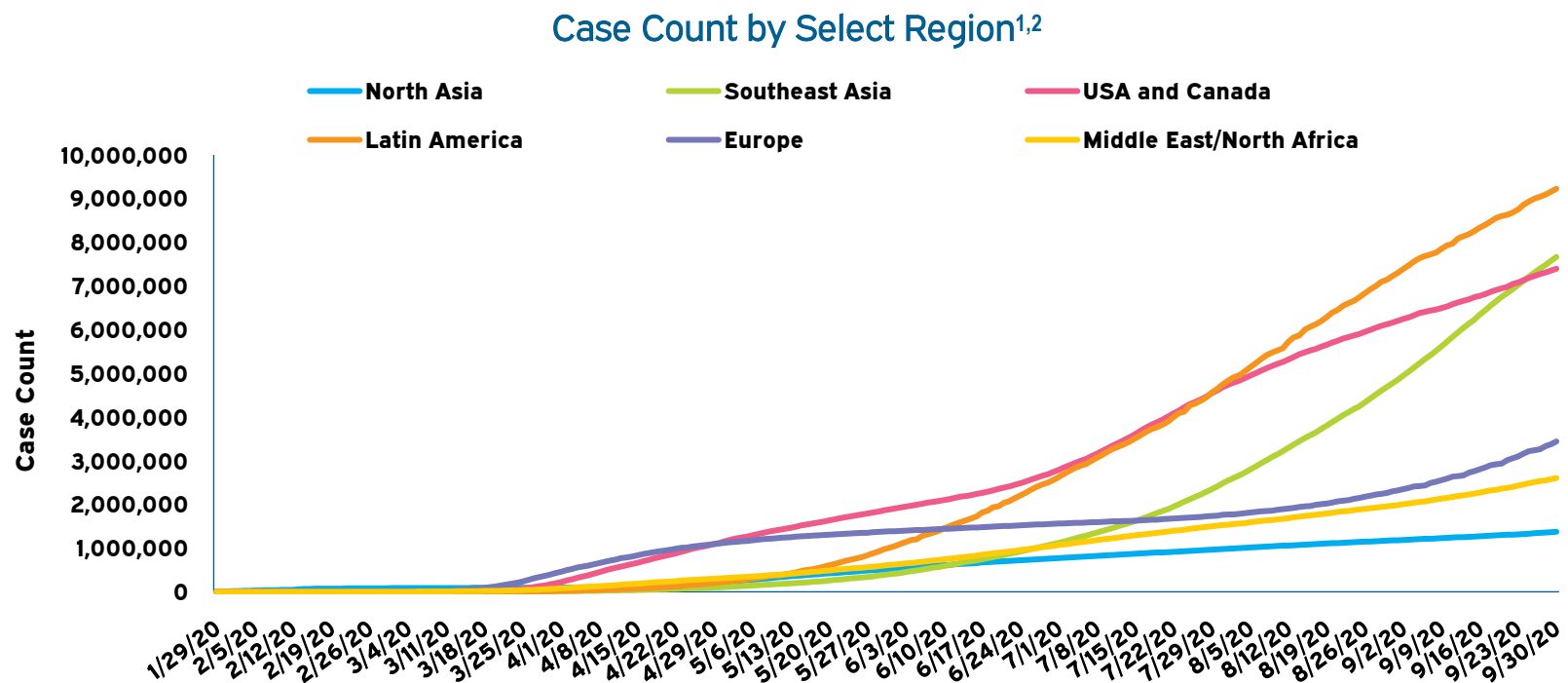


Economic and Market Update

Data as of September 30, 2020



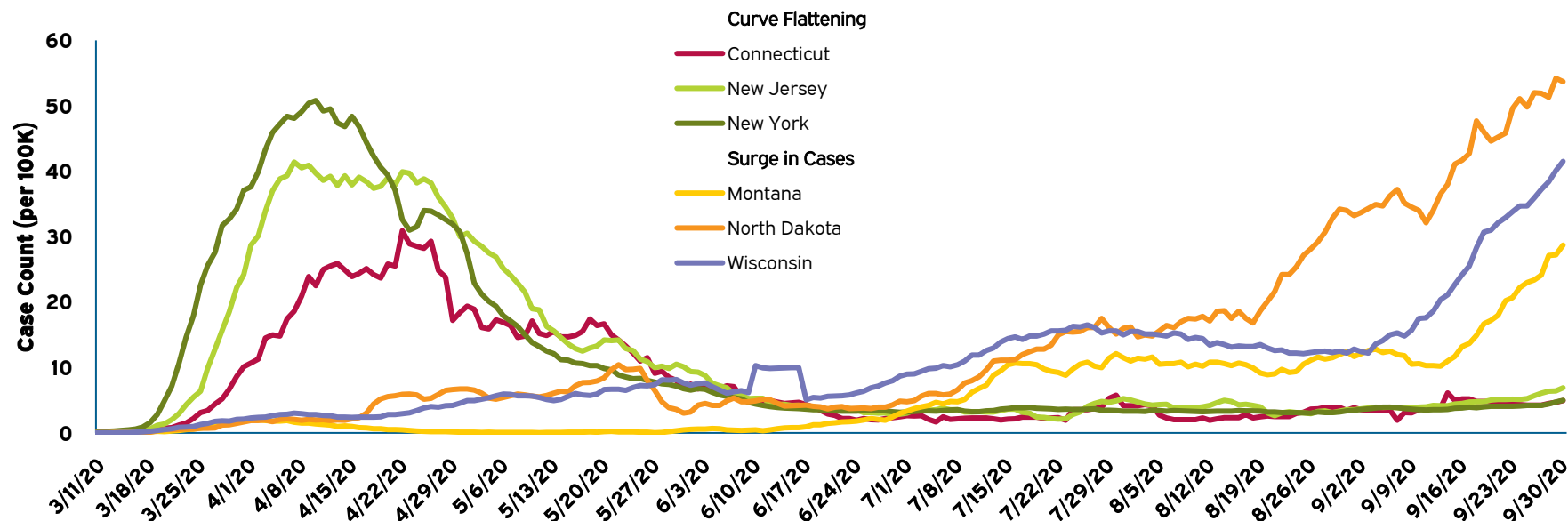


- Cases of COVID-19 continue to grow globally with now over 40 million reported cases across 189 countries.
- The US still has the highest number of cases, with India surpassing Brazil for the second spot. Latin America in aggregate remains a hotspot, with Russia, France, and Spain also experiencing high case counts.

¹ Source: Bloomberg. Data is as of September 30, 2020.

² North Asia: China, Hong Kong, Japan, Russia, South Korea, and Taiwan. Southeast Asia: Singapore, India, Indonesia, Malaysia, Pakistan, Philippines, Thailand, Bangladesh, Sri Lanka, and Vietnam. Europe: Austria, Belarus, Bulgaria, Croatia, Czech Republic, Denmark, France, Germany, Hungary, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, United Kingdom, Switzerland, and Ukraine. Latin America: Chile, Brazil, Mexico, Argentina, Colombia, Peru, Venezuela, Ecuador, Panama, Paraguay, Costa Rica, Bolivia, Uruguay, El Salvador, Honduras, Cuba, Dominican Republic, Haiti, and Nicaragua. Middle East/North Africa: Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Turkey, Tunisia, United Arab Emirates, and Yemen.

New Daily Reported COVID-19 Cases¹



- Some states experienced initial spikes in cases with subsequent improvements, while other states fared better early on with recent case spikes.
- As we move into the colder months, flu season and the reopening of schools in some areas could create additional stresses on the healthcare system.
- The recent increase in cases in some states has sparked concerns that the trend will continue throughout the country.

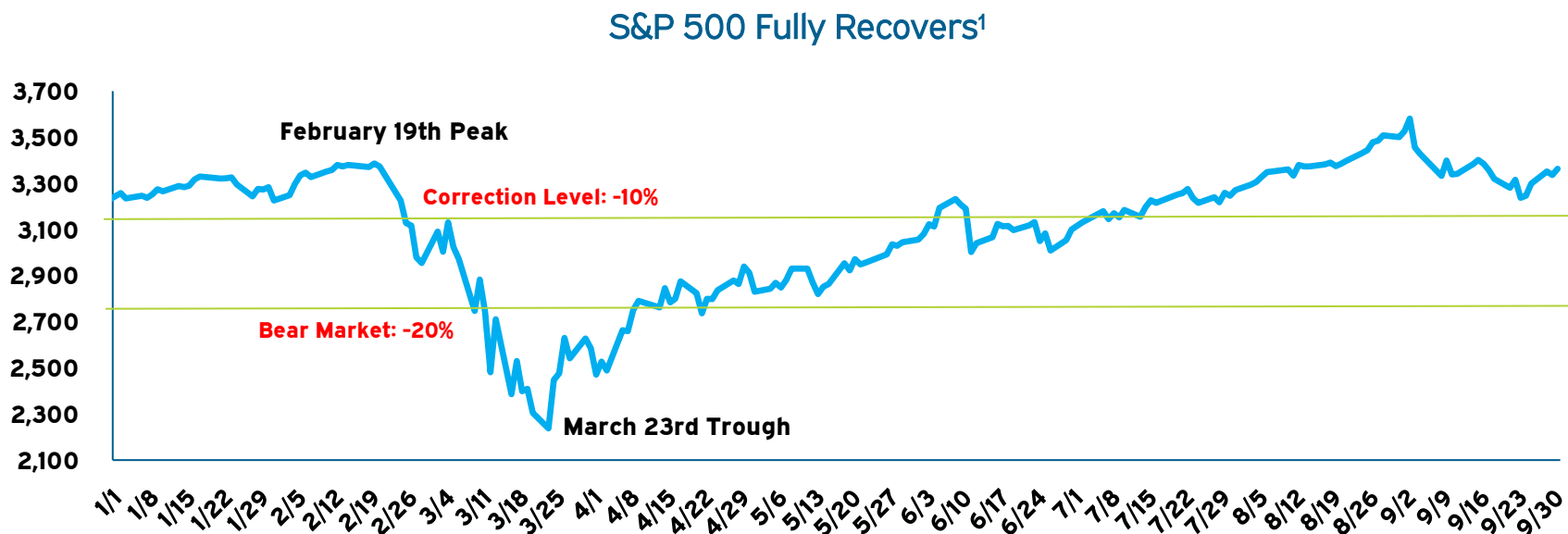
¹ Source: TrackTheRecovery. Data is as of September 30, 2020.

