



Omba Advisory & Investments Ltd



“Shapes”

Mapping the Recovery

“What shape will the economic recovery take?” Everyone has his or her favourite candidate: a W, an L, a U or maybe a Nike Swoosh. Of course, the one we hear the most about is a V...” - Howard Marks, co-founder and co-chairman of Oaktree Capital Management

September 2020

OMBA Advisory & Investments Limited is incorporated in England and Wales, Company Number 10594806
OMBA Advisory & Investments Limited is authorised and regulated by the Financial Conduct Authority 775647
OMBA Advisory & Investments Ltd is an authorised financial services provider (FSP No. 49101) in South Africa

www.ombainvestments.com | www.ombafunds.com

Contents

INTRODUCTION	3
OUR KEY MARKET THEMES, EXPANDED	4
BULLISH THEMES	4
1. Surprise vaccine news.....	4
2. Asset prices vs. money supply ("brrr")	6
MODERATELY BULLISH THEMES	8
3. The "hunt for yield" (the Fed Model)	8
4. Credit conditions (Covid-19 is exogenous).....	10
MODERATELY BEARISH THEMES	13
5. Earnings disappointment in 4Q 2020	13
6. US-China trade war escalation.....	15
BEARISH THEMES	17
7. US domestic politics (tax hikes, gridlock)	17
8. Non-targeted lockdowns.....	18
REFERENCES	21

Disclaimer

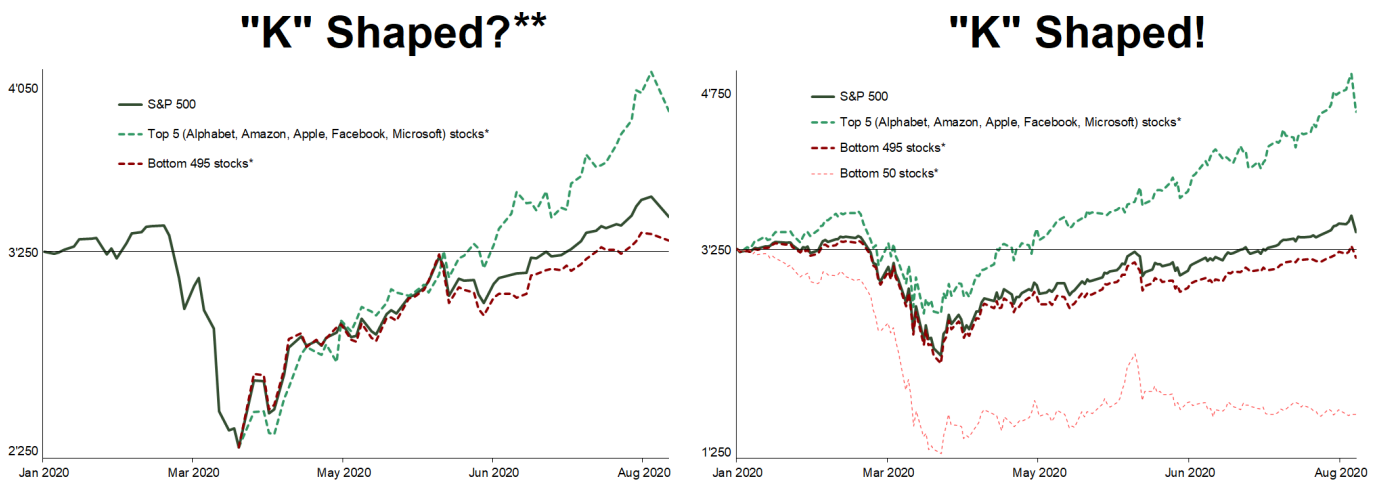
This is not an offer or solicitation with respect to the purchase or sale of any security. This document is only to facilitate your discussions with Omba Advisory & Investments Limited. The given material is subject to change and although based on information which we consider reliable, it's not guaranteed as to its accuracy or completeness. The information contained in this document does not constitute an offer or solicitation of investment, financial or banking services by Omba Advisory & Investments Limited. This document may not be reproduced in whole or in part or copies circulated without the prior written consent of Omba Advisory & Investments Limited.

Introduction

As we all know, 2020 has been a trying time; Microsoft Teams, waiting in queues, toilet paper being auctioned on eBay, the incessant use of hand sanitiser, and face mask-muffled speech. The year has been “disrupted” in more ways than one. The unique cause of the correction – the Coronavirus - and its continuing presence in our lives makes future economic impact harder to predict.

We are all aware of the use of letters to describe the “shape” of the recovery – an exercise that at times reminds us more of Scrabble than economic analysis. One could argue that many letters are appropriate. A “V” shape has certainly been seen across some data points such as higher frequency PMI, GDP growth (when looked on a quarter-on-quarter basis), or the Nasdaq100. Similarly, we expect to see a more gradual “U” shape in other areas like interest rates, GDP growth (when looked at on a year-on-year basis), and mobility. Unfortunately, when bankruptcy strikes, an “L” shape is the most appropriate. Mostly, we hope the nascent recovery in 2020 does not follow a “W”.

Of the various “shapes”, we want to draw our readers’ attention to the “K”¹ – which highlights the key theme of return dispersion seen in 2020². We can draw many parallels: the technology sector versus airlines, the US versus Emerging Markets, gold versus crude oil... but we want to highlight what we find to be the most interesting example. Namely, US technology versus US ex-technology – and in particular, the top 5 largest US stocks. The chart below clearly shows the high degree of return dispersion the S&P 500 has experienced. This “K” shaped recovery does not inspire confidence, as it signals that the majority of the “real” economy is not yet out of the woods.



*Time series are rebased to the S&P 500. Performance numbers are as of 8 Sep 2020. The chart on the left rebases performance to the 23 Mar 2020 low close. The baskets of stocks represented by the dotted lines are market cap weighted on a daily t-1 basis.

**The chart on the left uses weekly data and not daily data, and hence is “smoother” than the chart on the right.

Source: Refinitiv, Omba

Amid this heightened uncertainty, we discuss a few key upside and downside risks that could materialise over the balance of the year. On the next page, we highlight and rank what we believe will be key market themes driving asset prices through the rest of 2020. On the subsequent pages, we elaborate on each topic and highlight how each story might play out – be it good or bad for equity markets.

Histogram of Market Themes in 2H 2020

Bullish themes		Moderately bullish themes		Moderately bearish themes		Bearish themes				
1	<p>Surprise vaccine news</p> <p>Whilst our basecase remains a vaccine passing Phase 3 Trials in 1H 2021, with widescale distribution before YE2021, we believe markets are positioned to surprise to the upside if announced earlier. With Russia having already approved the world's first Covid-19 vaccine, even pessimistic analysts on The Street estimate a vaccine announced prior to YE 2021.</p>	3	<p>The "hunt for yield" (the Fed Model)</p> <p>A new normal? Secular stagnation? A sharp decline in rates leaves investors chasing yield, sometimes at the expense of departing from valuation norms. The highly reputed Fed Model rationalises how Price/Earnings ratios, elevated relative to their own history, may be appropriate given trends in the spread between earnings yields and risk-free yields.</p>	5	<p>Earnings disappointment in 4Q 2020</p> <p>Although we view the risk of outcomes as being fairly balanced, earnings are increasingly likely to disappoint given the recent upward revisions to 3Q 2020 forecasts (announced in 4Q 2020). This coincides with US net profit margins being at the lowest level since 2009 and a sharp expansion in valuation multiples which should, over time, demand higher earnings growth rates.</p>	7	<p>US domestic politics (tax hikes, gridlock)</p> <p>Talks of US political risks have focused on tax hikes rather than trade. Although still highly uncertain, a Democrat "wave" is increasingly predicted and could suggest a federal corporate tax hike to 28%. This would be highly market-unfriendly but would be partially offset by softer China negotiations. A divided government could also result in political gridlock.</p>			
	<p>Asset prices vs. money supply ("brrr")</p> <p>Equities are expensive by various valuation metrics, but are historically cheap when considered in the context of hugely expanded money supply ("brrr"). Driven by an abundance of liquidity, we consider the alternative metric of stock prices divided by M2 Money Supply. "Don't fight the Fed".</p>		4		<p>Credit conditions (Covid-19 is exogenous)</p> <p>Thanks to Central Bank "bazookas" - rate cuts, "Fallen Angel" debt purchases, QE, etc - credit spreads have steadily declined from the height of the March 2020 panic. Credit conditions, and even debt service ratios in some instances, are easier now than before Covid-19. This leaves the global economy positioned to outperform once business activity returns.</p>		6	<p>US-China trade war escalation</p> <p>While we believe both the US and China will honour the Phase 1 trade deal, a Trump victory will likely bring hard-line trade negotiation tactics back into the fray. Although Biden will also take a stance on China - in particular tech and IP protection given bi-partisan support - his negotiation style would likely be less disruptive to financial markets via trade and volatility.</p>	8	<p>Non-targeted lockdowns</p> <p>Although we do not predict widespread lockdowns, it remains a highly destructive risk given the implications to consumer demand and business activity. Supportively, any flare-up would likely be met with further stimulus. Targeted/regional lockdowns have already been shown to be effective (such as in Australia, the UK, etc).</p>
	<p>High expectation of continued stimulus; Support will materialise in response to issues</p>				<p>Accelerated secular tech adoption, albeit at the risk of legacy sectors (retailers, autos, etc)</p>		<p>Although very unlikely, a large surprise in inflation could bring rates back into discussion</p>			
Bullish themes		Moderately bullish themes		Moderately bearish themes		Bearish themes				

Our Key Market Themes, Expanded

Bullish Themes

1. Surprise vaccine news

We expect a vaccine to pass Phase 3 trials by 1Q 2021

- Given the large pipeline of vaccine trials, we are optimistic that at least one therapeutic drug will be approved by 1Q 2021.
- We expect an approved vaccine will be widely available in the US and Europe by 3Q 2021, and possibly by 2Q 2021 for those pharmaceuticals being manufactured "at risk".

