

Financial investors and commodity markets¹

Commodities have attracted considerable interest as a financial investment in recent years. This article discusses the factors behind their growing appeal and assesses the extent to which market characteristics, such as price volatility, have changed as a result. The feature concludes that commodity markets have become more like financial markets in terms of the motivations and strategies of participants, but that the physical characteristics of commodity markets are still important.

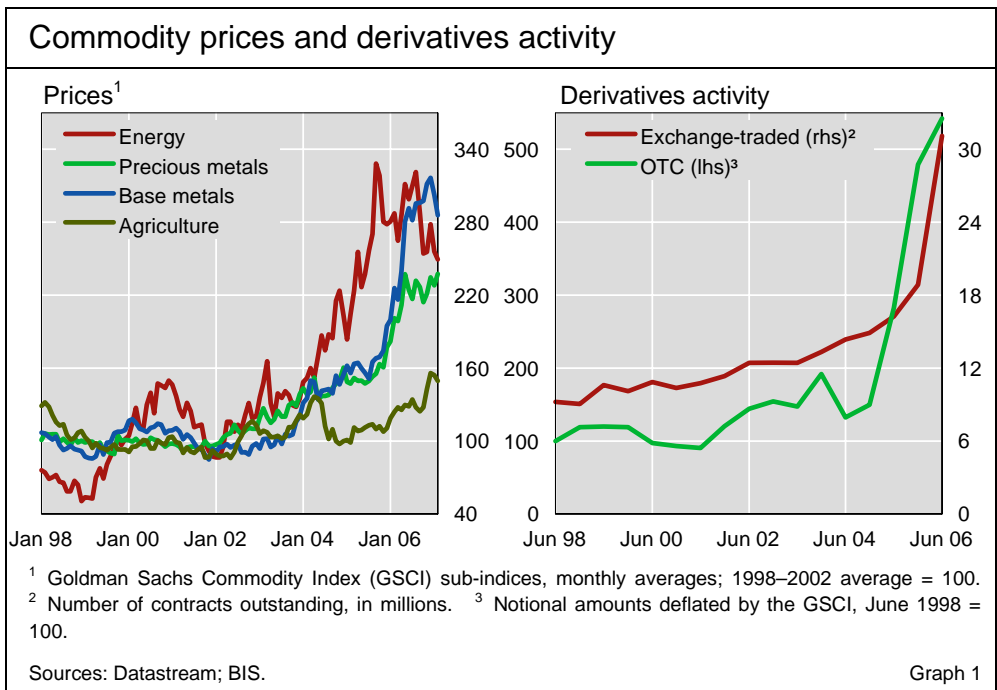
JEL classification: G11, G15, Q41.

The sharp increase in commodity prices, especially for energy and base metals since 2002, has gone hand in hand with growing derivatives market activity (Graph 1). The number of contracts outstanding in exchange-traded commodity derivatives almost tripled from 2002 to 2005. Over-the-counter (OTC) trading of commodity derivatives also grew rapidly. According to BIS statistics, the notional value of OTC commodity derivatives contracts outstanding reached \$6.4 trillion in mid-2006, about 14 times the value in 1998 (BIS (2006)). At the same time, the share of commodities in overall OTC derivatives trading grew from 0.5% to 1.7%.

Along with the rapid increase in commodity derivatives trading, the presence of financial investors in commodity markets has grown rapidly over the past few years. While commodity market investment is still small relative to overall managed funds, it is large relative to commodity production. In addition, there are indications that the types of financial investors and the strategies they employ have changed.

These developments raise the question of whether growing investor presence has altered the character of markets that are of key importance for the global economy. Understanding the nature of the changes in investor types and strategies is an important step in this regard. The first part of this article documents the increasing role of financial investors in commodity markets, while the second presents some evidence about changes in the motivations of market participants. The third section looks at the effect these changes may have had on the dynamics of commodity prices. The feature concludes that

¹ The views expressed in this article are those of the authors and do not necessarily reflect those of the BIS. We are grateful to Anna Cobau and Emir Emiray for excellent research assistance.



while physical characteristics, such as inventory levels and the marginal cost of production, remain important, commodity markets have become more like financial markets in terms of the motivations and strategies of participants.