Market Returns¹

Indices	September	YTD	1 Year	3 Year	5 Year	10 Year
S&P 500	-3.8%	5.6%	15.1%	12.3%	14.1%	13.7%
MSCI EAFE	-2.6%	-7.1%	0.5%	0.6%	5.3%	4.6%
MSCI Emerging Markets	-1.6%	-1.2%	10.5%	2.4%	9.0%	2.5%
MSCI China	-2.7%	16.4%	33.6%	7.9%	13.5%	6.5%
Bloomberg Barclays Aggregate	-0.1%	6.8%	7.0%	5.2%	4.2%	3.6%
Bloomberg Barclays TIPS	-0.4%	9.2%	10.1%	5.8%	4.6%	3.6%
Bloomberg Barclays High Yield	-1.0%	0.6%	3.3%	4.2%	6.8%	6.5%
10-year US Treasury	0.2%	12.8%	10.8%	6.7%	4.6%	4.3%
30-year US Treasury	0.1%	23.9%	17.9%	12.4%	9.3%	7.8%

- In September, most asset classes declined, particularly riskier ones, possibly influenced by gridlock over the next round of US fiscal stimulus, the approaching presidential election, and fears over rising virus cases. Notably, September declines followed five straight months of substantial gains.
- Overall, global risk assets have recovered meaningfully from their lows, largely driven by record fiscal and monetary policy stimulus. The S&P 500 has appreciated by over 56% from its mid-March trough.
- Despite the recovery in risk assets, yields on safe-haven assets like US Treasuries remain close to record lows due to expectations for extremely accommodative monetary policy for the foreseeable future and for relatively weak economic growth.

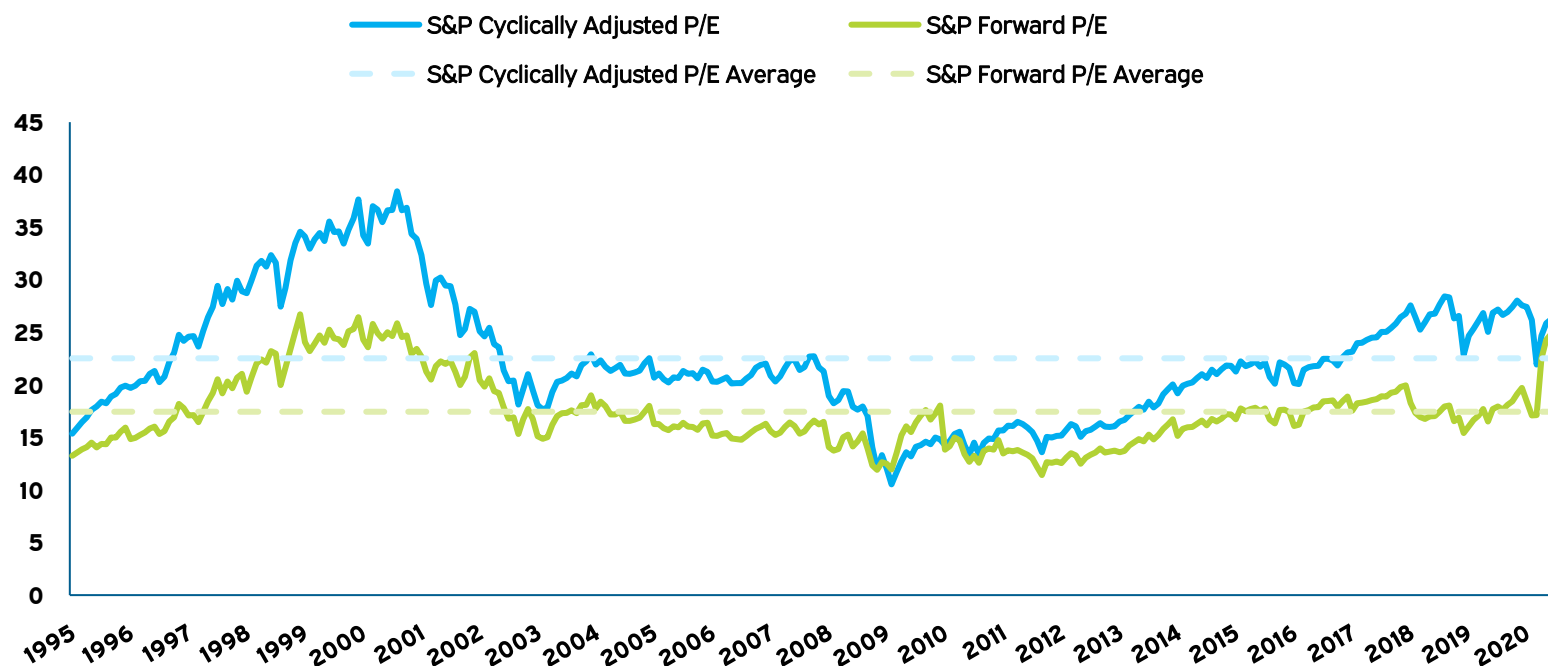
¹ Source: InvestorForce and Bloomberg. Data is as of September 30, 2020.



- Given the anticipated economic carnage surrounding the pandemic, US stocks declined from a February peak into bear market (-20%) territory at the fastest pace in history.
- From the February 19 peak, the S&P 500 plunged 34% in just 24 trading days.
- After quickly rebounding from its lows and finishing above its pre-COVID levels at the end of August, the market retraced 3.8% in September, bringing its year-to-date gain to 5.6%.
- The key risk going forward remains that a spike in COVID-19 cases could slow, or reverse, reopening plans.

¹ Source: Bloomberg. Data is as of September 30, 2020.

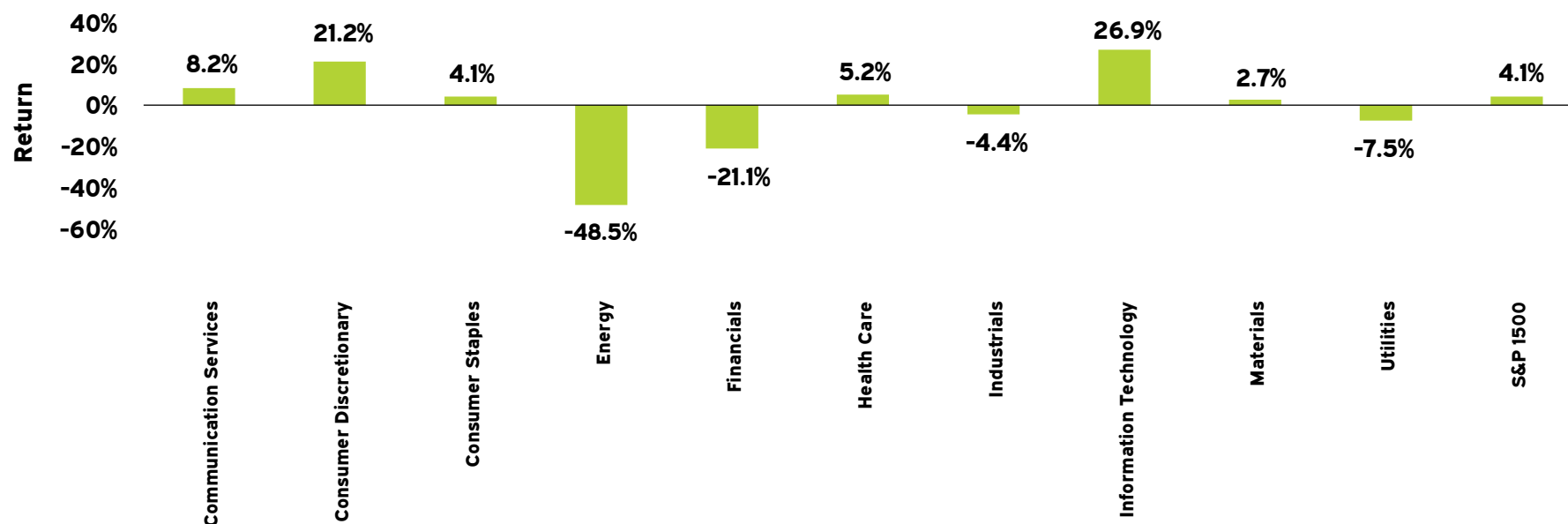
S&P Equity Valuations¹



- Despite the pullback in September, valuations based on both forward- and backward-looking earnings remain stretched.
- Many are looking to improvements in earnings growth as the US economy continues to reopen to justify market levels, with historically low interest rates also providing support.

¹ Source: Bloomberg. Data is as of September 30, 2020.

2020 YTD Sector Returns¹

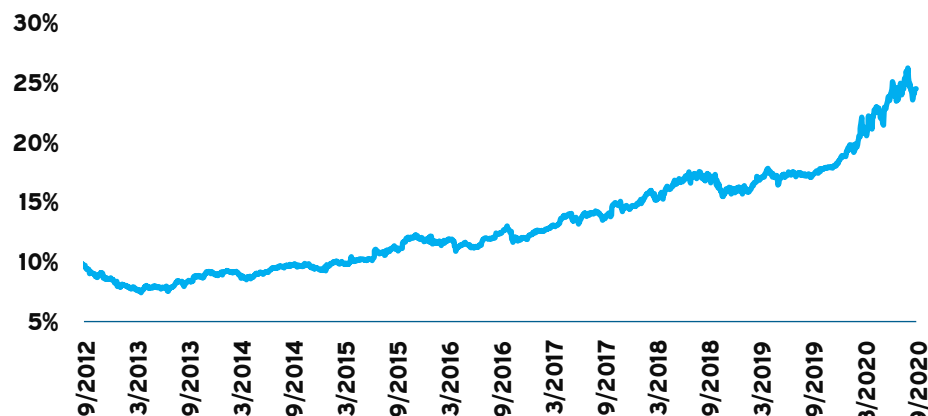


- Information technology remains the best performing sector, with a narrow group of companies including Amazon and Netflix driving market gains. The outperformance has been due to consumers moving to online purchases and streaming services.
- The consumer discretionary sector also experienced gains as the economy reopened, people returned to work, and stimulus checks were spent.
- The energy sector remains the sector with the greatest 2020 decline, triggered by the plunge in oil prices. Financials have also struggled in this slow growth environment with demand for loans down and low interest rates weighing on loan revenue.

