



WISE FUNDS

## Journal of the Plague Year

### Chapter 4

#### Chaos and confusion

##### **More hard facts**

The news media naturally concentrates on human stories and on the more shocking facts – the desperate shortage of medical staff in Italy, the high death toll in Spain, the opening of the world's largest new hospital in London, the various poses struck by the US President. You can be sure that there will be a major headline around Friday April 3rd when the world total of recorded Covid-19 cases exceeds one million, and another when total deaths exceed 50,000 at around the same time.

With everyone's lives taken over by the crisis, we feel a powerful urge to glean what nuggets we can from the data, partly to understand a little of the workings of a pandemic and the measures taken to control it, and partly because there are clues in the data as to how long the lockdown might last, and by extension how profound and lasting its economic effects might be.

The UK authorities are understandably cagey on this important point. There is a clear and justifiable intention to compel us to abide by the new regulations by all possible means. Part of that narrative is to guide us to the conclusion that we should get used to our new way of life because it is likely to persist for a prolonged period – and will last longer still if we don't behave. The lockdown is due to be reviewed after three weeks (Monday April 13th, probably Tuesday 14th as Monday 13th is a bank holiday), but nothing is expected to change at that point. There are to be three-weekly reviews thereafter. The next milestone is the 13-week point, when the over-70s have been told that their period of confinement will be assessed. However, on March 29th Deputy Chief Medical Officer Jenny Harries announced that life in the UK will not 'return to normal' for six months – in other words, the end of September. All guidance around the progress of the disease has been heavily caveated, with the emphasis very much on the impossibility of predicting or promising anything, but it might be thought reasonable to conclude from what has been said that the base case is for us to expect the full lockdown to continue until the end of June, being possibly tightened further during that period, with some restrictions remaining in force for a further three months to the end of September.

##### **Disclaimer**

This section will analyse the published data, all of which is freely available online. We accept that the data may be partially or wholly inaccurate – for example we know that the number of people who have contracted the disease vastly exceeds the number that has been reported to the health authorities. Covid-19 is first and foremost a medical emergency. We see the reality on our TV screens every evening – exhausted doctors and nurses, staff stuck at home for lack of testing equipment, the numbers of cases rising exponentially, shortages of all equipment, with even worse to come. All this is a far cry from sitting quietly in a warm office looking for patterns in the numbers.

The pandemic began in Asia before moving westwards to Europe and the Americas. This brief survey will follow its path.

## The course of an epidemic

As Camus shows in *The Plague*, and as we have seen, a pandemic begins with a single case. Then there's a second one, and then the numbers begin to multiply. Then there is the first death. The outbreak then enters its exponential stage, during which both cases and deaths multiply rapidly, with each day's totals 30-50% higher than those of the day before. At some point a peak is reached. This inflection point appears first in the rate of growth of daily new cases, and then in the actual number of new cases. Then, as the number of recoveries and deaths begin to exceed new cases, the number of active cases (the total cases being treated at any given time) begins to decline. The number of daily deaths is usually the last of these data points to reach its peak. As the numbers unfold, despair gives way to hope, hope to relief, and relief to euphoria.

## China

Activity in China isn't yet back to normal but is getting there. Cafes and restaurants are open. Factory production is close to full capacity. The students haven't physically returned to university yet but are expected to do so in the next two or three weeks. You can even travel to Wuhan, though you won't be able to get back out again until April 8th.

The great worry for China is that the unwelcome companion of its return to normal levels of activity will be a second wave of corona virus infections. So far, this has not proved to be the case. In the week to March 30th, the latest date for which figures are available, average daily new cases reported in China were 51, with 48 on March 30th, and the average number of daily deaths in the same period was four, with one recorded on March 30th. In a population of 1.4 billion, these figures are extremely low, and there is no sign as yet of a surge in new cases.

China went into lockdown on January 23rd. Excluding the spike on February 12th when the basis of calculation was changed, the peak of new cases was probably February 7th. Ignoring February 23rd, which looks like a 'rogue' number, daily deaths probably peaked at 143 on February 14th, and active cases at 58,000 on February 17th. This gives rise to a simple formula for China

Peak New Cases (PNC) = L +15 (L is Lockdown)

Peak Deaths (PD) = L + 22

Peak Active Cases (PAC) = L + 25

## South Korea

South Korea's new case and death numbers have stabilised at a low level, though not as low as China's. Average new cases for the week to March 30th were 118, with 125 on March 30th, and the average of daily deaths was 6, with 4 on March 30th. In a population of 51 million, these numbers are clearly less impressive than China's, but it is possible to say that the outbreak is very much under control, and there is no evidence of a second wave.

