



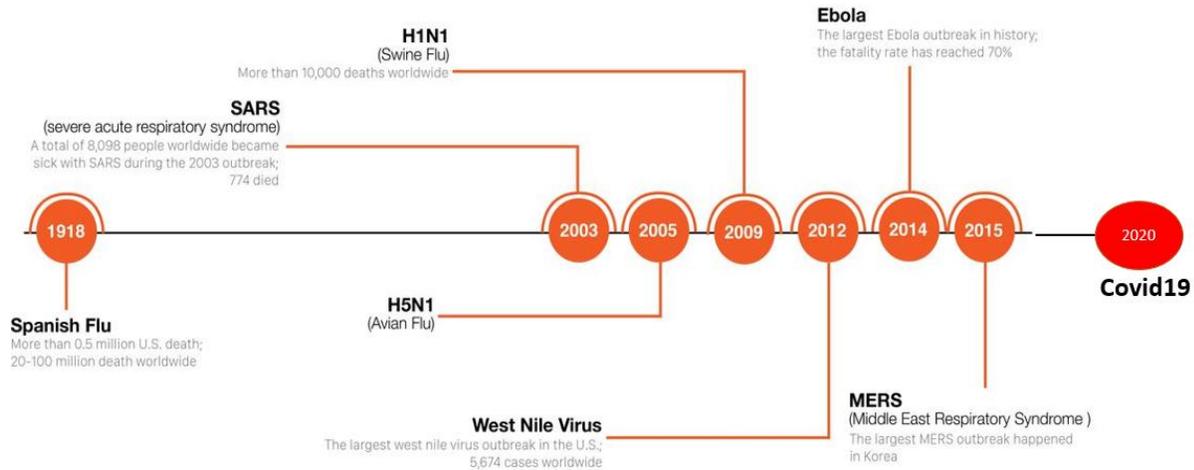
The Four Horsemen of the Apocalypse

The Four Horsemen of the Final Judgement were detailed in the last book of the Bible, Revelations. It describes the Christian apocalyptic vision with the Four Horsemen as the harbingers setting the divine end of time. This writer isn't trying to be prophetic but instead am just taking the liberty to associate four mega and irreversible trends that will affect the global economy and ensuing portfolio implications. The four horsemen connote plague, sword, wild beasts, and famine.

Plague. Covid-19 will not be the last of pandemics. Since the 1980s, we have already witnessed numerous zoonotic viruses crossing over to humans. From HIV, SARs, Ebola, MERs, Covid19 as well as a host of lesser-known viruses like the Nipah and Hendra. According to the National Center for Biotechnology Information, it is estimated that every year, 4 new zoonotic viruses are found. Many factors have led to the increase in frequency of emerging zoonotic diseases infecting humans including the modernisation of farming practices, particularly in the developing world, habitat destruction, human encroachment, and climate changes. Better connectivity via air and sea travel is also enabling the spread from one continent to another much faster than ever before. Unfortunately, the global response to the Covid19 pandemic by many parties is marred by a litany of opaqueness, lethargy, finger-pointing and most of all lack of coordination and cooperation to assist each other. It also exposes the vulnerability of employment for economies that are services-oriented, which is ironic as this sector has often been considered the bastion of stability. It is unthinkable that the US unemployment rate could go from the lowest in 50 years to the highest in 80 years with 38.6mn unemployed in a matter of months. Contrary to the popular narrative that Covid-19 is social leveller that does not discriminate race or income, the virus has infected the lower-income and minorities disproportionately. In the US nearly 23% of the reported deaths are African American even though they make up 13% of the nation's population. In the UK, the number of deaths per 100,000 people is more than double at 55 deaths in the poorest part of England compared to 25 in the wealthiest area. There are many reasons for that including access to healthcare, higher co-morbidities among the poor or simply a case that the poorer segment of society is likely in jobs that are deemed essential services with no luxury to work from home. It is also not a surprise that the clamour to open the economy rings louder among the poor than the rich when livelihoods take precedent over lives. What it means for portfolio construction is that black swans, by definition should be infrequent, are going to occur more often going forward. **An asset allocation that is titled too much to equities or illiquid private equity should be avoided. Finding tail-risk hedging strategies and uncorrelated returns have become even more urgent for us.**

Online strategy is no longer an after-thought but is now a quintessential sales channel for many sectors including the less penetrated segments of groceries, luxury, pharmaceutical. The adoption of online learning will no longer be for after-school tuition but be incorporated into school's curriculum spanning both primary and tertiary institutes. Telecommuting and remote-controlling of industrial machinery will become sine-qua-non for the future of work.

