

## Could Inflation Derail the 'Green Revolution'?

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Inflation is back in the headlines. As financial and business pages in recent weeks have reported, pent-up demand, increased savings, coupled with reduction of supply resulting from lockdown, are putting strains on markets just at the point at which eye-watering levels of investment from governments across the world, most especially the United States, is taking place.

Unsurprisingly, demand rising faster than supply can respond, pushes asset prices up. For investors this is good. Asset prices, though somewhat turbulent given the increasing obsession with fluctuations of the plethora of cryptocurrencies, which is another story, have shown some healthy increases in recent weeks.

For everyone else, including governments, policymakers and, of course, individuals, there's the worry of how it will be possible to hedge against inflation which, in the last six months, have been at an historically ultra-low level. Writing in the *Telegraph* at the weekend, finance expert and chairman of Capital Economics, Roger Bootle, believes we're likely to see a fairly steady rise in inflation over the next months that will take us well over the Bank of England's 2pc target<sup>[1]</sup>.

Bootle, like many commentators, contends inflation has been so low in recent months because of inactivity due to lockdown. Demand for many resources, unsurprisingly, dipped. In some sectors, demand effectively disappeared.

As Sam Beckett of the ONS (Office for National Statistics), the body which collects data to calculate inflation, stresses, there's been changes in what's measured to better reflect consumer behaviour during the pandemic, as the chart above shows, inflation has hovered well below one per cent.

Notably, though, CPIH (Consumer Prices Index including owner occupiers' housing costs) has risen by 1.0% in the 12 months to March 2021, up from 0.7% to February. The Consumer Prices Index (CPI) rose by 0.7% in the 12 months to March 2021, up from 0.4% to February 2021. This measure was as low as 0.2% in August 2020 and fell again because of the second lockdown, rose in January, falling in February, before rising yet again to its current rate of 0.7%.

There are crucial implications of living through a period of low inflation.

Interest rates have, since the global financial crisis, remained at a level which, for savers has meant rates have been so low there's often been something of a struggle to avoid money invested is not eroded by inflation. Those investing in stocks have done rather better.

All of this may be about to change with very serious implications for investors, especially those hoping to be part of creating the basis of the green revolution to replace our current carbon-based economy. The latest ONS figure released on Wednesday, showing inflation has risen to 1.5%, mainly due to fuel rises in March, might not immediately seem there's too much to be alarmed by, especially when compared to the levels it's been at in the past.

However, inflation's upward trajectory may continue for quite some time.

As the Naomi Ravnick in London, and Aziza Kasumov and Colby Smith in New York, report in *The Financial Times*, markets are becoming spooked at the prospect of a period in which inflation will rise rapidly resulting in higher interest rates undermining returns for investors<sup>[3]</sup>. This is particularly

so in the bellwether American Standard and Poor 500 and Nasdaq Composite which slipped by 0.3% and 0.4% respectively on Monday.

The price of gold, traditionally regarded as a safe haven in times of uncertainty and an effective hedge against inflation, has risen to its highest level since January to \$1,866 an ounce.

Coincidentally, the rapid rise in the price of another metal, though less precious than gold, is seen as fundamental to the emerging crisis that's so worrying investors. As was reported last week, the price of copper hit a record of \$10,700 a tonne.

This rise in the price of copper is causing concern because it's a mineral fundamental to so much already produced across a wide range of sectors and, in producing the transition to a green future. Electrical energy, seen as vital to success in achieving a greener economy, will require vast amounts of copper to create the network and associated technology.

Jillian Ambrose writing in the *Guardian* describes the importance of copper and other minerals that are already being subject to increasing demand<sup>[2]</sup>. Copper, she writes, has doubled in price over the past year" due primarily to China's recovery from the effects of coronavirus, creating a "bullish run" on many commodities. However, the push for the greener future we're being exhorted to embrace in order to avert the catastrophe of climate change, will place even greater demand on such resources in coming years.

By 2040, demand for 'critical minerals', needed to produce clean energy, will be almost four times greater than in 2020. In a report just published, *The Role of Critical World Energy Outlook Special Report Minerals in Clean Energy Transitions*, well-respected body, the International Energy Agency (IEA), founded in 1974 following severe market and social disruption caused by 'oil shock' in 1973, analyses what's needed to ensure "mineral security" consistent with clean energy. As this report stresses, the constituent elements of products fundamental to ensuring a greener future will be different in proportion to those currently produced.

Any effort to achieve the objective set out in the Paris Climate Agreement of climate stabilisation at "well below 2°C global temperature rise" will, as Ambrose's states in her article, "mean a quadrupling of mineral requirements for clean energy technologies by 2040". However, according to IEA, the desire to attain net-zero by 2050, increasingly stated as a preferred objective, would need "six times more mineral inputs in 2040 than today".

When we look at components needed its not hard to see why. Electric cars though still perceived as somewhat quirky and, in terms of sales, not helped by their relatively high cost when compared to petrol and diesel, typically require, according to IEA, "six times the mineral inputs of a conventional car". An onshore wind plant, the IEA point out, needs "nine times more mineral resources" than an equivalent plant producing energy using gas.

These are the dilemmas faced by government and investors alike. Whatever the former wants to achieve will be stymied if the latter, faced with spiralling costs, believe potential returns are going to be reduced.

