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# Will carbon be the catalyst for the next commodity bull market?

By Paul Krake

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For those of you who are not aware, we have launching a new video and podcast product exclusively focused on climate. *Climate Transformed* will be daily live, interactive content, focusing on interviews with CEOs, business leaders, academics, and experts who will lead the world forward as we tackle what will be one of the great innovation challenges we have ever faced, slowing and hopefully reversing global warming. Our priority will be interviewing 250 VC-backed climate start-ups to discuss their business models and the technologies that underpin them. What better way to assess investment opportunities within the mega-thematic that is climate than to study the most innovative companies that have been funded to meet this problem head-on? Clients will be able to send in questions in advance as well as engage with our guests live. I am confident that we will amalgamate the highest quality intelligence in this digestible format of video and podcasts.

We are in the process of filming the first 30 hours of content. With China launching its new carbon emission trading scheme (ETS), it was a perfect time to do a deep dive into carbon trading: the strengths and weaknesses of the programs, the opportunities for investors, and the positive and negative externalities for polluters, consumers and, of course, mother nature. I have attached three of the interviews, and some overriding themes are emerging. Despite the absence of fungibility and the global nature of this problem, local programs can effectively implement change as long as the consequences for non-compliance are punitive enough. It is an overriding concern about the Chinese program. Initially targeting only the coal segment, the fines are insignificant in the context of the revenue generated by many of the major coal producers in the country. As it currently stands, the largest fine is only RMB 1mm (\$155,000), which is hardly draconian and unlikely to change the behavior of an industry that remains politically powerful and employs as many people as the population of Norway. While China has been a world leader regarding rhetoric and long-term vision, it will be vitally important for China's words to match its actions, even to achieve its near-term goals of peak emissions by 2030.

While we should be concerned about execution risk, it is clear that climate regulation and the funding of a green agenda is an unstoppable force. The world should remain skeptical about the United States, whose attitudes towards climate change could flip flop again with a Republican President in 2024. Still, with determined leadership from the European Union and China moving forward, the path towards a coordinated approach to tackling global warming will remain a top priority. Public pressure to tackle these issues is relentless, and citizens in the aggregate are holding governments and companies to account. All debates have two sides, but the tide has turned to such an extent that it is now my top investment theme of the next decade. Trillions of dollars of investment will transform the corporate landscape, and while mega themes such as China and Fintech will demand the attention of many, climate

and the consequences it will have on both energy and mobility make it the most consequential investment narrative for the years ahead.

### *How do the losers adapt?*

Discussions about climate technology, policy, and investment are upbeat. While the consequences, if we mess this up, are dire, I tend to find climate investors incredibly optimistic because they solve real-world problems. This is not a zero-sum game. The benefits, job creation, and quality of life improvements as this transition occurs should outweigh the negatives. However, there will be losers. While coal mining communities in West Virginia, Northern Queensland, or Inner Mongolia have no right to determine a global agenda, the eventual disruption to these populations cannot be ignored. The acquisition of carbon credits across the globe is a direct tax on companies that pollute, and the path to a cleaner world is not instantaneous for the likes of Lafarge, BHP, Exxon, and Shell. They are enormous employers, and their products remain essential to the smooth operation of the global economy. A world without plastic would be amazing, but we haven't reached peak plastic yet, and that transition could take several decades. While I believe that the consensus of 30 million electric vehicles will prove conservative, oil will still be required to fuel the hundreds of millions of combustion engines that will remain on the roads for decades. A green world cannot be achieved by flipping a switch.

Forcing polluting companies to buy credits to permit them to send carbon into the atmosphere is the best plan we have, and as the price of carbon rises, this should force change. Some of the significant innovations regarding climate will come from the world's largest polluters as they are forced to adapt to the climate imperative. It is impossible to predict what the "carbon tax" will be for BHP or Freeport McMoran, but we are talking about numbers that will dramatically alter their balance sheets. Hundreds of billions of dollars need to be funded, and it could well be this cost that is the catalyst for the last great commodity bull market.

I am focusing on the industrial side of the equation. The types of commodities that require pollution to be extracted and their end-use adds to the carbon footprint. While some of the qualitative analysis I am about to outline could apply to other sources of greenhouse gases such as cattle and pork, I will focus on oil, copper, iron ore, and products like cement. Therefore, I will prioritize companies that produce them (BHP, RIO, the oil majors, and Freeport). That said, oil is the clearest example of the thesis I will put forward.