Upside scenario: a bona fide vaccine is approved by 4Q 2020

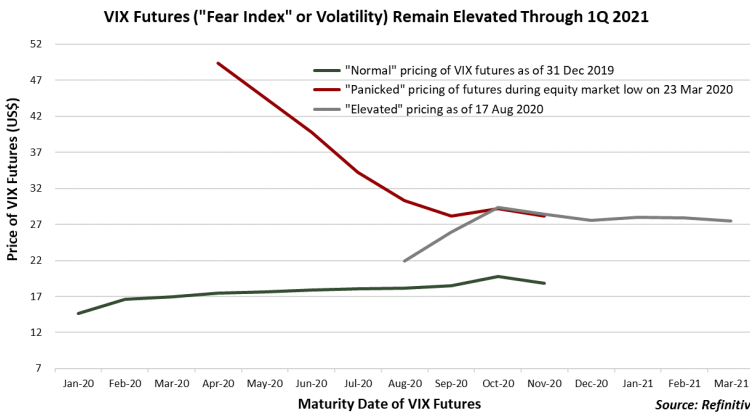
- We argue, based on how investors are pricing equity volatility at elevated levels, there remains substantial upside to any surprise positive vaccine developments.
- Online polls³ and several major investment banks predict a vaccine in early 2021. At least one major asset manager expects a vaccine within 2020.
- The US Center of Disease Control (CDC) asked states to prepare for vaccine distribution, indicating that a vaccine could be ready by the US election.

Downside scenario: a vaccine is approved within 2H 2021 or later

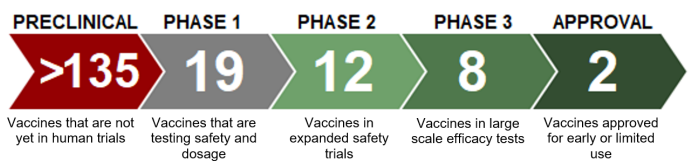
- A dire outcome would be one in which the first bona fide vaccine is approved in 2H 2021.
- Despite the large number of vaccines in development, there may be a high degree of correlation between trial successes given that many of the drugs⁴ are targeting the same SARS-Cov-2 "spike" protein⁵.
- An approved vaccine may also have limited efficacy (see Russian vaccine). There is high degree of political and commercial pressure to go to market.

The Street is broadly predicting a vaccine to successfully pass Phase 3 trials by 1Q 2021. This could come as early as 4Q 2020 - or as late as 4Q 2021, according to the more pessimistic scenarios highlighted by analysts. Widescale distribution will likely come at least a quarter after the successful passing of the Phase 3

trial, and hence our base case expectation is for widescale distribution within 2H 2021. However, implied volatility, as measured by CBOE VIX futures, still trade at elevated levels for contracts maturing through 1Q 2021. This pricing of volatility suggests that equity market investors are indeed not complacent of risks given that such levels of volatility, should they materialise, would be almost unprecedented over such a period of time. Hence, equity markets are positioned for a sharp positive surprise if an early vaccine is announced.



Our timeline for vaccine success is slightly more cautious than many analysts, and also more cautious than the goals of Operation Warp Speed, a partnership announced by the US government in May 2020. Operation Warp Speed aims to deliver 300 million doses of a safe and effective vaccine against SARS-CoV-2 by January 2021. The US Department of Health and Human Services, as part of Operation Warp Speed, has already pledged over US\$ 2.1 bn worth of support to Johnson & Johnson (US\$ 456 mn), Moderna (US\$ 483 mn), and AstraZeneca/University of Oxford (US\$ 1.2 bn) to accelerate the development and production of various vaccines⁶. We note that the AstraZeneca/University of Oxford vaccine trial has been temporarily paused⁷. The US government has also already secured the option to acquire at least 600 million vaccine doses, once developed, as part of such agreements. The UK government has secured early access to 340 million vaccine doses through similar agreements⁸.



Source: The New York Times as of 18 Aug 2020

Pharmaceutical companies are already ramping up production facilities in anticipation of vaccine trial success, known as manufacturing “at risk”, in order to limit the time between approval and distribution. According to the World Health Organisation (WHO) there are at least six unique vaccine candidates undergoing Phase 3 trials. Completion of Phase 3 usually allows for widescale human distribution of a vaccine, whereas longer-term monitoring occurs during Phase 4 at which point the drug is already commercially available.

Vaccine Developer	Vaccine Platform	Timing of Doses	Phase 3 Trial
University of Oxford & AstraZeneca	Non-Replicating Viral Vector	Day 0 (1 dose)	http://www.isrctn.com/ISRCTN89951424
Moderna & NIAID	RNA	Day 0, 28 (2 doses)	https://clinicaltrials.gov/ct2/show/NCT04470427
Pfizer & BioNTech & Fosun Pharma	RNA	Day 0, 28 (2 doses)	https://clinicaltrials.gov/ct2/show/NCT04368728
Sinovac	Inactivated Virus	Day 0, 14 (2 doses)	https://clinicaltrials.gov/ct2/show/NCT04456595
Wuhan Institute of Biological Products & Sinopharm	Inactivated Virus	Day 0, 14 or day 0, 21 (2 doses)	http://www.chictr.org.cn/showprojen.aspx?proj=56651
Beijing Institute of Biological Products & Sinopharm	Inactivated Virus	Day 0, 14 or day 0, 21 (2 doses)	http://www.chictr.org.cn/showprojen.aspx?proj=56651

Description of Different Vaccine Platforms	
Non-Replicating Viral Vector	Attenuated (or weakened but not dead) virus is delivered to evoke an immune response.
RNA	The sequence is translated by the host cells to produce the encoded antigens, evoking an immune response which elicits antibody production.
Inactivated Virus	Destroyed pathogen particles that, once delivered, evoke an adaptive immune response.

Source: WHO, vaccines.gov, horizon-magazine.eu

Russia recently announced the approval of the first vaccine against SARS-CoV-2 after being developed by Moscow-based Gamaleya Institute⁹. The international community has broadly dismissed the vaccine as being improperly tested at best, or thievery at worst (hacking and stealing intellectual property). Criticism of the Russian vaccine focuses on the fact that it was released prior to beginning a Phase 3 trial, suggesting limited data in terms of both safety and efficacy. Furthermore, Russia has not fully disclosed the data pertaining to drug trials.

Even if a vaccine is developed and widely distributed in developed countries (initially), poorer countries are likely to still suffer enhanced uncertainty around Covid-19 and cause subsequent global spread. Furthermore, developed countries' social distancing measures and changing (read: cautious) human behaviour are likely to remaining a drag on consumption and spending, with a concomitant drag on global GDP. We take the view that until herd immunity is attained, most economies will not be able to recover beyond 2019 GDP levels. Attaining herd immunity is both a function of infections and vaccine, and the actual percentage of the population required is still very much an unknown. Thus, any news surrounding vaccine approval will be closely watched by investors, although the medium-term impact would remain difficult to predict.

2. Asset prices vs. money supply ("brrr")

Amid a continued expansion of global monetary supply, elevated valuations may be warranted in the medium-term

- In the context of global stock prices-to-money supply ratios (M2 is used as a proxy), valuations may not be as elevated as widely thought.
- Investors still have capacity to add to net equity exposure according to: (i) CFTC data on S&P 500 and Nasdaq 100 speculative net length¹⁰ and (ii) US equity funds having seen negative outflows over the past few months while US bond funds have seen positive inflows¹¹.

Upside scenario: central bank monetary policy remains accommodative; investors increase equity exposure by buying any dips

- We expect expansionary monetary policy to continue in the medium-term.
- Investors could be encouraged to buy any equity dips whilst markets remain supported by continued Quantitative Easing (QE) and asset purchases by global central banks (investment grade and high yield bonds, equities, ETFs).

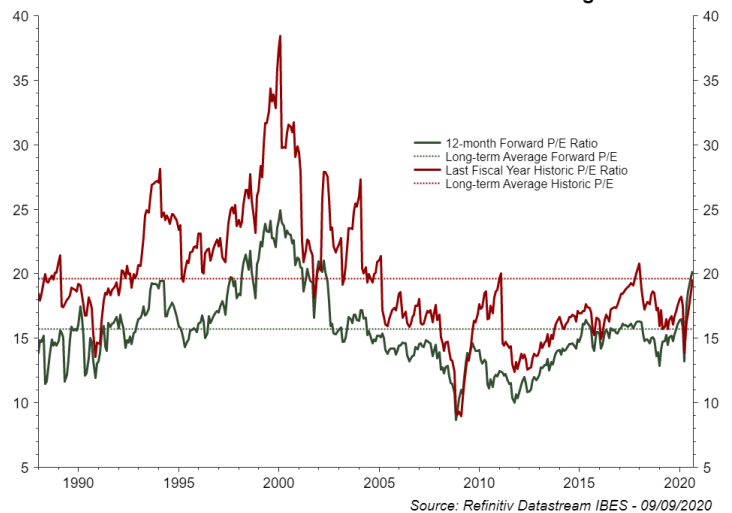
Downside scenario: central bank asset purchases are insufficient in keeping yields low amid a deluge of bond issuances or large defaults; credit spreads spike

- Overall, risk of derailment of accommodative monetary policy remains limited. However, a negative scenario would arise if bond yields were to increase and credit conditions were to tighten.
- We see this scenario as unlikely in the short-term (6 -12 months) as governments and corporates alike are able to adequately service their debt amid extremely low interest rates.

In conversations with investors, **expensive valuations are often cited amongst the top reasons prohibiting or limiting investment into equity markets**. The dilemma of whether or not to take risk can be challenging: abstain and you forgo upside, participate and you are exposed to a correction. The fact of the matter is that valuations are indeed expensive on a historical basis. Furthermore, there is no clear market consensus as to whether or not we are mid-cycle, end of cycle, or just starting a new cycle (which we discuss later in the section **Covid-19 is Exogenous**). Where does that leave us as investors?

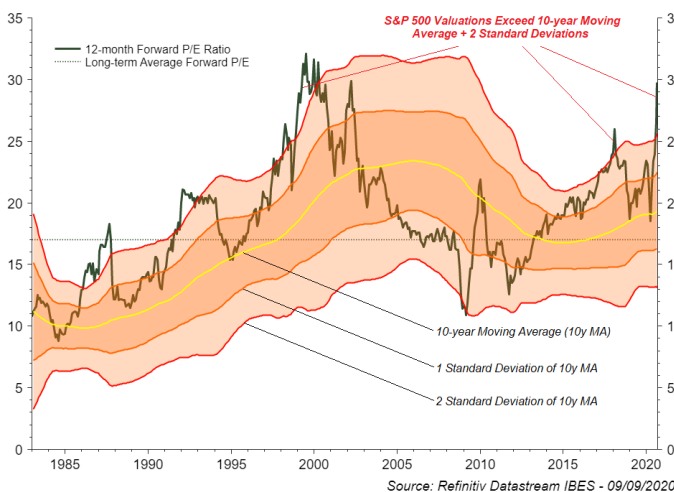
The chart on the right shows how current valuations of the MSCI All-Country World Index (MSCI ACWI) exceed its long-term historical average on a 12-month forward Price/Earnings basis. Measures of the backwards looking Price/Earnings ratio (which uses last fiscal year earnings) are less elevated on a historical basis but are still above the average level observed since the early 2000s. In very simple terms, these relatively rich valuations suggest that the risk-reward of buying the MSCI All-Country World Index is poor (especially since forward earnings are particularly uncertain).

