Why Investors Should Hold a Diversified Portfolio of Commodities

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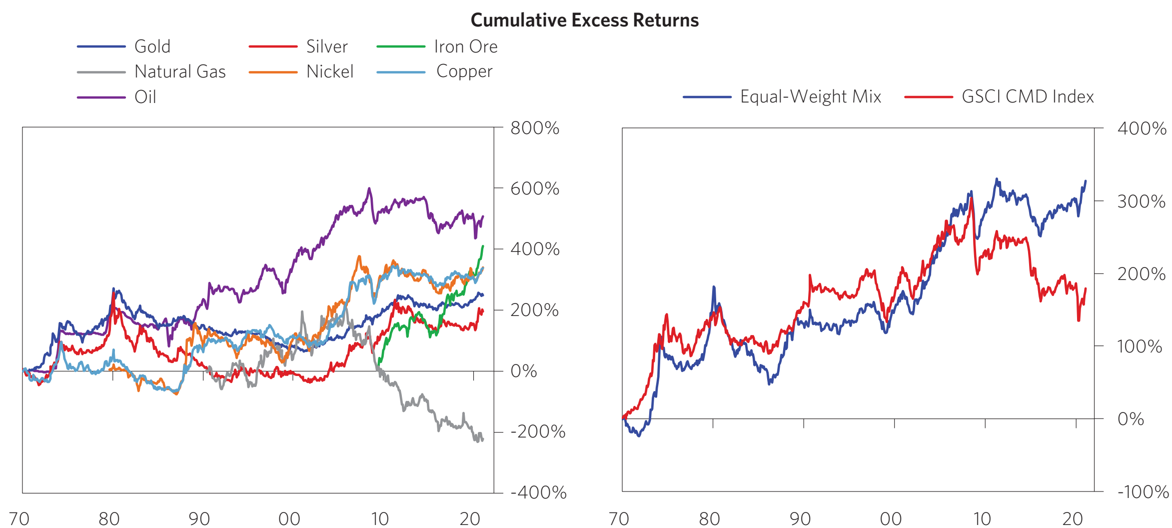
With the COVID vaccines rolling out, easy financial conditions, and the potential for more fiscal easing, the risks to inflation look tilted to the upside. Most portfolios lack assets that will perform well when there is inflation, be it monetary, demand-pull, or cost-push inflation. Investors should hold commodities to protect themselves against the possibility of rising inflation. However, different commodities protect investors against different ways that inflation can transpire. Achieving diversification in commodity holdings is critical because:

- **Inflation can be monetary (i.e., devaluing the currency) or driven by cost pressures in the real economy (e.g., insufficient supply of goods relative to demand).** Investors should have exposures that will perform well in both cases. Precious metals are good hedges against monetary inflation, while industrial commodity prices reflect cost pressures in the real economy.
- **Different commodities reflect different regional conditions, providing investors with geographical diversification.** Last year's market action illustrated this, as investors with exposure to commodities where China dominates consumption, such as iron ore and copper, benefited when China led the global recovery.
- **Common commodity indexes are concentrated in oil, leaving investors susceptible to its unique supply/demand dynamics.** Oil is uniquely exposed to regulatory and policy risks related to combating climate change, which in turn could have idiosyncratic impacts on energy supply and demand.

Commodities are especially important in a portfolio because of their diversifying characteristics relative to economic drivers, which makes them balancers to other assets. Commodities generally offer a risk premium to investors over time because producers are willing to pay to hedge their exposures, but individual commodities have idiosyncratic drivers, so a broad basket is the most diversifying. The commonly used GSCI index is heavily concentrated in oil, which historically has been correlated to a broader set of commodities, but this has been much less true over the last decade. As shown below, a simple diversified mix (an equal average of the seven largest commodity markets) has provided more consistent returns than one of the most common ones.



