

September 2021

The Pandemic Accelerant Part II: Turbo-Charging the Digital Economy



Kevin Hebner, PhD
Managing Director, Global Portfolio Management



William W. Priest, CFA
Executive Chairman, Co-Chief Investment
Officer & Portfolio Manager

- New business formation has soared during the pandemic, even though it typically plummets during recessions. Similarly, we have witnessed a record number of unicorn births, especially in FinTech and Biotech.
- There are two primary reasons for the boom in start-ups and unicorns: the broad availability of financing, and the vastly improved digital ecosystem which has drastically lowered the upfront costs of starting a business.
- Regardless of recent progress, it is estimated the U.S. has only reached 18% of its digital potential, suggesting this shift in the structure of the economy is just getting started.
- Further, COVID-19 has primed the U.S. for another period of rapid productivity growth, driven by the swift adoption of digital technologies and an economy running at full steam.
- However, the stunning pace of digital innovation raises challenges for national accounts, which we believe understate economic and productivity growth by a full percentage point per year, while overstating inflation by a similar amount.
- Digitization is also profoundly disinflationary, which implies “lower for even longer” interest rates. This is especially beneficial for long-duration equities and the latest crop of unicorns.
- While pockets of speculative excess undoubtedly exist, tech and the overall S&P 500 appear fairly valued, provided they continue to produce solid free cash flow (FCF) growth and bond yields remain subdued.
- We expect digital platforms to represent the vast majority of equity market capitalization by 2025, with tech, health care, and communications the most promising sectors.

“The move towards a more digital and automated economy was already well underway before the pandemic. But the pandemic clearly accelerated these shifts, compressing about 20 years of change into 20 weeks, marking the biggest shift in the way people work since WWII.”

—Erik Brynjolfsson, Stanford

COVID-19 has applied a giant jolt to the economy, ushering in a period of enormous “creative destruction.” New business formation has soared, even though it typically plummets during recessions. Similarly, we have witnessed a record number of unicorn births, occurring across a wide range of sectors, but almost all with a digital focus. One consequence has been a surge in productivity growth, suggesting a decisive reversal of the weakness experienced in the 2010s. Further, corporate earnings have rebounded sharply and much more swiftly than typically occurs following a recession.

This paper examines these four trends, all of which reflect an acceleration in the digital economy, and discusses their implications for investors.¹ Although digital business models now account for the bulk of economic growth and value creation, the astonishing progress made over the last eighteen months has received much less attention than it merits. While such misdirection often occurs around epochal events, we believe the impact of the booming digital economy will ultimately prove even more consequential for markets than COVID-19 itself (**Figure 1**).

“I failed to see in 2001 that the rise of China would ultimately pose a bigger strategic challenge to the U.S. than Islamic fundamentalism.”

—Niall Ferguson, *Stanford*, Sept 2021

The Pandemic Start-up Surge: New business Formation Goes Bezonkers

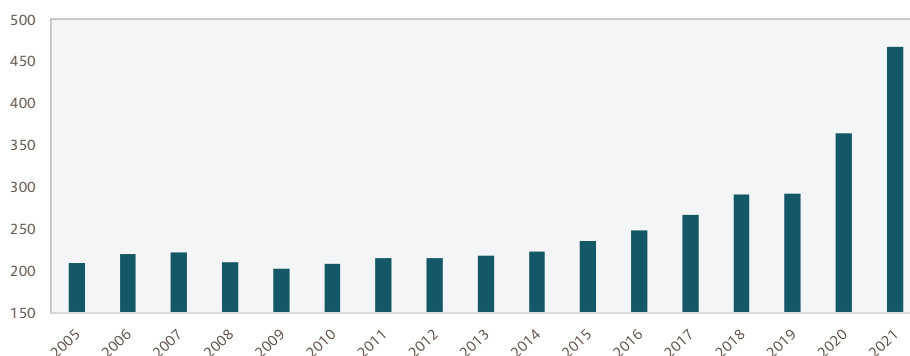
To the astonishment of just about everyone, COVID-19 has unleashed a tidal wave of entrepreneurial activity, breaking the U.S.—at least temporarily—out of a decades-long start-up slump (**Figure 2**). New firms are a key driver of job growth and innovation, so we expect the surge in company forma-

FIGURE 1: The biggest news stories don’t always have the greatest long-term impact on the economy and markets. What are investors neglecting while COVID dominates the headlines?

	Biggest news story	Highest long-term impact
2001	9/11 terrorist attacks	China joins WTO
2007	Global financial crisis	i-Phone launch
2020	COVID-19 pandemic	Digital economy booms?