MSCI ACWI Valuations Exceed Historical Averages

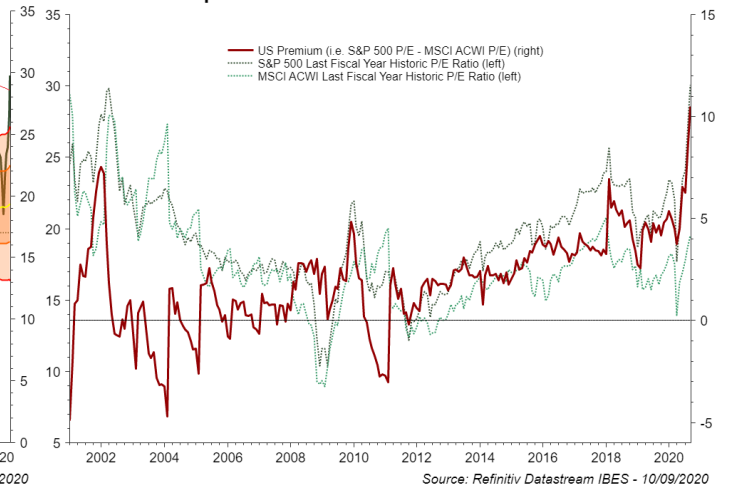


To make matters worse, the two charts below show that US equities - the powerhouse driving developed market equity returns - are even more expensive on a relative and historical basis. Not only are Price/Earnings measures of the S&P 500 over 2-standard deviations above the 10-year moving average (below left chart), but the relative valuations of US stocks versus those of the MSCI All-Country World Index are around relative highs (below right chart). The premium that investors are willing to pay for US companies relative to global stocks is comparable to the 2001 tech bubble – an ironic comparison given that the top 5 stocks in the S&P 500 (Apple, Amazon.com, Alphabet, Facebook, Microsoft) have driven almost all of the year-to-date returns for the entire index! In fact, a fifth of S&P 500 companies were still more than 50% below their highs and all 500 stocks were on average* 28.4% below their peak as of late August¹². Return dispersion, or a “K”-shaped recovery, has been an important theme in 2020.

S&P 500 Valuations Far Exceed Historical Norms



US Equities Trade at a Premium to Rest of World

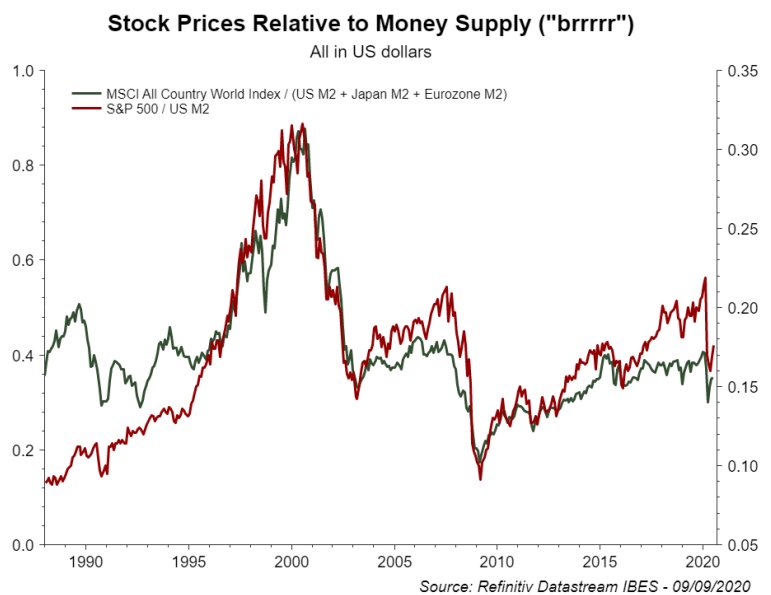


As we have previously suggested by VIX futures (a measure of forward-looking volatility), investors are indeed not complacent. Perhaps valuations are not as dear as one might think? In a world of sharply expanded government balance sheets and QE, net money supply may be an important consideration[†]. The chart on the next page shows an alternative valuation measure: stock price over money supply (M2 is used as a proxy). This

* The S&P 500 Index is priced on a market capitalisation weighted basis, meaning that larger market cap stocks will contribute more to overall returns. The “Big 5” tech stocks, being beneficiaries of the Coronavirus and work-from-home trends, have skewed index returns higher.

† QE is essentially when a central bank increases money supply in order to purchase government debt, with the intention of suppressing yields and in turn lowering the cost of credit. By cheapening the cost of credit and increasing liquidity, investors will more likely allocate capital towards riskier assets that generate comparatively higher yields. Better funding thus encourages companies to increase capex or expand operations.

chart suggests that both US and global stock prices are not expensive on a historical basis. Despite this valuation method being a simplification in ways, it does demonstrate some historical patterns. While stocks were expensive in late 2019 according to this chart, in particular US stocks, the expansion of money supply in response to Coronavirus cheapened valuations to within historical norms. Given that we believe investors have capacity to increase equity allocation, investors could be encouraged to take more risk as a “wall of money” is deployed in market corrections. This would keep dips short and shallow.



Moderately Bullish Themes

3. The “hunt for yield” (the Fed Model)

“Lower for longer” meets “the hunt for yield”: equities can carry higher valuations due to relatively attractive earnings yields compared to bond yields

- Prospects of a low rate environment supports equity valuations for the next few years.
- Investors slowly begin to accept higher valuation multiples as part of a new normal. Rather than chasing the market higher, the marginal investor is encouraged to buy any dip - making corrections short and shallow.

Upside scenario: further upside would require a broad adoption and acceptance of secularly higher equity valuations and lower government bond yields

- Overall, we see it as unlikely that investors will reframe long-held valuation norms quickly. However, in such a case, the marginal investor would chase the market higher rather than deploying during corrections.

Downside scenario: investors lose confidence in frothy valuations (i) US technology stocks and (ii) growth and momentum factor stocks

- Higher government bond yields (driven by policy rates, inflation, and credit risk) reduce the relative attractiveness of equities. Investors lose the confidence in today’s expensive valuations.
- US technology and growth/momentum factor stocks could be most exposed to a correction, given the pace and magnitude of the 2Q-3Q 2020 recovery and, as some argue, frothy valuations.
- We explore downside risks to earnings growth forecasts **later**. If an earnings shock were to materialise, it would be a different scenario to this topic, as it doesn’t factor in the relative attractiveness of bond yields. A shock to earnings growth would simply lower the stock price as valuations adjust to a smaller “E” (earnings).

The Coronavirus is new. The “Japan Disease”¹³ is not. The latter is the secular theme of low yields, low growth, and high debt that has plagued Japan for decades. Given that we increasingly exist in a low yield world, driven by “secular stagnation” (i.e. structurally low growth), how can investors justify today’s expensive valuations? The “Fed Model” might offer clues.

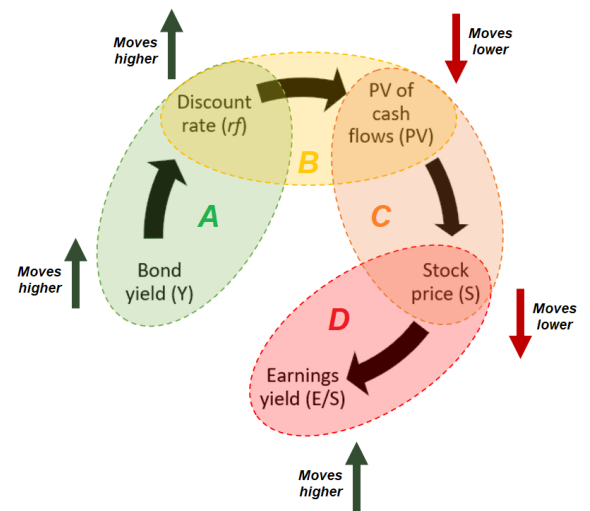
The Fed Model states that bond and stock markets are in equilibrium and fairly valued when the forward earnings yield equals the 10-year treasury yield. The model has been cited more frequently in recent months by experienced value investors like Howard Marks who references it in his recent memo “Time for Thinking”¹⁴. For a given country, the earnings yield (the reciprocal of Price/Earnings, i.e. Earnings/Price) on a relevant equity benchmark is compared to the 10-year government bond yield.

Competing Asset Argument

Investors only have a finite amount of risk they are able to take. As such, decisions regarding the optimal asset allocation is always a central focus. Stocks and bonds have different risk profiles although, unlike commodities, they both generate yield. As such, dislocations between the yields of these two opposing asset classes can be thought of as competing, whereby the higher yielding asset is “cheap”, and the lower yielding asset is “expensive”. Given that “yield” is a ratio of income-to-price, the higher the price the lower the yield (all else being equal). Thus, through the process of buying what is attractive and selling what is not, yields converge and equilibrium is once again achieved.