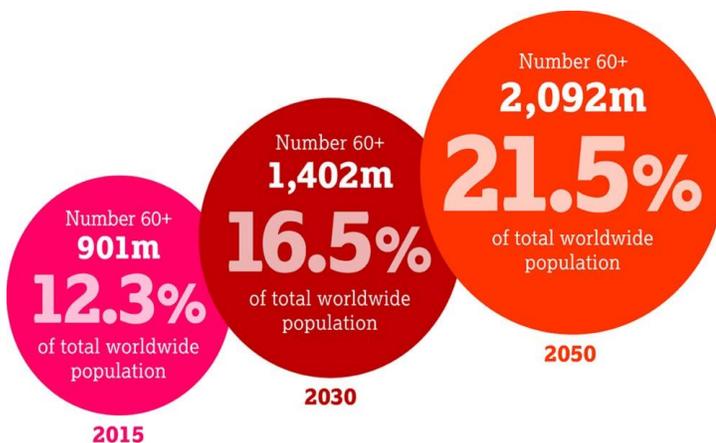
Emerging Zoonotic Disease Timeline



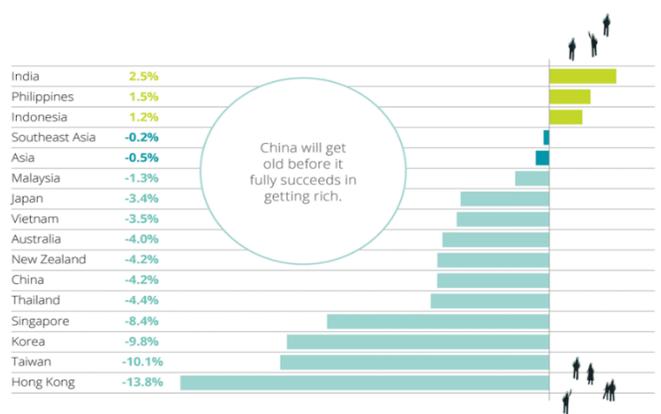
Source: U.S. Centers for Disease Control and Prevention; World Health Organization; European Centre for Disease Prevention and Control

Sword. The sword that thwarts future growth is ageing demographics. According to data from World Population Prospects: the 2019 Revision, by 2050, one in six people in the world will be over age 65 (16%), up from one in 11 in 2019 (9%). By 2050, one in four persons living in Europe and Northern America is 65 or over. In 2018, for the first time in history, people aged 65 or above outnumbered children under five years of age globally. The number of persons aged 80 years or over is projected to triple, from 143 million in 2019 to 426 million in 2050. This has significant implication including lowering the overall demand for goods and services, such as housing and transportation. As the propensity to spend compared to save will tilt to the latter when the world ages, we should expect greater demand for the state to step-in to provide social safety nets.

The world is ageing fast



China will aged before becoming rich



Source: Deloitte
Deloitte Insights | Deloitte.com/insights

Source: UNDESA Population Division, World population prospects.

The economic implications would be an increase in fiscal spending against a backdrop of declining revenues. To compensate for the expected shortfall in revenues, tax rates will have to increase alongside an expansion of more types of taxes. A poster child of such flagrance is in Japan. It recently announced a \$2.2trn stimulus packages, 40% of its GDP, that will require the country to issue Yen90trn of government bonds, which is a record level. If we include the government debt due for rollover for this fiscal year, Yen 212 trn worth of debt is coming to the market for financing, widening its fiscal deficit to 14.9% of GDP, a multi-decade high. To put the near 15% deficit spending in perspective, Japan must run a balanced budget while generating 2% pa growth over the next 7 years to normalize its fiscal deficit incurred in 2020. This will be a tall order as the average GDP growth in Japan since 1995 has only been 1.5% pa and it has never run a balanced budget since 2009. Furthermore, as postulated by the Ricardian equivalence theory, the current efforts to stimulate the economy via unsustainable debt-financed government spending will fail as consumers would rather save in expectation of higher taxes and/or are less sanguine of future growth in income. This behavior is evident in post-GFC world. We witnessed US savings rate jumped from the average of 4.6% between 2000-2008 to 13.1% as of Mar 2020. We can draw the same conclusion in Europe and Japan as well. **From a portfolio perspective what this trend means the search for income will continue but the challenge is to find reasonable yield in a world where close to \$16trn debt are yielding zero or negative yields. There will be clear winners in sectors like healthcare and robotics;** areas the team is focusing to build both internal and external expertise.

