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# Commodity Investing in the Age of ESG and Inflation

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## Introduction

The risks posed by climate change are real and urgent. We need to make significant changes to reach net zero 2050. But from copper to corn to crude, we need commodities to do that. As the largest global investment consultant Mercer noted:

*“Commodities will remain an essential component of the economy. Investors should note that there is no transition pathway to a climate-neutral world that does not involve commodities” (Mercer, 2020).*

Much has been published about ESG frameworks for resource stocks and bonds, but what about commodity futures? Commodity futures are generally not tied to any specific source or production company. Financial participation in futures markets does not directly influence a particular company’s actions, as it can with equities or bonds. This makes applying ESG principles challenging.

Commodity futures also do not create or consume the underlying commodity. As opposed to an equity or bond investment, with futures there is no resulting increase or decrease in production. Futures also tend to have lower correlation and stronger diversification benefits than the equity or bonds of resource companies. How should a responsible investor weigh these benefits?

Up to this point neither the Organization for Economic Cooperation and Development (OECD) nor the UN Principles for Responsible Investment (UNPRI) provide comprehensive guidance specifically related to commodity futures.

What about Societal and Governance goals? These are often overshadowed by the “Environmental” in ESG, particularly when considering commodities. Beyond environmental considerations, what role do commodity futures markets play more broadly in society?

Finally, can a responsible investor invest in commodity futures? **We believe the answer to this question is an unequivocal yes.**

## Executive Summary

There are three approaches to embracing ESG with commodities:

1. Restriction or divestment of resource companies.
2. Active engagement in resource companies.
3. Using commodity futures.

There is continuing debate as to the impact of the first two approaches. Generally active engagement tends to be the preferred approach, and if that fails, or resources aren't available to engage, then divestment is taken.

Regardless of the impact to date, most would agree that active engagement is necessary. It's the large energy, natural resource, and renewables companies that have the supply chains, infrastructure, and balance sheet to make an impact. To implement change, we need to work with these companies.

**But, like portfolio management, ESG should be holistic.** We need both active engagement in companies and well functioning derivative markets to achieve our goals. One doesn't build a portfolio with just stocks or bonds, each has a role and the combination of the two generates the best results.

To date there has been little discussion about commodity futures within ESG frameworks. This paper expands on this increasingly important topic. In doing so it puts forth three considerations specific to ESG and commodity futures, and a fourth that expands on risk management and inflation alongside ESG:

### *Four key ESG considerations related to commodity futures:*

1. Well functioning futures markets are critical to the development of commodity markets important in the green transition.
2. Futures markets are essential to companies for managing risk, improving transparency, and providing liquidity. This aligns with many ESG principles, particularly the often underemphasized societal and governance considerations.
3. **Futures offer exposure to commodities with zero environmental impact.**
4. Futures offer superior risk management and diversification benefits for investors, particularly with respect to inflation protection.

Lastly, it also examines two prevailing criticisms of futures investments, that futures speculation increases volatility, and that active engagement in resource producers is the only responsible method of attaining commodity exposure.

## Four Key ESG Considerations

### 1. Commodities - Infrastructure and Green Transition

*We cannot live without commodities. We can live without crypto. We could probably survive without stock markets. But there is no plausible society without commodities.*

- Auspice.

The role of commodities in the green transition cannot be understated. The building blocks for many of the technologies used to mitigate or reverse the effects of climate change are industrial commodities such as copper, aluminum, nickel and silver.

Other, lesser known commodity markets are also integral. For instance, lithium, graphite, nickel, manganese, and cobalt are used in batteries. Palladium and platinum are key in catalytic converters, used to reduce harmful emissions, and wind turbines use steel, which is produced from iron ore. A recent world bank group report noted that over three billion tonnes of minerals and metals will be needed to deploy the wind, solar, and geothermal power, as well as energy storage, required for achieving a below 2°C future (The World Bank, 2021).

Consider aluminum. The average aluminum can made in the United States contains about 73 percent recycled content compared with 23 percent for glass bottles and less than 6 percent for plastic (Recycling Today, 2020). The ability to source, recycle, re-use and manage this input risk is critical to a more environmentally friendly world. **Aluminum can be hedged effectively through futures whereas plastic and glass cannot due to limited liquidity.**

Liquid futures markets are critical to the development of the aluminum market and the corresponding reduction in global plastic. Without risk mitigation tools, the development of this market would be impeded given the price risk.

### 2. Commodity Futures - Risk Management, Price Discovery, and Increased Transparency

Since the introduction of rice futures in Japan in the 1700s to the founding of the London Metal Exchange (LME) in 1877, the main objective of commodity derivative markets has always been to help producers manage and facilitate risk. This objective aligns with many ESG principles, particularly the need for transparency, risk mitigation, and market access.

Markets serve two main functions: they facilitate price discovery and offer an exchange for risk. As active market participants in derivative (futures) markets, CTAs<sup>1</sup> (Commodity Trading Advisors) who employ managed futures strategies actively take on risks that others cannot or do not want to manage. This particularly holds true in commodity markets where

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<sup>1</sup> For the purpose of this paper “CTAs” refers to investments in CTA pools/funds.

commodity producers generally want to avoid high price volatility and seek risk mitigation through hedging.

There is no market without buyers and sellers, and no efficient market without differing opinions and objectives. Like the insurance market, well-functioning derivative and financial markets require buyers and sellers with differing risk tolerance and objectives. A hedger may seek to minimize price risk through derivative markets, a CTA trend follower on the other hand is willing to accept this risk in exchange for a potential risk premium that will be earned over time.

**Efficient risk transfer and competitive pricing depend on the number of participants: the more buyers and sellers, the more efficient the market.** Efficient markets typically reduce price volatility and increase liquidity.

In terms of price discovery, derivatives markets play a vital role in everything from a barrel of crude oil, to a megawatt of solar energy to a tonne of CO<sub>2</sub>, helping businesses and policymakers understand the true costs of climate change. Even legacy contracts like thermal coal futures are important tools for the global response to climate change. These contracts, like all derivatives contracts, offer important signals on supply and demand through pricing trends (FIA, September, p. 2).