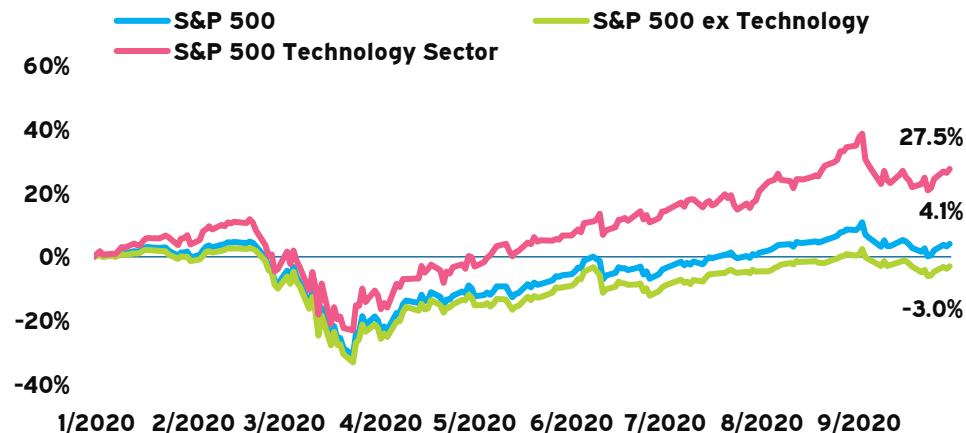
¹ Source: Bloomberg. Data is as of September 30, 2020.

Technology has led the way in the Rebound

FAANG+M Share of S&P 500¹



Returns Year to Date through September 30²

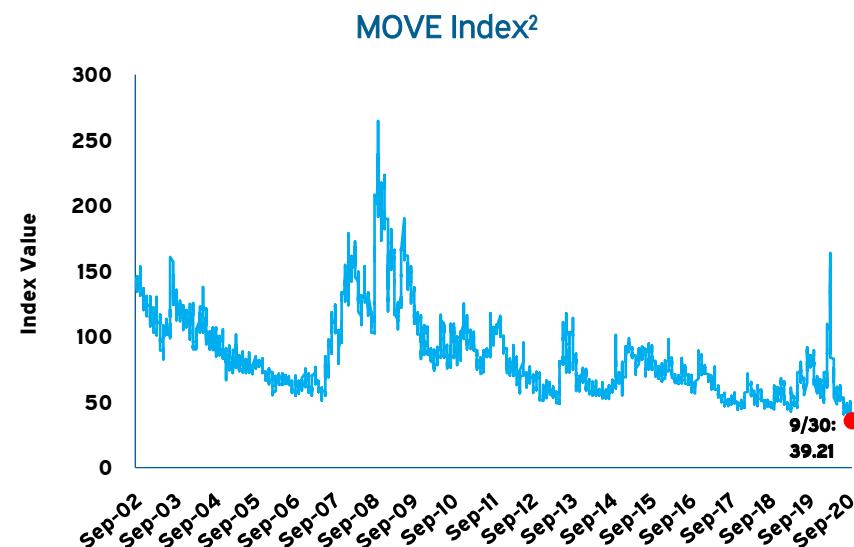
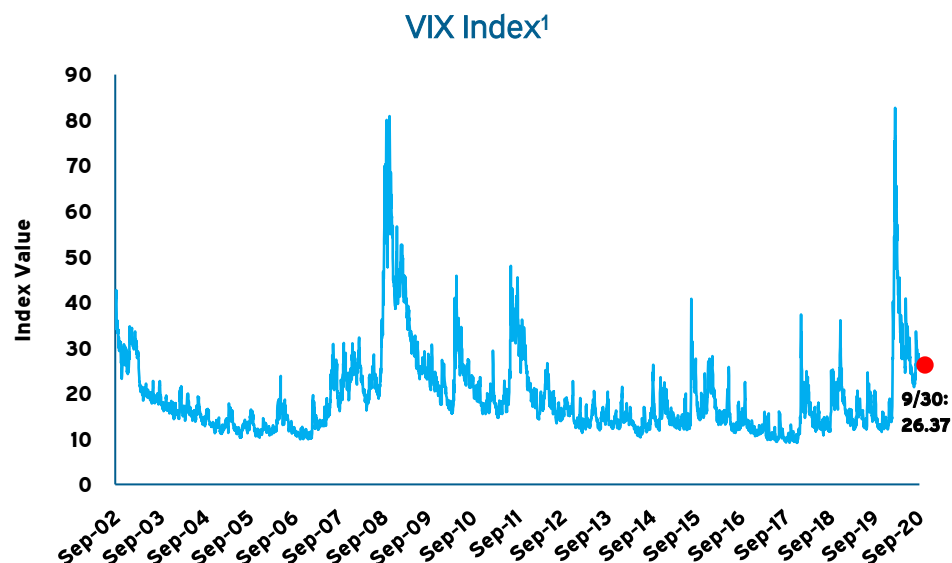


- The recent market recovery has largely been driven by a few select technology companies that benefited from the stay-at-home environment related to the virus.
- Year-to-date, the S&P 500 technology sector returned 27.5%, compared to -3.0% for the S&P 500 ex-technology index, with Amazon (+70%), Netflix (+55%), and Apple (+58%) posting strong results.
- The strong relative returns of these companies has led to them comprising a growing portion (24.5%) of the S&P 500, which makes their future performance particularly impactful.

¹ FAANG+M = Facebook, Amazon, Apple, Netflix, Google (Alphabet), and Microsoft. The percentage represents the aggregate market capitalization of the 6 companies compared to the total market capitalization of the S&P 500 as of September 30, 2020.

² Each data point represents the price change relative to the 12/31/2019 starting value.

Volatility has Declined



- Expectations of short-term equity volatility, as measured by the VIX index, continued to decline from record levels, though it remains elevated relative to the past decade.
- At the recent peak, the VIX reached 82.7, surpassing the pinnacle of volatility during the GFC, thus showing the magnitude of the crisis and of investor fear.
- Expectations of volatility within fixed income, as represented by the MOVE index, spiked and then dropped to historic lows, helped by the broad level of monetary support and forward guidance by the Fed.

¹ Source: Chicago Board of Exchange. Data is as of September 30, 2020.

² Source: Bloomberg. Data is as of September 30, 2020.

Global Financial Crisis Comparison

2007-2009 Global Financial Crisis		COVID-19 Crisis
Primary Causes	<p>Excess Risk Taking Due to:</p> <ul style="list-style-type: none"> Deregulation, un-constrained securitization, shadow banking system, fraud 	<p>Pandemic/Natural Disaster:</p> <ul style="list-style-type: none"> Large scale global restrictions on businesses and individuals leading to immediate and significant deterioration in economic fundamentals
2007-2009 Global Financial Crisis		COVID-19 Crisis
Fiscal Measures	<ul style="list-style-type: none"> American Recovery Reinvestment Act of 2009: \$787 billion Economic Stimulus Act of 2008: \$152 billion 	<ul style="list-style-type: none"> PPP Act: \$659 billion CARES Act of 2020: \$2.3 trillion Families First Coronavirus Response Act: \$150 billion Coronavirus Preparedness & Response Supplemental Appropriations Act 2020: \$8.3 billion National Emergency: \$50 billion
2007-2009 Global Financial Crisis		COVID-19 Crisis
Monetary Measures		
Lowering Fed Funds Rate	X	X
Quantitative Easing	X	X
Primary Dealer Repos	X	X
Central Bank Swap Lines	X	X
Commercial Paper Funding Facility	X	X
Primary Dealers Credit Facility	X	X
Money Market Lending Facility	X	X
Term Auction Facility	X	
TALF	X	X
TSLF	X	
FIMA Repo Facility		X
Primary & Secondary Corp. Debt		X
PPP Term Facility		X
Municipal Liquidity Facility		X
Main Street Loan Facility		X

Global Financial Crisis Comparison (continued)

- The US **fiscal** response to the COVID-19 Crisis has been materially larger than the response to the 2007-2009 Global Financial Crisis (GFC), and stimulus is acutely focused on areas of the economy showing the greatest need, including small- and mid-sized companies. For example, the Paycheck Protection Program (PPP) helped small businesses keep employees working by offering forgivable loans to cover salaries.
- On the **monetary** side, markets targeted during both crises represent those most in need, but for the COVID-19 Crisis the policy response was dramatically faster, measured in weeks, not years, as in the GFC.
- Of the monetary stimulus measures, the corporate debt (Primary & Secondary Corporate Debt) programs and Main Street Loan Facility are new and garnered much attention from market participants.
- Through the end of September, Fed programs have experienced various degrees of usage. However, at this point, none has come close to reaching program limits. Still, programs have been extended through December 2020, and the psychological value of knowing the programs are available, if necessary, likely supports market sentiment.