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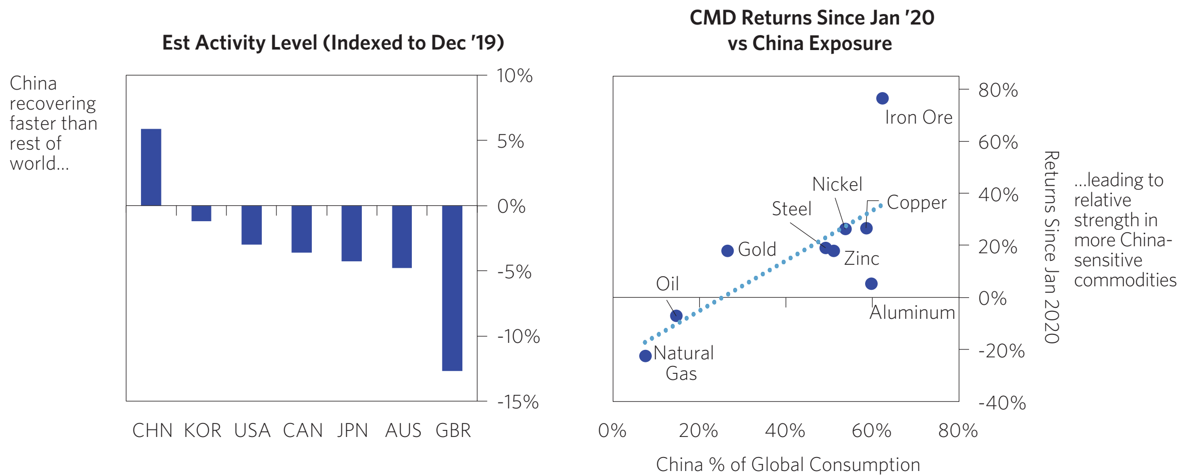
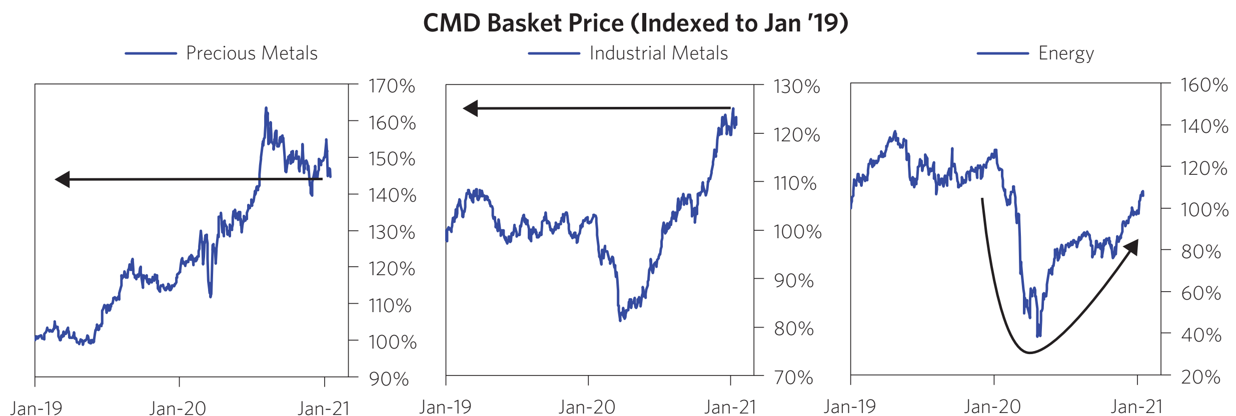
And this more diversified portfolio has delivered much better risk-adjusted returns.

	GSCI CMD Index	Top 7 Equal Weight Mix	Gold	Silver	Iron Ore	Nickel	Copper	Oil	Natural Gas
Data Since	Jan-70	Jan-70	Jan-70	Jan-70	May-09	Aug-79	Jan-70	Jan-71	May-90
Ann Return	1.4%	4.8%	2.9%	-1.5%	32.4%	2.7%	3.3%	5.6%	-16.2%
Ann Risk	20.1%	18.6%	20.2%	31.8%	35.7%	33.6%	25.5%	30.3%	44.9%
Ratio	0.07	0.26	0.14	-0.05	0.91	0.08	0.13	0.18	-0.36

Diversification is critical because different commodities protect investors against different ways that inflation can transpire. The price action in 2020 reflects this: policy makers provided historic amounts of liquidity to combat COVID and China outperformed, recovering fastest from the virus; as a result, commodities most exposed to monetary inflation and China outperformed.