Source: Bloomberg, Epoch Investment Partners, Mehlman Castagnetti

FIGURE 2: New U.S. business applications (monthly average, ‘000) have skyrocketed



Source: Bloomberg, U.S. Census Bureau. Note: 2021 is to July

tion to help generate a more dynamic, productive economy. Among sectors experiencing the largest increases in start-ups are retail, accommodation & food services, IT, transportation & warehousing, and professional services.

Entrepreneurial activity typically dips during downturns, which begs the question of why the COVID recession was so vastly different. During the tech bust and GFC, entrepreneurship and new-business formation sputtered and then remained depressed whereas, after May 2020, start-up activity zoomed upward. There are two primary reasons for this boom, the first concerning the availability of financing, and the second related to new digital platforms that facilitate start-ups.

Financing has remained readily available during the pandemic, partially because this was not a bank-centered

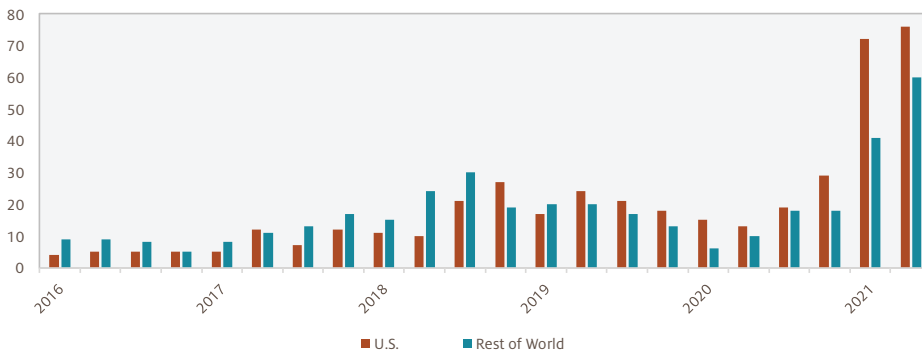
recession. Entrepreneurship fell during the GFC because banks were hit hard and the collapse in home values made it difficult to obtain capital to start a business. This time banks had plenty of funds to lend and home prices boomeranged higher. Further, the Trump and Biden administrations’ massive fiscal programs included stimulus payments that ensured a speedier economic recovery with enormous pent-up demand. They also resulted in excess household savings of over \$2 tn, which helped many new entrepreneurs make ends meet while they got their businesses up and running.

“If you have \$29 a month and can use email, you can easily build a store on Shopify in under an hour. You could start a business today.”

—Harley Finkelstein, *President of Shopify*

1. Our first paper on this topic (“*The Pandemic Accelerant: Digital Age Business Strategies*,” August 2020) analyzed how the digitization of the economy gained steam during the early months of the pandemic. It focused on WFH, Edtech, e-commerce, e-fitness, and telehealth activities, all of which have been turbo-charged by COVID-19.

FIGURE 3: Unicorn births (# per quarter). The last eighteen months has witnessed a stunning increase, with almost all the new unicorns being digital businesses



Source: Bloomberg, The Economist

The second reason for the start-up boom is the enormous growth in new digital platforms that have made it much faster, easier, and cheaper to get a business off the ground. One high profile example is Shopify, which runs websites for 1.7+ mn businesses and offers a suite of services including payments, marketing, shipping, and customer engagement tools. There are also a host of platforms that specialize in payments, invoicing, inventory tracking, accounting, HR, payrolls, and benefits. Additionally, the “pay-as-you-go” model of cloud providers allows entrepreneurs to avoid prohibitive upfront outlays and drastically reduces IT operational costs. Further, digital companies can access a treasure chest of data regarding prospects, which allows precise ad targeting on social media platforms. Overall, this digital ecosystem has drastically lowered the bar for fledgling entrepreneurs to start and grow their own businesses.

Recent start-ups also credit a third factor that is harder to quantify: The pandemic and its disruptions led many people to reassess their lives and consider a different career path. The contagion also reinforced a growing view that traditional jobs are riskier and less secure than they were once thought to be. Further, the start-up boom was driven, to a significant extent,

by the massive layoffs that occurred in early 2020. According to the Kauffman Foundation, about 30% of new entrepreneurs last year were unemployed when they started their businesses, roughly double the pre-COVID rate.

