would not have been expected for years and make the space more appealing to financial sub-sectors that are more interest rate dependent. Enhanced growth would be supportive of what tends to be higher valuations for payment stocks which could create a hurdle for low multiple sub-sectors interested in M&A and help to provide incentive for payment names to remain independent.	• **Asset managers**—Market volatility and poor fund flows have long been catalysts for asset manager tie-ups. Increasing diversification geographically and across asset classes tends to reduce earnings volatility and help provide the scale necessary to attract fund flows in different market conditions. Poor fund performance given a tough market backdrop could also spur M&A activity for managers with a long track record. • **Insurance—**Although M&A activity in the insurance space had been relatively sparse and often times more focused on spinoffs & divestment, "lower-for-longer" interest rates and an increase in catastrophe losses due to global warming could force combinations out of necessity for both life and property & casualty insurers.
Consumer	• **Retail companies** could accelerate purchases of smaller software firms for their intellectual capital and technological capabilities, as industry players compete for leadership in e-commerce. • **Restaurant chains** may seek to expand their franchise portfolios through acquisitions. Expect further consolidation in the **food/last mile delivery** businesses. • Distressed businesses such as **mall operators** could see an acceleration of M&A in the near term to strengthen their negotiating power.	• **Autos and auto suppliers** M&A could also accelerate during the market downturn, as economies of scale and investments in R&D and technology become even more important. • **Cross border M&A** could be more abundant in the consumer companies than in other sectors more critical to national security. European consumer companies may look to expand their presence in the U.S. through acquisitions.
Technology	• **Mergers between mega-cap tech** companies are unlikely to occur given current anti-trust concerns and break-up pressures. However, smaller deals targeting start-ups in strategic sectors such as gaming, cloud computing may be in focus. Software company valuations are currently stretched, so there could be less motivation for M&A in this area.	• **Semiconductor** companies continue to expand business models to become more platform-focused, incorporating software, cyber, and other capabilities. Semi capital equipment companies should look to build out greater artificial intelligence functionality. • **Share Buyback** volumes may be weaker on account of growing political pressures. Plus, companies may prefer to buy other companies rather than their own shares at elevated stock prices.

