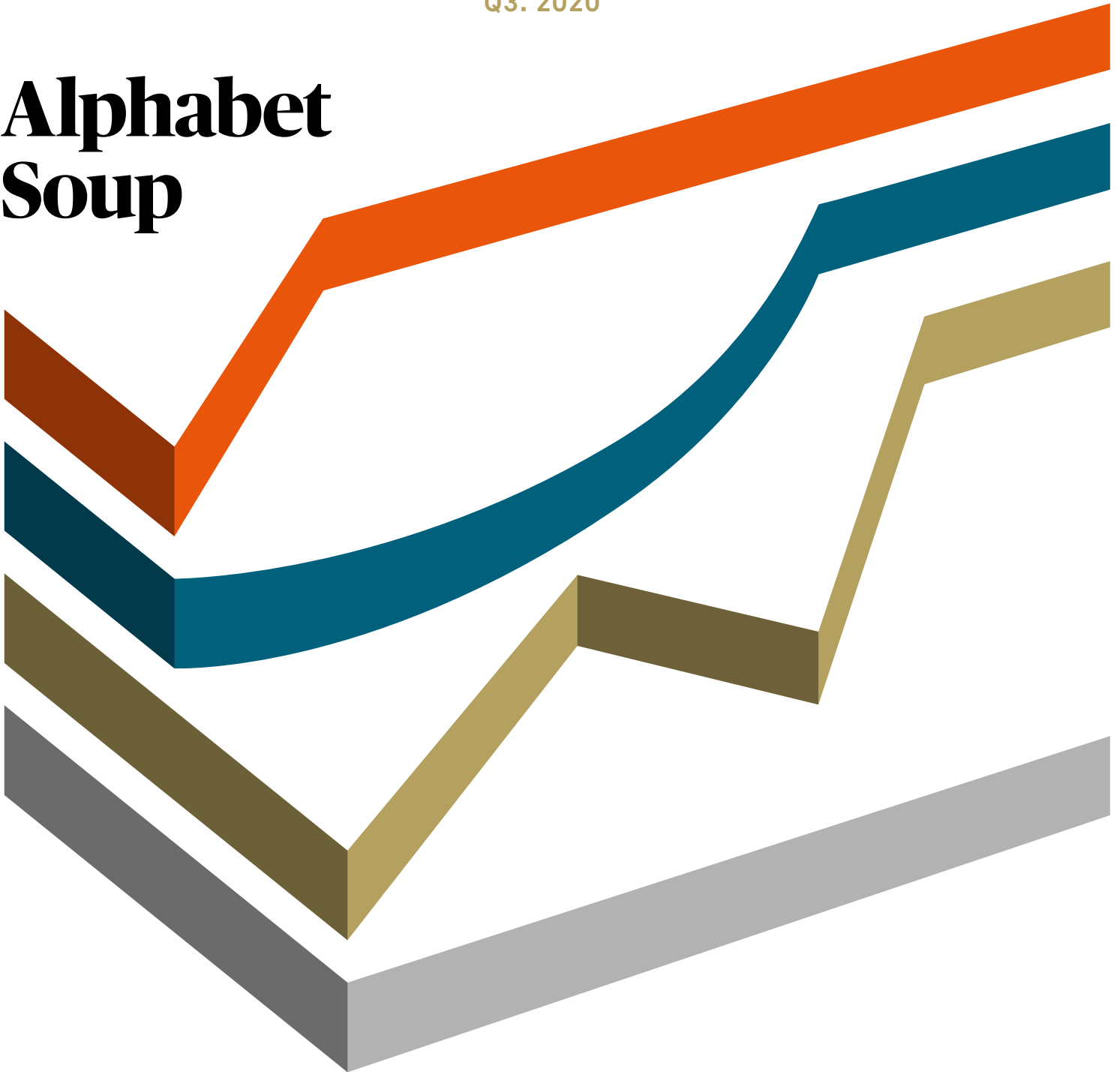




# Vantage Point

Q3. 2020

## Alphabet Soup







# Introduction



Since the last edition of Vantage Point, Covid-19 has wreaked both human and economic devastation on the world. At the time of writing (June 25), worldwide over 9 million people have contracted the disease and more than 450,000 have died from it. The response has been to lock down a number of economies in an attempt to reduce the transmission rate and reduce the so-called R number to below 1. The upshot has been the largest global economic contraction since economic records began: the world economy could have shrunk by around 10% in Q2, with huge knock-on effects onto employment and business profitability. The economic policy response has been impressive, as both central banks and governments have stepped in to prevent recession turning into depression. In this edition, we look back at what we've been through, look ahead to what might happen, assess the monetary and fiscal policy response, analyse the impact on markets and finally draw some broad investment conclusions in what is a highly uncertain and rapidly-evolving situation.

There is good news and bad news about what we've been through. The good news is that we may be past the worst: the world economy probably troughed in late-April or early May. The bad news is that the worst was, economically speaking, very bad indeed. The epicenter of the disease moved from China in Q1 to Europe and the US in Q2. Some European economies – Italy, Spain, the UK – may well contract by a quarter to a third in the second quarter. The US economy is likely to have shrunk by upwards of 10% (quarterly change, not annualized), while unemployment has risen by over 30 million. Lockdown measures are beginning to ease now and we should see a pickup in activity shortly, but the extent and duration of the recovery remain hugely uncertain.

Looking ahead, we once again describe an alphabet soup of potential recovery scenarios from here. We describe a 'V', a 'W/U', an 'L', and an 'I' scenario. Crucially, we also define precisely what we mean by each scenario, differentiating them by the time it takes to recover the pre-crisis level of GDP. Given the scale of the decline to date, growth rates in the second half of the year are likely to be very high, even if economies are only in reality opening up slowly – so GDP levels are what matter here and we have recast our GDP fan charts into levels to make that point clear.

What kind of recovery we get depends fundamentally on the course of the disease from here. If a large number of economies can exit lockdown without seeing the frequency of cases spike beyond levels health systems can cope with, then a 'V'-shaped recovery is on the cards, with global GDP returning to pre-crisis levels by the middle of 2021. However, if there is a large second wave, possibly in the Northern Hemisphere Fall/Autumn that necessitates a return to partial or full lockdown, then a 'W/U'-shaped recovery becomes likely and we are unlikely to see pre-crisis levels of GDP restored until 2022. If, in either case, we see permanent demand and capacity destruction, a prolonged, slow or 'L'-shaped recovery, becomes likely. That scenario could also trigger another bout of financial market instability, especially if a wave of bankruptcies and defaults causes parts of the credit market to collapse. Finally, our 'I' scenario refers to 'inflation'; it is a variant of the 'V', in which a stronger-than-expected recovery, coupled with some reduction in supply capacity, causes inflationary pressure to rise in 2021 and forces central banks to reconsider their ultra-easy stance much sooner than markets currently expect.

As usual, we attach probabilities to these scenarios and present all our forecasts in the form of ‘fan charts,’ which describe not just the most-likely and weighted-average outcomes, but also the level of uncertainty and where the balance of risks lies. In times like these, investors need to take account of risk as well as return and our fan charts help them to do that. After much debate, we have settled on the following probabilities for our scenarios: the ‘V’ gets 50%; ‘W/U’ 30%; ‘L’ 15% and ‘I’ just 5%. In short, we are a little bit more optimistic about the chances of a ‘V’ than we were last time, but the balance of risks remains firmly shifted to the downside. Our downside scenario probabilities add up to 45%, so are slightly odds against, but the outcomes in those scenarios are so negative that a number of our fan charts display a large negative skew.

We conclude with some broad investment conclusions. One difficulty is that equity markets in particular have been rallying strongly since late March, on the back of decisive central bank intervention designed to stave off another financial

crisis. They seem to be pricing in a relatively strong ‘V’-shaped recovery and, although realised volatility remains high, and measures of financial market stress such as Libor-OIS spreads remain higher than they were pre-crisis, markets do not seem to be pricing in as much downside risk as our fan charts would imply. As a result, the investment advice is nuanced: cautious but gradually increasing allocation to risky assets (equity and credit), but at lower-than-normal levels of overall portfolio risk, coupled with hedges where possible. That’s a difficult message to get over, let alone for investors to implement, but it reflects the precariousness and uncertainty of the situation we find ourselves in. Let’s hope we emerge from it soon.



A stylized, handwritten signature in black ink, consisting of a large 'S' and 'D' followed by a long horizontal stroke.

**SHAMIK DHAR**  
**CHIEF ECONOMIST**

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# Executive Summary

## WHAT WE THINK – ECONOMIC SCENARIOS

50%

### V-shaped recovery

We are past the trough in global economic activity and peak lockdowns. Economies continue to reopen. Health care systems are able to manage any new outbreaks. Consumers and businesses adapt helping to limit the transmission rate from spiking higher. A second round of lockdowns is prevented and GDP in most countries recovers to pre-crisis levels by the second half of 2021. Fiscal and monetary stimulus, pent up demand, and less supply side disruption support growth. Credit markets ease further and risk assets continue to gain as investors increasingly learn that the long-term growth consequences of the disease will be limited.

30%

### W/U-shaped recovery

Covid-19 virus cases resurface in the northern hemisphere Fall/Autumn leading to substantial and widespread outbreaks. Even if more localized, the virus spread is large enough to require a return to partial or full lockdowns despite better equipped health systems. Similar to the first wave, global economic activity falls sharply. Renewed weakness from already vulnerable economies and uncertainty trigger widespread risk-off sentiment, which lasts longer than seen during February and March. A second financial shakeout ensues as stocks decline towards the lows in March and Treasury yields approach 0%. Policymakers struggle to put a floor on rapidly deteriorating sentiment and stress in dollar funding markets picks up, particularly for countries not included in the Fed's existing swap lines agreements. Markets bottom by mid-2021 and GDP does not recover to pre-crisis levels until the second half of 2022.

15%

### L-shaped recovery

Just like our W/U scenario, this scenario sees a sizeable second wave in major countries in Q3-Q4 2020 that necessitates partial or full lockdowns. Unlike our W/U scenario, there is a permanent hit to output in major economies (hence the L-shape recovery), as outbreaks trigger severing of global supply chains and accelerate existing deglobalization trends. The impact on both Europe and the US is huge with permanent demand and capacity destruction. The disruptions to supply chains lead to higher global costs and inflationary pressure. Central banks can accommodate to some degree, but not as much as under the V-shaped scenario. Risk markets sell off, global yields dive further into negative territory. In the longer term, the liberal international trading/ investment order is crippled and a new narrative takes hold: the virus has accelerated an underlying trend in which re-shoring and nationalism means higher costs and lower growth for years.

5%

### I is for Inflation

In terms of the path of the virus, this scenario is much like the V-shaped one. The difference here is that the US growth recovery is stronger than expected, capacity constraints begin to bite, and the pick-up in US inflation is more rapid, prompting the Fed to tighten in Q2 2021, much sooner than markets currently expect. US remains the most resilient economy and resumes its upward trajectory in Q3 2020. Tighter US policy depresses activity in the Eurozone and China. The dollar shortage reappears and capital flight from EMs picks up and the 'carry trade' reverses. China, Asia and other EMs hit hardest, but knock-on effects to developed economies too, notably Eurozone.

PROBABILITY\*

SCENARIO

## CAPITAL MARKET PRICING – WHAT THE MARKETS THINK

### Short Rates



- The market is pricing no policy rate hikes across major advanced economies for the foreseeable future. At face value, options markets suggest a significant probability of negative policy rates in the US by the end of 2020/H1 2021. However, negative term premia even at the short end of the interest rates curve and hedging behavior of financial institutions mean that the probability of negative rates is lower than markets might appear to be pricing.

### Fixed Income



- Forward curves in the US stabilized after the ~100bp fall in Q1, with rates at the longer end increasing by around 20bp in Q2 but rates at the shorter end moving slightly lower.
- Nominal yields remain compressed along the whole yield curve, and the market appears to be pricing outcomes for interest rates that are slightly lower than our fan chart suggests.
- A decomposition of US yields into forward expected short rates and term premia suggests that interest rates are expected to increase faster than suggested by headline nominal yields.
- The market expects inflation to remain subdued in the longer run in both the US and the Eurozone. Option prices suggest that the market is assigning a 50-60% probability of US CPI inflation remaining below 1% on average over the next 5-years and a 5% probability that inflation will overshoot target and remain at above 3% on average.

### Equities



- Equity markets posted an impressive recovery in April and May as risk sentiment and growth expectations improved on the back of lockdown easing and supportive policy.
- Earnings per share (EPS) expectations have been revised down over the next 12 and 24 months, and forward price-earnings ratios stand at post dot-com bubble highs. In part this reflects a sharp fall in the discount rate from both the safe component as interest rates have fallen and the risk premium via central banks helping to eliminate some of the left-tail risk.

### SUMMARY

Markets have rallied significantly in the past few months, with equities reversing a significant proportion of the fall in Q1. With monetary policy expected to stay loose over the next couple years, yields should remain low and broader financial conditions will continue to be supported. Over the next several months, and absent any further shock, we expect to see a similar environment to April/May, albeit with fewer extreme moves. But given the high probability and severity of our negative scenarios, risks remain to the downside.

### Credit

- The strong headline divergence between the current level of economy activity and financial market pricing is also evident in credit. There appears to be little compensation overall to take on credit risk given historically low levels of economic activity, another sign that the significant policy intervention by governments and central banks has been effective so far in a) preventing solvency issues for illiquid but otherwise sound firms and b) supporting expectations that this will continue being the case in the near future.



## INVESTMENT CONCLUSIONS

As usual, our investment conclusions follow from the main differences between what we expect, as expressed in our fan charts, and what the market is pricing.

