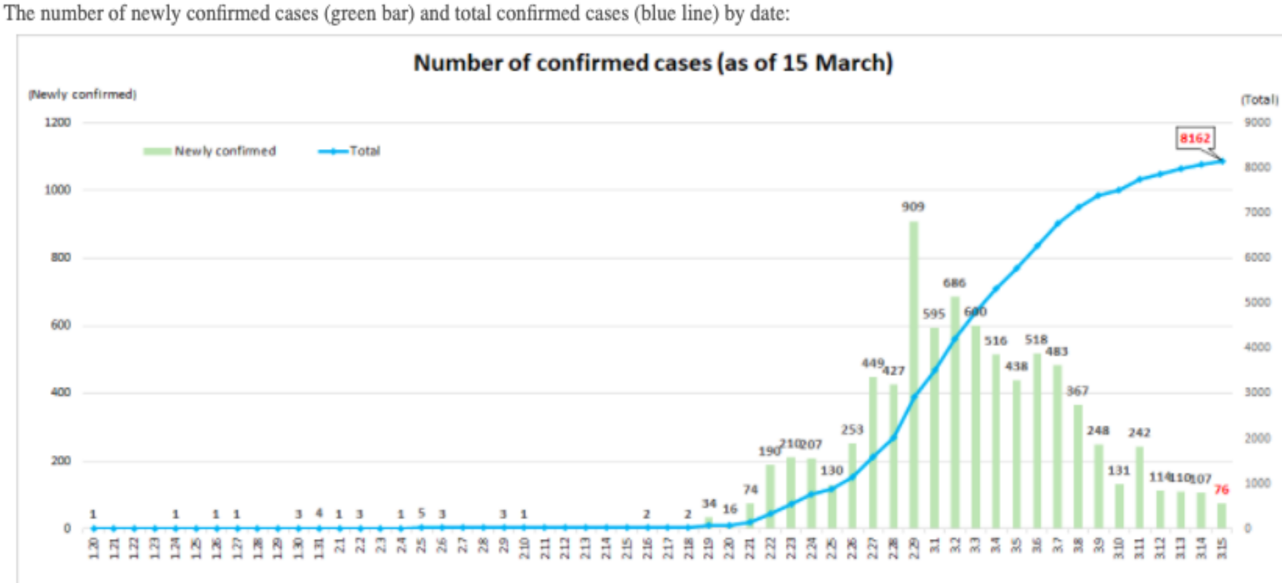
Harper Capital Management:

Global Markets- Current Outlook:

Global Equity Markets are down significantly on a YTD basis with many of the leading country indices in bear market territory. The S&P 500 is down 16.32% YTD[1] and the All Country World Index is down 19.95%. What has been driving the correction is the fear of the economic impact of COVID-19, the coronavirus pandemic which started in Wuhan, China and spread to its Asian neighbors and is now impacting the United States and Europe. The S&P 500 peaked at 3380.39 on February 19th, 2020 when it was +5.14% for the year. It is interesting to note that while the Index rose to an all-time high at the start of the year, the Yield on the Treasury 10-year bond fell from 1.88 at the start of the year to 1.56% as the S&P 500 peaked in February.

The data from Asia suggests the impact of the virus can be contained with strong measures to isolate those that are contagious and limit community spread by restricting social and economic activities which involve large groups of people. The chart below shows the progression in South Korea:

○ The number of newly confirmed cases (green bar) and total confirmed cases (blue line) by date:



Data from China and Taiwan show a similar decline though the delay in publicizing the information about the virus spread in China resulted in wide progression in Wuhan and potentially has made this a global pandemic. Italy was late in realizing

[1]As of 03/13/2020

the magnitude of the problem in the country and is now attempting the drastic measures that have worked in Asia.

