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The trending charts in 2021

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CONTENTS

CONSUMER TRENDS

Time to spend

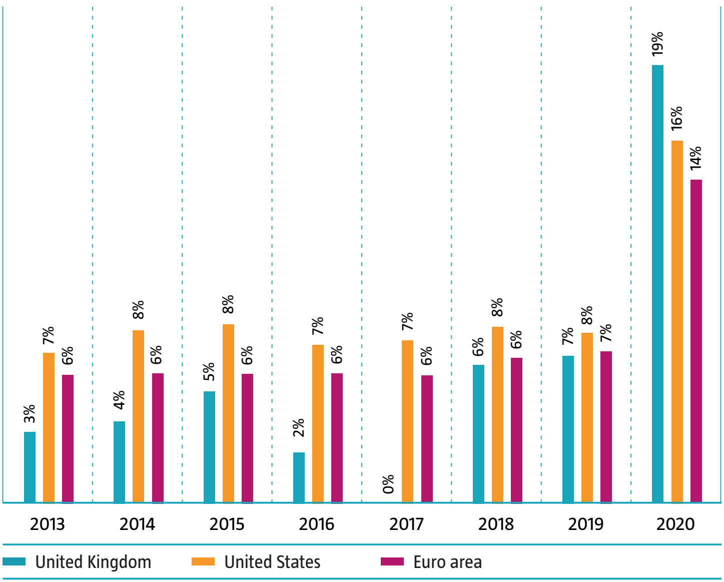
Consumers around the world have accumulated an extra $5.4 trillion in savings since the coronavirus pandemic began, providing the basis for a resurgence in spending. According to OECD data, the average savings rate more than doubled in 2020; rising for instance, from 7% to 19% in the United Kingdom and from 8% to 16% in the United States.

With this savings glut in mind and with a successful vaccination program underway, The Bank of England this month raised their outlook for household spending, and now expect a 5.3% rise in 2021 and 9.3% in 2022.

Similarly in the US, aided by vaccinations, consumer spending is accelerating. The US Commerce department recently reported total retail sales in April rose 51.4% Y/Y with restaurant spending up 119.8% Y/Y and clothing sales up 711.3% Y/Y – presumably in preparation for a return to the office, and an evening out.

With strong consumer balance sheets, rising employment, and easing travel restrictions, it is shaping up to be the summer of spend.

Savings rates



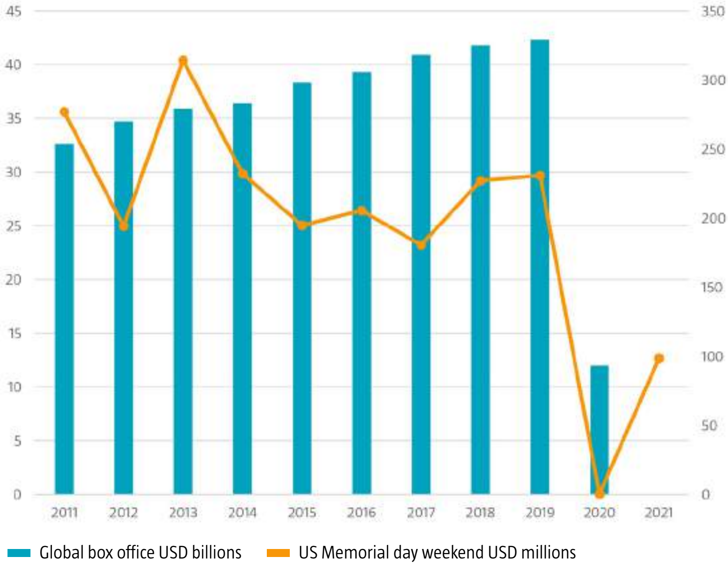
Source: OECD

Popcorn time

There was a time when summer moviegoers went to theaters not just for the entertainment, but also for the air conditioning. However, even before the pandemic, box office attendance was melting away.

With theaters shuttered in 2020, movie attendance per capita in the US and Canada dropped to 0.7 versus 3.5 in 2019, 3.7 in 2018 and a record 5.2 in 2002. Globally, box office revenues fell 71.6% YoY to USD 12.0 billion last year, while movies sold digitally and on disc rose 23% YoY to USD 68.8 billion. Subscriptions to services like Netflix, Disney+ and Hulu rose 26% YoY. There are now signs of recovery; the US box office grossed USD 98.5 million over the holiday weekend, but that figure is still down 57% from the same weekend in 2019.

Box office revenues

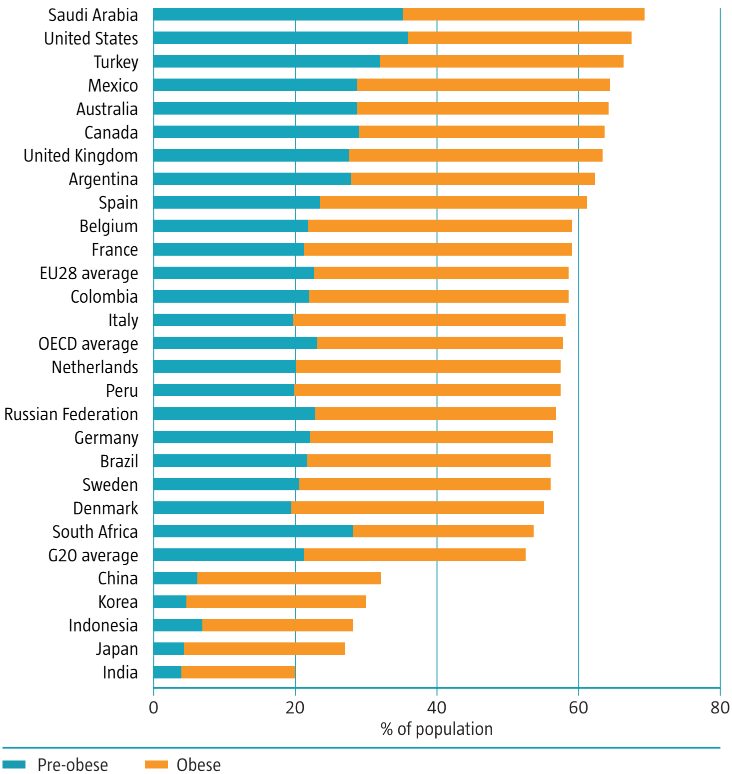


Source: Motion Picture Association, Box Office Mojo

Double burden

According to the World Health Organization, overweight and obesity have tripled since 1975, with 1.9 billion adults being overweight and 650 million of those being obese, equating to 39% and 13% of all adults respectively. At the same time, 462 million or 9.2% of adults are underweight. The coexistence of overweight and underweight has created a double burden of malnutrition in our world.

Large parts of the global population are overweight

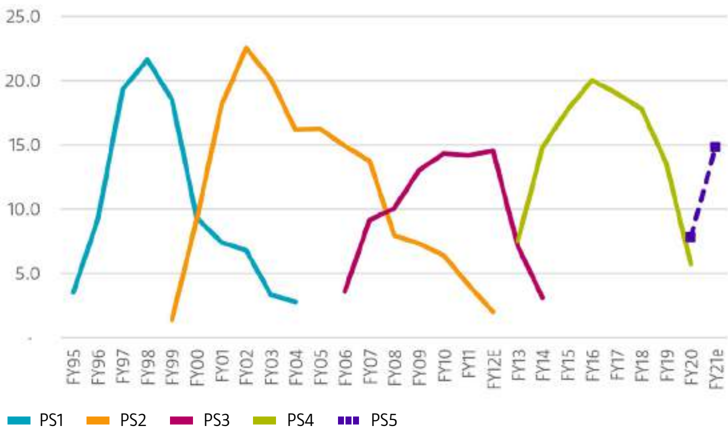


Source: WHO Global Health Observatory, 2018

Game cycles

Discussions at the E3 video game industry trade show, held online this week, shifted beyond the stunning visual demonstrations to the cloud. In the games industry, platform holders Sony, Nintendo and Microsoft release a new generation of consoles with faster processing speeds and higher resolution graphics every few years. And every few years, analysts predict the console cycle will end as gamers move to either PC online, mobile or a yet-to-be released system in the cloud. While mobile game sales are indeed more than twice the size, according to industry researchers at NewZoo, console game sales continue to thrive, rising 27.6% to USD 54 billion in 2020 – aided by a new generation of hardware and a customer base largely confined to home during the year. The cycle continues.

Sony PlayStation console hardware sales, units millions

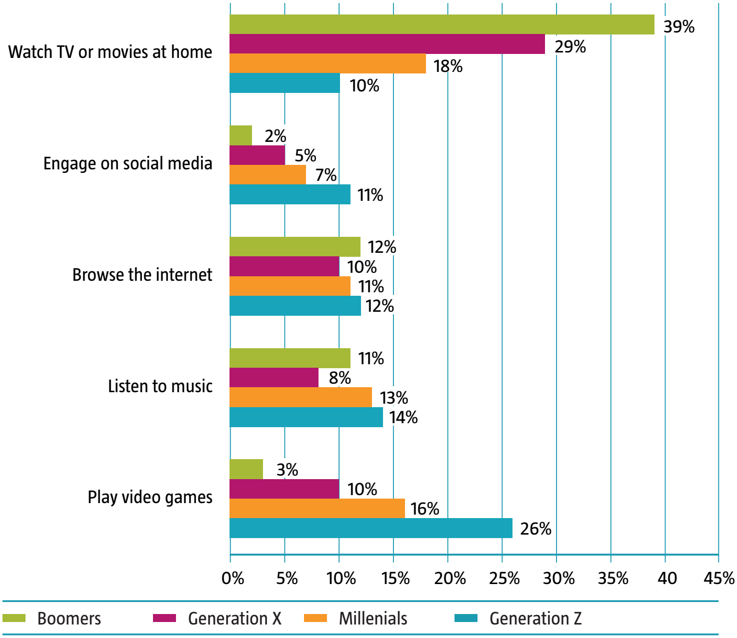


Source: Company Filings and published guidance
Note: Fiscal Year Ends March of following year, e.g. FY21 ends March 2022

Generation gamer

Generation Z may have coined the term 'Netflix & chill' but according to Deloitte's Digital Media trends survey published earlier this year, more of that cohort cite playing video games as their favorite form of entertainment. Fuelled by bored consumers at home, a new generation of consoles, and the continued expansion of mobile offerings, year-on-year video game spending rose 23% in 2020 to nearly USD 178 billon. It's no surprise then that everyone from Netflix to the at-home cycling service Peloton have recently announced plans to include games withing their offerings. After all, engagement is the name of the game.

Favorite entertainment activity by generation

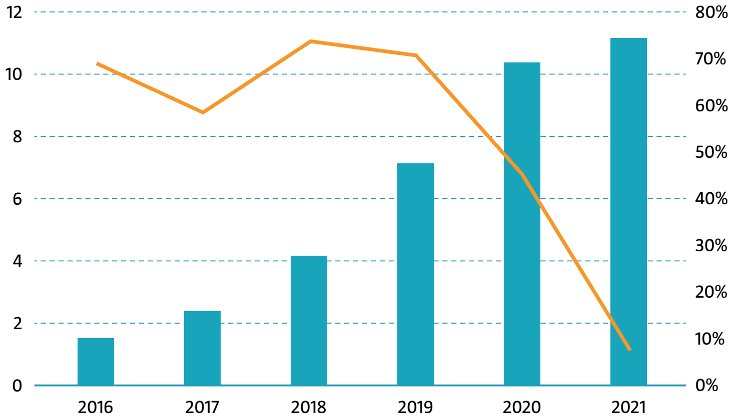


Source: Deloitte Digital Media trends, 15th edition

Prime numbers

According to researchers at Digital Commerce 360, Amazon's Prime Day event on Monday and Tuesday of this week generated sales that topped USD 11 billion. This was 8% higher than the sales of the Prime Day event held in October of 2020. Given seasonality, that rate of growth may not be comparable to the 45% growth rate recorded in 2020. Notably, Adobe Analytics estimated total online sales recorded on Monday and Tuesday were between 21% and 29% higher than average for a day in June. Worldwide top-selling items according to Amazon ranged from apple cider vinegar to robotic vacuum cleaners. Curiously, with summer begun and with travel resuming, neither beach umbrellas nor drink coolers made Amazon's top-sellers list.

Estimated prime dales sales



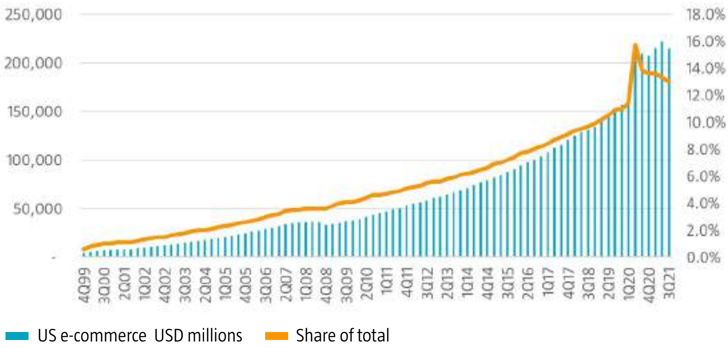
Sales USD billion | Y/Y

Source: Digital Commerce 360

Back on trend

Prior to the pandemic, e-commerce's share of total US retail sales rose in a linear manner, expanding roughly one percentage point per year. With consumers, students and office workers largely confined to their homes during the pandemic, e-commerce sales accelerated, and in 2Q20 jumped 44% year over year in the US, reaching 15.7% of total retail sales versus 10.5% in 2Q19. As the vaccine rolled out and the economy re-opened, e-commerce sales began to decelerate materially in 2Q21. According to figures released by the US Census Bureau last week, e-commerce accounted for 13% of total retail sales, a figure that is just slightly above the level that might have been achieved had the pre-pandemic share expansion trend continued.

US e-commerce sales & share of retail sales

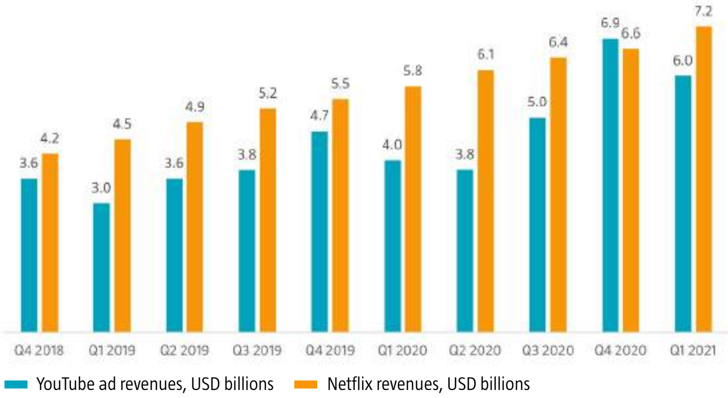


Source: US Census Bureau, November 2021

Full stream ahead

YouTube users watch one billion hours of video per day while Netflix viewers tune in for 400 million hours. The shift away from traditional TV towards the internet has required advertisers to find new ways to bring their message to consumers. Netflix's growth as a service where advertisers do not have any access to the audience is pushing advertisers to platforms such as YouTube. This is clearly visible in YouTube's fast growth. In the fourth quarter of 2020, YouTube ad revenues eclipsed Netflix subscription revenues for the first time.

Quarterly Netflix and YouTube revenues

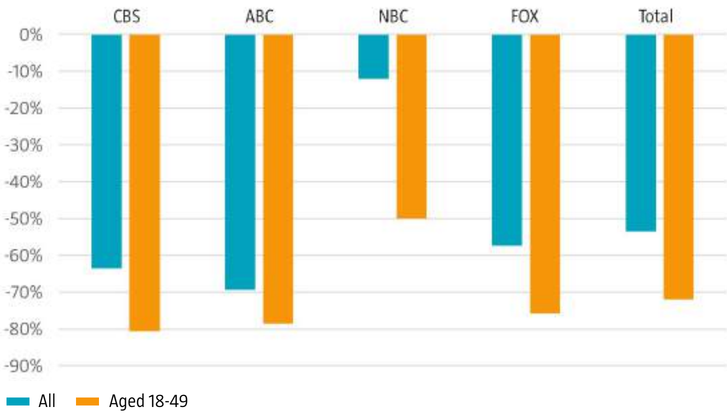


Source: Netflix and Alphabet company filings

Roll up the red carpet

After losing out on top honors during the recent Emmy awards to programs from streaming services like Apple TV+ and Netflix, US television broadcasters have suffered another loss, reduced audiences. During premiere week (September 20 – 26), the four major TV broadcasters attracted 17.5 million viewers, down 53% from the comparable week in 2011. In the key advertising favored demographic of those aged 18 to 49, over the last ten years, premiere week viewership has fallen 72% to 3.3 million. The revolution may not have been televised, but it will be streamed.

Premiere week TV viewership 2021 vs. 2011



Source: Nielsen, Lightshed Partners, September 2021

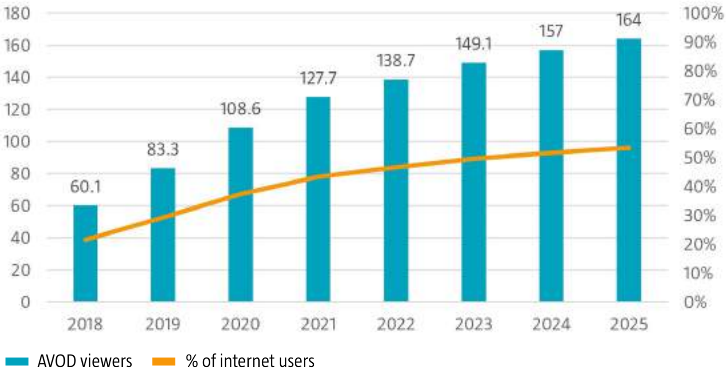
The network game

At one time, not long ago, television viewing was dominated by a few large broadcast networks, a facet of the industry that largely remained even as cable networks greatly fragmented audiences. In recent years, viewers have gravitated toward advertising-free subscription streaming services like Netflix, Disney+ and HBO. This shift has left advertisers without a key channel to reach potential consumers.

While short form video sites like YouTube and Tik Tok have captured the lion share of online video advertising dollars, incumbent media networks have not remained idle. As a result, dozens of free ad-supported video on demand (AVOD) streaming services like Hulu, Peacock, and Pluto have been launched to fill the void for traditional television advertisements.

eMarketer forecasts that US ad-supported streaming will expand 30% year on year in 2021 to 127.7 million viewers and will reach 164 million by 2025. However, as paid streaming services continue to reinvest revenues into new content as diverse as The Squid Game and Ted Lasso, free services will need to ensure viewers remain engaged long enough to watch the ads.

US ad-supported video on demand service viewers



Source: eMarketer, September 2021

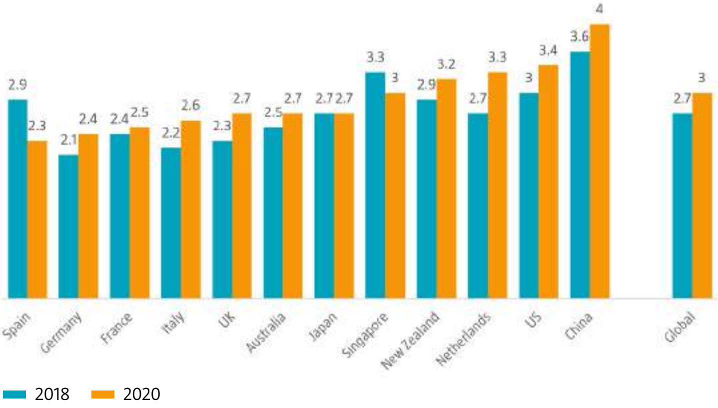
Super subscribers

In many areas consumers are switching from an ownership to a subscription model. For example, subscription business models are now employed by Spotify in music, Adobe in creative software, Microsoft in gaming and Chewy in pet supplies.

Consumers are keen to sign up. Globally, the average number of subscriptions per person making use of subscriptions increased from 2.7 in 2018 to 3 in 2020. Over the same period, the percentage of adults with subscription services increased from 71% to 78%.

For companies, a subscription model could increase average spend, boost customer retention, improve brand loyalty and enable better customer data analysis, while providing a predictable revenue stream. Consumers get the benefit of convenience, value for price, spread-out payments and proactive updates.

Average number of subscriptions per those who use subscription services

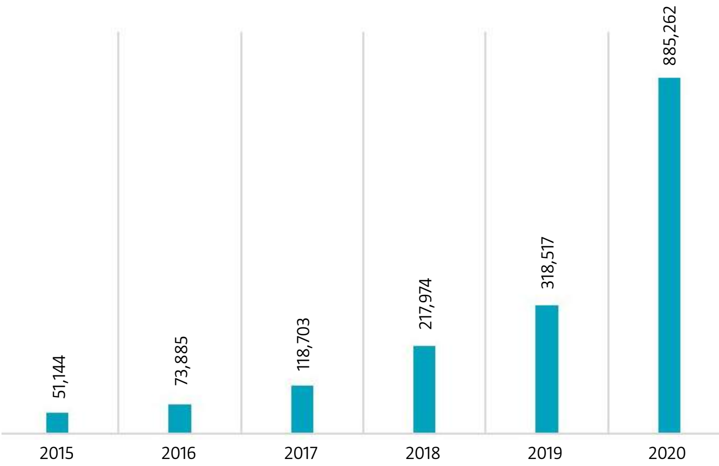


Source: Zuora, The Harris Poll, Bernstein. Date: August 2021

Lend me your ears

According to media research firm Chartable, nearly 900,000 new podcast shows were launched in 2020 versus just over 300,000 in 2019. While the recession limited podcast revenue growth in 2020, the Interactive Advertising Bureau forecasts that podcast advertising will jump 60% Y/Y in 2021 to USD 1.35 billion in the US. Notably, where sports programming dominates advertiser focus in television, that segment attracts only 5% of podcast industry revenue, with news attracting 22%; comedy 16%; and science 12%. The acceleration in the podcast industry underscores a key thesis of Chris Anderson's 2006 book The Long Tail: that the internet provides an opportunity for every niche.

New podcast launches per year



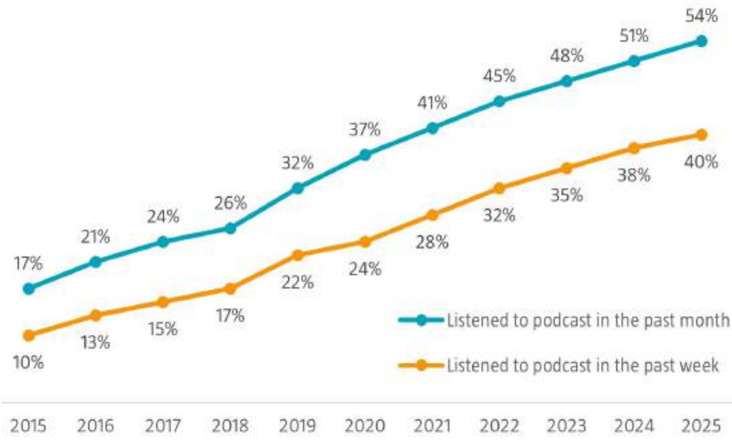
Source: Chartable

Popular podcasts

The popularity of audio streaming services such as Spotify, Apple Music and Pandora is enabling podcast creators to reach a very large audience with relative ease. This increased reach has sparked a wave of creativity, resulting in an attractive offering for listeners. The percentage of Americans listening to a podcast at least once per month has increased from 17% in 2015 to 41% in 2021 and is expected to reach 54% in 2025.

Audio streaming services and podcasters are still figuring out the right business model. Apple allows listeners to pay their favorite podcasters individually. Meanwhile, some podcasters on Spotify accept payments from advertisers, whom they mention throughout their podcasts.

