Portfolio & Index Research

What do investors expect from their commodity portfolios?

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Potential reasons to invest in commodity portfolios

- Inflation hedging
- Exposure to the business cycle/industrial production
- Diversification
 - Industrial output, geopolitical events, harvest outlooks

• Sources of returns

- Demand/supply imbalances
- Structural factors
- Sentiment
- Thematics
 - Energy transition/decarbonization

Examples

- Inflation hedging
 - Energy-based portfolios
- Exposure to the business cycle/industrial production
 - Energy and metals portfolios
- Diversification
 - Broad-based benchmarks like the Bloomberg Commodity Index
 - Risk parity across five commodity sectors
- Sources of returns
 - Long/short trend-following & backwardation
- Thematics
 - Electrification & battery production

Key considerations for portfolio construction

- What is your constituent universe?
- What is your investible instrument?
- What is your weighting scheme?
- Does your exposure vary?
- Do you incorporate signal-based measured?
- Are short positions allowed?

Microcosm of multi-asset portfolios?

	Energy	Industrial metals	Precious metals	Agriculture	Livestock	BCOM
Annualized return	0.8%	4.2%	5.1%	1.0%	-2.6%	3.2%
Volatility	29.7%	20.1%	17.5%	17.9%	14.7%	14.8%
Return/Vol	0.03	0.21	0.29	0.06	-0.17	0.22
Correlations						
US Equity	0.20	0.42	0.08	0.24	0.08	0.33
US Fixed Income	-0.05	-0.07	0.18	-0.01	-0.04	-0.01

Sector correlations

	Energy	Industrial metals	Precious metals	Agriculture	Livestock
Energy		0.32	0.14	0.22	0.14
Industrial metals			0.34	0.34	0.10
Precious metals				0.26	-0.04
Agriculture					0.03
Livestock					

Significant differences in return profiles



Source: Bloomberg

Source: Bloomberg

Inflation hedging capabilities differ



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Impact of weighting schemes & exposure

	BCOM	Risk weight	Volatility targeted	Equal weight
Ann total return	3.2%	2.7%	2.5%	3.1%
Volatility	15.2%	11.4%	11.5%	12.6%
Return/Vol	0.21	0.24	0.21	0.24
Drawdown	-72%	-55%	-63%	-60%
Skewness	-0.51	-0.71	-0.25	-0.74
Scenarios				
Credit Crisis	-25.1%	-23.6%	-4.9%	-22.9%
COVID	-14.9%	-11.6%	-14.6%	-13.9%
Ukraine Crisis Source: Bloomberg	8.9%	0.9%	8.1%	3.1%





Source: Bloomberg

	Inflation betas
BCOM	3.8
Risk weight	2.5
Volatility targeted	2.6
Equal weight	2.9
Source: Bloomberg	

Source: Bloomberg

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Alternative risk premia - uncorrelated sources of returns

	BCOM	Bloomberg GSAM Commodity Carry	Bloomberg GSAM Commodity Trend
Full sample (2000 - June 2022)			
Ann excess return	0.8%	4.4%	1.7%
Volatility	16.1%	4.3%	3.2%
Sharpe ratio	0.05	1.02	0.53
Drawdown	-73.9%	-8.1%	-6.9%
Skewness	-0.53	-0.54	1.00
1st half (2000 - 2011)			
Ann Return	3.1%	8.1%	2.0%
Volatility	17.7%	4.0%	3.2%
Sharpe ratio	0.17	2.00	0.61
2nd half (2012 - June 2022)			
Ann Return	-1.7%	0.3%	1.4%
Volatility	14.2%	4.3%	3.1%
Sharpe ratio	-0.12	0.06	0.44
Scenarios			
Credit Crisis	-27.8%	22.1%	13.6%
COVID	-15.1%	-4.7%	5.0%
Ukraine Crisis	8.5%	2.5%	3.4%
Source: Bloomberg			





Source: Bloomberg

Combining asset class and alternative factors

	BCOM	lncorp curve	Incorp curve and carry	Incorp curve and trend
Ann total return	1.5%	6.0%	7.4%	7.6%
Volatility	16.2%	15.4%	15.6%	9.9%
Return/Vol	0.10	0.39	0.47	0.76
Drawdown	-72.0%	-61.8%	-50.5%	-31.5%
Skewness	-0.58	-0.63	-0.71	0.03
Asset class correlations				
US Equity	0.41	0.42	0.44	0.21
US Fixed income	-0.04	-0.03	-0.03	-0.02
Scenarios				
Credit Crisis	-25.1%	-13.8%	-10.3%	14.9%
COVID	-14.9%	-11.1%	-12.9%	-0.3%
Ukraine Crisis	8.9%	9.6%	9.9%	12.0%
Source: Bloomberg				



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