Policy Responses

	Fiscal	Monetary
United States	\$50 billion to states for virus related support, interest waived on student loans, flexibility on tax payments and filings, expanded COVID-19 testing, paid sick leave for hourly workers, \$2 trillion package for individuals, businesses, and state/local governments. Additional \$484 billion package to replenish small business loans, provide funding to hospitals, and increase testing.	Cut policy rates to zero, outcome-based forward guidance suggesting aggressively accommodative policy for the foreseeable future, unlimited QE4, offering trillions in repo market funding, restarted and extended CPFF, PDCF, MMTF programs to support lending and financing markets, expanded US dollar swap lines with foreign central banks, announced IG corporate debt buying program with subsequent amendment for certain HY securities, Main Street Lending program, Muni liquidity facility, repo facility with foreign central banks, easing of some financial regulations for lenders, and changing the inflation mandate to an average target of 2.0%
Euro Area	European Union: Shared 750 billion euro stimulus package. Germany: 220 billion euro stimulus France: 57 billion euro stimulus. Italy: 75 billion euro stimulus. Spain: 200 billion euro and 700 million euro loan and aid package, respectively.	Targeted longer-term refinancing operations aimed at small and medium sized businesses, under more favorable pricing, and announced the 750 billion euro Pandemic Emergency Purchase Program, and then expanded the purchases to include lower-quality corporate debt.
Japan	Hundreds of trillions in yen stimulus for citizens and businesses, including low interest loans, deferrals on taxes, and direct cash handouts.	Initially increased QE purchases (ETFs, corporate bonds, and CP) and then expanded to unlimited purchases and doubling of corporate debt and commercial paper, expanded collateral and liquidity requirements, and 0% interest loans to businesses hurt by virus.
China	Tax cuts, low-interest business loans, extra payments to gov't benefit recipients.	Expanded repo facility, policy rate cuts, lowered reserve requirements, loan-purchase scheme.
Canada	\$7.1 billion in loans to businesses to help with virus damage, C\$381 billion stimulus.	Cut policy rates, expanded bond-buying and repos, lowered bank reserve requirements.
UK (BOE)	190 billion pound stimulus, Tax cut for retailers, small business cash grants, benefits for those infected with virus, expanded access to gov't benefits for self and un-employed.	Lowered policy rates and capital requirements for UK banks, restarts QE program and subsequently increased the purchase amounts.
Australia	\$11.4 billion, subsidies for impacted industries like tourism, one-time payment to gov't benefit recipients.	Policy rate cut, started QE.

Next Round of US Fiscal Stimulus

	Republican Proposal ¹	Democratic Proposal ²
Status	Offered by the President and republican leaders in mid-October	Passed in House on October 1
Direct payments	\$1,200 for adults, \$1,000 per child	\$1,200 for adults, \$500 per dependent
Unemployment / Assistance	\$400 per week, through the third week of January and retroactive to Sept. 12	\$600 per week enhanced unemployment benefit through January. 15% increase in food stamps
State and local aid	\$300 billion	\$436 billion
Airlines	\$20 billion	\$25 billion
Paycheck Protection	\$330 billion	Extend program
Testing / Tracing / Healthcare	\$175 billion	\$75 billion
Education	\$150 billion	\$225 billion
Childcare	\$25 billion	\$57 billion
Total	\$1.8 Trillion	\$2.2 Trillion

- The next round of fiscal stimulus that the market has been anticipating appears to be caught in gridlock.
- Without further stimulus, many businesses might not be able to survive, particularly services like restaurants as we move into the colder months in parts of the country.
- The enhanced unemployment benefits from the initial stimulus program were particularly impactful to those without jobs. After it ended in July an extension of a lesser amount (\$300 extra per week) was implemented, but is in the process of winding down and at risk of ending without replacement.

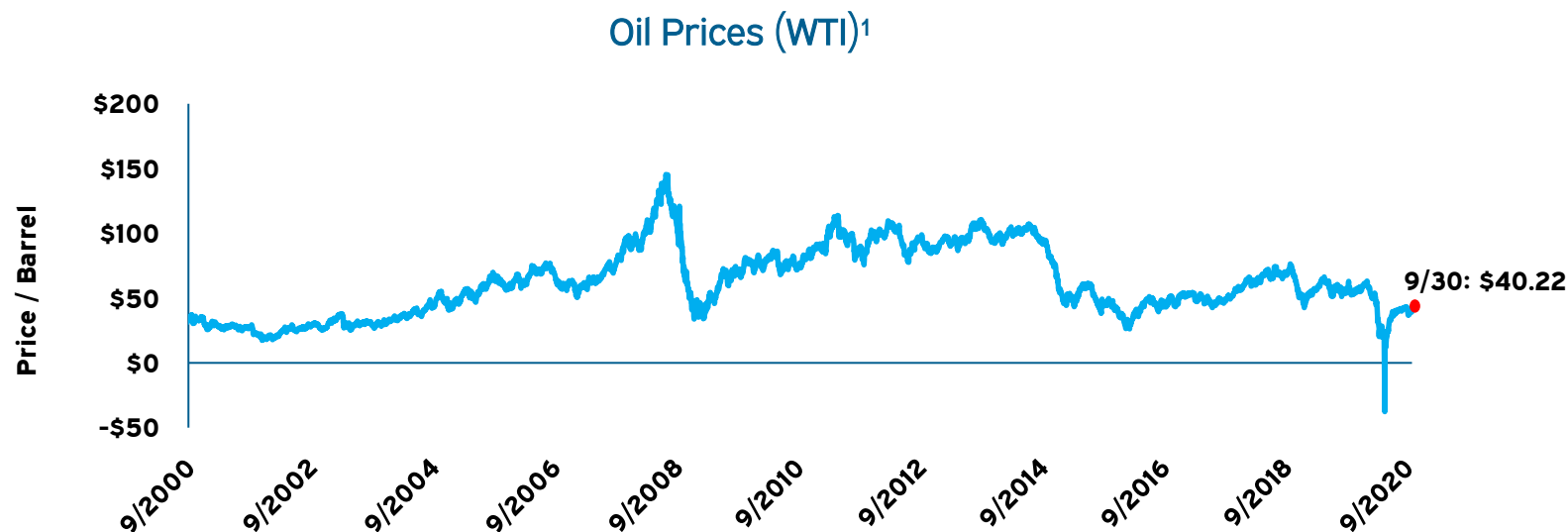
¹ Source: <https://www.cnbc.com/2020/10/10/pelosi-dismisses-trump-coronavirus-stimulus-offer.html>

² Source: <https://www.cnbc.com/2020/10/01/coronavirus-stimulus-update-house-passes-democratic-relief-bill.html>

November US Presidential Election

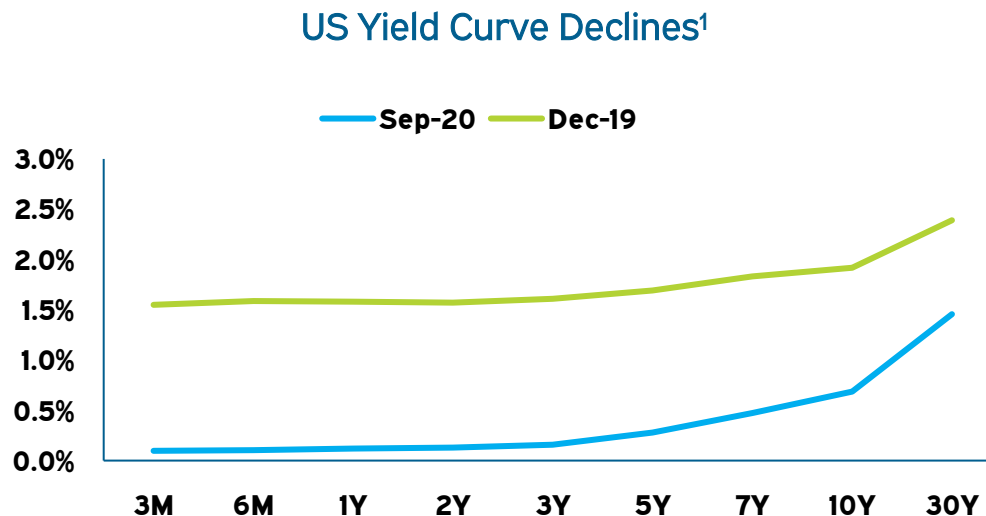
Policy Area	Trump	Biden
Tax Policy & Wages	Favors lower taxes and lower capital gains rates; “Made in America” tax credits; expanded tax breaks for investing in lower-income communities; Has indicated support for an increased minimum wage but prefers to leave it to the States.	Increase corporate tax rates from 21% to 28% (still lower than under President Obama) and implement a minimum 15% tax on global income over \$100 million; increase the tax rate for individuals earning over \$400,000 to 39.6%; Supports a \$15 an hour national minimum wage.
Infrastructure	Allocate over \$1 trillion over ten years to highways and transit, rural broadband, and 5G cell service.	Allocate over \$2 trillion to “sustainable infrastructure” and clean energy, 5G cell service, rural broadband, and modernize schools.
Government reach and Regulation	Favors smaller government and de-regulation; continue to ease regulation for businesses.	Favors increased government involvement; strengthen regulation and oversight.
Trade Policy	“America First”, protectionist in nature, use of tariffs; hard line stance with China.	“Why America Must Lead Again”; coalition forming to confront China.
Immigration	Favors restrictive immigration policies including building the southern wall and more restrictive visa requirements.	Vowed to reverse President Trump’s immigration policies including border detention and public charge rule
Climate Change	Pulled the US out of the Paris Climate Accord.	Proposed a \$2 trillion climate plan with the goal of achieving an emissions-free power sector by 2035 and upgrading four million buildings over four years to meet the highest standards for energy efficiency. Return to the Paris Accord.

- Many are looking to the November presidential election and the potential impacts of the candidate’s proposed policies.
- President Trump’s policies will likely be a continuation of those implemented pre-pandemic, focused around low taxes, deregulation, and protectionist trade policies, with a particularly aggressive stance against China. By contrast, Mr. Biden’s plans include an increase in taxes for higher-income earners, a more collaborative approach with America’s allies on foreign policy, broader regulation, and “green” initiatives.



- While global oil prices have rallied from April lows, they remain below their pre-pandemic level.
- In September, OPEC+ maintained their 7.7 million barrels/day production cuts in an effort to support oil prices.
- Counterbalancing the OPEC+ production cut agreement, US oil producers (particularly shale output) are turning wells back on, given higher prices.
- As OPEC+ starts rolling back production cuts, and an increasing virus spread potentially weighs on demand, oil prices could experience downward pressure going forward.