Present Value Argument

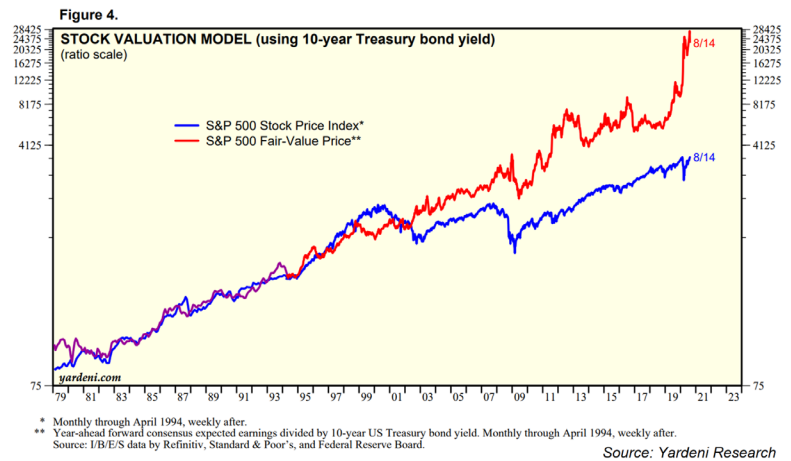
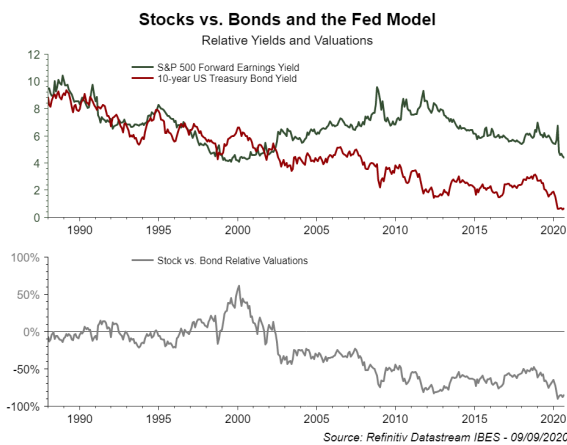
This argument follows the logic that the price of a stock is a function of the value of its discounted future cash flows. Importantly, risk-free government bond yields are often thought of as being a good proxy of the discount rate. Thus, the higher the risk-free government bond yield, the higher the expected discount (**A**). The higher the discount rate, the lower the present value of the discounted cash flows (**B**). The lower the present value of the discounted cash flows, the lower stock price (**C**). The lower the stock price, the higher the earnings yield (**D**). Hence, as bond yields goes up (or down), so does the earnings yield go up (or down) – which assumption behind the Fed Model.



Historical Data Argument

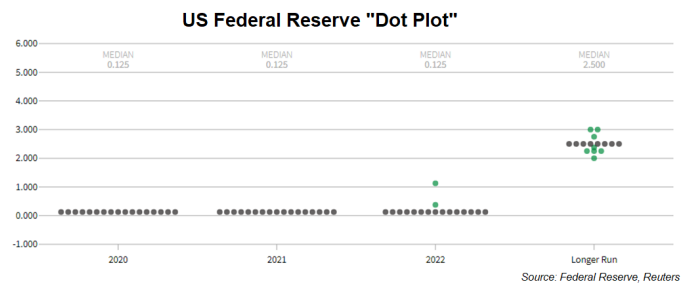
More often than not, proponents of the Fed Model will reference the strong historical pattern between bond and stock yields – even despite limitations in the estimation of earnings. For a comprehensive argument against the Fed Model, see Cliff Asness’ 2003 paper “Fight the Fed Model”¹⁵.

Whether or not the Fed Model is a casual predictor of stock market returns, if investors believe it is it may very well turn out to be accurate (self-fulfilling). Looking at the left chart on the next page, one can see a clear dislocation between stock and bond “valuations” in the 1999 – 2001 tech bubble. This dislocation later corrected, as predicted by the Fed Model. The relationship again broke down during the GFC. The model also opines that equities are currently undervalued, according to the relative relationship between 10-year US Treasury Bond yields and S&P 500 forward earnings yields. The right chart on the next page estimates the “fair” value of the S&P 500 based on this relationship. More information can be found on the Yardeni Research Inc. website¹⁶, from which this chart was taken.



Low bond yields have recently been driven by a combination of **(i) policy rates, (ii) inflation rates, and (iii) declining credit spreads**. We expect policy rates to remain low and unchanged for the foreseeable future, although have a bearish bias towards longer dated government debt amid a deluge of issuance. Currently, we think it is more likely that 10-year US Treasury Bond yields will go to 1.0% than 0.0%.

- (i) **Policy rates** are expected to be “lower for longer”, with no upside forecasted anytime soon. The chart on the right shows the US Federal Reserve “dot plot”, in which each FOMC voting member places a “dot” at the level at which they expect policy rates to be at a certain point in the future. The Fed’s most recent dot plot, in aggregate, signalled no expected rate hike until at least 2023. In other countries, such as the UK, investor expectations of policy rates have flirted with negative territory¹⁷, according to futures markets.
- (ii) **Inflation rates** and inflation expectations are currently highly polarised topics. Supportive for higher inflation is the recent adjustment to Fed policy¹⁸ on “flexible average inflation targeting”¹⁹. They acknowledge the heightened risk of persistently low inflation and have decided to allow targets to episodically exceed the 2% objective on a “symmetric” basis. On the other hand, one could argue that inflation expectations have already run too hard as the “break-even inflation rate” has already increased by c. 1% since the March 2020 lows.
- (iii) **Credit spreads** have retraced back to pre-Coronavirus levels as investors have been comfortable taking on more credit risk.



4. Credit conditions (Covid-19 is exogenous)

Despite high outright levels of debt, the debt servicing ability of corporates and households are robust given historically low interest rates

- 2020 has been more akin to a natural disaster than an economic recession. We are aware that activity in certain services industries, such as travel and leisure, will take a long(er) time to return to pre-Coronavirus levels. Profitability will return in line with business activity and social distancing relaxations.
- The speed of the rebound in equity markets suggests that investors are optimistic about the pace of the economic recovery. We do not expect the “Great Pause” of 2020 to spark a widespread wave of credit defaults as debt servicing costs have dropped significantly. We do, however, expect many over-levered businesses to default if demand does not pick up adequately.

Upside scenario: corporate earnings will rebound alongside business activity; stocks benefit from post-Coronavirus economic tailwinds

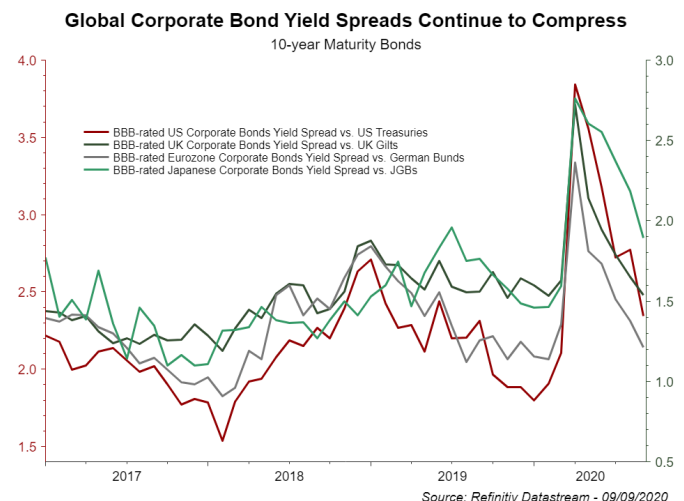
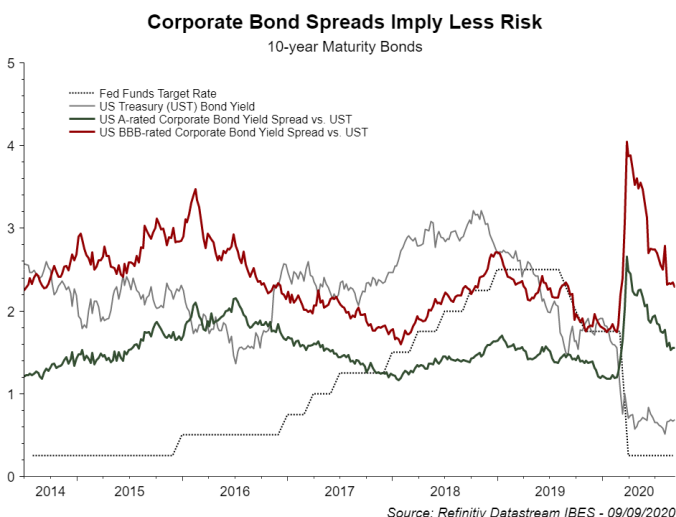
- Positive surprises to economic growth could be possible thanks to aspects of the post-Coronavirus environment: there is more leverage in the economy to fuel growth, funding rates have been slashed, there is no tightness in the labour market, prices of some raw commodities have cheapened, and many of the late-cycle economic pressures we were worried about this time last year have been alleviated.
- Economic recessions are usually triggered by the collapse of excessive risk taking on household, corporate, or government balance sheets. For example, the 2001 tech bubble was largely due to excessively high equity valuations, particularly in the technology sector. The 2009 GFC was due to excess credit risk, in the form of a mortgages, carried by US households. This doesn't apply to the 2020 slowdown.

Downside scenario: although we see a low likelihood of widespread credit defaults, given exceptionally easy credit conditions, a lagged recovery in the labour market could result in persistent demand destruction

- If the recovery in the labour market substantially lags the recovery in business activity, it could result in persistent demand destruction.
- It would not be impossible for some domestic services sectors, such as retail and restaurants, to see a wave of credit defaults some time in 2021 if not in Q4 2020.

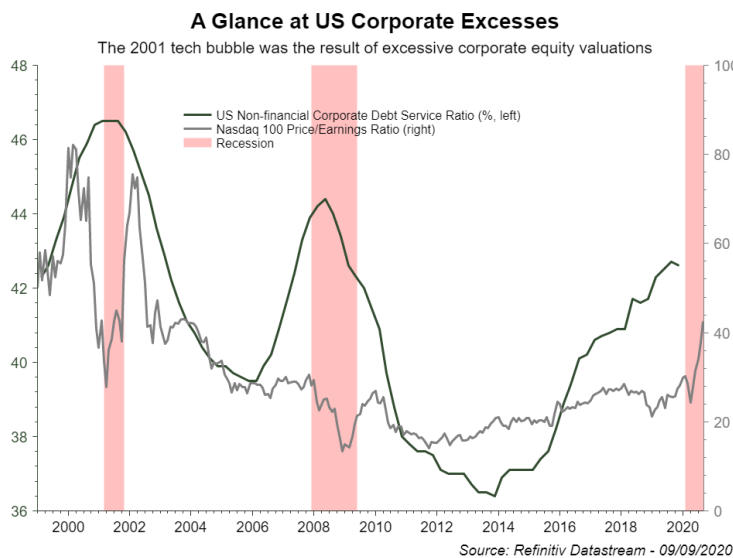
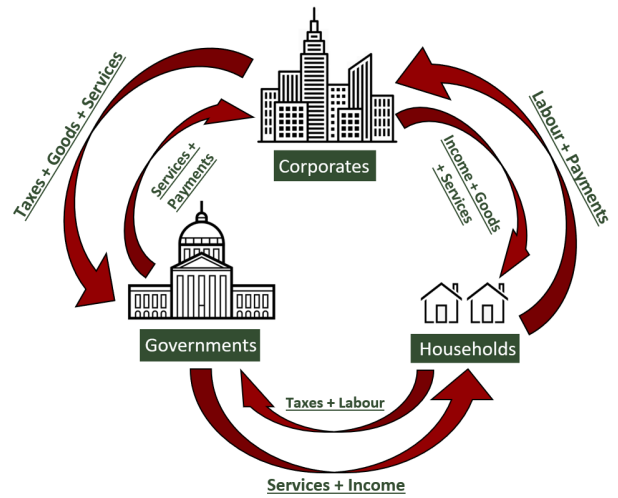
Supportive of risk taking is the fact that credit conditions have substantially eased since pre-Coronavirus. Early on, during the depths of the virus-led depression, many investors pondered whether or not the economic slowdown should be thought of as a "economic recession" or a "natural disaster". Although we must wait and see if permanent damage is done to the economy (such as bankruptcies, persistent slack in the labour market, or long-term damage to consumption patterns or consumer saving), the nascent recovery suggests that the crisis was more akin to a natural disaster.