Exhibit 8 continued on the next page →

Exhibit 8 Continued: U.S. Sector M&A Outlook—Far from One Size Fits All

Industrials	• The M&A environment post-coronavirus will likely be less about mega-deals and more about **smaller, opportunistic acquisitions**. While a flurry of M&A deals at the bottom of the cycle seems unlikely, M&A activity should rebound along with economic activity as some weaker companies may struggle to keep up with ramping demand if they had to cut costs and capacity significantly to survive the shutdown. • Some larger and stronger companies may consider **M&A** to strengthen supply chains to support rising production levels during the recovery, but note that oftentimes these targeted businesses have lower margins and higher capital intensity, highlighting the trade-off between supply chain security and efficiency.	• The trend of **de-conglomeration** may be temporarily on hold, as companies value more diversified businesses models and resiliency coming out of the crisis. • **Large industrial companies** with the ability to increase funding could look to buy smaller competitors who are not nearly as well-capitalized. This has been a theme on several industrial earnings calls. • Prospects for further consolidation in the domestic **airlines** industry depends on how long the economic downturn lasts. While the U.S. industry seems to be already highly concentrated, more consolidations for survival are not considered off the table, especially if Federal aid runs out as scheduled in September and if the sector continues to display significant weakness.
Healthcare	• In the near term, firms will likely hesitate to pursue major acquisitions, and M&A volumes could continue to be suppressed until there is more clarity on the Covid-19 recovery and the future of the industry. • That said, once the dust settles, **large cap pharma and biotech** companies emerging from the crisis with relatively healthy balance sheets may look to acquire smaller players to enhance pipelines. We have yet to see widespread cancelation of clinical trials, which makes smaller companies more attractive targets. Prospects for M&A in this space could benefit equal-weighted indices which tend to put more of an emphasis on small/mid-cap names.	• Among **med tech, life science tools and diagnostics, and health care information technology** companies, firms may look to marginally improve functionality and expand into new areas through acquisitions—seeking to add new technologies or capabilities onto their platform. We are likely to see acquisitions that are smaller in scale, rather than a wave of big M&A deals. • The outlook for hospital M&A is highly uncertain. It remains to be seen whether larger institutions will be comfortable buying up weaker players.
Energy	• There seems to be a need for greater scale to improve returns on capital, lower break-even levels and help generate free cash flow. However, given uncertainties surrounding energy demand and weaker energy prices, most companies are playing defense and not looking to make large acquisitions. • There are currently a handful of energy companies in strong financial positions with balance sheet strength and flexibility that would allow them to potentially make large acquisitions. However, current priorities are to reduce leverage and support dividends over M&A.	• Energy management teams may face negative feedback from investors if they decide to acquire companies that add more debt to their balance sheets and higher leverage ratios. • Companies with financial strength and relatively low leverage are more likely to do "bolt-on" acquisitions of smaller private companies or private land acquisitions that are strategically located and would provide synergies with current operations. • Smaller public energy companies may decide to work together and consolidate to survive by agreeing to merger of equals transactions to provide greater scale and more cost cutting opportunities.
Utilities	• M&A is likely to be focused on acquiring renewable energy assets, predominately wind and solar assets, that may be integrated into the traditional power generation base. • Utilities that have noteworthy renewable power generation appear to be rewarded with higher valuation multiples and therefore renewable energy assets may be in high demand from traditional utilities.	• There may be periodic M&A deals where more efficient utility companies acquire less efficient or poorly run utilities and apply their management and operational playbooks to the acquired assets to generate better results and earnings.
Materials	• The materials M&A cycle may be slightly ahead of the curve, given demand pressure from industrial end markets before the coronavirus resulting in a focus on margin improvement through innovation/cost reduction or both. • 2019 was a strong year for **metals M&A**, with 33 deals involving gold companies. In 2020, with production profiles under pressure there could be more runway for M&A. We could see this trend extend beyond gold into some base metals whose markets are experiencing similarly tightening dynamics.	• Recent years saw a wave of consolidation across seeds, crop protection chemicals, fertilizers, and industrial gases. There is room for further consolidation in commodity chemicals where greater scale is often the answer in a relentless search to lower costs of production. We could also see more innovation and technology driven deals within specialty chemicals in industries such as coatings.

Source: Chief Investment Office as of June 2020.

Key Risks for Consideration

There seems to be no greater arena in which the currents of size, growth, social culture and politics intersect than in the tech space today. The growing importance of technology across the global economy, and network effects, may be helping to skew the concentration of wealth and market share amongst a select few global companies. That has prompted some regulatory risks for some of the most visible tech industry leaders from both international and domestic policymakers.

Lawmakers could feasibly construct policy in such a way as to limit or reverse the concentration of power amongst firms. In the U.S., the government has put forth legislation that applies to various issues as it relates to "Big Tech[9]," and federal and state regulators have launched their own inquiries. Tax policy, antitrust, privacy laws and Section 230 of the Communications Decency Act have been discussed as vehicles for reform.

In addition, risks seem to be building overseas, especially in Europe, where antitrust investigations and digital services taxes threaten the status quo of U.S. technology companies' foreign operations. The Organisation for Economic Co-operation and Development (OECD) has been in the middle of a mulityear effort to harmonize tax rules globally for digital companies; however, the U.S. claims that digital service taxes unfairly target American firms. With the U.S. withdrawing from the OECD talks in recent weeks, it is unlikely countries will agree on a global solution in the near term. As a result, countries could push ahead with their own individual tax plans, which could be accelerated due to the need to fill widening budget gaps in Europe.

These current risks for large cap tech names could weigh on market sentiment and cause greater market volatility for the sector in the near term. Importantly, antitrust inquiries and regulatory headwinds can shift company resources and attention away from important growth initiatives. We believe, however, that the near-term risks should not materially diminish long-term secular growth trends for the sector—such as cloud computing, artificial intelligence, software and cybersecurity. Furthermore, breakup risks may be less severe for some companies if "the sum of the parts is greater than the whole." In other words, more value could be unleashed by breaking up core business segments into different entities.