*Transparency can help to prevent corruption, mismanagement, loss of public revenue and illicit financial flows from commodity dependent developing countries (United Nations, 2020).*

The derivatives market plays a major role in enhancing transparency through the provision of forward information on the underlying commodities, securities or assets, and this ultimately contributes to long-term sustainability objectives. Derivative markets have also been more tightly regulated since the 2008 financial crisis, making them safer and even more transparent.

In terms of commodities and commodity futures, consider something as basic as water. Water futures tied to the Nasdaq Veles California Water Index were launched in December 2020. Prior to this the buying and selling of water rights, which allows the holder to pump water from the ground or reservoirs, only happened in the spot (physical) markets. In droughts it meant that buyers were facing high prices and significant uncertainty. The futures market will potentially bring price transparency to a previously opaque market.

For farmers the increased transparency can be a make or break for their crop revenues. With a futures market farmers can look to the market for guidance on both the current price and price trends in previous dry years, and hedge against higher prices in periods they expect to need additional fertilizer or water for their crops.

Water scarcity is potentially one of the biggest challenges of our century. A well developed, liquid futures market is necessary for improving risk management and transparency. This bodes the same for every commodity market, from carbon emissions to crude oil.

### 3. Commodity Futures – Lowest Impact Commodity Exposure

A study conducted by researchers from the University of Chicago and Harvard published in the Nation Bureau of Economic Research (NBER) concluded that divestment was a less effective approach than active engagement in addressing climate change (divestmentfacts.com, 2020). In contrast, a recent think tank study claims that the active engagement of leading Canadian pension plans “may be more talk than walk” (Canadian Centre for Policy Alternatives, 2021).

To date there has been significant progress, but there remains uncertainty and debate around the measured impact of divestment and active engagement. Divestment proponents will note that an active investment in the equity of a resource company that is making significant, proactive changes still represents an investment in a company that has a (often large) carbon footprint. Further, the measured impact of various green initiatives in reaching net zero is often minimal, and greenwashing is increasingly a concern.

What is less uncertain however are considerations around commodity futures investments, such as CTAs and ETFs backed by commodity futures. An investor considering adding commodity exposure to the portfolio should consider the following:

1. Investments in commodity futures align with many ESG principles, particularly the need for transparency, risk mitigation, and market access.
2. A futures backed ETF or CTA investment does not require physical extraction – there is no required physical delivery (even if this mechanism exists), no increase or decrease in production, **no consumption**.
3. A commodity futures investment does not have ESG company risk and the associated reputational risk.

The previous section covered the first point. It is the second point here that is of most importance:

Futures investments do not require physical extraction to back, as is the case with traditional equities and bonds, and they do not link to the environmental impact from resource extraction, an inherently invasive process.

Broadly less than 5% of commodity futures contracts are taken to delivery (Hecht, 2021). In the case of CTAs and futures backed commodity ETFs, this number is effectively zero. Delivery of physical commodities often is explicitly prohibited by the investment policy statements of these funds. With no delivery there is no increase or decrease in production, no financing, and importantly, no consumption. There have been initial efforts to attach carbon footprints to futures, but these are fundamentally flawed. There is a clear difference between the ownership of a company versus having exposure to a commodity risk factor.

*“what ultimately matters for carbon accounting is who ‘owns’ a company. All the owners of a company together provide the capital that enables its economic activities and emissions” (Markwat, 2021).*

Consider a large energy producer that has completely hedged its production through short positions in energy futures. If futures have a carbon footprint, and the producer has hedged its price risk through short positions in futures, are they carbon neutral? What about an investor who has a stake in the company's equity or bonds and an equivalent stake in an offsetting short futures position - is that a carbon neutral investment?

**The answer to these questions should be an unequivocal no. Futures do not affect consumption or production – they affect exposure to risk, and these are fundamentally different.** The ability to invest in an instrument that's value is affected by nothing other than the underlying price of the commodity itself is undeniably the lowest impact method of attaining valuable commodity risk exposure.

Further, consider that the equity and bonds of a company make up its capital stock. If one purchases the equity or bonds of a company, it is directly involved in its financing and is entitled to various rights associated with the financing. For a resource company, purchasing equity or bonds directly finances the production of a resource. A company's capital stock at any given point is finite and can be directly tied to its carbon footprint. This relationship does not hold with futures, and there are no associated rights.

Finally, an important consideration for smaller institutional investors lacking the capacity to engage with companies, commodity futures eliminate the ESG company risk and associated reputational risks. As greenwashing is increasingly a concern that requires considerable resources to address (Green is not always clean, 2021), commodity futures may offer a more practical solution for responsible investors seeking commodity exposure.

#### 4. Commodity Futures - Risk Management and Inflation Protection for Investors

*"If our solution is entirely just to get a green world, we're going to have much higher inflation, because we do not have the technology to do all this, yet. That's going to be a big policy issue going forward too: Are we going to be willing to accept more inflation if inflation is to accelerate our green footprint?" – Larry Fink, CEO of Blackrock (BNN Bloomberg, 2021).*

The two basic ingredients required for a commodity super cycle are an extended period of underinvestment in supply, and a generational demand shock. Today we may have both. The risk of inflation to investors, from the largest pensions and sovereign wealth funds to local foundations and individual investors, is significant. **The sound risk management of these funds is integral in any comprehensive ESG framework.** Commodities and managed futures trend following employed by CTAs have historically provided the most effective risk management through diversification in periods of rising inflation<sup>2</sup>.

#### Underinvestment in Commodity Supply

Modern infrastructure is central to economic development and quality of life. From the critical roads and railways needed to transport people and goods, to power plants and

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<sup>2</sup> See Figure 4. Commodities and Trend following historically were the top performing strategies during inflation surges.