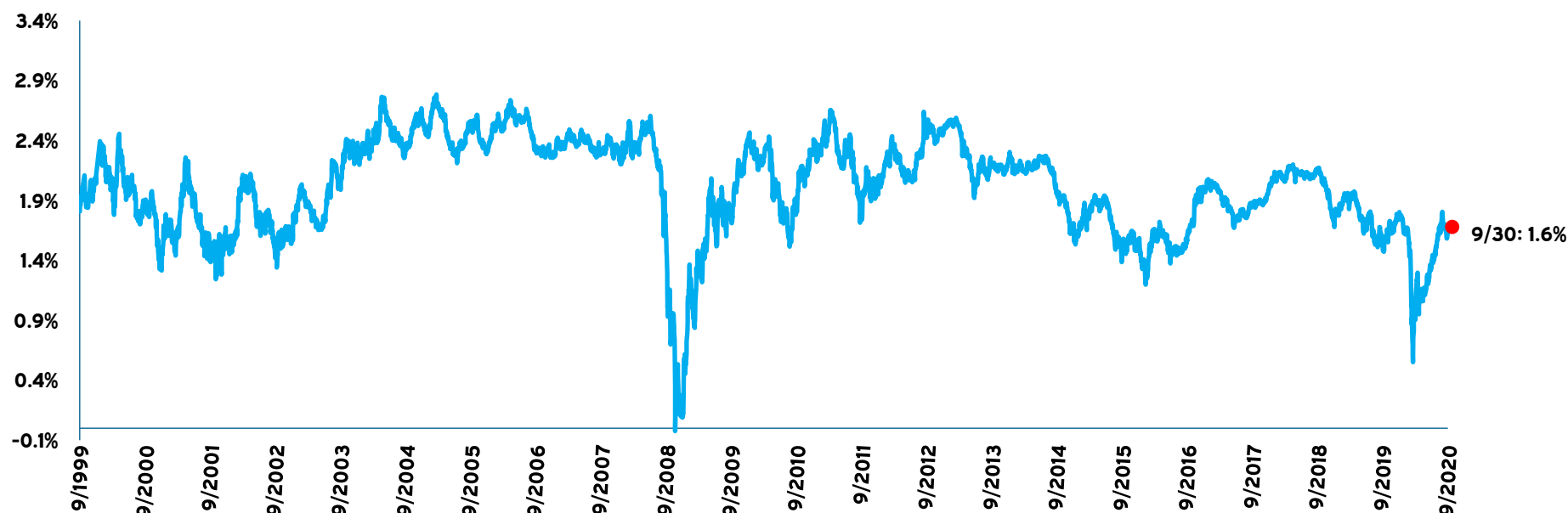
¹ Source: Bloomberg. Represents WTI first available futures contract. Data is as of September 30, 2020.



- The US Treasury yield curve has declined materially during 2020.
- Cuts in monetary policy rates, and policy makers' open commitments to keep rates low for the foreseeable future, drove yields down in shorter maturities, while flight-to-quality flows, low inflation, and economic growth uncertainty have driven the changes in longer maturities.
- The Federal Reserve's unlimited quantitative easing purchase program has produced further downward pressure on interest rates, particularly in the short- and medium-term sectors due to the purchases being focused on those segments.

¹ Source: Bloomberg. Data is as of September 30, 2020.

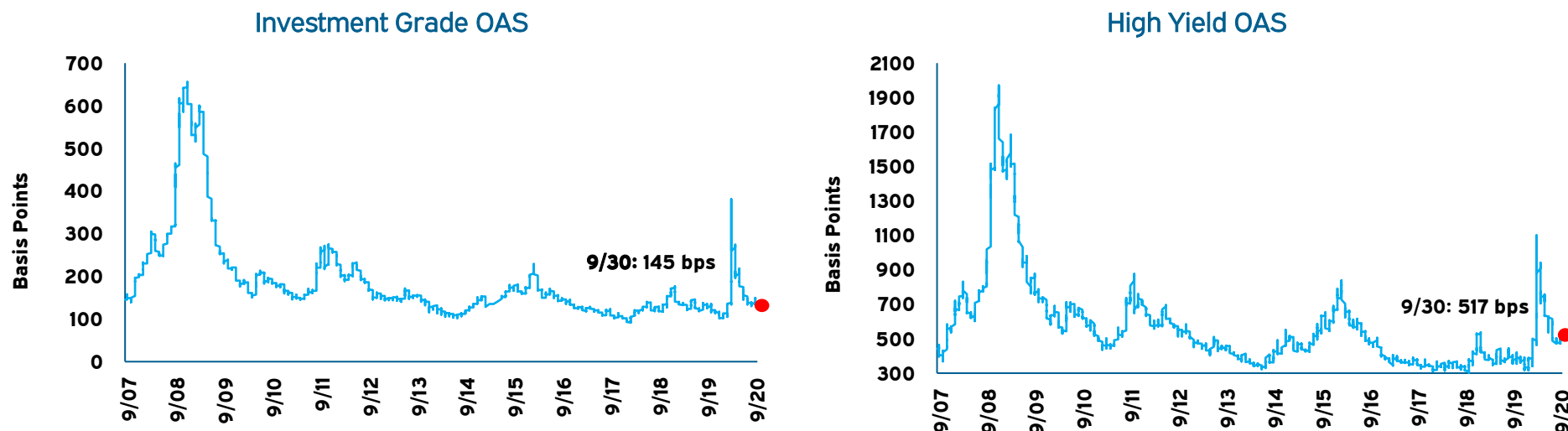
10-Year Breakeven Inflation¹



- Inflation breakeven rates initially declined sharply, due to a combination of lower growth and inflation expectations, as well as liquidity dynamics in TIPS during the height of market volatility.
- Liquidity eventually improved and breakeven rates increased as deflationary concerns moderated, but given the uncertainty regarding economic growth and the inflationary effects of the unprecedented US fiscal response, inflation expectations remain below historical averages.

¹ Source: Bloomberg. Data is as of September 30, 2020.

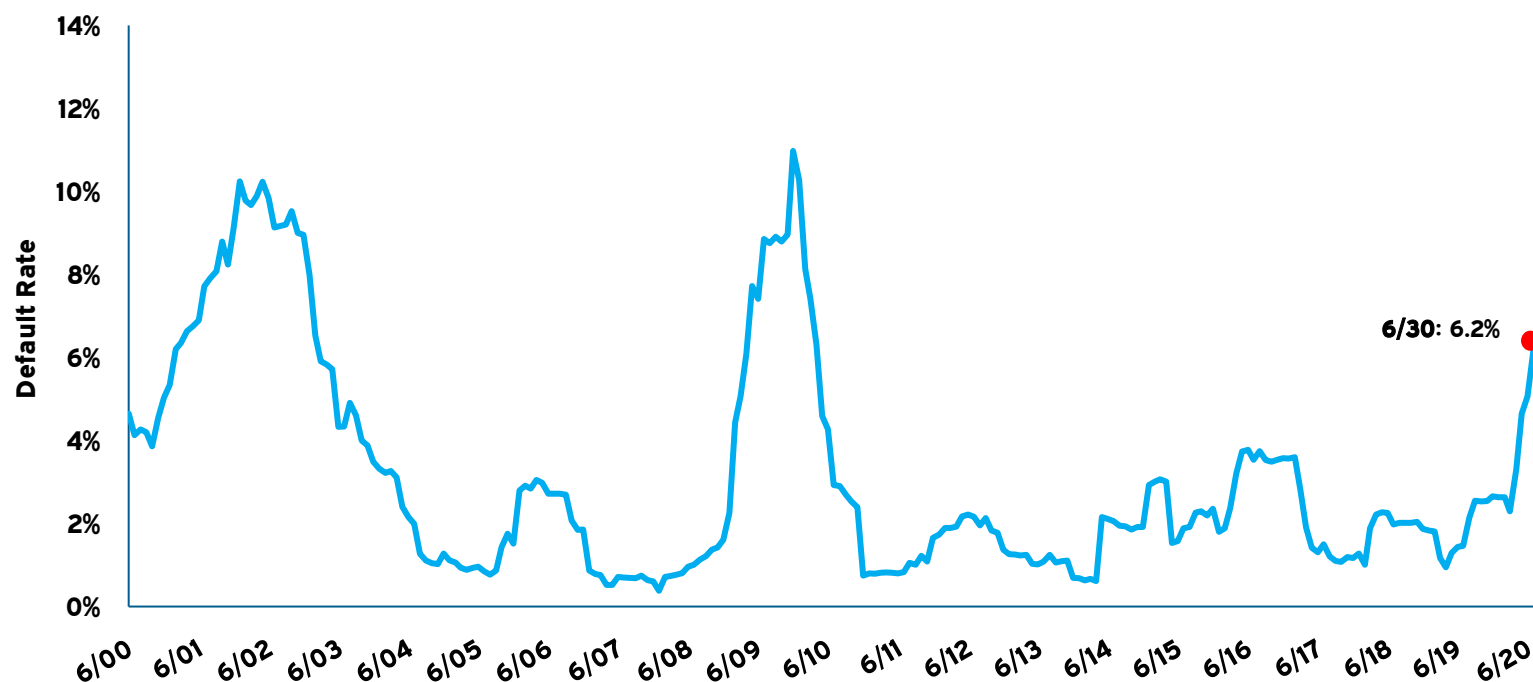
Credit Spreads (High Yield & Investment Grade)¹



- Credit spreads (the spread above a comparable Treasury bond) for investment grade and high yield corporate debt expanded sharply at the start of the pandemic as investors sought safety.
- Investment grade bonds held up better than high yield bonds. The Federal Reserve's corporate debt purchase program for investment grade and certain high yield securities recently downgraded from investment grade, was well received by investors, leading to a decline in spreads to around long-term averages.
- Overall, corporate debt issuance has more than doubled since 2008, which magnifies the impact of deterioration in the corporate debt market. This is particularly true in the energy sector, which represents over 10% of the high yield bond market.

