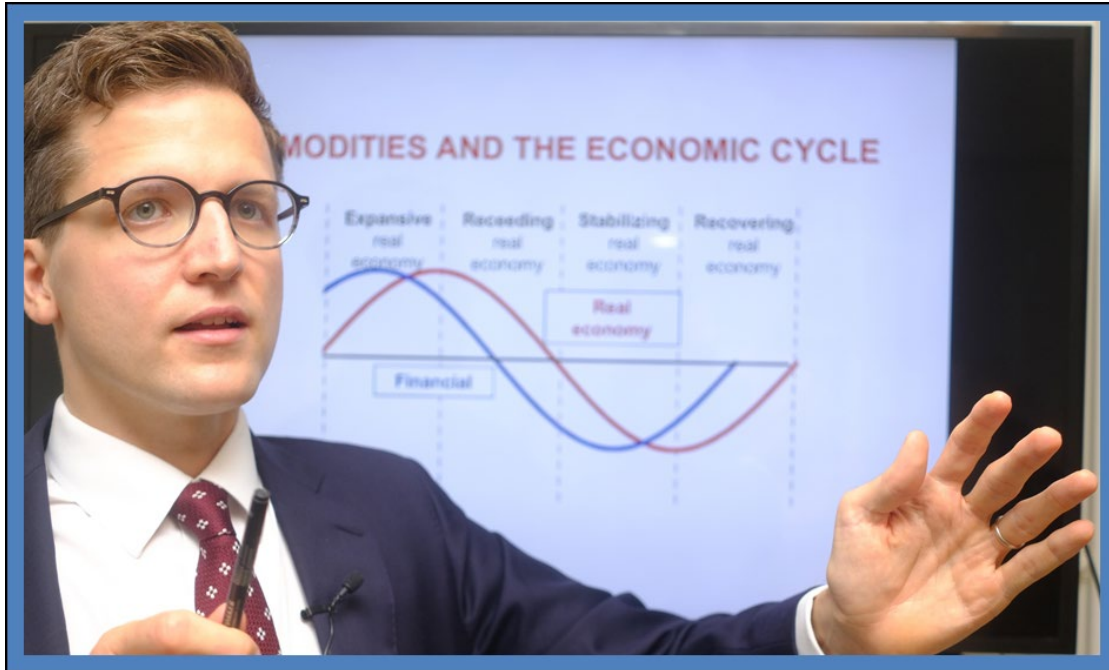




## Can a Responsible Investor Invest in Commodity Futures?

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**Mr. Gillis Björk Danielsen**, Senior Portfolio Manager, APG Asset Management, presenting on commodities and the economic cycle in an introduction to commodities.

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### Problem Statement

Efficient institutional investment portfolios include commodity derivatives. This may be through long-only allocation to commodity beta-risk, or through long and short positions taken by macro hedge fund mandates or alternative risk premia strategies. Simultaneously, a growing number of investors perceive the importance of responsible investment both from a moral and risk standpoint. The total number of institutional asset managers striving towards responsible investment portfolios is constantly growing (see Figure 1 on the next page).

While there is a solid understanding today about the many ways responsible investment can be integrated into equity and bond investments, reasonable and complete guidelines and industry consensus for what responsible investment entails for commodity derivatives is still missing.