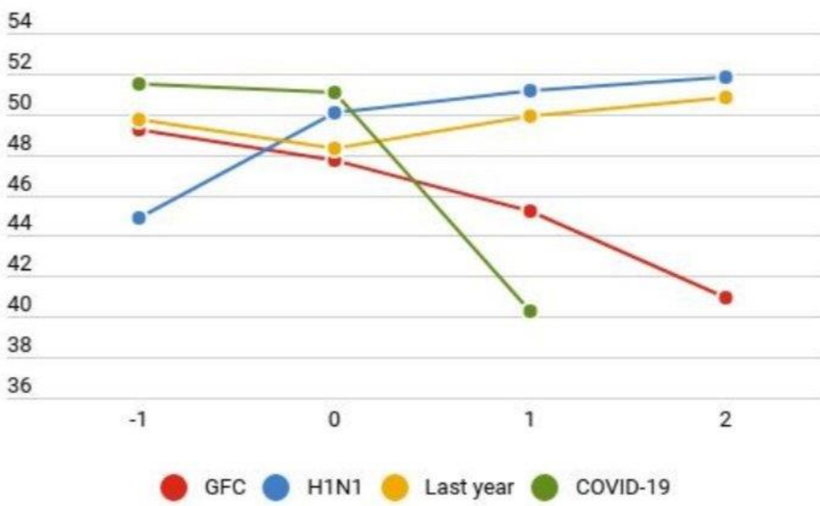
How do we assess the economic impact and the risk to Global Equities based on what we know so far?

The COVID-19 pandemic has resulted in both demand and supply shocks to the economic systems globally. Restrictions on social end economic activities resulted in dramatic declines in indicators in China on a scale not seen even during the Great Financial Crisis of 2008-2009. The chart below captures this:

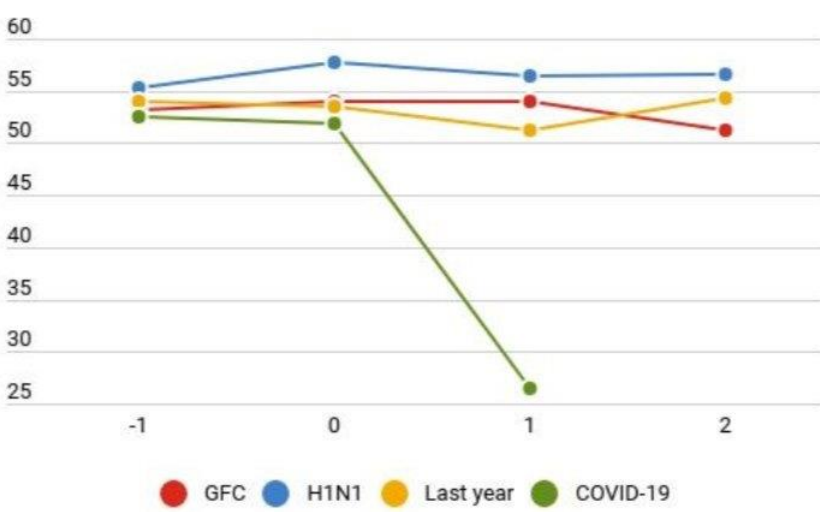
COVID-19's impact on China's economy

Manufacturing and services activity have declined dramatically. Services appears to be much harder hit than manufacturing.

(Manufacturing Purchasing Managers' Index, seasonally adjusted, 50+ = expansion)



(Services Purchasing Managers' Index, seasonally adjusted, 50+ = expansion)



Sources: Haver Analytics; and IMF staff calculations.

