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## Market Commentary

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## Recent Developments

The Biden administration took office. An outburst of political comity lasted about one day but appears to be fading rapidly in the face of contentious issues and reflexive hostility.

Biden's primary issues are to resolve the pandemic and restart the economy. Everything else is secondary to that. But everything else is a long list: immigration, civil rights, policing bias, the Trump opposition, climate change, health insurance reform, China, Iran, Afghanistan, Russia, North Korea, Taiwan and NATO. Not even making the list are such perennial favorites as the Israeli/Palestinian conflict, WHO reform, jihadist extremism, civil service reform, education, tax reform, trade management, statehood for DC and Puerto Rico, and wildfire management. Trump's upcoming impeachment trial is expected to tie up the Senate for most of February and halt other business. Currently the political betting is on an acquittal. Another failed impeachment should pretty much end impeachment as a viable political process. It will dramatically shift the Constitutional balance of power towards the President. Is the US evolving into an elective monarchy? Could Biden simply dismiss Congress and govern by decree? Only an arcane process known as reconciliation can be relied upon to get legislation through the current Congress. Under the reconciliation process up to three money bills per government fiscal year can be passed through the US Senate on a simple majority vote as opposed to the 60-40 supermajority otherwise required. We expect the first such bill to be a Covid relief measure passed in the near future. A general government budget and infrastructure spending bill is likely to be passed before the summer recess. A final money bill, likely focused on taxes and climate change, could come by year end.

The pandemic is currently at full force with 120,000 new cases per day in the US and several new variants spreading rapidly around the world. A curious statistic was uncovered by the New York Times which highlights the efficacy of mask wearing and social distancing: prior to the attack on Congress 44 Republican members of Congress had contracted Covid-19 whereas only 11 Democratic members had. A significant scientific finding is that infection with the disease results in only short-term immunity of about five months. This finding should be the final nail in the coffin of the "let everyone get sick" policy urged by an important minority – including the governments of Sweden, the US, Brazil and – initially – the UK. That policy was always an imprudent one given our limited understanding of the disease. Its fatal flaws now stand revealed: first it does not produce long lasting herd immunity, second it leads to faster evolution of the virus as the rate of viral evolution is roughly proportional to the number of cases and third it results in heavy mortality both from Covid deaths and from deaths due to other causes which an overwhelmed medical system can no longer address.

For individuals the best policy remains taking strong personal protective measures. For society rapid efficient production and distribution of vaccine holds the promise of defeating the virus in the developed world in 2021 and in the wider world in 2022. There are now nine deployable vaccines (table 1.) Efficacy appears to be a function of technology platform rather than manufacturer. Vaccines work by priming the human immune system to attack the virus. Viruses evolve to resist attack by the immune system. As a result viral resistance to vaccines should develop over time

independently of how intensively a vaccine is deployed. This is a different type of resistance than bacterial resistance to antibiotics where resistance develops to the antibiotic itself largely proportionate to how heavily the antibiotic is applied. Among the new Covid strains that have developed, in some cases there are indications of reduced vaccine efficacy against the new strain, but no strain is yet fully vaccine resistant. Eradication of Covid as a disease will require achieving global vaccination before Covid succeeds in establishing itself in a wild animal reservoir which could serve as a center of recurring outbreaks. Otherwise, there is a strong possibility that Covid, like influenza, could become an episodically pandemic disease requiring ongoing management efforts.

Table 1: Vaccine Results as of January 29, 2021

<b>Vaccines Reporting Results in Scientific Journals</b>		<b>Vaccine Name</b>	<b>Technology</b>	<b>Effectiveness</b>	<b>Publication Date</b>	<b>Dose Schedule</b>	<b>Storage</b>
<b>Country</b>	<b>Institution(s)</b>						
US/Germany	Pfizer/Fosun Pharmaceuticals	BNT 162 (3LND-mRNA)	mRNA + lipid droplet	95.0 (90.3-97.6)	12/10/20	0+21	-70
US	Moderna/NIAID	mRNA-1273	mRNA + lipid droplet	94.1 (89.3-96.8)	12/30/20	0+28	-20
UK/Sweden	Oxford/Astra-Zenica	Covishield	DNA + ChAdOx1	62.1 (41.0-75.7)	01/09/21	0+28	-2
<b>Vaccines with Informal Reports</b>		<b>Vaccine Name</b>	<b>Technology</b>	<b>Effectiveness</b>	<b>Publication Date</b>	<b>Dose Schedule</b>	<b>Storage</b>
<b>Country</b>	<b>Institution(s)</b>						
Russia	Gamaleya Research Institute	Sputnik 5	DNA + Adenovirus 5 & 26	91.4	12/15/20	0+21	2-8
China	Sinovac	CoronaVac	killed virus	50.4	01/03/21	0+14	2-8
China	Sinopharm/Wuhan Institute of Virology	Vero	killed virus	79.34	01/29/21	0+21	2-8
China	CanSino/Beijing Institute Biotechnology	Ad5-nCov	DNA + Adenovirus 5	military use since 6/20 efficacy not reported		0+14	2-8
US	Novavax	NVX-CoV2373	Protein antigen + Adjuvant	89.3 (75.2-95.4)	01/28/21	0+21	2-8
Belgium/Israel	Jansen Pharmaceutical/Beth Israel Deaconess MC	Ad26-Cov2.5	DNA + Adenovirus 26	66	01/29/21	0	2-8