Wild Beasts. We wrote back in May 2018, [The Thucydides Trap](#), about the risk of US and China falling into the Thucydides trap. Since then, diplomatic wrangling has become more cantankerous. In this author's opinion neither of these two countries have demonstrated leadership and benevolence in this time of crisis. The recent comments from China's foreign minister remarking "U.S. political forces are taking hostage of China-U.S. relations, attempting to push the ties to the brink of so-called 'new Cold War'" which was followed by the US Secretary of State declaring that it no longer view HK as autonomous are bellicose statements leading to the inevitable conflict. While many have hoped that relationships between both countries can improve if the current US administration is not re-elected in November, the deterioration in their relationship between both countries did not arise from the Trump's administration but has been festering since Obama's strategic "Asia pivot" in 2012. The core of US's bi-partisan view of China as a strategic competitor and adversary predates the "Asia pivot". It stems from deep rooted issues such as loss of employment among the middle and lower rungs of its society as firms outsourced to China in droves after China's ascension to WTO in 2001. As for China, its abhorrence of western powers interference in its domestic affairs including treatment of Muslims in restive Xinjiang province, Hong Kong's "One country, two systems" and Taiwan's independence can be traced back to its humiliating loss during the 18th century Opium war. While conflicts are inevitable as an upcoming nation challenges the incumbent's status quo, it does not mean a war is imminent. As mentioned in his book, *Destined for War*, Dr Graham Allison cited several occasions the dislodgement of dominance did not lead to war with the US-Soviet narrative as the most relevant. The presence of nuclear arsenal in both countries set the condition of "mutually assured destruction" therefore

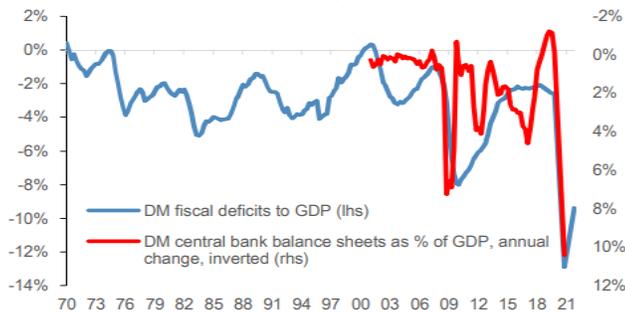
Famine. The days of unbridled capitalism is over, to be more specific the days of neoliberalism is over. Neoliberalism is an ideology championed in the 1980s by Reagan and Thatcher, which advocates free market against government regulation and centralized planning. Neoliberalism sees competition as the defining characteristic between consumers, corporate and government relationships. It encourages consumers to exercise their freedom of choices and cement the mentality that their conspicuous consumption spending and accumulated wealth is due to their own merits; don't need to be apologetic about it. Corporates continue this Darwinism thinking taking no prisoners in the name of efficiencies and profit-maximization. Any efforts to create level playing field or to accommodate social exigency at the expense of profits are portrayed as distorting market forces. Lesser taxes, fewer regulations are good, organized labour is evil and public goods should be privatized in the name of efficiency. As for the governing cohort, their modus operandi is to perpetuate this rent-seeking mindset. Centralized economic planning that addresses longer-term issue like climate changes, narrowing income disparities, demands of an ageing population are side-swiped for lobbyists with the eye on the next election. In neoliberalism, the role of the government should be minimized and is best epitomized by Ronald Reagan famously said, "Government is not the solution to our problem, government is the problem." In the US, the Republicans call for big business, small government while the Democrats call for globalization and outsourcing blurring the lines of their ideologies when it comes to defining capitalism. The best example is the listing of SMRT back in 2000 with the view that such public good and services are best facilitated by the public capital markets. But without an equitable pricing model that serves the public increasing need and the capital markets profit maximization demands, the train operator had to be privatized by 2016 to much chagrin of both stakeholders. However, the post Covid19 world will rewrite these rules. The rich-poor schism is a tinder box of riots and revolutions. Corporates seeking government bailouts cannot go on with their model of profit maximization while paying gig-economy wages. The record level of fiscal deficits that the global government are spending comes with greater accountability after all it is their governing citizens that will have to pay for it eventually.