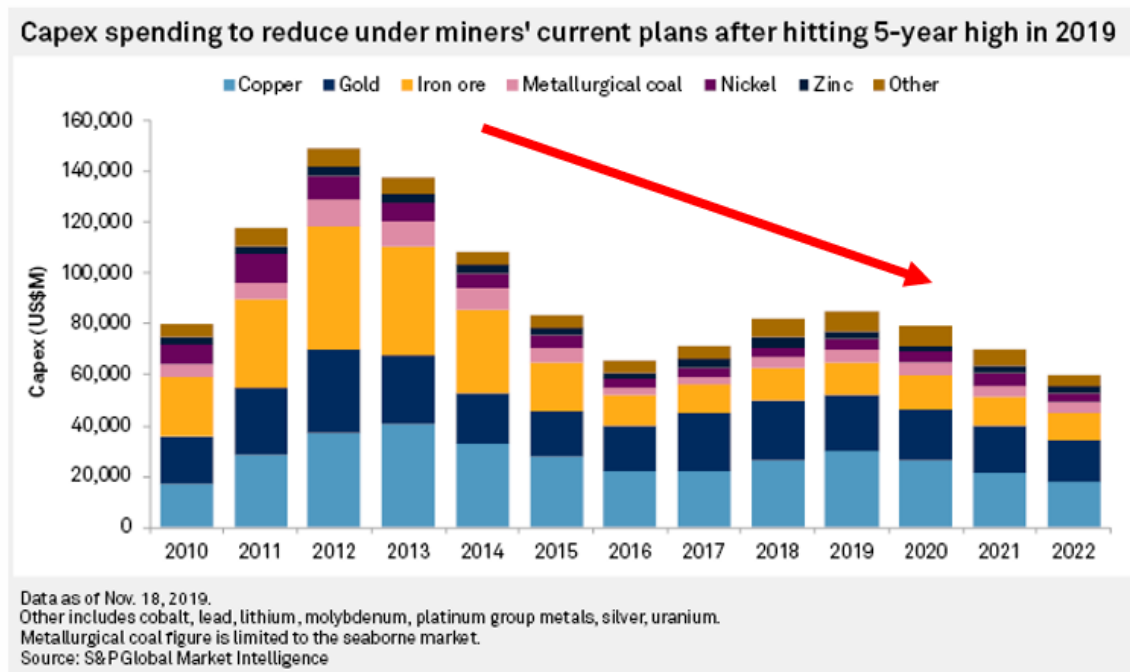


communication networks that underly economic and household activity, to basic needs for clean water and sanitation, infrastructure is integral to fostering development.

Prior to COVID and the global unification towards greening the economy it was estimated that global infrastructure investment needs to be \$94 trillion between 2016 and 2040 and the world would be facing a **\$15 trillion infrastructure gap by 2040** (World Economic Forum, 2019). Energy and roads, both very commodity intensive, account for more than two-thirds of global investment needs<sup>3</sup>.

This infrastructure gap is threatened by the lack of capital expenditure in the resource economy over the last decade, with estimates that "every single commodity market with the exception of wheat is in a deficit today" (S&P Global, 2020). For example, prior to COVID and the world uniting around "building back better" a December 2019 report by S&P Global Market Intelligence noted that the outlook for miners in 2022 was for a continued capex reduction (S&P Global, 2019). The forecast for 2022 capex was less than 50% of the 2012 peak and follows a decade of declining investment. See Figure 1.

**Figure 1: 10 Years of Decline in Capital Expenditures in the Mining Sector**



Source: (S&P Global, 2019).

<sup>3</sup> See <https://outlook.gihub.org/>. "Energy" (\$26 trillion) and "Transport: Road" (\$26 trillion) equal \$52 trillion of the estimated \$79 trillion in investment needs.

### Generational Demand Shock

COVID has been a catalyst in unifying the world around the greening of our economy. From the US re-entering the Paris agreement and agreeing to “build back better”, to the European Green Deal, trillions in capital is now being mobilized.

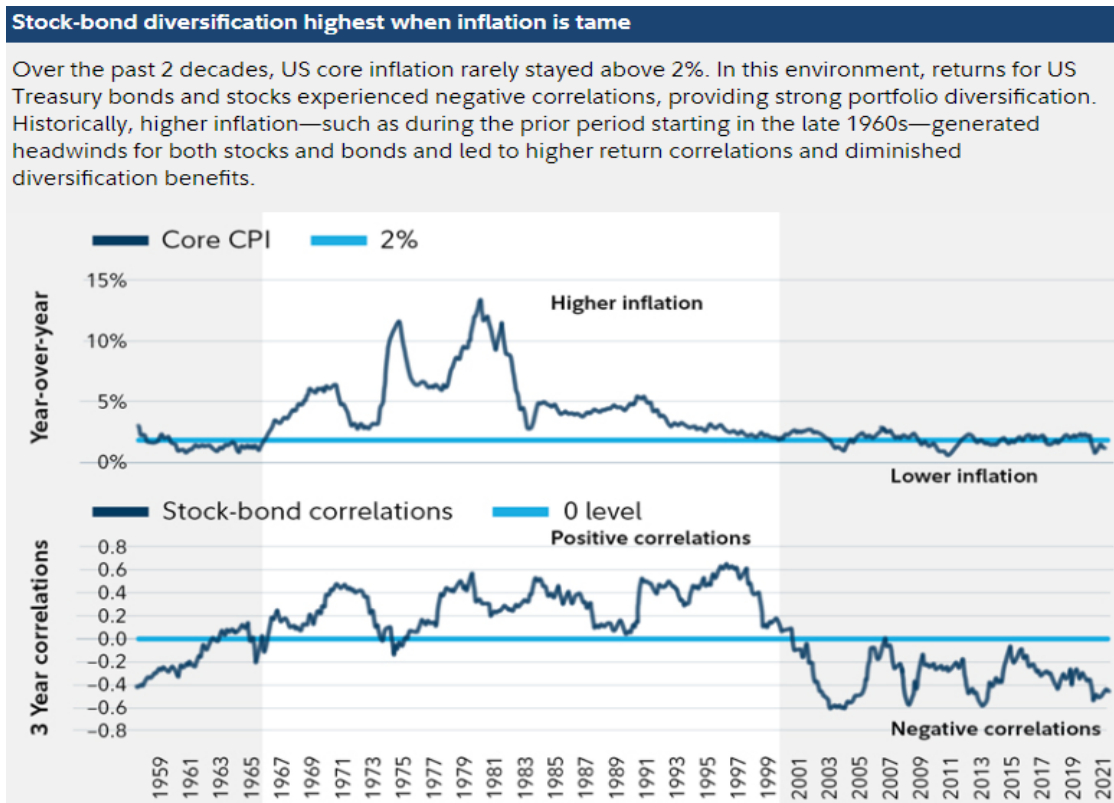
These infrastructure investments will likely dwarf the estimated \$3 trillion in Chinese infrastructure investments in the 2000s, widely believed to be a key driver of the previous commodity bull market. This, in conjunction with the dearth of commodity and infrastructure investment over the past decade has created the basic preconditions for an extended commodity supercycle, **and importantly for investors, inflation.**

