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Coronavirus, Lockdowns and Stock Markets in Simple Numbers

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Introduction

Trying to get a handle on the economic numbers during this global pandemic is like trying to keep your focus on 20 different grains of sand whilst running along a beach. It all seems rather blurry, both the tiny details and the huge scale of it all are overwhelming, and never mind all that - you have enough to worry about just keeping going.

In this article we have tried to pin the numbers down in a simplified way. This means using the same currency for all the financials (US Dollars as the most widely reported figures) and getting rid of a lot of zeros from all the trillions that have been banded around in an effort to make it more accessible. We have also taken a fair amount of 'poetic licence' at times in estimating our own numbers for brevity and to simplify the story – so please accept the numerous flaws this inevitably brings.

We hope this approach does not come across as being unsympathetic. There is human suffering and loss of life, and here we are discussing the financial impact. But in some respects, we are simply repeating some of the thought processes that governments have been through when judging how to react to the Coronavirus threat.

Economic Impact of Coronavirus Without a Lockdown

What might have happened if we had carried on life as usual? Estimates for the UK were that 260,000 people might have died.[i] Assuming a death rate of 2%[ii] for those infected with the disease, that would mean 13 million people infected with the disease and possibly incapacitated in some way.

In the US, the Environmental Protection Agency has a tough call to make - how much is it appropriate to spend in order to protect one life? Cutting to the chase, the figure used is 10 million dollars.[iii] It takes into account factors such as loss of earnings, cost of healthcare, business, social and family disruption – pretty much every possible angle and all the ripples across society.

Whilst the figure of 10 million dollars might seem rather high for an elderly victim without much loss of earnings (most coronavirus victims seem to be elderly[iv]), given the 13 million that might have suffered in one way or another perhaps we can adjust to $5m per death as a reasonable way to judge the total impact of the disease.

Using these two simple figures – 260,000 deaths and $5m per death – we get an economic impact in the UK of 1,300 billion US dollars. The Gross Domestic Product (GDP, total value of all goods and services produced) for the UK in 2019 was 2,830 billion US dollars.[v] Using this simple metric it looks like the UK economy might have seen a 50% fall in GDP, which would be pretty disastrous in economic terms.

If we imagine that the UK is afflicted in the same way as the rest of the world, taking this approximate 50% reduction in GDP and spreading it around the world, we might have seen global GDP fall from $87,000 billion[vi] to $43,500 billion had the virus continued unchecked.

Economic Impact of Lockdown

Given the potential impact of taking no action to prevent the spread of this coronavirus outbreak, a lockdown is well worth considering. This means closing the doors for many businesses, putting a fairly swift halt on all activity that might bring people together. Judging from the period of lockdown in China which has recently been lifted, a period of 3 months might be a reasonable expectation for countries to get ahead of the disease.

Not all businesses will be closed during this period, food production and distribution in particular must continue (for example). Other service based / professional firms may be able to maintain a reasonable level of operation with some staff working from home. Businesses are unlikely to be able to pick up where they left off, however, and so a three-month lockdown would have longer lasting effects. These lasting effects might be offset by the operations that can continue during lockdown. A simple estimate would therefore be that GDP is down by 25% - as if the economy ceased to function for one whole quarter.

Using the 2019 figures for global GDP that would mean a reduction of some $21,750 billion compared to the $43,500 billion cost if the virus had continued unchecked.

Using this simplistic comparison, the lockdown makes sense in economic terms.

Economic Impact made by Central Banks and Governments

So, we think we now have a $21,750 billion hole in the world economy. How best to plug it?

Central banks help by cutting interest rates, making it easier for individuals and businesses to borrow money. They also help by injecting cash into the system. They do this by purchasing bonds.

Governments help by providing grants or loans to businesses, by extending deadlines for payment of taxes and by paying wages or sending payments out to households directly.

The table below covers some key areas of the global economy and compares the 25% reduction in GDP against the total value of central bank and government measures aimed at plugging the economic gap caused by the lockdown.