Additionally, industries that face increased regulation also tend to promote high barriers to entry, which could benefit established names with deep economic moats. In fact, many observers have cautioned that "Big Tech" executives may lobby to regulate themselves or to help craft legislation to help codify their market positioning. In recent decades, it appears that the scales have shifted toward regulatory and enforcement trends that favor larger, more established enterprises:

- Antitrust criminal case filings recently touched their lowest levels since 1996 and the number of corporations fined has been in steep decline since the early 80s. One reason for the decline in activity is that federal budget appropriations for the Federal Trade Commission and the Antitrust Division of the Department of Justice have significantly lagged gross domestic product (GDP) growth.

- Annual figures for economically sensitive rules have trended higher in recent years along with the expanding girth of the Code of Federal Regulations. In 1950, the Code contained 15,932 pages—hardly an easy read by any measure—but in 2018 it clocked in at a hefty 185,434 pages.

- Some argue that patent strength has deviated too far from its intended use and that efforts to protect innovation may now be stifling innovation while promoting monopolistic tendencies. From the 1970s through the early 90s, the compound annual growth rate of patent grants was modest at approximately 1.5%. However, since the digital explosion in the mid-90s, the compound annual growth rate has tracked closer to 5.5% (Exhibit 9).

Public opinion is also turning in favor of more tech regulation:

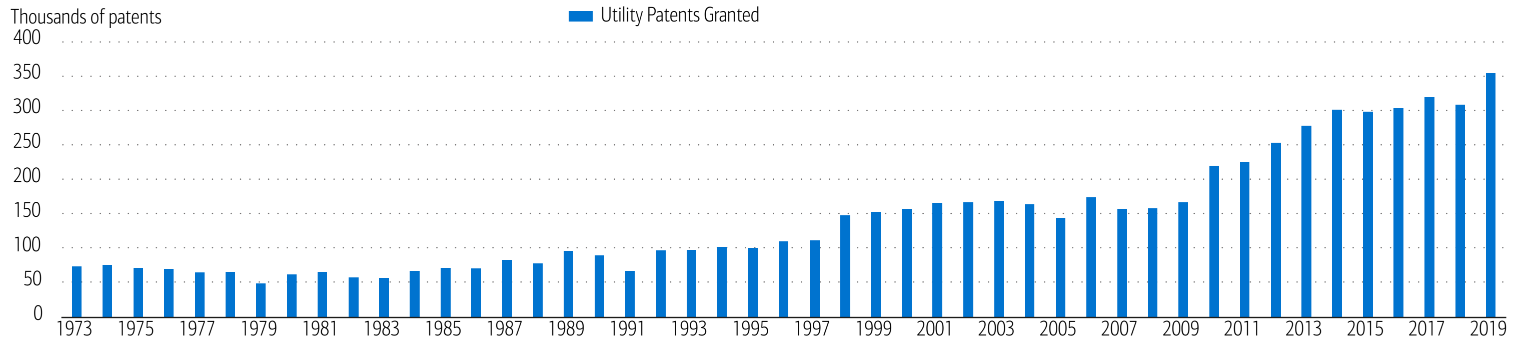
- In a Gallup poll from August 2019, a plurality (48%) of respondents indicated a preference for more regulation of "Big Tech," while only 10% of respondents sought less regulation.

- The Pew Research Center found censorship, objectionable material and privacy concerns cited among criticisms of Big Tech. The majority of Americans polled also believe tech companies simply wield too much power and influence.[10]

[10] Pew Research Center, "Americans have become much less positive about tech companies' impact on the U.S.", July 2019.

[9] Big tech refers to the largest and most dominant companies in the information technology industry.

Exhibit 9: U.S. patent grants have exploded in recent years



Sources: Chief Investment Office, GW Regulatory Studies Center, Department of Justice. Data as of June 17, 2020.

Wall Street Meets Main Street: The Rise of Equity Market Concentration

The performance of various equity indexes has also become increasingly top-heavy over time, or more reliant on the contributions from a select few. The age of globalization, digitization and network effects has enabled disproportionate gains to become more sustainable. The implications have generally meant that the stakes are higher for investors to maintain exposure to the best relative to worst equities. Over the past five years, the top 10 positive contributors to the S&P 500 represented 80% of its returns on an annual average, compared to just 25% during the 2000-2004 period (Exhibit 10a). The list of top contributors is also rather resilient across time with only 12 companies having occupied a spot in the top five contributors over the last five years.