Americans listening to podcasts

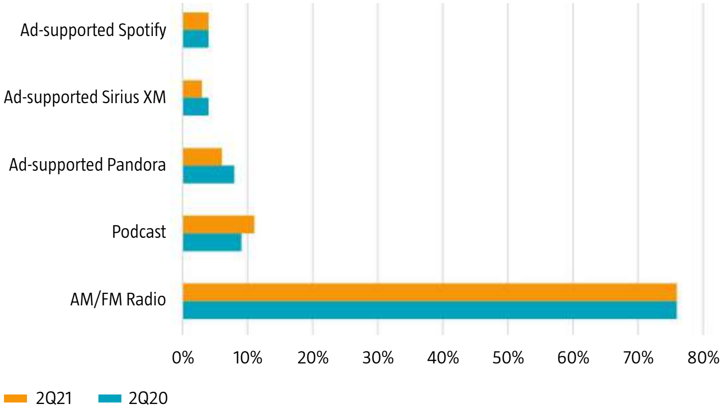


Source: Pew Research, eMarketer, Robeco. Date: August 2021

Fading radio star

Despite the penetration of paid audio services in the US having doubled over the last five years, to 47%, and podcast streaming having more than doubled, to 28%, radio listening carries on. According to Edison Research, AM/FM radio listening still accounts for 76% of the time Americans devote to ad-supported audio. The growth in time spent consuming podcasts, from 9% in 2Q20 to 11% in 2Q21, came at the expense of other ad-supported audio services. However, while streaming may not have killed the radio star, the medium is fading. Total US radio advertising revenues fell 17% in 2020, to USD 14.8 billion, according to PWC.

Share of time spent with ad-supported audio, US market

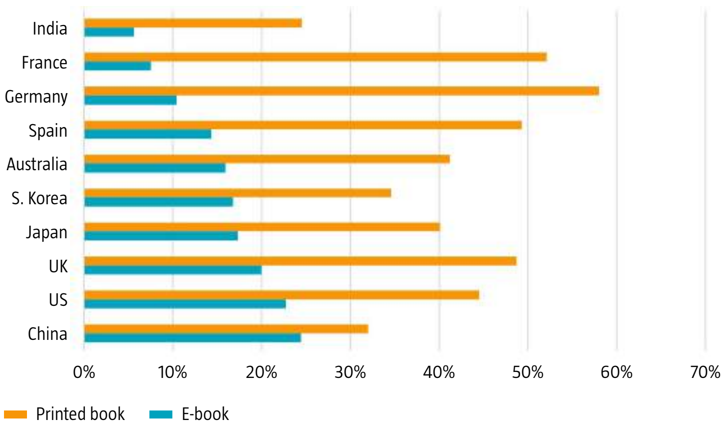


Source: Edison Research, August 2021

Paperback writer

While digital transformation remains a corporate imperative, particularly in media, the literary world remains predominately analog. In China, 24.4% of the population bought e-books and in France, just 7.5%, according to Statista's Advertising & Media Outlook report. While industry estimates vary widely, with Statista pegging e-book's share in the US at 22.7% and the American Publishers Association estimating 14.5% share, it is clear paper books are surviving digital disruption.

Percentage of population that purchased either an e-book or a printed book in 2020

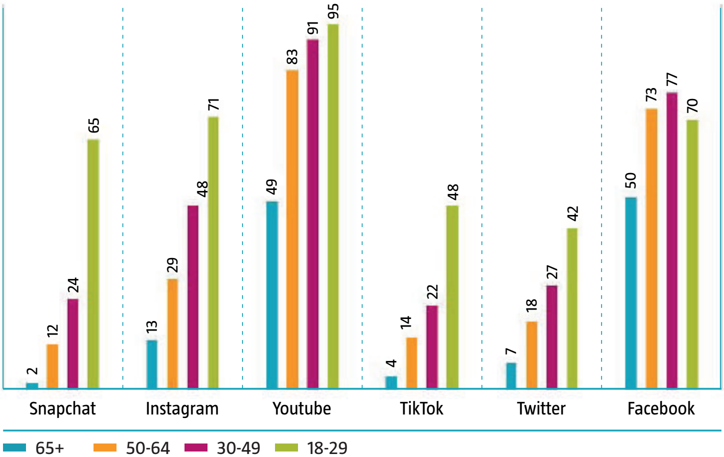


Source: Statista, August 2021

Social boomers

Roughly seven in ten American adults use social media, according to a Pew Research Center poll conducted earlier this year. Aside from wondering about the 30% that don't use social media, an interesting observation from the report is the variety between age groups across platforms. For Facebook, the usage delta between the oldest grouping of those aged 65 and above, and the youngest group of those aged 18 to 29, is 20 percentage points. For Snapchat, the delta is 63 percentage points, given just 2% of the 65-plus group say they use the service versus 65% for those 18 to 29. These differences are worth noting as usage will likely impact perceptions for everyone – from marketers allocating advertising budgets to policymakers considering anti-trust rules. The picture is often clearer without a filter.

Social media usage by adult age groups



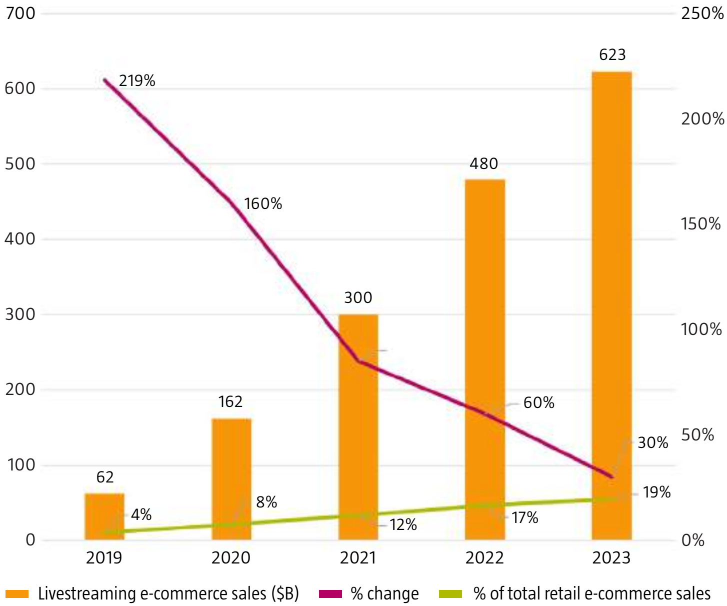
Source: Pew Research Center

See now, buy now

Livestreaming e-commerce means promoting and selling goods through influencers' streams on their own social media channels. This way of selling is growing rapidly in China, with sales increasing 160% in 2020 to USD 162 billion, amounting to 8% of total e-commerce sales.

Jiaqi Li, a former L'Oréal salesman now known as the "Lipstick King", is one of the most popular live streamers with 6.5 million followers on Alibaba's Taobao. People like Jiaqi Li can boost sales for brands through product endorsements, education, and persuasion. Estée Lauder sold USD 300 million worth of products via its livestream on the last Singles Day in China. Livestreaming e-commerce is small outside Asia, but it's likely Western consumers will see more and more brands experimenting with this type of selling.

Livestreaming e-commerce sales in China

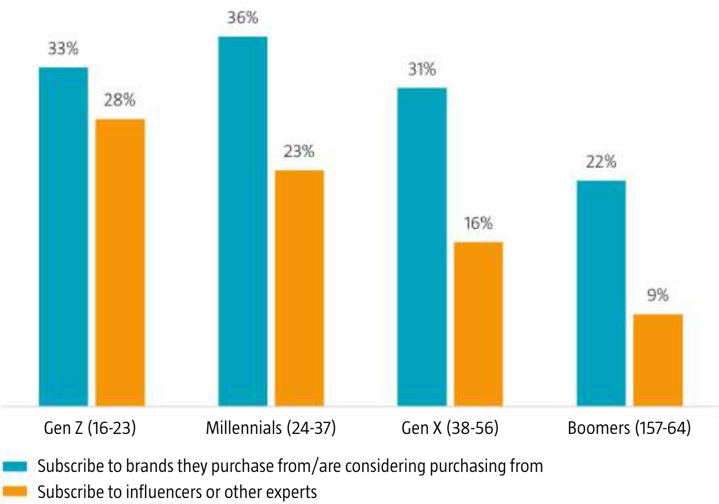


Source: eMarketer

Brands and influencers

Even though a large part of the population uses social media now in most countries, brands and influencers could still gain a lot more following. In a poll conducted among 180,852 internet users by GWI at the end of 2020, 33% of Gen Z (aged 16-23) said they follow brands on social media and 28% said they follow influencers or other experts. Interestingly, Gen Z follow influencers almost as much as brands. Brands have noticed as many of them pay influencers to promote their products. Among older generations, following of influencers is less common with just 16% of Gen X (aged 38-56) and 9% of Boomers (aged 57-64) doing so.

Following of brands and influencers across generations on social media



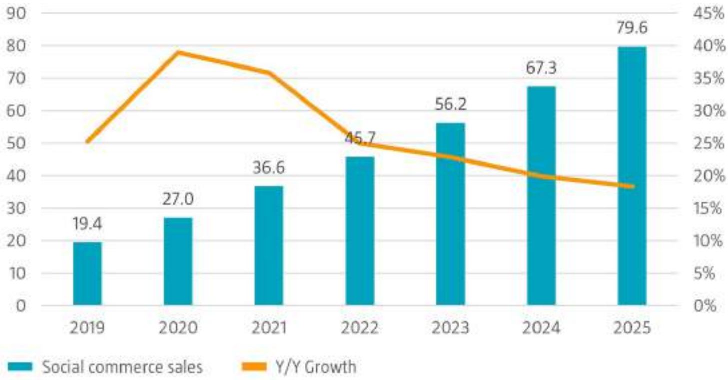
Source: GWI, 180.852 internet users polled and 38.049 influencers followers, Q4 2020

Among friends

Social commerce, already a fervent market in China where 51.5% of shoppers make purchases through social networks is taking off in the US as well. According to eMarketer, social commerce sales rose 38.9% year on year in 2020 to just under USD 27 billion. In 2021, eMarketer expects social commerce to grow 35.8% to USD 36.6 billion and more than double to USD 79.6 billion by 2025.

Social commerce in the US is unsurprisingly most popular among generation Z users, with more than half of that group participating in the trend. Social commerce is however less social than the name suggests; the segment is defined as sales made via links found within posts on sites like Instagram and TikTok rather than sales made via recommendations from friends.

US retail social commerce sales USD billions



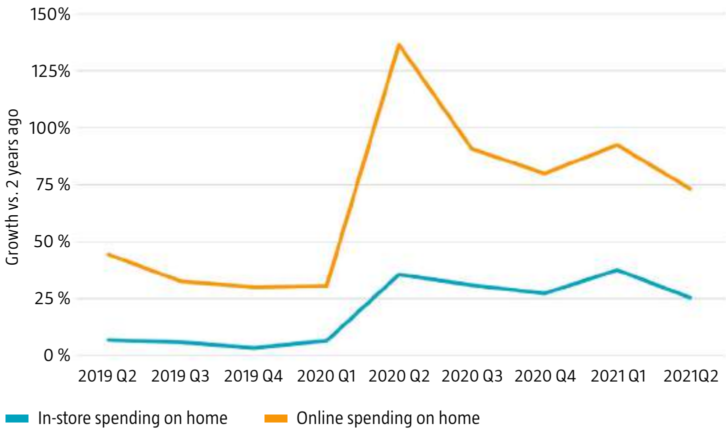
Source: eMarketer, June 2021

No place like home

Growth in spending on home improvement and home furnishing boomed during the pandemic and remains elevated. Consumers are shifting home spending to online channels. Online home spending was already growing at >30% but accelerated to 136% last year and is still 75% above levels seen two years ago.

Companies offering goods for the home online such as Wayfair, Overstock.com and Ashley Furniture grew their number of shoppers by 30% to 200% last year. Large numbers of new consumers have experienced buying furniture and decorations for their home can also be done from the comfort of their home.

Growth vs. 2 years ago in home spending



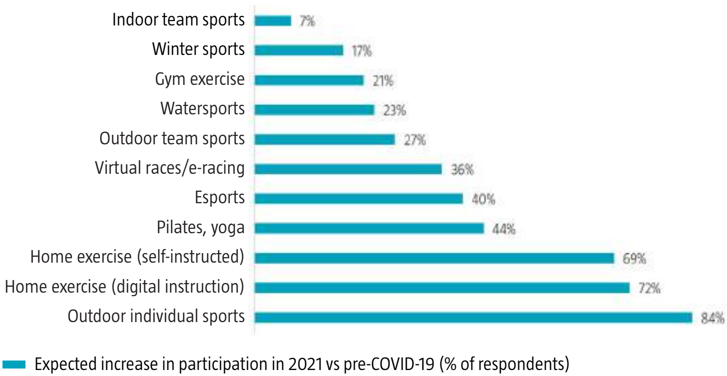
Source: Earnest Research

Hello, old sport

Most sporting facilities closed during the Covid-19 pandemic. At the same time, many people started paying more attention to their health, with an increase in sports participation being one outcome of this decision. This change in behavior is likely to stick. In a recent survey by McKinsey and the World Federation of the Sporting Goods Industry, 84% of respondents say they will do more outdoor individual sports compared to before Covid-19. The survey suggests an increased participation in other types of sports, too.

Interestingly, consumers have also adopted home exercise with digital instruction, esports and virtual races. As a result, companies like Peloton, Zwift and MIRROR (part of lululemon) have experienced a rapid growth in sales. To these companies' benefit, 36-72% of consumers say they expect increased participation in these digitally connected forms of sport after the pandemic ends.

Expected increase in sports participation in 2021 vs. pre-COVID-19



Source: Global Sporting Goods Industry Report 2021 by McKinsey and World Federation of the Sporting Good Industry

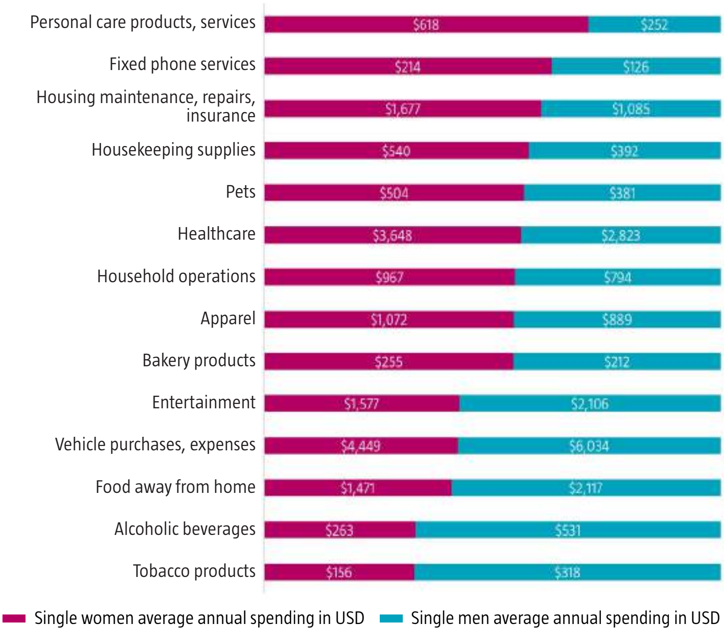
Make up and cigars

How do men and women stack up against one another in terms of consumer spending? To get a good comparison we look at annual spending by single men and women in the US, from the US Bureau of Labor Statistics.

The largest difference in spending habits is in personal care products and services, where single women outspend men 2.5 times. On the other hand, single men spend twice as much as women on tobacco. Single men also spend 44% more on food away from home and 36% more on vehicle purchases and expenses. Single women, meanwhile, spend 32% more on pets and 55% more on home maintenance, repairs and insurance.

This information is useful for companies to identify where they are underpenetrated and to forecast spending habits within household units by looking at behavior prior to the formation of a family unit.

Categories where annual spending differs more than 20% between single woman and men in the US



Source: US Bureau of Labor Statistics, period: 2019-2020

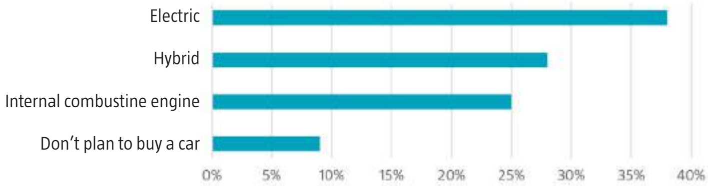
Ask the interns

Morgan Stanley's survey among interns shows how potential future business leaders challenge current perceptions around mobility. 38% of interns say they would buy an electric car and 28% would go for hybrid when buying a car in the next five years.

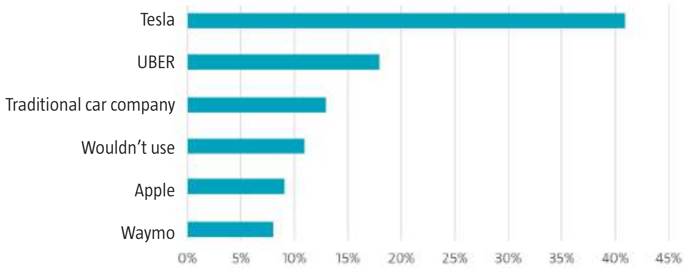
Close to half think owning a car will not be a necessity by 2030. This could indicate increasing usage of car-sharing services, public transport, new forms of transportation or a lower propensity to travel. Shared autonomous mobility or robo-taxis could be another alternative to car ownership. When autonomous driving technology matures, the biggest cost in a taxi, the human driver, could be replaced by cameras, computers and software. If this scenario unfolds, it could significantly reduce taxi fares and enable car owners to monetize their asset.

Response of Morgan Stanley interns on questions about mobility

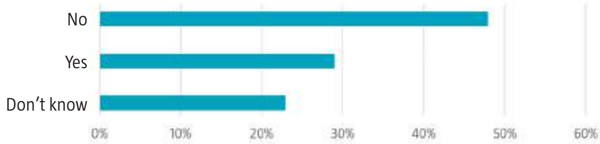
Which type of car car would you buy in the next five years?



If available, wich robo-taxi service would you use?



In 2030, do you think owning a car is a necessity?

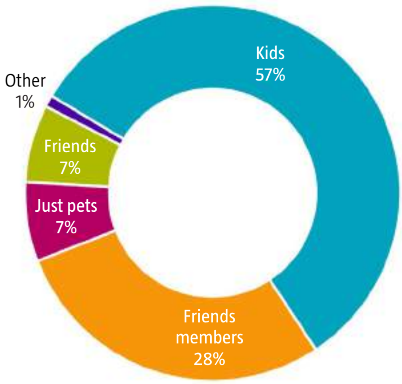


Source: Morgan Stanley's 2021 intern survey

Pets are family too

The humanization of pets appears to be a global trend. It has been well documented in North America and Europe. Now, research by UBS shows 57% of Chinese pet owners see their pets as kids, and a further 28% sees them as family members. This humanization of pets compels owners to spend more on their animal companions. For example, they buy premium pet food, take their pet to the vet more often, use grooming services and even purchase insurance for their furry family members. The Chinese pet market is worth USD 383 billion and is expected to grow by approximately 15% per annum in the coming five years. For many internationally operating pet companies, China has the potential to be one of their largest markets.

How Chinese pet owners see their pets

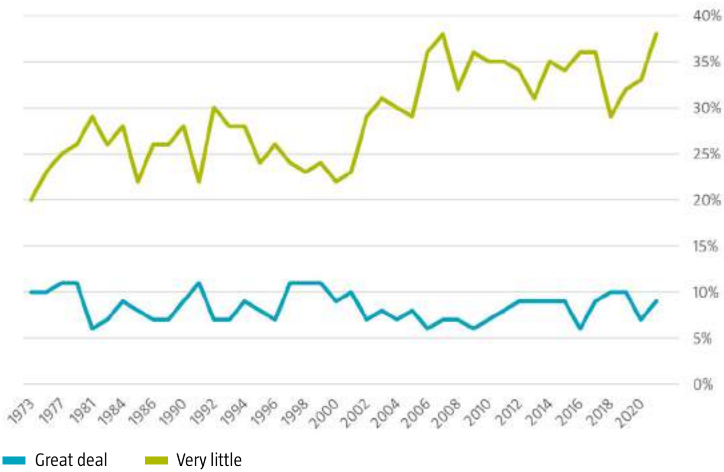


Source: UBS, Chinese Pet Industry white paper, 2021

Big distrust

In a recent poll by Gallup, 38% of Americans indicated they have very little trust in big business. This is a change in attitude, because from the height of the 2007 financial crisis until 2018, the percentage of people distrusting big business was declining. One explanation for more distrust could be the increasingly powerful position large technology companies such as Google and Facebook have today. This has not gone unnoticed by US regulators, who have opened multiple investigations into these companies. To end on a more positive note, Americans do love their small businesses: 70% of respondents stated they had a great deal or quite a lot of trust in small businesses.

Percentage of respondents having a great deal or very little trust in big business in the US

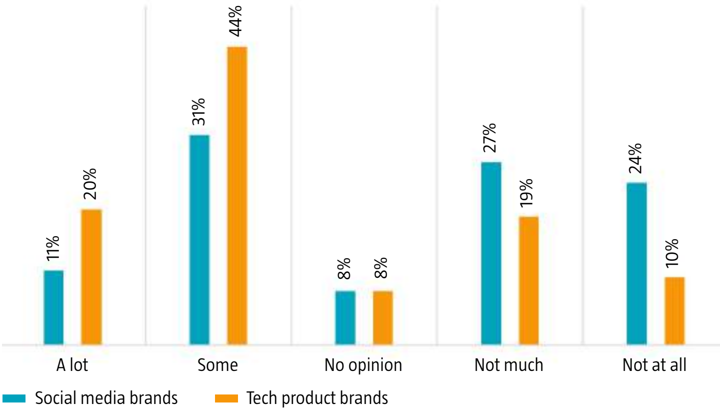


Source: Gallup, August 2021

In technology we trust

While big technology companies remain in the regulatory spotlight, they appear to have retained consumer trust – although less so in the case of social media platforms. According to a report issued this month by the market researcher Morning Consult, 64% of US consumers indicate some or a great deal of trust in technology product companies. For social media, a less robust 42% of respondents expressed having trust in those companies. Notably, 24% of consumers said they did not trust social media companies at all, compared to only 10% of respondents who indicated not having trust in tech product companies. The biggest areas of concern for survey respondents were the sharing of personal data without permission and data breaches. To paraphrase Will Rogers, 'it takes a lifetime to build trust, but only a minute to lose it.'

Consumer levels of trust in tech companies by type

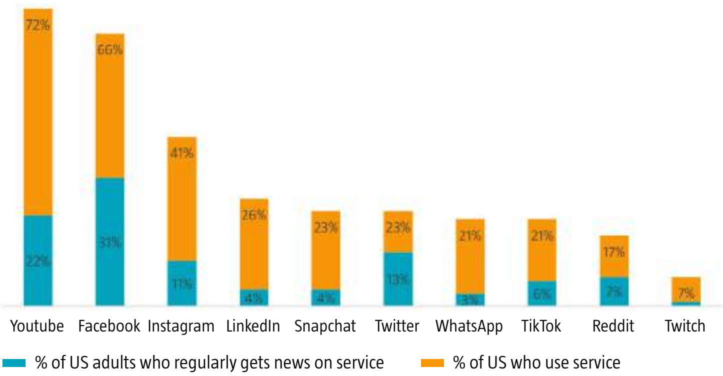


Source: Morning Consult, October 2021

Social media news

About half of US adults get their news via social media at least sometimes, down slightly from 2020. Social media companies have come under scrutiny for users publishing misleading information via their services. Facebook has probably faced the most criticism and is also the most common source of news among social media, with 31% of US adults regularly getting their news via the service. Looking across social media, Twitter is the most news-heavy with more than half of its users consuming news on the service regularly. Whether we can define YouTube as social media is up for debate, but it's the most used service among US adults, and 22% of them regularly consume news on the service, but until now it has faced less criticism.