### Risk Management for Investors

It is hard to imagine a scenario in which a commodity supercycle does not impose significant inflationary pressures. One doesn’t have to look beyond US President Biden’s August 2021 call on OPEC+ to increase energy production (Reuters, 2021): today’s inflationary environment is very much commodity driven.

Inflation is arguably one of the biggest risks facing investors. Investors have benefitted from a 40-year bull market in bonds and considerable diversification benefits over the last two decades. Return prospects and diversification benefits are diminished in an inflationary environment as rates rise and the equity-bond correlation increases. See Figure 2.

**Figure 2: Equity-Bond Correlation**





Source: (Fidelity, 2021)

Ultimately diversification is the best type of risk management – the only free lunch in investing. Historically, commodities have provided unique portfolio diversification benefits and comparable returns to equity markets. Few investors realize that from 1970 to 2007 commodities outperformed equity indexes and provided exceptional diversification benefits with zero correlation to equities (Auspice, 2021). See Table 1.

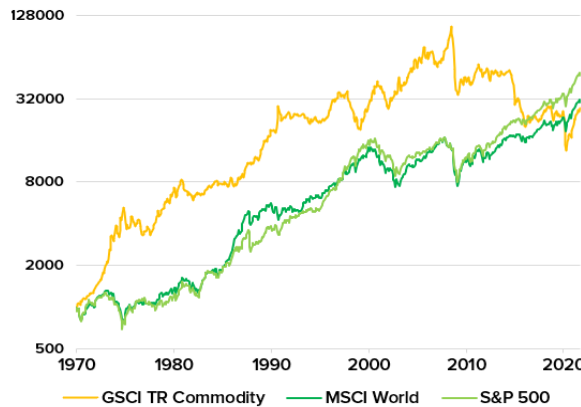


Table 1: Commodities vs Equities Prior to Global Financial Crisis

Jan 1970 - Dec 2007	GSCI TR Commodity	MSCI World	S&P 500
Annualized Return	12.02%	7.55%	7.56%
Standard Deviation	18.78%	14.10%	15.06%
S&P 500 Correlation	-0.05	0.87	1.00

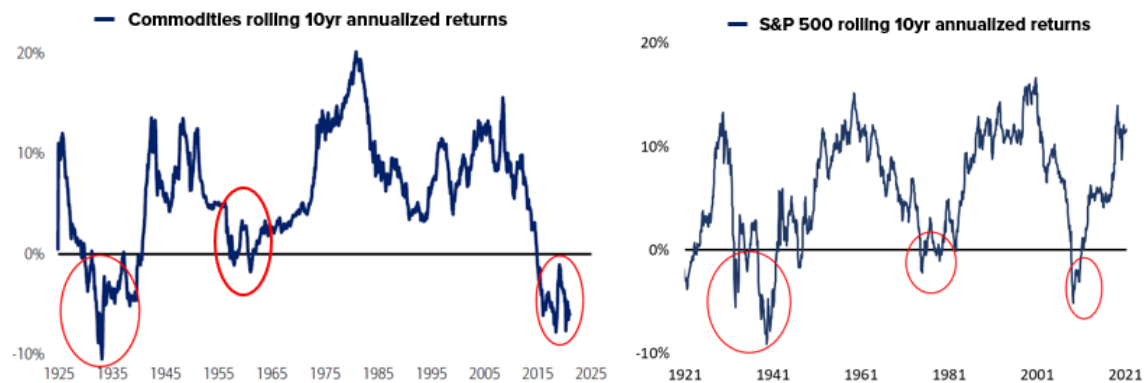
Table 2: Commodities vs Equities Since 1970

Jan 1970 - Sep 2021	GSCI TR Commodity	MSCI World	S&P 500
Annualized Return	6.60%	6.80%	7.72%
Standard Deviation	20.50%	14.76%	15.22%
S&P 500 Correlation	0.12	.90	1.00

Source: Auspice, data provided by Bloomberg

It has only been the post Global Financial Crisis world in which deflationary forces prevailed did returns suffer. Even so, the full cycle returns have still been attractive, and notably the correlation and diversification benefits remain significant (see Table 2). Longer term analysis suggests that commodities, like equities, are cyclical, and the recent experience for commodities has been among the worst, whereas equities have experienced one of their best periods of performance in history. See Figure 3.

Figure 3: Both Commodities and Equities are Cyclical



Sources: Commodities; (BofA, 2021). S&P 500; Auspice, data provided by Bloomberg.

For the largest sovereign wealth and pension plans to the individual retail investor, commodity futures and CTAs are one of the most effective risk management tools. Ontario

Teachers Pension Plan (OTPP) made headlines (Financial Post, 2021) in Q3 2021 as they increased commodity derivative investments to hedge their inflation risk, with net investments in the asset class now accounting for 12% of their \$226bn portfolio, up from 8% in December 2020. Notably, of the \$26.5bn reported in commodities in their Q2 2021 Interim Report, **\$25.5bn is in commodity derivatives** (OTPP, 2021).

*“What we know historically is that inflation is not really kind to traditional asset classes ... stocks or bonds,” said Ziad Hindo, Chief Investment Officer at the pension manager. Commodity prices, on the other hand, tend to rise when inflation is on an upward trajectory and provide a hedge against it.”* (Financial Post, 2021).

The total real returns of assets through eight specific US inflationary regimes are shown below in Figure 4, as well as the annualized returns during inflationary, non-inflationary, and all periods.