I refer to this as the last great commodity bull market because we are changing. Like all commodity bull markets, it comes about because of a disconnect between demand and supply. This next commodity bull market will occur because capex will not keep up with organic demand. While demand for copper will continue to rise as the electric vehicle revolution becomes a reality, the demand side of the equation is structurally evolving. The long-term future of coal is bleak, and Hubbert's Peak will become a reality for oil producers in the years ahead. Gas, hydrogen, and renewables are the future of energy, but it doesn't mean that the

transition won't produce a near-term spike in price for an array of commodities that our grandchildren may never use.

### *The Capex Squeeze*

Commodity analysts have both demand and supply models for the commodities they follow. The supply models tend to be hundreds of pages in length, an in-depth assessment of the world's largest projects. The evaluation of demand tends to be a couple of pages and some function of economic output. I am far too simplistic, but the point is that supply dynamics are the key driver of commodity prices. Demand can change, but the supply side of the balance sheet has the most significant influence on price.

Long-term supply is determined by capital expenditure. One part of the narrative in recent quarters has been just how difficult and expensive it is for companies to add additional supply. The cost of regulation alone is reported to have added 50% to the price of any future copper mine. The Biden administration banning all oil and gas drilling on federal land reduces future supply sources, and the shortage of uranium is becoming apparent to most outside of Kazakhstan. While I remain a structural disinflationist, it is difficult for me to paint a scenario where stricter environmental regulations do not add a significant premium to the cost of producing a unit of oil, copper, or iron ore. The result could well be a continuation of trends that have produced pricing pressures like those witness in the past 12 months, concerns over long-term supply.

This problem can potentially get much worse in the context of the mandatory acquisition of carbon credits. The money to acquire carbon credits needs to be funded from somewhere, be that cashflow or debt, and will come at the expense of either Capex budgets or cash that is returned to shareholders. Given the behavior of global CEOs who, since the global financial crisis, have prioritized using free cash flow for enhancing shareholder value (dividends and share buybacks) rather than capital expenditure, it is difficult for me to paint a scenario where the tight supply dynamics that structurally exist in many commodities will be alleviated any time soon. Long lead times to bring mines or rigs to market, the contingent liabilities of carbon, and heightened regulatory cost could well lead to a slew of outcomes that point to higher prices and significant change for the sector as a whole.

### *The Ugly Side of Climate Bonds*

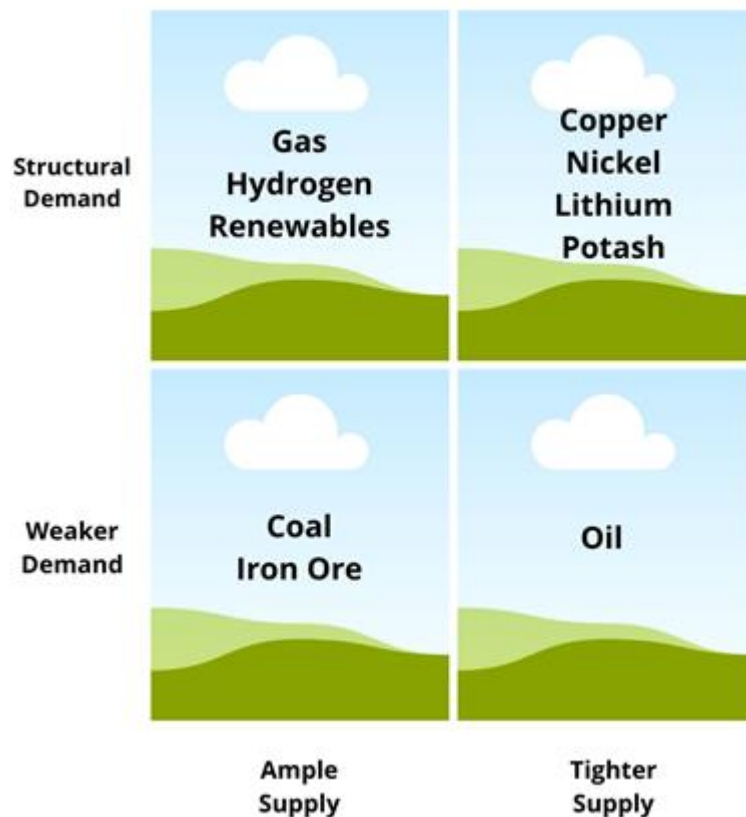
One way for major commodity companies to avoid liquidity problems from acquiring carbon credits is to utilize the most significant trend in sovereign, quasi-sovereign, and corporate debt in the next decade: climate-link bonds. Due to preferential tax treatment, soft or hard government guarantees, central bank buying, or organic demand from investors who prioritize sustainability, the demand for climate-related fixed income will be relentless. Yields should remain structurally low as a result, and the attractiveness to issue debt versus equity will be compelling for innovators and infrastructure providers alike. What is missed is that it will also allow large polluters to effectively game the system.