Economic Area (all figures in billion dollars)	*GDP in 2019*	*25% Reduction of 2019 GDP is:*	*Combined Value of Central Bank and Government Action*[vii]
China	$27,310	$5,360	$ 560
United States	$21,440	$6,828	$4,500
Euro Area[viii]	$14,000	$3,500	$4,700
UK	$ 2,830	$ 708	$ 648

Some of the Government support provided is in the form of a direct payment (such as covering wages or paying directly to households) which will not be repaid. But most of the measures involve money being repaid at some point, so it is more like short-term cashflow support than gifts - extremely useful, nonetheless. Making funds available does not necessarily mean it will reach the right parts of the economy at the right time. Furthermore, different parts of the world also entered the crisis with different growth rates – China in particular was seeing increases in GDP significantly higher than the other areas shown in the table above.

This is a complicated business, fortunately the Economist published a summary of the coronavirus-revised GDP forecasts from 18 investment banks and economics consultancies which should take such issues into account. The table below shows the average forecast, although The Economist emphasises the point that there was quite a variety of forecasts rather than a clear consensus[ix]:

Economic Area	*Average GDP forecast for 2020*
China	+3%
United States	-3%
Euro Area	-5%
UK	-4%

China still comes out with a positive forecast GDP on average (some of the forecasts for China were negative). This is perhaps because it was growing at around 6% before the crisis struck and goes some way to explain why central bank and Government measures are not so pronounced as other areas.

On the basis that a recession is defined as two consecutive quarters of negative GDP growth a global recession is highly likely. At this stage it is hard to predict how long a recession might last.

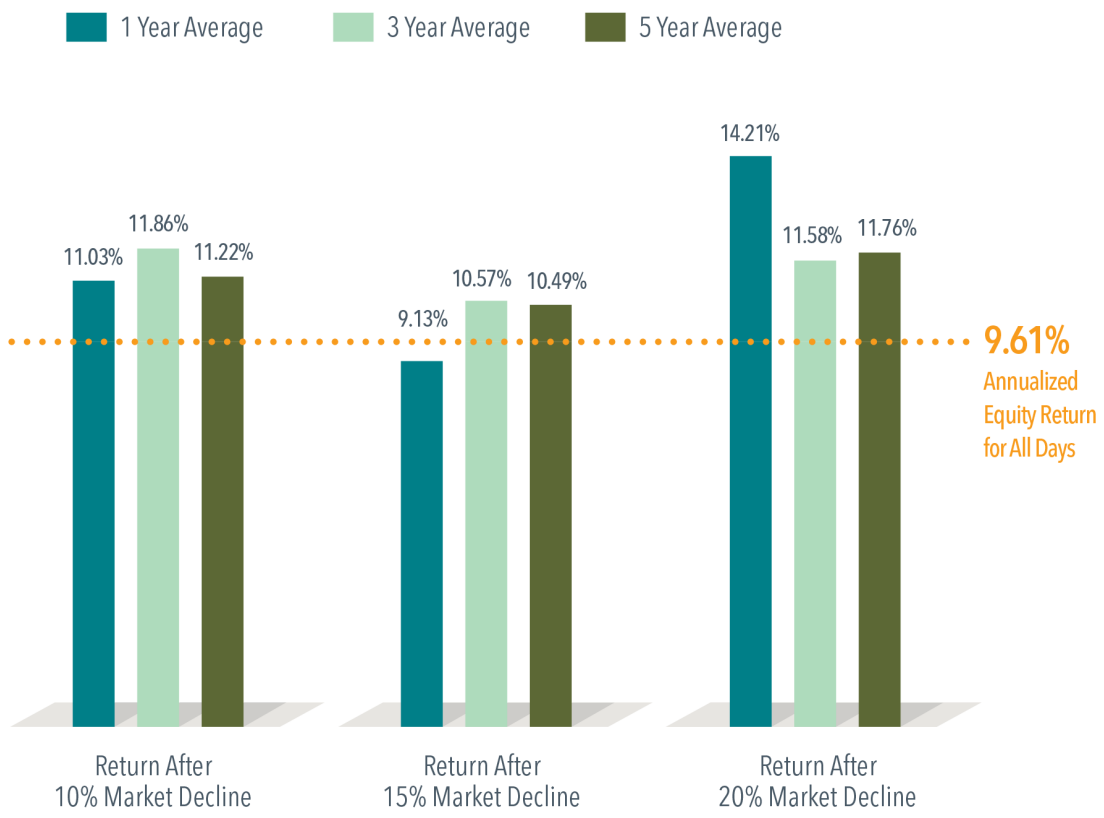
The National Bureau of Economic Research records the dates of periods of expansion and contraction in the business cycle in the US. The average period of contraction in the US from 1854-2009 was 17.5 months and the average period of expansion was 38.7 months. Since 1945 the contractions have averaged just 11 months and the expansions more than 58 months. The longest period of contraction since 1945 was 18 months starting in December 2007; it was a global recession and became known as the credit crunch.[x] If this coronavirus-related recession does not break recent patterns a return to growth in 2021 is a reasonable prospect.

