Timothy Lane: Financing commodities markets

Remarks by Mr Timothy Lane, Deputy Governor of the Bank of Canada, to the CFA Society of Calgary, Calgary, Alberta, 25 September 2012.

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Introduction

Good afternoon. I want to thank the CFA Society of Calgary for inviting me to speak to you today. I would like to take this opportunity to share some thoughts on the role of the financial system in our natural resource economy. In particular, I would like to focus on the changing relationship between the financial system and commodities markets.

Natural resources are of central importance to Canada's economy and financial system, and nowhere is that more apparent than here in Calgary. The development of these natural resources has been powering much of Calgary's – and Canada's – recent economic growth. Natural resource industries – including farming, forestry, mining, oil and gas extraction and related industries – are a key element of the Canadian economy, accounting for roughly one fifth of our gross domestic product.[1] That share is roughly twice the share of natural resource industries in the United States economy and higher than in most other advanced economies.[2] Resources are an even more important feature of Canada's international trade, accounting for roughly half of our exports.

We all have a strong stake, therefore, in ensuring that these resources are developed wisely and sustainably for the benefit of all Canadians. Doing that requires several elements: an appropriate policy environment, flexible labour markets and a reliable transportation network. It also requires a sound and efficient financial system that meets the needs of the resource economy.

The financial system is connected to resource development in two main ways.

First, it channels the financing needed to develop those resources. Canada's equity markets in particular are heavily weighted toward resources: the TSX Venture Exchange is one of the world's primary listing destinations for resource firms, and even the Toronto Stock Exchange is sometimes referred to as "the world's mining exchange." Bank lending and other financing flows also play an important part. Many of you are directly involved in some aspect of this financing.

Second, the financial system is linked with the commodities markets. Here, I mean the intricate web of global markets in which commodities are bought and sold, prices determined, and the producers and end-users of commodities hedge against unexpected movements in those prices. These markets are very important in determining the returns that Canadian producers earn for their output, as well as the risks they face.

In my remarks today, I would like to address this second aspect: the commodities market and its nexus with the financial system. My focus is the key trends related to financial innovation, deleveraging and regulation.

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1 Natural resource industries include the following: agriculture, hunting, forestry and fishing; mining and oil and gas extraction; wood products; paper manufacturing; printing and related support activities; petroleum and coal products; chemicals, excluding pharmaceuticals; non-metallic mineral products; primary and fabricated metals; and utilities.

2 J. Murray, "Commodity Prices: The Long and the Short of It," speech to the Johnson/Shoyama Graduate School of Public Policy, Regina, Saskatchewan, 10 February 2011.

Complex global commodities markets

The commodities markets are complex in several ways. There are spot markets and forward transactions, as well as other derivatives contracts such as options. There are organized exchanges and over-the-counter markets. There are physical and financial aspects. Trading takes place in many different geographical locations and many different commodities and grades of those commodities are traded. There are also many players in these markets: producers; end-users; major commodity trading houses; the commodity trading operations of the large global investment banks; exchange-traded funds (ETFs); various institutional and individual investors and, in some cases, government agencies.

So what makes these markets global? Arbitrage is the glue that binds together markets that are separated by distance and time, as well as markets for different but related products. Arbitrageurs take advantage of price differences, buying low and selling high, and thus driving those prices together. They can also take advantage of differences between physical and financial commodity markets, tying together prices across those markets. Various market-makers hold inventories and stand ready to buy and sell commodities, connecting suppliers and end-users. These arbitrage and market-making activities are often undertaken by the same firms and are difficult to disentangle.

Of course, there are limits to the extent to which prices converge in global commodities markets. The recent behaviour of oil prices is a particularly telling example of these limits. Western Canadian crude oil has been selling at a deep and varying discount compared with the world price. This discount is due to the limitations of our transport network as well as differences in grade. As a result, Western Canadian producers of heavy oil have recently been obliged to sell their output at as much as $54 per barrel below the world price of oil – while Eastern Canadian consumers continue to pay the world price.[3] This illustrates the point that when prices in different parts of the global commodities market diverge, Canadians may not reap the full benefits of their natural resources.

Commodity prices

I've stressed that arbitrage and market-making are critical to tying global commodities markets together. These activities provide significant liquidity to commodities markets and, when they work properly, they also help bring commodity prices into line with the fundamentals of supply and demand – by which I mean, not just current supply and demand, but expectations of how supply and demand will evolve in the future. There is strong evidence that broad movements in commodity prices over the longer term indeed reflect these fundamentals at a global level.