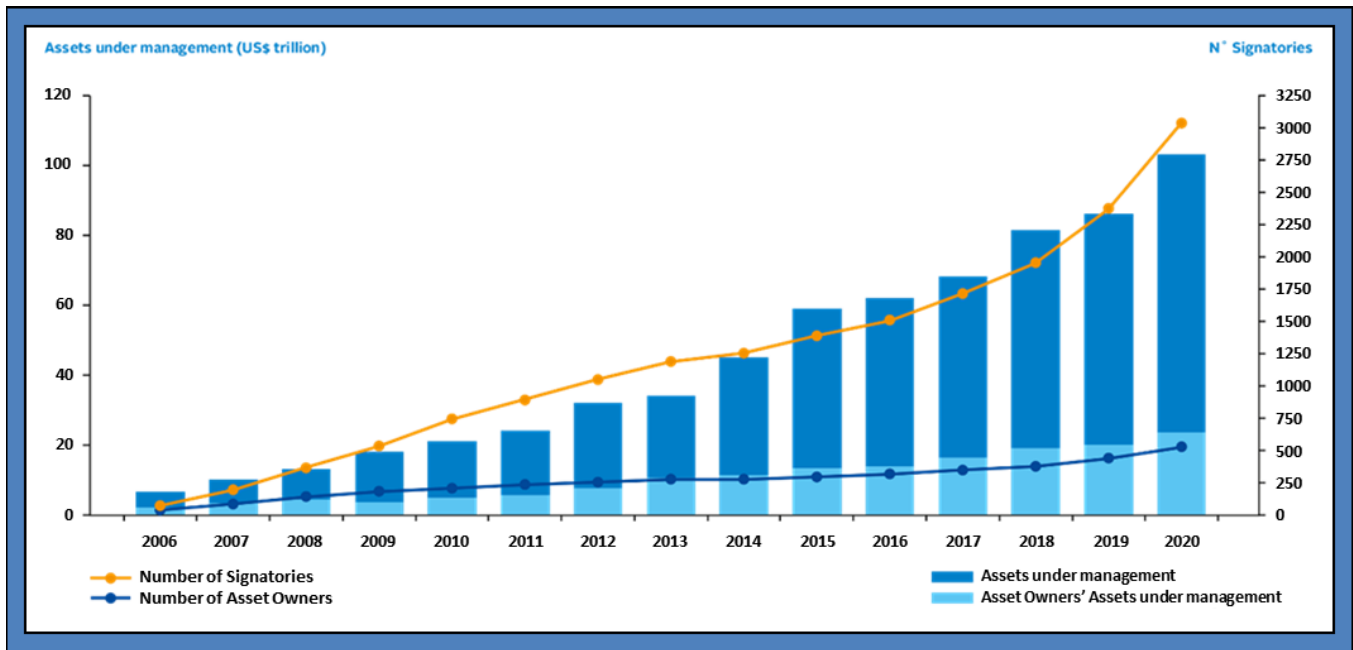
This article attempts to summarize and discuss the various perceived Environmental, Social, and Corporate Governance (ESG) issues with regards to allocating capital to commodity futures. I also discuss how already available policies and guidelines could reasonably be applied to answer these questions. Lastly, I propose two actions available to investors.



Throughout this article, I will only discuss purely financial investment use of commodity futures. That is, futures positions that are rolled forward well ahead of contract expiration and are not hedges for any physical good. Furthermore, for brevity, I will limit the discussion to commodity futures although my arguments can also be extended to other types of commodity derivatives.

**Figure 1**

**Signatories to the U.N. Principles of Responsible Investment and Their Combined Total Assets Under Management by Type**



Source: United Nations’ Principles for Responsible Investment website.

### Applicable Guidance and Terminology

Throughout this article, I attempt to discuss responsible investment using the terminology, and the spirit, of the two available key instruments for responsible investment: the Organization for Economic Cooperation and Development (OECD) guidance and the U.N. Principles for Responsible Investment (UNPRI). Regrettably, neither at this point in time provide comprehensive guidance specifically related to commodity futures.

The UNPRI is a corporate responsibility instrument developed by the financial sector under the auspices of the United Nations. The PRI defines responsible investment as a strategy and practice to incorporate ESG factors in investment decisions and active ownership by adhering to six core principles.<sup>1</sup> *Active ownership* involves *engagement* with investments, that is, challenging investment counterparties to improve how they manage or disclose on ESG issues. If initial engagement efforts are unsuccessful, the PRI recommends collaborative engagement with other investors, reducing exposure or, as a last resort, divesting.