**Figure 4: Real Total Returns of Assets in US Inflationary Regimes**

*In Figure 4 we have highlighted the strategies that have produced returns of 7% and above in inflationary periods as defined by the authors. Eleven of twelve of those strategies fall into the two categories of “Commodities” and “Trend”. See endnotes for higher resolution table.*

Strategy	Specific inflation regimes								Combined regimes		
	US enters WW2	End of WW2	Korean War	Ending of Bretton Woods	OPEC oil embargo	Iranian Revolution	Reagan's Boom	China demand boom	Inflation (19%)	Other (81%)	All (100%)
Start month	Apr 1941	Mar 1946	Aug 1950	Feb 1966	Jul 1972	Feb 1977	Feb 1987	Sep 2007			
End month	May 1942	Mar 1947	Feb 1951	Jan 1970	Dec 1974	Mar 1980	Nov 1990	Jul 2008			
Total price level chg	15%	21%	7%	19%	24%	37%	20%	6%			
Length (mths)	14	13	7	48	30	38	46	11			
	<b>Real return (total)</b>								<b>Real return (ann.)</b>		
(P) Commodities - Energies	-3%	2%	-6%	-16%	264%	57%	201%	68%	41%	-1%	3%
(A) Trend - All assets	20%	23%	19%	135%	196%	100%	65%	17%	25%	15%	16%
(A) Trend - Commodities			1%	54%	173%	33%	132%	25%	20%	8%	10%
(P) Commodities - Industrial				115%	38%	-6%	306%	3%	19%	4%	7%
(A) Trend - Bonds				79%	54%	149%	6%	6%	15%	9%	10%
(P) Commodities - Aggregate		12%	6%	26%	85%	38%	84%	21%	14%	1%	4%
(P) Commodities - Gold					166%	154%	-18%	27%	13%	-1%	1%
(P) Commodities - Precious				28%	29%	185%	-27%	33%	11%	-2%	1%
(A) Trend - Equity	20%	23%	24%	77%	23%	-13%	13%	-3%	8%	11%	10%
(P) Commodities - Softs				-41%	243%	15%	11%	15%	8%	-3%	-1%
(A) Equity Factor - Cross-sectional Mom.	-15%	-18%	7%	35%	38%	44%	41%	26%	8%	4%	5%
(P) Commodities - Agri		12%	6%	-23%	197%	-21%	6%	33%	7%	-3%	0%
(A) Trend - FX					-14%	16%	42%	6%	4%	4%	4%
(A) Equity Factor - Quality (QMI)				14%	-1%	-12%	40%	7%	3%	3%	3%
(P) Fixed Income - TIPS				-3%	13%	-2%	11%	6%	2%	3%	3%
(A) Equity Factor - Investment (CMA)				-7%	31%	-9%	24%	-10%	2%	2%	2%
(P) Long Equities - Energy Sector	-14%	-10%	25%	-19%	-19%	31%	31%	2%	1%	8%	6%
(A) Equity Factor - Profitability (RMW)				4%	-24%	-8%	18%	6%	-1%	2%	2%
(A) Equity Factor - Value (HML)	-4%	-17%	3%	8%	36%	-11%	-3%	-7%	-1%	2%	2%
(P) Real Estate - Residential	-17%	4%	-4%	-2%	-7%	11%	0%	-13%	-2%	2%	1%
(A) Equity Factor - Low Vol (BAB)	-24%	-6%	-3%	28%	-13%	9%	-7%	-22%	-3%	8%	6%
(P) Fixed Income - 2 Yr. Treasury	-13%	-17%	-6%	-1%	-7%	-17%	11%	0%	-3%	2%	1%
(A) Equity Factor - Size (SMB)	-11%	-23%	-4%	45%	-43%	32%	-26%	-4%	-4%	1%	0%
(P) Fixed Income - 10 Yr. Treasury	-11%	-17%	-6%	-13%	-12%	-31%	8%	5%	-5%	4%	2%
(P) Fixed Income - High Yield	-4%	-11%	0%	-18%	-21%	-38%	-10%	-8%	-7%	6%	4%
(P) Long Equities - Market Composite	-24%	-27%	24%	-7%	-46%	-14%	12%	-17%	-7%	10%	7%
(P) Fixed Income - Investment Grade	-7%	-12%	-3%	-23%	-20%	-43%	-5%	1%	-7%	6%	3%
(P) Fixed Income - 30 Yr. Treasury	-17%	-17%	-6%	-20%	-28%	-41%	13%	2%	-8%	5%	3%
(P) Long Equities - Consumer Durables	-16%	-32%	24%	-30%	-62%	-27%	-28%	-36%	-15%	13%	7%

Source: (Henry Neville, 2021). High resolution chart also available at <https://eprints.pm-research.com/17511/58502/index.html?77409>

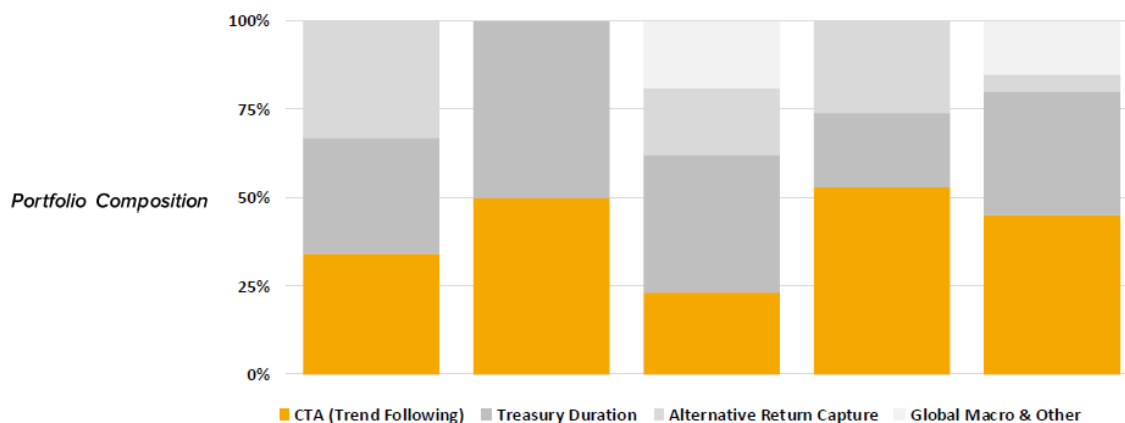
As illustrated, commodities and trend following have provided the strongest returns in inflationary periods. Further, from a risk management standpoint, trend following and the

agnostic ability to trade both long and short, has provided the most effective diversification benefits. Since inception (1987) the BTOP 50, the longest standing CTA (trend following) index, has had a -0.03 correlation to the S&P 500 while the GSCI commodity index has had a 0.19 correlation to the S&P 500.