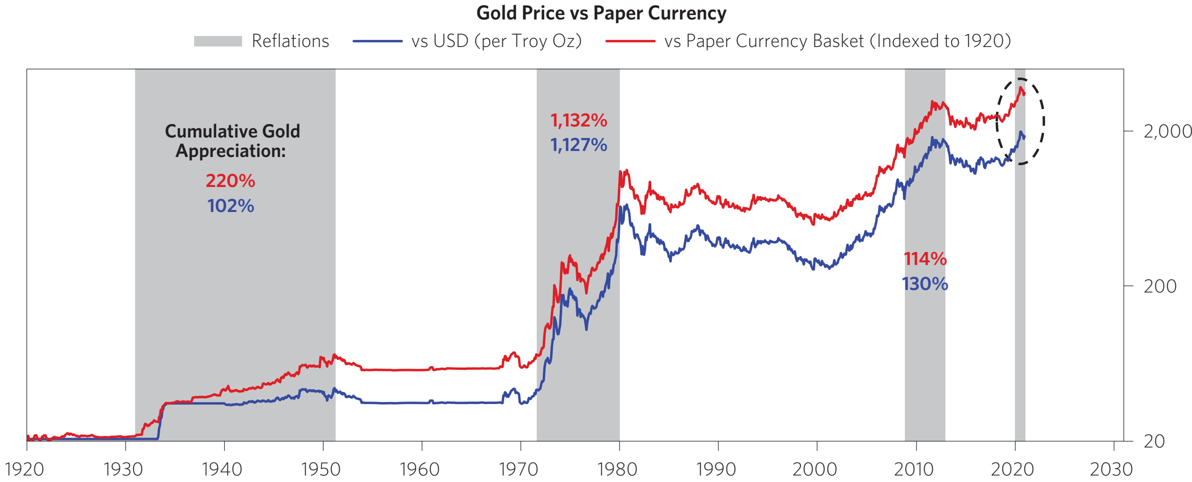
Broadly speaking, precious metals prices best reflect monetary inflation/devaluing fiat currencies; China dominates the consumption of industrial commodities, and the developed world is more dominant in oil consumption. In 2020, gold outperformed as global central banks printed a historic amount in response to the virus; industrial metals boomed as China's growth rebounded, led by investment in infrastructure; and oil suffered idiosyncratically from the virus-driven decline in transportation, notably air travel, and remains well below recent peaks.



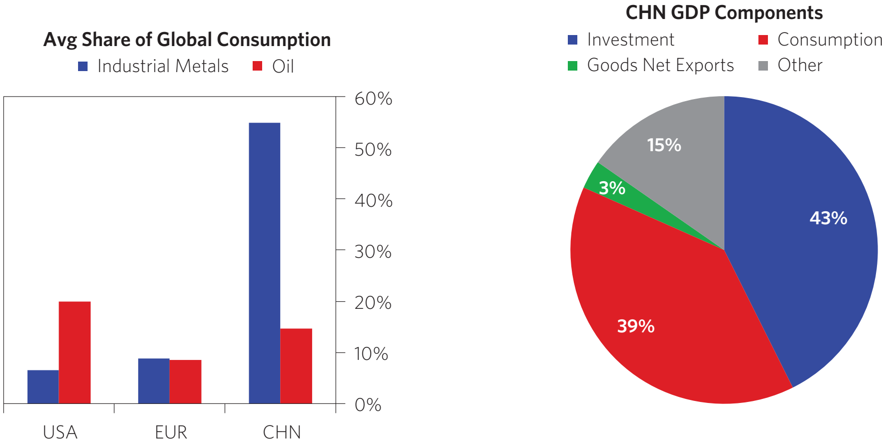
Going Forward, the Mix of Policies Around the World Will Have a Significant Impact on Which Commodities Benefit from Reflationary Policies

Policy makers around the world are pursuing reflationary policies, and the form these policies take will have significant influence on which commodities benefit most—emphasizing the need for a diversified mix that can benefit investors across a range of reflationary outcomes.

In order to reflate, developed world policy makers have needed to utilize both monetary and fiscal stimulation (what we've called MP3 policies), with the monetary stimulation—i.e., US and European policy makers utilizing monetary policy and devaluing cash—particularly benefiting precious metals. In prior periods of reflation over the past 100 years, gold has risen significantly against paper currencies, providing investors with valuable protection against monetary inflation.



The extent to which China utilizes fiscal policy—and the extent to which this policy is directed toward commodity-intensive fixed asset investment—is critical for bulk commodities and industrial metals. Over the past 20 years, China has emerged as the primary consumer of these commodities. While its demand for oil is roughly in line with the size of its economy (i.e., roughly in line with US demand for oil), its demand for industrial commodities is much greater (i.e., over half of consumption on average) because China's growth has been dominated by fixed asset investment. Bulk commodities and industrial metals are primarily used when the economy is growing, as iron ore, steel, copper, and so on are used when building infrastructure, housing, manufacturing plants, etc.