Unicorn Births: Also Turbo-Charged by the Pandemic

In addition to soaring business formation, the last eighteen months has experienced a staggering increase in unicorn births (**Figure 3**), with the two booms sharing the same fundamental drivers (abundant financing and new digital technologies). The term “unicorn” was coined in 2013 to refer to what was then a rare, mythical species: privately held start-ups valued at \$1 bn or more. Today they are commonplace—and becoming ever more so. The world’s

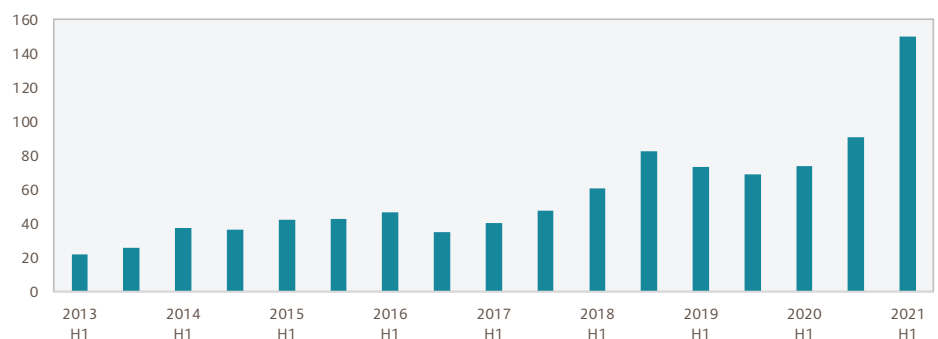
unicorn herd has grown from a dozen eight years ago to more than eight hundred today, with a combined worth of \$2.6 tn. Of the 423 unicorns added since early 2020, the most common categories include: FinTech (100), Internet software & services (86), E-commerce & DTC (42), Health (36), AI (28), Cybersecurity (20) and Edtech (15).

VC Funding: To Infinity and Beyond

The unicorn boom would not be possible without venture capital. According to McKinsey, start-up and VC funding in 2021 is on track to double last year’s all-time highs in the U.S. and triple 2020’s venture funding in Europe. Additionally, KPMG emphasizes, “The seismic changes in digitalization, the shift to cloud and exciting innovations in life sciences and logistics are all still encouraging mass infusions of capital into thousands of start-ups worldwide. 2021 has now observed record levels.”

The first two quarters of 2021 both notched \$75 bn of VC financing in the U.S. (**Figure 4**), with the top deals featuring EVs, AVs, e-Commerce, Edtech, Fintech, Robotics, Spacetechnology, enterprise software, Cloudtech, and gaming. The first half of 2021 also saw a peak pace for VC exits, a majority of which occurred through public listings, with the remainder largely taking place via acquisitions.

FIGURE 4: U.S. venture capital financing (USD bn) has soared, with the vast majority invested in digital businesses



Source: Bloomberg, The Economist

FinTech Companies Have Received 20% of Global VC Funding in 2021

Two of the most dynamic sectors are FinTech and Biotech. Funding into the former is escalating (**Figure 5**), with active subsectors including payments, digital lending, BNPL, wealth management, insurance, banking, and real estate. There are also a growing number of digital “Neobanks”, that aspire to become a one-stop shop for all your financing needs. FinTech activity is exceptionally global with payments with companies in the in the U.S., Sweden, UK and Brazil leading the way. Reflecting the impressive impact the sector is having, the FinTech indices (as tracked by FINX and IPAY) have dramatically outperformed the banking sector over the last five years.

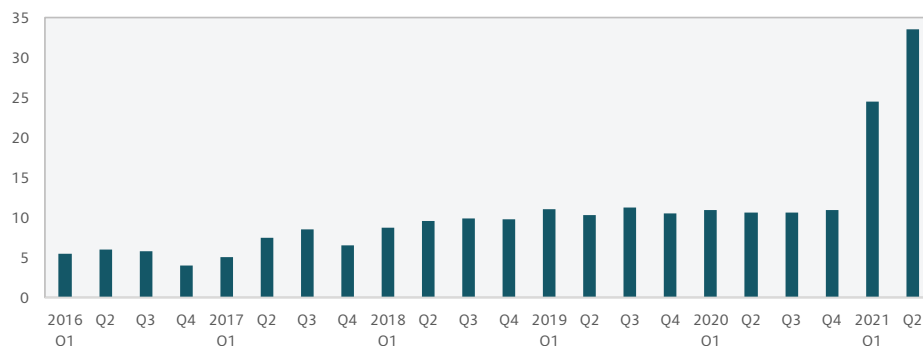
The Golden Age of Biotech

“The golden age of biotechnology, we’re hitting an inflection point, not only in the field of gene therapy but medicine in general. ... (Although, with) so much capital being deployed so quickly, a lot of the valuations are ones that the companies need to grow into.”