The difference in market cap between the largest publicly traded companies and the smallest has been growing and accelerating in recent years. At the end of 2000, the top 10 most valuable companies within the S&P 500 were worth an average of $271 billion more than the least valuable 10 within the index. By 2020, that margin jumped by over 257% to nearly $700 billion (Exhibit 10b).

Exhibit 10a: Market Performance has become more concentrated

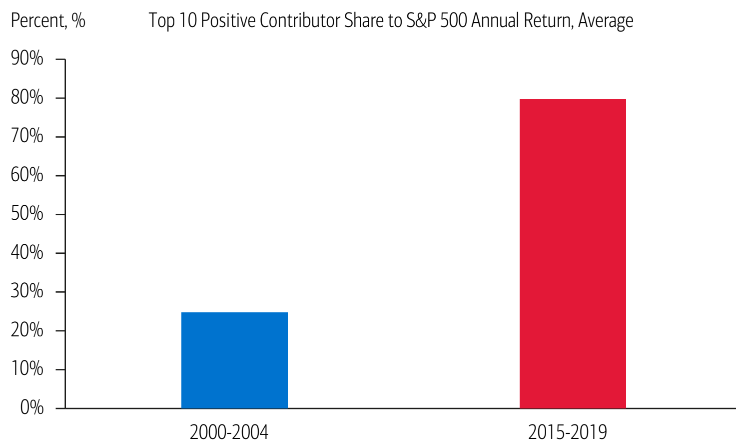
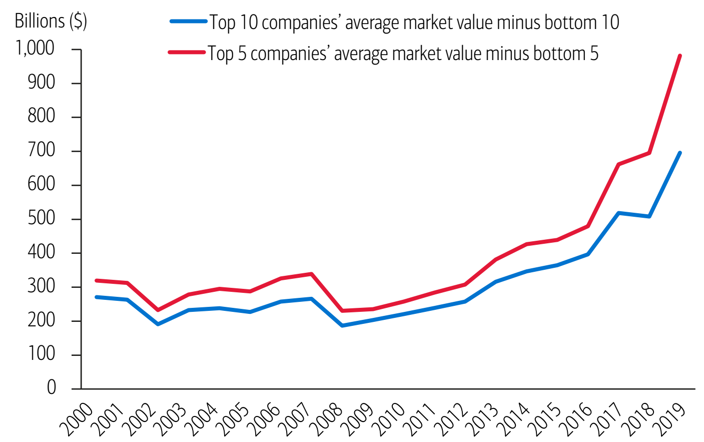


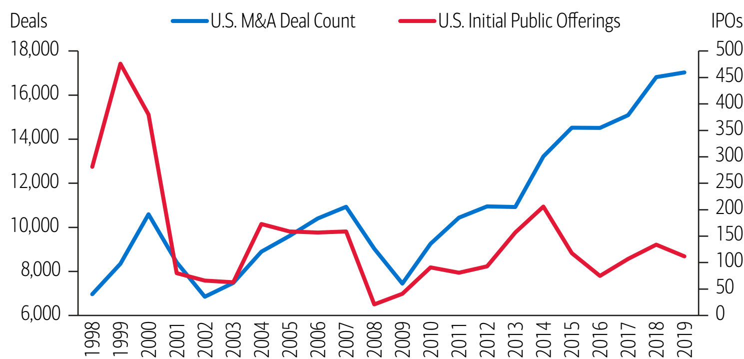
Exhibit 10b: The S&P 500 is becoming increasingly top heavy



Sources: Both exhibits from Chief Investment Office, Bloomberg. Data as of June 2020.