Notes: Technology is given as immune system trigger + delivery package. Vaccines given in two doses N days apart have a schedule of 0+N. Single dose vaccines are just 0. Storage temperature is degrees centigrade. Jansen Pharmaceutical is the Belgium subsidiary of the US firm Johnson and Johnson. Sinopharm has a vaccine developed in conjunction with the Beijing Institute of Biotechnology that is highly similar to the vaccine shown here. Higher effectiveness for Covishield was reported with a variant dosing regime but this result is suspected to be an artifact from testing that regime on a less susceptible population. The effectiveness for Novavax is based on a UK study. A smaller South African study reported an effectiveness of 60% (19.9-80.1.) When confidence Intervals are given the width of the interval primarily reflects study design rather than vaccine efficacy. Studies often report several measures of effectiveness which may not be identical across studies. We report the efficacy figure which is most indicative of the vaccine's ability to prevent clinical disease in the general population. Informal reports are generally interim results from ongoing stage three clinical trials, whereas journal articles reflect more careful data analysis of such trials. Efficacies reported informally are more likely to be revised downwards than efficacies reported in journals.

Source: WHO (*The Covid-19 candidate vaccine landscape*), medical journals and press releases and reports

In 2020 the US Congress voted \$4 trillion in relief spending. We would expect the total bill for 2021 to be similar as sustained recovery is not expected to start until midsummer at best. The Biden administration has asked for an initial amount of \$2 trillion and likely has the political muscle needed to push it through, either by the reconciliation process or by building a broad coalition willing to support the bill in the Senate.

Abroad the picture remains largely as it has been. Europe continues to flounder while South America and Africa are in great difficulties. Asia remains relatively unscathed and China continues to build its position in the power vacuum created by the disease. Aggregate world economic growth is likely to be flat or modestly down for the year.

### Quarterly Economic Review

This month we update our quarterly review of major economies (see table next page.) Since our prior review in October deaths from Covid have more than doubled in North America and have trebled in Europe. In Asia deaths have increased by a more modest but still painful 66%. Quarterly results range from strong growth in China to punishing contractions in India and the UK. However, for the year as a whole results are much more uniform. The developed economies have seen a 4%-5% reduction in GDP. China has experienced a smaller absolute decline, but compared to the 6%

growth it otherwise might have booked the economic deceleration is of comparable magnitude. The US decline is estimated to be 3% for the year – better than most of its peer group due to significant relief measures. Canada and the Arabian peninsula had results of -7 % to -8% reflecting their exposure to Oil which had a particularly poor year. Results in Mexico and Russia were even worse as particularly bad Covid experiences, weak Oil and intrinsically less robust economies all conjoined to deliver truly painful economic contraction. Stock markets turned in very mixed results for 2020. They were modestly up on average in Asia, which is consistent with Asia's relatively good Covid experience and favorable GDP numbers. However, the aggregate figure does not reflect the wide spread in results between South Korea which advanced 30% and Singapore which declined 10%. Brazil, Mexico, Russia and the UK all turned in steep declines which goes along with their poor Covid experience and weak economies. Europe closed the year just slightly down – really nearly flat. In the US, the S&P 500 was up 18% for the year while the technology-dominated NASDAQ closed up 45%.

Interest rates remain low around the world. A 1% yield is a typical result in the developed world, while 5% is typical for the developing economies. The four percentage point spread between these two is unremarkable.

Region	Component	2019 GDP (T\$)	Population (M)	GDP/capita (\$000)	Total Covid Deaths	Deaths per Million	Percent Change in GDP			Equity Return For 2020 (%)	Bond Rates at year end (%)
							Q4	2020 Total	Annual		
North America	US	21.44	331	64.8	443,205	1,339	-2.8	20.80	-3.0	18.40	1.1
	Canada	1.73	38	45.9	20,145	530	-5.2	1.59	-8.1	-5.97	0.8
	Mexico	1.27	128	9.9	159,100	1,243	-1.2	1.08	-15.4	-13.93	5.3
	All	24.44	497	49.2	622,450	1,252	-3.1	23.47	-4.0	-0.50	2.4
Europe	Europe	19.84	453	43.8	474,523	1,048	-4.3	19.00	-4.2	-3.74	-0.5
	UK	2.83	68	41.7	106,774	1,570	-8.6	2.70	-4.6	-23.83	0.4
	Russia	1.67	145	11.5	72,456	500	-3.4	1.25	-25.1	-27.67	6.5
	All	24.34	666	36.5	653,753	318	-5.4	22.95	-5.7	-18.41	2.1
Asia	China	14.57	1446	10.1	4,818	3	6.5	14.34	-1.6	13.87	3
	Japan	5.15	126	40.9	5,833	46	-5.7	5.08	-1.3	0.78	0
	Indo-Pacific	4.94	565	8.7	43,408	77	-3.5	4.82	-2.5	3.17	2.3
	India	2.94	1380	2.1	154,486	112	-7.5	2.88	-2.2	15.75	5.9
	Australia/NZ	1.58	30	52.3	934	31	-3.8	1.52	-4.1	-1.45	1.1
	All	29.18	3547	8.2	209,479	59	-2.8	28.63	-1.9	6.42	2.5
Other	Brazil	1.85	212	8.7	225,099	1,062	-3.9	1.77	-4.3	-16.98	7.6
	Arabia	1.66	58	27.9	10,969	189	0.3	1.54	-7.2	-4.9	n/a

Sources: Economist, World Bank, WHO. 2020 total GDP figures are generally estimates based on partial data. Aggregate equity returns and bond yields are unweighted averages.