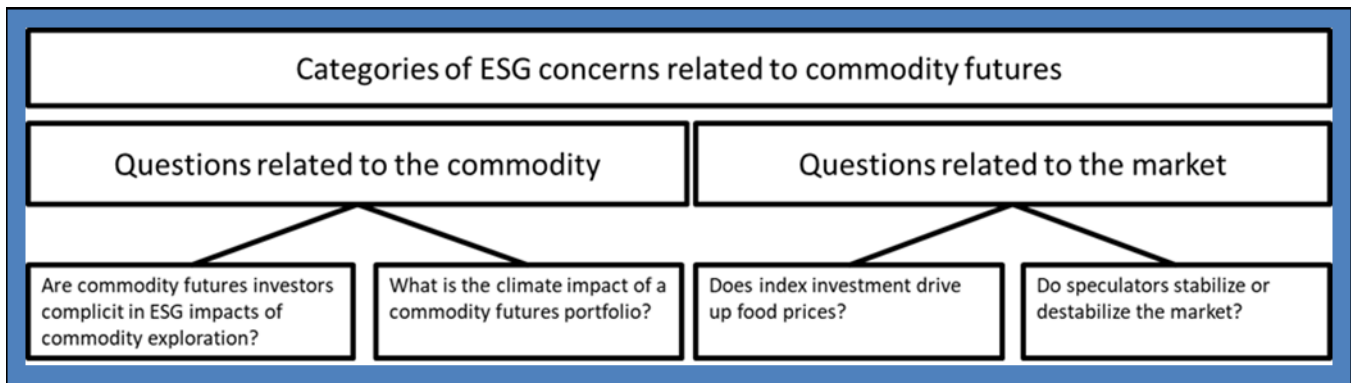


The *OECD Guidelines for Multinational Enterprises (MNEs)* is a comprehensive responsibility instrument addressed by governments to investors (OECD, 2017). The *OECD Guidelines* set out principles and steps that investors are expected to take to avoid and address their investment from causing *adverse impacts* across a range of societal concerns. Investors or their service providers are expected to carry out *due diligence* to avoid and address involvement with adverse impacts.

**Taxonomy of ESG Questions**

I argue that for commodity futures, perceived ESG issues fall broadly into one out of two categories visualized in Figure 2: Issues related to the exploration of the commodity underlying the futures contract, and issues related to the societal impact of the futures market. Within these categories, I will study two common questions, each in more detail.

**Figure 2**  
ESG Issues



**Issues Relating to the Commodity**

The first fundamental question in this category is: what is the role of commodity futures investors along the value chain? Is the investor a stakeholder in activities involved in extracting or processing the commodity?

When it comes to equities and bonds of corporations involved in the exploration, processing and refining of commodities, this link is clear; the investor provides capital, which the corporation uses in order to produce more of a particular commodity in a given way. The corporation undertakes these activities with the intent of making a profit, allowing it to return the investor his investment plus interest. As the investor finances these activities through the purchase of equities or bonds, the investor also gains tangible leverage to influence particular corporations’ actions. In the parlance of OECD guidelines, *business relationships* entailing certain responsibilities are present (OECD, 2017, pp. 12-13).

The same relation does not exist when it comes to financial participation in commodity futures markets. Even though futures contracts have physical commodities underlying the contracts, they do not, before expiry, give their holders any rights beyond receipt of price returns. In fact, before the delivery period,



the investor's futures contract is not linked to any particular source, production method or seller beyond what is required by the contract specifications.

Throughout the investment, the investor never owns a particular commodity, and therefore the investor cannot perform due diligence on its source, nor can the investor favor more sustainable alternatives among the range of grades and qualities available for delivery. It would be unreasonable to argue that the investor holds accountability of all possible commodities that might have been delivered, had the futures contract been held to expiration.

Various ESG issues undeniably exist along commodity value chains. OECD guidelines do encourage responsible investors to take part in industry initiatives that aim to increase overall industry responsibility (OECD, 2017, p. 14). With such an initiative, commodity futures investors can petition exchanges to increase minimum requirements on deliverables where desirable, a complex topic in itself, discussed later in this article.