### Equities

- Our equity fan charts generally show markets rising as a central expectation, but with large uncertainty and a big downside skew, thanks to the severity of the downside outcomes. Our overall attitude is therefore cautiously positive towards equities, but expect judicious stock selection to be key.
- We acknowledge the opportunity offered by US equity markets and suggest a balanced approach to cyclical sectors (Industrials, Financials, Energy) and higher growth sectors (IT, Health Care) as we expect cash to re-enter equities as economies continue to reopen.
- Given interest rates are likely to stay low for a long time, dividend-paying equities are an attractive income generator and less volatile component of equity allocations. Small businesses have been hit hardest by this crisis, but fiscal support and the expectation for a rapid restart have driven sentiment higher, improving the outlook for small-cap stocks.
- Europe faces fiscal headwinds that increase downside risks, but there is room for European equities to catch-up through 2020 as global demand comes back online and the region is supported by the expectation for a large fiscal support package.
- EM risks have moderated recently as several major countries have started to ease lockdowns. The USD has shown weakening bias, and oil prices have started to rise again. Still, the macro environment for many EMs remains challenging and downside risks are present. As the pace of economic recovery will be country-specific, EM asset performance will remain idiosyncratic.

### Alternative

- Multi-asset strategies that utilize put options for protecting against swift downdrafts in equities, and those with the flexibility to quickly rotate into cash if one of our downside scenarios becomes increasingly likely.
- We believe the market is currently underpricing inflation risk and investors can protect purchasing power with real assets and precious metals.

### US Dollar

- In the short term, the dollar is likely to act as a barometer of global financial stability, rising when stresses increase, but falling back as confidence in the global financial system returns. The probability-weighted average points to the dollar being broadly flat over our forecast horizon, but with higher-than-usual volatility and an upside skew. This outlook isn't very different from market pricing, given small interest rate differentials across the major economies and subsiding stress indicators, such as the cross-currency basis. Again, this outlook is underpinned by central banks' willingness to supply dollars in the event of another lurch into crisis.

### Fixed Income

- Given the plethora of monetary policy and fiscal support, particularly in the US, we believe the risk of a spike in sovereign yields is limited and the US yield curve is likely to see a gradual steepening as the recovery ensues. This asset class remains an effective hedge against macro risks and despite historically low yields, still offers diversification value in the event of a downside shock.
- Our new credit fan charts show the high-yield less investment grade spread most likely remaining in the 300-500bps range. There is a large upside skew, however this is somewhat smaller than the downside skew in equities. To an extent, that reflects a confidence that the Federal Reserve and other central banks can offset a credit crunch in all but the most challenging scenario (the 'L'). Overall, this suggests cyclical credits can offer exposure to a recovery without presenting outsize left-tail risks.

SECTION 1

# Economics



SECTION 1A

# Economic Scenarios

**50%**  
(Probability)

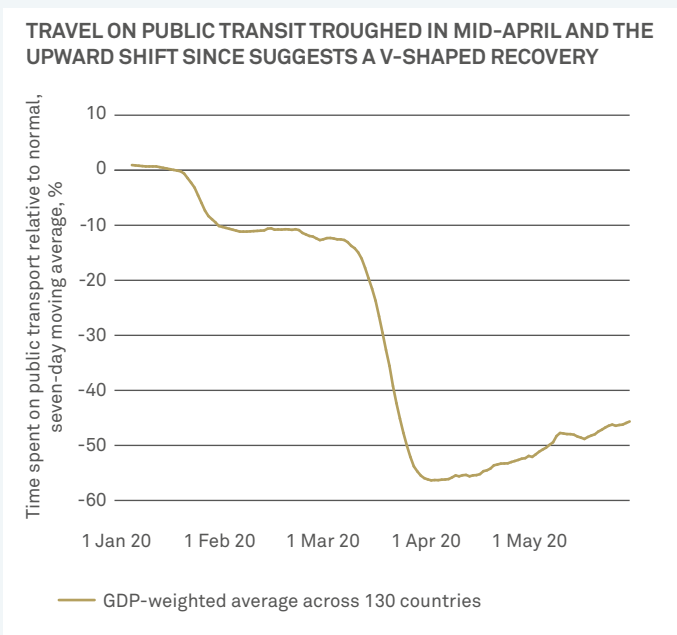
## Scenario #1: V-shaped recovery

There is some evidence from across 120 countries and over 100 days of data that the disease is falling away faster than pure lockdown effects can explain. The appendix describes the econometrics in more detail, but essentially there are two potential explanations for this, one optimistic one less so. The optimistic interpretation is that immunity levels, a change in people's behavior and heterogeneity in transmission rates mean the disease is less potent than it was, so lockdown restrictions coupled with effective track-and-trace policies can facilitate a sharp recovery without a major second wave. The fact that a number of Asian and European countries have been able to relax lockdowns without seeing significant secondary spikes in infection rates lends some support to this hypothesis. This observation, together with analysis of over 200 recessions since 1900 (see appendix) that suggests V-shaped recoveries are by

far the most common has informed our decision to raise our 'V' probability to 50% from 35%. We describe the second, less optimistic interpretation in our 'W' scenario below.

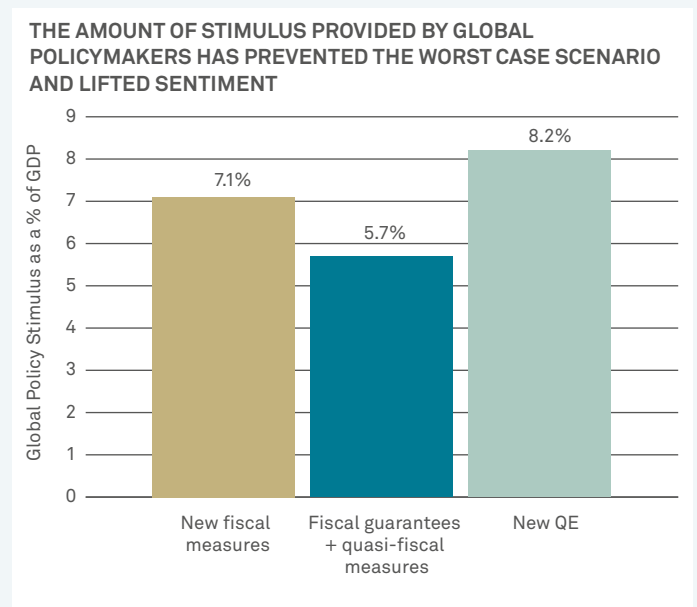
So, in this scenario we are past the trough in global economic activity. Economies continue to reopen and an economically-disruptive second wave of infections is prevented. Any further Covid-19 spread is contained by effective track-and-trace systems, as well by the capacity and ability of health care systems, including improved treatments. Greater social awareness allows consumers and business to reengage with each other, albeit in new ways that respect new social distancing and hygiene norms. In other words, new outbreaks are contained without the need to impose lockdowns similar to those seen to date.

### Global Public Transportation Usage Relative to Trend



Daily data as of May 31, 2020. Global is a GDP weighted proxy of 130 countries. Source: Google and Fathom Consulting.

### Global Policy Stimulus as a % of GDP\*



\*US, China, Japan, UK, Germany, France, Italy, Spain, Eurozone, Switzerland, Australia, Canada, Brazil, Russia, India, Korea, Indonesia, Mexico, Poland, Turkey, 2019 GDP. Fiscal guarantees refers to maximum amounts announced by governments. Quasi-fiscal measures include lending and support packages to be financed by various public sector institutions and agencies such as national development banks, and which are not guaranteed by or part of the government. Source: Fitch Ratings, IMF, and Strategas.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

As a result, in most countries GDP recovers to its pre-crisis level by the second half of 2021. Having reopened the earliest, China and the rest of Asia lead the way, followed by the US and Europe. China is above pre-crisis levels of output by Q1 2021 while the US and the Eurozone get there by Q3 2021.

Historically unprecedented fiscal and monetary stimulus, amounting to more than 10% of global GDP, along with pent up demand continue to boost activity. Services, after bearing the brunt of the slowdown during lockdowns, lead as economies learn to live with and adapt to the disease. Inventories are rebuilt and there is less supply side disruption, so manufacturing improves as well.

Subdued inflation and expectations keeps interest rates low and policy easy. Eventually, improved activity and sentiment lead the Fed to raise rates by 25 bp in Q4 2021. Credit market concerns, after spiking in March, retreat further as the policy backstop remains in place and profits gain on the back of a better economy and less uncertain outlook. With increased clarity that the long-term growth consequences of the disease are limited, the rally in risk assets persists while the upward momentum slows.

**30%**  
(Probability)

## Scenario #2: W/U-shaped recovery

In our next highest probability scenario, which we lowered by 5% from our last report, the virus resurges in the northern hemisphere Fall/Autumn leading to substantial and widespread outbreaks. Despite health care systems that are better prepared to cope with the disease, this “second wave”, even if more localized, is large enough to require a return to partial or full lockdowns.

The less-optimistic interpretation of the infection/fatality data described in the “V” section above is that the declines we are witnessing are seasonal and that track-and-trace systems are not well enough developed in a number of major economies. If that is the case, then we might expect to see a significant second wave in the northern hemisphere fall/autumn, especially if it turns out that some countries are easing lockdown measures ‘too soon’, while the R number remains uncomfortably close to 1. Here the experience of countries like Iran, India, Saudi Arabia, Germany and even some of the southern states of the US, where infection rates appear to be rising soon after lockdowns restrictions have been eased, are important evidence.

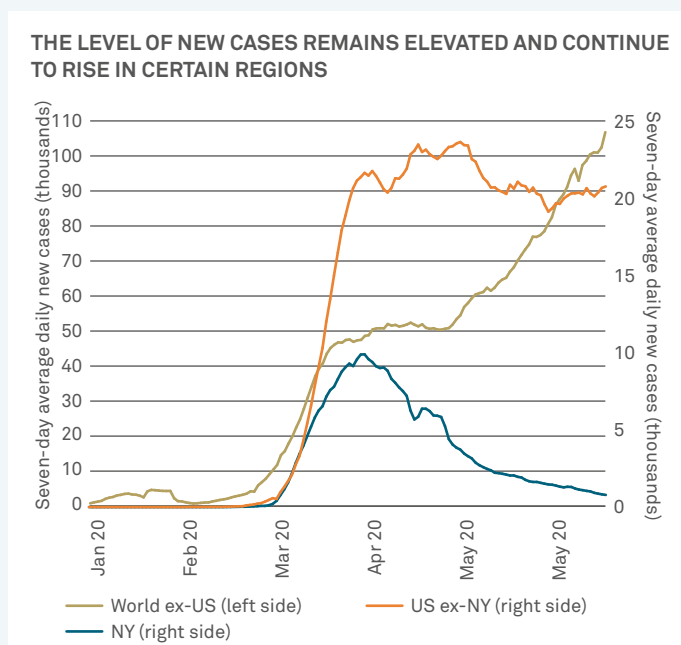
So, in this scenario renewed weakness and uncertainty trigger widespread risk-off sentiment, probably in late Q3/Q4. The S&P 500 sells off and falls back to the lows last seen in March. Policymakers, after injecting unprecedented stimulus during the first half of 2020, find it more difficult to put a floor on falling

sentiment. US-China relations deteriorate further, adding more uncertainty to the outlook, particularly around the time of the US election.

Risk premia rise sharply and financial conditions tighten significantly. Credit prices fall, particularly in high leveraged corporates and economies. US 10-year Treasury yields drop close to 0% with a non-zero probability of dipping into negative territory. Despite the current policy backstop along with additional coordinated central bank action, a global shortage of dollars returns and generates stress in foreign exchange (basis swaps) - particularly for countries not included in the Fed’s existing swap lines agreements, sovereign fixed income and dollar funding markets more generally. The US dollar rises sharply, escalating funding pressure particularly in some emerging markets.

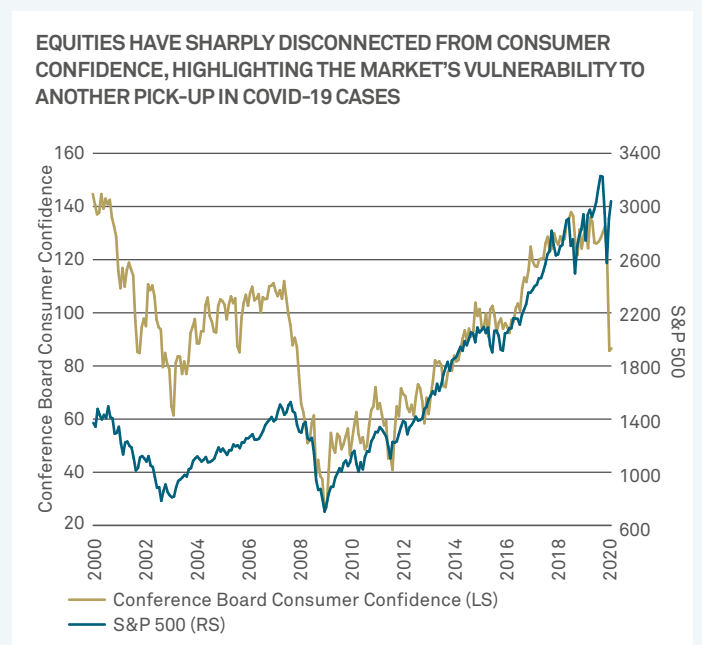
Eventually, the virus spread is brought back under control. But thanks to this renewed disruption, GDP does not recover to pre-crisis levels until the second half of 2022. Given the heightened collateral damage and less effective policy, the duration of the market sell-off lasts longer than that in February-March. The market recovery begins sometime in early 2021 and doesn’t reach pre-crisis levels until the end of 2022. Inflation goes into negative territory and then remains below target levels leaving central bank rates unchanged.

### Global Covid-19, 7-day average in new cases (thousands)



Daily data as of June 13, 2020. Source: Bloomberg.

### US Consumer Confidence vs. S&P 500



Monthly data as of May 31, 2020. Source: Bloomberg.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

**15%**  
(Probability)

### Scenario #3: L-shaped recovery

Just like our W/U scenario, this scenario sees a sizeable second wave in major countries in Q3-Q4 2020 that necessitates partial or full lockdowns. Unlike our W/U scenario, there is a permanent hit to output in major economies (hence the L-shape recovery). There is permanent damage to both the demand and supply sides of the economy. Precautionary household saving remains high, while higher hurdle rates and widespread bankruptcy hit business investment hard. On the supply side, global supply chains are disrupted and bankruptcies imply capital destruction and weaker productivity growth. Unemployment remains significantly higher for longer.