### Long Term Factors: The Transition Away From Fossil Fuels

This month we have published an extended research note entitled “Opportunities in the Green Economy.” Here we summarize some of the main conclusions from our study:

- 1) The world is embarked on a thirty-year transition away from an economy built on fossil fuels to one built on technologies which present less risk of damaging climate change.
- 2) This transition will create a complex set of investment opportunities, risks and shifting political dynamics. We expect economic forces and the dynamic of technology development to be the controlling factors. Government, however, will be wound into the process at many points.
- 3) Currently wind and solar generated electric power have the lowest cost per megawatt for new built plant. Existing combined cycle gas fired plants remain economically viable, but coal fired and peaker plants will be retired over the next decade. Effective means of power storage at utility scale over day to week time frames are currently being proved out. Once those technologies move along their cost reduction curve sufficiently, even gas fired plants become subject to retirement. Currently 40% of US electric power is “green” (i.e. produced without release of greenhouse gasses.) Overall the green transition is a very positive growth factor for electric utilities.
- 4) The electric car powered by lithium batteries has reached the point of being competitive against

the gasoline powered passenger vehicle. Over the next five years we expect wider choice of models to develop in the electric car market and for rapid displacement of the gasoline car to be underway by the end of the decade. We expect this transition to be largely complete by 2040. The transition to electric drive is also expected to occur in heavy trucks and some industrial vehicles, but with a few years lag on passenger vehicles.

5) Substantial reductions in greenhouse emissions are achievable in industry as well. The pace of adoption will depend largely on government mandates as, unlike power and transportation, these technology changes are not driven by economic forces.

6) Several sectors are most likely to transition by incorporating hydrogen into their technology base. A viable hydrogen technology chain is unlikely to be demonstrated before 2030 however. As a result the following sectors will probably continue with business as usual for the next decade: aviation, shipping, and heavy industrial vehicles.

7) In agriculture and buildings the carbon transition is likely to be a long drawn out but consequential process.

8) The future for the fossil fuel industry is somewhere between bleak and discouraging. Gas production looks to be the best sector in a bad lot.

9) The Trump administration's policies were driven by the electoral calculus of the fossil fuel industry. As a result, the wider business community did not have a voice at the table. Democratic policy making as expressed in the Green New Deal, by contrast, was driven by the desire to strengthen unions through massive spending on carbon transition. The Biden climate plan has dialed back that give away quite substantially while adding smaller boondoggles of its own. We believe the Biden team hopes to do a great deal of horse trading to arrive at a consensus national plan.

10) The goal of reaching a green economy by 2050 appears achievable.

## Market Review

Markets were little moved over the first month of 2021. Many indexes rose mid-month on good earnings news, as 82% of US companies beat their estimates. Then economic and vaccine concerns reappeared, so indexes fell back. Yields too were unchanged. Worries abounded: unemployment dropped to 6.3% in large part because discouraged workers exited the job market. A key mover for the month was VIX (the market volatility measure) spiking up to 33%.

	January 2021
S&P 500	-1.0%
MSCI EAFE	-1.0%
MSCI EMG	+3.1%
Bloomberg Barclays US Aggregate Government	-1.0%
Bloomberg Barclays US Aggregate	-0.7%
Bloomberg Barclays US High Yield	+0.4%
B of A / Merrill Lynch European High Yield	+0.4%
JPM EMBIG	-1.2%

Market attention focused around month-end on a handful of institutionally disfavored stocks like Gamestop, which briefly rocketed from \$20 to \$350 on a short squeeze before settling back to \$60. Much was made of this: some cheered the democratization of market access as millennial users of Robinhood's free trading app converged on Reddit (social media site) and outwitted veteran hedge

funds. Others ominously recalled that such exuberant dilettantes often portend major crashes, like Wall St barbers and shoeshiners in 1929 or house-flippers in 2008. Additional evidence of market froth can be seen in the explosive growth of cryptocurrencies (Bitcoin now trading over \$45k vs. \$19k in December) and of SPACs (special purpose acquisition companies, or “blank check IPOs” that raised \$83.0 Bn in 2020 vs. \$13.6 Bn in '19). By any measure, this remains a heady market.

### **Outlook**

Our year-end market outlook is reaffirmed: look for continued economic and pandemic recovery, plus strong fiscal stimulus. Be skeptical of overstretched valuations, and don't dismiss risk mitigants.