Usage and news consumption across social media



Source: Pew Research Center, August 2021

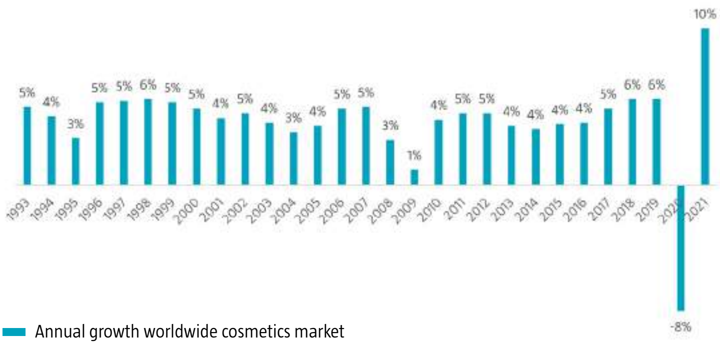
Quest for beauty

At an Amazon event in 2012, former CEO Jeff Bezos shared how he thought about the future and his investment decisions: "I very frequently get the question: 'What's going to change in the next ten years?' And that is a very interesting question; it's a very common one. I almost never get the question: 'What's not going to change in the next 10 years?'"

He continued by saying: "...and I submit to you that that second question is actually the more important of the two — because you can build a business strategy around the things that are stable in time." For Amazon, consumers wanting low prices and a vast selection were and are two of those things that aren't going to change.

Another consumer desire unlikely to change is the quest for beauty, which, even as definitions of beauty change, is centuries old. The worldwide cosmetics is growing at a stable 4% annually on average and 2020 was the first time since measurement that cosmetics sales declined. We are already witnessing a rebound in 2021.

Worldwide cosmetics market annual growth rate

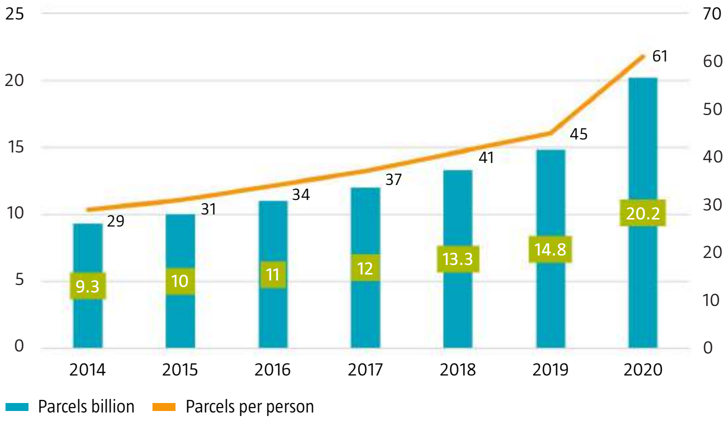


Source: L'Oréal, Robeco. Date: July 2021.

To your doorstep

As e-commerce sales accelerated from their 14% rate of growth in 2019 to 32% in 2020, the number of packages shipped to support those sales grew even faster. According to mail services provider Pitney Bowes, US domestic shipments rose 37% Y/Y to 20.2 billion parcels. Those volumes equate to 61 parcels received per person, up from 45 in 2019. With the capacity of existing carriers already stretched, e-commerce sites have moved to expand delivery options; for instance Amazon saw a 127% Y/Y growth in parcels delivered by their own logistics network. Notably the Pitney Bowes data excludes the faster growing category of local deliveries that span a diverse range of items, from a carton of milk to iPhone chargers. The doorstep has become the new Main Street.

US parcel volume



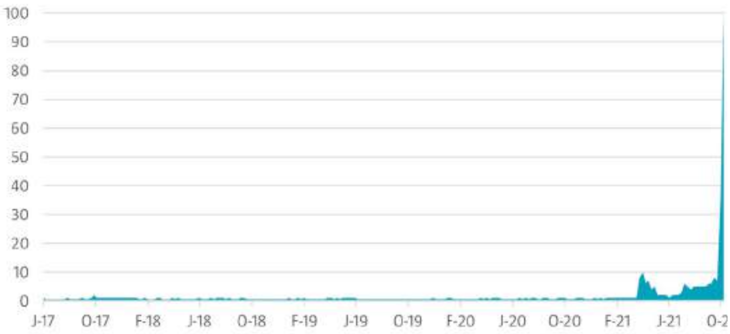
Source: Pitney Bowes, September 2021

Meta interest

Lamenting the lack of tangible innovation in Silicon Valley, the venture capitalist Peter Thiel once said ruefully, "We wanted flying cars, instead we got 140 characters." While the merits of flying cars are debatable, Silicon Valley has recently found new inspiration in another virtual technology - the metaverse. From music concerts hosted within Fortnite to the purchase of non-fungible tokens in digital art, the blending of real and virtual worlds has been on the rise since the pandemic confined people to their homes.

Interest in the term metaverse spiked last week as Facebook announced a corporate name change to Meta while outlining plans to build a new virtual environment to connect social, work, and education-related applications. The term metaverse is credited to the science fiction author Neal Stephenson whose 1992 book Snow Crash described a persistent shared virtual reality space where users were represented as avatars. Science fiction very often inspires inventors, but it is less often those ideas come into form so presciently.

Google search interest in the term "Metaverse"



Source: Google Search Trends, October 2021

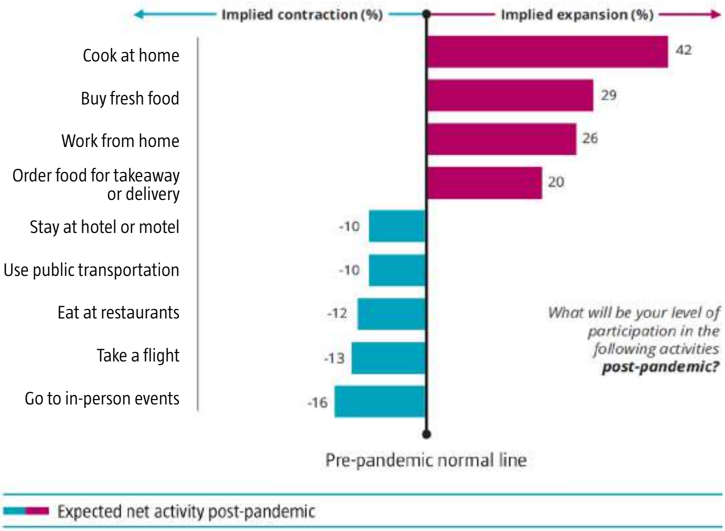
REOPENING & THE FUTURE OF WORK

Post pandemic habits

As the world emerges from its Covid induced hibernation, a question on the minds of investors is what lockdown habits will remain and what pre-covid activities will return.

According to Deloitte's Global State of the Consumer survey, how and what we eat will see the biggest change in norms. Relative to pre-pandemic levels, cooking at home will expand 42%; buying fresh food will rise 29% and ordering meals will grow 20%. Working at home is expected to remain a part of the new normal with a 26% expansion. Although recent data suggest an uptick in travel plans, the Deloitte survey indicates airline travel could decline 13% and attendance and in-person events will retract 16%.

Expected net activity change after the health crisis ends relative to pre-pandemic levels.



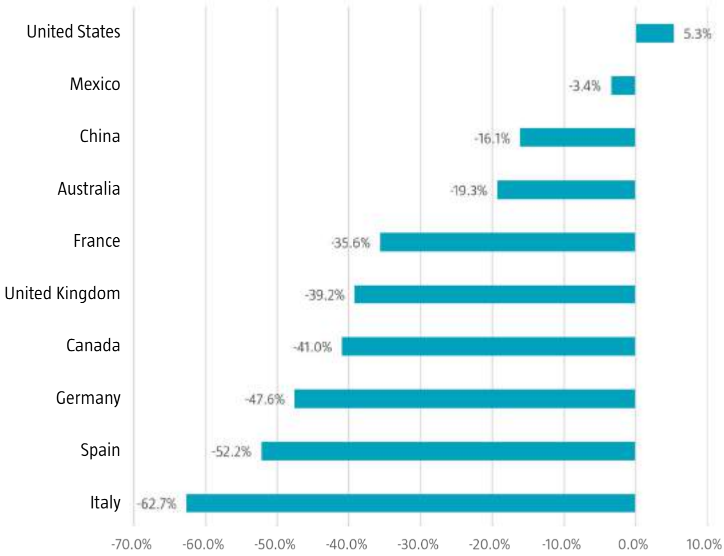
Source: Deloitte State of the Consumer Tracker Survey

A weekend away

Beyond its more sombre purpose, Memorial Day in the US marks the start of the summer – with barbecue gatherings and weekend trips away.

Short-term rentals on platforms such as Airbnb and VBRO have proved more resilient than hotels during the pandemic, with the former falling 40% YoY in 2020 versus the latter's 60% decline. Now, more than a year since the pandemic began, signs of recovery are still weak. According AirDNA data, April short-term rental bookings in the US (which has higher vacination rates) rose 5.3% versus April 2019, while in Italy they were down 63%. Airline passenger data shows similar trends, with the IATA reporting domestic flights globally at 74% of pre-crisis levels and international travel at just 20%.

Short Term Rental Booking Nights: April 2021 vs. April 2019

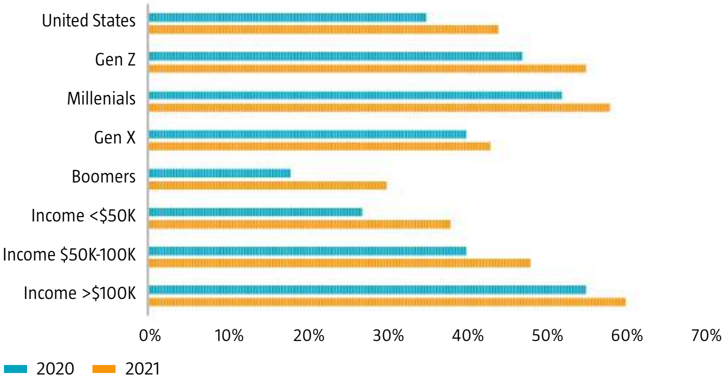


Source: AirDNA

Away for the holidays

With the prospect of another round of Covid travel restrictions in Europe looming, Americans are preparing to hit the road for the holidays. This season 44% of US adults plan to take a trip, up from 35% in 2020, according to survey research firm Morning Consult. Those younger and wealthier are more likely to pack their bags, with 55% of Generation Z and 60% of those earning at least USD 100,000 planning to travel. Recent US airport data also shows strong growth, with passenger screenings over the last week up 122% versus the same period in 2020, and just 11% below the same period in 2019.

US Holiday travel plans

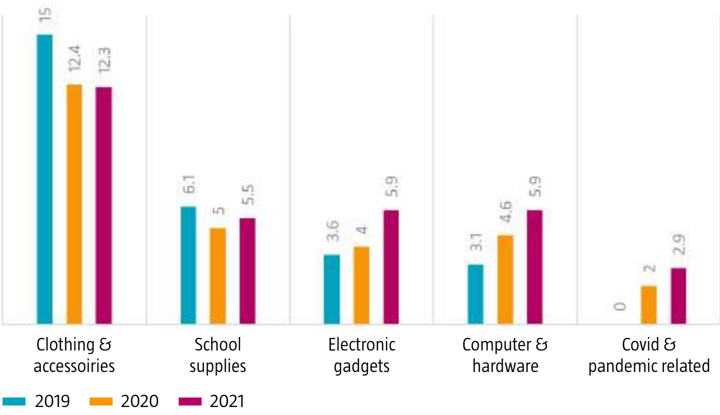


Source: Morning Consult, November 2021

Back to school

While the US retail sales growth reported last week disappointed some expectations, school-related spending is expected to jump this year. A recent Deloitte survey indicates back-to-school spending will rise 16% this year against relatively softer comparisons in 2020, when spending grew just 1%. Although classes are expected to be conducted in person rather than online, technology-related expenditures are still forecasted to increase by 37% to USD 11.8 billion. Health concerns remain top-of-mind as spending on Covid and pandemic-related supplies from hand sanitizers to WFM equipment is expected to rise 45% to USD 2.9 billion. While parents certainly hope classes will remain in person, they appear to be keeping Zoom webcams at the ready.

US back to school spending trends, USD billions

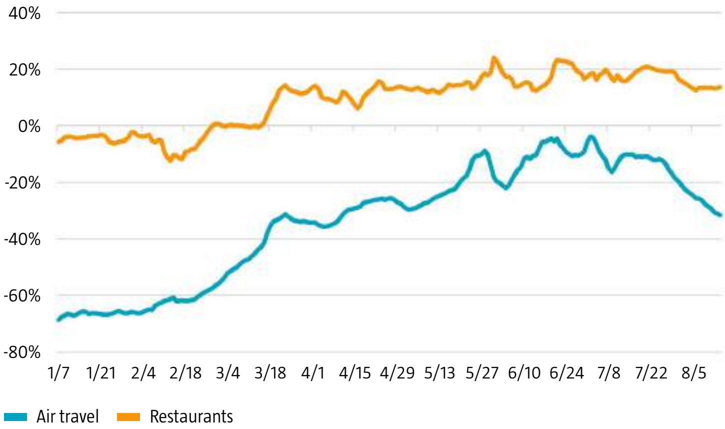


Source: Deloitte, July 2021

The neighborhood restaurant

The delta variant appears to be curtailing late-summer air travel, according to card data from Bank of America. Air travel spending had recovered in the first half of this year, from a 69% drop in January compared to the same period in 2019, to a 10% decline in mid-July. But the trend has since deteriorated. In the first two weeks of August, air travel spending was down 27% versus the same period in 2019. Meanwhile, spending at restaurants in August is tracking 14% above pre-pandemic 2019 levels. As the summer light begins to fade, there still is time left to dine on the terrace of your neighborhood restaurant.

Spending at restaurants and airline travel, two year growth rate



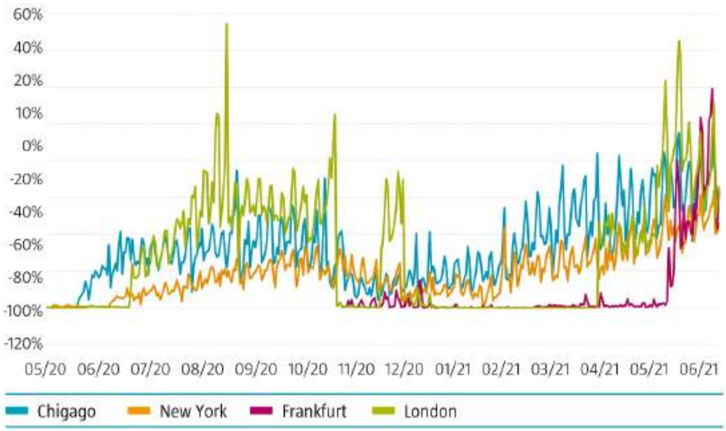
Source: Bank of America, August 2021

Dinner time

At a recent financial sector conference, one CEO quipped that if bankers could dine out in crowded restaurants, they could also come into the office. Data from restaurant reservation service Open Table suggests restaurants in major financial market cities have not yet recovered. Comparing data relative to the same periods in pre-pandemic 2019, overall in-restaurant dining is currently down 54% in New York, and down by more than 30% in Chicago, Frankfurt, and London.

On the other hand, in regions away from the major financial centers, dinning volume is above pre-pandemic levels. In Florida, restaurant dining is up 19% vs. 2019; in Germany's Baden-Württemberg, up 31%; and in Australia's Queensland, up 135%. Perhaps banking has gone fully remote.

Seated diners from online, phone, and walk-in reservations, relative to 2019

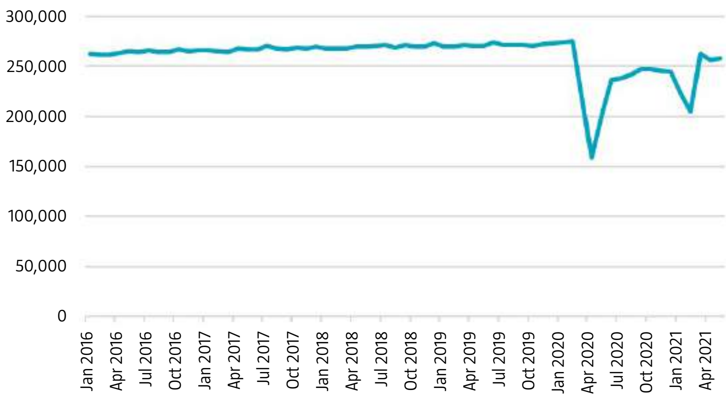


Source: Open Table

On the road again

Last week, the US Department of Transportation reported that vehicle miles driven jumped 28.7% year on year in May, although the figure was still down nearly 4% versus pre-pandemic May 2019. In 2020, total vehicle-miles traveled fell 13% year on year to 2.83 trillion. Those fewer miles translated into a 170 million metric tons reduction in carbon dioxide emissions, according to the agency. As Americans return to the road, some of the environmental benefits of working from home appear to have been only temporary.

US vehicle miles traveled (millions)

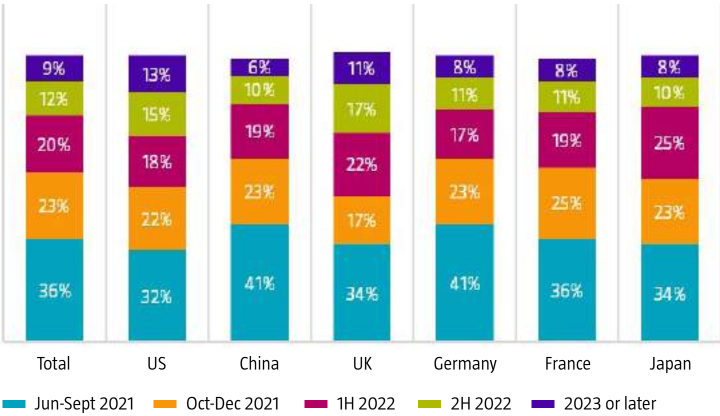


Source: US Department of Transportation

Infrequent flyer

Although many tourists have returned to the sky, global passenger air miles are down 62.7% versus pre-pandemic 2019, with international miles down 85% and domestic miles down 24% according to the most recent report from the International Air Transport Association. For business travellers, it appears the recovery is still not out of the gate. In a recent Bank of America survey, 59% of respondents expected that their next business trip would still occur this year. However, 20% do not expect to fly for business until the first half of 2022, and a further 21% listed the second half of 2022 or later. Hopefully any accumulated frequent flyer miles won't expire before would-be travellers request an upgrade.

Expected timing of next business trip (Survey sample of 7,321 respondents)

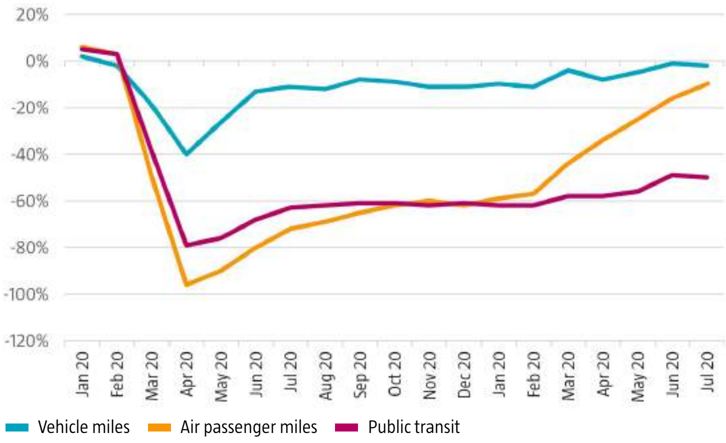


Source: Bank of America, RIWI

Waiting for passengers

Driven by telecommuting, concerns for the Corona virus, reduced capacity, and the return of the bicycle as a means of transport, public transit has suffered during the ongoing pandemic. While personal vehicle miles driven have nearly returned to pre-covid levels and air traffic continues to improve, trips taken on public transit systems like busses and subways are still down 50% relative to corresponding months in pre-pandemic 2019 according to the US Bureau of Transportation Statistics. Google map data show less severe, but still negative public transit trends in other international markets like London which is down 36%, Milan -20%; Tokyo -19%; and Sao Paulo -43%. Instead of travelers waiting for the bus, the bus is waiting for its passengers.

US travel relative to 2019



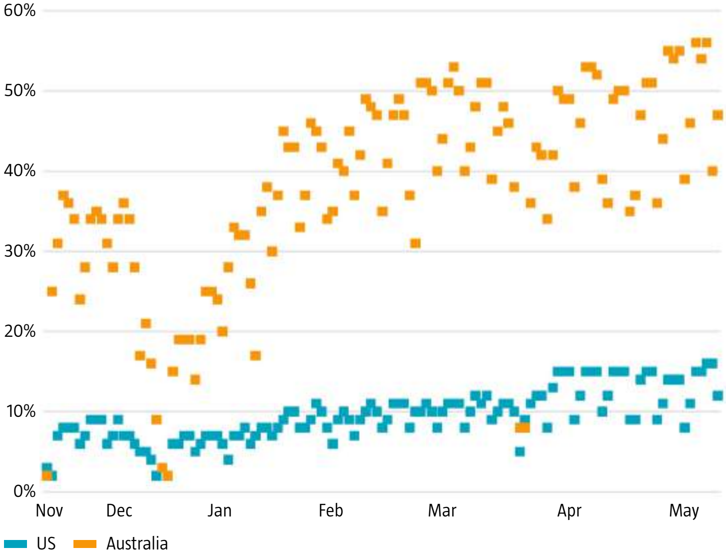
Source: US Bureau of Transportation Statistics, October 2021.

The office revisited

This week, many New York investment bankers were asked to return to the office. They are not alone. Yesterday, office management software provider Robin released its monthly report showing a 40% month-over-month increase in the number of US employees returning to the office in May. Nevertheless, the office is still a long way from going back to normal. According to Robin, US average office capacity in use reached 17% in May; and in Australia and New Zealand, markets which have been reopened for longer, average office usage reached 53%.

While plans for office reopening vary widely, a PwC survey published earlier this year found that 83% of employers say the shift to remote work had been successful and that 55% of employees would like to continue working remotely between three and five days per week. Don't put away that webcam just yet.

Office capacity in use, US and Australia



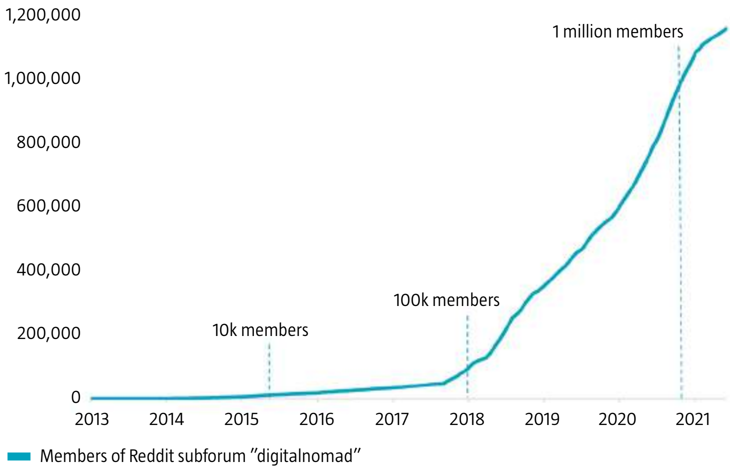
Source: Robin Software Return To Office Tracking Series

Digital nomads

Millions of people were forced to work from home to curb the pandemic. A growing group of people voluntarily takes working from home a step further: working from anywhere. Thanks to the internet, digital nomads can work fully remotely, and they regularly move around between places like Bali and Tulum.

Subreddit r/digitalnomad is a popular social media meeting place for digital nomads and has been gaining popularity since 2018, with now more than a million members. Thousands of years ago, before the agricultural revolution, people moved around in search of food. Nowadays technologies such as video conferencing and collaboration software enable us to revisit the nomadic lifestyle again, often in a search for freedom instead of out of necessity.

