Opinion **The Commodities Note**

When commodities get hooked on derivatives

The distortions will damage the welfare of market participants and society at large

Ruslan Kharlamov and Heiner Flassbeck JUNE 14, 2019

Pick up marketing materials of any commodity exchange and it's all about "risk management". For many bourses, however, a real business lies elsewhere. It needs no advertising and shuns public scrutiny.

This is the business of making markets: a licence to set prices for raw materials. As these markets went global, so did the function of their pricing and benefits for those controlling this function.

Over the years, both commodity exchanges and derivatives traded on them came a long way from their original purpose. There were three forces behind this development.

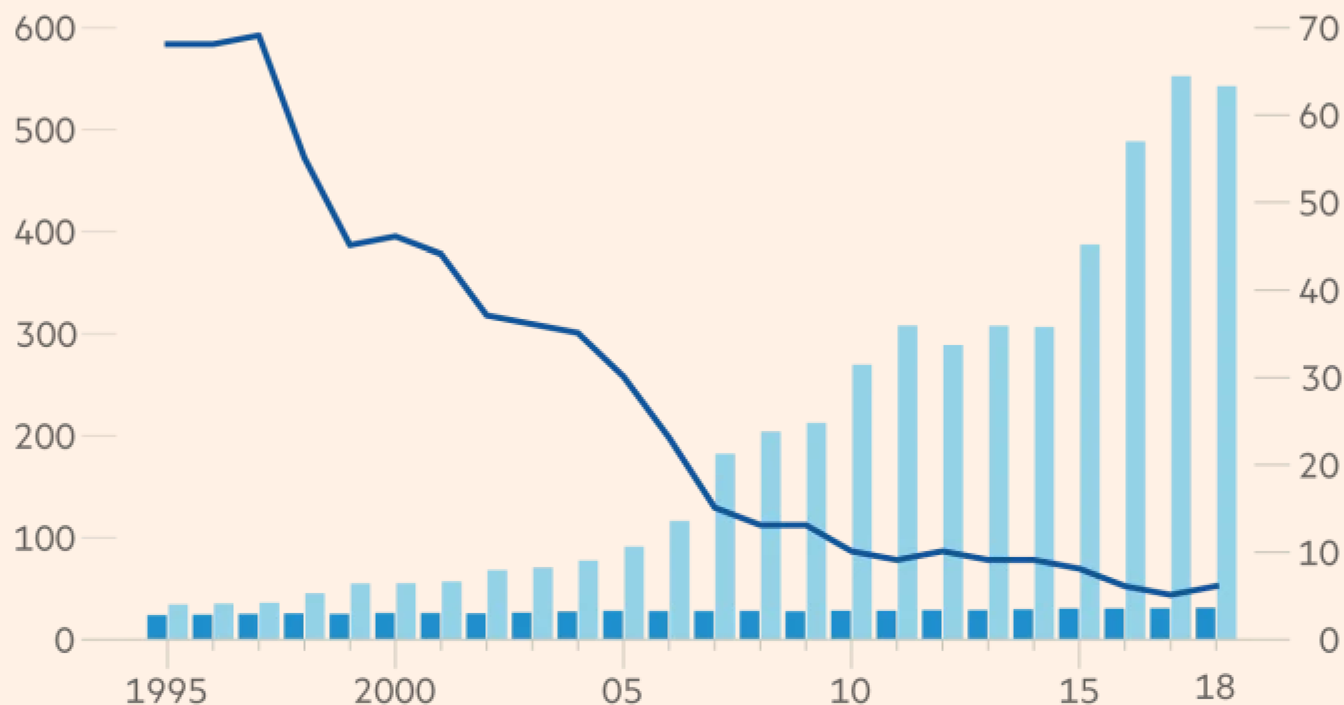
First was the wave of mergers and buyouts in the 2000s, which turned western exchanges from not for profit utilities into large corporations. Today, CME Group and Intercontinental Exchange (ICE), the two bourses reining in energy and agricultural markets, are owned by institutional investors. In 2012, London Metal Exchange was acquired by Hong Kong Exchanges and Clearing for $2.2bn.

Exchange-traded derivatives (futures, options, swaps) were invented to help supply chains mitigate market risk through harvesting and economic cycles and were largely used for this purpose since the 19th century. The situation changed in the 1990s when investment funds noticed that commodity prices moved asymmetrically to financial markets and started trading raw materials as a store of value and a source of speculative income from price fluctuations. The derivatives enable such trading without physical possession. This was the second factor.

For exchanges and brokers that facilitate these transactions, it was a gold mine. Commodity risk management is limited by production, trade, and consumption; speculative trading is not.

Since revenues depend on trading volumes and services, such as clearing, the more derivatives are traded, the more money flows to investors, exchanges and brokers, creating a whole new ecosystem. In this brave new world, nobody knows the size of derivative markets and understands the interplay with their physical cousins.