Some of the largest investors in CTAs are public pensions in the most climate and ESG sensitive states - The California State Teachers’ Retirement System (CalSTRS) and the Employees’ Retirement System of the State of Hawaii (HIERS) for example have 4.5-6% of their portfolio in CTAs as part of larger “Risk Mitigation Strategies”<sup>4</sup> (“RMS”) (calstrs.com, 2021) and “Crisis Risk Offset” (“CRO”) (ers.hawaii.gov, 2019) portfolios<sup>5</sup>. Figure 5 captures some of the leading US public pensions’ approaches:

**Figure 5: US Public Pension “Crisis Risk Offset” and Risk Mitigation Strategies**

Institutional Investor:	SJCERA	ERSRI	HIERS	IL SURS	CalSTRS
Total Plan AUM (USD):	3.2bn	10.5bn	18bn	24bn	312.2bn
Launch:	Jan-16	May-17	Apr-17	Dec-19	Jan-16
Portfolio Name:	Crisis Risk Offset	Crisis Protection Class	Diversifying strategies	Crisis Risk Offset	Risk Mitigating Strategies
% of Total Portfolio:	15%	10%	25%	19%	10%



**\*CTA (Trend Following) tends to be the largest allocation in these portfolios.**

Source: Data derived from publicly available sources, see Appendix 1. % of Total Portfolio and Portfolio Composition represent long term targets except for HIERS in which June 30th, 2021 holdings are used.

Whether broadly for diversification and risk management, or more specifically for inflation protection, commodities and trend following CTAs historically have provided the most effective benefits. And these sophisticated risk management investments aren’t limited to

<sup>4</sup> Note that the Hawaii Employees’ Retirement System (“HIERS”) evolved the original “Crisis Risk Offset” portfolio to a larger and broader “Diversifying Strategies” portfolio following a 2019 asset allocation study. For more, see (Pensions & Investments, 2021)

<sup>5</sup> See <https://www.pionline.com/investing/investors-employ-defensive-moves-curb-market-mayhem> for a summary of some of these portfolios.

sophisticated institutional investors. Retail investors can manage inflation risk through a variety of ETFs and mutual funds that are comprised of commodity futures.

## Criticisms against commodity futures

### 1 – Increased Volatility

It has been suggested that futures markets played a role in the increased volatility of commodities, particularly agricultural commodities used in our food supply following the Global Financial Crisis (Mercer, 2020).

In 2009 the IOSCO Task Force on Commodity Futures Markets was formed following the concerns expressed by the G-8 Finance Ministers regarding the price rises and volatility in agricultural and energy in 2008. The Task Force made the following conclusion:

*“Reports by international organizations, central banks and regulators in response to the above concerns that were reviewed by the Task Force suggest that economic fundamentals, rather than speculative activity, are a plausible explanation for recent price changes in commodities.”* (IOSCO, 2009).

It is understandable to think that innovations in high frequency trading, long-only index investments, and modern asset allocation techniques could increase commodity volatility, and worse, cause increases in global food prices. This concept was known as the “Masters hypothesis” and was brought to the US congress following the extreme volatility during the Global Financial Crisis.

In the ensuing decade the hypothesis was actively debated in academic and professional publications. In a 2015 review article it was concluded:

“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.**” (JPMCC, 2020).

Further, in a study of 18 markets over 150 years economic historian David Jacks concluded that there is strong evidence to show the existence of futures markets has lowered the volatility of the traded commodities (JPMCC, 2020). Your Wheaties, Cheerios, bacon and eggs will come to your table a bit cheaper because of lower volatility and risk management available through liquid futures markets.

### 2 – Active Engagement as the Only Approach

Just like portfolio management, ESG too should take a holistic approach. 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 the environment and society.

Historically investors seeking exposure to commodities could invest in resource equities or commodity futures through ETFs or CTAs. More recently, in response to growing ESG

concerns, the “easy” answer so far as to the responsible approach has been to prioritize active engagement in companies versus commodity futures.

*“Accessing commodity markets without investing in the futures market is possible and potentially preferable — for example, by investing in commodity producers (in either private or public markets). With equity, you get a say: Investors can engage with firms to improve their sustainability and working practices.” (Mercer, 2020).*

There is no dispute about the need for active engagement. **This is an incomplete view however, the equivalent of building a portfolio with just one asset class, or saying that stocks are “preferable” to bonds.** Each has a role; both are necessary to achieve the best results.

Consider two scenarios:

1. Remove all speculators and investors from futures markets - just allow hedgers to participate in futures markets.
2. We allow only "pro-green" speculation, ESG themed managed futures portfolios, for example long positions in clean “transition” commodities, and short positions in carbon heavy commodities.

What happens? In both scenarios commodity markets become:

1. Heavily one sided.
2. Less liquid.
3. Inefficient.

This would be detrimental to progression of the global goals. Further, consider an oil producer. One could posit that perhaps these results, less liquid and inefficient energy futures markets are good, as this would limit hedging and risk management capabilities, ultimately making future viability more difficult. From a single perspective that could be considered good. **It would not be.**

These large companies are the ones we are actively engaging to integrate newer green infrastructure. It's been well established that divestment and/or bankrupting these companies does not push forward global goals (divestmentfacts.com, 2020). It's the energy, natural resource, and renewables companies that have the supply chains, infrastructure, and balance sheet to actually make an impact. In order to implement change we need to work with these companies.