—Beth Seidenberg, biotech investor, founder Westlake Village Biopartners

The pandemic has also highlighted the promise of novel drugs and therapies—and the clever firms developing them. The most consequential examples are Moderna and BioNTech’s vaccines, which gave a tremendous boost to other VC-backed companies developing new classes of drugs. American biotechnology is booming, a trend recently emphasized by The Economist which noted that “64% of drugs in late-stage development are being concocted by youngish biotech companies built around a novel technology rather than by big pharma firms.”

FIGURE 5: Global VC funding (USD bn) of FinTech companies tripled in H1 of 2021



Source: Bloomberg, The Economist

As a result, biotech VC funding has increased massively, from about \$5-10bn annually in 2010-2017 to \$25bn in 2020 and is on track to exceed \$30 bn in 2021. One consequence is the oversized role the sector now plays in the IPO market, with seventy-seven biotech companies going public last year (**Figure 6**). Moreover, despite enormous volatility and a dearth of FCF, the Nasdaq Biotech index has dramatically outperformed the S&P 500 over the last decade.

The Outlook for Productivity: A Marked Improvement from the Tepid Growth of the 2010s

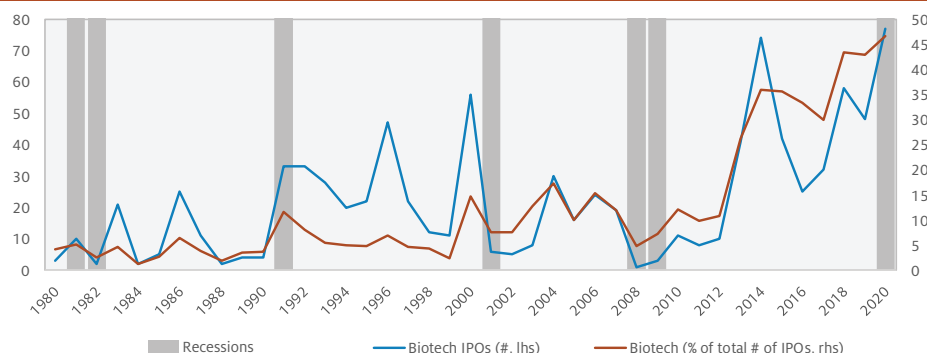
“Productivity isn’t everything, but, in the long run, it is almost everything.”

—Paul Krugman

Having examined the boom in start-ups and unicorn births, we now move on to

discuss the much-improved outlook for productivity in light of the pandemic and the acceleration in the digital economy. Productivity growth was particularly sluggish during the 2010s, averaging only 1.2% (**Figure 7**), but a recent article in the MIT Tech Review² emphasizes three reasons in favor of a solid and prolonged pickup. The first is technological, with the past decade delivering an astonishing cluster of technology breakthroughs (e.g., in AI, biomedical sciences (including mRNA), and cloud computing). Moreover, Brynjolfsson et al emphasize “the innovations in AI, combined with large decline in prices for data storage and improvements in computing power has allowed firms to address challenges from vision and speech to prediction and diagnosis.” Further, these innovations are increasingly accessible to smaller firms on a subscription basis, eliminating the need for huge upfront expenditures.

FIGURE 6: The Biotech sector represented a staggering 47% of all U.S. IPOs in 2020

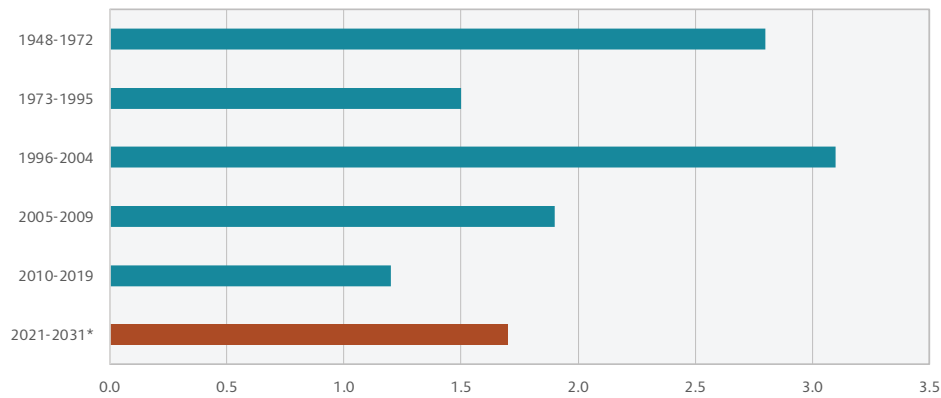


Source: Ritter IPO statistics

2. “The coming productivity boom: AI and other digital technologies have been surprisingly slow to improve economic growth. But that could be about to change,” by Erik Brynjolfsson et al

FIGURE 7: Average U.S. labor productivity growth (% annually)

Although few see productivity rising as quickly as the late 1990s-early-2000s (when it averaged 3.1%, largely due to the PC revolution), it is likely to exceed the tepid 1.2% clip experienced in the decade following the GFC.