The second fundamental difference to an equity investment is that as futures contracts do not finance exploration, such positions also do not create or destroy any additional supply of the commodity. Because no commodity is created or consumed, popular ESG metrics familiar to equity investors, such as the investment's carbon footprint, lose their meaning for futures. Nevertheless, financial service providers have, in the name of ESG, taken to marketing modified commodity indices with constituents that are less energy intensive to extract (Ghia *et al.*, 2020). When considering the investment case for switching to such an index, an investor ought to accept that even though the new index may have other merits, it cannot reasonably be claimed to reduce portfolio GHG emissions.

### **Issues Relating to the Market**

Commodity futures markets are global high frequency marketplaces transacting billions of dollars per day in financial centers. The settlement prices reached at these exchanges impact the immediate livelihoods of billions of people around the planet. It is a legitimate question to ask, does this "financialization" of commodities bear adverse impacts on society – and do investors unwittingly contribute to these adverse effects?

Futures markets help the global economy manage risk. Futures contracts allow energy companies today to mitigate short-term price volatility so they can invest into future energy sources, while also letting farmers grow their crops at a price secured in advance, without having to worry about global trade disruptions that could drive them into ruin.

Futures markets have been the extension of the spot market and the intersection between producers, consumers and financial participants for centuries. In some markets, futures have been introduced late to liquid cash market; in others, popular futures markets have existed but later were removed for regulatory reasons. The economic historian David Jacks analyzed 18 markets from these two categories over the last 150 years, concluding that there is strong evidence to show the existence of futures markets has lowered the volatility of the traded commodities (Jacks, 2007).



It may be countered that recent financial innovation such as high frequency trading and modern asset allocation techniques have skewed such results, making them irrelevant in reflecting the dynamics of today's financial market. However, there is very little empirical evidence to support this position. The U.S. Commodity Futures Trading Commission releases weekly statistics detailing what kind of investors hold which positions in the market. These statistics have changed remarkably little over the last decades, even as financial technology has simultaneously evolved significantly (see Bhardwaj *et al.*, 2016; Kang *et al.*, 2019). Also today, commercial hedgers remain on aggregate short while speculators are on aggregate long. Both parties hold similar overall stakes of open interest.

This leads us to the second common question; given that commodity speculators are biased to the long side, can they be the cause for too high global food prices? This discussion was particularly active around the year 2008, as many staple food commodities had risen to all-time highs concurrently with capital inflow into commodity futures index funds. In studies of the possible causality, the question is typically called “The Masters hypothesis,” according to investor Michael W. Masters, who testified in front of the U.S. Congress that it was his belief that commodity index funds had caused the record market prices seen at the time.

The Masters hypothesis has been quite actively debated in academic publications over the decade following that hearing. In their 2015 review article, Will *et al.* (2016) conclude:

“All articles that successfully passed academic peer review, as well as the vast majority of the empirical contributions to gray literature, unanimously arrive at the conclusion that financial speculation does not have an adverse effect on the functioning of the agricultural commodities markets.”

To be clear, commodity markets can, as can all financial markets, be temporarily squeezed or manipulated. However, such manipulation tends to be related to criminal actions. Cornering a market almost certainly requires the investor to breach position limits set by regulatory agencies at levels intended to prevent investors acting in good faith from causing undue disruptions to the market.

### **What Can an Investor Do?**

Various Environmental-, Social- and Governance issues are known to exist along commodity value chains. As this article has argued, commodity futures investments are not directly linked to particular exploration practices, which also means futures offer their investors limited leverage for active investment. Nevertheless, I want to highlight two actions available to investors.

### **Engage the Exchange**

Both exchanges and financial industry organizations have voiced their willingness to engage with stakeholders to find financial solutions for a more sustainable future.<sup>2</sup> Responsible investors need to answer the call and take the industry up on its word.