Portfolio selections become multi-dimensional. Incorporating ESG alongside traditional financial metrics will be more persuasive and pervasive. State involvement in strategic industries will become more widely accepted which could mean better to own their debt than their equity. **Days of leveraging the balance sheet to do more shares buyback are over.** It is precisely the neoliberalist view of 2018 corporate tax cut that led to a record increase in corporate shares buyback even though the bill was sold to the public as tax reform package that will raise wages and spur hiring as US corporates repatriated money back in the US. **The monetization of debt to fund targeted spending/assistance programs will erode central banker's independence from the government of the day.** Only a few countries will have the luxury of deploying MMT like the US. China could to a lesser extent if they can accelerate the internationalization of their currency, and Europe only if they can agree on

the mutualization of their debt. This leaves many EM countries vulnerable especially those with poor fiscal discipline and a large stock of US\$ denominated debt.

Record deficit spending funded by CBs not fiscal surplus

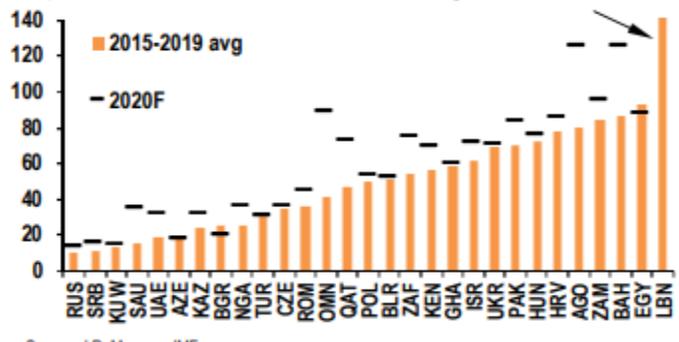
DM fiscal deficits as percentage of GDP versus annual change in DM central bank balance sheets as percent of GDP. Both aggregates are weighted averages based on country GDP. 2020 and 2021 deficit figures are JPM forecasts.



Source: J.P. Morgan

EM public debt rising way above trend

%-pts of GDP LBN: avg: 151.4%, F'cast: 181.3%



Source: J.P. Morgan, IMF

Asset Allocation Strategy

In our April's strategy piece, [Never let a good crisis go to waste](#), we laid out 4 markers to guide our asset allocation strategies. They are (1) Tracking the Covid19 virus, including the pace of new cases, the mortality rate, and advances in the medical efforts to test, treat and vaccinate, (2) The pace of recovery as fiscal and monetary responses percolate into the economy while lock-down eases, (3) Investor positioning and lastly (4) Historical precedents we can draw from when analyzing the risk of further earnings downside, valuation extremities, and the magnitude and duration of asset prices declines (at this current juncture, it will be the extent of recovery). There have been significant positive developments for markers 1 and 2 which has also led to marker 3, positionings across many asset classes, skewed towards the expectation of a bullish V-shape recovery that we have assumed. However, our base-case economic trajectory is for a V-shape recovery spanning only 2Q-4Q20 and we are more bearish on the mid to long-term prospects of the global economy for reasons articulated above and as well as fading impulses from fiscal stimulus. We characterized the shape of the economy as square root, with a down sloping horizontal line.