Take Chevron. Let us assume that Exxon has a carbon liability of \$50bn. This will be spread out over a considerable period, say ten years. Chevron issues \$5bn in climate bonds, using proceeds to buy the carbon credits it is required to own for its operations in jurisdictions with emission trading schemes. It may get tax credits that, in many cases, would take the effective cost of capital below where it would be for a vanilla corporate bond. These securities would be ESG compliant, which is ironic given that many institutional investors are refusing to own their equity in an ESG compliant vehicle. It would provide Chevron with the ability to fund its carbon liability with the capital of environmentally focused investors. While additional debt is on the Chevron balance sheet, this is effectively a low consequence way of funding a multi-billion dollar contingent liability. This doesn't force behavioral change for management or shareholders, which was the intention of carbon pricing.

Not all companies will have the ability to issue debt to cover these contingent liabilities. With a Debt to EBITDA of 0.3, BHP can gear its balance sheet while a more levered firm like Exxon may not. That is why it is important not to generalize.

### *Scenarios due to tight supply*

While copious amounts of excess liquidity was the tide that lifted all boats for the commodity complex in H2 2020, future gains will be much more idiosyncratic. I believe you need to bucket the commodity complex into four camps:



The fluidity of American politics makes it difficult to make predictions on environmental policy outside of the four-year reign of each US President. In fact, mid-term elections ensure tremendous uncertainty on implementing policy on a rolling two-year basis. While most believe that the global environmental trends we are witnessing are irreversible, a populist agenda that supports expanded oil and coal output cannot be discounted entirely in the event of a Republican sweep in 2024. As I stand today, that is my base case.

However, as long as Joe Biden is President, the United States is back on board with the global climate agenda. It will make it more difficult for additional supply of most industrial commodities to come of stream due to a much stricter regulatory environment.

China remains the key source of demand for the industrial complex, and while Chinese growth remains on the steady glide path lower than that it has experienced in the past 15 years, China's insatiable demand for infrastructure and its destiny as the world's largest economy will ensure that its commodity demand will remain robust. This is especially the case for the likes of copper as China will dominate EV production in the years ahead.

### **Here are several long term themes over the next several years**

**\$20,000 Copper** – We will blow through the expectation of 30mm Electric Vehicles by 2025. 20 times the copper in the average Tesla or NIO versus a combustion engine

**\$125 oil** – OPEC has done a remarkable job holding the line regarding supply discipline, especially the agreement between the Saudis and Russia. While OPEC could always waver, especially in the face of higher prices, oil does have a long-term supply problem. We are yet to reach peak oil demand; steady demand growth, especially from the likes of India, could well see long-term oil prices grind higher.

Owning both oil and copper on a two to three-year forward view is compelling. For the more adventurous amongst you, short iron ore and coal make sense against long copper and oil, especially in the context of slower global growth from 2023 onwards.