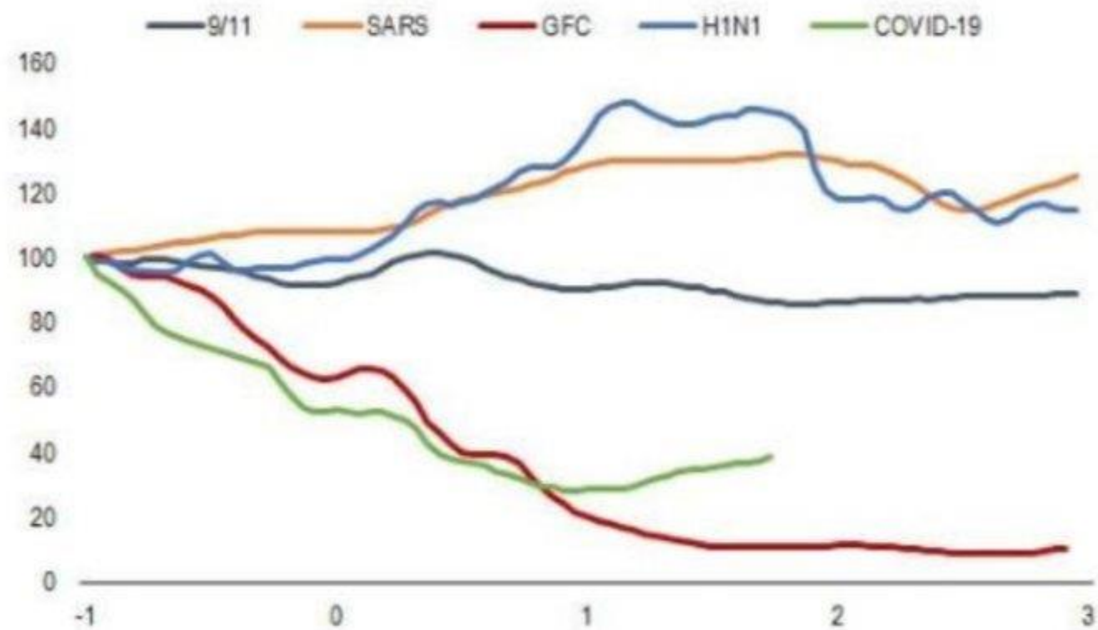
Note: The x-axis shows the months elapsed since the indicated event, with t=0 the initial impact month. Specific start dates by event are: COVID-19 = Coronavirus Disease 2019 (January, 2020), H1N1 = Influenza A virus subtype H1N1 (April, 2009), GFC = Global Financial Crisis (September, 2008), and last year = January 2019.

The impact was not restricted to China even from the beginning as the charts below show:

Shipping costs

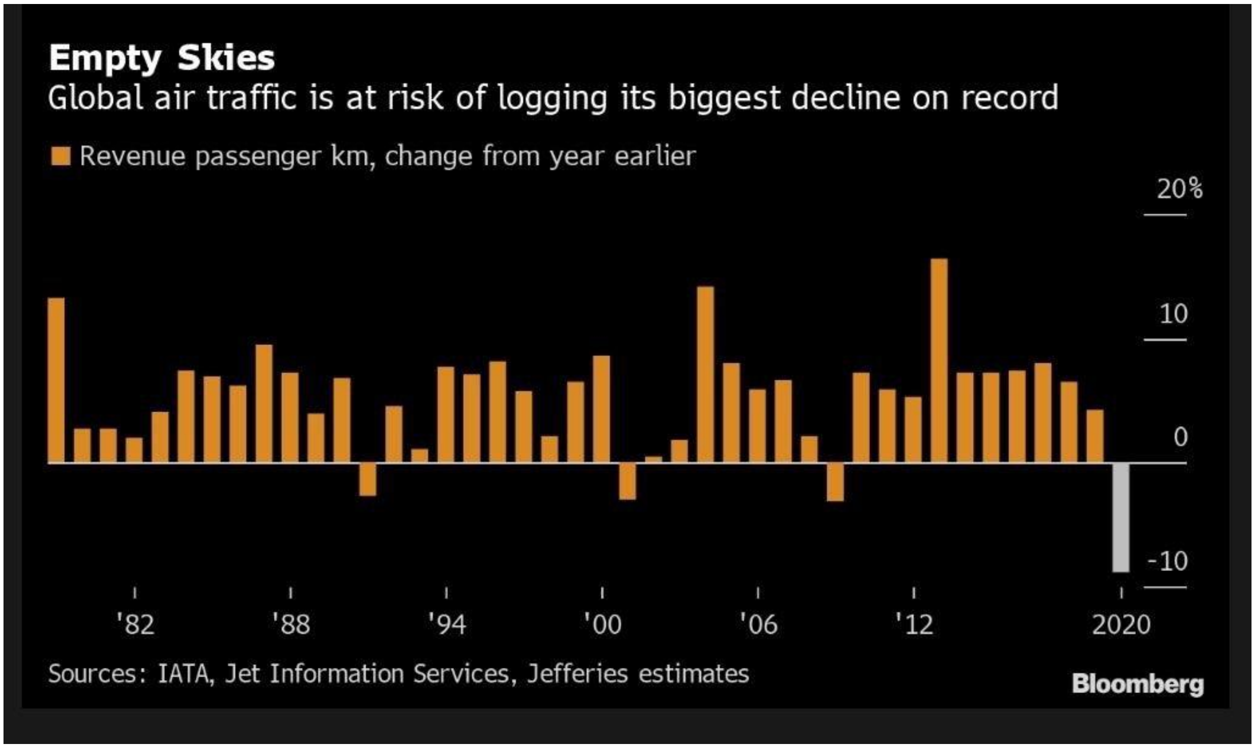
The shipping index shows a sharp drop in vessel leasing rates since the start of the COVID-19 outbreak.