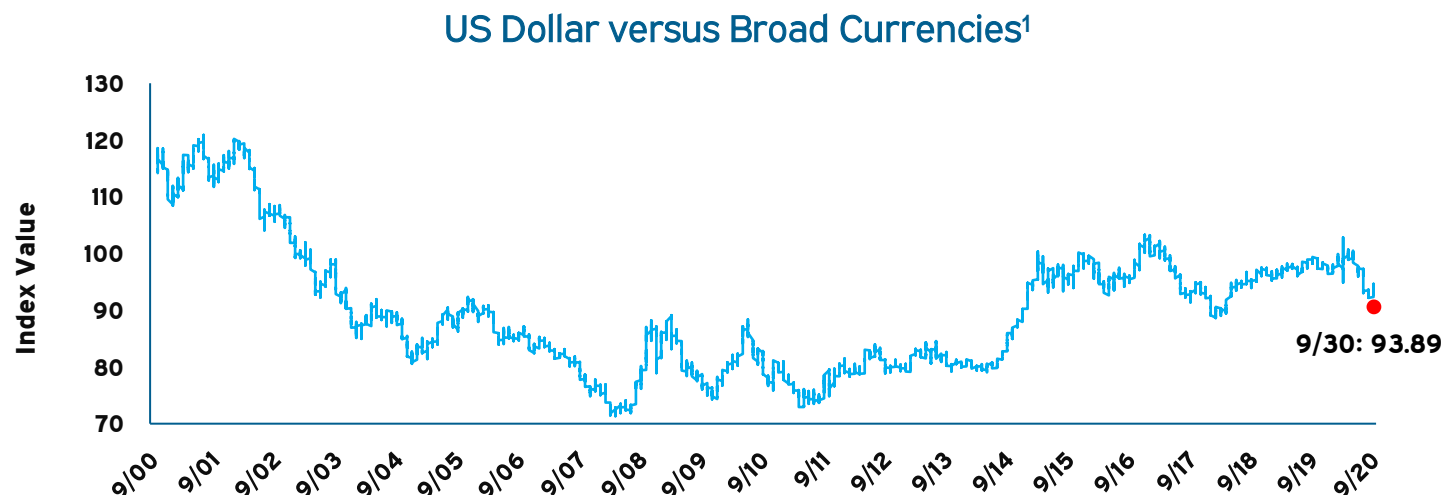
¹ Source: Federal Reserve Bank of St. Louis Economic Research. Data is as of September 30, 2020.

US High Yield Credit Defaults¹



- Even though spreads have declined, helped by the Federal Reserve's support, defaults, particularly in the high yield sector, have increased dramatically in 2020.
- The energy sector has experienced the greatest impact given the decline in oil prices, with the default rate over 10% and expectations for it to increase.

¹ Source: J.P. Morgan; S&P LCD. Most recent data is as of June 30, 2020.



- When financial markets began aggressively reacting to COVID-19 developments, the US dollar came under selling pressure as investors sought safe-haven exposure in currencies like the Japanese yen given its current account surplus and its status as the largest creditor globally.
- As the crisis grew into a pandemic, investors' preferences shifted to holding US dollars and highly liquid, short-term securities like US Treasury bills. This global demand for US dollars led to appreciation versus most major currencies.
- To help ease global demand for US dollars, the Federal Reserve, working with a number of global central banks, re-established the US dollar swap program, providing some relief to other currencies. Usage of the program continues to decline as dollar funding demands have eased.
- Recently we have seen some weakness in the dollar as the US struggles with containing the virus and investors seek higher-yielding non-US assets, particularly in emerging markets. This has created pressures on already stressed export-focused countries.
- Going forward, the dollar's safe haven quality and the relatively higher rates in the US could provide support.

¹ Source: Bloomberg. Represents the DXY Index. Data is as of September 30, 2020.

Economic Impact

Supply Chain Disruptions:

- Factories closing, increased cost of stagnant inventory, and disrupted supply agreements.
- Reduced travel, tourism, and separation policies including closed borders: Significant impact on service-based economies.

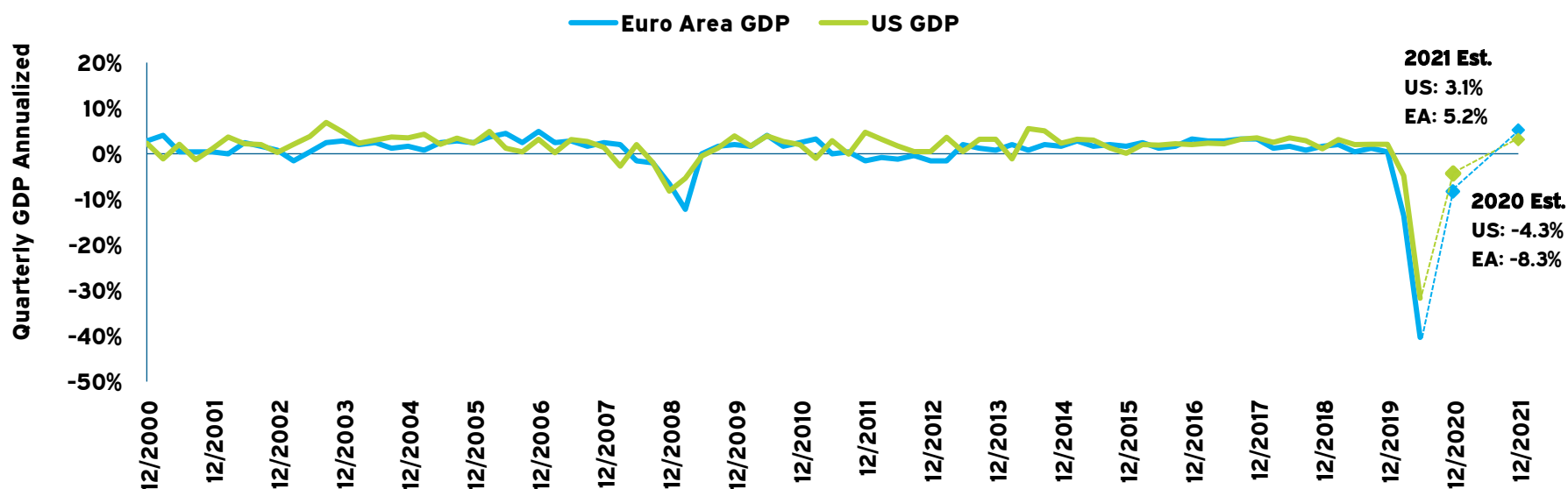
Labor Force Impacts:

- Huge layoffs across service and manufacturing economies.
- Increased strains as workforce productivity declines from increased societal responsibilities (e.g., home schooling of children) and lower functionality working from home.
- Illnesses from the disease will also depress the labor force.

Declines in Business and Consumer Sentiment:

- Sentiment drives investment and consumption, which leads to increased recessionary pressures as sentiment slips.

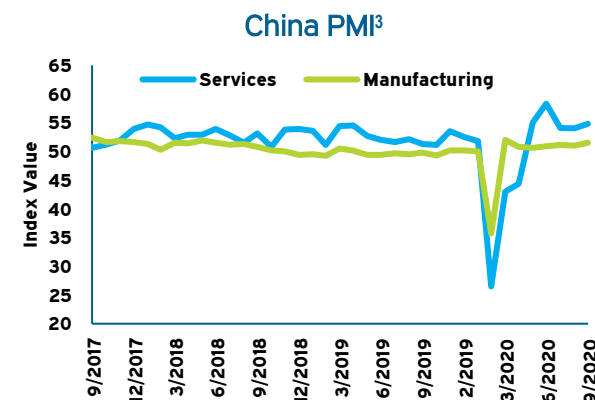
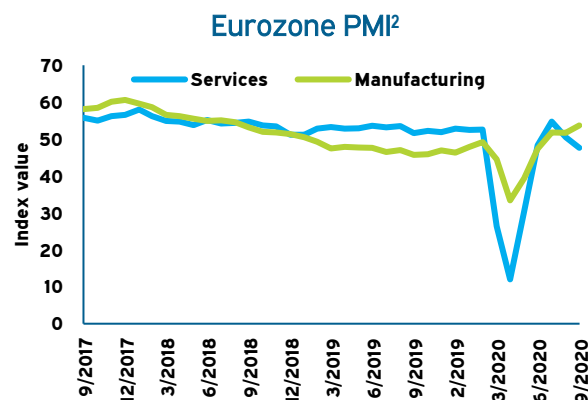
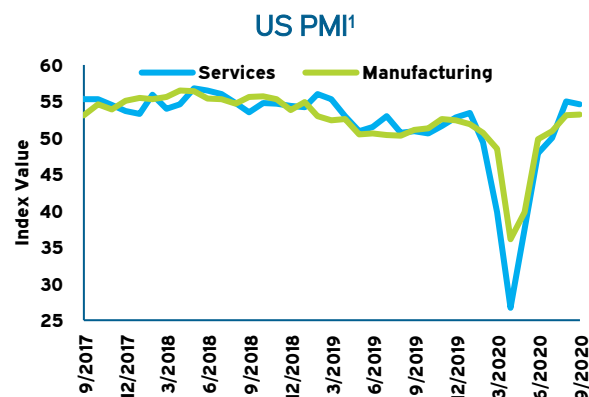
GDP Data Shows Impact of the Pandemic¹



- The global economy faces major recessionary pressures this year, but optimism remains for improvements in 2021, as economies are expected to gradually reopen.
- In the US, second quarter GDP posted a record (annualized) decline of -31.4%, officially putting the US in a recession. Similarly, growth in the Euro Area declined by a record amount with the major economies in Germany, France, Italy, and Spain experiencing historic declines.
- At the end of September, Bloomberg Economics estimated that third quarter US GDP growth could be as high as 25.1% (QoQ annualized). Full year US GDP growth is forecasted to decline by 4.3%.

¹ Source: Bloomberg and IMF. Q3 2020 data represents the third estimate of GDP for the Euro Area and United States. Euro Area figures annualized by Meketa. Projections via October 2020 IMF World Economic Outlook and represent annual numbers.