### ***Does this result in inflation?***

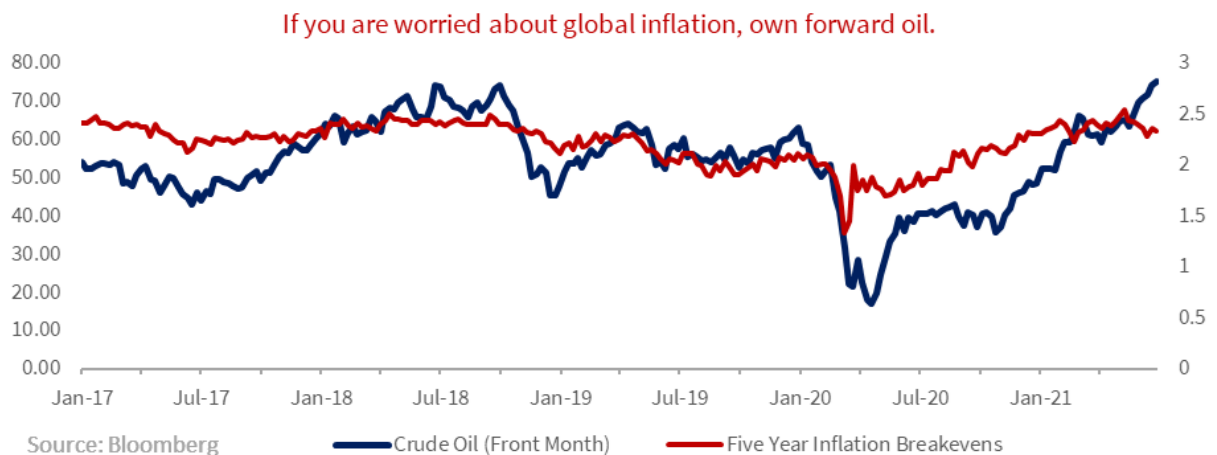
This is the part of the report where I start to annoy the "inflationistas." Will higher commodity prices lead to broad-based inflation? I still believe it does not.

I apologize for adding a couple of paragraphs to the end of a report about the most important determinant of global beta in the years ahead: the sustainability of inflation. These topics deserve the most thorough analysis, but it is essential to give you my framework for inflation in the years ahead.

The reason for my continued deflationary outlook is as follows:

- Service disinflation and demographic pressures will continue to be the overriding driver of inflation in the years ahead.

- Tech deflation is omnipresent.
- Long-term growth rates across the developed world, especially in the United States, will be lower from 2022 onwards because record fiscal deficit shave stolen output from the years ahead.
- History points to the Republican Party taking the House of Representatives in the 2022 mid-term election. The resultant gridlock and collapse in the fiscal impulse will almost guarantee a recession in 2024.
- Higher oil prices will see inflation expectations rise, but cheaper renewables will offset many of these gains. It will be expensive to drive but cheap to power your home. When combined with the realization that the resale value of a new combustion engine vehicle will plummet in the years ahead, this should ensure that the adoption of Electric Vehicles blows away all expectations.



That said, before I get dismissive of the impact of higher commodity prices on the overall level of inflation, it is vital to look at the last great commodity run, 2004-2008. Driven by China, this was the era where penny stocks became billion-dollar companies, and the price of oil almost quadrupled from its 2004 lows. Chinese demand dramatically altered the demand landscape and investors of all stripes threw money to gain exposure to the space. The comparison between the exponential growth of Chinese demand in the mid-2000s and today's green agenda is undoubtedly valid.

So what were the inflation consequences of the last commodity boom?

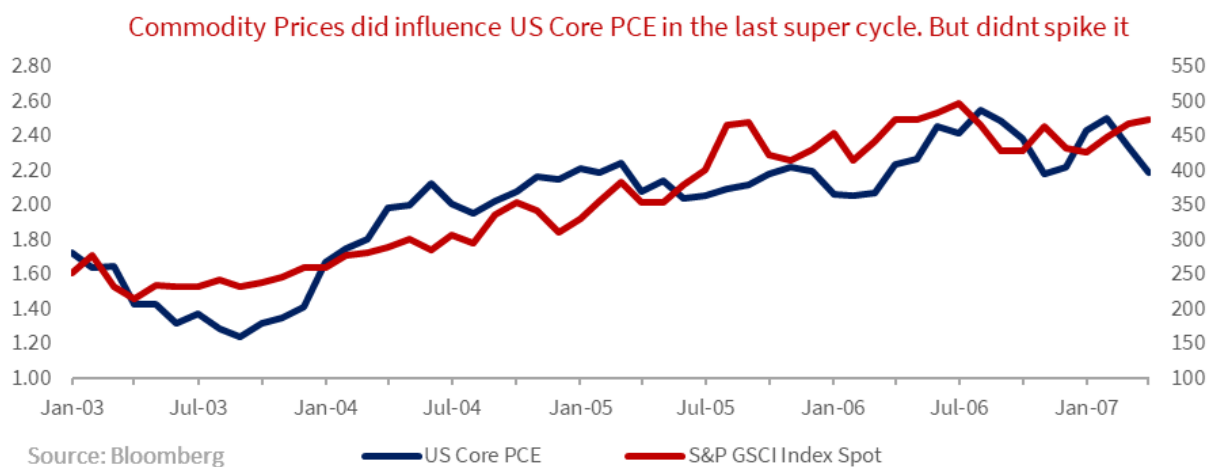
It is undeniable that we saw a boost in broad pricing pressures during the second term of George W Bush. However, it is important to note that Core PCE, the Fed's preferred measure of inflation, was remarkably stable between 2000 and the Global Financial crisis (GFC).