From an individual perspective, without radical change in technology and production methods, we may be required to pay more for greener goods, energy and food. Writing in *The Times*, Philip Aldrick in 'Markets were right to be spooked by the threat of rising inflation' takes issue with the government's net-zero pledge and the fact the IMF (International Monetary Fund) believes the UK's carbon price needs to triple to achieve the 2050 target<sup>[4]</sup>.

Aldrick claims this would add £25 billion annually to the cost of UK carbon consumption, assuming present levels continue meaning £900 for every household. Equally, he suggests, this assumes “home insulation and electric cars cost no more than standard DIY and petrol motors.”

What particularly concerns the IEA, is that production of minerals needed in energy transition is “more concentrated” than that of oil or natural gas. In the case of cobalt, the Democratic Republic of the Congo is responsible for 69% of the world’s supply of cobalt. China is responsible for 64% of graphite and 60% of rare earth minerals.

The IEA, which came into being in the political, social and economic turbulence of the 1970s during the crisis caused by a huge hike in the price of oil (caused by war in the middle east), recognises the dangers possible from such high levels of concentration in particular countries. Clearly, any disruption in supply caused by, for example, internal conflict, has the potential to cause a spike in the price of any mineral vital to becoming greener.

In effect, and as has long been the case, countries able to pay higher prices in any supply crisis will likely receive preferential treatment in securing minerals. This, of course, will simply reinforce endemic disparity and inequality between different nations as well as within individual countries. The tragedy being that in avoiding the calamitous impact of climate change, it ultimately makes the lives of those poorest even worse. As the following diagram shows, when it comes to processing, China, a country with which international relationships, including ours, has been somewhat difficult recently, has an unrivalled place in terms of concentration.

Notwithstanding supply issues affecting the rest of the world consuming minerals, concentration of both production and processing may, as has been experienced already, lead to a range of social and environmental issues in countries in which citizens do not enjoy the level of protection standardly expected in developed nations. Though ethical investment is assuming greater significance, decisions to exclude countries exhibiting poor standards would inevitably cause tension.

If, as seems likely, any decision which reducing the availability of a resource already in limited supply, will induce a heightened threat to the goal of meeting demand. This, as the IEA contend, could potentially cause delays to clean energy transitions and consequentially increase costs. As they argue, “Given the urgency of reducing emissions, this is a possibility that the world can ill afford.”

Therein lies the problem incumbent to all concerned in creating a green future. The transition to greener economies brings with it the risk of maintenance of supply that’s reliable, affordable and which, crucially, in addressing climate change, does not create even more profound sustainability problems in localised areas in which production and processing of essential minerals takes place.

Such are the challenges all governments and investors must urgently confront. As part of its role in ensuring minerals so imperative to the green transition critical to the earth’s sustainability, the IEA’s present six key recommendations:

1. *Ensure adequate investment in diversified sources of new supply* which includes the role of policy makers and government in setting a sense of purpose, explicit agendas and financial incentives.
2. *Promote technology innovation at all points along the value chain* by “Stepping up R&D efforts for technology innovation on both the demand and production sides” as well as more efficient use of materials and substitution.

3. *Scale up recycling* which, though we already practice, can be vastly increased to reduce need for minerals and more effective increased use of products we consume.
4. *Enhance supply chain resilience and market transparency* involving improved “resilience of supply chains for different minerals, develop response capabilities to potential supply disruptions and enhance market transparency.”
5. *Mainstream higher environmental, social and governance standards* intended to produce greater adherence through the collective behaviour of every person and organisation.
6. *Strengthen international collaboration between producers and consumers.*

The last of these is obvious. Climate change is not the ‘zero sum game’ in which one country gains whilst others lose. The earth is a planet in which the actions of some affect that the conditions of many millions of others. As Christopher Flavin exhorts, “Urgency and vision are the twin pillars on which humanity’s hope now hangs.

We’re aware of the urgency of dealing with climate change through change. There’s no shortage of vision. What’s needed is application through action based on investment. Success will only be possible through a combination of urgency, collaboration by all based on patience in seeing, initially, gradual improvement.

Inflation, a product of global market economies is a price we must pay for increased demand following the shock caused by the pandemic. Past experience shows inflation goes up but, eventually, comes back down. Nonetheless, any immediate rapid increase we experience in inflation should not be used as an excuse to put off critical investment needed so urgently to protect future generations.

**Dr. Steven McCabe is co-editor of *Brexit and Northern Ireland, Bordering on Confusion* (published by Bite-Sized Books, ISBN-13:978-1694447807) and *English Regions After Brexit: Examining Potential Change through Devolved Power* (published by Bite-Sized Books, ISBN-13: 979-8666953099). His latest co-edited book, *Exploring the Green Economy, Issues, Challenges and Benefits*, will be published in early Summer. Additionally, ‘AI Promised You a Miracle – Life Under ‘Greased Piglet’ Johnson’, will be included as a chapter in a forthcoming book, *Populism and the Media*, to be published by Abramis Academic Publishing in June.**

[1] <https://www.telegraph.co.uk/business/2021/05/16/inflation-rear-ugly-head/>.

[2] <https://www.theguardian.com/business/2021/may/15/record-metals-boom-may-threaten-transition-to-green-energy>.

[3] <https://www.ft.com/content/4c241565-1d48-46ac-83b2-74ec92c09e44>.

[4] <https://www.thetimes.co.uk/article/why-the-markets-are-right-to-be-spooked-by-threat-of-high-inflation-9fpg52rfn>.