The futures investors cannot know what product will eventually be delivered against a futures contract beyond the minimum requirements set out in the contract specifications. Commodity exchanges define these contract specifications, and they have historically been based almost solely on physical or chemical properties alone.

Fundamentally, both the exchange's and its investors' incentives are in setting the contract specification in ways that maximize participation at the exchange, maximizing market liquidity and minimizing transaction costs. Setting contract specifications is a complicated multi-stakeholder process, which when hurried or ill-conceived can go wrong with disastrous consequences for the market as a whole. A textbook example of a one-sided change gone wrong was when the Kansas City Wheat contract abruptly lost 2/3 of its open interest in 1953 as the contract was made less useful to millers, by including a seller's option to also deliver soft red wheat (Till, 2016).

The World Federation of Exchanges released a working paper highlighting many further challenges exchanges face in incorporating sustainability standards in contract specifications (WFE, 2019). Firstly, should the new standards be enforced on current contracts, or be launched as parallel contracts? Secondly, how can standards be made simultaneously loose enough not to disrupt small but responsible producers while tight enough not to become meaningless or unenforceable?

Responsible futures investors can make their voices heard to the exchanges, and they can support and encourage exchanges to investigate or undertake responsible sourcing initiatives. Nevertheless, the investor must remain cognizant that it is unlikely futures contracts can both fulfill their societal role as the global facilitators of trade while simultaneously strictly confining contracts to only the very best sourcing practices.

### **The Portfolio-Holistic Approach**

For a diversified asset allocator, it is important not to lose sight of the goal of responsible investment: to invest in a way that mitigates or even addresses adverse effects on environment and society. An investor who wants to impact the issues prevalent in the exploration and refining of commodities should not miss the direct possibilities the rest of their portfolio gives for that. Global equity and bond indices cover many of the integrated corporations involved in exploration, processing and consumption. Therefore, it makes sense that ESG views are implemented in a holistic way where leverage is applied where it is most available to the investor.

As a simple case study, I illustrate this point by studying five industrial metals. Primary production of metals is a sector known for many ESG risks while simultaneously being an essential sector to grow for accomplishing the global energy transformation. Our analysis shows that owning popular benchmark equity indices entails holding business relationships with 30-91% of the world production of each of these five metals (see Figure 3 on the next page). Engagement with investments, be it through proxy voting or direct management outreach, gives the investor an efficient form of leverage to favor responsible practices.



**Figure 3**  
Share of World Metals Production in Benchmark Equity Indices

	World production 2018	Produced by companies in MSCI World/EM indices	Share
Copper	20 851 kT	9 543 kT	46%
Platinum	5 200 koz	4 724 koz	91%
Aluminium	64 338 kT	29 783 kT	46%
Iron ore	1 854 MT	1 184 MT	64%
Zinc	13 848 kT	4 202 kT	30%

Based on the constituents of the MSCI World and MSCI Emerging Markets equity indices as of August 2020. Companies are included in the tally if they, or their current subsidiaries, were among the largest producers of a particular metal in 2018. Metals production means primary mined production.

Source of Data: APG-AM, Morgan Stanley Research, FactSet, Company filings.

## Conclusions

I have discussed the key questions and concerns a responsible commodity futures investor must be able to address. Firstly, the indirect relation between the commodity futures investor and the physical commodity market: a commodity futures investment is not tied to any particular source or production method. Secondly, I have discussed how commodity futures investments do not create or consume the underlying commodity.

These two facts can appear paradoxical at first, and it will likely remain a challenge for the investor to explain them to his stakeholders. However, it is important that investors have these conversations instead of opting for “easy fixes” such as reweighting benchmarks or excluding futures altogether. Both are likely to lead to less efficient portfolios without *de facto* improved ESG performance.