(Baltic Dry Index, one month prior to start date = 100)



Sources: Haver Analytics; and IMF staff calculations.

Note: The x-axis shows the months elapsed since the indicated event, with t=0 the initial impact month. Underlying data are at daily frequency. Specific start dates by event are: COVID-19 = Coronavirus Disease 2019 (January 11, 2020), H1N1 = Influenza A virus subtype H1N1 (April 15, 2009), GFC = Global Financial Crisis (September 15, 2008), SARS = Severe acute respiratory syndrome (November 16, 2002), and 9/11 = (September 11, 2001).



The scale of the economic problem is very significant, and the question now is will there be a quick recovery or are there longer lasting problems that keep the Equity Markets under pressure? While parts of Asia appear to have a measure of control, the scale of the problem in Europe and the Americas is still growing. It is unlikely we see a recovery before it is apparent that pandemic is under control globally. It is also important that we do not see a re-appearance of the problem (increasing # of sick people) in places like China and South Korea which appear to have it under control. The Weather may help as we head to Spring and then Summer as warmer weather generally is a deterrent against the spread of such viruses.

So where are we in terms of the Global Economy and the Markets:

Global Central Banks are now being aggressive in easing monetary policy and providing liquidity to the markets. This can reduce financial stress in the system but will probably not avert a one or two quarter economic downturn. It is rare in recent times to see deep economic downturns and data from the United States shows the following declines from peak to trough GDP during recessions or downturns:

1980: -2.2%

1982: -2.6%

1990: -1.4%

2000: -0.3%

2001: -0.4%

2008-2009: -3.9%

The most significant recession over the last four decades was during the 2008-2009 period and that was a decline from peak to trough of about 3.9%. Clearly the impact on the Equity Markets is magnified many times over due to the following reasons:

- Valuations that reflect excess optimism
- Operating leverage and Financial leverage that exacerbate the downside

In addition to the above problems, we think Central Banks in the developed world have less tools to support the Global Economy given that interest rates are already very low.

The most likely scenario is a downturn not as severe as the last one. Equity Markets anticipate economic events quite well and the sell-off reflects this economic expectation. Given the uncertainties of the Pandemic the bottoming process for the Markets may be extended and an immediate V-shape recovery is unlikely in our opinion. Long-term investors will find opportunities over the next several weeks and months to build positions in companies/markets. Valuation remains elevated for some sectors particularly in the United States. The table below shows some of the valuation disparities and opportunities[2]: (#s in brackets are 15-year Median and #s outside brackets current metrics)

[2]As of 03/09/2020- https://www.schroders.com/en/us/insights/equities/which-stock-markets-look-cheap-after-the-coronavirus-shock-of-early-2020/

	CAPE	Forward price/earnings (P/E)	Trailing P/E	Price to book	Dividend yield
UK	**12** (13)	**11** (12)	**11** (14)	**1.4** (1.8)	**5.8** (3.8)
US	**29** (25)	**17** (15)	**20** (18)	**3.1** (2.8)	**2.2** (2.0)
Europe ex UK	**18** (16)	**14** (13)	**15** (16)	**1.6** (1.8)	**3.6** (3.2)
Japan	**17** (24)	**13** (14)	**12** (17)	**1.1** (1.3)	**2.8** (1.9)
EM	**12** (15)	**12** (11)	**13** (14)	**1.5** (1.7)	**3.0** (2.6)