Global PMIs

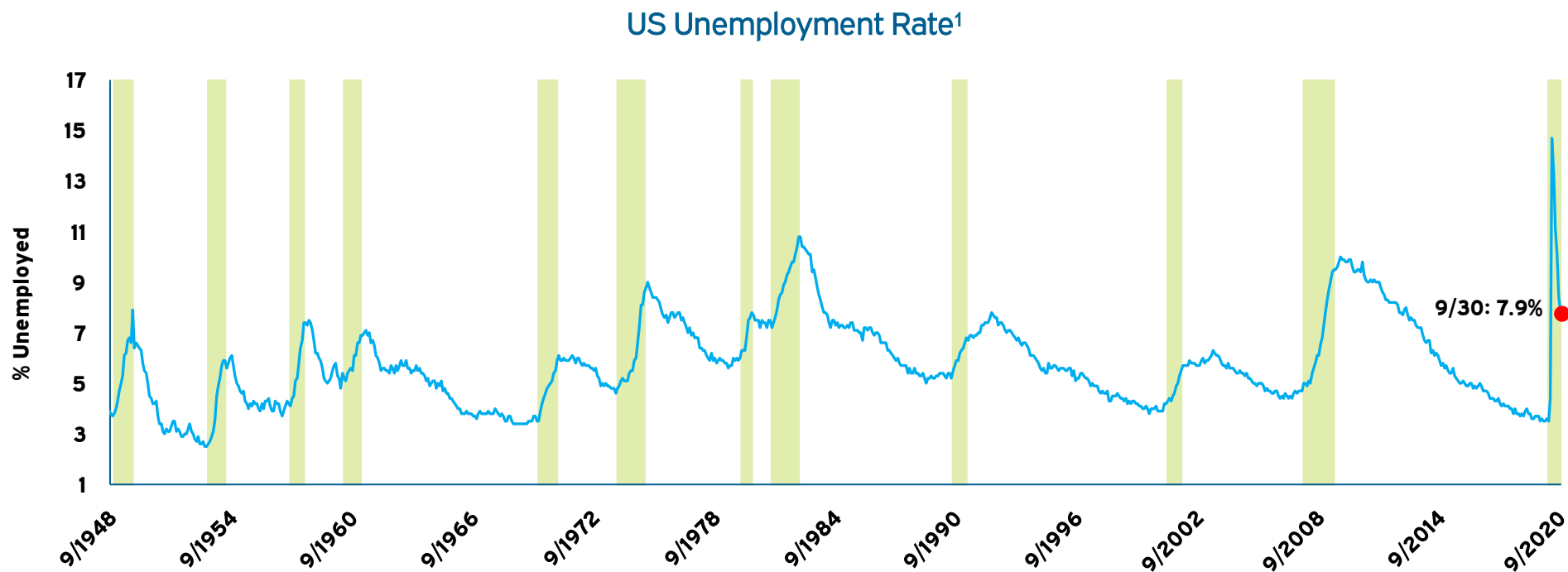


- Purchasing Managers Indices (PMI), which are based on surveys of private sector companies, initially collapsed across the world to record lows, as output, new orders, production, and employment were materially impacted by closed economies.
- Readings below 50 represent contractions across underlying components and act as a leading indicator of economic activity, including the future paths of GDP, employment, and industrial production.
- The services sector was particularly hard hit by the stay-at-home restrictions in many places.
- As the Chinese economy reopened, their PMI's, particularly in the service sector, recovered materially. In the US and Europe, the indices have also improved from their lows to above contraction levels in most cases.

¹ Source: Bloomberg. US Markit Services and Manufacturing PMI. Data is as of September 2020.

² Source: Bloomberg. Eurozone Markit Services and Manufacturing PMI. Data is as of September 2020.

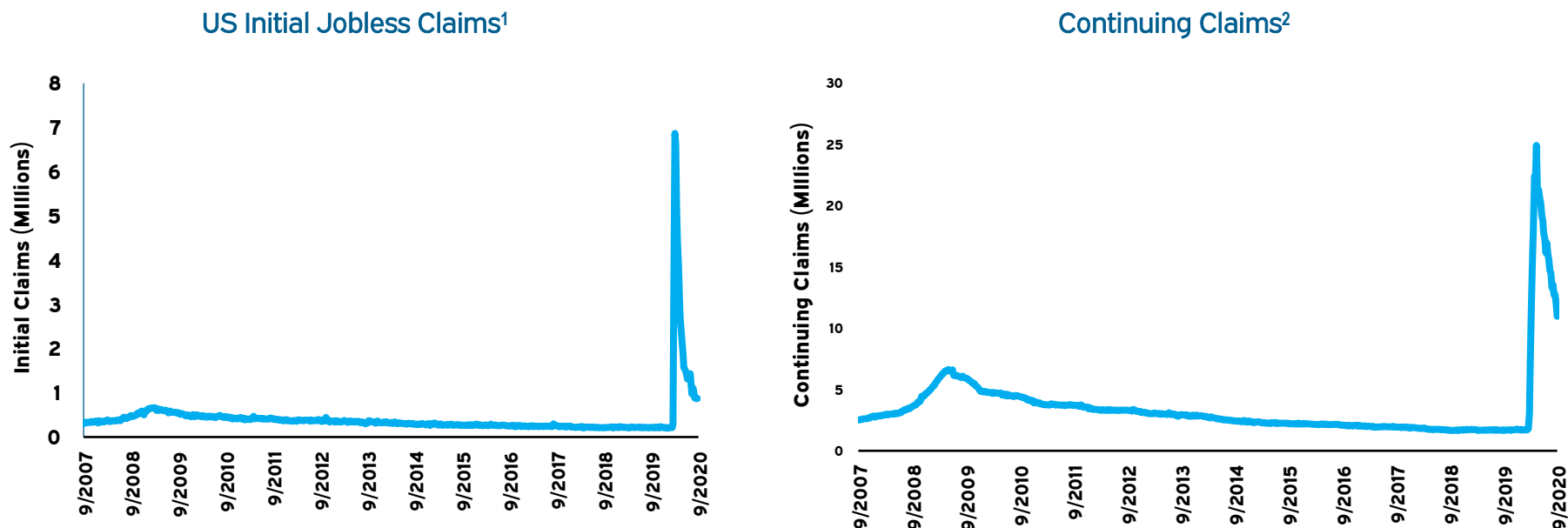
³ Source: Bloomberg. Caixin Services and Manufacturing PMI. Data is as of September 2020.



- In September, the unemployment rate continued its decline from the recent April 14.7% peak, falling to 7.9% as businesses and consumers emerged from the lockdown.
- Despite the improvement, unemployment levels remain well above pre-virus readings and are likely higher than reported, as some workers appear misclassified. According to the Bureau of Labor Statistics, absent the misclassification issue, the September unemployment rate would be higher by 0.4%.
- The recent spike in infections and the potential shutting down of some parts of the economy, could lead to an increase in the unemployment rate going forward.

¹ Source: Bloomberg. Data is as of September 30, 2020. Bars represent recessions.

US Jobless Claims

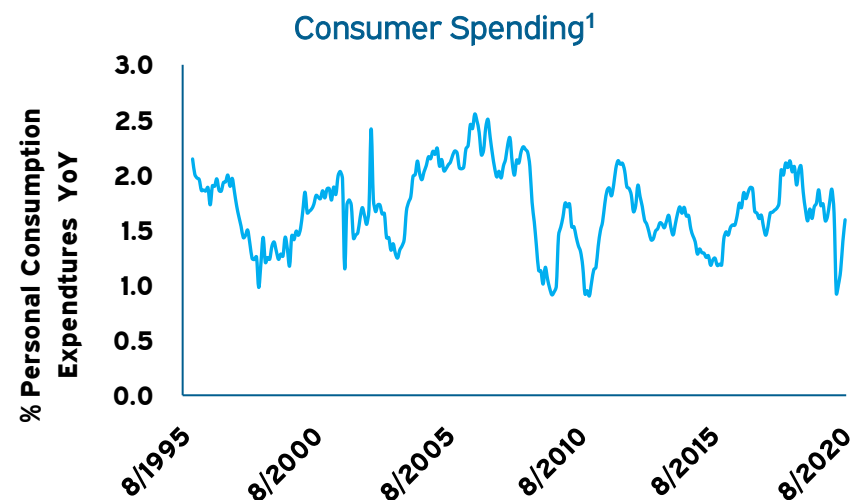
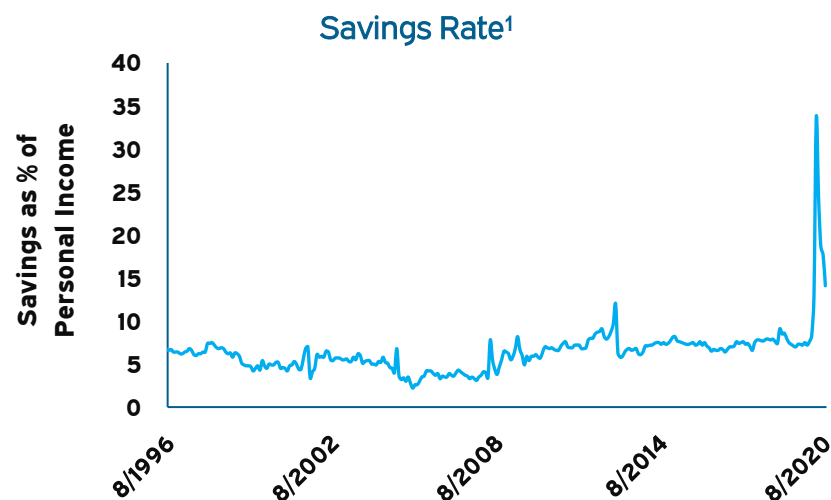


- Over the last 28 weeks, roughly 63 million people filed for initial unemployment. This level far exceeds the 22 million jobs added since the GFC, highlighting the unprecedented impact of the virus.
- Despite the continued decline in initial jobless claims to below 1.0 million per week, levels remain many multiples above the worst reading during the Global Financial Crisis.
- Continuing jobless claims (i.e., those currently receiving benefits) has also declined from record levels, but remains elevated at 11.8 million.

¹ Source: Bloomberg. First reading of seasonally adjusted initial jobless claims. Data is as of September 25, 2020.

² Source: Bloomberg. US Continuing Jobless Claims SA. Data is as of September 25, 2020.