Further, while the use of oil and other carbon heavy commodities in 2050 may be dramatically different, today they are still integral to our economy and particularly important to our transition. One doesn't have to look beyond the September 2021 energy price crisis as evidence of this.

## Conclusion

Sustainability is one of the most pressing topics of our own and future generations. In the World Economic Forum’s “Global Risk Report 2021”, respondents ranked climate action failure as the most concerning risk globally, ahead of infectious diseases, debt crises, and other more traditional “economic” risks (World Economic Forum, 2021).

Financial markets, as an intersection for capital allocation, can play a major role in promoting sustainability and sustainable resource management, and futures represent a key risk management tool. Commodity futures perform a critical role in economic activity by enabling producers and investors better manage the risks to which they are exposed, and by more effectively aligning exposures with risk tolerance and risk management requirements.

The futures market also plays a major role in enhancing transparency, through the provision of forward information on the underlying commodities, securities or assets, and this ultimately contributes to long-term ESG objectives.

The transition to a more sustainable global economy requires scaling up of investments that provide environmental and social benefits. This demands sound and effective risk management alongside transparency and disclosure from issuers of capital instruments. Such investments have long-term objectives and require a long-term orientation. To this end, commodity futures can play a very important role in achieving global goals.

Commodity futures also do not create or consume the underlying commodity. As opposed to an equity or bond investment, with futures there is no resulting increase or decrease in production, no environmental impact. Considered alongside low equity correlation and strong diversification benefits, the collective characteristics are compelling. It is not surprising that some of the most sophisticated investors are including CTAs in “Risk Mitigating Strategies” and “Crisis Risk Offset” portfolios.

Active engagement in companies is necessary, but it is one part of a comprehensive, holistic approach to ESG. We need both active engagement in companies and well functioning derivative markets to achieve our goals. One doesn’t build a portfolio with just stocks or bonds, each has a role, the combination of the two generates the best results.

Finally, a responsible investor must consider ESG factors alongside investment merit and portfolio considerations. Collectively, commodity futures and CTA strategies offer compelling attributes and may be preferable to investments in equities and bonds of resource companies.

## Auspice Capital and ESG

### Auspice ESG Policy

Auspice is committed to an integrated evaluation of Environmental, Social, and Governance (ESG) factors in investments, when applicable, and in company operations. A separate Auspice ESG Policy document is also available upon request.



### About The Authors

Tim Pickering, Founder and CIO at Auspice, was elected to the Board of the Calgary chapter of Pheasants Forever, a globally respected habitat organization dedicated to wildlife, land management, conservation, and education.

Brennan Basnicki, Director and Partner at Auspice, was in the first cohort to complete the Sustainability and Climate Risk Certificate (SCR) offered by the Global Association of Risk Professionals (GARP) in 2020. He has also completed four further certificates in climate action and sustainable finance.

### Further Resources for financial professionals

ESG is a rapidly evolving space, however within the investment industry two organizations have long stood at the forefront of investor education, professionalism, and ethics. GARP and the CFA Institute both offer comprehensive bodies of knowledge on this topic. For investment professionals seeking to broaden their understanding we recommend the following:

1. [Sustainability and Climate Risk Certificate \(SCR\)](#). Offered by the Global Association of Risk Professional (GARP) the SCR is part of GARP's flagship certifications and educational programs.
2. [Certificate in ESG Investing](#). Offered by the CFA Institute, the Certificate in ESG investing offers both practical application and technical knowledge in the fast-growing field of ESG investing.

### Bibliography

- Auspice. (2021, March). *Positioning for the 2020s Commodity Bull Market - Select Your Exposure Wisely*. Retrieved from Auspice Capital:  
<https://static1.squarespace.com/static/53a1ca9ce4b030ded763dbc2/t/60425ce59d3dd764560d624c/1614961895139/AUSPICE+-+Positioning+for+the+2020s+Commodity+Bull+Market.pdf>
- BNN Bloomberg. (2021, June 18). *The Climate-Change Fight is Adding to the Global Inflation Scare*. Retrieved from <https://www.bnnbloomberg.ca/the-climate-change-fight-is-adding-to-the-global-inflation-scare-1.1618567>
- BofA. (2021, March 25). The Case for Real Assets. *Global Investment Strategy*, p. 7.
- calstrs.com. (2021). *Current investment portfolio*. Retrieved from <https://www.calstrs.com/current-investment-portfolio>
- Canadian Centre for Policy Alternatives. (2021, August 12). *An Insecure Future. Canada's biggest public pensions are still banking on fossil fuels*. Retrieved from <https://www.policyalternatives.ca/publications/reports/insecure-future>

- divestmentfacts.com. (2020, September 2). *New study: divestment is media-grabbing, but ineffective*. Retrieved from <https://divestmentfacts.com/new-study-divestment-is-media-grabbing-but-ineffective/>
- ers.ehawaii.gov. (2019, June 30). *Comprehensive Annual Financial Reports*. Retrieved from [https://ers.ehawaii.gov/wp-content/uploads/2020/10/CAFR-2019-Web\\_Final.pdf](https://ers.ehawaii.gov/wp-content/uploads/2020/10/CAFR-2019-Web_Final.pdf)
- FIA. (September, 2020). *How derivatives markets are helping the world fight climate change*. Retrieved from [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)
- Fidelity. (2021, May 12). *How to protect your money from inflation*. Retrieved from <https://www.fidelity.com/learning-center/trading-investing/money-and-inflation>
- Financial Post. (2021, August 23). *Ontario Teachers' Pension Plan looks at commodities for hedge against inflation*. Retrieved from <https://financialpost.com/fp-finance/ontario-teachers-pension-plan-looks-at-commodities-for-hedge-against-inflation>
- Green is not always clean*. (2021, May 19). Retrieved from Aviva Investors: <https://www.avivainvestors.com/en-gb/views/aiq-investment-thinking/2021/05/greenwashing-risk/>
- Hecht, A. (2021, July 31). *Taking Delivery of Commodities via the Futures Market*. Retrieved from The Balance: <https://www.thebalance.com/taking-delivery-of-commodities-via-the-futures-market-4118366>
- Henry Neville, T. D. (2021, March 29). *The Best Strategies for Inflationary Times*. Retrieved from SSRN: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3813202](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3813202)
- IOSCO. (2009, March). *Task Force on Commodity Futures Markets*. Retrieved from <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD285.pdf>
- JPMCC. (2020). *Can a Responsible Investor Invest in Commodity Futures*. Retrieved from [http://www.jpmmc-gcard.com/digest-uploads/2020-winter/issue-pages/Page%2088\\_96%20GCARD%20Winter%202020%20Danielsen%20112120.pdf](http://www.jpmmc-gcard.com/digest-uploads/2020-winter/issue-pages/Page%2088_96%20GCARD%20Winter%202020%20Danielsen%20112120.pdf)
- Markwat, T. (2021, September 2). *The CO2lumnist: Should derivatives have a carbon footprint*. Retrieved from Robeco: <https://www.robeco.com/en/insights/2021/09/the-columnist-should-derivatives-have-a-carbon-footprint.html>
- Mercer. (2020). *Investing responsibly, the use of commodities*. Retrieved from <https://www.mercer.com/content/dam/mercercapital/attachments/private/gl-2020-responsible-investment-in-commodities-mercercapital.pdf>