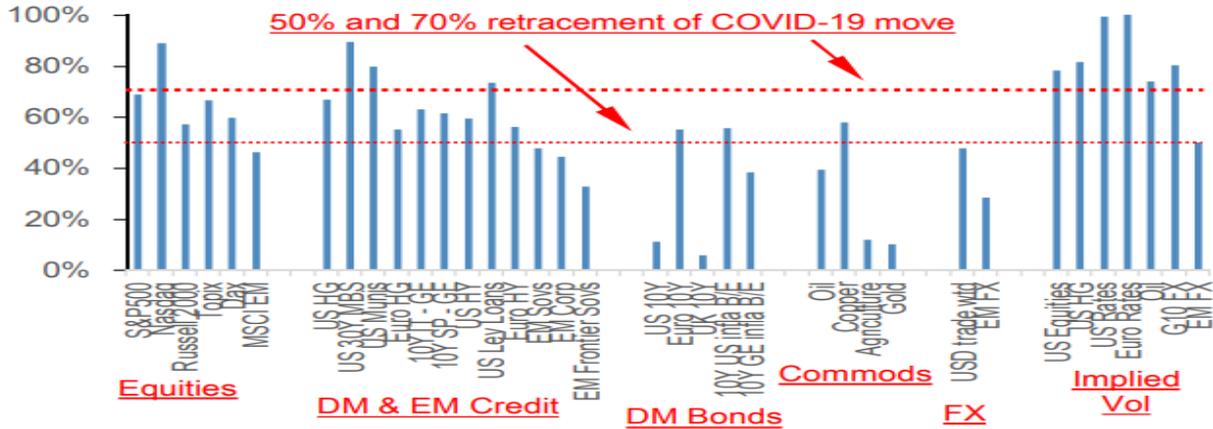
Plenty of good news on Marker I

Drugmaker (candidate), Country	Development phase and related JPM company research
Gilead (remdesivir), US	Therapeutic. Trials in late April showed the drug effective in shortening patients' recovery time, with acceptable safety profile. Approval for emergency use in US, Japan and UK. Company hopes for production sufficient to treat 1mn cases in 2020 and more in 2021 (see Gilead Sciences: Put down the bleach, remdesivir is coming by Kasimov from Apr 29).
Moderna (mRNA-1273), US	Vaccine. Preliminary Phase 1 trial results released mid-May showed mRNA-1273 to induce neutralizing antibodies. Vaccine considered safe and tolerable but on limited sample size. Phase 3 trial expected to begin in July; with results potentially by year-end. Possible company filing for vaccine approval in 2021. Partnership with Lonza to produce 1bn doses annually (see One (not so) small step for MRNA, one (potential) giant leap for the market by Kasimov from May 18).
BioNTech (BNT162), Germany & Pfizer (US)	Vaccine. Phase 1 trial in Germany and US underway, with initial data expected late June or July. Expects approval by end-2020 and is ramping up on manufacturing with goal of 100mn doses by end-2020, with scale up in 2021 (see BioNTech: Q1 snapshot and model update from May 12 and BioNTech: Highlights from management conference call from May 26 by Kasimov).
Sanofi, France & GlaxoSmithKline, UK	Vaccine. Joint development effort aiming for clinical trials in H2 2020 and availability in H2 2021. Potential production of 600mn doses annually. US to receive priority distribution to funding from US Dept of Health and Human Services. Separately, GSK plans to produce 1bn doses of its adjuvant (booster) to reduce the amount of vaccine required per immunization.
Merck, US	Therapeutic. Holds rights to EIDD-2801, an oral antiviral in early clinical development, bought from Ridgeback Biotherapeutics and discovered at Emory University. Vaccines: One in collaboration with IAVI based on MRK's Ebola shot; another via Themis acquisition of Themis using measles virus vector platform discovered by Pasteur Institute
Novavax (NVX-CoV2373), US	Vaccine. Phase 1 trials underway in Australia, followed by other countries later. Goal is development by end-2020. Recent acquisition of Praha Vaccines to all production of 1bn doses in 2021.
AstraZeneca & Oxford University (ChAdOx1 nCoV-19), UK	Vaccine. Phase 1 trials began in April. Results expected in June. Goal is to produce 30mn does by Sept and 100mn this year. Company has secured supply agreements for 400mn. Priority delivery for UK then US given government funding (\$1bn from US).
CanSino Biologics (Ad5-nCoV), China	Vaccine. Phase 2 trials underway in China. Additional trials to begin this summer in Canada.
Novavax (NVX-CoV2373), US	Vaccine. Phase 1 trials underway in Australia, followed by other countries later. Goal is development by end-2020. Recent acquisition of Praha Vaccines to all production of 1bn doses in 2021.