Members of Reddit subforum "digitalnomad"



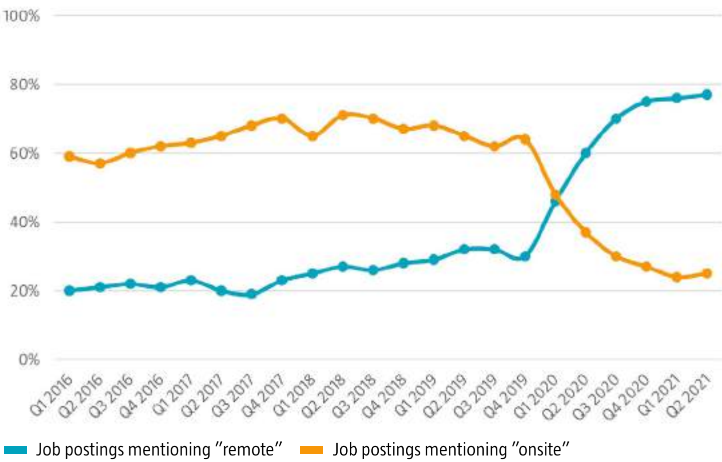
Source: Subreddit Stats

Remote jobs

While many workers are gradually returning to a traditional office, for many programmers, software developers, and user interface designers, remote working has become the norm. Before the pandemic, 30% of jobs listed on Hacker News mentioned "remote" and 64% "onsite". Fast forward to today: 77% of job postings mention remote compared to just 25% onsite.

Tech-savvy companies such as cryptocurrency exchange Coinbase, e-commerce software provider Shopify, and image-sharing service Pinterest have completely switched to remote work. The permanent adoption of fulltime and hybrid remote working plays into the hands of collaboration and video-conferencing software providers such as Atlassian, Slack and Zoom.

Share of jobs mentioning "remote" and "onsite" on Hacker News

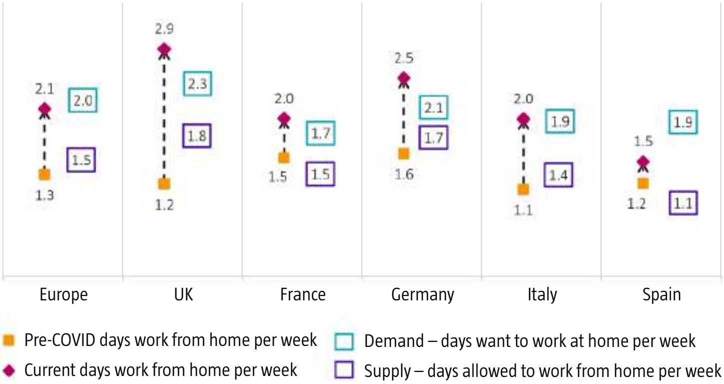


Source: The Economist, Hacker News. Date: August 2021

Hybrid working

Hybrid working, i.e., partly at the office and partly at home, is here to stay. The average days per week European office workers work from home has risen from 1.3 pre-Covid to 2.1 now, according to a survey by Morgan Stanley and AlphaWise. The same survey also asked how many days people would like to work from home. On average European office workers said 2 days per week. However, they expect their employer to require them in the office more often, allowing them to work from home only 1.5 days per week. An interesting disconnect that begs the question: should employees bite the bullet or can employers be more attractive by allowing more days working from home?

Average days working from home



Source: Morgan Stanley, AlphaWise, September 2021

Meet for coffee

One problem of working from home is that it can be a challenge to meet a colleague or peer for coffee. According to Earnest research, foot traffic to Starbucks coffee stores located in city centers is down substantially from pre-pandemic levels – even though the company's overall sales have rebounded. In downtown Seattle, for instance, foot traffic to Starbucks shops was down 53% in September 2021 compared to the same month in 2019.

Data from Google's mobility tracking report shows similar trends, with trips to workplaces in the Seattle region down 44% relative to pre-pandemic January 2020. In the same vein, a report from Bloomberg finds Pret a Manger sandwich shop volumes were down 20% in the City of London City, while volumes were up 28% in London suburbs. Until offices open more fully, coworkers may need a travel mug to meet for that coffee.

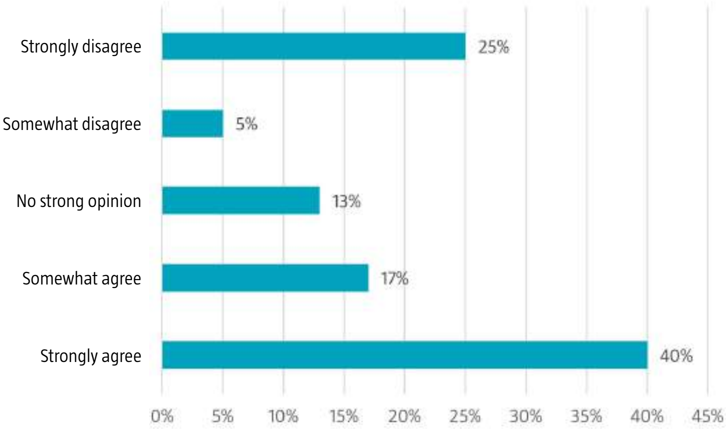
September city center Starbucks foot traffic vs. 2019

Source: Earnest Research, October 2021

Policy debate

Tomorrow all eyes will be on the US Federal Reserve Chairman, and given that the Jackson Hole symposium will be conducted virtually, it will be easier for more people to watch than ever. Despite the remarkable accomplishment in developing and delivering safe and effective vaccines against Covid-19, public attitudes have emerged as one of the obstacles to sufficient vaccination coverage. Similarly, as many offices and services seek to bring people back together again, opinions vary sharply on whether corporations should mandate vaccinations. A Civic Science poll conducted this month found 57% of Americans agreed employers should require proof of vaccination, and 30% disagreed. Unlike central bankers, most health ministers lack the authority to dictate policy, and so the debate continues and the road to recovery drags on.

Extent to which respondents agree or disagree with vaccination requirements at work

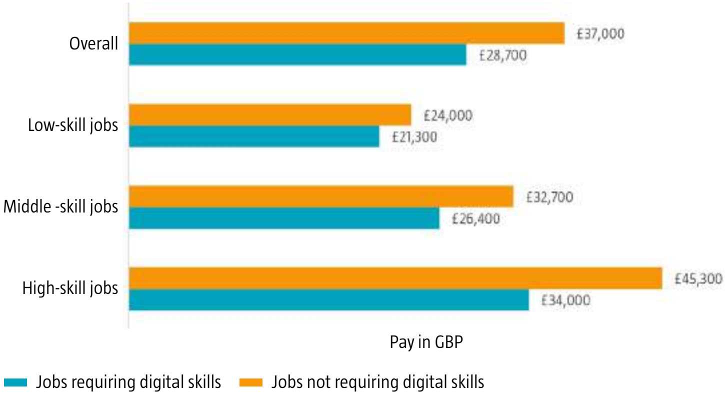


Source: Civic Science, August 2021

Digital skills pay off

The wage differential among jobs requiring digital skills and those that don't is 29% in the UK. This differential is visible in low, middle and high-skill jobs, with high-skill jobs showing the widest gap at 33%. Owing to the urgency with which companies need to digitalize to stay relevant in the future, employees with digital skills are in high demand. For those looking to boost their salary, online education services that provide coding bootcamps, digital marketing classes and user-interface design workshops would be a handy solution. Quite possibly, this could trigger a trend of parents selecting their children's schools based on whether they offer coding classes.

People with digital skills get paid more



Source: DCMS and Burning Glass

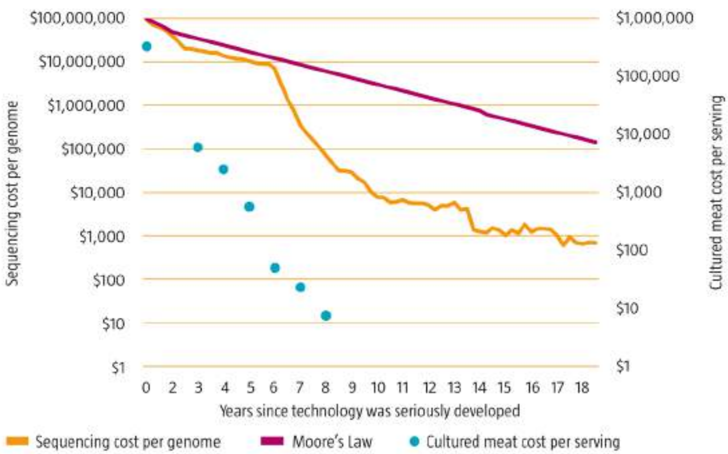
SUSTAINABILITY

Meet the new meat

Eleven Madison Park, the renowned Michelin-starred New York City restaurant, re-opened last Friday with a plant-based menu. No longer will caviar, foie gras, dairy and butter or any other animal product be served. A bold move in the restaurant world, but it follows a broader trend among consumers to eat less meat and more plant-based foods.

Numerous companies like Beyond Meat and Impossible Foods are working to re-create meat-like food from plants. However, it remains difficult to create meat's taste and texture solely with plant-based ingredients. To solve this, several start-ups are working on lab-grown meat. Although still expensive, the industry has succeeded in lowering costs tremendously from USD 330,000 to USD 8 per serving over the last eight years.

Lab-grown meat costs behave like technology



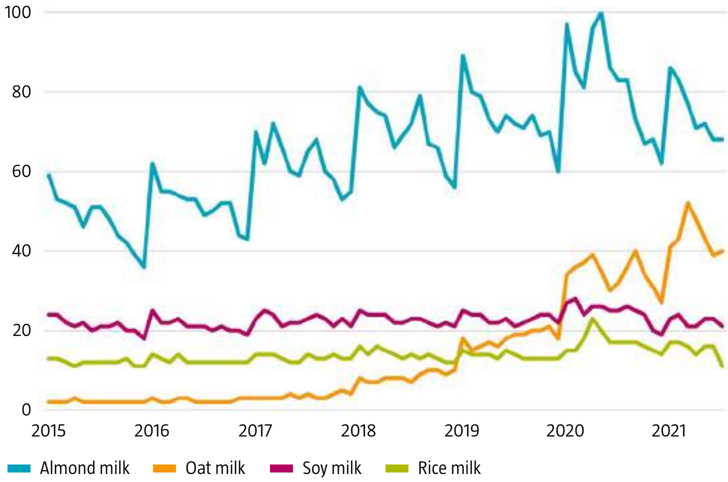
Source: Ron Shigeta on Medium, Robeco, National Human Genome Research, Memphis Meat, Just, Future Meat Technologies, Mosa Meat. Date: 2021

Almonds vs. oats

In a quest for more sustainable and healthy food, consumers are increasing their spend on plant-based food. Sales are growing at steady 10-15% annually in the US, EU, and UK, but are just a fraction of total food sales. The plant-based dairy category is roughly double that of plant-based meat. Historically, milk based on almonds, oats, soy and rice has been the largest category within plant-based dairy.

Almond milk is still the most popular among consumers, but environmental questions regarding water and bee use, combined with aggressive marketing by new emerging brands, has elevated oat milk from a distant fourth to the second most popular plant-based milk in just three years. What base ingredient will win in the long-term? We don't know, but 71% of consumers still say taste is the most important purchase consideration. So, try some yourself and you could have the answer.

Worldwide Google search volume (100=max)

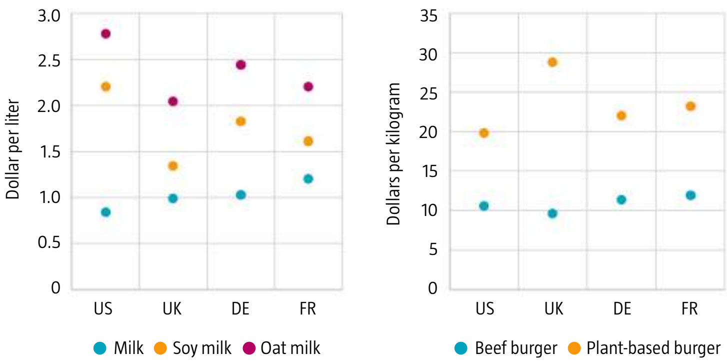


Source: Google Search Trends

Pay up for plants

A quarter of consumers are currently willing to pay more for plant-based burgers than beef burgers, according to a UBS consumer survey. This could mean that three-quarters of consumers do not regularly buy plant-based food, given that prices are now 30% to 300% above those for animal-based products. Nonetheless, consumers in aggregate are buying more plant-based food as evidenced by the 10-15% annual sales growth. Lower prices are likely needed to reach mass adoption, though. Not surprisingly, then, plant-based food companies such as Beyond Meat, Impossible Food and Oatly are targeting price parity with animal-based products.

Price comparison of animal and plant-based products

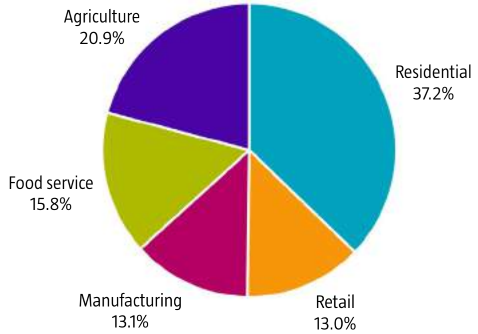


Source: Walmart, Tesco, Rewe, Carrefour, Amazon, USDA, Lidl, March 2021

Waste

A popular tradition which follows Thanksgiving in the US is the making of dishes from the feast's leftovers. A good case can be made to continue that tradition throughout the rest of the year too. A remarkable one-third of all food produced goes uneaten, according to the United Nations. Every year, global food waste adds up to 1.3 billion tons, accounting for 8% of global greenhouse gas emissions. Furthermore, those wasted resources of associated labor, supplies, distribution, and preparation represent USD 1 trillion in lost value. Reducing food waste therefore represents an enormous opportunity for people, planet, and profits.

Food waste by source in the US



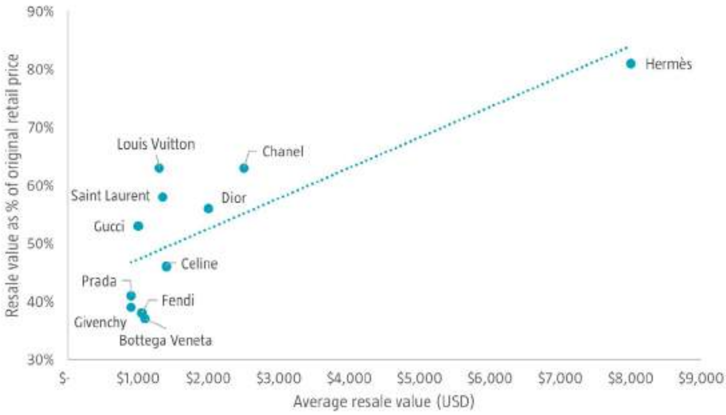
Source: Refed, January 2021

Priceless handbags

Handbags from the more expensive luxury brands tend to retain more of their value after the initial purchase. For example, Hermès handbags have an average resale value of USD 8,000, which is 81% of the average retail price. By contrast, Prada's handbags have an average resale value of USD 900, which is only 41% of the average retail price. What does this teach us? Judging by the willingness of secondhand buyers to pay up, it seems the higher the price, the more desirable the brand. This in turn shows how luxury goods defy the classic economic law of supply and demand.

One could even argue some product made by luxury companies such as LVMH are Veblen goods: a type of luxury good for which the demand for a good increase as the price increases. The higher prices of Veblen goods may make them desirable as a status symbol. A product may be a Veblen good because it is a positional good, something few other can own.

Handbags from more expensive brands retain more value

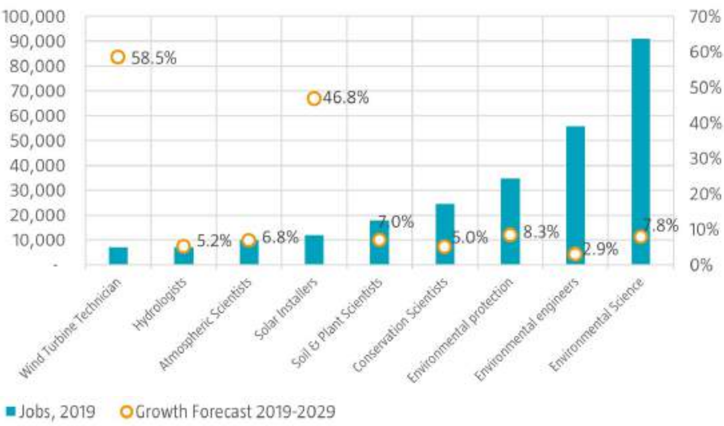


Source: Bernstein, Rebag

Just one word, green

Were the 1967 film The Graduate released today, the word that the advice offered to Dustin Hoffman's character Ben: "I want to say just one word to you, just one word" centered on would be green, rather than plastics. According to research from the US Bureau of Labor Statistics and Yale University, jobs associated with green energy and climate science will grow at more than double the rate of all employment over the current decade. While a small part of the labor force today, jobs for wind turbine technicians are expected to grow by 58.5% and for solar panel installers by 46.8%. As the advice to Ben concludes, "Think about it, will you think about it?"

Projected growth in select US jobs related to the climate, 2019 to 2029



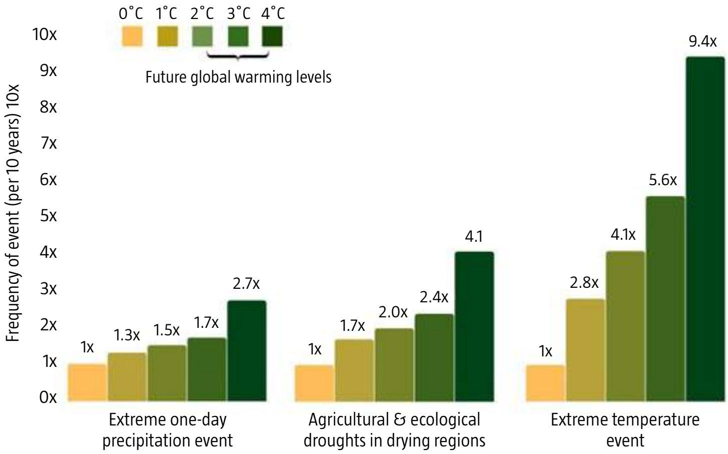
Source: US Bureau of Labor Statistics, Yale University

Extreme weather

The recently released report from the Intergovernmental Panel on Climate Change (IPCC) concludes that climate change is "widespread, rapid, and intensifying". As with business and markets, system-wide change does not typically follow a straight line, and greater volatility in results can set a plan off course. The gradual warming of the planet increases the likelihood of extreme events like storms and droughts, according to the IPCC.

Beyond the human toll of extreme weather events, global supply chain disruptions have cascading economic effects as evidenced by events as large as the pandemic and as seemingly small as a grounded container ship. It is time to chart a course for calmer seas and a cooler planet.

Projected change in extreme events under varied global warming scenarios

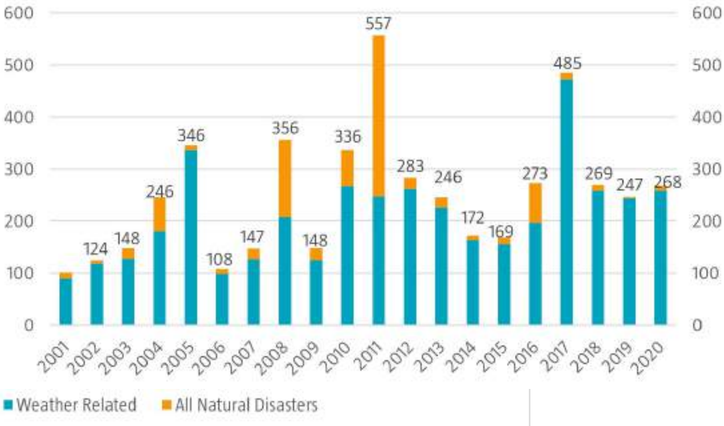


Source: IPCC, August 2021

Expensive weather

As residents from Louisiana to New York continue to grapple with the effects of Hurricane Ida, including the loss of some 60 lives, the economic toll is also mounting. Moody's estimates property and infrastructure damage at USD 50 billion and AccuWeather estimates total economic damage will reach USD 95 billion. The increasing frequency of extreme weather events, coupled with inconsistent efforts to build resilient systems, has driven the economic cost of natural disasters up according to the insurer Aon. Between 2011 and 2020, the economic costs of natural disasters totaled USD 2.97 trillion, a 44% increase over the prior decade. The climate is not only getting warmer, but also more expensive.

Economic cost of natural disasters, USD billions



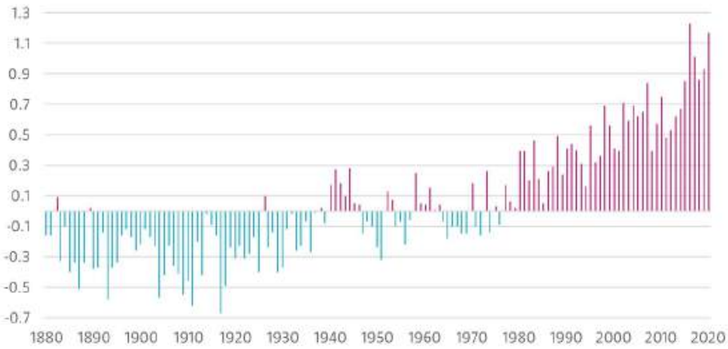
Source: Aon, July 2021

2.0

As global leaders meet this week in Glasgow for COP26, one key figure remains top of mind: the rise in Earth's temperature. In 2015, 196 member countries signed the Paris Agreement seeking to limit global warming to well below 2°C and to pursue a limit of 1.5°C. Since 1850, the Earth has already warmed on average 1.09°C, increasing the likelihood of current extreme weather events such as storms, flood, droughts, and wildfires.

While carbon emissions must be reduced 25% by 2030 to achieve the 2°C limit and by 50% to achieve the 1.5°C limit, carbon emissions have risen each year following the Paris agreement, with the exception of pandemic-reduced economic activity in 2020. An acceleration of decarbonization efforts is essential: hopefully leaders in Glasgow will outline a Paris Agreement 2.0.

Global average surface temperature chnge since 1850 in Celsius



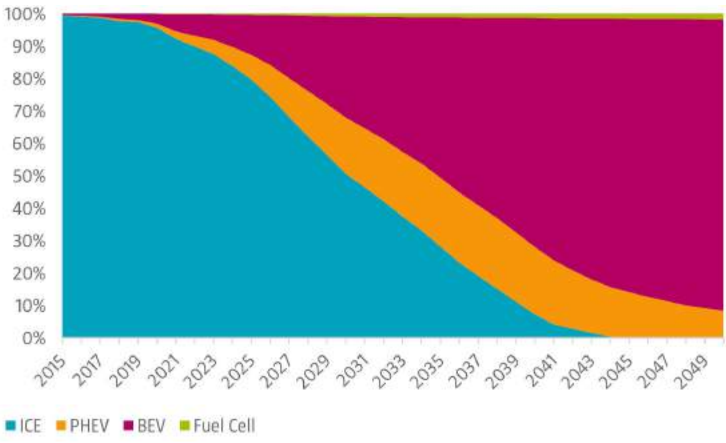
Source: NASA Goddard Institute, October 2021

Are we there yet?

There was much excitement or frustration among observers of this week's motor show in Munich, depending on who you asked. While automakers rolled out an impressive new slate of forthcoming electric models, critics questioned the speed of change. Pointing out the complexity of building out the required infrastructure from battery plants to charging stations, Volkswagen's CEO told attendees at the show it was impossible to move faster.

Indeed, while Robeco expects battery electric vehicle sales to expand at a 30.6% compound annual growth rate over the next decade, we also expect internal combustion engine sales to continue past 2040. To borrow a phrase from Hemingway, change happens 'gradually and then suddenly.'

Global Light Vehicle Sales by type



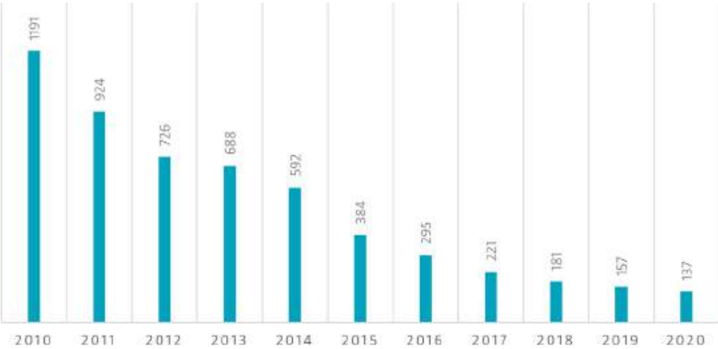
Source: Robeco, August 2021

Longer for less

While supply chain bottlenecks and strong demand has driven up the price of nearly everything this year, innovation and economies of scale continue to drive down a key cost component of electric vehicles (EVs), the battery. Over the last decade, the cost of EV battery packs, as measured by the US dollar per kilowatt hour, has fallen at a compound annual rate of 19.4% according to Bloomberg New Energy Finance.