- OTPP. (2021). *Q2 2021 Interim Report*. Retrieved from <https://www.otpp.com/documents/10179/1274961/Q2+2021+Interim+Report/6d27c0df-4033-4070-bcda-dbfdf8e81ee6>
- Pensions & Investments. (2021, February 8). *Hawaii funds avoids pigeonholes and goes its own way*. Retrieved from <https://www.pionline.com/pi-1000-largest-retirement-plans/hawaii-fund-avoids-pigeonholes-and-goes-its-own-way>
- Recycling Today. (2020, December 3). *Report finds aluminum cans remain most sustainable package*. Retrieved from <https://www.recyclingtoday.com/article/aluminum-cans-recycled-twice-plastic-bottles/>
- Reuters. (2021, August 11). *U.S. calls on OPEC and its allies to pump more oil*. Retrieved from <https://www.reuters.com/world/middle-east/us-call-opec-its-allies-increase-oil-production-cnbc-2021-08-11/>
- S&P Global. (2019, December 4). *Capital Expenditure In The Mining Industry To Drop By US \$5.4B in 2020*. Retrieved from <https://www.spglobal.com/marketintelligence/en/news-insights/research/capital-expenditure-in-the-mining-industry-to-drop-by-us-54b-in-2020>
- S&P Global. (2020, December 8). *Goldman Sachs' Currie predicts 'long-lasting bull market' for virtually all commodities*. Retrieved from <https://www.spglobal.com/platts/en/market-insights/latest-news/agriculture/120820-goldman-sachs-currie-predicts-long-lasting-bull-market-for-virtually-all-commodities>
- The World Bank. (2021). *Climate-Smart Mining: Minerals for Climate Action*. Retrieved from <https://www.worldbank.org/en/topic/extractiveindustries/brief/climate-smart-mining-minerals-for-climate-action>
- United Nations. (2020, April). *United Nations Conference on Trade and Development*. Retrieved from Great transparency in commodity markets: [https://unctad.org/system/files/official-document/cimem2d49\\_en.pdf](https://unctad.org/system/files/official-document/cimem2d49_en.pdf)
- World Economic Forum. (2019, April 11). *The world is facing a \$15 trillion infrastructure gap by 2040. Here's how to bridge it*. Retrieved from <https://www.weforum.org/agenda/2019/04/infrastructure-gap-heres-how-to-solve-it/>
- World Economic Forum. (2021). *The Global Risks Report 2021 16th Edition*. Retrieved from [https://www3.weforum.org/docs/WEF\\_The\\_Global\\_Risks\\_Report\\_2021.pdf](https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf)

## Appendix 1 – US Public Pension “Crisis Risk Offset” and Risk Mitigation Strategies

*SJCERA (San Joaquin Country Employees’ Retirement Association), April 2021*

1. [https://www.sjcera.org/new\\_website/15board-retirement/documents/B20210409.pdf](https://www.sjcera.org/new_website/15board-retirement/documents/B20210409.pdf)
  - a. See pages 6 and 11.

*ERSRI (Employees’ Retirement System of Rhode Island), December 2016*

2. <http://data.treasury.ri.gov/dataset/6d1a23b6-1e4f-4c0f-b7fe-9e4864253774/resource/031e209d-b26c-4c47-93b0-4d66b59a8d74/download/RI-Crisis-Risk-Offset-Portfolio-IPS-d-5-CS.pdf>
  - a. See pages 1 – 2.

*HIERS (State of Hawaii Employees’ Retirement System), June 2021*

3. <https://ers.ehawaii.gov/wp-content/uploads/2021/07/HIERS-IPS-June-2021.pdf>
  - a. See “DIVERSIFYING STRATEGIES APPENDIX” pages 2 – 5 for target portfolio construction
4. <https://ers.ehawaii.gov/wp-content/uploads/2021/09/2021-Q2-HIERS-Mgrs-AUM.pdf>
  - a. \*We have calculated the portfolio composition and weightings presented in Exhibit 1 based off these exposures.

*Illinois SURS (State Universities Retirement System of Illinois), August 2021*

5. <https://207ar92ygmcaxw5e93d1in2k-wpengine.netdna-ssl.com/wp-content/uploads/invupdate.pdf>
6. <https://207ar92ygmcaxw5e93d1in2k-wpengine.netdna-ssl.com/wp-content/uploads/sursinvplan.pdf>
  - a. See page 8 “Crisis Risk Offset Continued Implementation”.

*CalSTRS (California State Teachers’ Retirement System), July 2021*

7. <https://www.calstrs.com/sites/main/files/file-attachments/r-rms-investment-policy.pdf>
  - a. See “POLICY” page 3.
8. <https://www.calstrs.com/sites/main/files/file-attachments/investmentpolicyandmanagementplan.pdf?1630366352>
  - a. See “Review of Asset Allocation Policy” pages 11 – 12 and “RISK MITIGATING STRATEGIES (RMS) STRUCTURE” page 16.