The below two charts are highly supportive in that they suggest limited credit risk in corporate credit markets. Credit spreads measure the yield that investors demand to be compensated for taking credit risk. The two charts show how credit spreads spiked - very temporarily - in 1H 2020 during the Coronavirus sell-off. The below right chart shows that credit spreads for BBB-rated corporates have reverted close to pre-Coronavirus levels in the US, UK, Eurozone, and Japan. This suggests that credit conditions are supportive of an economic recovery through 2021.



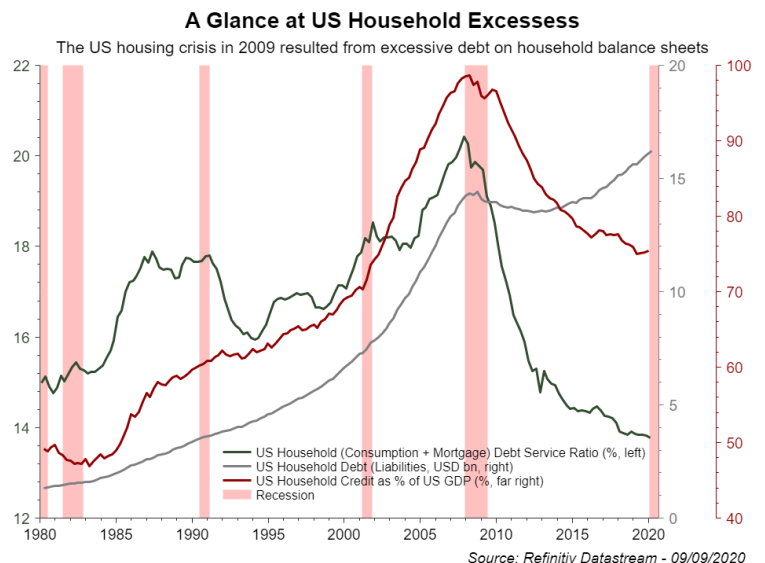
How do “bubbles” cause economic recessions?

Economic recessions usually occur from the misallocation of resources, creating “excesses” or “bubbles” in balance sheets across the globe. Such excesses could either occur due to excessive **(a) equity risk** or **(b) credit risk**. We also highlight the three different segments on the economy: **(i) households**, **(ii) corporates**, and **(iii) governments**. Such excesses can exist on the balance sheets of any of these three segments of the economy. Once these bubbles burst, they create long-term damage given the interconnected nature of the economy, resulting in longer-term *demand destruction*. Without *demand* or *consumption*, the economic machine cannot function. However, when a slowdown is exogenous - or driven by external factors such as a natural disaster or a terrorist attack – it forces the temporary closure of businesses although the economy can restart just as quickly as it stopped. Since the depths of the “Great Pause”, we have seen a pick-up in business activity due to *relaxation of lockdowns*, *huge government stimulus*, and *increased productivity in spite of lockdowns* given the accelerated adoption of technology.



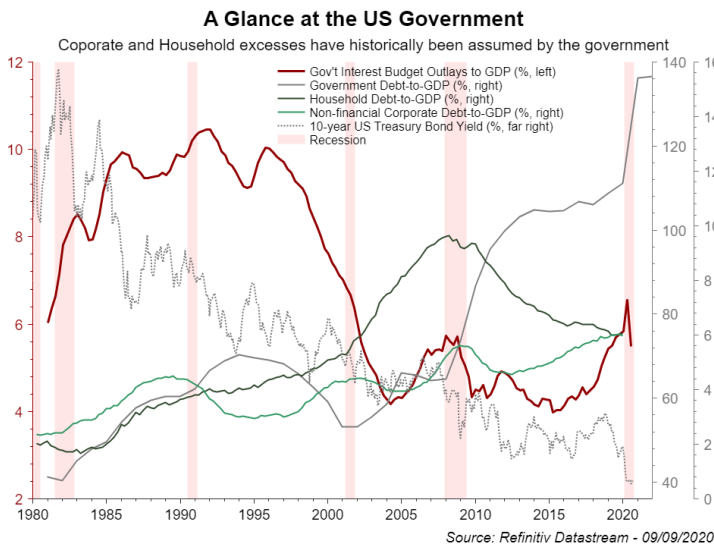
The chart on the left looks at US corporate balance sheets over time. The 2001 tech bubble and bust was primarily the result of excessive **equity risk** assumed by **US tech-focused corporates**. The chart clearly depicts a huge spike in the Price/Earnings ratio of the Nasdaq 100 (**grey line**) to around 80.0x – with hindsight this was clearly an “excess” or bubble! What is important to note is that equity valuations were “reasonable” in the run-up to the 2007-2009 GFC – highlighting how excesses can be somewhat independent across equity or debt. However, one must note that the debt service ratio for US non-financial corporates is not yet significantly stretched and has dropped significantly since interest rates have been cut in response to the Coronavirus.

The 2009 GFC and US housing crisis was largely the result of too much **debt taken on by US households** and too much **credit being granted by US banks**. The excessive debt - a credit bubble - existed in the form of mortgages. Although there was a confluence of factors that exacerbated the crisis (such as excess risk taking by banks), the crisis would have not occurred so soon had US house price growth remained robust and the debt-focused bubble related to US mortgages would not have burst. Furthermore, the chart on the right clearly shows that household debt servicing ratios are also not yet stretched. Household credit as a percent of GDP is also far from GFC levels.



Households and corporates alike have been hurt by the poor business environment in 2020. The response of governments worldwide has been to expand their own balance sheets - thereby giving liquidity to households and corporates and, in exchange, taking on more debt. Notably the US Debt-to-GDP ratio has expanded to over

135%²⁰ but is not yet close to Japan's levels of 238%²¹. Note how the US government Interest Budget Outlays to GDP is at a relatively low level of around 5.5%. This is largely a function of extremely low policy rates and implies the government can service its debt comfortably. Furthermore, Households' Debt-to-GDP ratio is well below levels seen during the GFC and thus less concerning. The chart on the left compares debt levels across the balance sheets of US households (dark green), US corporates (light green), and the US government (solid grey). Interestingly, despite higher debt-to-GDP ratios across each segment of the economy, the debt burden is relatively low for the US government (thick red line).



Moderately Bearish Themes

5. Earnings disappointment in 4Q 2020

Earnings expectations, whilst still low, may be set up for moderate disappointment in 4Q 2020

- Earnings in 4Q 2020 could act as a downside catalyst given the recent wave of upwards revisions to earnings forecasts. This essentially raised the hurdle for corporates to post a positive surprise.

Upside scenario: earnings have been revised higher, but not by much; a continued pick-up in business activity could drive a positive earnings surprise

- The hurdle for positive surprise has been raised but remains low.

Downside scenario: negative earnings surprises occur when results miss expectations

- Since the sharp multiple expansion of 2H 2019, there has been mounting pressure on corporate earnings to deliver positive growth. Investors have so far "looked through" poor earnings and even strongly rewarded companies that "beat" estimates despite the outright numbers remaining poor or negative. Hence, earnings may come to a head in 4Q 2020 or even 1Q 2021.

Unsurprisingly, outright earnings growth has been sharply negative on a year-on-year basis for both the S&P 500 and Stoxx 600. Surprisingly, however, the recent earnings season for 2Q 2020 (reported in 3Q 2020) has been a boon for stock prices. The table on the right shows the severity of the year-on-year earnings contraction for 2Q 2020 earnings, with year-on-year growth ranging between a tepid +6.9% increase for US healthcare stocks and -168.4% for the US energy sector. Earnings contractions greater than 100% imply an outright earnings loss.

2Q 2020 Earnings Growth

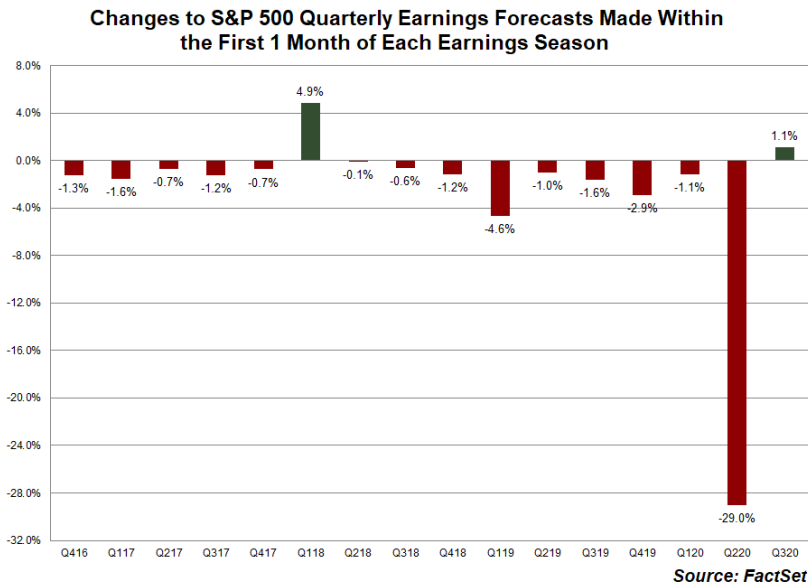
	S&P 500		Stoxx 600	
	Beat Est's (%)	Growth YoY (%)	Beat Est's (%)	Growth YoY (%)
Full Index	82%	-30.1%	60%	-51.9%
Health Care	90%	+6.9%	63%	+1.1%
Technology	94%	+5.8%	68%	-6.3%
Consumer Staples	86%	-5.7%	46%	-10.3%
Financials	78%	-42.7%	55%	-43.0%
Consumer Discretionary	74%	-68.2%	54%	-128.5%
Industrials	89%	-82.9%	72%	-70.1%
Energy	73%	-168.4%	37%	-152.9%