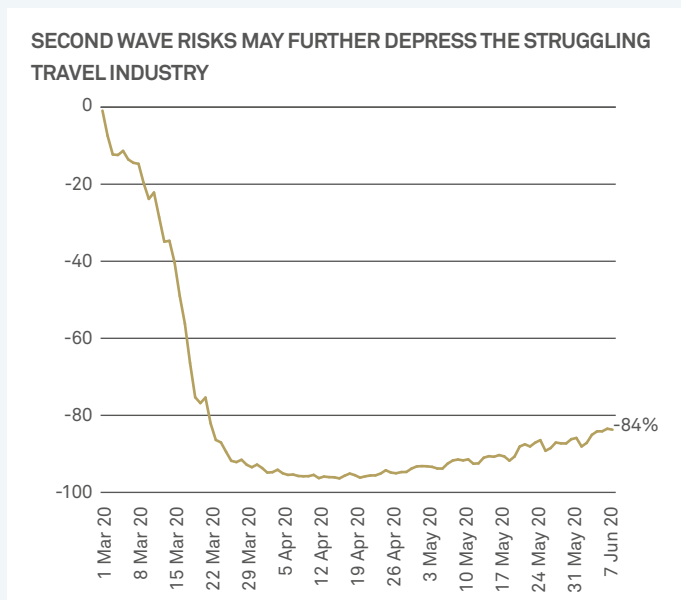
Economic activity in affected regions fall sharply again in Q4 2020. The impact on both Europe and the US is huge with permanent demand and capacity destruction. Ultimately, this is likely to add pressure on firms to diversify supply chains over the longer term and accelerates underlying de-globalization trends. The huge disruptions to supply chains affect output in a number of countries importing parts (intermediate goods) from China and also exporting parts to China. The impact on global GDP is large, but is predominantly felt through the supply side.

As a result, global costs rise when alternatives to Chinese production can't be found (or if found, at a higher cost). This ultimately leads to higher inflationary pressure, which constrained central banks are unable to contain.

Borders remain closed for some time, and the US and EU respond to increased costs with protectionist moves, especially if China attempts to devalue the Yuan. Central banks can accommodate to some degree, but not as much as under the V-shaped scenario. Fiscal policy is loosened globally, but insufficiently to offset the global shock. Asset prices fall despite the loose monetary policy stance, potentially triggering another bout of financial market instability, since policy is still tighter than previously expected, and confidence is hit hard by the spread of disease.

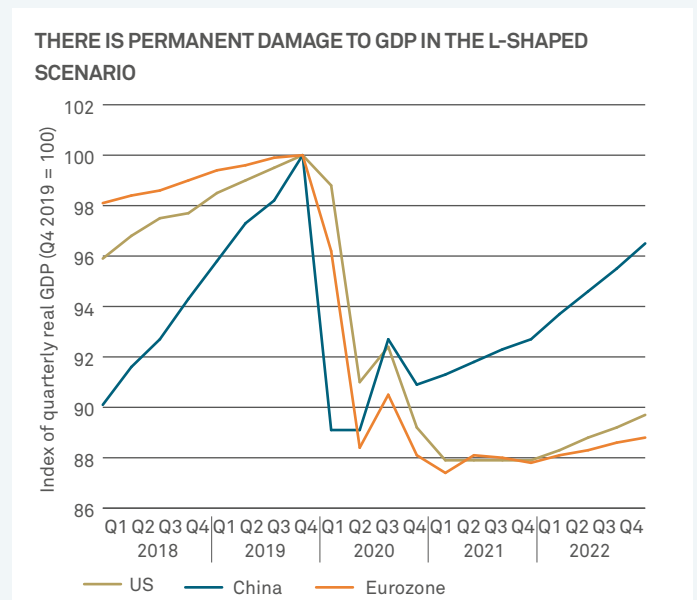
In the longer term, the liberal international trading/investment order is crippled and a new narrative takes hold: the virus has accelerated an underlying trend in which re-shoring and nationalism means higher costs and lower growth for years. Risk markets sell off, global yields dive further into negative territory.

### US TSA Check Point Travel Numbers (y/y % Change)



US Transportation Security Administration (TSA) total traveler throughput vs. 1-year prior. Data as of June 8, 2020. Source: TSA.gov.

### GDP Paths in the L scenario; Index, Q4 2019 = 100



Forecasts begin Q2 2020 and are as of May 31, 2020. Source: BNY Mellon Global Economics and Investment Analysis team and Fathom Consulting.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

**5%**  
(Probability)

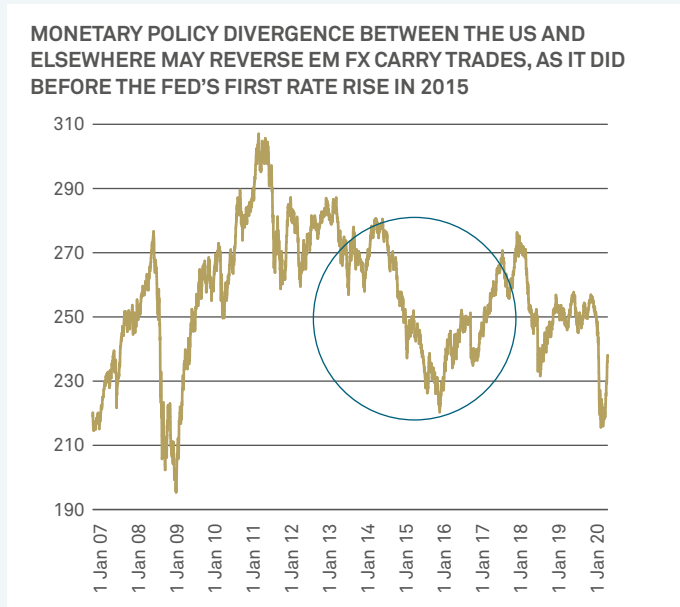
## Scenario #4: I is for Inflation

In terms of the path of the virus, this scenario is much like the V-shaped one. The difference here is that US growth recovery is stronger than expected, capacity constraints begin to bite, and the pick-up in US inflation is more rapid, prompting the Fed to tighten in 2021, much sooner than markets currently expect.

The strong US recovery is led by a healthy consumer rebound on the back of easy monetary stimulus and lower trade uncertainty. The US remains the most resilient economy and resumes its upward trajectory in Q3 2020. Inflation expectations come sharply off historical lows. As the US is more resource-constrained than anticipated, inflation rises and surpasses the Fed's 2% target. The rest of world growth lags behind the US; tighter US policy depresses activity in the Eurozone and China.

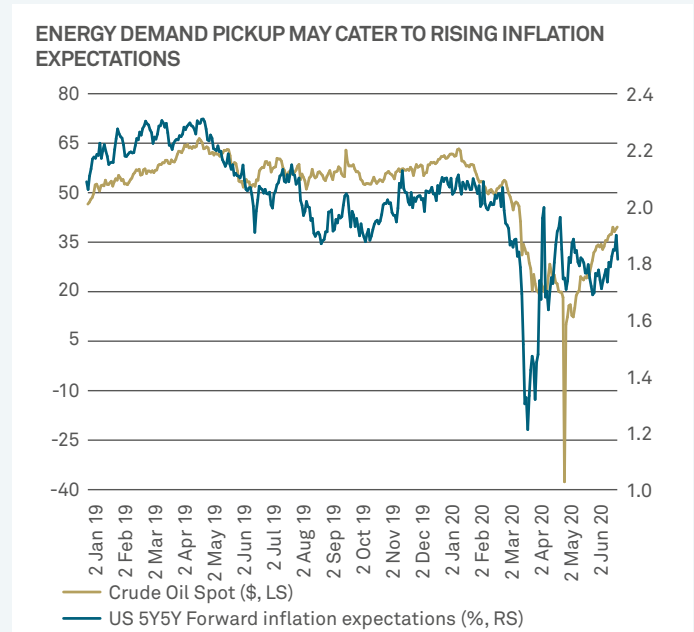
A large divergence emerges between monetary conditions in the US and elsewhere, as US interest rates go up sooner than markets are currently expecting. The dollar shortage reappears and capital flight from EMs picks up, particularly out of Asian EMs. The 'carry trade' reverses and dollar reserves are depleted much faster than expected; a number of dollar pegs (including the yuan) come under severe pressure. The collapse in short-term dollar financing affects investment and output in key dollar-exposed EMs, which domestic monetary policy can only ameliorate slightly. China, Asia and other EMs hit hardest, but there are knock-on effects to developed economies too, notably the Eurozone.

### Cumulative Total Return on EM FX Carry Trade Index



FX: foreign exchange. Cumulative total return on buy-and-hold carry trade position in long 8 EM FX: (Brazilian real, Mexican peso, Indian rupee, Indonesian rupiah, South African rand, Turkish lira, Hungarian forint, Polish zloty) that is fully funded with short positions in the US dollar. It is assumed that the investment is in three-month money-market securities, with each of the eight EM currencies assigned an equal weight in the currency basket. Data as of June 9, 2020. Source: Bloomberg.

### Crude Oil Spot and Market Inflation Expectations



5y5y: 5-year inflation expected 5-years from now. Data as of June 10, 2020. Source: Bloomberg.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

SECTION 1B

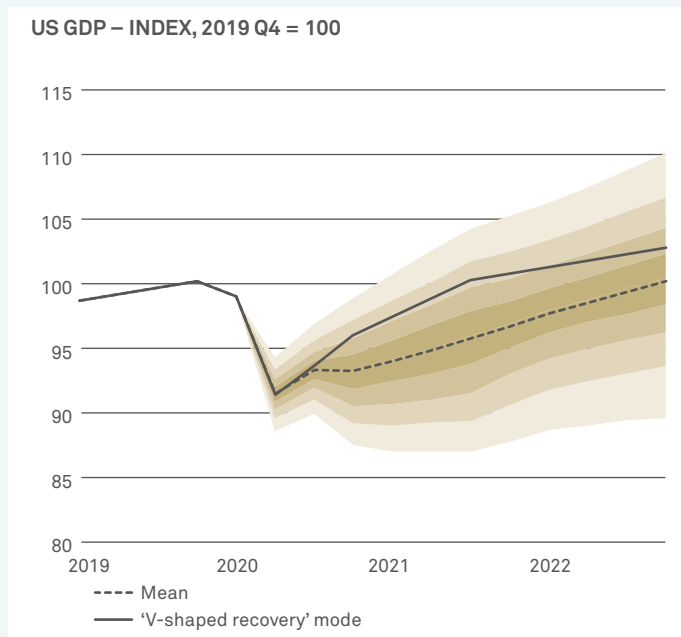
# Economic Forecasts

Since our previous Vantage Point, the virus that causes Covid-19 has spread rapidly around the world, with almost all countries having reported infections. Different governments have adopted different responses to the pandemic, with different results. Some placed severe restrictions on the movement of people early on, and some did so later. Others imposed few restrictions at all, relying on individuals to modify their behavior of their own accord. While the total number of global cases continues to rise, we find some evidence suggesting that the transmission rate, termed “R” - or the number of cases transmitted per infected person, appears to be slowing, on average around the world. Some have argued that differences in people’s susceptibility to the disease means that some countries are already close to herd immunity. Others point to the adoption of personal hygiene measures, such as more frequent hand washing and the wearing of facial masks.

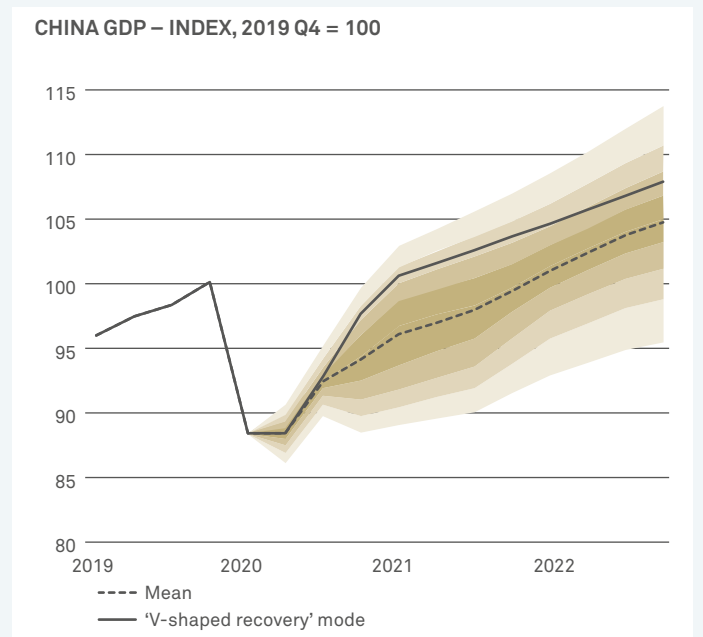
Another, less encouraging possibility is that the disease is seasonal, and will return to northern hemisphere countries as they move back towards winter. Nevertheless, even with an increase in total cases signs that R is slowing, combined with the observation that a number of European countries have managed to ease their lockdowns with no meaningful second wave, has led us to increase the weight we attach to a V-shaped recovery, from 35% to 50%.

Over the past three months we have also learned more about the combined impact of government responses to the virus on global economic activity. Companies such as Apple and Google now provide measures of the mobility of individuals in different countries using data obtained from smartphones. Weighting together these indicators, we find that economic activity troughed in April, and has begun to recover since then, first as

For charts below, forecasts begin in Q2 2020 and are as of May 31, 2020. The two solid lines show the V-shaped upside scenario mode and mean (probability-weighted average) forecasts. The darker bands towards the center of the fan chart show the more likely outcomes, while the lighter bands show progressively less likely outcomes covering 90% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central forecast are wider than those above shows the balance of risks lies to the downside.



Forecasts as of May 31, 2020. Source: BNY Mellon GEIA and Fathom Consulting.