The Effect on Stock Markets

If the world enters a recession then it might be logical to expect stock markets to fall, indeed we have seen this happen sharply already. Sadly (or perhaps fortunately) stock markets are not always so intuitively logical. It is surprisingly difficult to prove that stock market growth mirrors GDP growth.[xi] Part of the reason for this is the global nature of business, that larger stock market listed companies tend to sell their goods and access supplies in many parts of the world – such that a UK listed company could benefit from expansion in China, and see its share price rise even if the UK is in a recession.

Another reason for this disconnect is that share prices tend to reflect investors expectations. When stock markets tumbled at the end of February and into March it was most likely on the back of expectations of a recession since at the time no recession had yet occurred. Similarly, stock markets can begin to rise during a recession on the back of expectations of a recovery.

According to Dimensional (an investment fund management group) broad market index tracking data in the US from 1926 to December 2019 shows that stocks have generally delivered strong returns over one-year, three-year, and five-year periods following steep declines. Their chart showing average returns following steep declines is below[xii]:



Having already suffered more than a 20% decline from the peak the above chart provides some reasons for optimism. The part we can only know after the event, is where the bottom lies. Further falls on the back of worse than expected economic news cannot be ruled out because much confirmed information is yet to emerge.

Summary

We wanted to get a handle on the numbers here and see how it might impact stock markets. The best way to approach this was to simplify, although this runs a high risk of becoming inaccurate.

Our "guestimate" is that the lockdown measures taken in many countries, painful though they are, may have averted an even greater economic disaster. We believe that a global recession is highly likely but could be short-lived. Stock markets have already suffered a steep decline and further falls should not be ruled out. Nonetheless, in the medium to long term it is perfectly reasonable to expect a strong recovery if history is anything to go by.

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[i] Evening Standard, "UK Lockdown to cut coronavirus death toll by 254,000 experts say", 28 March 2020.
[ii] World Health Organisation, Novel coronavirus press conference at United Nations of Geneva, 29 January 2020
[iii] Bloomberg, "No one values your life more than the Federal Government", 19 October 2017.
[iv]Https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregisteredweeklyinenglandandwalesprovisional/weekending3april2020#deaths-registered-by-age-group
[v] www.worldometer.com, 13 April 2020.
[vi] www.worldometer.com, 13 April 2020.
[vii] Reuters, "Factbox: Global economic policy response to coronavirus crisis", 09 April 2020.
[viii] www.tradingeconomics.com, 13 April 2020;
[ix] The Economist, "Economists forecasts for GDP growth in 2020 vary widely", 04 April 2020.
[x] www.nber.org/cycles/cyclesmain.html 23 April 2013.
[xi] MSCI Research Barra Paper No. 2010-18, "Is there a link between GDP Growth and equity returns?", 12 November 2020.
[xii] Dimensional Fund Advisors LP, Fama/French total US Market Research Index Returns, us.dimensional.com/perspectives/us-equity-returns-following-past-downturns