The presence of financial investors in commodity markets

Financial activity in commodity markets is large compared with the size of physical production and has grown much faster in recent years. For gold, copper and aluminium, the volume of exchange-traded derivatives was around 30 times larger than physical production in 2005 – a significant increase in this ratio from 2002 (Table 1). The much lower ratio for crude oil may understate the relative size of financial activity, given that OTC markets are particularly important for this commodity. Bank of England market contacts suggest that up to 90% of swaps and options trading in oil is done over the counter, reflecting the need for tailored contracts and a lack of organised derivatives markets for certain types of crude oil (Campbell et al (2006)).

Financial activity is large relative to physical markets

Traditionally, specialised financial traders in commodity markets focused on exploiting arbitrage opportunities (Kolb (1997)). Typically, such opportunities arise as the consequence of commercial investors seeking to hedge their production or consumption in futures markets. These arbitrage trades, usually conducted by specialised commodity traders, typically involve taking long or short positions in forward markets for specific commodities and offsetting positions in spot markets. In doing so, financial investors provide liquidity in commodity derivatives markets.

Traditional arbitrage ...

Normally in financial markets, opportunities for (risk-free) arbitrage exist when the futures price deviates from the relevant spot price plus the cost of carry, eg the cost of financing a position in the spot market. However, the scope for arbitrage in commodity markets may be limited by constraints on short selling. In particular, the stock of commodities available for lending is

... limited by constraints on short selling

generally small for energy and base metals. This limitation allows the futures price to fall below the spot price – a situation known as backwardation (Duffie (1989)).

Passive investment strategies ...

The current upturn in commodity prices has been accompanied by greater variety in the types of financial investors and investment strategies in commodity markets (Holmes (2006)). One rapidly growing area is passively managed investment and portfolio products, which is consistent with investors now viewing commodities as an attractive separate asset class. By mid-2006, around \$85 billion of funds were tracking the Goldman Sachs Commodity Index (GSCI) and the Dow Jones/AIG Index, two important commodity indices (Holmes (2006)).

... can provide diversification benefits

Passively managed investments often pursue a fully collateralised long-only futures strategy. This can be attractive to institutional investors with a longer-term investment horizon, such as pension funds, for several reasons (Beenen (2005)). First, this strategy allows diversification into commodities at a relatively low cost. Historically, commodity prices have had a relatively low correlation with prices in other asset classes and a high correlation with