Forecasts as of May 31, 2020. Source: BNY Mellon GEIA and Fathom Consulting.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

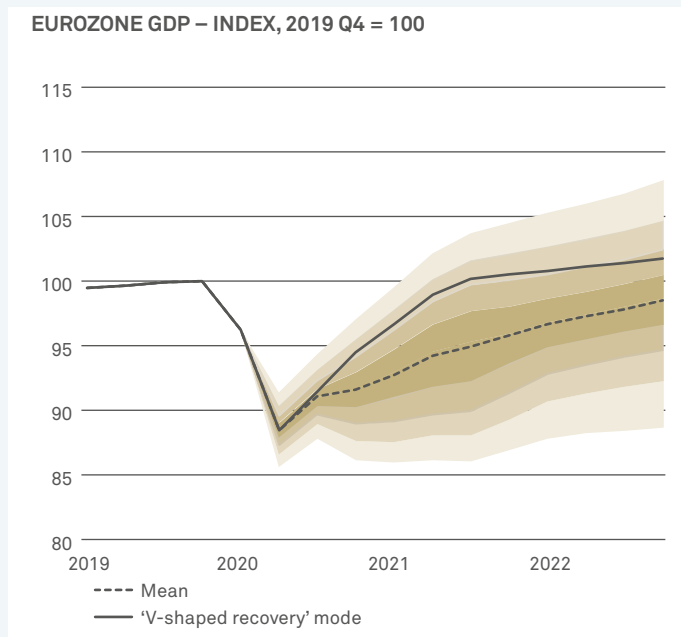


China, and then as much of Europe and the US began cautiously to reopen their economies. In our single most likely scenario, that steady recovery continues more or less without interruption, and most major economies return to pre-crisis levels of activity towards the middle of next year. Of course, that is only one possible outcome. There is still a very real risk that the virus returns with greater or equal vigor later this year, causing further substantial disruption to global economic activity. This possibility is captured in our two downside scenarios – the W/U-shaped and the L-shaped recovery. The distribution of possible outcomes for US GDP is shown in our first fan chart. To aid interpretation, the numbers along the vertical axis this time relate to the level of US GDP, rather than the growth rate, with a reading of 100 corresponding to the level of GDP in 2019 Q4. The risks around the most likely outcome for US GDP are clearly skewed to the downside, with the mean lying

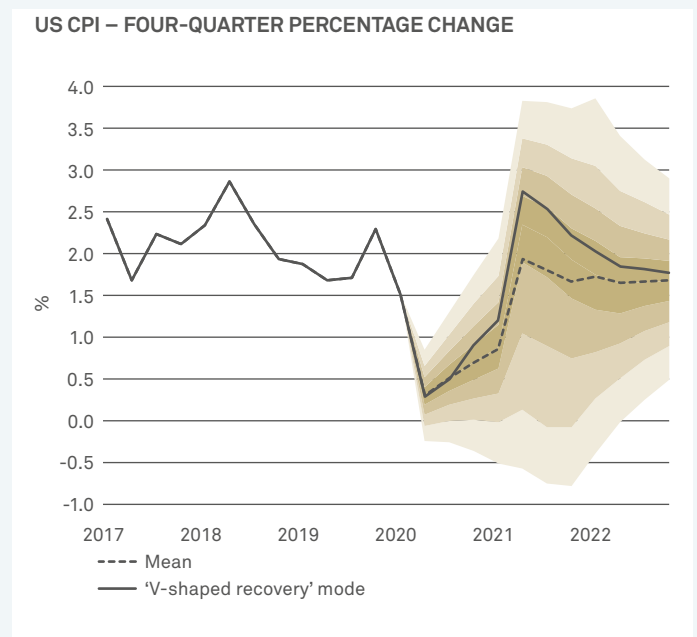
some way below the path in the most likely outcome, or our V-shaped scenario.

The risks to inflation are more evenly balanced. Our central scenario sees global inflation rise through the second half of this year as oil prices recover. In our US inflation returns scenario, the pick-up in US inflation is more rapid, as capacity constraints start to bite. But inflation behaves very differently in each of the two remaining scenarios. In our W-shaped recovery scenario, the re-emergence of the disease later this year triggers a financial market crisis, putting significant downward pressure on aggregate demand, and pushing many major economies into a period of deflation. By contrast, in our L-shaped recovery scenario, a marked reduction in aggregate supply, triggered by the severing of global supply chains, dominates the economic picture, putting upward pressure on

For charts below, forecasts begin in Q2 2020 and are as of May 31, 2020. The two solid lines show the V-shaped upside scenario mode and mean (probability-weighted average) forecasts. The darker bands towards the center of the fan chart show the more likely outcomes, while the lighter bands show progressively less likely outcomes covering 90% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central forecast are wider than those above shows the balance of risks lies to the downside.



Forecasts as of May 31, 2020.  
Source: BNY Mellon GEIA and Fathom Consulting.



Forecasts as of May 31, 2020.  
Source: BNY Mellon GEIA and Fathom Consulting.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

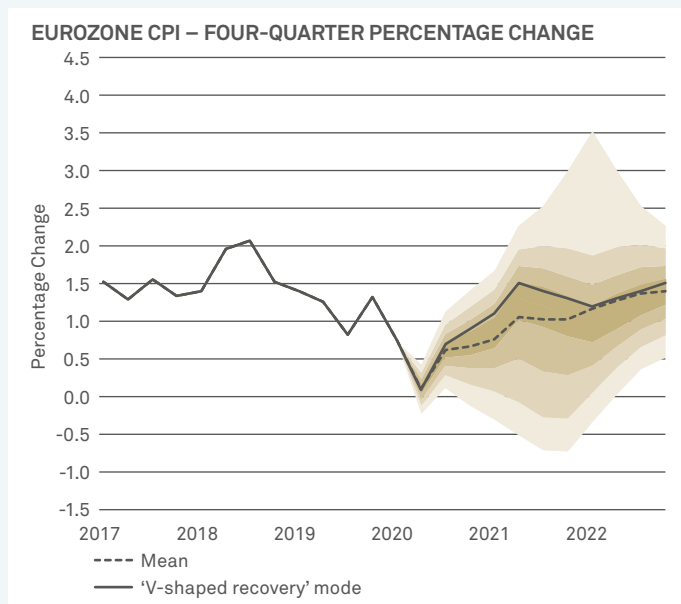
inflation. By late next year, in the Eurozone the mean and the V-shape recovery mode more or less coincide, but the distribution of possible outcomes is large. We see around a 1-in-4 chance that the Eurozone is in outright deflation at that time, almost matched by a 1-in-5 chance that inflation has moved above 2%.

Our fan chart for the US Federal Funds rate has changed relatively little over the past three months. With the target range already at an all-time low, of 0.00%-0.25%, the downside to the US policy rate is limited, though we do not rule out the possibility that it drops below zero over the next two years or so. The distribution of possible outcomes for US Treasury yields also retains a similar shape to before. In the single most likely scenario, the ten-year yield moves steadily towards 2.5% by the end of next year. But the skew to US Treasury yields, as with the

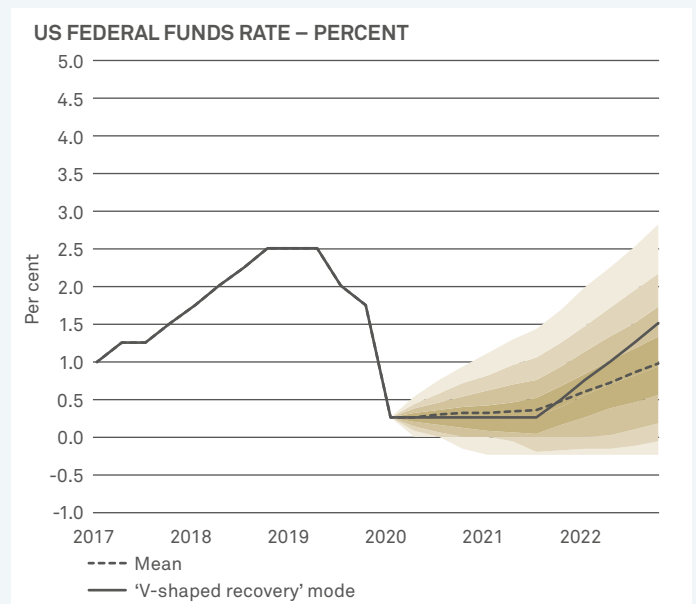
skew to economic activity, lies to the downside, with around a 1-in-5 chance that they turn negative towards the middle of next year.

The announcement in mid-March of a substantial expansion of existing QE programs by the major central banks triggered a substantial rebound in global equity benchmarks. By early June, the S&P 500 was showing positive returns, year-to-date, despite the dramatic consequences of the pandemic for near-term global economic activity. Investors appear confident of a V-shaped recovery, and confident too that central banks will again step in to provide additional liquidity if needed. In our central scenario, equities continue to rise from here, but risks remain to the downside. In the case of the S&P 500, we see a 1-in-5 chance that it is above 3500 by the end of this year, but around a 40% chance that it is below 3000.

For charts below, forecasts begin in Q2 2020 and are as of May 31, 2020. The two solid lines show the V-shaped upside scenario mode and mean (probability-weighted average) forecasts. The darker bands towards the center of the fan chart show the more likely outcomes, while the lighter bands show progressively less likely outcomes covering 90% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central forecast are wider than those above shows the balance of risks lies to the downside.



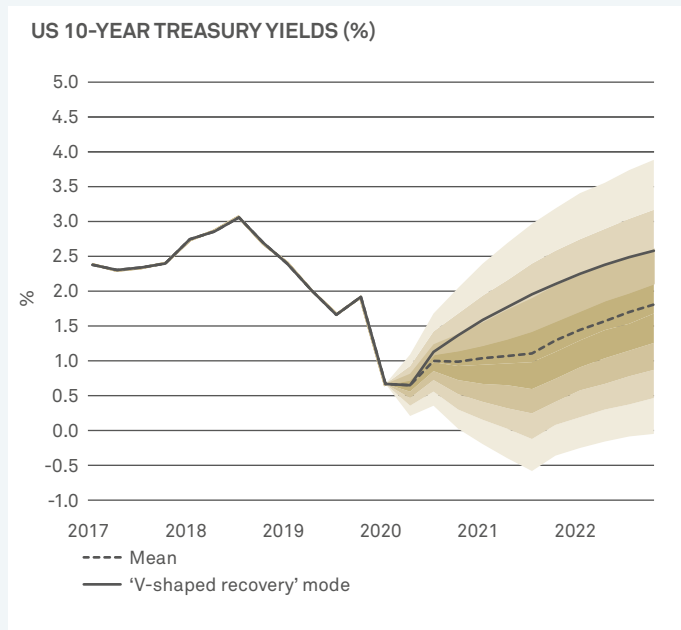
Forecasts as of May 31, 2020.  
Source: BNY Mellon GEIA and Fathom Consulting.



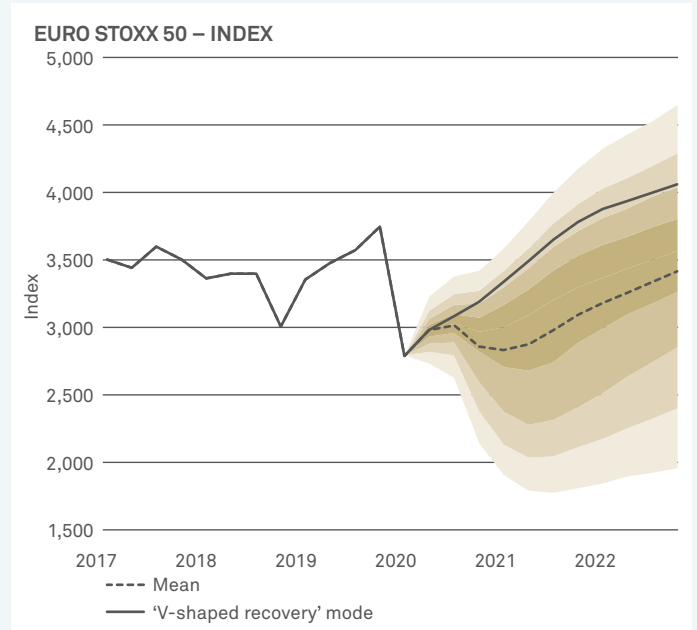
Forecasts as of May 31, 2020.  
Source: BNY Mellon GEIA and Fathom Consulting.

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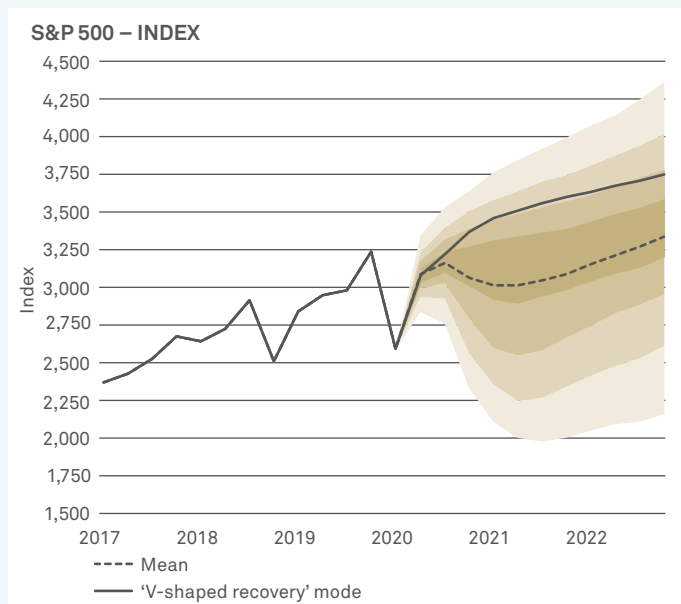
For charts below, forecasts begin in Q2 2020 and are as of May 31, 2020. The two solid lines show the V-shaped upside scenario mode and mean (probability-weighted average) forecasts. The darker bands towards the center of the fan chart show the more likely outcomes, while the lighter bands show progressively less likely outcomes covering 90% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central forecast are wider than those above shows the balance of risks lies to the downside.



