ESG Arbitrage, Part 1

Yu-Ming Wang
Senior Advisor,
Investment &
Corporate Strategy

I theorized in the previous article that a cost push inflation may become a real concern. For hedging such risk, it is natural to think about investing in commodities. In this two-part article, I will offer another rationale for investing in this long-ignored market.

To kick off, I need to explain the somewhat provocative title by saying that I am a firm believer in ESG principles as a guide for investing responsibly. I had written and spoken on many occasions that ESG principles are fundamental to protecting what truly matter in our lives; therefore, adhering to sustainability is not a choice but a responsibility for all of us. Having said that, I titled my commodity investing strategy as an arbitrage to misguided ESG practices which may lead to market disequilibrium. A free market thrives when supply and demand forces drive price discovery, as opposed to manipulation by "visible hands". As a pragmatic investor, I believe that certain ESG pursuits that distort the natural forces of a free market may end up harming the general economy. Such distortions present opportunities for investment returns.

ESG Torrent of Cash

ESG or sustainable investing has been the hottest theme that has consistently attracted growing fund flows in recent years. Morningstar reported that global assets in sustainable funds hit record highs of $1.65 trillion in Q4 2020. That is a lot of cash chasing after a noble cause. However, we also know that in financial markets, too much of a good thing can lead to bad outcomes.

The bursting of the Dot Com Bubble offered a stark lesson of how too much money chasing after a megatrend ended up in losses, even though the excess of the 1990s actually heralded an internet era even greater than what was envisioned. Unfortunately for the early investors, many of today's winning companies came after their costly lessons. When too much capital gets thrown at one theme, investors need to be alarmed and beware of unintended consequences.

To illustrate the current rush to bid up assets considered as sustainable, look at the following table comparing Conventional vs Renewable Energy (Duke vs Nextera), internal combustion engine automaker vs electric vehicle company (Volkswagen vs Tesla). The striking contrast in valuation metrics speak to the consensus view of the future.

Table 1: Contrasting Renewable Energy vs Traditional Fossil Fuel Companies, data as of July 9 2021

Name	Market Capitalization ($M)	Enterprise Value/Sales	Enterp.Value / EBITDA (trailing 12m)	Enterp.Value / Forward Est. EBITDA	Trailing P/E	Forward P/E
TESLA	632,860	18	135	71	633	148
VOLKSWAGEN	126,922	1	4	3	13	10
NEXTERA ENERGY	147,089	12	26	18	32	30
DUKE ENERGY	77,429	6	14	13	16	19

Source: Bloomberg; data as of July 9th 2021

Backed by plentiful capital and public policy endorsement, renewable energy is almost guaranteed to have a bright future. A sector's success, however, does not directly translate into investor's success. Aside from the internet bubble, other examples of capital excess leading to massive losses include the late 1990s telecom industry, the mid-2000s housing market, and the early 2010s solar industry[1]. My wariness about an overcrowded sector with promising growth prospect leads me to recommend an alternative approach to participate in the renewable energy theme. Equivalent to the old saying that "during a gold rush, sell shovels", my first ESG arbitrage strategy is to invest in the raw materials most sought after by the renewable energy companies. That "shovel" in today's green energy gold rush would be copper, the base metal requisite for enabling the electrification of everything from cars to wind power.

Copper as the Green Metal

As the source of energy production shifts from hydrocarbon to renewable, and transportation gets powered by electric batteries instead of internal combustion engines, one clear winner is copper[2]. Consultants are projecting various degrees of copper supply deficit as EV and renewable power generation begin to get ramped up. Forecasting of long term supply and demand is prone to errors, especially on a tectonic shift of something as fundamental as energy. Instead of relying on any prognosis, I reached my conclusion that the likeliest trajectory of copper price is upward and possibly by a significant margin, based on the following logic:

i. Capital influx into renewable energy production and electric transportation ensure that copper usage will go up;
ii. Metal miners' capital expenditure has been on a steady downward trajectory over the past decade, with 2020 Capex back at 2007 levels (see Chart 1 in the previous article on Inflation);

---

[1] The references summarize these three examples: The Great Telecom Implosion (princeton.edu) ; The 2008 Housing Crisis - Center for American Progress ; Rest in Peace: The List of Deceased Solar Companies, 2009 to 2013 | Greentech Media

[2] Many studies point to the critical role to be played by copper in the renewable energy transition. For reference, one study done by the Copper Alliance: Renewable Energy: A Sustainable Driver of the Copper Industry - Copper Alliance

iii. It takes years, if not decades, to develop a greenfield copper mine into production;
iv. As supply of a long development cycle commodity such as copper is relatively inelastic, the spot price is driven by demand[3]. It was the unforeseen demand from China that turbocharged the last copper supercycle in the 2000s.
v. If the predictions of EVs and renewables replacing traditional energy sources were to materialize, the resulting copper demand may exceed the demand surge from China in the previous cycle.

The price of copper has already staged a steep rally from $5,000 per metric ton at the trough of Q1 2020 to $10,000 recently. Many of the copper mining stocks have gone up considerably. Is the risk reward still favorable for this strategy? I believe so but let me assess the 2021 commodities market rally.