South Korea did not impose a lockdown, so the L+ formula cannot be applied. The peak number of active cases, 7362, was reached on March 11th.

## Italy

Corona virus has killed more people in Italy than any other country so far. Italy has suffered a lethal combination of very high levels of infection with the world's highest death rate from the virus. Italy's lockdown has been effective because its people have become too scared to go out unless absolutely necessary. Italy imposed a lockdown on March 9th. Italy's outbreak has been mainly confined to the north of the country and could break out in the south with devastating effect – but that hasn't happened so far. The number of new cases shows a clear peak at 6,557 on March 21st. The latest available figure for March 30th shows 4050 new cases, the lowest since March 17th. We have a provisional figure of PNC = L+12 for Italy, though this peak could yet turn out to be a false summit.

## Spain

The Prime Minister of Spain, Pedro Sanchez, is unusual among national politicians. Despite the gravity of the epidemic there – Spain has the highest infection rate in the world (apart from tiny enclaves such as Andorra, San Marino, Liechtenstein and the Vatican City) – Sanchez is remarkably upbeat, saying consistently that he believes that the peak of the crisis is at hand. He may be right, though it is too soon to be sure. The peak number of new cases, a horrifying 14,462, may have been reached on March 27th, and peak deaths, 1,325, possibly on the same day. It is too early for these numbers to be anything other than provisional, but if March 27th turns out to have been the peak, then for Spain  $PNC = L+13$ , and  $PD = L+13$ . The number of active cases continues to climb, as everywhere else in Europe.

## France

France imposed lockdown on March 17th. New cases hit a high of 4,611 on March 28th, but it is too soon to see a reliable trend in the numbers. Daily deaths together with the numbers of active cases continue to rise steadily.

## Germany

Germany hasn't imposed lockdown as such, opting instead for strict social-distancing laws which were imposed on March 22nd and will have a very similar effect to a lockdown. German daily new cases hit a high of 9,402 on March 27th, and deaths hit a peak of 132 on the same day. It is comforting to see lower numbers on the three days following, but too soon to draw any conclusions.

## The UK

At the time of writing, the UK is at  $L+8$ , so it is too early to expect any of the data to peak in the next few days, but within a week it will be clear whether the peaks that are beginning to appear in continental European countries are turning into reliable trends or not. If they do, then it would be reasonable to assume that the number of new daily cases in the UK might peak around two weeks after the imposition of lockdown, in other words around the end of the first week in April. The peaks in the other numbers could be expected to follow within a couple of weeks.

These tentative assumptions may seem astonishingly naïve and optimistic. They will be proved right or wrong within the next couple of weeks. By the time the UK's lockdown comes up for its first review, the peak in daily cases across Europe, of which we are seeing the early signs, will either have turned into reliable trends, as Italy's appears to be doing, or not.

It does not seem unreasonable to predict an early decline in new cases. How many daily contacts (within two metres) take place between the 68 million citizens of the UK? The number will vary, from schoolchildren who interact with all their teachers, classmates and other friends, to solitary older people who might only have one or two contacts each day. The lockdown hasn't ended all such contacts, but it has reduced their number by perhaps 95-98%, and imposed regulation on the other 2-5%. Given a gestation period of 5-7 days for the virus, it would be extraordinary if the rate of new corona virus cases didn't decline sharply around a week after the imposition of lockdown. To use the medical term, social distancing will sharply reduce  $R_0$ , the number of people infected by the average infected person. Once  $R_0$  falls below 1, the rate of new cases must decline. Indeed, the lockdown is designed to engineer this outcome, though it is usually spoken of in terms of reducing the pressure on the health service.

The question then arises as to what happens if the number of new cases has peaked by - let's say - the end of the third week in April, and if by then the number of daily deaths and the number of active cases is visibly flattening. Will the Government continue to impose lockdown until the end of June or beyond? The pressure on them to ease restrictions would become intense as it became harder to maintain a sense of crisis.

The duration of the lockdown really matters. There is something unnatural about the process – a bit like holding someone’s head under water while feeding them air through a straw. Each day it is prolonged, despite the best efforts of treasuries and central banks, the more irreparable damage will be caused.