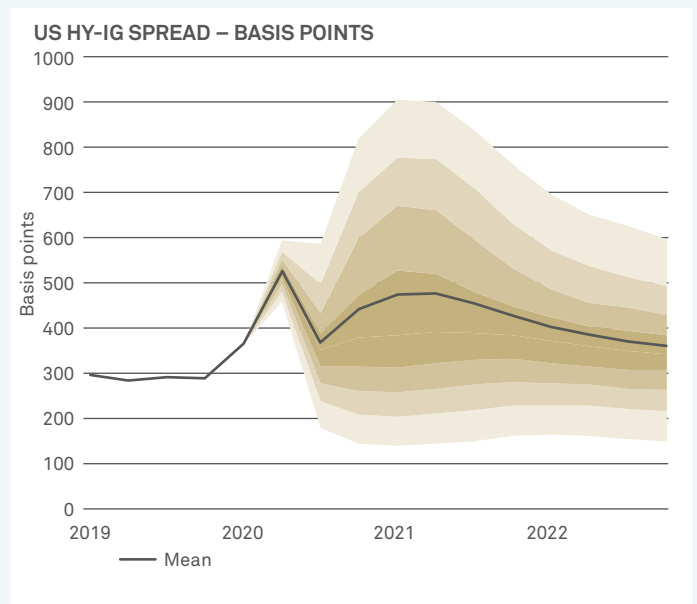
Source: Fathom Consulting



Forecasts as of May 31, 2020.  
Source: BNY Mellon GEIA and Fathom Consulting.



Forecasts as of May 31, 2020.  
Source: BNY Mellon GEIA and Fathom Consulting.



HY: high yield. IG: investment grade. Forecasts as of May 31, 2020.  
Source: BNY Mellon GEIA and Fathom Consulting.

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SECTION 2

# Capital Markets



## SECTION 2A

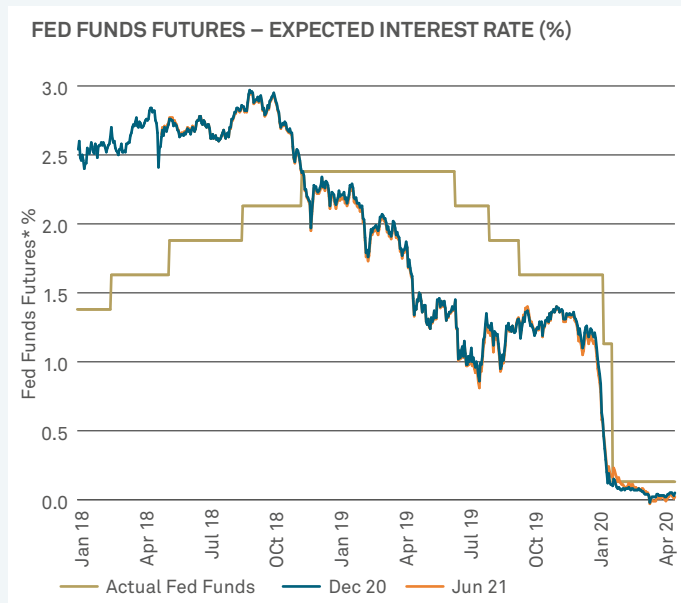
# Capital Market Pricing – What is Priced In?

## INTEREST RATES

After declining to 2007-09 crisis lows in Q1 as growth expectations deteriorated sharply and central banks rushed to ease monetary policy, short term interest rates remained relatively stable. The market is pricing no policy rate hikes across major advanced economies for the foreseeable future. In a number of advanced economies, such as the US and UK, the options market is signaling a significant probability of negative interest rates by the end of H1 2021.

Overall, our probability weighted path for policy rates is higher over the next few years. In our most likely V-shaped recovery scenario (50%) where the economy recovers back to pre-crisis levels by mid of 2021, we see policy rates increasing gradually

from Q4 2021 up to 1.5% by end 2022 in the US. The first hike in the Fed Funds rate is expected slightly earlier, in Q2 2021, in our 'I' scenario (5%), with short rates ending our forecast at 2%. In our two downside scenarios of a U/W-shaped recovery (30%) and L-shaped recovery (15%), policy rates are expected to remain on hold from current levels. Given the combined 45% probability attached to our downside scenarios, and associated distribution of potential outcomes under each scenario (see fan chart), there is around a 1-in-5 chance of negative policy rates in the US by end 2022. While we acknowledge this number is non-negligible, we are moderately more optimistic relative to both our previous Vantage Points and the market.



\*Expected Fed Funds rate at the corresponding date. Data as of June 12, 2020.  
Source: Bloomberg.

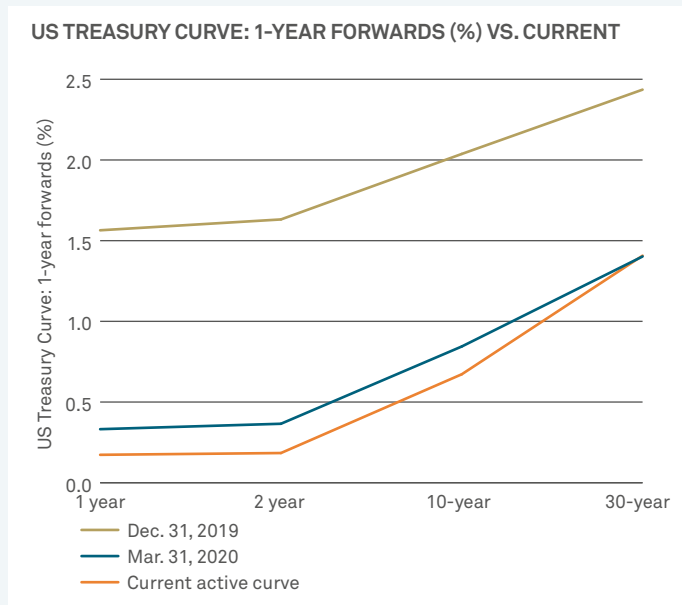
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## GOVERNMENT BONDS

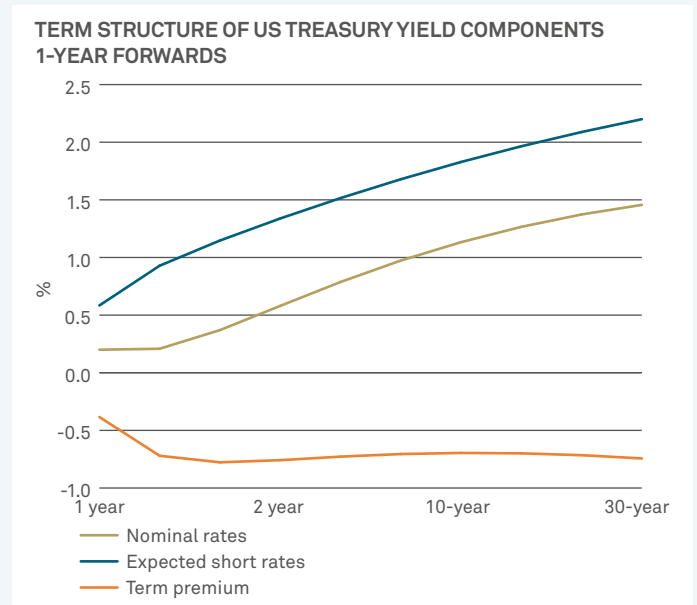
Similar to short rates, the market is pricing a more pessimistic scenario than we envisage. Our probability weighted forecast suggests the 10-year Treasury will increase in the second half on this year and reach around 1.5% by end 2022, compared to a mean market pricing for the 10-year interest rates of around 1% by end 2022. In our most likely scenario – ‘V’ - we see 10-year yields increasing to 2.5% by end 2022. In the U/W shaped scenario, yields are instead expected to fall further from current levels, and potentially to become negative in 2021, before increasing in line with the economic recovery further out. In an L-shaped recovery we expect a divergence in the underlying drivers of nominal yields: higher inflation due to supply side disruptions and lower real interest rates due to bleaker prospects for growth, which overall we believe imply a slow but steady move downwards in nominal yields from current levels.

Forward curves in the US stabilized after the ~100bp fall in Q1, with rates at the longer end increasing by around 20bp in Q2 but rates at the shorter end moving slightly lower. Nominal yields remain compressed, but as suggested by a decomposition of US yields into forward expected short rates and term premium interest rates are expected to increase faster than what is indicated by headline nominal yields (bottom right chart). Forward curves in Germany increased slightly, but are still expected to remain in deep negative territory for the foreseeable future.

Government bonds experienced extreme bouts of volatility in March, with yields rising abruptly, particularly at the longer end, as equities fell. The yield curve steepened sharply, by as much as 200 bp on some measures. As liquidity conditions in the market stabilized in April and May, standard measures of the yield curve (particularly shorter term ones, such as the



Data as of June 12, 2020. Market estimate of US Treasury yields one-year forward at each date. Source: Bloomberg.



Data as of June 4, 2020. Term premium is the is the compensation risk-averse investors require or are willing to pay for holding a long term bond relative to a series of short term bonds. Source: BNY Mellon GEIA team calculations using Federal Reserve Bank of New York data.

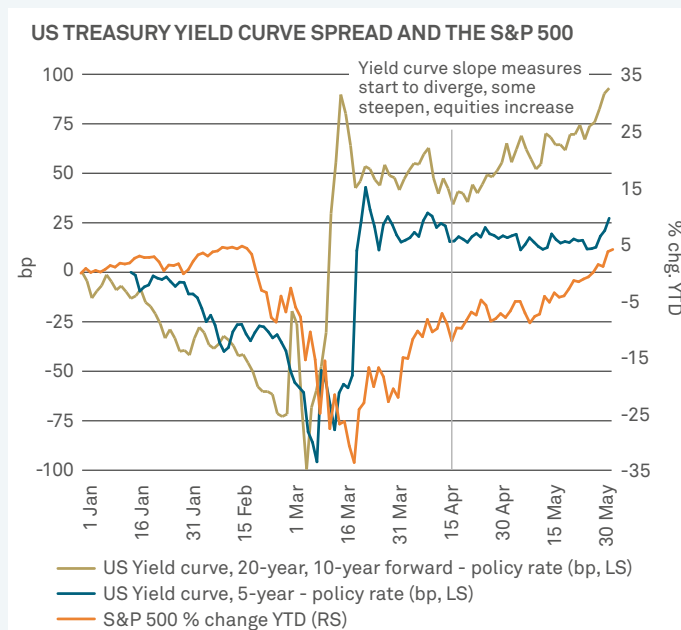
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5-year yield minus the policy rate) flattened somewhat but remains steeper than in Q1. Longer term forward measures of the yield curve slope steepened instead. This divergence in measures of the slope of the yield curve is consistent with an improvement in expectations for the economic outlook, combined with expectations for monetary policy to maintain interest rates at low levels in the short to medium term (for example through strong forward guidance, yield curve control or some form of average inflation targeting).

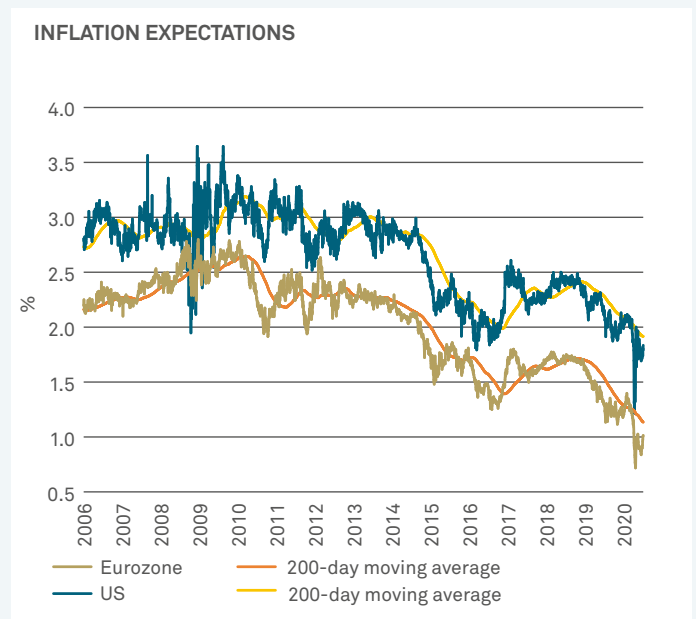
Overall, our forecasts for yields imply a market that is pricing in the worst case scenario, and while our most likely forecasts implies yields to shift higher by year-end, our weighted-average path for yields is only slightly higher than current levels until end of 2021.

## INFLATION

Inflation expectations continued to fall slightly in the US while they were broadly flat in the Eurozone in April and May as a whole. The market expects inflation to remain subdued in the longer run in both regions. Long term inflation expectations as derived from five-year, five-year inflation swaps, which have been significantly lower than 2% in the Eurozone for a long time, are now at the lower bound of levels consistent with target in the US. The pessimism in the market around inflation expectations is clear from option prices. The market is assigning a 50-60% probability of US inflation remaining below 1% on average over the next 5 years (see bottom left chart on page 22). The probability of inflation overshooting target and reaching 3% on average is instead priced in only at than 5%. This distribution of outcomes is different from our projections for inflation. We see inflation picking up in our two most positive scenarios – the ‘V’ and ‘I’ – as well as in one of the downside scenarios - the ‘L’ -



Policy rate is federal funds rate. Data as of June 5, 2020. Source: BNY Mellon GEIA team calculations using Federal Reserve Bank of New York data.



5y5y inflation swap. 5-year expected inflation 5 years from now. Data as of June 4, 2020. Source: Bloomberg.