Assessing the 2021 Commodities Market Rally

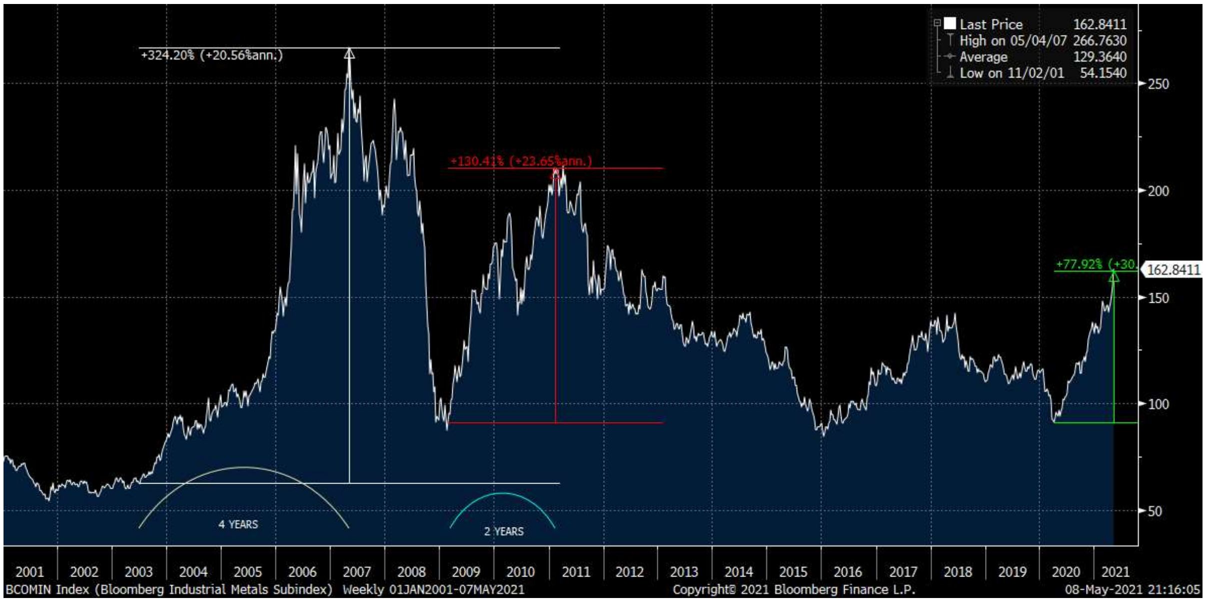
The magnitude of the significant rally since Q1 of 2020 cannot be attributed to the green energy revolution. I would attribute this price move to the unprecedented fiscal/monetary stimulus. In the case of copper, the percentage of current demand coming from green energy only accounts for 3.5%, insignificant in the price discovery even if the long term prospect looks very bright.

In the historical context, I would say the 2020-2021 bull market is more analogous to the 2009-2010 stimulus driven rally, rather than the commodities supercycle of 2003-2008 due to China's rise. Looking at those two distinctively different commodities bull markets (see chart 1 below), I would make the following observations:

- The stimulus driven bull market lasted only 2 years, while the China supercycle went on for 4 years.
- The magnitude of the stimulus rally was 130%, while the supercycle went up 320%
- If this bull market follows the pattern of 2009-10, then industrial metals may have +30% upside remaining. This would imply $12,500 per metric ton price for copper.

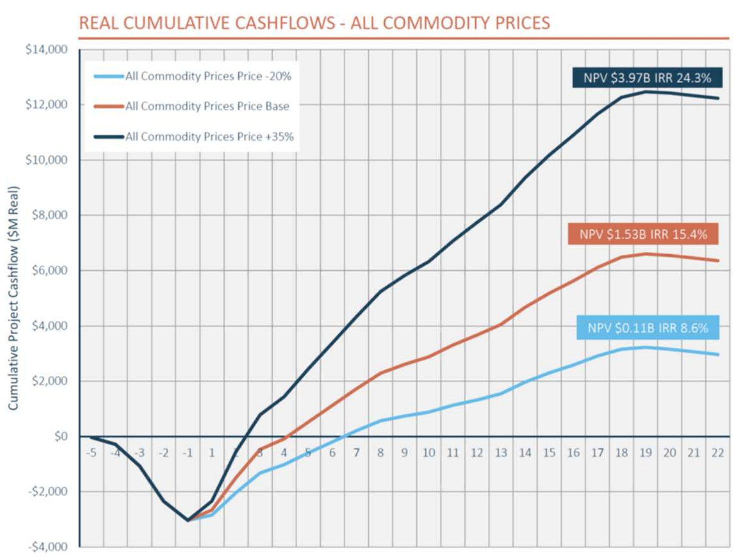
[3] Interestingly, it took just a CAGR of 3.1% in the 2000s decade, increased from 2.1% in the previous decade, to drive that commodities supercycle. Just 1% higher growth drove a 5x jump in copper price. That's the power of balance deficit in an inelastic supply market.