Source: Refinitiv as of 26 Aug 2020

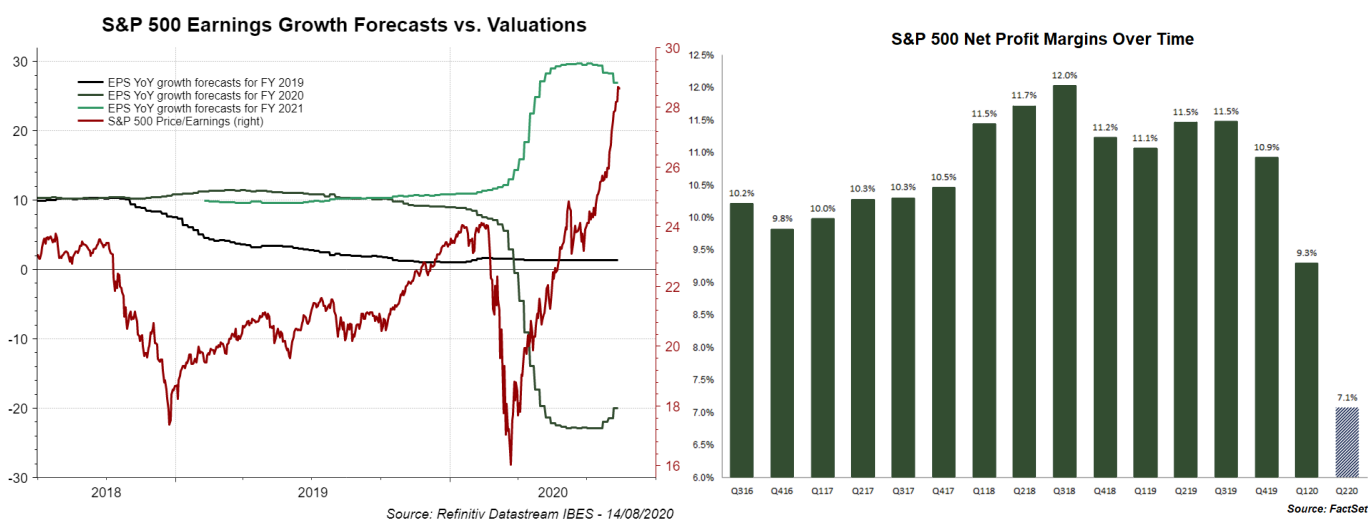
The outright level of year-on-year earnings growth was -30.1% for the S&P 500 Index and -51.9% for the Stoxx 600 Index. So, why did stocks rally on the back of this terrible earnings news? The answer: the bar was set so low that any positive surprise to earnings would have resulted in a sharp outperformance. The aforementioned table also shows the percentage of stocks within each index that “beat” analysts’ forecasts. According to FactSet, 83% of S&P 500 stocks beat analysts EPS estimates – the highest recorded number since FactSet started recording the metric²².

As surprising as it might sound, the practice of revising earnings lower into earnings season is quite common (allowing management to post a positive EPS surprise) and company management and financial analyst often revise EPS forwards as part of expectations guidance. In fact, it is relatively uncommon for analysts to revise

EPS estimates higher within the first month of any given earnings season. The chart on the left shows the average change to EPS revisions made in the first month of each earnings season going back to 4Q 2016. Despite the S&P 500 flirting with an earnings recession in 2019, record levels of downward revisions over the past 12 months helped flip “outright bad” numbers into being supportive for stock prices given that the results were “relatively good” compared to estimates. In fact, expectations were so low in 2Q 2020 that EPS forecasts were revised higher in the first month of the most recent earnings season. This was the first time since 1Q 2018 (or the past 10 quarters)!



The below left chart, an Omba favourite, has a lot of explanatory power as it captures much of the recent market narrative. It shows how S&P 500 valuation multiples (Price/Earnings, **red line**) rapidly rose in 2H 2019 despite actual **2019 EPS growth rate** (the “flat” **black line**) for the year remaining largely unchanged. This indicated that earnings multiples “expanded” i.e. the “P” in the P/E ratio rose sharply. Over time, either the “P” or “E” must normalise if historic standard of valuations are to hold (unless we are indeed in a new normal). Ultimately, this puts greater pressure on earnings expectations. This narrative, despite being front of mind at the start of the year, was quickly dismissed as news of the Coronavirus and subsequent stimulus broke. The **dark green line** on the below left chart shows how **2020 EPS** was revised down at the start of 2020, whereas the **light green line** shows that **2021 EPS** was revised up in tandem due to the “low base effect”. However, we see a nascent trend of upward EPS revisions for 2020. We believe this could pose downside risks to equities later in the year as expectations are, untraditionally, being revised higher. Over time, this “K” shaped recovery in stock prices – driven by US technology (or more specifically, the biggest 5 stocks) – may come to a head if valuation fundamentals remain stretched. **Compounding this is the fact that profit margins for US firms are at relative lows, as the below right chart shows.** Margin compression is a typical symptom of a late-cycle bull run, although much of the story in corporate margins is yet to play out post the “Great Pause”.



6. US-China trade war escalation

Somewhat dependent on a Trump win in the White House, we see limited risks of US-China and US-Europe trade war re-escalation

- If President Trump were to win a second term, we expect a re-escalation of the US-China trade discussions (and to a lesser extent US-Europe trade negotiations).
- Volatility is to be expected around the 3 November 2020 election date, with further bouts of volatility occurring around key negotiation and announcement dates. Keep your eyes peeled for spikes in the “Volfefe” index²³. Additional volatility may arise in the unlikely case of a contested election.
- We believe that the Phase 1 Deal will be respected.

Upside scenario: the lowest risk outcome would clearly be a Biden victory in the White House; the Phase 1 deal is respected and tariffs are partially or fully repealed

- Biden is broadly considered to have more market-friendly policies on trade than President Trump. Unlike stimulus or tax law, the locus of control over trade negotiations lies squarely within the White House. A Biden victory would see the use of negotiation tactics that focus more on reciprocity than the use of threat.
- The White House would likely continue to make progress in terms of US-China intellectual property protection and Chinese financial transparency, whilst posing less market volatility through the lessened use of tariffs.

Downside scenario: a dire, yet low probability outcome, would be a repealing of the Phase 1 deal; second term win for President Trump and full trade war re-escalation

- Although both the US and China are now more incentivised to cooperate due to the Coronavirus, it is possible for behind-the-scenes negotiations to sour and in an extreme scenario the Phase 1 deal could be scrapped completely.
- The implementation of new tariffs would pose risks to volatility and could precipitate a full equity market correction. An analysis shows that equity investors overreact to tariff announcements, perhaps on fears of any further escalation.

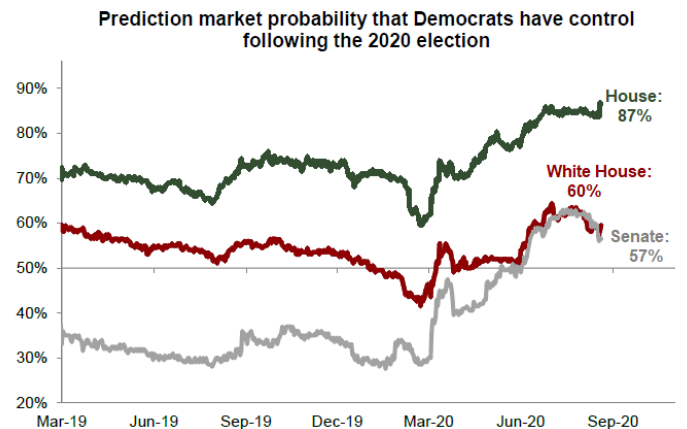
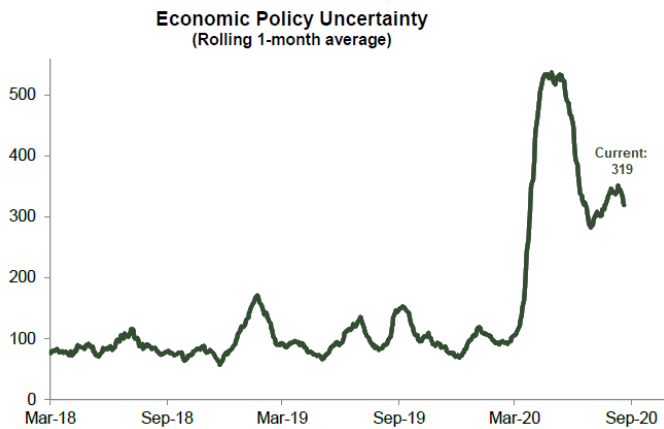
Despite a trend of improved Democrat support - coinciding with recent US civil activism and mounting criticism over the White House’s management of the Coronavirus - a win for Biden in the White House and win for the Democrats in Congress are far from certain. While US trade policy has been highlighted as a key risk to the economy in recent weeks, we see it as having a low likelihood of escalating prior to the US elections. Despite a minor breakdown in talks, both China and the US have reiterated a commitment to the Phase 1 deal. This was recently signalled by a meeting between top US and China trade representatives²⁴.

After the US election, trade policy will largely be determined by whoever wins the White House. The President holds meaningful influence over trade policy, given that policies can implemented in the form of a Presidential Executive Order (as opposed to a bill being passed in Congress). Investors broadly agree that Biden will be a more market-friendly outcome in terms of trade policy, as he will use more moderate negotiation tactics than those historically used by President Trump. It is unlikely that Biden would implement new tariffs, and it is even possible that he repeals some of the existing tariffs. However, the Biden campaign highlighted they “*would first re-evaluate the tariffs upon taking office*”. If the tariffs were to be repealed, it would likely also be done on condition that China meets other US demands. Biden has said “*we’re going after China in the wrong way... China is stealing intellectual property. China is conditioning being able to do business in China based on whether or not you have 51% Chinese ownership. That’s got to end*”²⁵.

	Market Friendly Outcome	Policy is Driven By
US Trade Policy	Biden win	The White House
US Tax Repeal	Trump/Republican win	US Congress

Overall, we expect the US to remain tough on China given the bi-partisan support for reform – particularly in terms of better protection for Western intellectual property. Biden, who intends on taking “*aggressive trade enforcement actions*”, would more likely galvanise multilateral negotiations with global allies and trade partners (such as the EU, the UK, and Japan). A new “China versus Rest of World” narrative may even provide more negotiation leverage than “China versus USA”.