Reduced battery prices coupled with other process improvements have enabled automakers to greatly improve both the affordability and the range of EVs. Innovations from material mix to the development of solid state batteries hold the promise to further improve range and reduce prices.

EV battery pack price (USD/kWh)



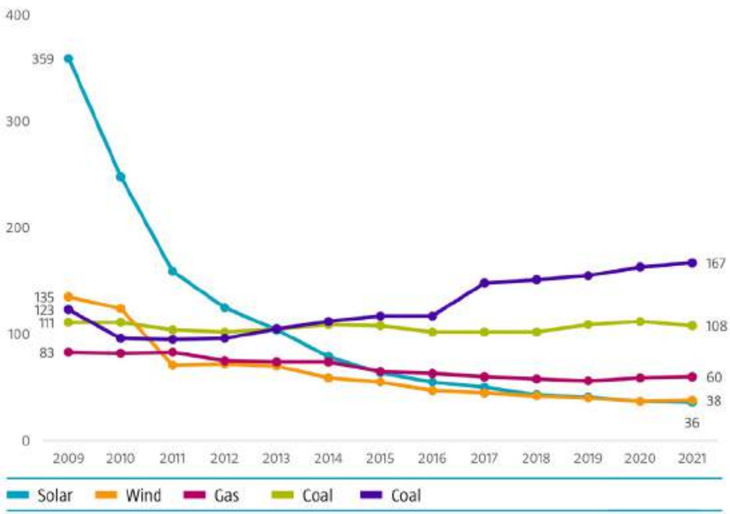
Source: Bloomberg New Energy Finance, September 2021

Feel the breeze

Renewable energy generation costs have decreased substantially over the last decade and are competitive with conventional sources in the US. Solar and wind energy costs have decreased by 90% and 70% respectively since 2009, according to Lazard. The fact that these costs exclude subsidies leads us to believe that profit-seeking energy producers will increasingly opt for solar and wind as they build new capacity.

The declining cost of renewable energy is primarily due to technological progress, although the reduction in capital costs and growing competition among producers are further contributors.

US unsubsidized cost of energy USD/MWh



Source: Lazard levelized cost of energy for utility-scale generation, October 2021

A green hedge

As inflation fears persist, investors and corporate managers increasingly debate the merits and methods of hedging against rising prices. At the same time, given broadening acceptance of cryptocurrencies and their rising returns, proponents of this asset class argue it provides better protection against inflation than more traditional assets like gold. Indeed, year to date, the price of Bitcoin has risen 148% while gold has fallen by more than 5%. Another potential inflation hedge is carbon, which arguably could also be seen as an inflation driver. Although carbon trading volumes remain relatively limited, the price of carbon in the European Union has risen 112% year to date.

2021 year to date returns

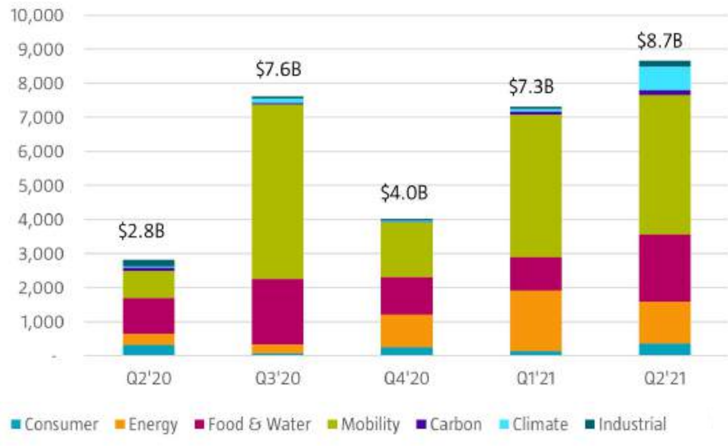
Source: Bloomberg, November 2021.

Climate renaissance

In the first half of 2021, technology startups building solutions to address climate change raised nearly USD 16 billion across 250 venture transactions, according to a new report from Climate Tech VC. In 2Q21, venture funding for climate technology rose 307% year on year to USD 8.6 billion; by comparison, in 2Q21 total venture funding rose 157% year on year to USD 156.2 billion.

While mobility solutions account for roughly half of climate-related venture funding, technologies focused on energy, food, and broad-based climate solutions rose triple digits. While some may fear a repeat of the clean tech bust a decade ago, the current climate technology renaissance is reminiscent of the Internet 2.0 boon that built its success on the foundations laid by their dot.com predecessors. May their success be ours as well.

Climate technology venture funding by segment



Source: Climate Tech VC, August 2021

Close the gap

While the overall gender pay gap for MBA graduates has narrowed, the gap widens again as managers progress in their careers. This is according to a new report from the Forte Foundation, a research consortium of business and universities. In Forte's 2020 survey, the average pay gap between men and women MBA graduates was 20%, down from 39% in both the 2018 and 2016 surveys. However, while the MBA gender pay gap is just 9% within two years of graduation, the disparity widens to 35% after nine or more years of experience. In an increasingly competitive market for talent, employers may find it an advantage to close the gap.

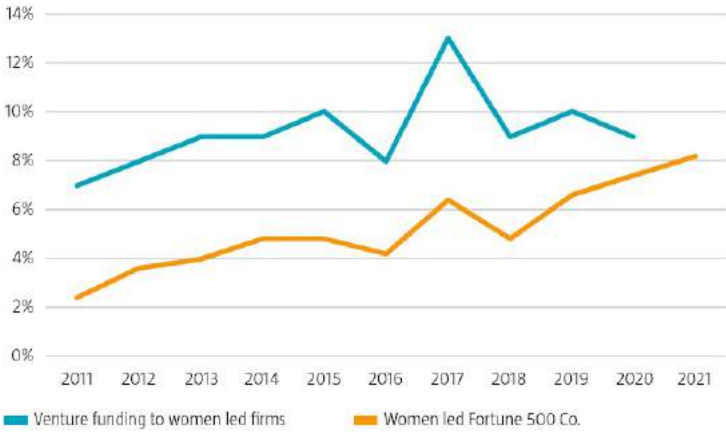
MBA compensation by gender & experience, USD

Source: Forte Foundation, September 2021

Venture glass

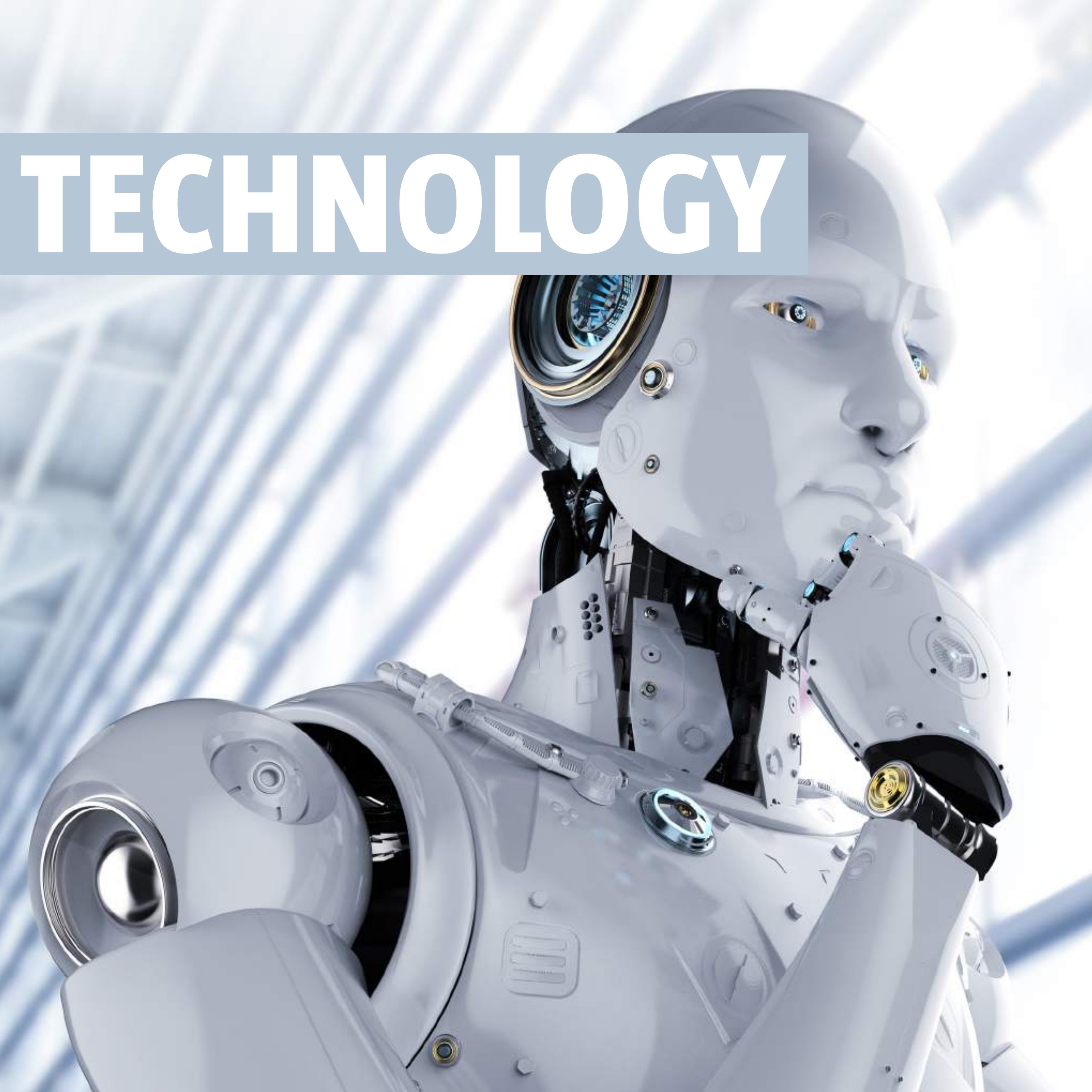
Venture capital investments are typically thought to lead future trends. However, in one regard the industry appears to be losing ground – gender diversity. According to a recent report from Crunchbase, the percentage of venture funding in 2020 allocated to women-led startups declined from 10% in 2019 to 9% in 2020 and a peak of 13% in 2017. Meanwhile, Fortune Magazine reported last month that the percentage of Fortune 500 companies with women CEOs continued its steady expansion to 8% in 2021, versus 7% a year ago. In either case, the race to gender parity looks more like an ultra-marathon than a sprint.

Comparing Gender Trends between venture funding and Fortune 500 leadership



Source: Crunchbase, Fortune Magazine

TECHNOLOGY

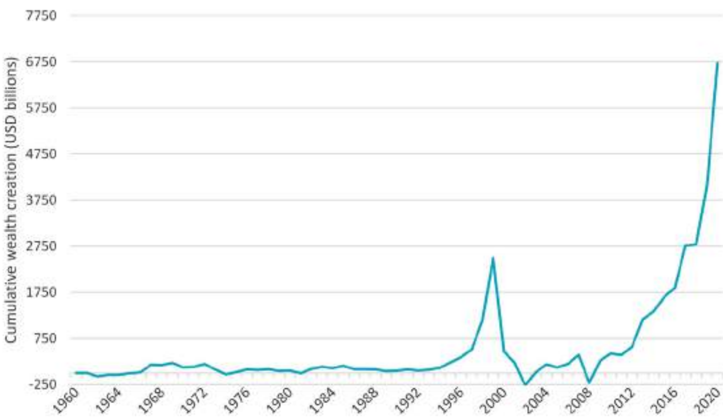


Software is feeding investors

Venture capitalist Marc Andreessen famously wrote: "Software is eating the world". Many investors doubted him back in 2011; those that did not have been rewarded generously. In the last ten years, the US software industry created USD 6.3 trillion in wealth for investors compounding at 32% per year.

Digitalization, of which software is an integral part, is arguably one of the biggest trends in the world. In the 1990s, some 30 years after its birth, the software industry started to create enormous amounts of wealth for investors. However, most companies had little substance apart from dotcom in their name. All wealth created in the previous decade was quickly destroyed when the dotcom bubble burst. After that shake-out, software companies matured and found widespread adoption among consumers and businesses, disrupting many other industries. A trend that still continues today.

Cumulative wealth creation by US software industry



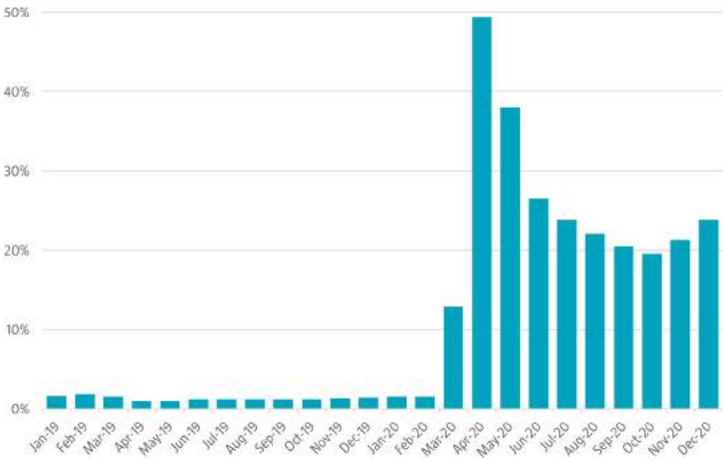
Source: CRSP, Bloomberg, Robeco. Market: US. Time period: 1960-2020

Telehealth's claim to fame

Telehealth usage has exploded due to the pandemic. In April 2020 almost 50% of healthcare claims in the US were telehealth claims, up from 1.5% before the pandemic or a 33x increase. By far the most telehealth claims are for behavioral and mental health conditions, on average 4.5M out of 9.2M claims or 49% since April 2020.

Prior to the pandemic, licensed health professionals were generally required to hold a license in each state in which they cared for patients using telehealth. In 2019, 72% of telehealth claims were from "in-state" and 28% from "out-of-state" providers. License restrictions were lifted in March 2020, but this has not caused a big increase in "out-of-state" claims. On the contrary, at the end of 2020, 94% of claims were in-state and 6% were out-of-state.

Telehealth claims as percentage of overall healthcare claims in the US

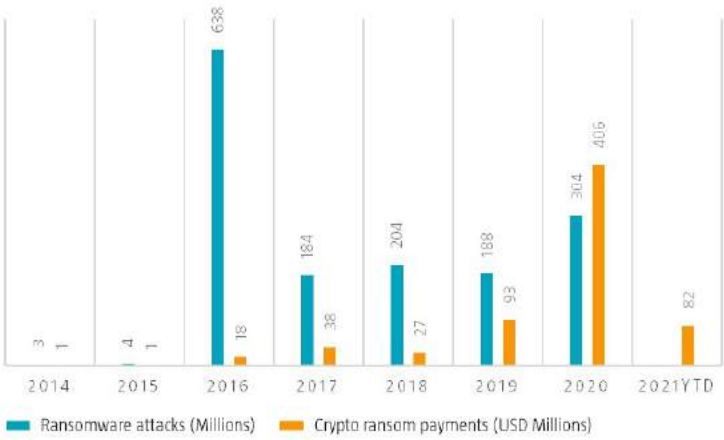


Source: COVID-19 Healthcare Coalition

A ransom for your data

In 2020, as the world shifted to remote work, many organizations neglected to properly secure their data, and cyber ransomware attacks rose 62% YoY to USD 304 million. At the same time, because criminals assumed cryptocurrencies would better shield their identities, this breed of ransomware payment rose 337% to USD 406 million. Through May of this year, this totaled USD 82 million, representing a 52% decline on an annualized basis. Perhaps organizations and their employees are getting smarter data security, but so are the attackers – best to keep your guard up.

Ransomware attack volume, and crypto currency based ransom payments



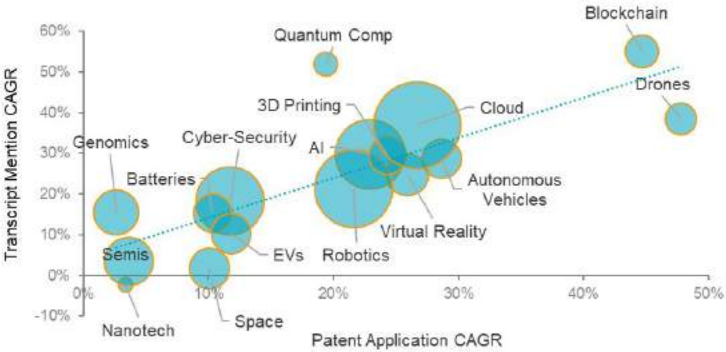
Source: Chain Analysis, Emsisoft, Statista

Patented buzz

It may be tempting to dismiss many new technology terms like AI, cloud and blockchain as mere buzzwords, but analysts at Morgan Stanley find meaningful investment support for these trends. For instance, mentions of the term 'cloud' in company conference calls has jumped 37%, while there has been growth of 27% in related patent applications. For 'AI', the growth rate of mentions and patent applications has been 30% and 23%; for 'blockchain', the rates are 45% and 55% respectively.

Moreover, when combined, these new technologies represent the fundamental building blocks for an expanding set of applications, ranging from grocery deliveries to scientific research drones on Mars. It seems there is method in the madness, after all.

Patent applications vs transcript mentions, 8-year CAGR



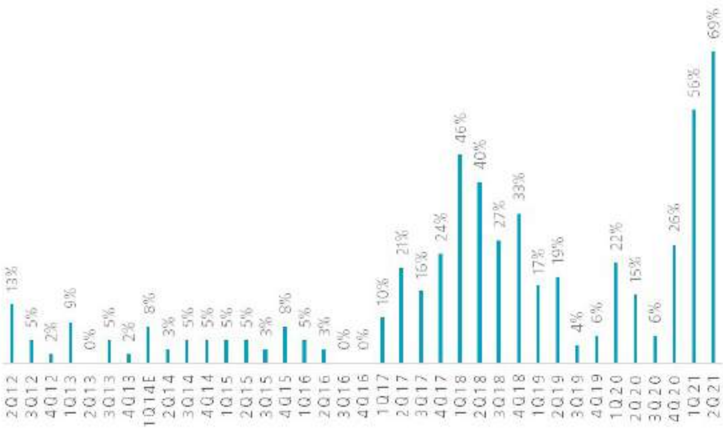
Source: WIPO, EPO, JPO, USPTO, Alphasense, Morgan Stanley Research

Make mine a double

From autos to telecommunications equipment, semiconductors remain in tight supply, and delivery lead times reached a record high of 19 weeks last month. In response, supply chain managers are rethinking strategies as they struggle to meet resurgent demand across industries.

According to a Morgan Stanley survey of semiconductor distributors, another industry record has been reached, with 69% of respondents reporting their firms had placed double orders during 2Q21, vs. 56% in 1Q21 and just 22% a year ago. Perhaps manufacturing is shifting from a practice of 'just in time' inventory management to 'just in case.'

Semiconductor distributors reporting use of double ordering



Source: Morgan Stanley, Alpha Wise

Unicorn births

In the second quarter of 2021, a staggering 136 private companies reached 'unicorn' status, meaning they surpassed a valuation of USD 1 billion for the first time. Some unicorns already go far beyond the one-billion mark. ByteDance, the owner of TikTok, has a valuation of USD 140 billion. SpaceX, Elon Musk's rocket company, is valued at USD 74 billion.

One of the drivers behind rising valuations is the surge in startup funding, which has increased by about 150% – or USD 96 billion – compared to the second quarter of last year. At the same time, the Covid-19 pandemic has pulled forward trends these unicorns are playing into, such as digitalization of payments, banking and grocery shopping.

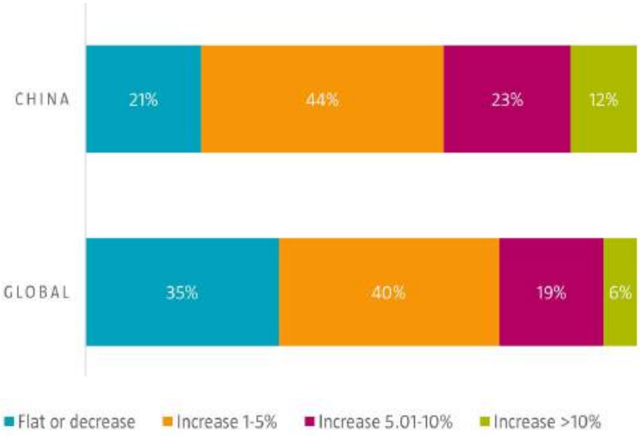
A record number of unicorns have been 'born' in the last quarter

Source: CB Insights

The research imperative

From customer demand to competitive pressure, the imperative to innovate has never been greater, and according a McKinsey survey 65% of firms plan to increase spending on R&D over the next one to two years. Given the role technology played among firms that flourished during the pandemic, it seems curious that 35% of firms plan to either maintain or reduce R&D spending. In addition to market forces, Chinese firms face also face the political pressure to become less reliant on foreign core technologies. As a result, at 79%, more firms in China plan to increase investments in R&D including the 12% that plan an increase of 10% or more. Going forward the question will become how effective were those R&D investments, given that money alone does not necessarily produce great invention.

Expected change in R&D spending over next 1-2 years, % of respondent



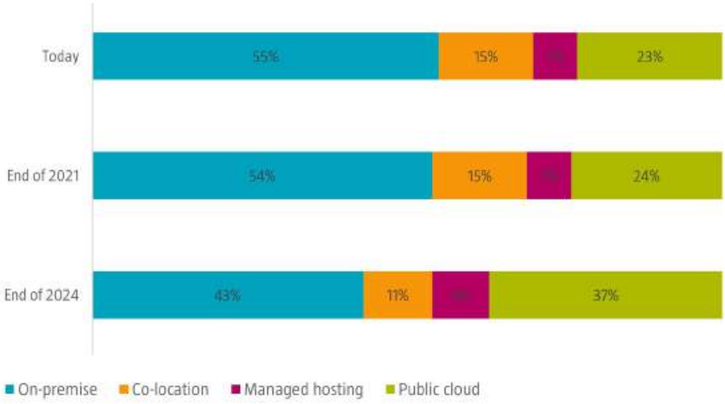
Source: McKinsey, September 2021

It's getting cloudy

Chief information officers (CIOs) say just 23% of their organization's workload resides in a public cloud. They expect this percentage to increase to 37% by the end of 2024. This implies a 60% growth rate for workloads residing in the cloud over the next three years, not even considering a growing workload due to digitalization.

Public cloud providers such as Amazon's AWS, Microsoft's Azure and Google already bring in billions of revenue and power thousands of applications. Some might fear most growth has already occurred for cloud providers. However, CIOs estimates show that large secular trends can continue to benefit well-positioned companies for years if not decades to come.

Chief information officers (CIO) estimates of where application workloads reside



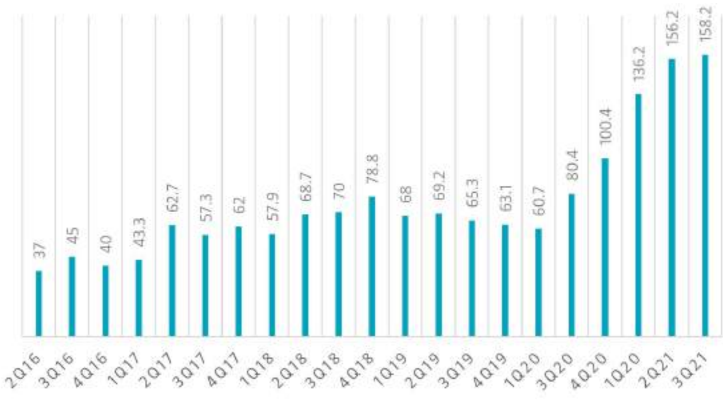
Source: Morgan Stanley survey

Big new ventures

Despite concerns that too few dominant global corporations might stifle competition and innovation, venture funding for startups has never been stronger. During 3Q21, venture capital funding rose 105% year on year to a record USD 158.2 billion, according to CB Insights. Notably, the herd of unicorns, private companies valued at more than USD 1 billion, increased by 311 year on year to 848. While the US continues to represent the largest market for venture funding, at 45% of the total it is no longer the majority.

