In the midst of a global pandemic, investors are quite understandably asking whether the catastrophe (cat) bond / insurance-linked securities (ILS) market are caught up in the wider market contagion. While there are bonds connected to more exotic perils – such as pandemic bonds – these are very niche and in general cat bond market conditions remain unaffected by the outbreak of Covid-191.

Against a market backdrop that is experiencing the most extreme turbulence since the global financial crisis in 2008, it is worth reiterating that catastrophe bonds and ILS are tied to risks that fundamentally have nothing to do with the economic cycle, interest rate movements, the political environment or currency fluctuations. Instead, the returns of these investments are largely driven by significant insurance and reinsurance2 loss events connected primarily to natural phenomena, such as earthquakes and hurricanes. A market crash cannot cause a cyclone or an earthquake to occur and while these catastrophic natural disasters do happen – and drawdowns will happen with time – when they do they are independent of the ongoing activity in the traditional financial markets.

This means ILS returns have a different set of drivers and can benefit from being fundamentally uncorrelated with the broader market, unlike other asset classes where correlations can significantly increase during times of market stress. Consequently, the addition of ILS into a portfolio can deliver on the promise of non-directional strategies: the potential to instantly enhance investor portfolios by reducing volatility and providing more stability of returns. We do not believe we need to alter our investment strategy or position in response to the Covid-19 outbreak. For us, this year remains business as usual.

**Covid-19 case fatality rates**

However, like most people we have been closely following this widening human drama and it has elicited the following observations on the markets’ response which we felt were worth sharing.

A vital role of the World Health Organization (WHO) is to publish and disseminate scientifically rigorous public health information that enables policy makers, researchers and practitioners to safeguard public health and lives more effectively. That is all well and good, but nowhere in a WHO mission statement are financial markets mentioned. We have ‘Fed watchers’ who regularly comment on the latest statements by the Federal Reserve (Fed), but we have no ‘WHO watchers’. As a result, the WHO is moving markets in a manner that is as novel as the virus itself.

A significant example of this happened at a recent WHO media briefing on 3 March 20203. In his preliminary remarks, the WHO Director-General almost casually mentioned the fact that Covid-19 had killed 3.4% of reported cases. The Director-General was making an indirect reference to something called the case fatality rate (CFR), which represents deaths divided by cases. (In keeping with informal practice, this report will use the terms, ‘case fatality’, ‘fatality rate’, and ‘fatality’ interchangeably with CFR.) The optics of WHO's 3.4% implied fatality rate made for sensational media headlines. The number suggested to the general public that Covid-19 could be as bad as the infamous 1918 Spanish Flu, which itself had a 2-3% CFR. Panic among schools, businesses and markets has ensued.

What many financial market observers do not fully realise is that the WHO's 3.4% implied fatality rate, based on laboratory-confirmed case counts, should be revised downward in the coming months, potentially by a factor of 3 to 10 times.

We are almost three months into the pandemic. At a similar point in time into the 2009 ‘Swine Flu’ pandemic, the WHO also used laboratory-confirmed cases to calculate and report a Swine Flu CFR of 2.0%. Three years later, the generally accepted fatality rate was <0.03% – over a 50 times decrease between early-observed and post-event estimates of case fatality4.

Sounds like an embarrassing revision? Not really, not for epidemiology. A survey of 77 published estimates of 2009 Swine Flu fatality rates5 shows how case fatality estimates evolve because the method of estimation changes over time. Initially, Swine Flu fatality was estimated using counts of laboratory-confirmed cases; these studies averaged to a 1.9% CFR. As symptomatic cases were added to laboratory-confirmed cases, the Swine Flu CFR plummeted to a survey average of 0.06% (a ~30x decrease). Finally, as mild or asymptomatic cases were added, the survey average dropped further to 0.007% (a cumulative ~300x decrease). It is no surprise that the survey concludes: "We suggest avoiding entirely the use of case fatality risk based on confirmed cases."

So what does this mean for markets? Covid-19 testing is increasing rapidly worldwide. It is unlikely that these Covid-19 tests will approach the ubiquity of flu tests. Still, as more data and understanding accumulate, it is a virtual certainty that Covid-19 CFR estimates will fall. If CFR falls below the 1% level, in combination with a broad, societal desire ‘to get on with it’, the headline effect could well be the catalyst for a turn in public sentiment and subsequent recovery of financial markets.

When might this turn occur? It is difficult to say. It could range from one month, two months to four months or more. Markets are at cross-purposes with the WHO. If you read carefully online, you can already see that Covid-19 fatality estimates on the order of 1% are mentioned6. Still, we need the WHO to create a headline acknowledgment – and the WHO will not do that unless the headline aligns with its public health objectives. The WHO's current containment goals are a significant consideration here. Public perception of high fatality encourages containment actions. It is possible, however, that if containment fails, lower CFR estimates might better suit the WHO's shift to mitigation.

We hope these comments allow each of you to become better ‘WHO watchers’ as the Covid-19 crisis continues to unfold.

1"World Bank Launches First-Ever Pandemic Bonds to Support $500 Million Pandemic Emergency Financing Facility," Press Release from The World Bank, 28 June 2017. Link: [https://www.worldbank.org/en/news/press-release/2017/06/28/world-bank-launches-first-ever-pandemic-bonds-to-support-500-million-pandemic-emergency-financing-facility](http://anws.co/bHCE2/%7Bd7f1979b-5c8d-4a05-b4f0-861241e67c1a%7D)

2 1 Reinsurance companies are companies that insure, or in other words back-stop, insurance companies. In this article, the term (re)insurance refers to the combined activities of insurance and reinsurance companies

3 "WHO Director-General's opening remarks at the media briefing on COVID-19 - 3 March 20203," transcript posted on the WHO website. Link: [https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---3-march-2020](http://anws.co/bHCE3/%7Bd7f1979b-5c8d-4a05-b4f0-861241e67c1a%7D)

4 "Swine flu less lethal than feared," Nick Triggle, BBC News. Link: <http://news.bbc.co.uk/2/hi/health/8406723.stm>. "Mortality from pandemic A/H1N1 2009 influenza in England: public health surveillance study," Liam Donaldson et al., British Medical Journal, (BMJ 2009;339:b5213), Link: [https://doi.org/10.1136/bmj.b5213](http://anws.co/bHCE4/%7Bd7f1979b-5c8d-4a05-b4f0-861241e67c1a%7D).

5 "Case fatality risk of influenza A(H1N1pdm09): a systematic review," Wong et al., Epidemiology, 2013 Nov; 24(6). Link: 10.1097/EDE.0b013e3182a67448.

6 See, for example: "How will country-based mitigation measures influence the course of the COVID-19 epidemic?" by Roy Anderson et al., The Lancet, 9 March 2020, Link: [https://doi.org/10.1016/S0140-6736(20)30567-5](http://anws.co/bHCE5/%7Bd7f1979b-5c8d-4a05-b4f0-861241e67c1a%7D)

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