Source: Bloomberg, BLS, WPT

* CBO estimate, many economists think it could be significantly higher

“When you put these three factors together—the bounty of technological advances, the compressed restructuring timetable due to covid-19, and an economy finally running at full capacity—the ingredients are in place for a productivity boom.”

—Erik Brynjolfsson et al, MIT Tech Review

The second reason to be optimistic about productivity is that the pandemic has compressed a decade’s worth of digital innovation into less than a year, potentially bringing us to a turning point in the productivity J-curve. Third, the aggressive policy mix enacted by the Trump and Biden administrations has helped bring about the tightest U.S. labor market in decades (**Figure 8**). At the sector level, job openings are especially plentiful in health care, retail, accommodation and food services, transportation, and professional & business services. The worker shortage has constituted a tailwind for the productivity rebound, as firms expedite automation and the implementation of new technologies.³

A new article in Foreign Affairs⁴ expands on the productivity rebound

theme, emphasizing that, “after years of sluggish growth, COVID-19 appears to have triggered a frenzy of technological and organizational innovations, suggesting another productivity jolt appears likely.” McKinsey’s survey of C-suite executives undertaken during the pandemic found that two-thirds had increased investment in automation and AI, with about 75% of executives expecting to substantially accelerate investment in new technologies between now and 2024.

Spence and Manyika also estimate the U.S. has reached only 18% of its digital potential (Europe is even lower at 12%), suggesting an awful lot of runway remains. As stressed by the NYT’s tech analyst, Shira Ovide: Americans spend just 6% of their TV time streaming, online shopping accounts for less than 14% of all the stuff that Americans buy, only one in six U.S. employees are working remotely, about 6% of Americans order from the most popular restaurant delivery company, and less than 2% of bicycle riders in the U.S. are customers of a leading fitness app. If this was a base- ball game, we’d still be in the middle of the second inning.

“The pandemic spurred businesses in practically every sector to radically rethink their operations ... accelerating plans for technological and organizational innovation that were already in the works.”

—Michael Spence, Stanford and James Manyika, McKinsey

The key takeaway from the Foreign Affairs article is that COVID-19 has primed the U.S. for another period of rapid productivity growth, based on the faster adoption of digital technologies. However, they warn that future gains in productivity are likely to be uneven, because a small number of large

FIGURE 8: Job openings (mn) are leagues above the previous record high, signaling an extraordinarily tight labor market.

Companies are responding by accelerating automation and the introduction of digital technologies.



Source: Bloomberg, BLS, NBER

3. U.S. GDP exceeded the pre-pandemic peak in Q2 of this year, and it did so with seven mn fewer workers. While the reasons for this are complex, it does represent an impressive improvement in productivity.

4. “A Better Boom: How to Capture the Pandemic’s Productivity Potential,” by Michael Spence of Stanford and James Manyika of McKinsey

superstar firms account for a disproportionate share of R&D, capex, M&A, and so on. In terms of where digital technology is likely to have the most impact, they emphasize healthcare (telemedicine and biotech), banking (FinTech, including digital payments), retail (e-commerce and warehouse automation), IT (AI, big data, cloud computing, IoT) and robotics.

A Breakout in Capital Goods and IT Spend: Reflecting the Rising Share of the Digital Economy

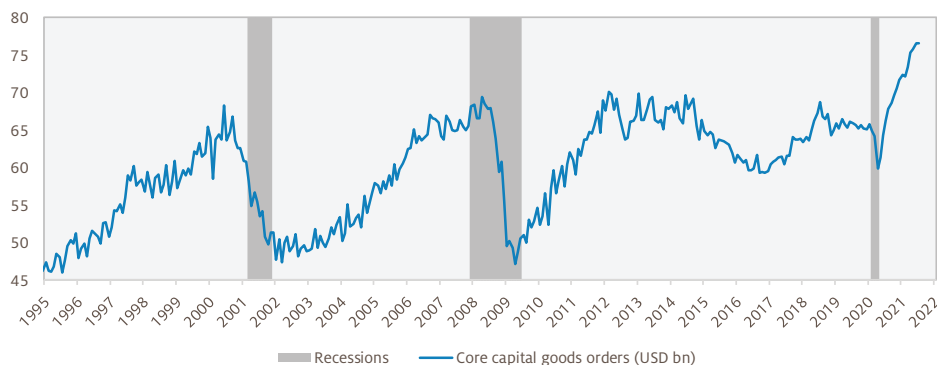
Moving on from our discussion of the tight labor market and how it is encouraging the shift toward the digital economy, this section examines the sharp rally in capital spending. This resurgence similarly confirms the digital shift and provides yet another reason to be optimistic regarding the productivity outlook. Over the last eighteen months a combination of cash rich balance sheets, rebounding FCF, soaring pent-up demand and acute labor shortages has prompted companies to dramatically raise capex. To illustrate, capital goods orders have absolutely soared since mid-2020 (**Figure 9**).