Rising 161% year on year, fintech companies represented 20% of total venture capital, matching the allocation of healthcare funding which grew a slower 40% year on year. Even though only a small proportion of venture-backed firms rises to the status of global enterprise, the pool of potential candidates continues to expand.

Global venture funding USD billions



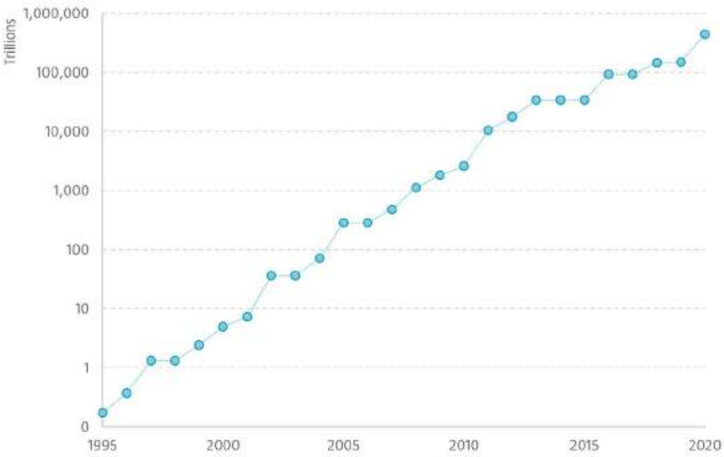
Source: CB Insights, October 2021

Superpowers

Technological developments are growing exponentially. Think of Moore's Law, which is the observation that the number of transistors on integrated circuits doubles every two years. While this aspect of technological progress might not have a direct impact on our lives, the capabilities of many digital electronic devices are strongly linked to Moore's Law. For example, it means that the power and speed of computers increases exponentially.

The chart shows the growth of supercomputer power, measured by the number of floating-point operations carried out per second (FLOPS) by the largest supercomputer in any given year. Japan's Fugaku supercomputer currently outperforms all competition with 442 petaFLOPS – that's 442 with 15 zeroes. Also, it's three times as powerful as the largest supercomputer two years ago – and thus implies an outperformance of Moore's Law. Supercomputers are predominantly used to do scientific research such as on climate change, outbreak prevention, chemical compounds and cryptology.

Largest supercomputer power (FLOPS)



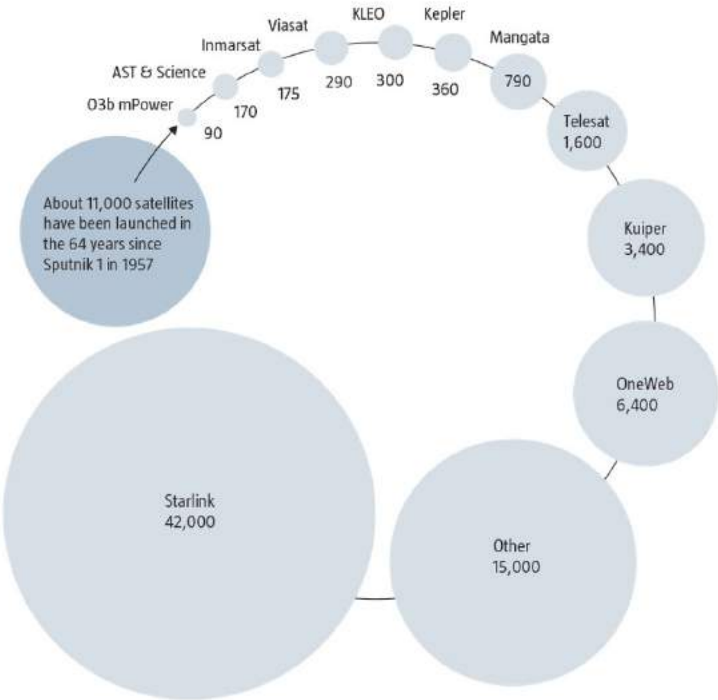
Source: TOP500 Supercomputer Database, Our World in Data, 2021

Space race

Last night SpaceX launched a Crew Dragon with four astronauts on board, setting off towards the International Space Station. This is the third such launch in less than a year, showing how a commercial party like SpaceX can succeed in the space business. Most commercial space companies do not intend to launch astronauts though, and are focusing instead on satellites.

Projects such as SpaceX's Starlink and Jeff Bezos' Kuiper aim to build a constellation of satellites to provide communications services to us earthlings. In fact, Starlink is already operational and provides internet services around the world. For now, satellites are best suited for remote areas with lower population densities where the existing communications infrastructure is lacking, but who knows what the future might hold.

Proposed satellite constellation size by group



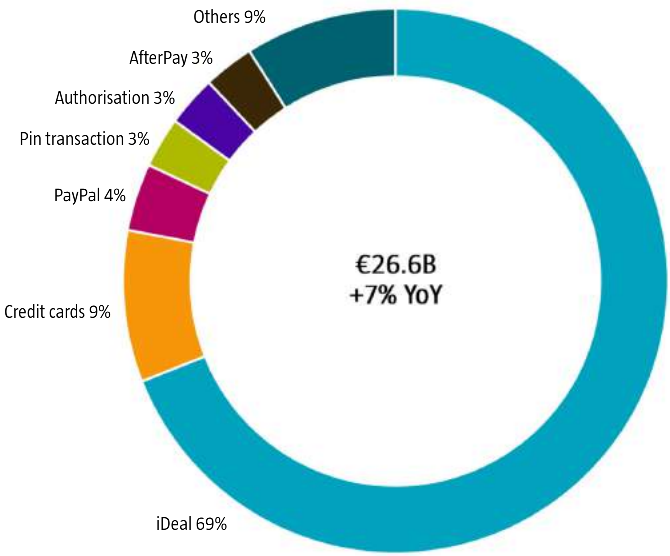
Source: company websites, Federal Communications Commission, August 2021

FINANCIAL TECHNOLOGY

Going Dutch

The tradeshow Amsterdam FinTech takes place online this week. Residents in the Netherlands most likely purchased their tickets through iDEAL, a payment system run by a joint venture of twelve bank issuers. While technology firms continue to disrupt many industries, iDEAL has proven to be an exception, having captured 69% of online sales in the Netherlands in 2020 – up from 60% in 2019. Interestingly, iDEAL's share of online payment methods among those 65 and older is even higher at 85%.

Netherlands e-commerce sales and payment method market share, 2020

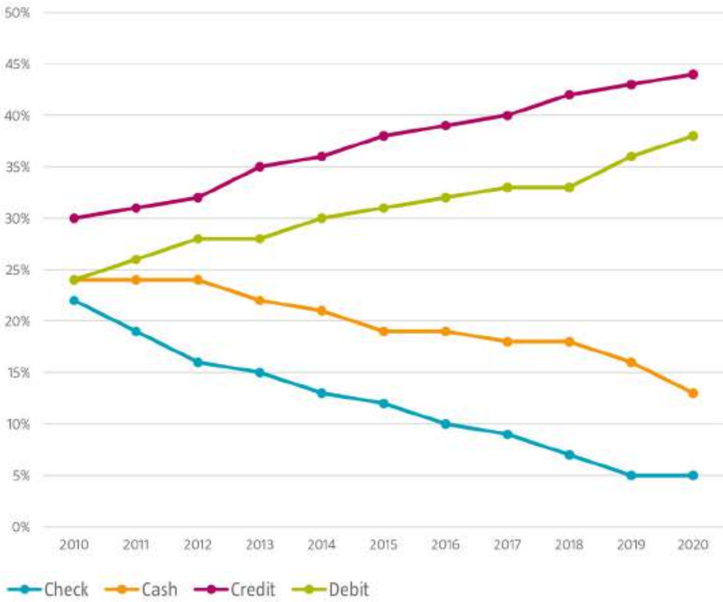


Source: GfK, PostNL, Payment Association Netherlands

Check please

Silicon Valley venture capitalists often announce new investments by stating that their firm had "written a check", an ironic phrase for an industry focused on disruptive innovation. That said, it is worth noting that paper instruments continue to hold a reasonable share of transactions. In the US checks held a 5% share of personal expenditure transactions in 2020, steady with 2019, while cash declined from 16% to a still material 13%. Meanwhile a stiffer race is on between credit cards which grew from 43% to 44% of transactions and debit cards that rose from 36% to 38% in 2020. Looking forward, another interesting question, given the current enthusiasm, will be the role of crypto-currencies in a few years' time.

US consumer expenditure payment method market share

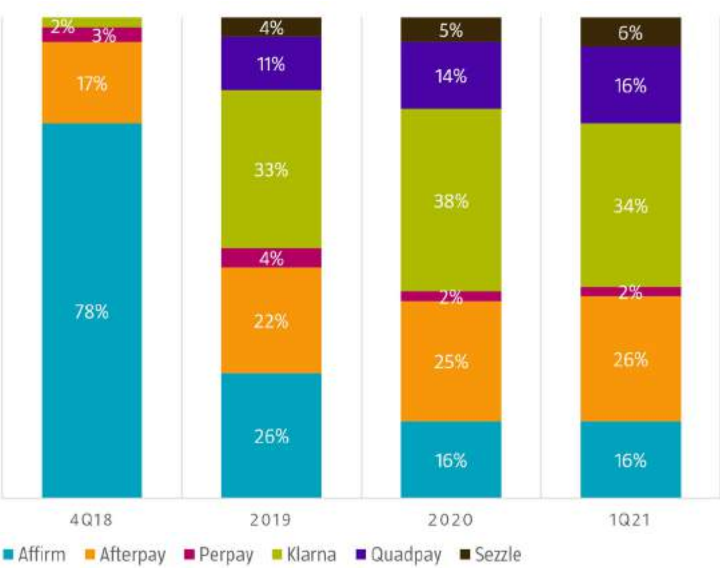


Source: The Nilson Report, J.P. Morgan

Split the business

The success of buy now pay later (BNPL) solutions, which enable merchants to entice consumers with zero-interest installment payments, has attracted new competition. In 2020, the BNPL market grew 65% to nearly USD 80 billion in financed transactions based on data from developed market operators such as Affirm, Afterpay and Klarna. Low interest rates, increased online shopping and a general aversion to credit cards among younger consumers have been tailwinds for this market. However, in the last two years, the BNPL landscape has grown from just a few specialists to multiple service providers. These include PayPal and Synchrony Financial, both of which are well-positioned to capitalize on the growth and have enjoyed strong adoption rates.

US market share of BNPL mobile application downloads



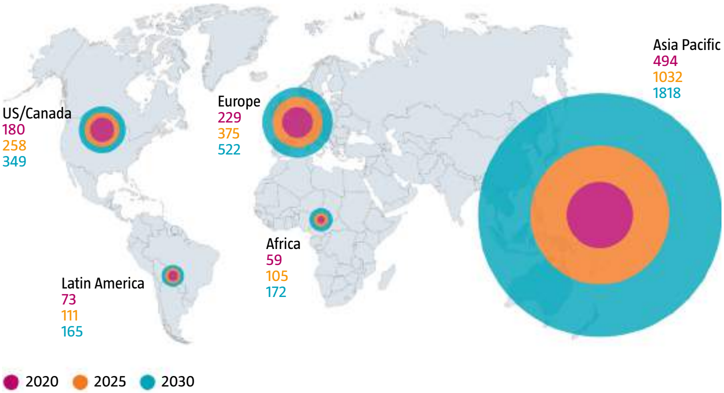
Source: Sensor Tower, e-Marketer

Cashless is king

The number of ways consumers can pay cashless is increasing. Offline, consumers are increasingly choosing to pay using QR codes, by tapping their mobile phones to payment terminals or by opting for the good old plastic card over cash. Growth in online purchasing is probably the biggest driver of the rising volume of cashless transactions. More merchants accepting payment via buy-now-pay-later and cryptocurrency also increases consumer choice, and potentially boosts conversion rates for merchants.

Global cashless transaction volume is expected to grow by 82% from 2020 to 2025, and by another 61% in the five years to 2030. Asia-Pacific contributes disproportionately to this growth. The number of cashless transactions in this region is forecast to grow by 1,300 billion in the next decade – an increase of 268%.

Cashless transactions volume is expected to double in the next decade (in billions)



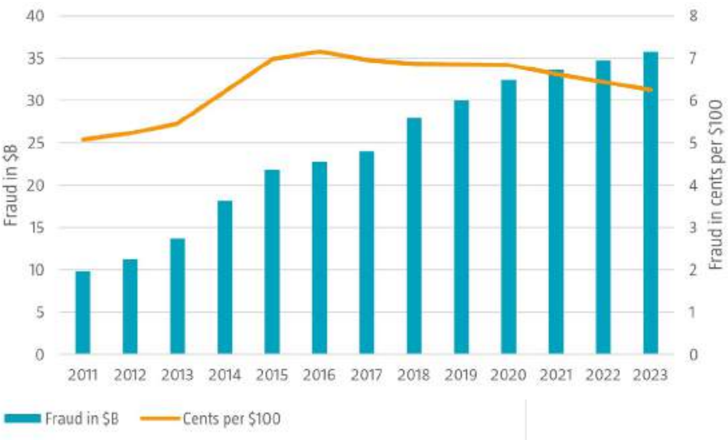
Source: PwC Strategy&. Date: June 2021

Payment fraud

Global losses from payment fraud have more than tripled from USD 10 billion in 2011 to USD 32 billion in 2020, and are estimated to reach USD 36 billion by 2023. For every USD 100 spent, 7 cents end up in the pockets of criminals, up from 5 cents a few years ago.

Business owners bear the cost of fraud, which can be reduced by implementing fraud prevention measures. Companies with set fraud prevention programs reduced their fraud attack response expenses by 42% and their remedy expenses by 17%, compared with companies without these measures in place. Bank and card networks also play an important role: in 2019 they prevented GBP 1 billion in card fraud in the UK, equivalent to GBP 6 of every GBP 10 of attempted card fraud being prevented.

Global payment fraud losses have tripled since 2011



Source: The Nilson Report

The new debt

During 2Q21, US household debt rose 4.8% year on year to USD 14.95 trillion. This includes housing-related debt, which rose 6% year on year to USD 10.76 trillion according to the New York Fed. Beneath the surface is a new form of debt: buy-now-pay-later; a category which McKinsey forecasts will grow at a 19.7% compound annual growth rate. These point-of-sale and buy-now-pay-later payment schemes are taking share from traditional credit cards and could account for 13% of total unsecured debt by 2023. The next time consumers and economists check their credit card statements, they might well need to make sure they haven't missed other outstanding loan balances.

Outstanding balances for unsecured lending products, USD billions

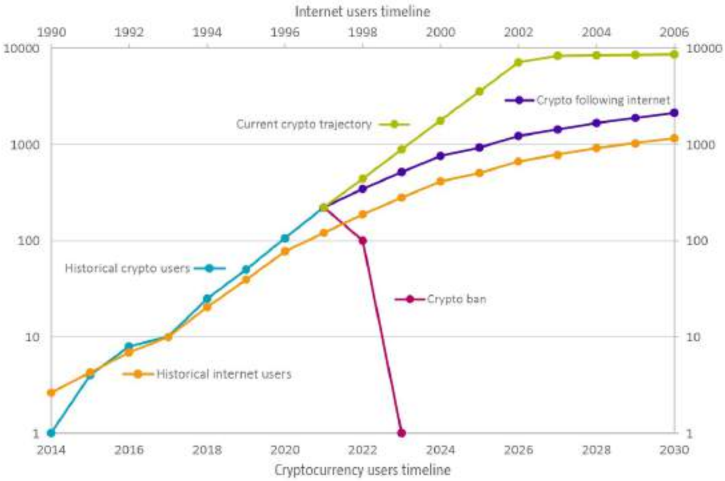
Source: McKinsey, July 2021

Cryptocurrency user adoption

The number of cryptocurrency users more than doubled each year in the last seven years. In fact, cryptocurrency adoption is now ahead of the internet adoption trajectory we saw in the 1990s. When extrapolating crypto's current trajectory we will see full worldwide adoption by 2027. That curve may seems a bit steep, also given the fact that not everyone will have an internet-connected device by then. On the other hand, most other physical infrastructure allowing for rapid user adoption is already in place.

Another scenario is crypto user adoption follow an internet trajectory from now on, which would result in 2.1 billion crypto users by 2030. A ban on cryptocurrencies is also a possibility. Recently, the Chinese government declared all cryptocurrency transactions illegal.

Cryptocurrency user adoption scenarios



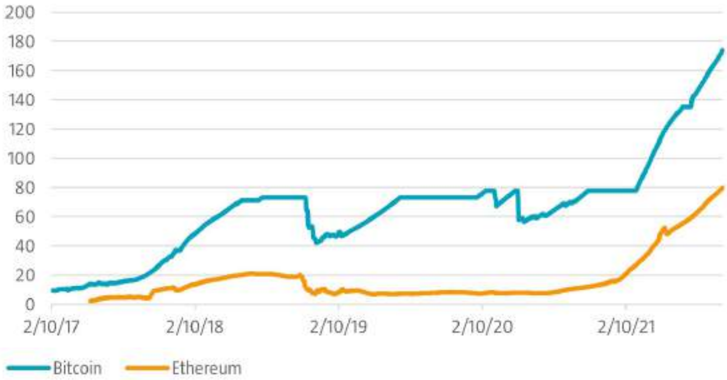
Source: World Bank, Crypto.com, Robeco estimates, 2021

Seeing green in crypto

This week, the US Securities Exchange approved the first exchange traded fund linked to a cryptocurrency, in this case Bitcoin futures. As cryptocurrencies continue to expand into mainstream finance, the environmental impact of the asset class will come under additional scrutiny. According to Digiconomist, the annualized electricity consumption of Bitcoin is currently 178 Terawatts, comparable to the total power consumption of a small country like Poland. The carbon footprint of Bitcoin is roughly equal to that of the gold mining industry, an asset class more than ten times larger.

However, Bitcoin is not the only cryptocurrency and process improvements will lower energy requirements over time. For instance, where a single Bitcoin transaction is estimated to consume nearly 1,800 kilowatts of energy, a single Ethereum transaction consumes just under 180 kilowatts. Further, Ethereum's expected shift from proof-of-work mining validation to a proof-of-stake process will reduce further the currency's energy needs. While there is no Moore's law for gold mining, technology has consistently demonstrated exponential improvements in speed and efficiency.

Cryptocurrency estimated energy consumption TWh/Yr

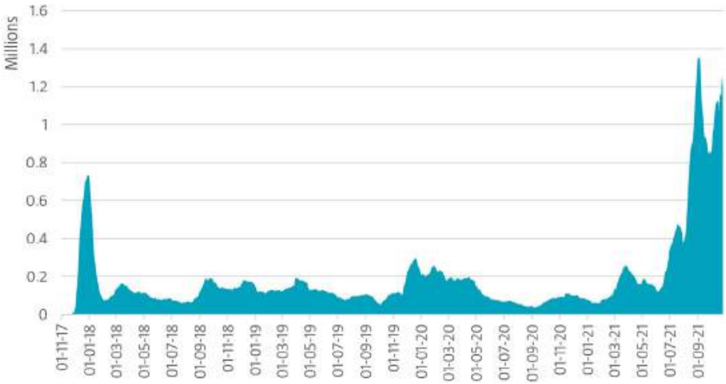


Source: Digiconomist Bitcoin & Ethereum Energy Consumption Index, October 2021

CryptoPunks ahead

Just a few hours ago, a CryptoPunk non-fungible token was sold for USD 630,000. Non-fungible tokens or 'NFTs' are a special class of assets on the blockchain characterized by being unique and non-interchangeable with one another for equal value. NFTs could be anything digital such as drawings and music, as well as fashion and games. The number of NFT sales has recently increased from about 150,000 to 1.2 million per month. Is this simply speculation in easily copyable units of data or is there more to it? As we move towards a more digital world, some argue NFTs could play a role in forming an online identity.

Total number of non-fungible token (NFT) sales per month



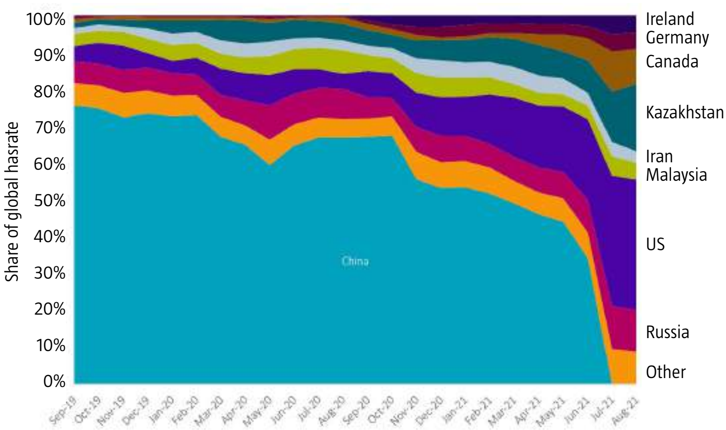
Source: nonfungible.com, Reuters, June 2021

Canary in the crypto mine

In June the Chinese government issued bans on crypto mining. The miners supporting the decentralized currency complied with the centralized power and completely halted mining by July. What followed was a decrease in global bitcoin mining activity followed by a partial recovery as miners in the US, Kazakhstan, Canada and Russia started mining more. The result is a complete shift in global mining activity. The US is now the largest bitcoin miner with 35% share, followed by Kazakhstan at 18%. Interestingly, Germany and Ireland have also emerged as mining destinations.

However, researchers from the Cambridge Centre for Alternative Finance are not aware of large mining operations in these countries. They suspect their share is significantly inflated due to redirected IP addresses. Might there still be some mining going on in China?

Global bitcoin mining activity

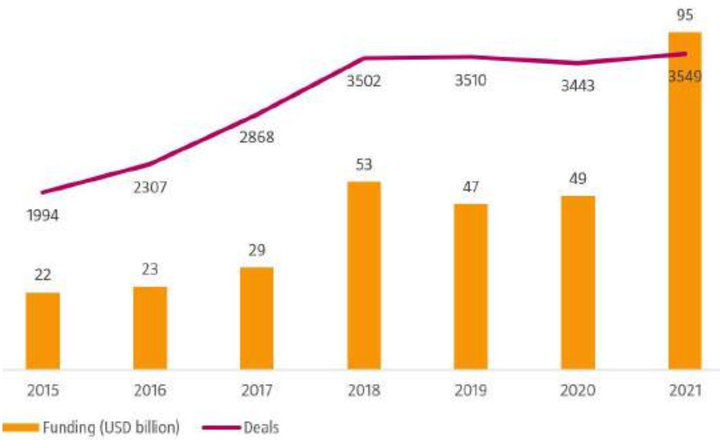


Source: Cambridge Centre for Alternative Finance, September 2021

Fintech funding bonanza

Funding for private financial technology or "fintech" companies has reached a record level in 2021 at USD 95 billion compared to USD 49 billion last year. The number of deals has hovered around 3,500 in the last four years. This implies average deal sizes are almost twice the size compared this year compared to previous years. Investors are funding companies in a wide variety of fintech segments such as payments, banking, digital lending, wealth tech and insurance tech.

Global funding for private financial technology companies



Source: CB Insights, 2021

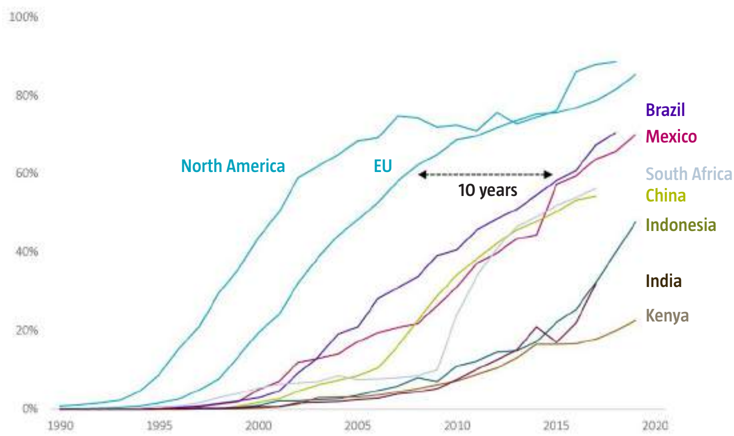
THE NEXT DIGITAL BILLION

Next digital billion

Internet use in emerging markets is exploding, while regions like North America and the EU are reaching their penetration limits. Internet penetration levels in emerging market countries are hitting levels seen in the US/EU ten years ago, and in some cases are increasing at a more rapid pace than ever seen before.