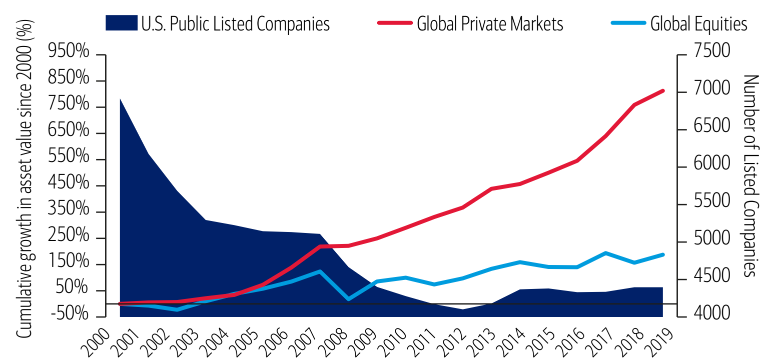
A multidecade rise in M&A, a scarcity of initial public offerings (IPOs), and the increasing prevalence of private equity has helped to skew public markets toward larger enterprises (Exhibit 11). As a result, a heavier concentration builds at the top while fewer entrants starve the public markets lower down the capitalization structure. In addition, smaller retail investors may be unable to invest in many of America's most promising companies at lucrative stages of their lifecycle.

Exhibit 11: As M&A activity consolidates the market, less new entrants fill the void



Source: Chief Investment Office, Bloomberg, University of Florida. Data as of June 17, 2020.

Exhibit 12: Private asset growth has outpaced public equities while the number of U.S. listed stocks dwindle



Source: Chief Investment Office, Wall Street Journal, Preqin, World Federation of Exchanges. Data as of June 2020.

- The number of publicly listed securities on U.S. exchanges has declined by approximately 50% since its peak in 1996-1997, according to the Center for Research in Security Prices, where the overwhelming loss of listed securities has occurred in small and micro segments of the market.

- A scarcity of organic growth opportunities and rock-bottom real yields appear to have made the M&A backdrop favorable in recent decades. Mergers and acquisition activity in the U.S. was holding near an all-time high annualized level of 17,000 deals in the beginning of 2020 until the global pandemic disruption.

- The arguments underpinning the secular decline in initial public offerings (IPO) activity include target companies being acquired by larger companies prior to public offering, companies opting to stay private for longer, or choosing against going public at all. With the rise of private equity and financing (Exhibit 12), firms which otherwise may have needed to tap the public markets for capital may find the latter options more attractive given the onerous regulatory and reporting complexity associated with public markets. Since 2010, an average of 117 IPOs have traded each year; however, from 1980 through 1999, there was an average of 307 new listings on an annual basis.

Is Bigger Better?

The key takeaway for investors from all the above: Scale matters when it comes to sales, earnings, research and development, innovation and strength of global brands. Scale also matters in terms of recent market performance. Smaller companies have lagged their megacap counterparts during recent years in profit growth, return on invested capital, and market performance. According to Evercore ISI Research, megacap companies predominantly in the technology sector have been able to significantly enhance their profit share while enjoying a significantly higher return on invested capital (ROIC) than their cost of capital. As a result, the correlation between earnings growth for large-cap companies and small-cap performance has turned solidly negative.

Both on an absolute and risk-adjusted basis, megacaps have outperformed the broader market, over a one-, three-, five- and 10-year time horizon.[11] However, timing of the business cycle is important in measuring relative returns, and small caps tend to outperform large caps during the initial recovery phase of an economic expansion. Indeed, the Russell 2000 outperformed the S&P 500 last quarter as the economic reopening gathered pace.

Taking a longer view, there is evidence that firms in more concentrated industries have experienced greater excess annual returns since the start of the century. As discussed in a recent report, an investment strategy of buying a portfolio of stocks in industries with the largest increase in concentration and shorting industries with the largest decrease in concentration generated excess returns of approximately 8.2% a year since the early 2000s, after controlling for risk factors.[12]

In the age of big data and artificial intelligence, scale has become ever more important. Large firms have the ability to use large quantities of consumer data to their competitive advantage—creating more personalized customer experiences, reducing consumer

[11] As measured by the Russell 3000 (broader U.S. Equity market) versus Russell Top 50 (mega-caps).

[12] Grullon, Larkin and Michaely, "Are U.S. Industries Becoming More Concentrated?" April 2019.

acquisition costs, building efficiencies in supply chains, and ultimately increasing sales and profitability. The increased use of personal data, however, has led to a rising backlash and more regulatory pressures. As previously discussed, however, regulations sometimes serve as barriers to entry for newer firms, whereas larger firms can navigate the regulatory landscape more efficiently.