Over the last 25 years the fastest areas of capex growth have been software and information processing equipment, while the slowest has been structures (spending on “bricks and mortar” is not coming back). These trends have been emboldened by the pandemic, with software and IP equipment already up 20% from their late-2019 levels. Similarly, amongst the most active sectors, tech capex is expected to grow by a stunning 28% this year, followed by 25% for consumer, 19% for health care and 17% for communications. We expect these trends, which support our optimistic view regarding digital tech diffusion and productivity, to continue over the medium-term.

While tech innovation often conjures up images of helicopter taxis and longevity

FIGURE 9: U.S. core capital goods orders (USD bn)

After the COVID recession it took only 3 months for orders to breach the pre-recession high, compared to 32 months following the GFC and 91 months after the tech recession



Source: Bloomberg, NBER, US Census Bureau

miracles, the reality is generally more quotidian. To illustrate, for restaurant workers, it is the ubiquitous QR barcode that is replacing human waiters rather than robots. During the pandemic, many restaurants successfully experimented with QR codes and online order management systems such as Toast that allow diners to order and pay from their phones instead of interacting with human servers. Similarly, grocery stores have increased their investments in self-checkout kiosks. Among other things, this shift means a significant chunk of the 1.7m leisure and hospitality jobs and 270,000 retail jobs the U.S. economy has lost since February 2020 are unlikely to return.

“The Covid crisis drove the adaptation of automated customer service tools as both consumers and business owners looked to reduce face-to-face interactions as much as possible. ... (COVID) has been a big product placement [advertisement] for tech solutions.”

—Mark Muro, Brookings Institution

A paper by the Philadelphia Fed titled “‘Forced Automation’ by COVID-19?” provided several other examples, including that of five hundred toll

collectors who were permanently laid off last June when the Pennsylvania Turnpike Commission converted its interstate network to a cashless system. Similarly, meat packing factories have introduced slaughterhouse robots (which have long been used in Europe) to prevent workers from getting infected, while hotels replaced human workers with self-check-in kiosks, as well as cleaning and delivery robots. Further, more call centers are replacing their customer service agents with Watson Assistant, a conversational AI platform. The lock down also hastened automation that displaced retail salespersons and parking attendants.

“We are in a productivity boom. The pandemic forced us all to learn to use technologies at a rapid pace. It was tech adaptation on steroids.”

—Diane Swonk, Grant Thornton

The cumulative effect of all these small-scale adjustments is that service sector robots have entered the mainstream and are becoming pervasive. ABI Research forecasts robot shipments will increase seven-fold by the end of the decade, with mobile robots (rather than industrial robots) accounting for the lion’s share of the increase. Growth has been

especially strong in logistics (e.g., e-Commerce warehousing and fulfillment operations) and commercial cleaning, with the International Federation of Robotics forecasting a 2020-2023 CAGR of 31% for logistic robots and 41% for professional cleaning.

Two final points on productivity. First, over the last 15 years, productivity in the information sector has averaged well over 6% annually and shows no signs of decelerating. In fact, IT services productivity is already running 12% above its prepandemic level. This is clearly bullish for today's increasingly digital economy. Second, a topical paper⁵ estimates that 20% of full workdays will be from home after the pandemic, compared with just 5% before. The authors conclude that teleworking could boost productivity by 5%, although "Only one-fifth of this productivity gain will show up in conventional productivity measures, because they do not capture the time savings from less commuting."

Mismeasurement Problems Associated with the Digital Economy: Becoming Even More Severe

Faster innovation and heightened productivity are great news for most of us, but for the economists who assemble national-income statistics, an already Herculean challenge becomes even more daunting. Our current measurement tools were developed for the industrial economy of the 1930s and 1940s (to help escape the Great Depression and then to win WWII), and do not come close to properly accounting for the business models of digital behemoths. And this problem is only getting worse as new digital products and services represent an increasing proportion of the economy. While national accounts are adept at measuring boots, bullets, and bubble-

gum (or, more broadly, "things you can drop on your toe"), this is not where growth is occurring.