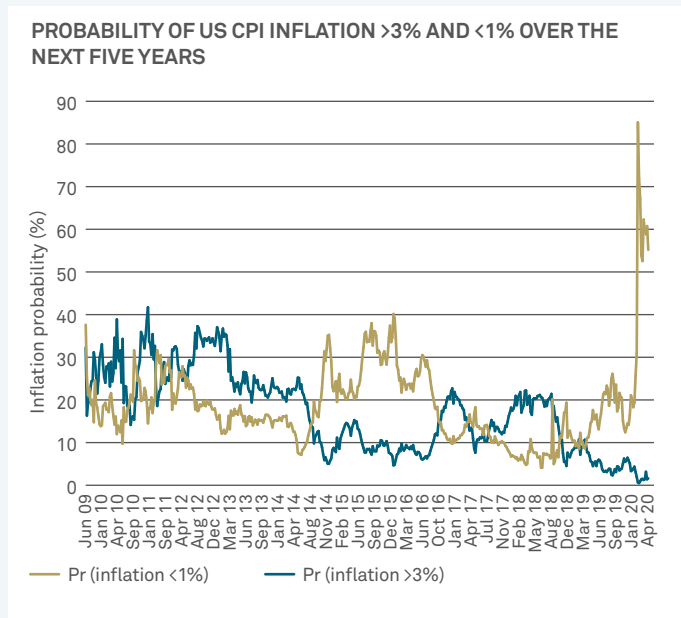
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due to higher costs from supply side disruptions. This results in our weighted average projections for inflation increasing to above 2% in 2021 and falling back towards target gradually afterwards. As such, we believe the market may be underpricing risk of a faster pickup in inflation.

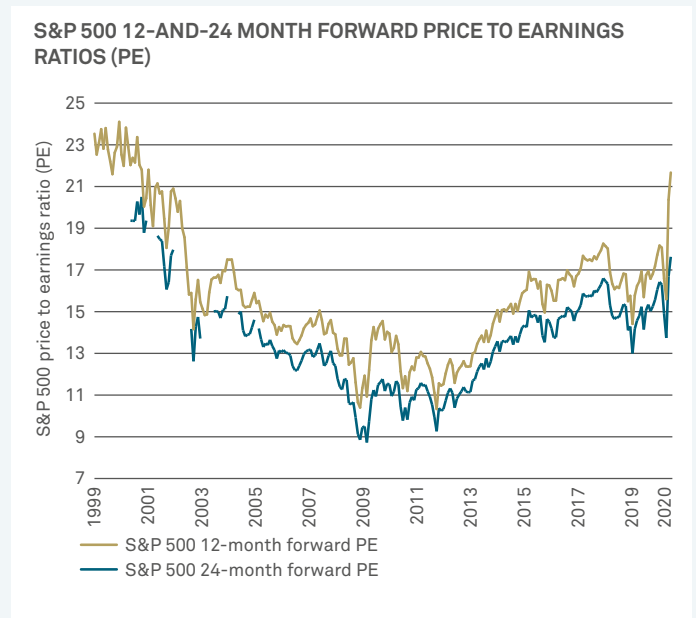
## EQUITIES

After the sharp declines in Q1, equity markets posted an impressive recovery in the second quarter as risk sentiment and growth expectations improved on the back of economic reopenings and supportive policy.

Earnings per share (EPS) expectations over the next 12 and 24 months weakened significantly over Q2. Expectations for S&P 500 earnings now stand at \$144 for 12-months forward (-19% YTD) and \$174 for 24-months forward (-12% YTD). Given the current level of the S&P 500, this implies a 12-month price-earnings (PE) ratio of 22. Assuming investors are looking through near-term earning losses due to shutdowns in 2020, and are pricing the S&P 500 relative to 24-month forward earnings, the PE ratio stands at 18. Such levels of valuations



Pr: probability, CPI: consumer price index. Data as of May 20, 2020. Source: Minneapolis Fed.



12-month PE based on consensus earnings expectations 12-months forward. 24-month PE based on consensus earnings expectations 12-to-24 months forward. Monthly data as of June 11, 2020. Source FactSet.

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are the highest since the stock market bubble of early 2000s, and rely on expectations for a rapid recovery in growth, continued policy support being effective in reducing the risk of left tail outcomes, and low interest rates.

Compared to our last Vantage Point we have become overall more optimistic for equities, as we are now attributing a higher probability to a more benign economic outlook. On average, we expect equities to remain around current levels in the near future, but to pick-up from mid-2021 onwards. In our most likely V-shaped scenario (50%), equities are expected to perform strongly over our whole forecast horizon, supported by a recovery in economic activity and continued policy support to financial conditions.

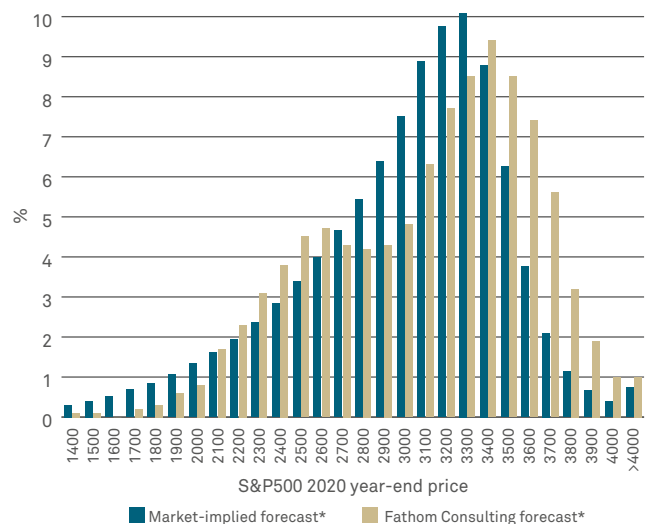
That said, we believe the balance of risk is significantly skewed to the downside. We can compare our view for equities with market expectations, by comparing probability distributions of possible outcomes for the S&P 500 by end of 2020, as derived from our projections and as implied by the options market. Our distribution is bimodal - it peaks at 3400 (+9% from levels as of June 19) but has a significant probability mass at around 2500 (~-20% from current levels). The distribution implied by option prices also highlights significant risks to the downside, with less probability of outcomes at around the 2500 level, but not far away from what we see overall.

### EURO STOXX 12-AND-24 MONTH FORWARD PRICE TO EARNINGS RATIOS (PE)



12-month PE based on consensus earnings expectations 12-months forward. 24-month PE based on consensus earnings expectations 12-to-24 months forward. Monthly data as of June 11, 2020. Source FactSet.

### S&P 500: DISTRIBUTION OF POSSIBLE OUTCOMES, 2020 Q4 (%)



\*The market-implied forecast shows risk-neutral probabilities for different levels of the S&P 500, as derived from a risk-neutral probability density function calculated from option prices. Source: Fathom Consulting and GEIA calculations using Bloomberg data.

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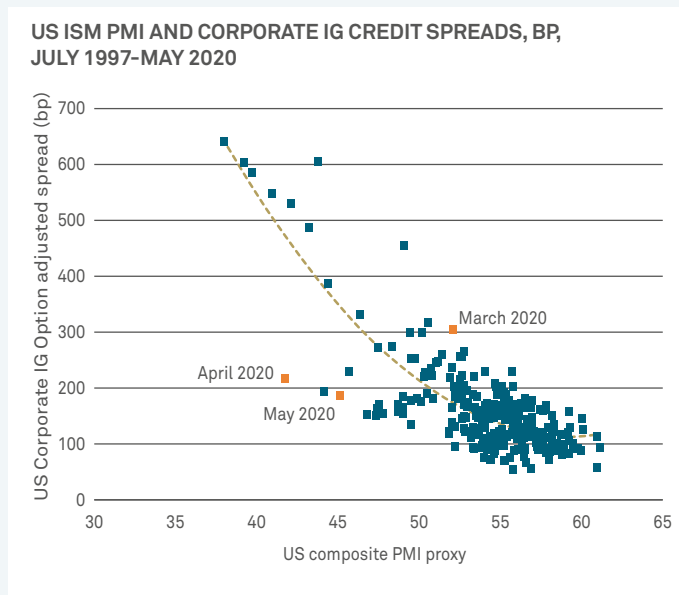
## CREDIT

The strong headline divergence between the current level of economy activity and financial market pricing is present also in credit. There appears to be little compensation to take on credit risk given historically low levels of economic activity (see chart below), a sign that the significant policy intervention by governments and central banks has been effective so far in a) preventing solvency issues for illiquid but otherwise sound firms and b) supporting expectations that this will continue being the case in the near future.

Our probability weighted forecast for credit spreads suggests that US dollar investment grade spreads will remain around current levels until mid of 2021, and decline gradually to around 150bp by end 2022 as the economy rebounds. Risks to

our outlook are tilted to the downside in the near term but become more favourable further out.

In our most likely, most positive scenario –‘V’ – Investment Grade (IG) credit spreads are expected to decline more rapidly, falling just below 150bp by end 2020 and reaching ~120bp by early 2021. In our ‘W’ and ‘L’ scenarios, investment grade spreads increase to around 300bp by Q2 2021, but then decline gradually afterwards. High Yield spreads are expected to follow similar paths to IG spreads, albeit with significantly larger moves. We expect HY spreads to bottom at 400bp in our ‘V’ scenario, and to increase up to 1200bp in our most pessimistic ‘L’ scenario.



The US composite proxy is constructed from Manufacturing and non-Manufacturing ISM PMI data, weighted by the relative importance of each sector based on value added data. Data as of May 2020. Source: Macrobond

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## SECTION 2B

# Market Sentiment

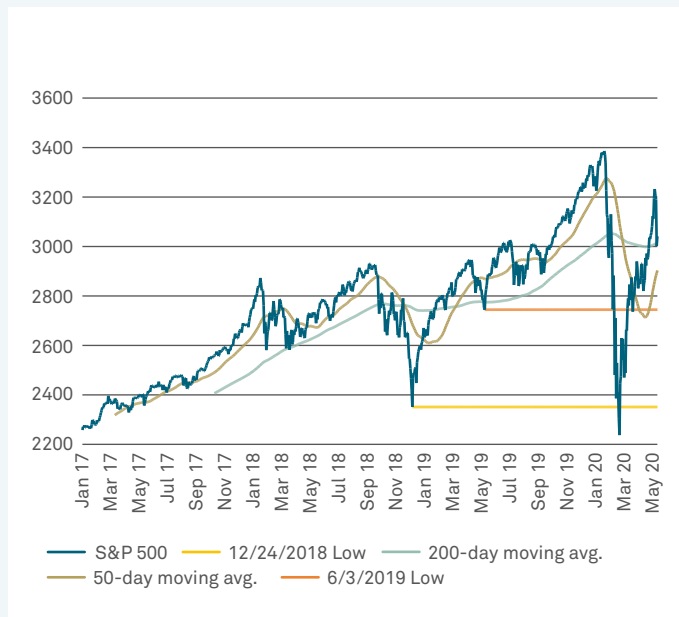
The recovery from March 23, 2020 is nothing short of historic. As of this writing, the market is up 38% off the lows as of June 19. As the market collapsed with historic speed, it also recovered with historic speed as the S&P500 is off only 4% for the year. In the ranking of recoveries off of major bottoms, this one is the most extreme echoing the speed of the decline. This is even as 20 million Americans are unemployed, Q2 GDP is widely expected to be down 10% QOQ (down 45% QOQ annualized).

The market is now pricing in not just a V-shaped recovery, which is our most likely scenario, but a V-shaped recovery which surpasses 2019 GDP levels as early as mid-2021. It has been helped along by historic global fiscal stimulus (~15% GDP in the US with the promise of more in an election year) and unprecedented timely central bank action to lower rates and maintain the flow of liquidity into the real economy and provide

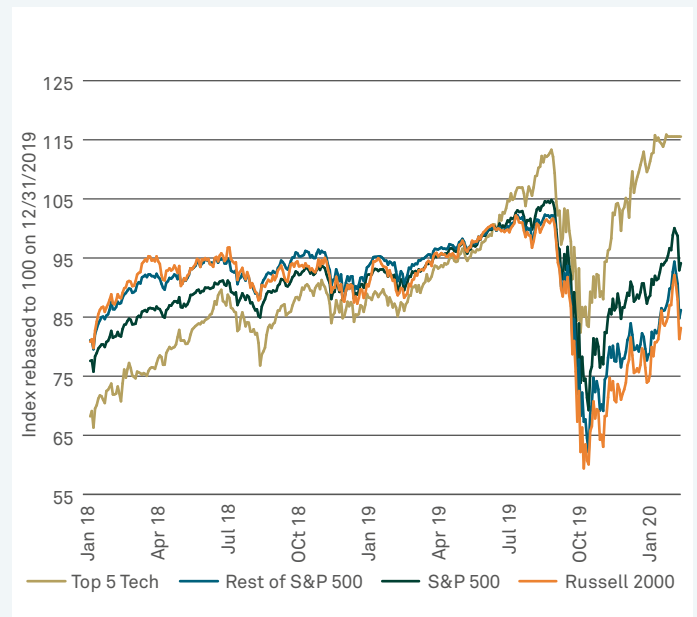
support for the credit markets. As the market has rallied, earnings have fallen bringing 12-month forward price-to-earnings ratios to 22. This is even higher than the peak reached pre-covid-19, and is the highest since the dot-com bubble in 2000-2001. Nasdaq is up 11% for the year as large cap tech has powered the markets. A large portion (85%) of the S&P 500 is now trading above its 50 day moving average, typically a bullish sign.