Mexico, Brazil, China, and South Africa have experienced a threefold increase in internet usage from below 20% to approximately 60% in just 15 years. Meanwhile, countries like Indonesia, India and Kenya are just getting started, and are seeing exponential growth in internet use. This is leading to the creation of new companies across emerging markets in the technology and internet sectors to cater to these new users.

Internet use in emerging markets is exploding



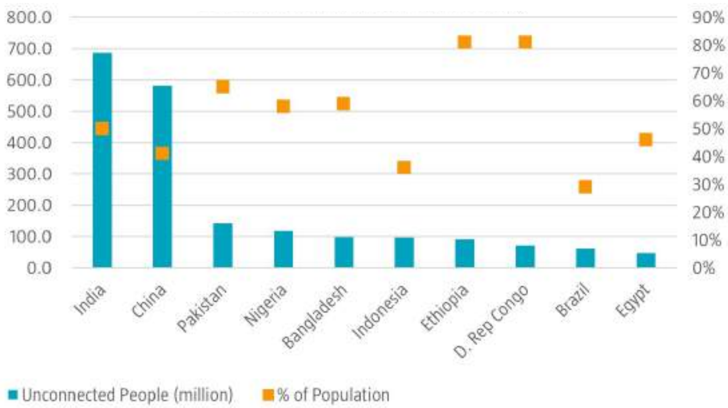
Source: World Bank, June 2021

The unconnected

While internet adoption has more than doubled over the last decade, over three billion people around the world still lack access. Although India has the second highest population of internet users, with 50% of the population online, the country also has the largest pool of people lacking access to the internet at 685 million. China, with nearly 60% internet adoption, still has 582 million unconnected citizens.

Even countries with relatively high adoption rates can still harbor large numbers of potential future users, such as Brazil with its adoption rate of 71% and 61 million users still to connect. Similarly, Indonesia with 64% internet penetration has nearly 97 million unconnected persons. As wireless technology continues to improve, offering connection speeds surpassing many wired options, internet adoption will not only rise, but so too will use cases. Today's unconnected are tomorrow's next digital billion.

Unconnected persons by country



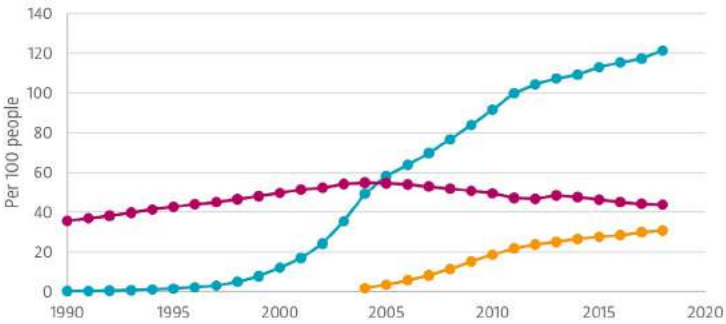
Source: Kepios, Hootsuite, September 2021

Leapfrogging landlines

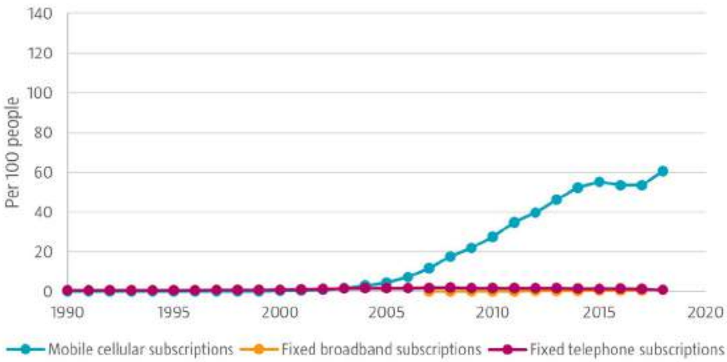
Low-income countries are leapfrogging technology used in high-income countries. Data from the International Telecommunications Union shows how fixed telephone reached 55 subscriptions per 100 people in high-income countries but never exceeded 2 per 100 people in low-income countries. Instead, low-income countries went straight to mobile and are even skipping fixed broadband.

Many more people are expected to come online via their mobile in low-income countries, with mobile subscriptions now standing at 60 per 100 people compared to 120 per 100 people in high-income countries. Imagine what these users will do. Some examples are online shopping, transferring money digitally, connecting with others on social media, and streaming content. This presents many opportunities for both local digital companies and the giants we already know.

High income countries mobile and fixed communications subscriptions



Low income countries mobile and fixed communications subscriptions

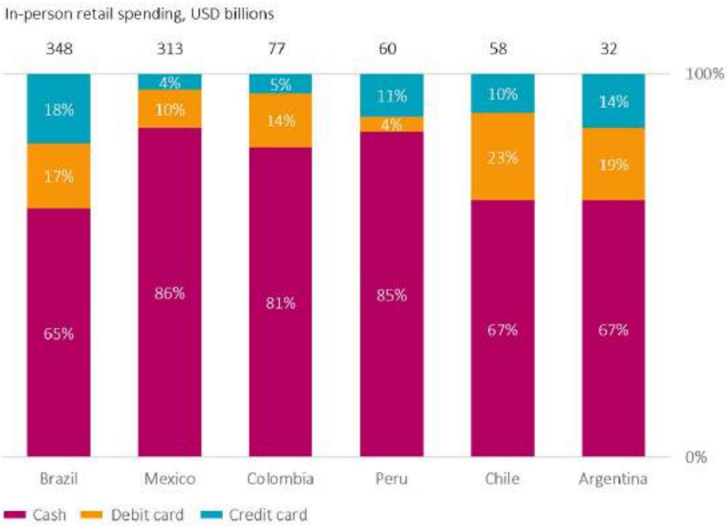


Source: International Telecommunications Union, 2021

Latin American cash and cards

Cash is still the most common payment method for in-person retail spending in large Latin American economies. For example, 65% of in-person retail spend goes via cash in Brazil. In Mexico, Colombia and Peru this percentage is above 80%. In-person retail spend decreased an estimated 18% in 2020 compared to 2019 in these countries. Spending with cash and credit card decreased 19% and 26% respectively, thus losing share to debit card spending which only declined 1%.

Cash and card penetration in Latin America



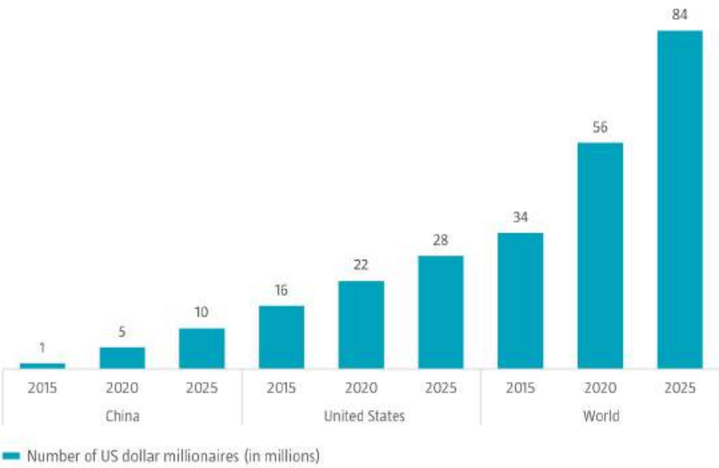
Source: Americas Market Intelligence, 2020

Who wants to be a millionaire?

Bernard Arnault has recently become the world's wealthiest person, with a net worth of about USD 198 billion. Frenchman Arnault owns 48% of LVMH, the world's largest luxury goods company. LVMH together with other luxury companies such as Gucci owner Kering and the ultimate luxury handbag creator Hermès have experienced a pandemic-defying rise in share prices.

After an initial slump in sales during the beginning of 2020, Chinese and American shoppers are splurging on designer handbags, jewelry and fashion. Longer term, luxury goods companies are benefiting from a growing clientele. The number of Chinese millionaires is expected to double from 2020 to 2025. Globally, an expected 84 million people could call themselves US dollar millionaires by 2025, implying the number of millionaires could grow by 8% per annum.

Number of US dollar millionaires in China, the US and the world



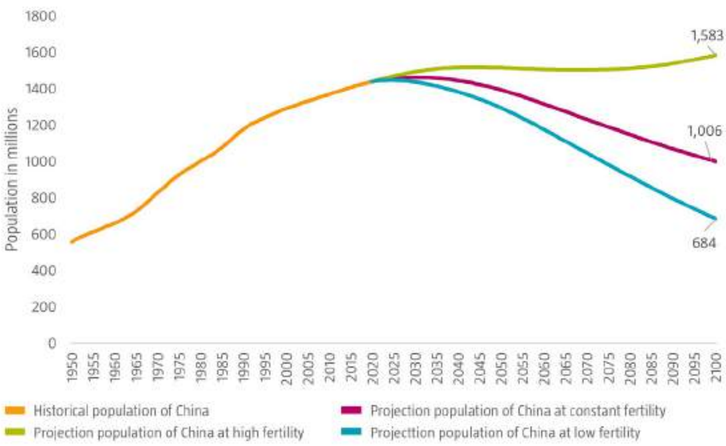
Source: Credit Suisse Global Wealth Report

Chinese baby boom

If birth rates remain constant, China's population is projected to top out at 1.46 billion in 2030 and decline to 1 billion by 2100. Although this seems like a long way away, Chinese policymakers are keen to prevent such a scenario as it will likely have negative economic consequences. China announced back in May it would allow couples to have three children. To further encourage couples to have children, China is trying to reduce the burden of having children, for example through education reforms.

If Chinese couples decide to have more children, this could result in a population of 1.58 billion by the end of the century. Or will we have figured out how to live forever by then?

Historical and projected population of China



Source: United Nations World Population Prospects, August 2019


MACRO
& MARKETS

There is no free shipping

Just as we learned in economics 101 that there is no free lunch, so it could be said of free shipping. The Drewry World Container Composite Index of freight rates closed 2020 up 138% Y/Y at $4,359 per forty-foot container and last week's reading was up 285% Y/Y to $6,135. Air-freight prices are also rising, with rates between Hong-Kong and North America up 49% Y/Y in April and in the US, ground freight per mile rates rose 72% Y/Y in May.

While many of the factors driving the recent rise in shipping costs will prove transitory, and leading e-commerce providers will continue offering free shipping to members, these cost pressures are likely to surface in end-market pricing near term.

Container freight rates

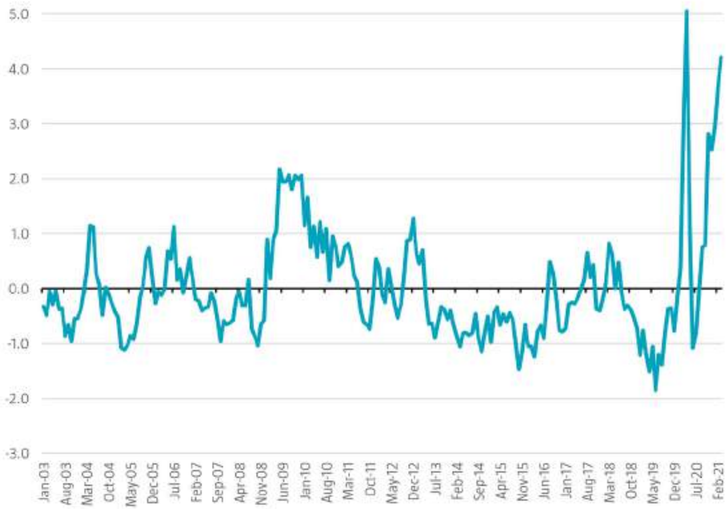
Source: Drewry World Container Index, Bloomberg

Supply chain strain

A recent surge in supply chain disruptions is bolstering the case for more resiliency through supply localization, automation, and diversification.

Constraints in global supply chains were largely resolved three months after the pandemic struck in March last year. Now a confluence of factors coupled with strong demand is limiting availability of everything from game consoles to automobiles. Transportation bottlenecks and shortages of raw materials and semiconductors have pushed the Barclays Supply Constraint Index close to its former high. While an unwelcome development at this stage in the recovery, these constraints bolster the case for more supply chain resiliency through localization of operations, efficiency boosting automation and diversification of the supply base. Suppliers of robotics and automation tools stand to benefit.

Supply constraints index



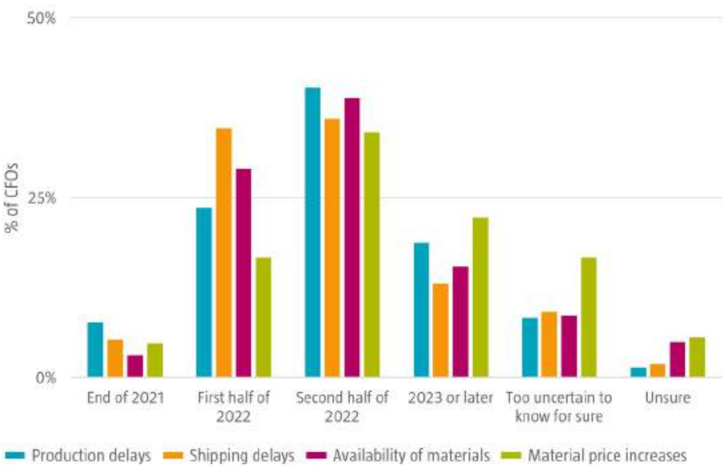
Source: Barclays Research

Supply chain shock

Companies around the world are experiencing supply chain issues leading to missed sales and higher costs. US CFOs surveyed by Duke University expect supply chain issues to continue well into 2022. Approximately 40% of surveyed CFOs say they expect these issues only to be resolved by the second half of 2022. The supply chain issues are predominantly caused by the economic shock following Covid-19.

The global economy saw a sharp contraction including a disruption in transportation and production, followed by a rapid recovery and high demand for goods among consumers. This has left suppliers worldwide scrambling for production, shipping capacity and materials. As companies navigate these issues, the strong and well-organized could emerge stronger and get ahead of their competition.

When do CFOs think these areas of supply chain issues will be resolved?



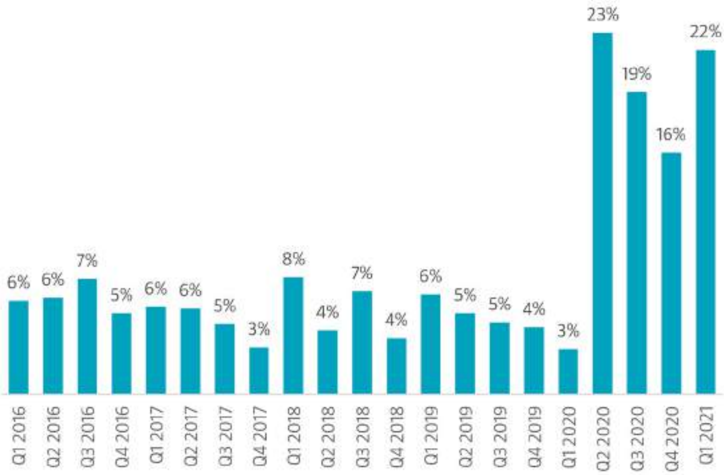
Source: Duke University, Federal Reserve Bank of Atlanta, September 2021

Surprising earnings

Systemic expectation biases lead to predictable patterns in financial markets and judging by earnings surprise data, financial analysts tend to underestimate companies' earnings growth. Over the last four quarters, the average earnings surprise within the S&P 500 was 20% versus 4% in the previous four quarters.

"We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run," noted late Stanford University professor Roy Amara. Over the last year, the pandemic has accelerated digitalization and business model shifts that have brought the long term into the present. Long-term changes are difficult to reverse. Investors focusing on trends and their implications for companies could potentially reduce expectation biases because they take a longer-term view.

Average S&P 500 earnings surprise



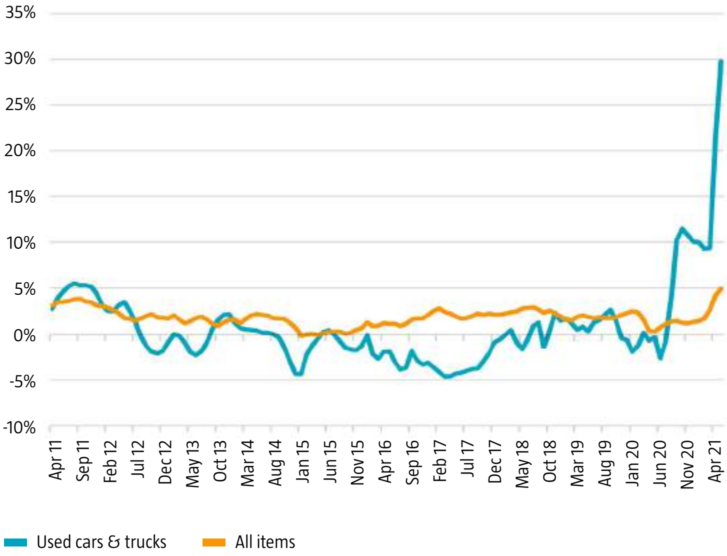
Source: S&P, Refinitiv, FactSet, Credit Suisse

Under inflation's hood

Yesterday's report showing that the US Consumer Price Index for All Items rose 5.0% YoY in May – the biggest climb since July 2008, when it rose 3.8% YoY – adds to concerns that inflationary pressures are here to stay. However, looking under the hood, one trend in the index that should prove transitory is the surge in used car and truck prices, which rose 29.7% YoY in May.

Supply chain constraints, particularly for semiconductors, have greatly hampered new automotive production, helping drive buyers towards the secondhand market. While the supply shortage will likely continue in the medium term, it's worth noting that pricing pressures have steadily abated, with the used car and truck price index up 7.3% MoM in May versus 10.0% MoM in April.

US consumer price index yoy percentage change, all Items & used cars & trucks

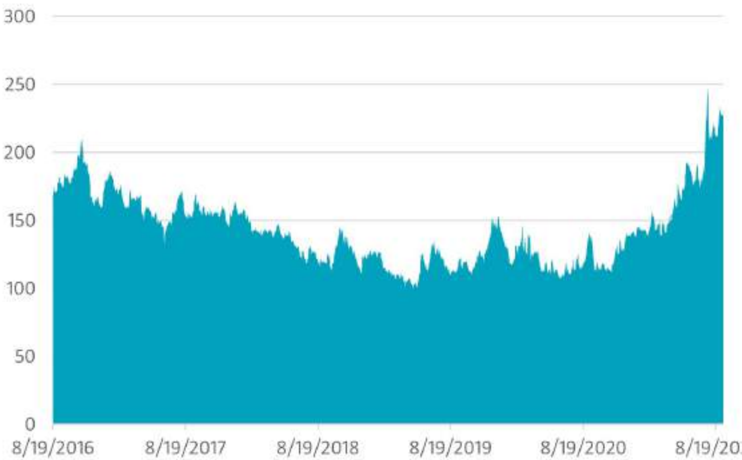


Source: US Bureau of Labor Statistics

Morning inflation

According to Fitch Solutions, dry weather and continued logistic bottlenecks will contribute to a 8.2% drop in global coffee production during the 2021-2022 growing season. In key producer Brazil, production is expected to fall 26%. Lower production and continued demand are driving prices higher: year to date, the market price of Arabica beans has risen 63% to roughly USD 3.80 per kilogram. Fitch expects higher prices will spur more planting, but output may not rebound until 2023. While elevated inflation may prove transitory, higher coffee prices are expected to continue for some time. Budget-stretched coffee lovers may want to savor their morning cup even longer.

Arabica coffee price per 60 kg bag, USD



Source: Bloomberg, September 2021

Back in business

Yesterday, the US Census Bureau reported a 1.3% decrease in May US retail sales month over month. Although this sounds worrisome, comparing the sales with pre-pandemic 2019 shows a remarkable recovery has taken place. Businesses hurt the most, such as furniture stores (-27% in 2020), clothing stores (-62%), and restaurants & bars (-39%), are already selling more than before the pandemic.

E-commerce is a clear pandemic winner, and continues to be strong, with year-over-year sales up 8.6%. Others are also holding up well, with grocery & liquor store sales 16% above pre-pandemic levels and showing no decline since last year, despite a sharp rise in restaurant and bar sales. It's safe to say that the US is back in business.

US retail sales by select category, USD Billion

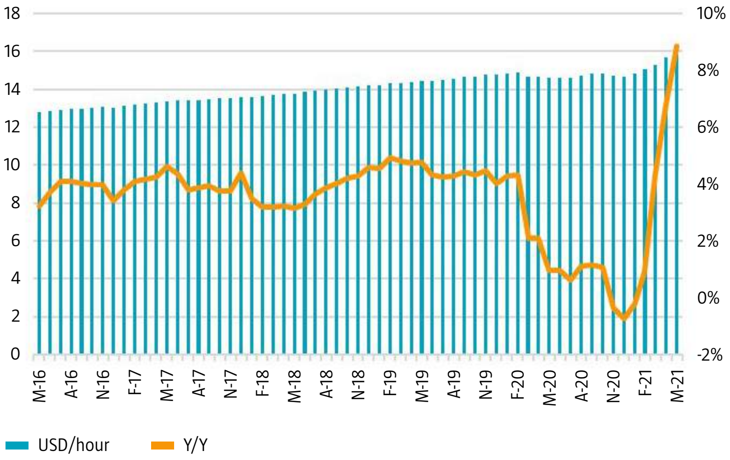
Source: US Census

A silver lining in rising wages

After significantly reducing headcounts during the pandemic-induced closures of 2020, restaurants and hotels are now scrambling to refill those positions; only to find fewer takers for lower-paying positions. As a result, hourly wage employment offers are on the rise. Earlier this month the US Labor Department reported the average hourly wage for non-supervisory hospitality workers rose 8.8% year on year to USD 15.87.

Notwithstanding a reasonable concern for inflation, just as investors appreciate corporate pricing power, perhaps we can also see a silver lining in rising wages. After a year on the sidelines, employees in hard-hit sectors are more likely to redeploy these renewed earnings into deferred consumption – supporting economic growth this year.

US average hourly earnings for non-supervisory hospitality sector employees

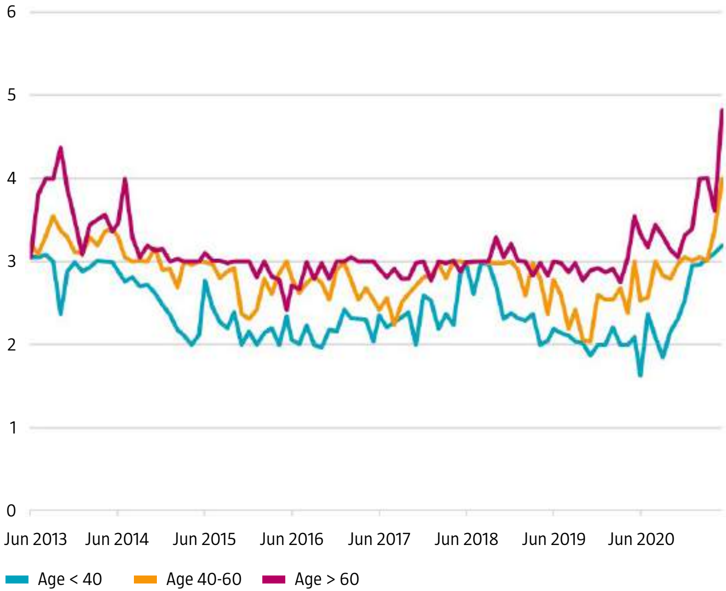


Source: US Bureau of Labor Statistics

Old enough to remember

For consumers old enough to remember queuing in long lines to fuel their cars during the 1970s oil crisis, inflation remains a persistent concern. According to the New York Fed, median expectations for one-year-ahead inflation rose 60 basis points in May to 4.0%. For consumers aged 60 and above, the expectations for inflation next year rose 120 basis points to 4.82% - a rate that is 50% higher than expectations of those under the age of 40. Notably, despite their longer experience, the data also suggests a strong recency bias as the forward expectation among those 60 and above nearly matches the 5.0% Consumer Price Index reading for May of this year.