Source: J. P. Morgan

But many asset classes have retraced from significantly from its lows

Retracement in each market this week as percentage of maximum drawdown experiences during COVID Recession. Higher values indicate larger rebounds.



Source: J.P. Morgan

Equities: We upgraded equities in late-March which at that time was a controversial decision. MSCI World Equities has since rallied 36% from the bottom, the fastest bear market rally in 88 years and from using marker (4) as a historical guidebook, this rally is too much and too soon. Looking at the price actions of past recessions, the extent of the current retracement normally only happens a month before the recession ends implying the market is pricing recession to have ended in the month of either May or June. This is not our base case view as we are expecting continual qoq contraction in 3Q and only a small recovery sequentially in 4Q20. The global economy is still expected to end the year in negative growth of -3.5% yoy; a 6.4 ppt downgrade from the beginning of the year forecast. The rally in the US has been very narrow with five mega-cap tech stocks, Microsoft, Amazon, Apple Google and Facebook, are up 15% but the rest of 495 stocks in S&P500 down -8% year to date. Coupled with our concern on the end of unbridled capitalism, we will not be surprised if more regulations are imposed on big tech with Trump’s latest salvo at Twitter as a case in point. **We are downgrading equities to Neutral as valuation across different metrics we use is expensive now in contrast back in April when valuations were supportive.**

Equities valuation is expensive now

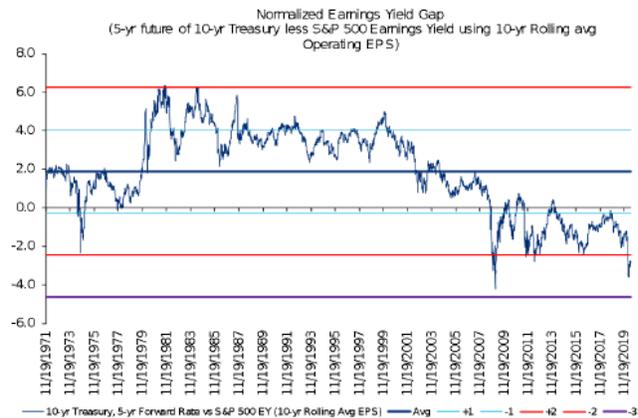
S&P 500 Valuation Composite



Valuation composite metrics include: trailing PE, forward PE, P/S, P/B, EV/EBITDA, CAPE, and Price/Dividend Yield

But relative to bond, equities yield way better

Normalized Earnings Yield Gap (Cyclically Adjusted Earnings Yield vs 10-year Treasury, 5-year Future)



Fixed Income: Underweight. Fixed income has not been attractively valued for a while now and has become even less attractive with renewed QE globally. The case for owning equities for yield over fixed income is the reason why we have kept fixed income underweight for a long period. The spread between equities earnings yield versus US ten-year bond is now at -1std in favour of equities. We rather take equities risk in the overall portfolio to generate capital gains and keep credit quality robust with companies with strong balance sheet and relatively better operating outcomes. A record \$1trn issuance in high-grade debt has been well absorbed by the market spurred on by Fed's backstopping corporate credit for the first time in modern day history. We continue to be overweight in Treasuries and investment-grade credit. Within the regions, we prefer the US over Europe due to the Fed's unlimited commitment. We prefer to own financials credits and defensive sectors such as utilities and tech companies than cyclical credit. We added more to China real estate investment-grade debt over the rest of the EM high yield. We have recently added to an income strategy that is uncorrelated to capital market focusing on short-tenure and lucrative trade financing opportunities.

FX: Short-term we expect USD to weaken slightly but still within the range. Longer-term, we see dollar hegemony to end.

Commodities: Underweight with long Gold as the key expression.

Alternatives: As we expect black swans to occur more frequently, we have recently added a tail-risk manager that is up 54% this year due to its risk-off positioning mindset. We are currently exploring more uncorrelated strategies including digital currencies strategies and will likely be adding more long/short equity managers to reduce the overall beta.

Featured Picture/Quote: Is the US and China destined for war or has China won?

Graham Allison and Kishore Mahbubani

<https://www.youtube.com/watch?v=v4L3gF-sLXc>

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