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Commodities; A key ingredient for Portfolio Managers

Introduction:

Commodities, known for their weak and often negative correlations to equities and bonds, stand as crucial elements for portfolio managers. Positioned at an opportune moment within the commodity cycle, these assets are at a key strategic point more than ever. In the context of current market dynamics, integrating commodities into one’s investment strategy not only offers a hedge to market volatility, but a gateway into the promising returns given current regulatory trends. In this paper, as we navigate through the commodity cycle, I aim to uncover how these dynamics can shape investment decisions in today's economic landscape.

What is The Commodity Cycle?

The tug-of-war between supply and demand of natural resources has been one, if not the strongest driver of the commodity price puzzle. Sometimes cyclical in nature, sometimes sporadic. But over the long term, we can pinpoint certain waves of price cyclicality. So what propels these waves, and at what point are we now? By dissecting the commodity supply chain and categorizing two key phases: investment and exploitation, we can start to piece together our cycle- The Commodity Cycle.

Phase 1- The Investment Phase:

As the cost of essential commodities like gasoline, groceries, and building materials continues to rise, consumers find themselves compelled to purchase these necessities despite their escalating prices. This persistent demand, and high prices incentivize entrepreneurs to investigate the feasibility of producing these essential resources at a more competitive price. They begin to plan and invest in exploration projects, refurbishing old rigs, acquiring land for grain farming, and copper mining. But extraction and generating the capital necessary for these projects takes years, so the supply boosts and competitive prices will not immediately materialize.

Phase 2- The Exploitation Phase:

Once the mines, rigs, and farms are in full operating capacity, supply becomes abundant again, over time prices soften and for some entrepreneurs, their projects no longer become viable. They decide to cease or slow down production, and the cycle continues.

A key illustration of one full period of this cycle was in the 90's and early 2000's. The investment phase in the 1990's on the back of a commodity boom from waves of emerging countries and entries into global trade, followed by China's entry into the WTO in 2001, continued to spur investment and prices peaking in 2008. After which, we experienced low subsequent years of prices with poor investment across the supply chain. And now, we are seeing tightened inventories, the U.S SPR has exhausted 50% of its crude oil barrels since 2008, 70% of which has been deployed since 2023[1]. This is one key indicator of the beginning of an investment cycle.

What is Different Now?

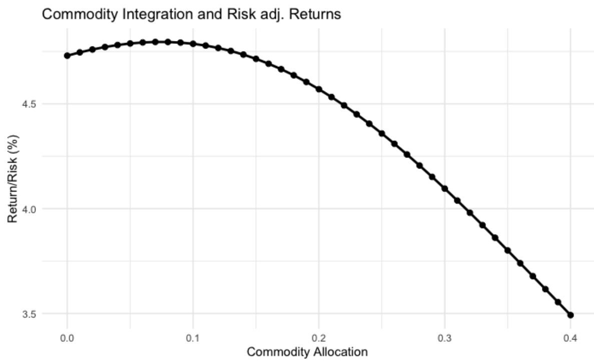
We constantly try to explain our current environment and predict the future through historical data. Whilst this is useful, it always ends up being different. This time, there are many other factors at play.

Firstly, the energy transition goals and regulations are tightening the scope of usable primary resources; we are seeing more pressure on green-fuels and metals such as copper, nickel, cobalt, natural gas and other resources key for electrification. Copper demand, for example, is expected to soar by 70% to over 50 mMt/y by 2050[2] due to its key usage in electric vehicles components, and wiring. At the same time, global copper production is at a stagnant 22 mMt/y [3] as of 2023, with few new copper extraction sources found and declining copper grades.

These Supply and demand imbalances are beginning to reflect years of underinvestment in extraction infrastructure. It is this landscape that fosters the short-term hike in prices and capital returns, especially in these green-fuel sectors.

In conclusion, despite commodity prices reaching record highs, when adjusted for inflation, compared to 1970, they are not at their highs and may even be considered cheap in real terms[4]. On top of this, their uncorrelated nature with other asset classes characterizes them as attractive ingredients in a portfolio, to hedge and stabilize risk adjusted returns, as depicted in Plot 1. Our current stage in the commodity cycle opens up windows of opportunity, and inefficiency in many green-driven markets where demand will outpace production and investment into mining, and extraction infrastructure. This current landscape is therefore contributing to our view that we could see sustained strong returns in the near future, especially in metals and green-initiative driven materials.

Plot 1.*



[5]

*To create this graph, we started with a standard 60/40 portfolio consisting of 60% equities and 40% bonds. We then introduced commodities into the portfolio by gradually increasing their allocation, starting from 0% up to 40%. As we added commodities, we reduced the equity and bond allocations proportionally to maintain a 100% portfolio. For each allocation, we calculated the portfolio's Sharpe Ratio (Return/Risk) using historical returns and volatility of the assets.

Bibliography:

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	Commodity	US Equity	US Bonds	Global Equity	Global Bonds	TIPS	Real Estate	Infra
Commodity	1.00							
US Equity	0.34	1.00						
US Bonds	-0.18	-0.36	1.00					
Global Equity	0.47	0.95	-0.39	1.00				
Global Bonds	0.13	-0.08	0.64	0.00	1.00			
TIPS	0.40	-0.22	0.68	-0.17	0.61	1.00		
Real Estate	0.34	0.21	-0.17	0.23	-0.05	0.04	1.00	
Infrastructure	0.32	0.27	-0.24	0.30	-0.06	0.01	0.53	1.00
CPI	0.76	0.19	-0.28	0.24	-0.08	0.28	0.46	0.33

Source: Bloomberg Finance L.P. Correlation based on quarterly annualized returns. Data from March 1998 to March 2022. Real asset data from March 1998 to September 2021

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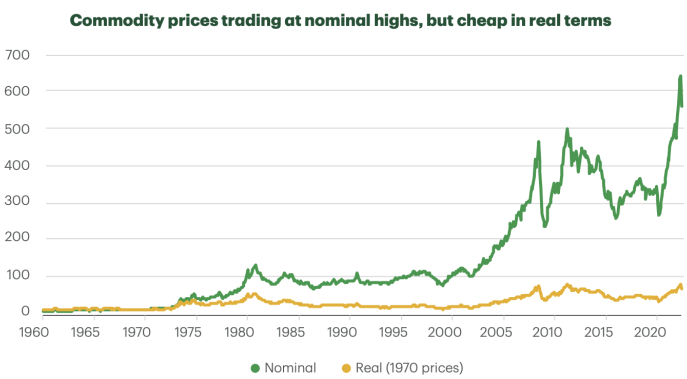

Source: Bloomberg Commodity Index Spot (BCOM), Bloomberg Finance L.P. Data as of June 30, 2022

5. The plot was calculated using data from the S&P 500, S&P-GSCI[7] as the commodity index, and the S&P U.S. Aggregate Bond Index[6]. The portfolio model started as a 60/40 S&P 500/S&P U.S. Aggregate Bond Index and incrementally increased S&P-GSCI allocation by 1%, reducing evenly the allocation to the S&P 500 and the S&P U.S. Aggregate Bond Index. Data from S&P Global, and Yahoo Finance. Risk free rate 2%, data retrieved from 11/28/2014 to 12/31/2024.

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