Beginning in the 1990s, the robust resource-intensive growth of emerging market economies (EMEs) has propelled commodity markets into a supercycle. The number of people living in cities in China and India has risen by roughly 500 million since 1990. In parallel, the global middle class has been growing by 70 million people each year. These trends are widely expected to continue, with profound ramifications for a broad range of commodities.[4]

Of course, there have been significant variations around the upward trend in commodity prices. On average, commodity prices have declined over the past year, as the growth in emerging-market economies has been moderating. Nonetheless, commodity prices as a whole are still about 25 per cent above their historical averages in real terms. In particular, real prices for energy and metals have been well above their long-term averages for more

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[3] World oil price refers to the price of Brent crude.

[4] M. Carney, "Dutch Disease," speech to the Spruce Meadows Round Table, Calgary, Alberta, 7 September 2012.

than seven years now, and real food prices are now at their highest level in 35 years (***Chart 1***).

Financing commodities trading

I have stressed the role of commodities markets – and in particular market-making and arbitrage – in tying together the global markets and bringing prices into line with fundamentals. These activities inevitably require financing – and the form of that financing has changed considerably over the past couple of decades.

I would like to talk now about how that financing has changed and discuss the implications for the commodities markets and the financial system. There have been two countervailing trends: a strengthening of the links between the financial system and commodities markets during the decade or so before the 2008 global financial crisis, and an element of retrenchment and restructuring since then. Let me describe each of those trends in turn.

A central element in the financing of commodities leading up to the 2008 crisis was the increasing participation of major global investment banks. Because of their access to wholesale funding markets, which provided them with cheaper funding than was available to other participants in commodity markets, the large banks became increasingly important in a range of commodity-related activities. They provided a large share of the lending to commodity dealers. They also themselves came to play a central role as dealers in over-the-counter derivatives markets in commodities. More recently, they have become more and more involved in the physical trading of commodities: holding physical inventories, making markets in commodities and even creating supply chains by providing shipping and commodity storage.

In parallel, the globally active commodity trading houses assumed a large and expanding role. These institutions hold inventories of commodities, store them over time, move them around the world, and make markets in both physical commodities and their derivatives. As these trading houses grew, they played an increasingly important role in facilitating the trade in commodities. They are not financial institutions, but they do require large amounts of financing. Traditionally, this financing was mostly in the form of syndicated bank lending secured by their commodities inventories, but recently that financing model has been shifting, as I will discuss.

Alongside the increasing role of these large institutions was the trend toward the "financialization" of commodities. Investors – both individuals and institutions such as pension funds and hedge funds – stepped up their interest in commodities (***Chart 2***). A combination of factors may have contributed to this trend. To some extent, investors may have been seeking higher returns associated with the commodity-price supercycle. They may also have sought to diversify their portfolios by including commodities as a distinct asset class.

Whatever the reason, this movement of investors into commodities was facilitated by financial innovations – notably, the emergence of index funds and, later, a variety of exchange-traded funds (***Chart 3***). More recently, high-frequency trading has also become a feature of commodity markets, as it has in financial markets. These developments together helped turn commodities into increasingly liquid financial assets, accessible to a wider range of investors. In turn, the flood of investment funds into commodities helped spur further innovation.

There is no clear evidence that this trend toward greater financialization has been a significant determinant of the overall level of commodity prices. As I have already discussed, the preponderance of evidence indicates instead that commodity prices have been driven by fundamentals – primarily by rising demand from EMEs. Research – including work at the

Bank of Canada – that looked for a possible link between prices and the volume of financial activity in commodities markets showed that it is difficult to identify such a relationship.[5]

It is possible that, under some circumstances, financial forces may have amplified price movements that were primarily driven by other forces and may thus have contributed to volatility – for example, by exaggerating spikes in oil prices. In contrast, some have argued that financialization has improved the efficiency of commodities markets. But no simple pattern emerges from the evidence. There is still a range of views on whether financial forces have, on the whole, contributed to or dampened volatility in commodity prices.[6]

It does appear, however, that financialization has been associated with closer ties between commodity markets and financial markets. One indication of this relationship is the greater correlation between short-run movements in commodity prices and the prices of other risky assets, including stock price indexes and currencies (***Chart 4***). In part, this no doubt reflects common macroeconomic factors driving the prices of a number of risky assets – particularly, changing market assessments of the prospects for global growth. But it is also plausible that such movements partly reflect investors' changing perceptions of risk and, in some cases, changes in the availability of liquid financing for their investment positions. (Ironically, the increasing correlation between commodity prices and the prices of other assets such as equities diminishes the benefits of diversification that investors sought by investing in commodities in the first place.)