"Economists put decimal points in their forecasts to show they have a sense of humor"

—William Gilmore Simms

New, innovative goods that represent vast improvements on their predecessors are difficult to evaluate quantitatively, and the proportion of such goods is rising. For example, think of mRNA vaccines and many other areas of medical progress that aren't captured adequately. Here's another way to think about it: U.S. adults now spend more than six hours per day on their various devices, yet expenditures for cell phone, internet, and streaming services make up less than 2% of reported consumption. The combination of new products, new vendors, and the prevalence of advertiser-supported internet business models all make it ever more difficult for statisticians to keep up. One consequence is the false narrative that economic progress has slowed rather than sped up. A revised and updated approach to national accounts data suggests economic growth and productivity is being understated by at least a full ppt per year, while inflation is being overstated by a similar amount.⁶

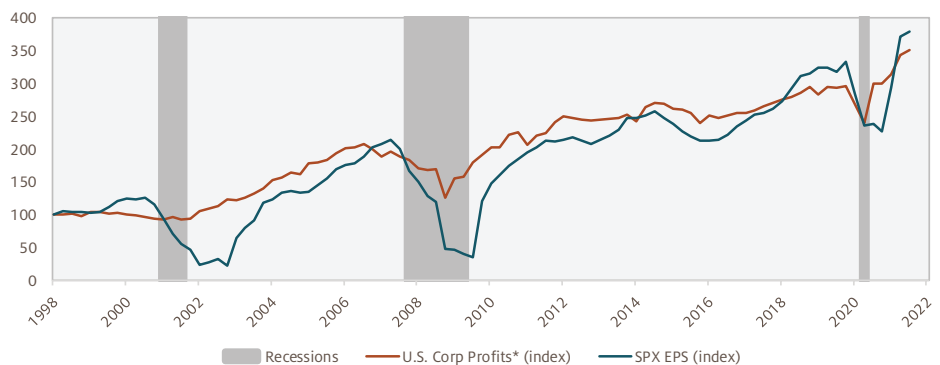
Digital Business Models and the Swift Rebound in Profitability

Moving on from our discussion of productivity, we now turn to corporate earnings. As a result of the accelerated digitization of the economy and the extraordinary government stimulus provided over the last eighteen months, profits have soared to record levels (**Figure 10**). This result holds whether we utilize earnings for the S&P 500 or a broader measure of corporate profits for the entire U.S. economy. Moreover, the recovery in profits was the fastest ever experienced. For example, during the previous two recessions it took eleven quarters for S&P 500 EPS to reach its prerecession high, but this time it took just four. Further, we have already hit all-time high operating margins in a number of sectors, including tech, finance, and retail.

Too Far, Too Fast: Are We Experiencing Yet Another Bubble?

Despite the impressive surge in corporate earnings, a frequent objection to our optimistic take on tech innovation and productivity is that this is just a replay of the late-1990s. That is, there is a massive bubble building (or maybe even multiple bubbles), which will eventually bust leaving investors again in tears (**Figure 11**). We understand these concerns and certainly

FIGURE 10: U.S. total corporate profits* and SPX EPS have hit new records, with the fastest rebound from recession ever observed



Source: Bloomberg, BEA, Epoch Investment Partners

* With Inventory Valuation Adjustment (IVA) and Capital Consumption Adjustment (CCA)

5. "Why Working from Home Will Stick," by N. Bloom of Stanford et al

6. "Evidence of Accelerating Mismeasurement of Growth and Inflation in the U.S. in the 21st Century," L. Nakamura, Philadelphia Fed

agree there exist pockets of speculative excess (e.g., SPACs, NFTs, cryptocurrencies). Of greater concern to us is that Biotech and Digital Currencies have yet to prove their ability to deliver positive FCF. Additionally, we have previously noted that just six stocks represent 26% of the S&P 500's market cap and have accounted for 39% of its increase since the beginning of 2015.

However, unlike previous bubbles the e-Commerce index has already demonstrated an ability to produce abundant FCF. Moreover, we are even less worried about the broader tech sector and overall equity market, which appear fairly valued (**Figure 12**). The two key risks remain markedly higher interest rates and disappointing FCF. While both outcomes are possible, we attribute a low likelihood to each. As a result, our base case calls for moderate equity returns, driven by the themes discussed in this paper, but with narrow market leadership reflecting the winner-takes-most nature of digital technologies.

COVID-19 as an Accelerant for the Digital Economy: Investment Conclusions

While the last eighteen months have been profoundly transformational, the digitization of the economy is still in its early stages (McKinsey estimates the U.S. has only reached 18% of its digital potential) and, if anything, is gaining steam. With an increasing proportion of innovation moving away from “bricks and mortar,” we expect digital platforms to represent the vast majority of equity market capitalization by 2025, with tech, health care, and communications the most promising sectors.