But not all price action is created equal and the index masks differential price performance. The 5 large cap tech stocks (AAPL, AMZN, MSFT, GOOGL, FB) account for over 21% of the S&P index, an historic high. As long as capital is attracted to this sector for the secular growth, free cash flow, the S&P 500 index is weighted to push higher. The outperformance of the five largest tech names has been so pronounced, that they have

### The Rapid Downturn and Subsequent Rally in the S&P 500 has no Historical Parallel



### Big Tech Leads but Upward Momentum has Become More Broad Based



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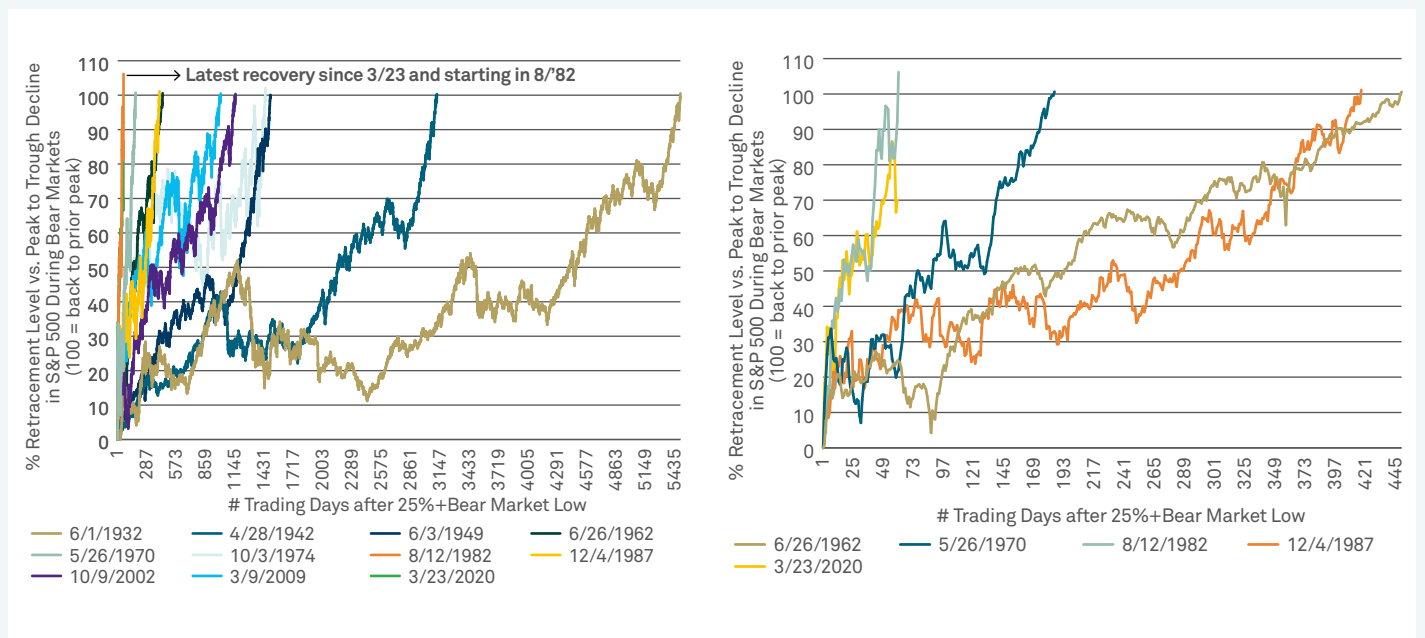
outperformed the rest of the S&P by 35% YTD. The stay at home trade, consisting of large cap tech, big box retailers, healthcare, and software-related consumer names pushed the index higher even as the cyclicals—financial, REITS, discretionary, metals and mining, industrials and small caps languished. Bond yields hovering between 60-70 bps for much of the spring have echoed the real economy growth fears. The pain of the corporate sector exposed to the closed economy has only been obvious underneath the index level. And small and medium sized business with thin cash cushions are uniquely exposed to plummeting growth.

This imbalance is the perfect set up for the reversion trade. As global reopenings have gone better than expected, and consumer demand looks to be robust, the stocks most levered to the real economy have started to show signs of life. In

addition, government-mandated lockdowns now look to be hard to re-impose in the future. All this means that growth, on the margin, could be substantially better than the fears of March and April. This is reflected in our scenario analysis which is now odds-on for recovery by the end of 2021. Almost by definition, growth will be V-shaped in the second half of 2020 given the extreme drop off in the first half. The question is, if so, when do we get back to pre-crisis GDP levels? The answer to this is much more complicated—hence our probability analysis--and depends in part to how quickly the labor market can heal.

The stay at home trade which powered the market coming off the low looks to be passing the baton as global fiscal stimulus and central bank support global economies. With growth looking to have bottomed, all the signs are there for other sectors to play catchup—the USD has softened, bond yields have moved off

## The Pace of the S&P 500 Rally is on Track to be one of the Fastest Recoveries in History



The first chart shows the full history and the second chart shows a select history to show post-bear market rallies more similar to the latest since March 23. Daily data as of June 12, 2020. Dates showed above refer to major bear market lows. Source: Bloomberg.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

their lows, and financials, with most dividend yields above the 10-yr, have finally found some traction. Those sectors which are most exposed to the shutdown—travel and leisure, discretionary, financials, energy have begun to play catchup. Make no mistake however, in order for the market to push harder, the tech names need to remain part of the rally. The cyclical sectors alone cannot move the index higher absent participation of tech and healthcare. It is here where excess cash on the sidelines could help push markets higher.

The market is a forward-looking discounting mechanism and is signalling better days ahead. The powerful rally off the lows requires economic fundamentals to inflect upward to sustain itself. Nimble policy—both fiscal and monetary—has gone an extraordinary way to removing the worst case scenario of crashing markets, shrinking liquidity, blown-out spreads, and

plummeting consumer demand. While crashing data in the spring will, by definition, be flattered as the global economy re-opens, the question for risk assets is whether growth stalls out by the fourth quarter. The biggest risks to markets, priced as they are, are a second wave that overwhelms the healthcare system, the US election, the US standoff with China, and the fiscal cliff created if Congress does not pass another stimulus bill. Any one of these could cause richly priced markets to shudder.

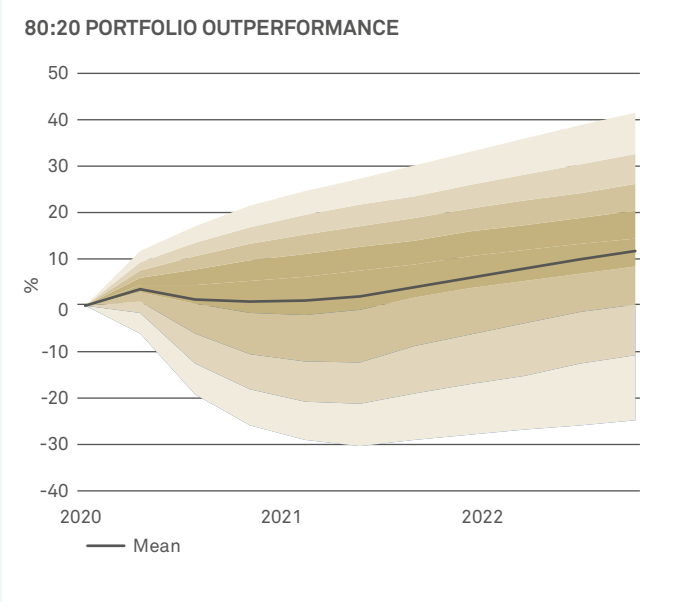
SECTION 3

# Investment Conclusions



# Portfolio Perspective

On the heels of a strong equity rally that suggests a risk-on stance, we remain aware of the cautious signals being sent by bond markets and volatility indices. Our optimism surrounding a V-shaped recovery has increased this quarter, which drives our views on cyclical equity exposure, but equally values hedges in portfolios to protect against the possibility of downdrafts. In this edition, we aim to balance the opportunity for investors to take part in an economic recovery with the need for protection against sharp pullbacks. The asset class views that follow are written to meet the objectives of capital growth via equity exposure, preservation via alternatives and high quality sovereign bonds, and income via investment grade credit and dividend paying equities. Overall, we view exposure to risky assets as important to meet investor goals, and emphasize the need for effective hedges while we continue to navigate this uncertain period. As in previous editions of Vantage Point, we show here the relative outperformance of a “risk bull” portfolio (80% US equities/20% US fixed income) to a “risk bear” portfolio (80% US fixed income/20% US equities). On balance, the risk bull portfolio offers more attractive return potential and has a slight bias to the upside over the next two years. However, we outline hedges in the text below to protect investors from the chance of downside shocks, which we believe remain possible as we move through the reopening process and into election season in the US.



Forecasts as of May 31, 2020. Indices used: Equity – S&P 500; Fixed Income – Bloomberg Barclays US Aggregate. Source: BNY Mellon Global Economics and Investment Analysis team and Fathom Consulting.

## EQUITIES

**US Equities:** Given our most likely scenario of a V-shaped recovery, we are encouraged by the catch-up in cyclical sectors and previously unloved asset classes, such as small-cap stocks. Continued forward momentum in equity markets is dependent on the confirmation of the recovery path and the absence of a dramatic second wave of Covid-19. While uncertainty remains, we acknowledge the opportunity offered by the so called “recovery trade” and suggest a balanced approach to cyclical sectors (Industrials, Financials, Energy) and higher growth sectors (IT, Health Care) as we expect cash to re-enter equities and lift these areas through the reopening process. Value sectors have managed to narrow the return gap vs. growth sectors in recent weeks, and we expect further narrowing over the short-term driven by Financials and Industrials. Over the long-term, however, we view growth stocks as a critical return driver and believe they have room for upside as long as long-term rates do not rise significantly. As the long-end of the curve rises, so does the discount rate applied to growth stocks, which would pressure the asset class and make value more attractive. On the other hand, our expectation for anchored short-end rates through 2020 makes dividend-paying equities an attractive income generator and less volatile component of equity allocations. Small businesses have been hit hardest by this crisis, but fiscal support and the expectation for a rapid restart have driven sentiment higher, improving the outlook for small-cap stocks. Overall, current levels feel a bit frothy, and we would not be surprised to see some minor pullbacks over the coming months, but broadly speaking we are optimistic about the mid-to-long term outlook on US equities.

**European Equities:** Our thoughts on European equities reflect a similar guarded optimism for a strong global recovery through the middle of 2021, and slightly less concern over frothiness in valuations as compared to US stocks. Europe faces a number of stronger headwinds fiscally that increase downside risks, but there is room for Europe to participate in the catch-up trade through 2020 as global demand comes back online and the region is supported by the expectation for a large fiscal support package. Europe’s dependence on world trade activity can help drive the region’s bounce back as demand picks up around the globe. Bear in mind, however, that Europe was riddled with sluggish inflation and growth pre-crisis, and we expect the economic recovery to be shallower than other regions as we move into 2021.

**Emerging Markets (EM) Equities:** Overall, EM risks have diminished slightly since our last publication as several major countries have started to ease lockdowns, the USD has shown a weakening bias as financial market stresses have eased, and the oil price war between Russia and Saudi Arabia has abated. Still, the macro environment for many EMs remains challenging and downside risks are present (US-China trade war escalation, second wave risks especially for those EMs that have prematurely restarted their economies, Hong Kong unrest). As the pace of economic recoveries will be country-specific, we suggest a more nuanced approach to EM investing and to remain on top of idiosyncratic developments. We continue to favor Asian countries such as China, South Korea, Taiwan, and the Philippines, which remain relative safe havens among EMs as further positive macro news due to virus containment may produce selective buying opportunities over the coming months.

## FX

**US Dollar and Foreign Exchange (FX):** FX volatility has declined recently as economies started to ease lockdowns and the oil price war between Saudi Arabia and Russia has subsided. We expect volatility to subside further as global monetary and fiscal policy continue to fuel confidence in markets. The dollar is likely to act as a barometer of global financial health for a while, rising when stresses increase, falling back as they ease. Looking across our scenarios, we see the USD index staying broadly flat but with higher-than-average volatility and risks skewed to the upside. Although the EM carry trade may recover in the short run, many EMs continue to cut rates and no longer have the rate support. We remain cautious on EM FX that have high dollar debt and external financing vulnerabilities, and may risk further large depreciations for their currencies (Turkey and South Africa).



## ALTERNATIVES

**Alternatives:** Environments characterized by momentum in equities, but with high risk of downside shocks, are prime time for hedging with alternatives. In particular, multi-asset strategies that utilize put options for protecting against swift downdrafts in equities, and those with the flexibility to quickly rotate into cash if one of our downside scenarios becomes increasingly likely. In addition, we believe the market is currently underpricing inflation risk and investors can be served well to protect purchasing power with real assets and precious metals. Although these hedging strategies are less likely to participate in upside equity market moves, they are critical pieces of an overall allocation that protect investors as they maintain risk exposure in traditional equities as suggested above.

## FIXED INCOME

**Sovereign Debt:** Sovereign yields in developed nations continue to send a very different risk signal than equity markets. Despite a slight pickup in yields while equities bounced off major lows, they remain at levels that reflect continued skepticism. Given the plethora of monetary policy and fiscal support, particularly in the US, we believe the risk of a spike in sovereign yields is limited. The US yield curve is likely to see gradual steepening as the recovery ensues, but this does not mean investors should retreat from sovereign bonds. This asset class remains an effective hedge in the US and selected international markets against macro risks and despite historically low yields, still offers diversification value in the event of a downside shock. Additionally, as we believe the market is currently underpricing inflation risk over the medium-to-long term, investors can consider building positions in US and global inflation-linked securities.

**Global Investment Grade Credit (IG):** In a V-shaped scenario, where a strong recovery drives consumer demand and lifts risk assets, investment grade corporate credit offers an attractive opportunity for spread tightening and a moderate amount of income. The uncertainty that remains in the corporate sector presents risks to this asset class, but overall we believe low rates and liquidity from the Federal Reserve should prevent a blowout in spreads. The return potential in corporate credit is likely more limited in the US than overseas, but cyclical sectors of credit can provide investors with diversified exposure to the recovery without presenting outsized left-tail risk.

**High Yield (HY) and Leveraged Loans:** With a strong correlation to equity markets, we would expect to see a tightening of HY spreads if a V-shaped recovery takes hold, but we caution investors on valuations and credit risk in this space. First, high yield spreads spiked near equity market lows, but only to roughly half of what we saw in 2008. Since that point, spreads have compressed to a level that suggests default risk is near what we typically observe during expansionary periods. Although our most likely scenario sees a strong recovery, the high amount of corporate leverage puts the high yield bond market at increased risk of downside if that outlook changes. Moreover, the support provided to this market by the Fed is largely liquidity-based, and would not prevent solvency issues if the economic recovery stalled or changed course. As such, we believe investors should remain cautious and underweight high yield credit until a recovery path is better confirmed.

**EM Hard Currency Debt:** A stable USD makes us broadly neutral to EM hard currency debt relative to local currency debt. Within hard currency debt, we continue to favor sovereigns with favorable fundamentals (countries such as Egypt which are backed by IMF lending programs) over corporates to mitigate risk of exposures to corporate defaults and restructurings.