## **The US**

The US has not yet imposed an official lockdown. Like the UK, the US has reached the exponential growth stage of the infection. In common with South Korea and Germany, the US has experienced a low ratio of deaths to infected people. However, the recent growth in new active cases there has been horrific. Comparing the growth of new active cases in different countries from the day when the number of active cases exceeded 1,000 for the first time yields the following statistic. Sixteen days after that point the number of new active cases had increased by the following amounts

Italy	5.7x
UK	10.6x
Spain	16.6x
Germany	22.1x
US	54.7x

This last number is problematic. The world will not be able to recover from Covid-19 until the US does so.

## **The rest of the world**

It is often the case that the true victims of a disaster do not appear until quite late in the proceedings. It seems now that China, which appeared at first to be the main affected country, has got off lightly with its 3,300 deaths, while Italy has already suffered over 11,000. Numbers for infection in the developing world remain low - for example Venezuela has 135 cases, Palestine 117, Rwanda 70, Kenya 50, Uganda 33, Ethiopia 23, and Tanzania and Congo, 19 each. The world’s poorer countries tend to be its hotter ones, and it may be that the virus will not be able to gain ground in those conditions, but if it does, then the outcome, in places where people live in crowded conditions and healthcare systems are under-funded, could be disastrous.

## **Chaos and confusion**

Governments everywhere have shown a laudable commitment to helping their citizens and businesses through the enforced shutdown of their economies in a generous and non-discriminating spirit. However, the new arrangements have been conceived under intense time-pressure and are inevitably simple and broad-brush. Already anomalies have appeared. Anecdotal evidence from all sides suggests that many are ‘falling through the cracks’. One example in the UK is the ‘marzipan layer’ of companies too big to benefit from the small business grants, but too small to be able to issue the investment-grade bonds the Government is prepared to support. Farmers aren’t eligible for the small business grants, because the grants are going to be administered through the business rates and farmers are exempt. Banks have received generous funding in order to extend loans to anyone who needs them but are requiring applicants to provide personal guarantees. Governments appear to be aware of these gaps and anomalies, and willing to plug them, but for now chaos and confusion reign.

There will inevitably be a trail of casualties, the more so the longer the shut-down continues.

## **The Financial markets**

The financial markets have developed a standard response to the series of macro-economic shocks that have challenged them in the last decade, including the ‘taper tantrum’, Euro crisis, oil price shock, trade wars and Brexit. Each crisis creates a ‘risk-off’ moment, where investors pile into cash, government bonds and bond-like instruments. The Covid-19 outbreak has produced the familiar risk-off reaction, except that this macro-shock is the biggest and most unpredictable of the series to date, so the reaction has been even bigger than usual. Government bond prices have risen, shares have fallen, though shares perceived as bond-like have fallen by less than the rest. The US and Japanese markets have held up well, the UK and

European markets haven't. 'Growth' has outperformed 'value' again. Large companies have held up much better than smaller ones everywhere except in Japan. The safe-haven currencies, the dollar and the yen, have been strong, while the pound and emerging currencies have been weak. Many ratios, including the valuation differential between 'growth' and 'value', and between smaller and larger companies are at new extremes. Markets everywhere are pushing the boundaries of risk-aversion. From this point of view, if no other, it is business as usual, with the established trends of the past decade continuing in their established pathways and in doing so reaching ever more extreme levels.

In last week's rally, 'risk assets' rebounded from deeply over-sold levels as the market acknowledged the extreme lengths that governments and central banks are prepared to go to in order to support their economies through the period of enforced shutdown. It will probably will not be long before the market's focus once again turns to all the things that could go wrong over the coming months.

However, to quote a much-overused phrase, it's only when the tide goes out that you can see who has been swimming without their shorts on. When this crisis is over, it may not be the familiar 'risk assets' that come off worst. Recessions have an unerring way of exposing flawed business models, weak balance sheets and fraud. One obviously vulnerable sector is US shale, which is caught between over-indebtedness, collapsing demand and a price war between the Saudis and Russians. Others will become clearer as time goes on

### **Summary**

**Emerging data for European countries suggests that their trajectories through the disease may not be too dissimilar to that of China, in which case the peak of the first wave of corona virus may have passed in Europe as early as the middle of April. The evolving trends will become clear within the next week or two. Should the disease peak earlier than forecast, there will be intense pressure on governments to begin normalising activity.**

**Financial markets will recover not once the disease has peaked, but once they get a sense of where the peak will be. Markets are likely to pay more attention to the data than to the pronouncements of governments.**

**The US has uniquely powerful resources to deal with the virus but has made a slow start and is seeing the fastest growth in new active cases of any major country.**

**Please note – this blog contains the personal views of Tony Yarrow as at March 31st, 2020, and does not contain financial or investment advice.**

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