Developments in the wake of the crisis

I have been describing stronger links between the financial system and commodity markets during the decade or two prior to the global financial crisis that came to a head in 2008. But in the wake of that crisis, the global financial system has been undergoing a sea change. This in turn has introduced further important changes to the financing of commodities trading.

Deleveraging has been the most significant trend in the global financial system since the crisis – one that is likely to continue for some time to come.[7] Particularly pronounced in the United States and Europe, the deleveraging process is being driven partly by the need for financial institutions to restore their balance sheets after the losses they incurred during the crisis and the ensuing worldwide recession. It also reflects the tightening of financial regulations to make the system more resilient, with a view to preventing a new crisis. Under the terms of Basel III, the minimum amount of capital that banks must hold has increased by about five times. The largest, most complex firms must hold even more.[8] Finally, deleveraging also reflects the shrinking of the shadow banking system – the complex web of securitized products, non-bank financial institutions, funding markets and other markets that created large amounts of leverage in some countries in the years preceding the crisis.

On the whole, this deleveraging is a welcome correction – both by financial institutions and the regulatory authorities – to the excessive leverage that had built up in the global financial system before the crisis. As this process is completed, it should result in a more resilient global financial system. But it is also protracted and painful, with pervasive effects on the

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5 R. Alquist and O. Gervais, "The Role of Financial Speculation in Driving the Price of Crude Oil," Discussion Paper No. 2011-6, Bank of Canada, 2011. See also: Report of the G-20 Study Group on Commodities, under the chairmanship of Hiroshi Nakaso, Trade Finance Experts Groups (November 2011).

6 A 2009 report by IOSCO also called for greater transparency in commodities markets, in part with a view to reducing the risk of market manipulation. See "Task Force Report on Commodity Futures Markets: Report to the G-20," Technical Committee of the International Organization of Securities Commissions, March 2009.

7 M. Carney, "Growth in the Age of Deleveraging," speech to the Empire Club of Canada/Canadian Club of Toronto, Toronto, Ontario, 12 December 2011.

8 T. Macklem, "Raising the House of Reform," speech to the Rotman Institute for International Business, Toronto, Ontario, 7 February 2012.

global financial system and economy. Indeed, deleveraging by financial institutions as well as by households and governments is the main force that is keeping the global economy on its current path of gradual and unbalanced growth.

How has this deleveraging affected commodities trading?

Banks have been pulling back from the commodities sector, both in terms of their lending to commodities traders and their own market-making and proprietary trading activities. Until recently, European banks provided up to 80 per cent of the financing for the trading of commodities worldwide. But, as those banks have had to repair their balance sheets, they have scaled back their lending, bringing their share down to about 50 per cent. To some extent, U.S. and Asian banks as well as banks in the Middle East have stepped into the breach: they have increased their share of financing for commodity houses. However, in the current climate, that financing is more limited and has come at an increasing cost. For banks doing business in the United States, the anticipated impact of the Dodd-Frank legislation on their commodity trading operations has been an important additional reason for curtailing these operations.

The involvement of banks in the financial trading of commodities, including derivatives, has declined and some have pulled out of the sector altogether. We have also seen a marked decline in the commodity assets that banks have under management. As banks have been scaling back their commodities-related lending, they have scaled back their commodities operations – for instance, reducing bonuses and remuneration for their commodity specialists. One area, however, in which some banks have been maintaining, or even expanding, their activities is in the physical side of the commodity business, increasing holdings of physical products and investments in the supply chain. These activities are more akin to those traditionally being undertaken by the commodity trading houses themselves.

Recently, investors have also grown more cautious, pulling back their commodity-related investments. Commodity-related assets under management have declined, reducing another financing flow into commodities trading (***Chart 5***).

As banks have scaled back their involvement in commodities, commodity trading houses have grown in importance and have changed their funding models. Some commodity companies have begun tapping the capital markets for the first time. Sales of investment-grade bonds by commodity companies are up 90 per cent over last year, and commodity-linked junk bonds have risen by an estimated 40 per cent so far this year.