**EM Local Currency Debt:** We have become more optimistic on EM local debt, yet we still believe that selective risk taking is advised in the current uncertain macro environment. Additionally, hedging local currency risk is a prudent strategy to dampen volatility. In many EMs, sharp slowdowns and deflationary pressures will likely trigger additional rate cuts. Continuation of easing inflation in emerging markets where there is still room for further rate cuts along with steep yield curves make local debt attractive in countries such as Brazil, Egypt, Indonesia, and Mexico.

APPENDIX PART 1

# Covid-19 Transmission Rate, or “Rt”

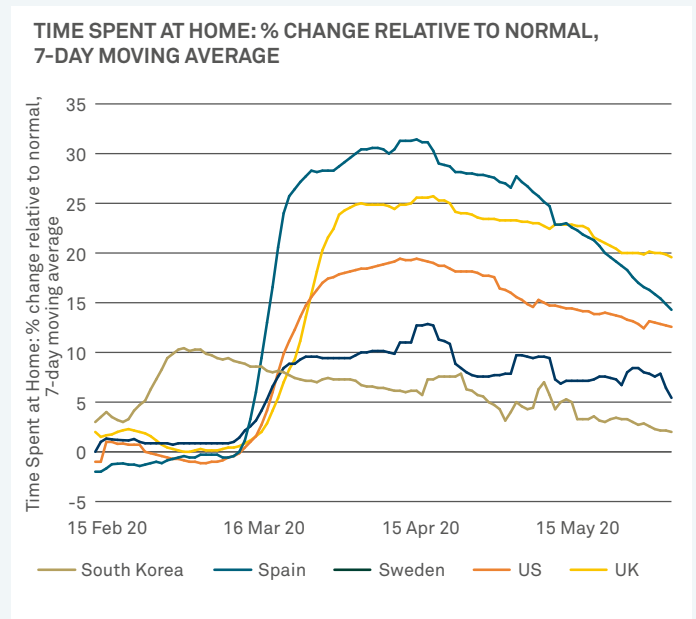
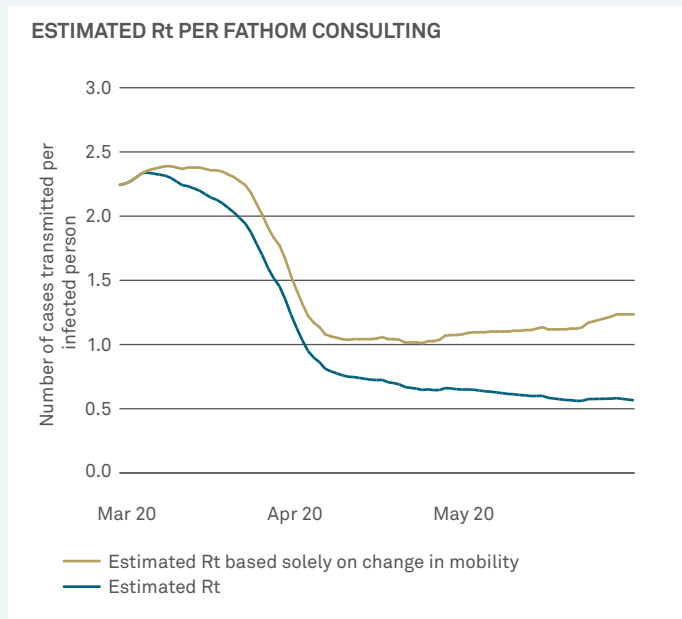
Emerging scientific research suggests there may be reasons to believe that Rt, or the number of Covid-19 cases transmitted per infected person, is slowing for reasons beyond increased social distancing. These for instance may include:

- More favorable weather in the Northern Hemisphere.
- Strong heterogeneity in individual Rts (i.e. super-spreaders and super-spreading events responsible for the vast majority of transmissions are now less likely to transmit/take place).
- Personal hygiene measures (hand washing, face masks, etc.).

The chart below is an illustrative modelled estimate of a global proxy for Rt by Fathom Consulting. The result is an average estimation across 115 countries.

The point is to show that the decline in Rt may be attributable to reasons beyond a decrease in mobility from lockdowns and increased social distancing (proxied in the model as a change in mobility).

The decline in Rt coincides strongly with lockdowns (gold line moving down) but has been pushed lower also by other unidentified factors (teal line being below gold line).

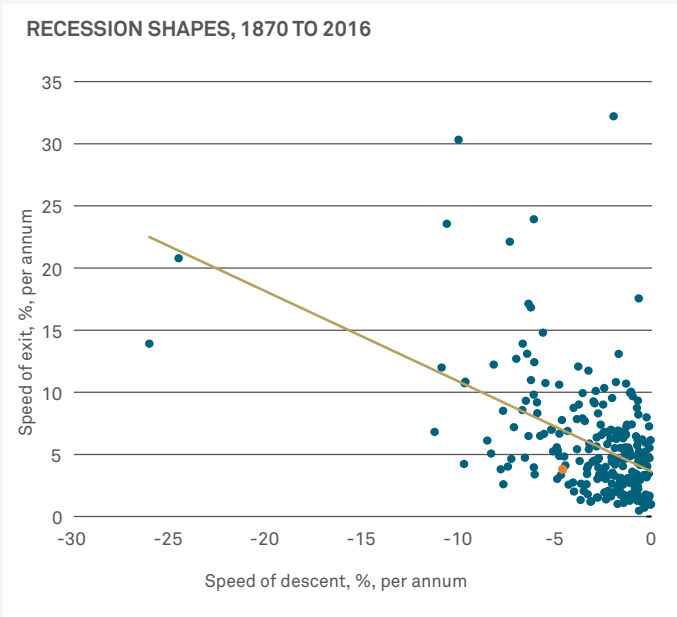
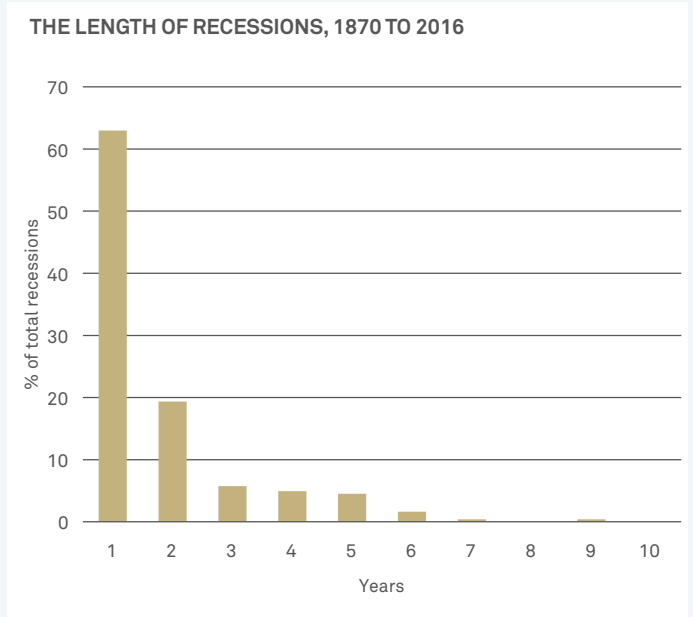
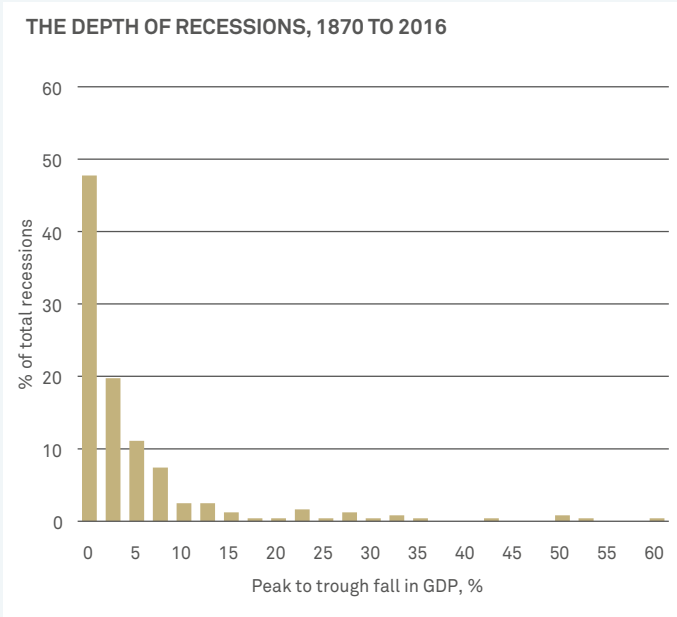


Data as of May 31, 2020. Rt: number of Covid-19 cases transmitted per infected person. Teal line: time trend capturing the impact of unidentified factors, other than social distancing, on lowering Rt. Please bear in mind that the increasing divergence between the teal and gold lines is a construct of the model and does not suggest a growing impact of unidentified factors. Source: Fathom Consulting and Google.

Data as of May 31, 2020. Source: Fathom Consulting and Google.

APPENDIX PART 2

# Global Recession Historical Analysis\*



Analysis of over 200 recessions across a number of countries dating back to 1900 suggests that deep recessions are not that uncommon and they tend to be followed by fairly rapid recoveries. Plotting the relationship between the severity and duration of recessions – the third chart – shows that our current ‘V’-shaped projection for the US economy does not look unusual. Of course, every recession is different and caused by different factors, but many of these short-lived recessions are generated by large supply shocks that have relatively short-lived consequences. The chart also suggests there is a high degree of uncertainty however, so while this analysis has contributed to our decision to increase the probability we attach to a ‘V’, we still recognise that other outcomes remain possible too.

Speed of exit: the percentage increase in GDP from the trough to its level when it first exceeds the previous peak, divided by the number of years it takes to get there.  
 \*This analysis is based on the Jorda-Schularick-Taylor macro history database which uses 30+ macro and financial market variables for 17 advanced economies over the period 1870-2016.  
 Source: Fathom Consulting

**Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.**

**The companies and/or sectors indicated should not be construed as recommendations to buy or sell a security.**

**All investments involve risk, including the possible loss of principal. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.**

#### **Important Disclosures:**

#### **RISKS**

**Equities** are subject to market, market sector, market liquidity, issuer, and investment style risks, to varying degrees.

**Bonds** are subject to interest-rate, credit, liquidity, call and market risks, to varying degrees. Generally, all other factors being equal, bond prices are inversely related to interest-rate changes and rate increases can cause price declines. **Commodities** contain heightened risk, including market, political, regulatory, and natural conditions, and may not be suitable for all investors. **High yield bonds** involve increased credit and liquidity risk than higher-rated bonds and are considered speculative in terms of the issuer's ability to pay interest and repay principal on a timely basis. Investing in **foreign denominated and/or domiciled securities** involves special risks, including changes in currency exchange rates, political, economic, and social instability, limited company information, differing auditing and legal standards, and less market liquidity. These risks generally are greater with emerging market countries.

**Small and midsize company stocks** tend to be more volatile and less liquid than larger company stocks as these companies are less established and have more volatile earnings histories. **Currencies** can decline in value relative to a local currency, or, in the case of hedged positions, the local currency will decline relative to the currency being hedged. These risks may increase volatility.

**Alternative strategies** may involve a high degree of risk and prospective investors are advised that these strategies are suitable only for persons of adequate financial means who have no need for liquidity with respect to their investment and who can bear the economic risk, including the possible complete loss, of their investment. The strategies may not be subject to the same regulatory requirements as registered investment vehicles. The strategies may be leveraged and may engage in speculative investment practices that may increase the risk of investment loss. Investors should consult their financial professional prior to making an investment decision.

#### **INDEX DEFINITIONS**

**US Consumer Prices (CPI) Index** measure of prices paid by consumers for a market basket of consumer goods and services.

The yearly (or monthly) growth rate represents the inflation rate. The **10Y US Treasuries Average Yield** of a range of Treasury securities all adjusted to the equivalent of a ten-year maturity. The **CBOE VIX Index (VIX)** is an indicator of the implied volatility of S&P 500 Index as calculated by the Chicago Board Options Exchange (CBOE). The **Majors Dollar Index (USD)** measures the value of the US dollar relative to a basket of currencies of the most significant trading partners of the US including the euro, Japanese yen, Canadian dollar, British pound, Swedish krona, and Swiss franc. The **MSCI EM Index (Emerging Markets Equities)** tracks the total return performance of emerging market equities. The **S&P 500 Composite Index (S&P 500)** is designed to track the performance of the largest 500 US companies. **Europe STOXX 600** Index represents the performance of 600 large, mid and small capitalization companies across 18 countries in the European Union. **Bloomberg Barclays US Corporate High Yield:** covers the universe of fixed-rate, non-investment grade corporate debt in the US. **Bloomberg Barclays US Corporate Investment Grade:** designed to measure the performance of the investment grade corporate sector in the US **1-mth. 1-year forward swap:** the avg. interest rate for 1-mth. in 1-year forward. **GDP:** gross domestic product is the total monetary or market value of all the finished goods and services produced within a country's borders over a given time period. **Fed funds Rate:** the target interest rate for overnight lending and borrowing between banks. **Purchasing Managers Index (PMI):** An economic indicator derived from monthly surveys of private sector companies. A level above 50 indicates expansion compared to the prior month and below 50 contraction.

#### **STATISTICAL TERMS**

**Skewness** in statistics represents an imbalance and an asymmetry from the mean of a data distribution. In a normal data distribution with a symmetrical bell curve, the mean and median are the same. **Probability-weighted mean** is similar to an ordinary arithmetic mean, except that instead of each of the data points contributing equally to the final average, data points are weighted by the statistical probability for a particular scenario outcome. **Duration** is a measure of a bond's interest-rate sensitivity, expressed in years. The higher the number, the greater the potential for volatility as interest rates change. **Z-score:** number of standard deviations from the mean a data point is.

# BNY Mellon Global Economics and Investment Analysis team



**Shamik Dhar**  
Chief Economist



**Alicia Levine, PhD**  
Chief Strategist



**Liz Young, CFA**  
Director of Market Strategy



**Lale Akoner**  
Market Strategist



**Bryan Besecker, CFA, CAIA**  
Market Strategist



**Sebastian Vismara**  
Financial Economist

im.bnymellon.com

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