Savings and Spending

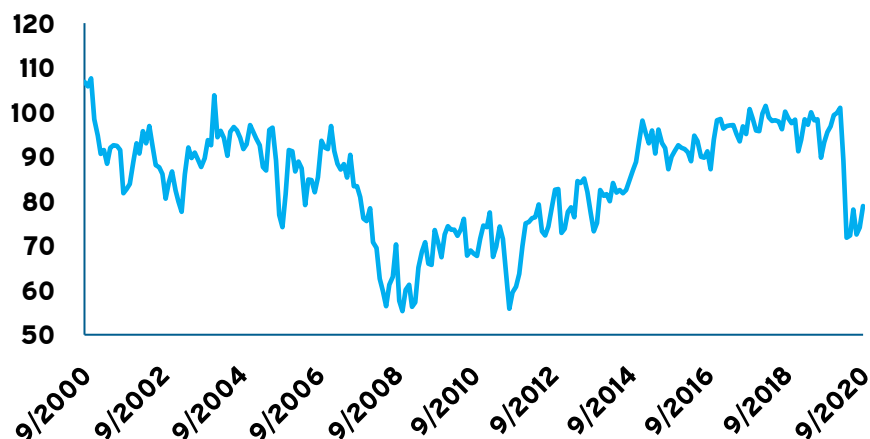


- Fiscal programs including stimulus checks, enhanced unemployment benefits, and loans to small businesses through the Paycheck Protection Program (PPP) have largely supported income levels through the shutdown.
- Despite the income support, the savings rate increased due to the decline in consumer spending, driven by the initial lock-down of the economy, and by uncertainties related to the future of the job market and stimulus programs.
- More recently, the savings rate declined from its peak as spending increased with the economy slowly reopening.

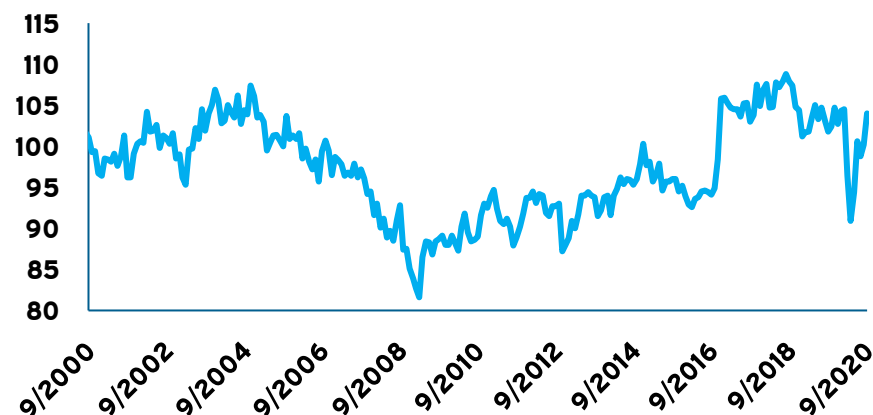
¹ Source: Bloomberg. Latest data is as of August 31, 2020.

Sentiment Indicators

University of Michigan Consumer Sentiment¹



Small Business Confidence²



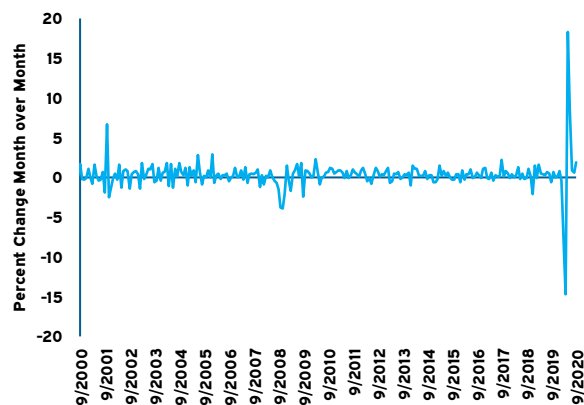
- A strong indicator of future economic activity are the attitudes of businesses and consumers today.
- Consumer spending comprises close to 70% of US GDP, making the attitudes of consumers an important driver of economic growth. Additionally, small businesses generate around half of US GDP, making sentiment in that segment important too.
- Sentiment indicators have shown some improvements as the economy re-opens, particularly for small businesses, but they remain below prior levels.

¹ Source: Bloomberg. University of Michigan Consumer Sentiment Index. Data is as of September 30, 2020.

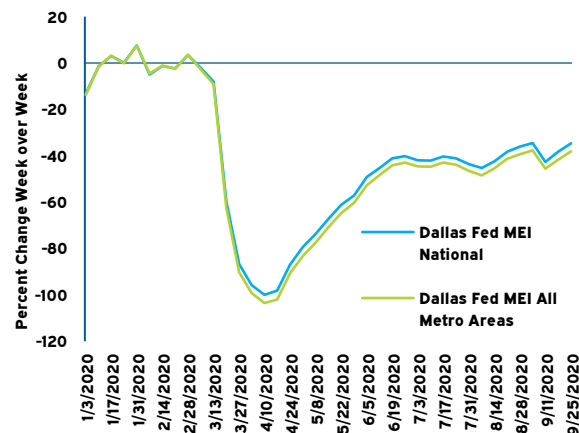
² Source: Bloomberg. NFIB Small Business Optimism Index. Latest data is as of September 30, 2020.

Some US Data has Improved

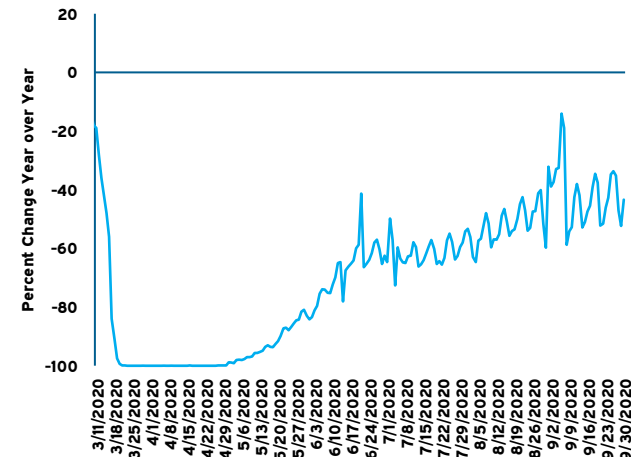
Retail Sales¹



Dallas Fed Mobility and Engagement Index²



OpenTable Seated Diners YoY % Change³



- There have been improvements in high frequency data, but overall levels remain well below historical averages, and have slowed in some instances given the recent spike in cases.
- Generally, people have become more active as restrictions eased and stores reopened. Retail sales recovered from a record decline with five consecutive months of growth as the economy reopened, but the pace of growth has been declining.
- Restaurants saw initial improvements before declining and leveling-off, as in-store dining has been cited as a key contributor to increases in infections.

¹ Source: Bloomberg. Data is as of September 30, 2020 and represents the US Retail Sales SA MoM%.

² Source: Bloomberg. Data is as of September 25, 2020 and represents the deviation from normal mobility behaviors induced by COVID-19 (formerly the "Social Distancing Index"). The index represents a weighted average of various lengths of time that a mobile device, like a cell phone, leaves its "home" or place of residence, and/or how long a device stays at home. A decline in this index represents a mobile device at home for a longer period of time than average.

³ Source: Bloomberg. This data shows year-over-year seated diners at restaurants on the OpenTable network across all channels: online reservations, phone reservations, and walk-ins. Only states or cities with 50+ restaurants in the sample are included. All such restaurants on the OpenTable network in either period are included. Data is as of September 30, 2020. Index start date 2/19/20.

Looking Forward...

- There will be significant economic impact and a global recession.
 - How deep it will be and how long it will last depend on factors (below) that are unknowable at this time.
- The length of the virus and country responses will be key considerations.
 - As of now, it is not clear the end is in sight, particularly with the recent increases in cases in certain areas; however, individual countries are attempting to lay the groundwork to support recoveries in their economies.
- Central banks and governments are pledging support, but will it be enough?
 - Market reactions to announced policies have been positive, but additional support will likely be required until the virus gets better contained and a vaccine is developed.
- Expect heightened market volatility should economies start to shut back down in response to the recent spike in cases.
 - This has been a consistent theme recently; volatility is likely to remain at risk of spiking again for the foreseeable future.
- It is important to retain a long-term focus.
 - History supports the argument that maintaining a long-term focus will ultimately prove beneficial for diversified portfolios.

Prior Drawdowns and Recoveries from 1926-2020¹

Period	Peak-to-Trough Decline of the S&P 500	Approximate Time to Recovery
Sept 1929 to June 1932	-85%	266 months
February 1937 to April 1942	-57%	48 months
May 1946 to February 1948	-25%	27 months
August 1956 to October 1957	-22%	11 months
December 1961 to June 1962	-28%	14 months
February 1966 to October 1966	-22%	7 months
November 1968 to May 1970	-36%	21 months
January 1973 to October 1974	-48%	69 months
September 1976 to March 1978	-19%	17 months
November 1980 to August 1982	-27%	3 months
August 1987 to December 1987	-32%	19 months
July 1990 to October 1990	-20%	4 months
July 1998 to August 1998	-19%	3 months
March 2000 to October 2002	-49%	56 months
October 2007 to March 2009	-57%	49 months
February 2020 to August 2020	-34%	6 months
Average	-36%	39 months
Average ex. Great Depression	-33%	24 months

- As markets have fully recovered to above pre-COVID levels, questions remain about the sustainability of the rally.
- The six-month recovery period represents one of the shortest on record, similar to the historic decline.

¹ Source: Goldman Sachs.

Implications for Clients

- Portfolios have experienced significant improvements from the March lows.
- Diversification and a disciplined rebalancing approach worked.
- Even though equity markets have recovered from their lows, it is important to remain vigilant and be prepared to rebalance if high volatility returns.
 - Before rebalancing, consider changes in liquidity needs given the potential for cash inflows to decline in some cases.
 - Also, consider the cost of rebalancing if investment liquidity declines.

Performance YTD (through September 30, 2020)

S&P 500	ACWI (ex. US)	Aggregate Bond Index	Balanced Portfolio ¹
5.6%	-5.4%	6.8%	3.6%

- Meketa will continue to monitor the situation and communicate frequently.
 - The situation is fluid and the economic impact is uncertain at this stage.
- Please feel free to reach out with any questions.

¹ Source: InvestorForce. Balanced Portfolio represents 60% MSCI ACWI and 40% Bloomberg Barclays Global Aggregate.

Disclaimers

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