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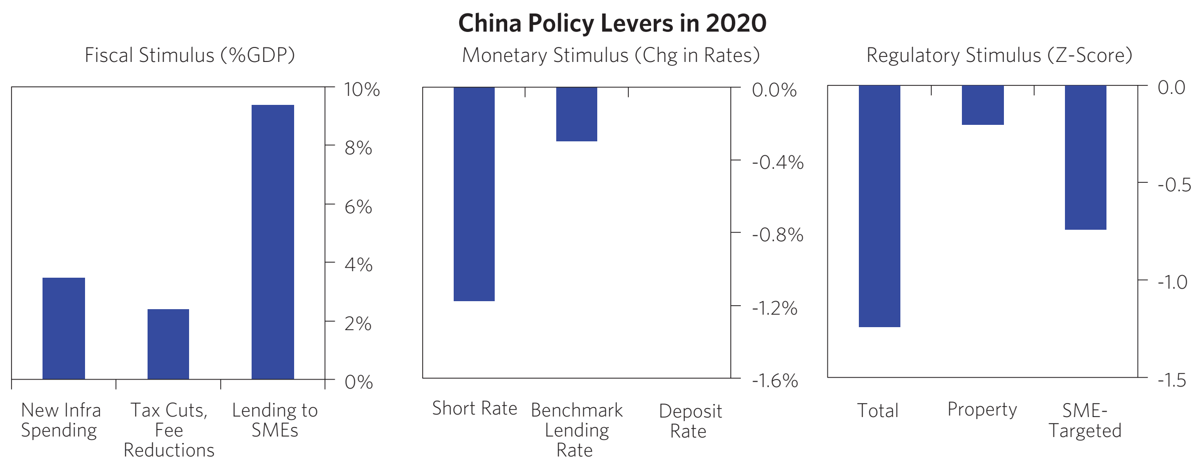
China's policy easings not only support bulk commodities and industrial metals through stimulating the economy at large, they also often direct stimulus toward commodity-intensive fixed asset investment. Fiscal spending during COVID has been in part directed at new infrastructure programs. Less directly, since Chinese rates are not at zero yet, lower rates flow through to cheaper mortgage costs—and residential construction can be further encouraged through regulatory easing directed at the sector. All told, China's easings can support meaningful increases in commodity-intensive output. Going forward, Chinese infrastructure financing (including infrastructure oriented around new technologies like 5G and Internet of Things) is expected to increase, and projects financed by China's 2020s stimulus will continue to come online. Against this, China's regulatory tightening within the banking and real estate sectors may weigh on housing construction activity.



Outside of China, increased fiscal spending is very likely to be a lever for policy makers to achieve their goals. Continued fiscal policy will stimulate the economy at large—and there is also a possibility of the enactment of some infrastructure-specific policies, which would add further direct government financing of the consumption of industrial commodities. Below are the largest green infrastructure projects in play:

United States: President-elect Biden, who will now enjoy a majority in both houses of Congress, has proposed to spend $2 trillion over 4 years (i.e., roughly 2.5% of GDP per year) on green investments, including:

- Building-efficiency upgrades and sustainable building construction
- Electric vehicle infrastructure
- Sustainable energy (solar, wind, hydrogen) subsidies and investment

Eurozone: About 1% of GDP per year in total green fiscal spending, coming from:

- Programs designed at the national level:
  - Germany's plan includes infrastructure investment (e.g., electric vehicle chargers, rail network) and renovations to make buildings energy efficient
  - France's plan includes major rail investments and renovations to make buildings energy efficient
- EU-level funds (i.e., the recovery fund and the EU budget for 2021–27) must be partly spent on initiatives like sustainable transportation (e.g., EVs, rail) and retrofitting buildings

Canada: Legislation pending but reasonably likely—0.7% of GDP, including:

- Home retrofits
- Zero-emissions buses

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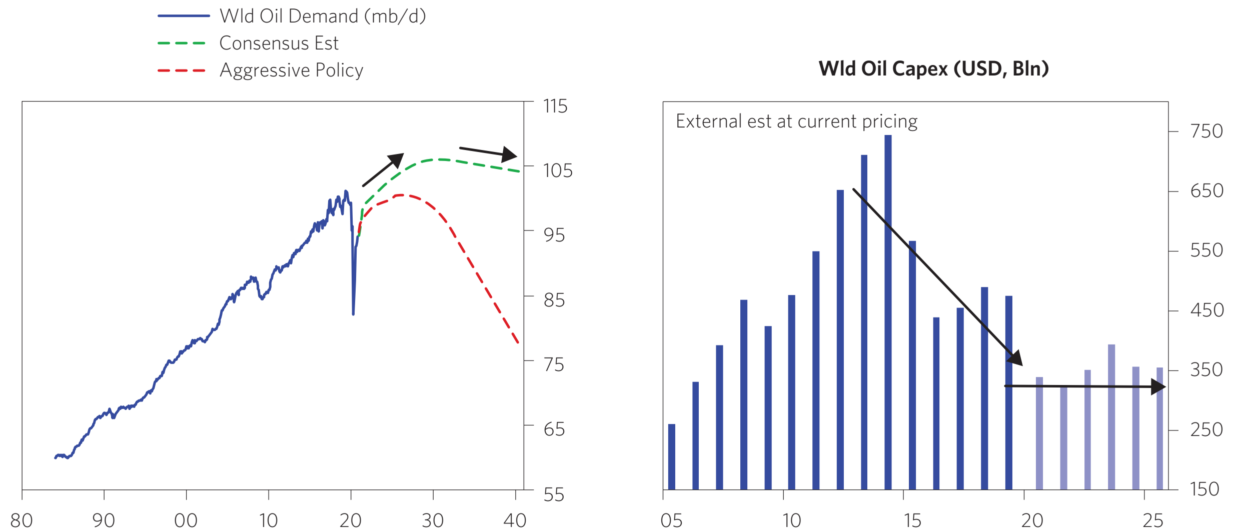
South Korea: 0.6% of GDP in stimulus, including measures to fund:

- Home-efficiency renovations (including solar)
- Electric and hydrogen fuel cell vehicles
- Liquid natural gas (LNG) infrastructure

United Kingdom: 0.2% of GDP in fiscal stimulus going to green spending for:

- Home-efficiency upgrades
- Green measures for schools and hospitals

Oil will continue to be exposed to idiosyncratic influences on both supply and demand even beyond the pandemic-related disruption experienced in 2020. In terms of demand, in many cases the infrastructure programs discussed above, which are likely to boost industrial commodity demand, are also focused on combating climate change. As shown below, aggressive policy to combat climate change would meaningfully affect oil demand. In contrast, absent such a shift, the slowdown in capex in recent years means supply pressures can flow through quickly to rising prices. Either way, oil could see large moves that don't reflect the broader inflationary pressures against which it is intended to protect.



Left chart: Based on IEA data from IEA 2021 April Oil Market Report, IEA 2021, www.iea.org/statistics. All rights reserved.

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Commodity Markets Are Liquid Enough to Enable Investors to Build a Diversified Exposure

As shown above, a simple equal-weight index of the largest commodity markets in the world provides investors with a far more diversified mix to protect them against a much wider range of inflationary outcomes. The table below includes Bridgewater's estimate of the market sizes of various commodities that investors could consider in building their commodity allocation. To estimate market size, we create an index of risk capacity across global commodity markets, reflecting the relative amount of exposure that can be taken for the same transaction cost. The index weights factors such as the activity in the relevant commodity futures, the production and stock of these commodities, the relative volatility of these markets, and our experienced costs trading these markets. The oil market is the largest and most liquid commodity market in the world, so we compare all other commodity markets to that benchmark.

Bridgewater Commodity Market Size Index

Market	Capacity Index	Notes
Oil	100	
Gold	65	
Copper	38	
Silver	37	
Iron Ore	26	Most only became available outside of China in 2018
Natural Gas	22	
Soybeans	19	
Nickel	16	
Corn	13	
Aluminum	13	
Zinc	11	
Wheat	10	
Steel	6	Likely to open up outside of China soon
Coal	4	Likely to open up outside of China soon

This liquidity available in commodity markets allows investors to create a much more diversified basket than what is available through most indexes. Especially of note is iron ore, which is the fifth-largest commodity market in the world yet remains generally unutilized by investors outside of China. The onshore China market, where the vast majority of global liquidity in iron ore is, only became accessible to foreign investors outside of China in 2018. Iron ore is the main input to steel, and together they contribute more to global growth than any commodity besides oil (steel/iron ore alone account for about 2% of global GDP). These bulk commodities are driven by a set of supply/demand forces very different than those of energy, providing diversification. In the coming year or so, other Chinese commodity markets such as steel, coal, and additional fuel and agricultural futures markets are expected to open up as well, allowing further diversification of commodity investments.

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