As commodity traders have increasingly been funding themselves directly through the capital markets, they have been making greater use of innovative financing tools. Some have used hybrid or convertible structures, and (particularly in Asia) have been making broader use of collateralized financing. In Europe, some banks are using structured trade credit insurance as a means of deleveraging while also remaining active in the commodity trade in emerging markets.[9]

Another development that partially reflects these changes in financing conditions is the wave of mergers and acquisitions that has been sweeping the commodity-trading sector. In a number of cases, the logic of these transactions is to bring trading houses and producers together. That’s not a new business model – indeed, the oil majors have had their trading operations for many years. But it is an increasingly attractive one in the current climate of dwindling bank financing for commodities.

[9] The latter shift has also been encouraged by regulation: many European countries allow such insurance to count as regulatory capital under the Basel III rules.

Implications

So far, I have given you a thumbnail sketch of the changing trends in the financing of commodities markets. But why do these developments matter for the world economy, and particularly for Canada? Here, I would like briefly to highlight three sets of issues.

First, there may be implications for the pricing of commodities. As I have stressed, the broad trends in commodity prices is determined by the fundamentals of supply and demand – notably the long-term growth in demand from Asian emerging-market economies. But the functioning of the markets in which commodities are traded has the potential to influence pricing in several ways. The flows of financing for commodity trading activities can affect the liquidity and efficiency of these markets and thus the extent to which prices reflect those fundamentals. As well, the financialization of commodities has the potential to affect the degree of short-term volatility of the markets. Although it is too early to assess the implications of the recent changes in financing patterns I have been describing, these developments bear watching.

A second set of issues pertains to systemic risk. In particular, the large trading houses, together with the physical trading operations of some large investment banks, are playing an increasingly prominent role in a number of commodity markets. This raises the possibility that some of these institutions are becoming systemically important. Just as the 2008 financial crisis revealed the need to assess the systemic importance of institutions that play a central role in particular financial markets, we should be asking the same questions about institutions that are interconnected with various commodity markets. Here, I have two general questions in mind: Could the failure of one of the large trading houses cause serious disruption in the commodities markets in which it played a market-making role? And, could the losses that a trading house incurs through the positions it has taken in commodities have significant knock-on effects on the financial system? We are far from having answers to those questions, but they need to be addressed.

Third, commodities trading can potentially be an important link between the financial system and the real economy. With the financialization of commodities, financial system stress has the potential to affect commodities markets. Commodities markets, in turn, have an important influence on the economic outlook of a commodity-rich country such as Canada. Moreover, movements in commodity prices may pose risks to the financial institutions that channel funding to commodity-trading activities. While it is possible that the recent trends toward deleveraging are actually diminishing the links between the financial system and commodities markets, this is a development that it will take time to assess.

Conclusion

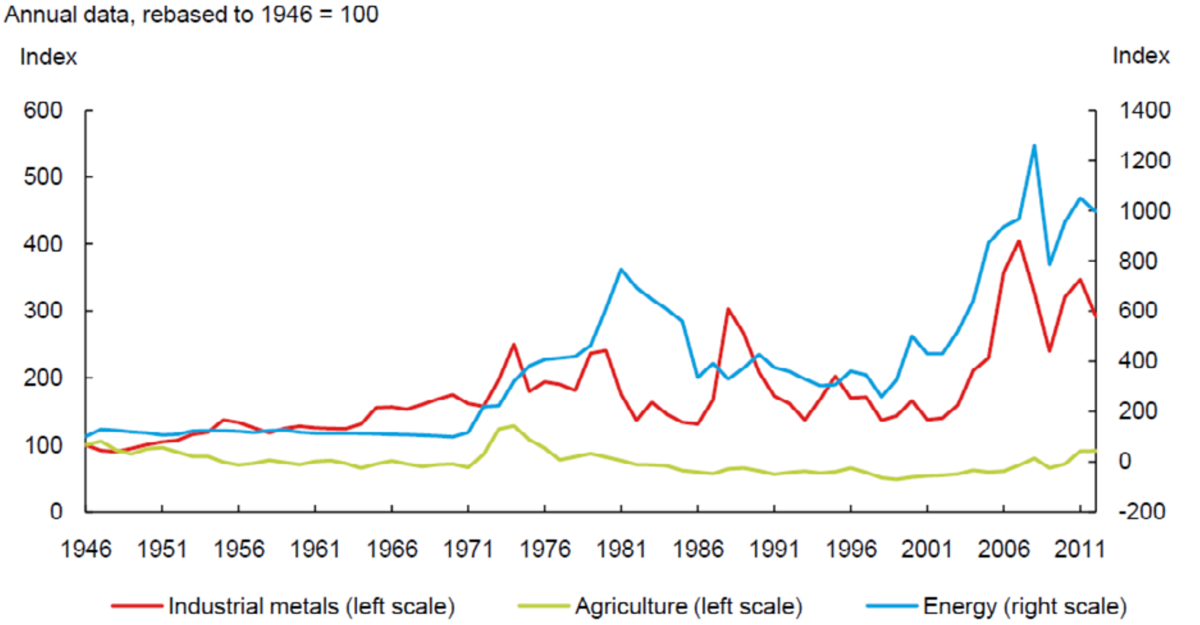
Allow me to conclude.