Figure 1: Oil physical and derivative markets

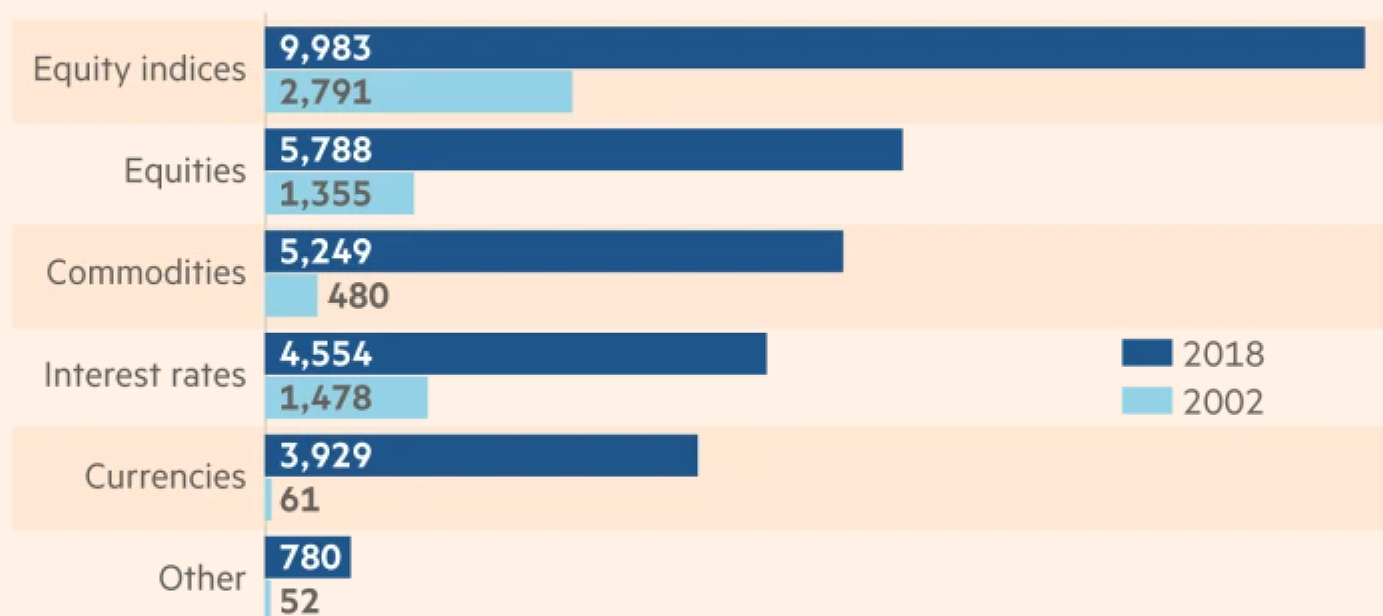


Finally, China. As the world's largest consumer and producer of many commodities, it wants a say in their pricing. But how to break into exchange "franchises" that had existed for decades? The answer is maximum liberalisation of domestic derivative markets to boost their size and impact, largely by dint of retail investors.

In the west, even though the business model of exchanges has changed, investors still assume that a commodity future should first be used for price hedging. Chinese futures were ostensibly launched with a financial community in mind irrespective of industrial needs and reception. The results are startling: last year eight of the top 10 metal and agricultural futures were traded on Chinese bourses. Energy is next in line.

These forces have fuelled an unprecedented surge of speculation in commodity markets. In a race for global dominance, derivatives turn into market-making instruments for investors and governments; laissez-faire meets co-ordinated policy; and risk management becomes a Trojan horse to justify financial intermediation and speculation. While regulators don't keep up with the pace of change, commodities are overtaking equities to become the second-most traded derivative category (Figure 2).

Figure 2: Global futures and options trading (millions of contracts)



Once a commodity is hooked on derivatives, producers lose a right to set prices — and there's no way back.

Derivative markets are not the efficient markets from economics textbooks. Centralisation and focus on trading expectations and interpretations rather than real things make them prone to behavioural biases and manipulation. Worse, they make commodities an integral part of financial markets.

The more commodities become investable assets, the more their pricing gets intertwined with financial market dynamics and phenomena unrelated to supply and demand. This is manifested by inverted correlations between commodity prices and financial markets, among other things (Figures 3 and 4). Quantifying these effects deserves a thorough scientific study based on meaningful data.

Markets so "financialised" fail in price discovery and the efficient allocation of economic resources. Such distortions may destabilise not only markets — consider, for example, renewable energy transition — but also entire commodity-dependent nations. They damage the long-term welfare of market participants and society at large.

Figure 3: Crude oil financialization

West Texas Intermediate v S&P 500

Years	As WTI futures speculation swells...	Market correlations invert (%)	Negative correlations fall	No correlation (below 10%)	Positive correlations rise
1984-88	15	-18	3Y	0Y	2Y
1989-93	45	-31	3Y	1Y	1Y
1994-98	54	-19	4Y	0Y	1Y
1999-2003	88	1	2Y	1Y	2Y
2004-08	202	27	1Y	0Y	4Y
2009-13	343	53	1Y	0Y	4Y
2014-18	586	35	1Y	0Y	4Y

Sources: World Bank; IMF; CME Group

Figure 4: Industrial metals financialization

LME Aluminium, Copper, Nickel, Zinc v S&P 500

Years	As LME futures speculation swells...	Al market correlations invert (%)	Cu market correlations invert (%)	Ni market correlations invert (%)	Zn market correlations invert (%)
1984-88	<60	-12	-17	-22	0
1989-93	99	-66	-48	-67	-33
1994-98	233	-39	-27	-41	-11
1999-2003	313	58	48	46	64
2004-08	430	39	62	20	60
2009-13	675	29	35	23	37
2014-18	808	57	21	47	51

Sources: World Bank; IMF; LME

To tackle commodities financialisation some policymakers think of curbing “excessive” speculation. This is hard to quantify and implement, especially in international markets. Innovation offers a better approach, shifting the onus from regulation to self-governance. By connecting suppliers, buyers and service providers directly, it will keep price formation in the real economy and enable risk management without financial intermediation.

As Milton Friedman observed: “One of the great mistakes is to judge policies by their intentions rather than results.” It’s time to follow his advice instead of financial marketing.

This article draws on the authors’ research paper Understanding Commodity Financialization (and why it matters to everyone)

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