In the second part of the article, I discussed commodity futures markets, and the societal role they play as the place to transact risk between producers, consumers and financial speculators. I find the weight of current evidence strongly favors the view that financial speculation into commodity futures does not destabilize nor skew prices away from fundamentals in either the futures or the cash market. While it is empirically difficult to completely rule out any causal link between speculation in commodity futures and any sort of short-term adverse price effect, investors can, in the light of current evidence, conclude that the net effect of futures market speculation remains positive for society.



Lastly, I have suggested two tangible actions that responsible commodity futures investors should consider: engagement with exchanges and a portfolio-holistic commodities ESG integration.

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## Endnotes

I am grateful to Professor Geert Rouwenhorst of Yale University, as well as Ralph Sandelowsky of Achmea Asset Management, for insightful discussion and feedback when writing this article. I would also like to thank Susan Bates of Morgan Stanley for providing the company filings data underlying the case study.

1 See “What are the Principles for Responsible Investment”:  
<https://www.unpri.org/pri/what-are-the-principles-for-responsible-investment>.

2 For papers on finding financial solutions for a more sustainable future, see WFE (2018), FIA (2020) and LME (2020).

## References

Bhardwaj, G., Gorton, G.B. and K.G. Rouwenhorst, 2016, “Investor Interest and the Returns to Commodity Investing,” *The Journal of Portfolio Management*, Vol. 42, No. 3, Spring, pp. 44-55.

FIA [Futures Industry Association], 2020, “How Derivatives Markets are Helping the World Fight Climate Change,” September. Accessed via website: [https://www.fia.org/sites/default/files/2020-08/FIA%20Climate%20Change%20Policy%20Paper\\_0.pdf](https://www.fia.org/sites/default/files/2020-08/FIA%20Climate%20Change%20Policy%20Paper_0.pdf) on October 10, 2020.

Ghia, K., Lindeman, A.J. and M. Zhang, 2020, “Commodities Investment Insight – ESG Comes to Town,” Bloomberg Whitepaper, September.

Jacks, D.S., 2007, “Populists Versus Theorists: Futures Markets and the Volatility of Prices,” *Explorations in Economic History*, Vol. 44, No. 2, April, pp. 342-362.

Kang, W., Rouwenhorst, K.G. and K. Tang, 2020, “A Tale of Two Premiums: The Role of Hedgers and Speculators in Commodity Futures Markets,” *The Journal of Finance*, Vol. 75, No. 1, pp. 377-417.

LME [London Metal Exchange], 2020, “LME Sustainability: Discussion Paper,” August. Accessed via website: <https://www.lme.com/About/Responsibility/Sustainability> on October 10, 2020.

OECD [Organization for Economic Co-operation and Development], 2017, “Responsible Business Conduct for Institutional Investors: Key Considerations for Due Diligence under the OECD Guidelines for Multinational Enterprises.” Accessed via website: <https://mneguidelines.oecd.org/RBC-for-Institutional-Investors.pdf> on October 10, 2020.

Till, H., 2016, “Brief Case Studies on Futures Contract Successes and Failures,” *The Journal of Alternative Investments*, Vol. 18, No. 3, Winter, pp. 39-56.

Will, M., Prehn, S., Pies, I. and T. Glauben, 2016, “Is Financial Speculation with Agricultural Commodities Harmful or Helpful?”, *The Journal of Alternative Investments*, Vol. 18, No. 3, Winter, pp. 84-102.

WFE [World Federation of Exchanges], 2018, “WFE Sustainability Principles,” October. Accessed via website: [https://www.world-exchanges.org/storage/app/media/research/Studies\\_Reports/2018/WFE%20Sustainability%20Principles%20October%202018.pdf](https://www.world-exchanges.org/storage/app/media/research/Studies_Reports/2018/WFE%20Sustainability%20Principles%20October%202018.pdf) on October 10, 2020.





WFE, 2019, "Sustainability & Commodity Derivatives White Paper," August.

Accessed via website:

<https://www.world-exchanges.org/our-work/articles/wfe-sustainability-commodity-derivatives-white-paper>

on October 10, 2020.

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