Chart 1: Bloomberg Industrial Metals index



In a presentation by one of the copper exploration companies, a new mine's projected IRR would jump from 15% to 24% when copper spot prices goes from $6600 to $9000 per ton. Many new mines should become very attractive projects at copper price greater than $10K.

Chart 2: A Copper Exploration Project Return Analysis over a new mine's life cycle



Source: Josemaria corporate presentation. Base price $6,600 per ton.

The price of copper has risen enough to incentivize new mines, but any new project will take more than seven years to develop. Thus, in the short to medium term, copper supply is inelastic leaving price discovery to be driven mainly by demand changes. I would attribute the 2020 copper price jump to China's demand as the country recovered from Covid, and the 2021 rally to the stimulus measures from the G7. Extrapolating the current trend, the copper market will reach a plateau when the demand recovery becomes widespread and the impact from the stimulus begin to fade. The timing is probably in Q4.

The impact from the renewable energy revolution will take time to filter into the copper demand. I would not recommend chasing this copper rally, but any price softness would present an excellent entry point for building a long term position in copper.

Investing Thesis of a Long Term Copper Strategy

In the short run, copper price will reflect demand boost from the post-Covid economic recovery as well as fiscal and monetary policies. In the longer run, the renewable energy revolution will draw increasing amount of copper. The latter effect will take years to shape up and impact the metal's spot price. In this context, I believe a prudent strategy is not to rush but to gradually accumulate a long term basket of copper miners, to be laddered in systematically over the next two years. During the 2000s China commodities bull market, the major copper producers ultimately went up 5 to 10x in that multiyear supercycle[4].

It is important to underscore the long term nature of this investment thesis for buying copper producers:

i. It is an alternative to participating in the renewable energy revolution without crowding into a very expensive sector;
ii. Copper supply is constrained due to years of capex cutback and little investment in new mines;
iii. Commodities may regain investors attention as a way to hedge rising inflation and currency debasement from the unprecedented monetary policies.

For implementation, I would target those companies with new mining projects and are expected to see significant production boost over the next five years, just in time to catch the bullish wave. The construction of such a basket of copper mining stocks will be discussed in a future article.

[4] Freeport-McMoran is the only pure play copper mining stock in the S&P 500 at 0.15% of the index. Its stock price rose from less than $6 in 2002 to a peak of $60 in 2008. The copper spot price went from $1500 to $8700 per ton during that cycle.

Disclosures:

- GAMMA Investing LLC ("GAMMA") is registered as an investment adviser with the SEC. GAMMA only transacts business in states where it is properly registered or is excluded or exempted from registration requirements.
- This information is directed to institutional, professional and wholesale clients or investors only and should not be relied upon by retail clients or investors.
- This literature is provided for informational purposes only and is not intended to be, and should not be construed as, an offer, solicitation or recommendation with respect to any transaction and should not be treated as legal, investment or tax advice. Recipients should not rely upon this information as a substitute for obtaining specific legal or tax advice from their own professions legal or tax advisors. Information is subject to change based on market or other conditions.
- Information presented is believed to be factual and up-to-date, but we do not guarantee its accuracy and it should not be regarded as a complete analysis of the subjects discussed. All expressions of opinion reflect the judgment of the author as of the date of publication and are subject to change.
- Forward-looking statements and assumptions are GAMMA Investing's current estimates or expectations of future events or future results based upon proprietary research and should not be construed as an estimate or promise of results that a portfolio may achieve. Actual results could differ materially from the results indicated by this information. Economic factors, market conditions, and investment strategies will affect the performance of any portfolio and there are no assurances that it will match or outperform any particular benchmark.
- Hypothetical portfolio information does not represent results of an actual investment portfolio but reflects representative historical performance of the strategies listed herein, which were selected with the benefit of hindsight. Historical performance results generally do not reflect the deduction of transaction and/or custodial charges or the deduction of an investment-management fee, the incurrence of which would have the effect of decreasing historical performance results. No representation is being made that any portfolio will achieve a performance record similar to that shown. Hypothetical results may have under- or over-compensation for the impact, if any, of certain market factors such as lack of liquidity, economic or market factors/conditions. The investment returns of other clients may differ materially from the portfolio portrayed. There are numerous other factors related to the markets in general or to the implementation of any specific program that cannot be fully accounted for in the preparation of hypothetical performance results. The information is confidential and may not be duplicated in any form or disseminated without the prior consent of GAAMMA Investing.
- All investment strategies have the potential for profit or loss. Different types of investments involve varying degrees of risk, and there can be no assurance that any specific investment will either be suitable or profitable for a client's investment portfolio.
  Past performance is no guarantee of future results. Performance returns and the principal value of an investment will fluctuate. Performance returns contained herein are subject to revision by GAMMA Investing. Comparative indices shown are provided as an indication of the performance of a particular segment of the capital markets and/or alternative strategies in general. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Gross performance returns contained herein include reinvestment of dividends and other earnings, transaction costs and all fees and expenses other than investment management fees, unless indicated otherwise.