A sound and efficient financial system – both in Canada and globally – is essential for developing natural resources for the benefit of all Canadians.

As I have discussed, the relationship between the financial system and the commodity markets has strengthened over the past couple of decades. However, in the wake of the global financial crisis, new trends have emerged that are associated with the broad trend toward deleveraging by financial institutions. The overall level of commodity prices is driven by supply and demand, particularly the rising demand from emerging-market economies. But financialization may have important implications for the short-term volatility of prices and their co-movements with the prices of other financial assets; for systemic risk; and for the channels through which stresses in the financial system can affect the real economy and vice versa.

Given the importance of commodities to the Canadian economy, the Bank of Canada is monitoring these developments, with a view to safeguarding the economic well-being of all Canadians.

Chart 1: Most commodity prices are well above historical averages



Sources: Bank of Canada, U.S. Bureau of Labour Statistics

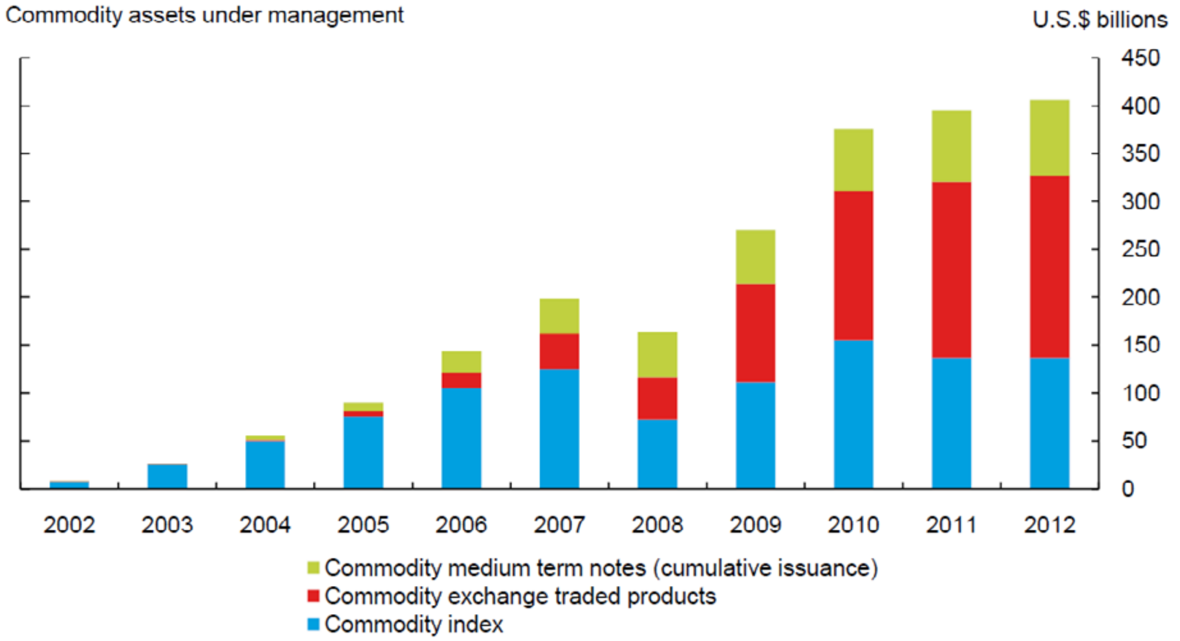
Last observation: 2012

Chart 2: Investment flows into commodities have increased significantly

Source: Barclays

Last observation: 2012

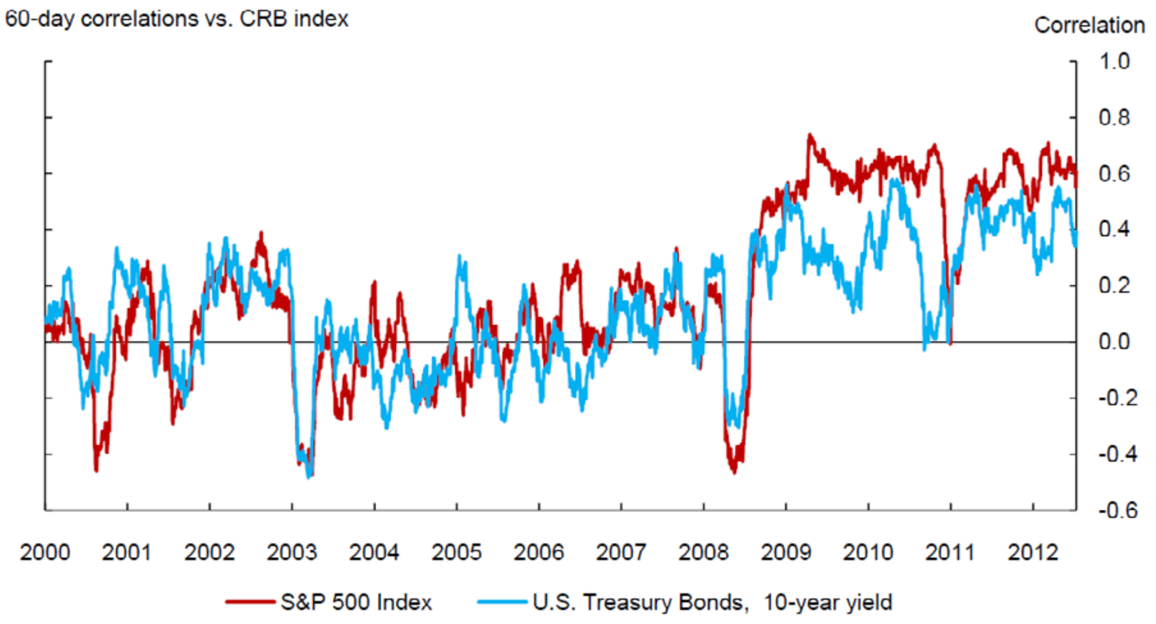
Chart 3: Composition of commodity assets under management has evolved



Source: Barclays

Last observation: 2012

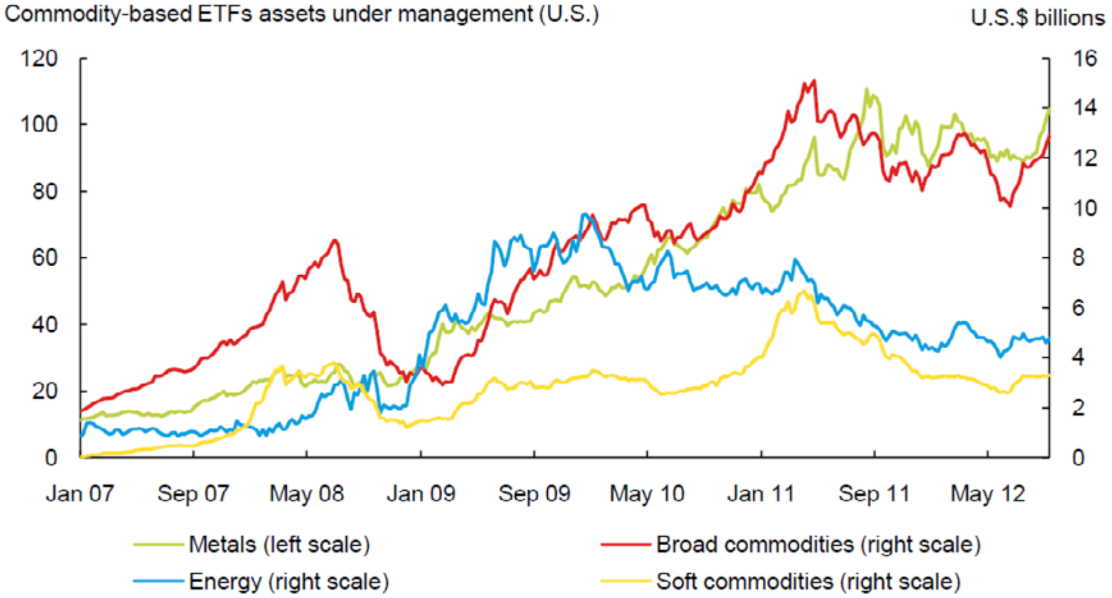
Chart 4: Short-run movements in commodity prices are increasingly correlated with those of equity and fixed-income assets



Source: Bloomberg

Last observation: Sept. 17, 2012

Chart 5: Commodity-based ETFs expanded rapidly but have recently been declining



Source: JPMorgan

Last observation: 14 September 2012