1-Year forward inflation expectation by age group



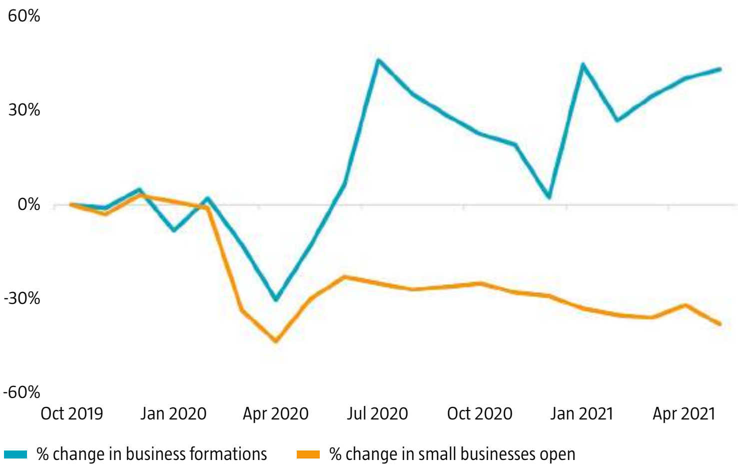
Source: New York Federal Reserve

Boom or bust?

Both optimists and pessimists could use today's sketch to suit their story, barring they each erase one line. Optimists could argue US economic data shows that business formations are 40% higher compared to pre-pandemic levels, after an initial decrease in the first months of the pandemic. Alternatively, pessimists might argue the number of small businesses open has decreased by 38% since October 2019.

Out-dated and non-viable businesses may have gone bust and never open again. But new digital businesses have been created. They are not bound to their local community but have the world at their fingertips through the internet. This can also be seen from the results of companies providing digital business services such as Shopify, Etsy, Intuit and Fiverr, just a few who have welcomed a raft of new clients.

Percentage change in business formations and small businesses open
(October 2019 = 100)

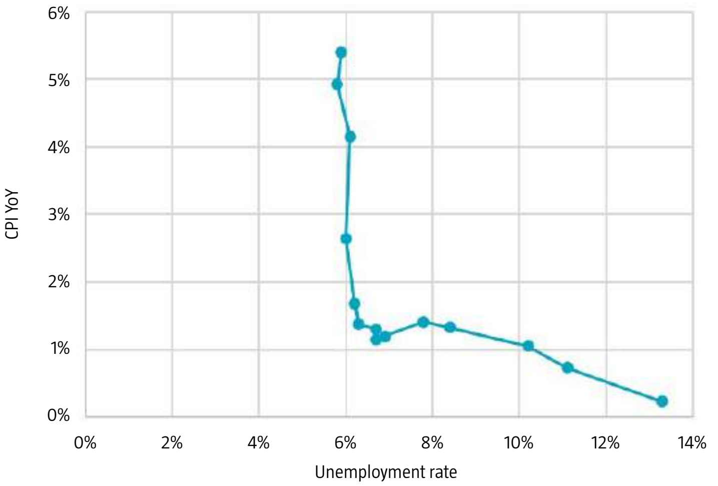


Source: Federal Reserve Bank of Saint Louis, Womply

A question for professor Phillips

Yesterday's higher-than-expected US CPI report has sharpened the gaze of inflation hawks. However, given that much of the increase came from supply-constrained segments like automotive and energy, there remains evidence that the move will prove transitory. On the other hand, coupled with falling unemployment figures, the acceleration in prices brings into focus the Phillips curve, which demonstrates an inverse relationship between the two economic variables. As with any economic question, whether the recent inflation data is cause for concern or not, will depend on whom you ask.

US consumer price index YoY vs. unemployment rate



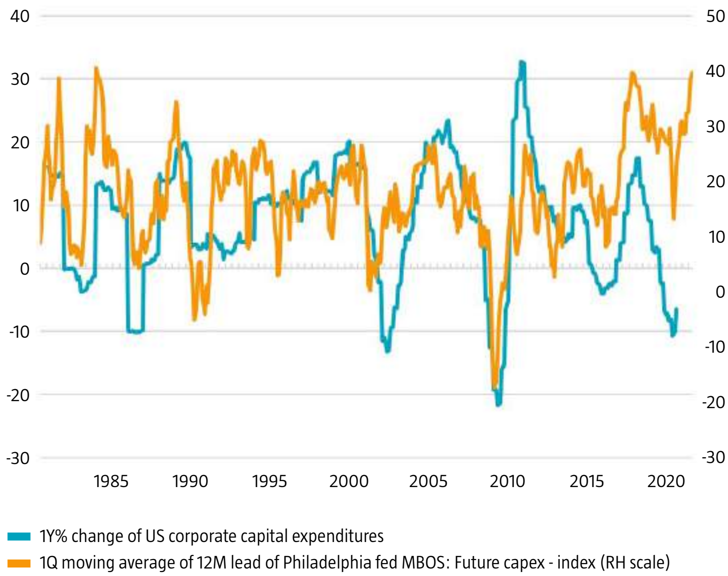
Source: US Bureau of Labor Statistics

Time to build

Capital spending plunged during the pandemic, a trend that continued into 2021, with US corporate capital spending down 10.1% year-on-year in June. This reduced investment exacerbated the supply constraints that emerged as demand rebounded when economies reopened. However, this downward investment trend is set to bottom out, based on the US Federal Reserve's Capex Intentions Index, which shows a steep year-on-year increase in planned capital expenditures.

As Robeco's multi-asset team noted in their monthly outlook, the market has already picked up on the theme with capital intensive stocks outperforming the broader market. That outperformance should in turn offer managers a further signal that it is time to build.

Capital expenditures, historical and expected

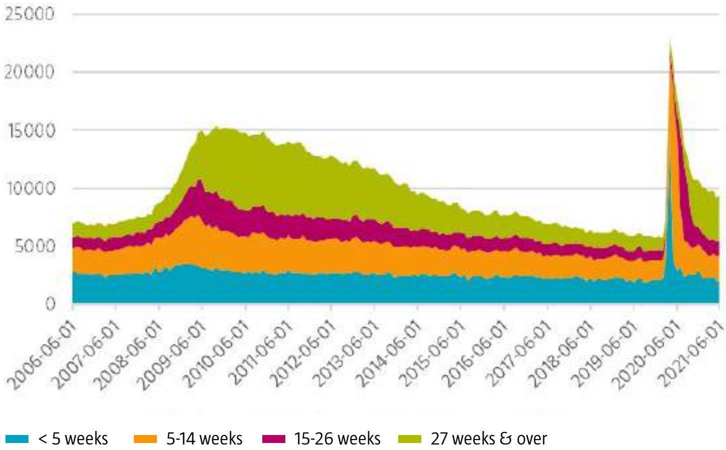


Source: Refinitiv Datastream, Robeco

Not that short

Last week the National Bureau of Economic Research reported that with a duration of just two months, the 2020 US recession was the shortest on record. The next shortest recession, which occurred in 1980, lasted six months. However, during the 2020 recession, the total number of unemployed persons in the US peaked at 23 million in April. Although job growth has remained strong, last month there were still 9.5 million unemployed persons, including nearly 4 million who have been out of work for 27 weeks or longer. While the pandemic-induced recession was short lived, for many the road to recovery remains long.

US Unemployed persons by duration, in thousands

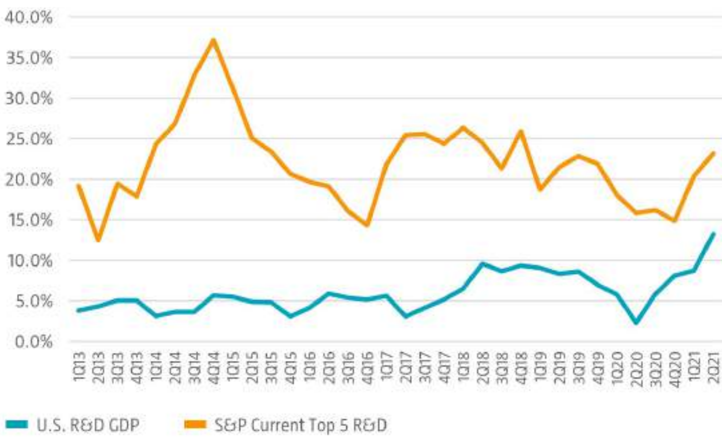


Source: US Bureau of Labor Statistics

Research economics

Although yesterday's US GDP growth report fell short of some estimates, one component of the data notably accelerated: research and development. In 2Q21, US R&D spending rose 13.2% Y/Y, up from the 8.7% Y/Y recorded in 1Q21. At the same time, R&D spending among the current top five companies in the S&P 500 (Apple, Microsoft, Amazon, Facebook, and Alphabet) rose 23% Y/Y, up from 20% Y/Y in the previous quarter. While there's some debate on the relationship between R&D and economic growth, it is worth noting that the S&P's top five collectively recorded sales up 36% Y/Y. As the inventor Thomas Edison once said, "The value of an idea lies in the using of it, not in the conceiving."

Growth in research and development investments, year on year



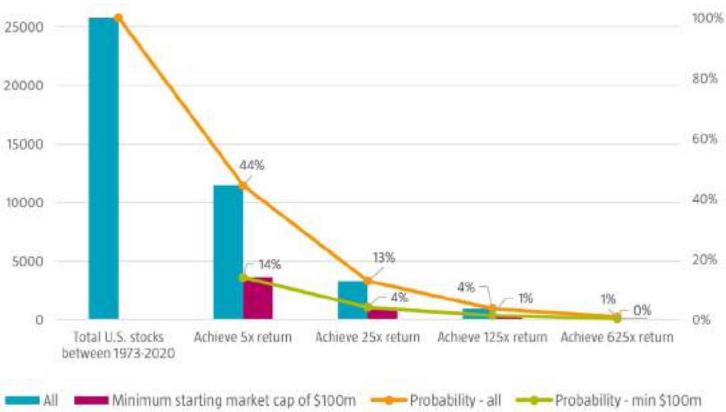
Source: US Bureau of Economic Analysis, Company reports, Robeco

5x winners

Large winners are not uncommon in the US stock market, as Hendrik Bessembinder's latest study shows. Out of the roughly 25,000 stocks listed between 1973 and 2020 in the US, 13% achieved a 25x return. Some stocks go on to win even bigger: 4% achieved a 125x return and 1% or 271 stocks achieved an astounding 625x return.

Since a number of stocks are quite small, Bessembinder also reports results for stocks with a minimum market capitalization of USD 100 million before the 5x return is achieved. Just 4% of all stocks started out with a market capitalization of over USD 100 million and achieved a 25x return. This teaches us larger investors can also win big, but they have to be very selective in where they invest.

Winners in the US stock market between 1973 and 2020

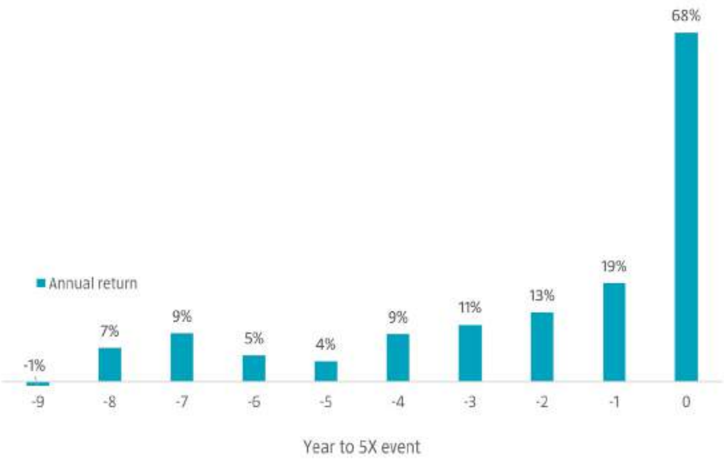


Source: H. Bessembinder. (2021). Stock Market Winners: Conditional Probabilities, Elapsed Times, and Post-Event Returns.

Returns arrive late

In most cases, it requires investor patience to achieve outsized returns from stock price increases. A study by Hendrik Bessembinder shows that, in the case of stocks that generate five-fold returns from price gains relative to their lows, the bulk of this return is earned in the final years leading up to the 5X event. For example, in the ten years leading up to a 5X return event, 43% of the return in those ten years is made in the last year, and 70% in the last two years. Bessembinder's study also shows that investors are likely to experience returns in line with or just above the market return for years before an outsized return is made.

Returns arrive late annual portfolio returns od stocks that went up 5x since trough

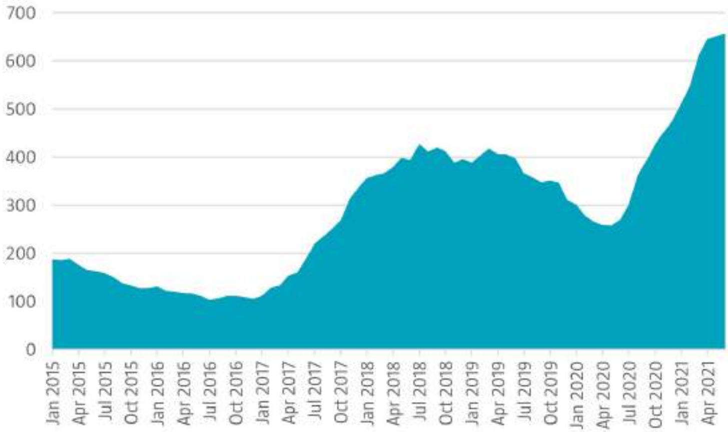


Source: "Stock market winners: conditional probabilities, elapsed times, and post-event returns", Hendrik Bessembinder, 2021.

Land ahoy

Supply chain constraints exacerbated by persistent virus concerns and ongoing trade policy uncertainty have driven renewed pressure to re-shore manufacturing. According to UBS Global Research, US corporate reshoring announcements rose 85% year on year during 2Q21, an acceleration from the 40% rate of growth recorded in 1Q21. On a trailing twelve-month basis, reshoring announcements are up five times compared to pre-trade-war levels in 2016. Given that the building and expansion of domestic manufacturing is expected to take 18 months on average, these announcements serve as a leading indicator for an increase in capital expenditures and hiring. A more stable foundation for the onshore supply chain may lie ahead.

US corporate reshoring announcements, trailing twelve months

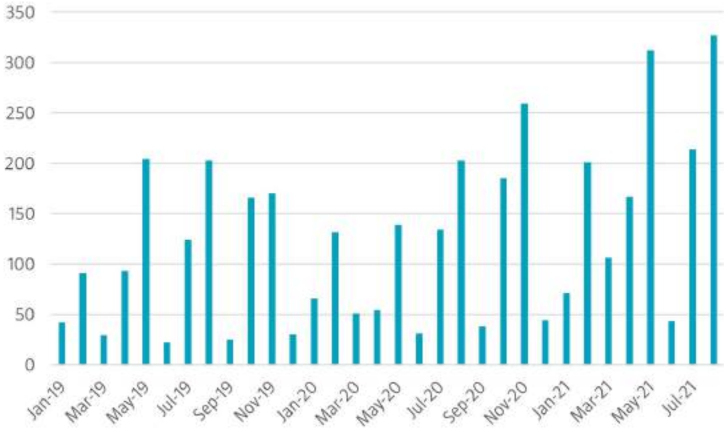


Source: UBS Global Research Evidence Lab, August 2021

Great quarter

The phrase 'great quarter' and synonymous terms appeared in 541 earnings call transcripts during this past July and August, a 60% jump from the same period in 2020 according to Sentieo data. While congratulatory remarks are sometimes overused by analysts, results this year have indeed been strong. During the 2Q21 reporting season, 87% of companies within the S&P 500 posted earnings and revenues above Wall Street estimates. With strong results throughout the year, expectations for full year 2021 S&P 500 earnings are currently 20% above the estimates that analysts issued in January. These great quarters are adding up to a great year for corporate earnings.

Mentions of "great quarter" on earnings call transcripts by month

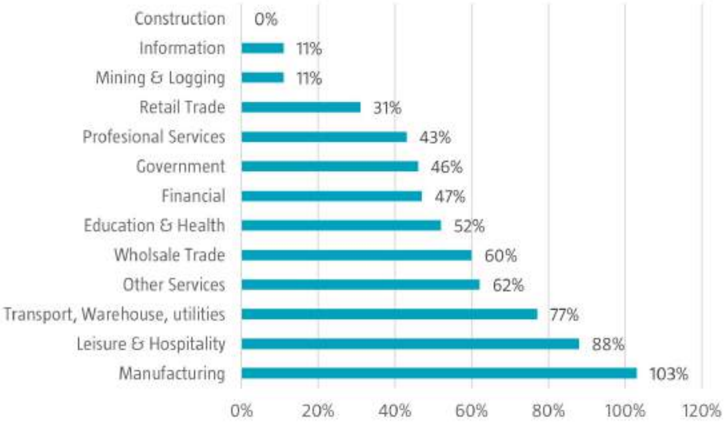


Source: Sentieo, September 2021

A laborer's market

The number of job openings in the US rose 63% year on year to a series high of 10.9 million in July, according the Bureau of Labor Statistics. For many industries, comparing the current number of openings to pre-pandemic 2019 data, the growth is impressive. For instance, the number of July 2021 job openings in manufacturing are up 103% versus July 2019, and are up 88% in the Leisure & Hospitality sector. The high number of openings not only reflects current economic strength, but also the degree to which firms let employees go during the pandemic – and rehiring for those positions has proven more difficult. Many employers are learning that retention is also key to a good hiring program.

Percentage change in job openings by sector, July 2021 vs. July 2019



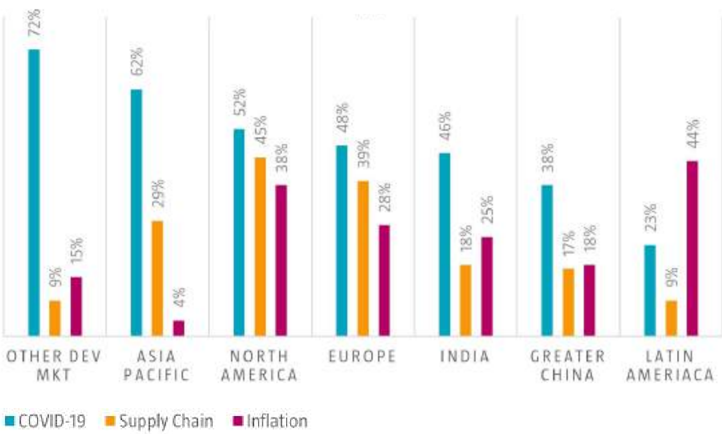
Source: US Bureau of Labor Statistics, September 2021

COVID still looms large

Corporate executives surveyed in McKinsey's latest global survey are more than twice as likely to say that economic conditions have improved relative to the same survey one year ago. However, after falling down the list of key risks to economic growth in last quarter's survey, COVID-19 is back on top. In June, 36% of executives citied COVID-19 as a risk to economic growth over the next 12 months, but in September 49% of executives cited the virus as a risk.

In emerging markets like Africa, the Middle East, and South Asia, 72% of executives cite the virus as a risk. While inflation and supply-chain disruptions also remain key concerns for executives, the pandemic remains a root cause of those effects.

Risk to economy, % of executive respondents



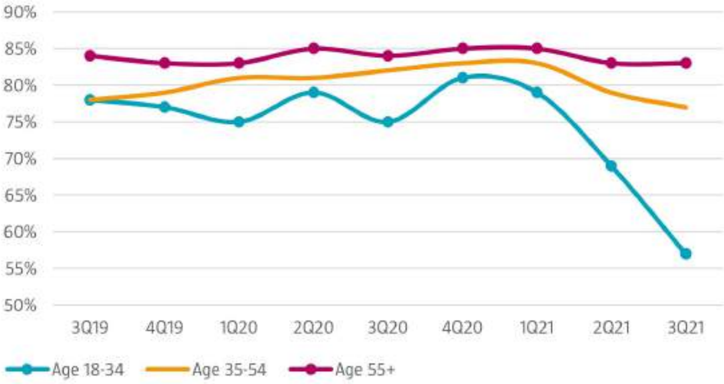
Source: McKinsey, September 2021

Generation dissatisfied

Millennials and Gen Z might also be labeled Generation Dissatisfied based on survey data from CivicScience showing a sharp fall in job satisfaction among younger workers. Job satisfaction among all adults has fallen to the lowest point since CivicScience began tracking the data in 2015. During Q3 2021, the percentage of US adults that said they were happy in their current jobs fell to 68%, versus 84% in last year's survey. For workers aged 18 to 34, this percentage fell more sharply, from 75% in Q3 2020 to 57% in Q3 2021.

The lower job satisfaction data is supported by a US Bureau of Labor Statistics report released earlier this month, showing that the quit rate among workers rose to a series high of 2.9% in August 2021 versus 2.1% a year earlier. After a stressful pandemic-defined eighteen months, perhaps there is a case to be made for a return of the happy hour.

Employees satisfied with job by age group



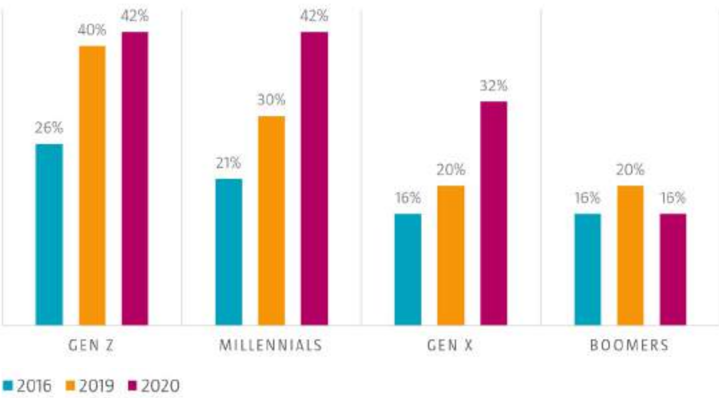
Source: CivicScience, October 2021

Thrifty generations

Younger generations are powering the rise of second-hand. For Gen Z, thrifting isn't just a way to shop – it's a lifestyle through which they want to be independent, save the planet, save money and make money, according to Elize Huber at Refinery29. The rising demand for second-hand clothing and accessories could be seen as a threat to apparel companies whose revenues are predominantly derived from new products.

However, some companies are embracing second-hand. Examples are Thredup, a resale facilitator for retailers and apparel brands, or Lululemon, a sport apparel company taking back products and offering them for resale. Resale is part of the increasing demand for socially and environmentally friendly products to which apparel brands need to adapt.

% of consumers who are shopping secondhand apparel



Source: GlobalData consumer survey among 3,500 US adults, April 2021

ROBECO TRENDS & THEMATIC TEAM

The **Robeco Trends & Thematic Equities team** consists of 12 portfolio managers, 13 analysts and 4 client portfolio managers, based in Rotterdam and Zürich, and has EUR 27 billion under management*. This team is responsible for a range of strategies that are positioned to profit from long-term structural trends, such as 'preserving Earth', evolving demographics, the changes in consumer behavior and technological advances. But a long-term trend can be born any day and passion is not limited to routine working hours. Two of the analysts, Daniel Ernst and Sam Brasser, scan the headlines and newswires early in the morning on a daily basis, searching for Unexpected graphs and charts that shed a unique light on today's world. They have become the main contributors to the Daily Sketch, a playful part of the more serious research the team does.

Research on such long-term structural trends and the identification of the investable universe are important steps in the investment process, and are done within this team. Portfolio managers and analysts collaborate on, exchange and challenge ideas to enhance the decision-making process. The portfolio managers can also leverage on the idea generation and analysis expertise of other investment professionals within Robeco. For more information, please visit Trends Investing (robeco.com)

*As per end of November 2021

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