Our paper offers a counter-argument to the fashionable conviction that America's economy is becoming less innovative and dynamic due to three

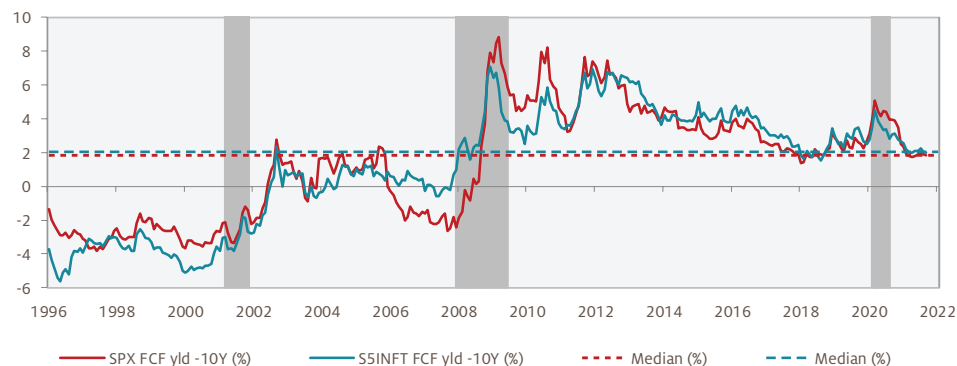
FIGURE 11: Market “bubbles” since the mid-1970s

E-commerce has already proven its ability to deliver and grow buckets of FCF, but the same can't be said about Digital Currencies and Biotech.



Source: Bloomberg, DoubleLine, Epoch Investment Partners

FIGURE 12: Valuations for the overall SPX and the Tech sector appear reasonable, provided they continue to produce FCF and bond yields remain subdued



Source: Bloomberg, NBER, Epoch Investment Partners

factors: de-globalization, hyper-partisanship, and rising industry concentration. While we don't outright dismiss these concerns, our take is more optimistic as we believe the themes examined in this paper will prevail.

From a macro perspective, digital platforms feature low marginal costs and increasing returns to scale, which creates winner-takes-most markets and favors global champions. Digitization also points to improved FCF margins and higher ROE which should allow for, over time, improved dividend and buyback yields. Further, digitization is profoundly disinflationary (even if it isn't captured accurately in official statistics), which

implies “lower for even longer” interest rates. This is especially beneficial for long-duration equities such as tech, as well as the new crop of unicorns.

While we've emphasized for several years now that network effects and economies of scale are paramount, this paper indicates there's something else important going on. In particular, we've witnessed an acceleration in start-ups and unicorns, all supported by a rapidly expanding digital ecosystem. We are just beginning to think through the implications, but it does imply the new equilibrium might be a barbell economy (featuring a mix of start-ups and superstar firms). It also

suggests today's behemoths might be more vulnerable to new challengers than we previously presumed.

For investors, understanding how companies will adapt their business models is central to assessing their ability to produce FCF on a sustainable basis. In light of this, "What is your business strategy in the digital age?" has become one of our favorite questions to ask management teams. If a company cannot provide a convincing response, we believe it will likely flounder and ultimately disappear. This is a contemporary version of Warren Buffet's advice to investors of yore, that they play the automobile's rise by going "short horses." This is an important perspective, especially as the digital divide is becoming increasingly clear, particularly in sectors such as retail, transportation, finance, and healthcare.

Epoch has always favored companies with effective capital allocation policies, including a demonstrated ability to deliver a return on invested capital above their WACC. Such companies are the most probable winners, especially today as management teams face a period of unprecedented disruption and digital innovation.

The information contained in this whitepaper is distributed for informational purposes only and should not be considered investment advice or a recommendation of any particular security, strategy or investment product. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed. The information contained in this whitepaper is accurate as of the date submitted, but is subject to change. Any performance information referenced in this whitepaper represents past performance and is not indicative of future returns. Any projections, targets, or estimates in this whitepaper are forward looking statements and are based on Epoch's research, analysis, and assumptions made by Epoch. There can be no assurances that such projections, targets, or estimates will occur and the actual results may be materially different. Other events which were not taken into account in formulating such projections, targets, or estimates may occur and may significantly affect the returns or performance of any accounts and/or funds managed by Epoch. To the extent this whitepaper contains information about specific companies or securities including whether they are profitable or not, they are being provided as a means of illustrating our investment thesis. Past references to specific companies or securities are not a complete list of securities selected for clients and not all securities selected for clients in the past year were profitable.

For more insights visit
<https://www.eipny.com/white-papers/>