We highlight the high degree of uncertainty into the election and that the market will struggle to predict US policy until after the results are finalised. As you can see from the left chart on the next page, some proprietary measures of US economic policy uncertainty are already highly elevated²⁶, even compared to points in 2019 when US-China trade was at the forefront of economic discussion. The right chart on the next page shows the polls changing to estimate a higher probability of a Democrat win in the White House and the House of Representatives. Many will remember the surprise announcement in 2016 of Donald Trump winning the US presidential election when betting odds almost guaranteed a win for Hillary Clinton - polls can clearly be wrong.



Source: FactSet, Predictit.org, PolicyUncertainty.com, Federal Reserve Bank, Haver Analytics, GS Global Investment Research

Bearish Themes

7. US domestic politics (tax hikes, gridlock)

Although highly unpredictable, investors await the 2020 election results to form an outlook for US domestic policy

- There are two upcoming focal points regarding US domestic policy: **(i) the possible full or partial repeal of the 2017 Tax Cuts and Jobs Act** and **(ii) a possible gridlock in US Congress** which could make it difficult to pass additional stimulus bills.
- A full or partial tax repeal is expected if Democrats were to win a majority in Congress. This would be a market-unfriendly outcome for US equities.

Upside scenario: the most market friendly scenario would be one in which there is no political gridlock and a less-than-expected tax hike

- A less-than-expected hike to taxes would be a positive catalyst for US equities. Market participants expect a repeal of the Tax Cuts and Jobs Act if the Democrats win a majority in Congress and Biden wins the presidential race.
- A high margin majority in Congress (be it Democrats or Republicans) and/or a Blue or Red “sweep” would reduce the risk of further fiscal stimulus bills getting stuck in gridlock.

Downside scenario: the worst-case outcome would be one of political gridlock whereby it becomes challenging to pass further stimulus packages

- A split between Congress and the White House would increase the risk of political gridlock potentially impacting stimulus programmes being approved.
- On 3 November 2020, the US votes on all 435 seats in the House of Representatives and 35 of 100 seats in the Senate. We anticipate elevated market volatility around the date of the event.

While Biden would be market-friendly for trade, he would be market-unfriendly for corporate tax policy. Biden has made explicit commitments to partially repeal the **Tax Cuts and Jobs Act of 2017**, often referred to as “Trump tax reform”, that reduced tax rates for corporates and individuals alike amongst other things. The Congressional Budget Office forecasted the Act would save corporates \$745 billion and individuals \$976 billion over 10 years²⁷. A key part of the Act was a reduction in corporate taxes from 35% to 21%²⁸.

Biden Tax Promises

	Current Level	Promised Level
Corporate Taxes	21.0%	28.0%
Income Tax (Top Bracket)	37.0%	39.6%
Long-term Capital Gains Taxes	20.0%	39.6%

Source: FT.com

Equally important is the risk of political gridlock. Gridlock could occur if there was a split between Republicans and Democrats in the White House and Congress. A split and/or a weak majority in Congress could mean that further stimulus talks get hamstrung. Breakdowns in negotiations have already occurred in 2H

2020 where the gap between the “Phase 4 stimulus package” proposals made by Republicans and Democrats was over US\$ 3 tn (yes, trillion) at certain points. Republicans, who initially wanted no further Phase 4 package, raised their proposal to around US\$ 1 tn in late July. Democrats, who initially proposed a much larger Phase 4 package at over US\$ 3 tn, are now willing to compromise at a more “reasonable” US\$ 2.2 tn²⁹.

The “shock-and-awe” scale and speed at which fiscal stimulus was rolled out was hugely supportive for the 2020 recovery story which is still unfolding. If political cohesion occurs, we anticipate further supportive policy in response to any deterioration in fundamentals. Failing this ongoing fiscal support, markets could flounder.

Expectations of Outcomes With Respect to Market Friendliness

		Who wins the White House	
		Biden	Trump
Who wins Congress (House and Senate)	Democrats	"Blue wave". Positive for stimulus. Positive for trade. Negative for taxes.	Risk of gridlock. Negative for trade.
	Republicans	Risk of gridlock. Positive for trade. Positive for taxes.	"Red wave". Neutral-to-positive for stimulus but no chance of gridlock. Negative for trade. Positive for taxes.

**The terms "positive" and "negative" indicate how market-friendly a result may be for risky asset prices, and has nothing to do with actual policy.*

8. Non-targeted lockdowns

We expect economic activity to continue to pick-up through year end with no nationwide lockdowns

- Relaxations to social distancing measures are key to a pick-up in business activity.
- We expect sporadic region-specific lockdowns to occur, although largely offset by the continued adoption of technology. We favour measures of “effective lockdown” rather than simple mobility/footfall/curfew data amid adaptive trends in technology and eCommerce.
- Higher new cases counts in the northern hemisphere may occur during the winter months; this is not due to cold resistant properties of SARS-CoV-2 so much as people meeting indoors at a closer proximity.

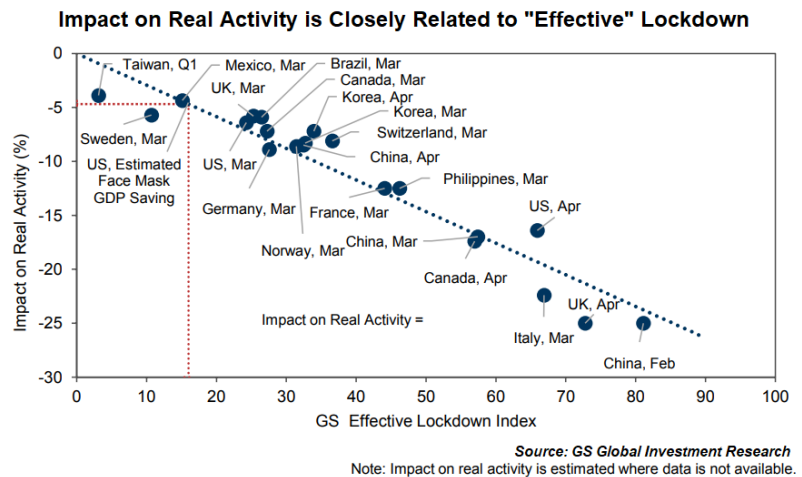
Upside scenario: no further escalations to lockdowns and the continued relaxation of social distancing measures prior to a vaccine rollout

- News around a vaccine remains centre stage.
- Widescale lockdowns are highly unlikely given the strong civil and political will to avoid them. Furthermore, it has been demonstrated that region specific lockdowns are indeed effective containment tools.

Downside scenario: a slowdown in business activity (and growth forecasts) is the main risk to the economic recovery

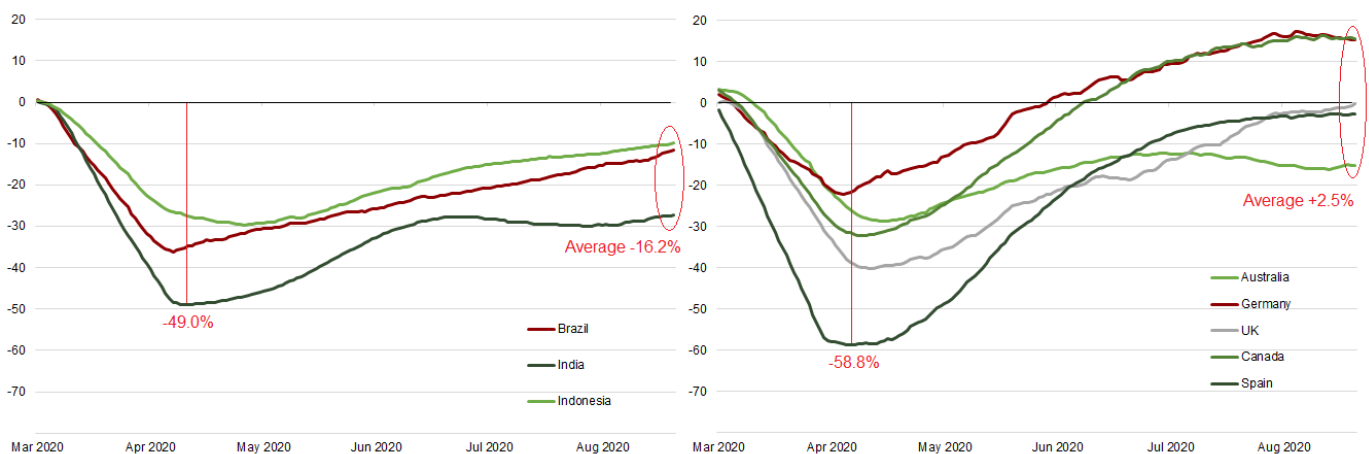
- Although we see worst case scenarios as being extremely unlikely to materialise, the greatest risk to the economic recovery is still Coronavirus related.
- If a severe lockdown were to occur in large nations this could derail the global recovery.

Lockdowns hurt business activity – that is common sense. However, a measure of “effective” lockdown can be more appropriate for quantifying damage to economic activity. The chart on the right clearly shows that proprietary measures of effective lockdown can be extremely powerful predictors of activity growth (and thus consumption). We expect the “effective” lockdown to continue to abate over time given the continued adoption of technology.



The charts below show mobility activity across a selection of Emerging Market (EM) and Developed Market (DM) nations. The data depicts measures of movement across different location categories such as retail spaces, groceries and pharmacies, transit stations, and traditional workplaces, versus baseline activity over 3 Jan 2020 – 6 Feb 2020³⁰. Interestingly, DM nations (shown below right) had a more severe, yet shorter, contraction in activity during the 2Q 2020 “first wave” lockdown. Across the 5 DM nations we selected, mobility contracted by 58.8% at the most in Spain. Currently, our selection of 5 DM nations are on average 2.5% more active than 1Q 2020 baseline levels[‡]. However, on the other hand, EM nations are still mired in lacklustre activity despite not contracting as severely initially. India, the “worst” contained EM nation in our selection, “only” contracted 49.0% versus baseline activity. Currently, our selection of 3 EM nations still show 16.2% less mobility than baseline levels on average. Comparatively, across our selection of 5 DM nations, Spain (the “worst” contained) recovered past the current level of our EM selection (-16.2% versus baseline) in June 2020, whereas Germany (the “best” contained) recovered as early as April 2020.