Coming out of the 2001 downturn, inflation remained between 1.5% and 2.0% until 2004 when, led by energy prices, inflation began to creep higher, peaking at 2.5% in September 2006. Taking out the spike in oil prices in the months before the GFC, GSCI more than doubled

from 2004 to the end of 2007, yet Core PCE oscillated between 2.0% and 2.5% for three years.

While arguments can be made that Core PCE understates the inflation that consumers practically deal with daily, it is a crucial input for the Federal Reserve when they determine policy. Higher commodity price shave two potential negative consequences. Firstly, input prices for manufacturers. This is a direct hit to profitability. Whether or not this can be passed onto consumers is a perennial debate that leads us to the second potential consequence: the Fed's response function to higher commodity prices.

Will the Fed raise interest rates in the next several years due to commodity inflation? While commodity prices are but one input into the inflation debate, it will be very dependent on whether these prices can be passed on to consumers or whether the Fed views higher energy prices in particular as a tax. A repeat of the 2004-2008 bounce in commodity prices will create an intense debate over inflation but it is hardly a determinant of tighter monetary policy,



I remain convinced that technology deflation will swamp any pricing pressures driven by commodity prices. The following is from a 2018 article from Juan M. Sánchez and Hee Sung Kim from the St Louis Fed titled "Why Is Inflation So Low?"

*Alan Greenspan, then chairman of the Federal Reserve, stated in testimony before the U.S. Congress in 2005: "The past decade of low inflation and solid economic growth in the United States and in many other countries around the world ... is attributable to the remarkable confluence of innovations that spawned new computer, telecommunication, and networking technologies, which, especially in the United States, have elevated the growth of productivity, suppressed unit labor costs, and helped to contain inflationary pressures."*

As the world normalizes post the pandemic, upgraded for the cloud, zoom, and machine learning, isn't this precisely the world we are in now?



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## *Conclusion- Barbell of Growth Equity and Commodities*

The climate agenda will be the dominant investment theme for the next decade. It is the reason I am launching a dedicated research product focused exclusively on climate investing. While you are all aware of my bias towards mega-cap technology companies that I believe will dominate gains in market capitalization in the years ahead, Amazon, Google and Microsoft are not the first names you think about when considering the winners in climate.

Many of the world's leading climate companies are still private, have technologies that most haven't heard of and may still be in their infancy. Investors who will profit handsomely from climate as a strategy will need to invest heavily in venture capital. Fixed-income investors will be offered an array of options to invest in green debt, but capital gains will be greatest for those who can provide capital to the innovators of tomorrow. The likes of Tesla will play a role in determining our climate future as Electric Vehicles will be front and center to the agenda. That said, private capital will hold the future of the array of start-ups that will take us on this climate journey.

As urgent as our climate issues are, change will be slower than most want. The global economy will continue to pollute to make the goods and services we require each day. Emerging economies want the same transportation, proteins, and accommodation that exists in the developed world, and the guilt of the western world shouldn't prevent India, Brazil, Turkey, and Nigeria from achieving their economic goals. India's absence from the global emission trading club is hardly a surprise.

The world will continue to grow as the climate transition evolves. The result will be a steady demand for all commodities in the aggregate. Coal is in decline, oil is stable, and the demand for copper moves to a new paradigm, but with global GDP continuing to expand, the overall demand equation is constructive.

Yet supply is more problematic. Regulatory cost in the west is becoming a serious impediment, and the cost of carbon has created a contingent liability that must be funded. This must keep supply constrained in the years ahead. The result could well be significantly higher prices, especially for copper, lithium, nickel, and to a lesser extent, oil.

A portfolio of growth equity and commodities dominated by copper and oil covers many bases, including inflation hedging, growth equity, and, of course, leveraging climate transformation.

I mention this will be the last great commodity bull market. The push towards renewable means that the end is apparent for coal and oil. It will take time but eventually, hydrogen, the wind, and the sun will make them obsolete. Sodium could eventually replace lithium in batteries, and other commodities will eventually be replaced as technologies evolve. Innovation is taking us to a world where energy is free. That is very cool indeed.