Investment Summary

We are closely watching growing regulatory risks for technology firms. Rising risks for large-cap tech names could weigh on market sentiment and lead to greater market volatility in the near term, especially as we get closer to the U.S. election. Antitrust investigations have proven in the past to shift company resources and attention away from important growth initiatives, constraining growth.[13] That said, we believe the fundamentals for technology firms remain strong, underpinned by strong balance sheets, cash flow generation and dividend growth. Secular growth trends for cloud computing, machine learning, artificial intelligence, software, cybersecurity and semiconductors should also support long-term outperformance. Moreover, the risks of breaking up firms may not be as severe for certain companies if breaking up core business segments into different entities actually unleashes value for shareholders.

In the end, the Great Consolidation within industries and across equity markets confirms several key pillars of investing. First off, diversification strategies are more important than ever in a period with rising equity market concentration. It is important to remain properly diversified within and across industries, asset classes and regions to soften the impact of firm-specific or sector-specific shocks. While we maintain a preference for large-cap stocks, we recommend a diversified allocation among equities across the market cap spectrum.

The importance of ESG will become even more relevant as well. Companies with favorable ESG metrics also tend to have lower earnings volatility and are more likely to avoid bankruptcies which can help on the downside.[14] In addition, long-term investors should keep in mind the value that companies create not just for shareholders, but also for their customers, employees and society as a whole. Do industry leaders engage in anti-competitive practices, exploit customers, and contribute to an overall decline in economic welfare? Or do they positively contribute to consumer welfare, provide value-enhancing goods and services, remain focused on innovation, and gain market share by making sound investments, improving efficiencies and fostering productivity growth? Companies fitting the latter qualifications are likely to have more staying power in a volatile economic and political environment.

INVESTMENT IMPLICATIONS SUMMARY

- Scale matters. Firms with larger market shares tend to benefit from higher-than-average profit margins. Sectors with greater industry concentration have benefited from higher stock market performance in recent decades. This could continue in the current environment, but rising concentration will bring with it more regulatory pressures.
- We continue to favor high-quality names with strong brands, valuable intangible assets and superior cash flow generation.
- Firms that have strong balance sheets that are able to make acquisitions during a crisis tend to outperform firms that do not.[14] Plus, acquisitions that occur during weak economic times tend to provide more value to shareholders than those pursued during strong economic times.[15]
- We continue to favor innovation and R&D leaders. Firms that can invest in innovation despite the economic downturn may position themselves better for the economic recovery. This was the case during the previous recession and early expansion, when the 50 most innovative companies (ranked by Boston Consulting Group at the end of 2007) delivered total shareholder returns that were 4% higher per year than the market from 2007 to 2012.

[13] Axios, "For Tech, Antitrust is a Fatal Distraction," March 12, 2019.
[14] BofA Global Research, "U.S. Equity Strategy in Pictures," June 8, 2020.
[15] Harvard Business Review, "The Case for M&A in a Downturn," May 17, 2020.
[16] Boston Consulting Group, "COVID-19's Impact on Global M&A," March 26, 2020.

Index Definitions

Securities indexes assume reinvestment of all distributions and interest payments. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index.

Indexes are all based in dollars.

Herfindahl-Hirschman Index (HHI) is a commonly accepted measure of market concentration. It is calculated by squaring the market share of each firm competing in a market and then summing the resulting numbers.

MSCI World Index is a broad global equity index that represents large and mid-cap equity performance across all 23 developed markets countries. It covers approximately 85% of the free float-adjusted market capitalization in each country.

S&P 500 is a market-capitalization-weighted index of the largest U.S. publicly traded companies. The index is a float-weighted index company market capitalizations are adjusted by the number of shares available for public trading.

Russell 3000 is a capitalization-weighted stock market index, maintained by FTSE Russell, that seeks to be a benchmark of the entire U.S stock market.

Russell Top 50 Mega Cap Index is designed to measure the performance of the mega capitalization companies in the United States equities market. The index is a composite of roughly 50 securities issued by the largest companies in the U.S. in terms of market capitalization.

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