Activity and Mobility Measures in DM vs. EM Nations

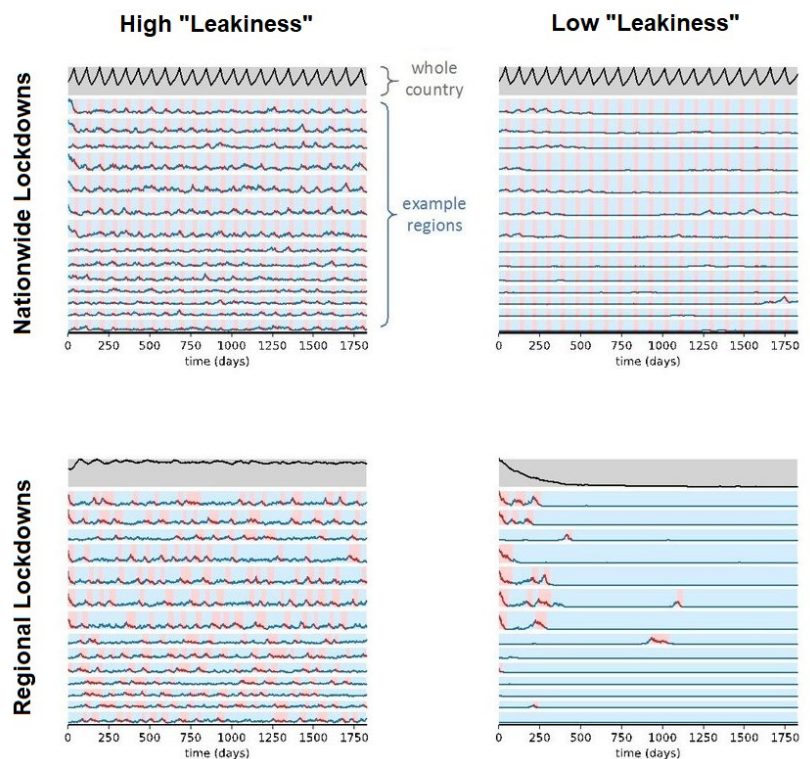


Source: Google COVID-19 Mobility Reports, Omba

[‡] Most recent data as of 1 September 2020

Nationwide lockdowns are much more punitive than region-specific lockdowns and will likely be avoided. We have seen from case studies in Australia, Germany, and the UK that regional lockdowns can be an important policy tool, with academic evidence further suggesting that they are effective at reducing positive case counts and deaths³¹. Furthermore, research from the Max Planck Institute suggests that regional lockdowns can be *even more effective* than nationwide lockdowns in certain instances³². The study simulated certain regions such as Germany, England, Italy, New York State, and Florida over 5 years and measures the effectiveness of regional versus nationwide lockdowns. The study modelled **macro-regions** (e.g. governments who can set widescale policy such as in Germany or New York State) as being made up of various **micro-regions** (e.g. counties or cities) which are able to independently lockdown. They found that different strategies worked best for different **macro-regions** (e.g. Australia, England) depending on the “leakiness” of the **micro-regions** (e.g. Melbourne, Leicester), or in other words, the likelihood of cross-regional spreading of the Coronavirus within the country. The graphic on the right shows how effective different strategies are, depending on levels of “leakiness”. Each square plot contains multiple line charts - each line representing the number of simulated cases in a single micro-region - and uses fixed rules to decide when to set new regional or nationwide lockdowns. Lockdowns can be seen as red shading on the otherwise blue background. As you can see from the bottom right grid, regional lockdowns are by far the most effective in low “leakiness” regions given that the “whole country” level of infections falls quickly and stays low. Nationwide lockdown strategies, which are shown in the top left and top right square plots, show a high degree of cyclical nature in whole country infection levels yet are still much more punitive in terms of total lockdowns (demonstrated by how much red shading exists).

Regional Lockdowns Can Sometimes Be Most Effective



Source: Max Planck Institute

References

- ¹ 'K-shaped' stock recovery widens gap between winners and losers – FT, <https://www.ft.com/content/680d9605-f112-4ea5-a5af-3b9138b5bf07>
- ² Worries grow over a K-shaped economic recovery that favors the wealthy – CNBC, <https://www.cnb.com/2020/09/04/worries-grow-over-a-k-shaped-economic-recovery-that-favors-the-wealthy.html>
- ³ Hypermind Predictions, 28 August 2020, <https://predict.hypermind.com/dash/dash/dash.html?list=COV>
- ⁴ Coronavirus vaccines leap through safety trials — but which will work is anybody's guess - Nature, July 2020, <https://www.nature.com/articles/d41586-020-02174-y>
- ⁵ Coronavirus 'spike' protein just mapped, leading way to vaccine – Live Science, February 2020, <https://www.livescience.com/coronavirus-spike-protein-structure.html>
- ⁶ Fact Sheet: Explaining Operation Warp Speed – US Department of Health and Human Services, <https://www.hhs.gov/about/news/2020/06/16/fact-sheet-explaining-operation-warp-speed.html>
- ⁷ Statement on AstraZeneca Oxford SARS-CoV-2 vaccine, AZD1222, COVID-19 vaccine trials temporary pause – AstraZeneca, <https://www.astrazeneca.com/media-centre/press-releases/2020/statement-on-astrazeneca-oxford-sars-cov-2-vaccine-azd1222-covid-19-vaccine-trials-temporary-pause.html>
- ⁸ UK secures another 90m doses of potential Covid-19 vaccines - FT, <https://www.ft.com/content/1e928cb6-57fb-4384-9c2c-9000c44eacc0>
- ⁹ Russia vaccine thrusts little-known state research unit into spotlight – FT, August 2020, <https://www.ft.com/content/874059a6-da43-4c23-b29d-21ed59152124>
- ¹⁰ Commitments of Traders Report (COTR) - Commodity Futures Trading Commission (CFTC), <https://www.cftc.gov/MarketReports/CommitmentsofTraders/index.htm>
- ¹¹ US Mutual Funds: Weekly New Cash Flows – Yardeni Research Inc, <https://www.yardeni.com/pub/ecoindiciwk.pdf>
- ¹² 'K-shaped' stock recovery widens gap between winners and losers – FT, August 2020, <https://www.ft.com/content/680d9605-f112-4ea5-a5af-3b9138b5bf07>
- ¹³ Is the World at Risk of the “Japan Disease”? – The International Economy, 2017 – http://www.international-economy.com/TIE_Su17_JapanDiseaseSymp.pdf
- ¹⁴ Time for Thinking – Howard Marks, 2020 – <https://www.oaktreecapital.com/docs/default-source/memos/timeforthinking.pdf>
- ¹⁵ Fight the Fed Model - Cliff Asness, 2003, <https://images.aqr.com/-/media/AQR/Documents/Journal-Articles/JPM-Fight-the-Fed-Model.pdf>
- ¹⁶ Stock Market Briefing: Fed's Stock Valuation Model Monthly/Weekly - Yardeni Research, 24 August 2020, <https://www.yardeni.com/pub/valuationfed.pdf>
- ¹⁷ Market Bets for Negative BOE Rates Back as Banks Weigh Chances – Bloomberg, June 2020, <https://www.bloomberg.com/news/articles/2020-06-11/morgan-stanley-says-risk-boe-will-cut-rates-below-zero-is-real>
- ¹⁸ Federal Open Market Committee announces approval of updates to its Statement on Longer-Run Goals and Monetary Policy Strategy – US Federal Reserve, <https://www.federalreserve.gov/newsevents/pressreleases/monetary20200827a.htm>
- ¹⁹ The Federal Reserve's New Monetary Policy Framework: A Robust Evolution – Vice Chair Clarida, <https://www.federalreserve.gov/newsevents/speech/clarida20200831a.htm>
- ²⁰ This number is basis the Refinitiv chart. For additional information on US Government Debt see the Federal Reserve, Bank of St. Louis website, <https://fred.stlouisfed.org/series/GFDEGDQ188S>
- ²¹ Japan: National debt from 2014 to 2024 in relation to gross domestic product – Statista, <https://www.statista.com/statistics/267226/japans-national-debt-in-relation-to-gross-domestic-product-gdp/>
- ²² S&P 500 EARNINGS SEASON UPDATE: AUGUST 7, 2020 – FactSet, <https://insight.factset.com/sp-500-earnings-season-update-august-7-2020>
- ²³ JPMorgan Creates 'Volfefe' Index to Track Trump Tweet Impact – Bloomberg, 2019, <https://www.bloomberg.com/news/articles/2019-09-09/jpmorgan-creates-volfefe-index-to-track-trump-tweet-impact>
- ²⁴ U.S., China reaffirm commitment to Phase 1 trade deal in phone call – Reuters, 25 August 2020, <https://www.reuters.com/article/us-usa-trade-china/us-china-reaffirm-commitment-to-phase-1-trade-deal-in-phone-call-idUSKBN25L023>
- ²⁵ Biden Says He Will End Trump's Tariffs On Chinese-Made Goods, Aide Walks Back Statement – Forbes, August 2020, <https://www.forbes.com/sites/stuartanderson/2020/08/06/biden-says-he-will-end-trumps-tariffs-on-chinese-made-goods/>
- ²⁶ Economic Policy Uncertainty Index, <https://www.policyuncertainty.com/>

²⁷ A bill to provide for reconciliation pursuant to titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018 – Congressional Budget Office Cost Estimate, 2017,

<https://www.cbo.gov/system/files/115th-congress-2017-2018/costestimate/hr1.pdf>

²⁸ From tax to trade: where Joe Biden stands on the big issues – FT.com, August 2020,

<https://www.ft.com/content/df1b1656-769d-4b7c-9f3a-cb003ced11f1>

²⁹ Chuck Schumer calls GOP's latest coronavirus stimulus plan 'completely inadequate' as stalemate drags on – CNBC, September 2020,

<https://www.cnbc.com/2020/09/03/coronavirus-stimulus-update-schumer-criticizes-republican-skinny-bill.html>

³⁰ Google Mobility Reports Documentation, https://www.google.com/covid19/mobility/data_documentation.html?hl=en

³¹ Evaluating the Effectiveness of Regional Lockdown Policies in the Containment of Covid-19: Evidence from Pakistan – Umer, Khan, George Mason University, June 2020,

https://www.researchgate.net/publication/341926913_Evaluating_the_Effectiveness_of_Regional_Lockdown_Policies_in_the_Containment_of_Covid-19_Evidence_from_Pakistan

³² Corona pandemic: Regional lockdowns could shorten the total duration of restrictions – Max Planck Institute, July 2020, <https://www.mpg.de/15217524/corona-local-lockdowns>