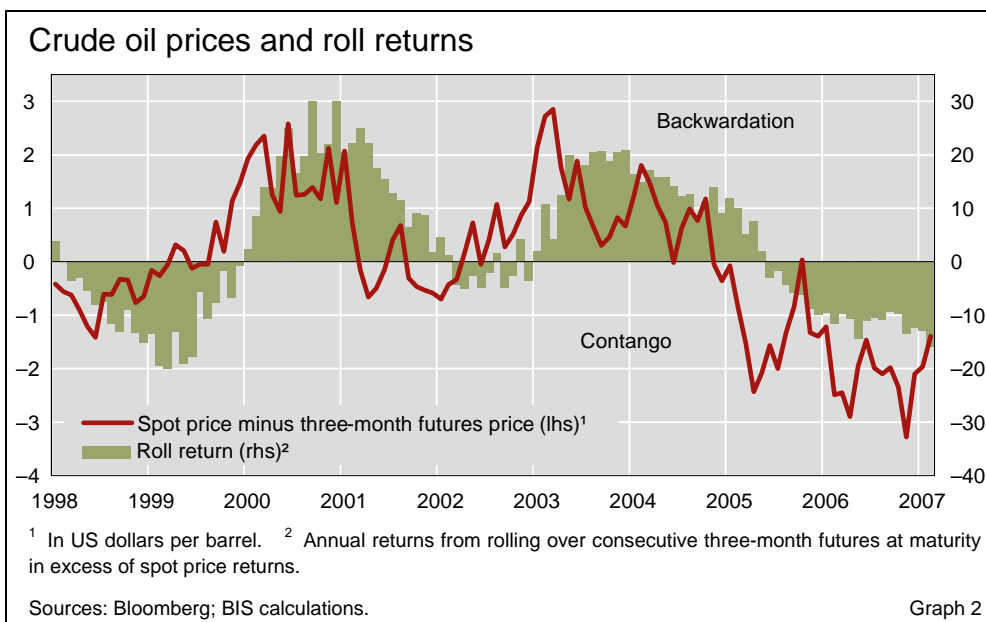
Indicators of financial and physical activity in selected commodity markets in 2005								
	Financial activity				World production ²		Ratio ³	
	Futures		Options		2002	2005	2002	2005
	Volume ¹	% chg since 2002	Volume ¹	% chg since 2002				
Crude oil	93.0	34.4	14.8	27.2	67.0	73.6	3.2	3.9
Of which: NYMEX	59.7	30.6	14.7	28.5				
ICE	30.4	41.5	0.0	-69.7				
Gold	34.5	16.8	2.9	49.7	2.6	2.5	21.8	32.0
Of which: TOCOM	18.0	-12.4	0.3	.				
COMEX	15.9	76.2	2.9	48.3				
Aluminium	33.3	25.2	4.1	368.3	26.1	23.0	22.7	27.3
Of which: LME	30.4	36.3	4.1	368.3				
SME	2.1	-9.0	.	.				
Copper	35.5	41.1	2.2	140.0	15.3	16.5	30.5	36.1
Of which: LME	19.2	16.0	2.1	134.5				
SME	12.4	113.1	.	.				

Note: NYMEX = New York Mercantile Exchange; ICE = IntercontinentalExchange, United Kingdom; TOCOM = Tokyo Commodity Exchange; LME = London Metal Exchange; SME = Shanghai Metal Exchange.

¹ Number of contracts, in millions. ² Oil: millions of barrels per day; gold: millions of kilograms; aluminium and copper: millions of tonnes. ³ Defined as financial activity in the two largest contracts converted to units of physical production, divided by production.

Sources: Commodity Research Bureau, *The CRB Commodity Yearbook*; Energy Information Agency, *Annual Energy Review*; GFMS; US Geological Survey.

Table 1



inflation (Gorton and Rouwenhorst (2004)).² Second, these authors also provide evidence that, historically, the return on a diversified basket of long commodity futures has been comparable with the return on other asset classes with similar risk features, such as equities.

Several authors have emphasised the importance of the so-called roll return from a long position in commodity futures as a component of total returns (Erb and Harvey (2005), Feldman and Till (2006)). Indeed, roll returns are an important explanation for why the average return on commodity futures has exceeded the average return from holding spot commodities (Gorton and Rouwenhorst (2004)). Investors earn a positive roll return if they can roll over a futures contract that is close to expiry into a new contract at a lower price. This occurs when the spot price (to which the price of the original futures contract converges over time) is higher than the price of the new futures contract, ie in a backwardated market.

Roll returns can be considerable. For example, in the crude oil market, the roll yield from purchasing three-month futures was about 14% per annum over 2003–04 (Graph 2). However, roll returns became negative when the price of the futures contract rose above the spot price, ie the market moved into contango, in 2005. Essentially, the profitability of strategies aimed at generating positive roll returns depends on the persistence of the factors that cause markets to backwardate, including low levels of commodity stocks available for short selling and positive returns received by owners from holding the physical commodity (the so-called convenience yield).

The presence of investors with a shorter-term focus, such as hedge funds, has increased considerably during the past three years. The number of hedge

Positive roll returns have been important ...

... but depend on the persistence of backwardation

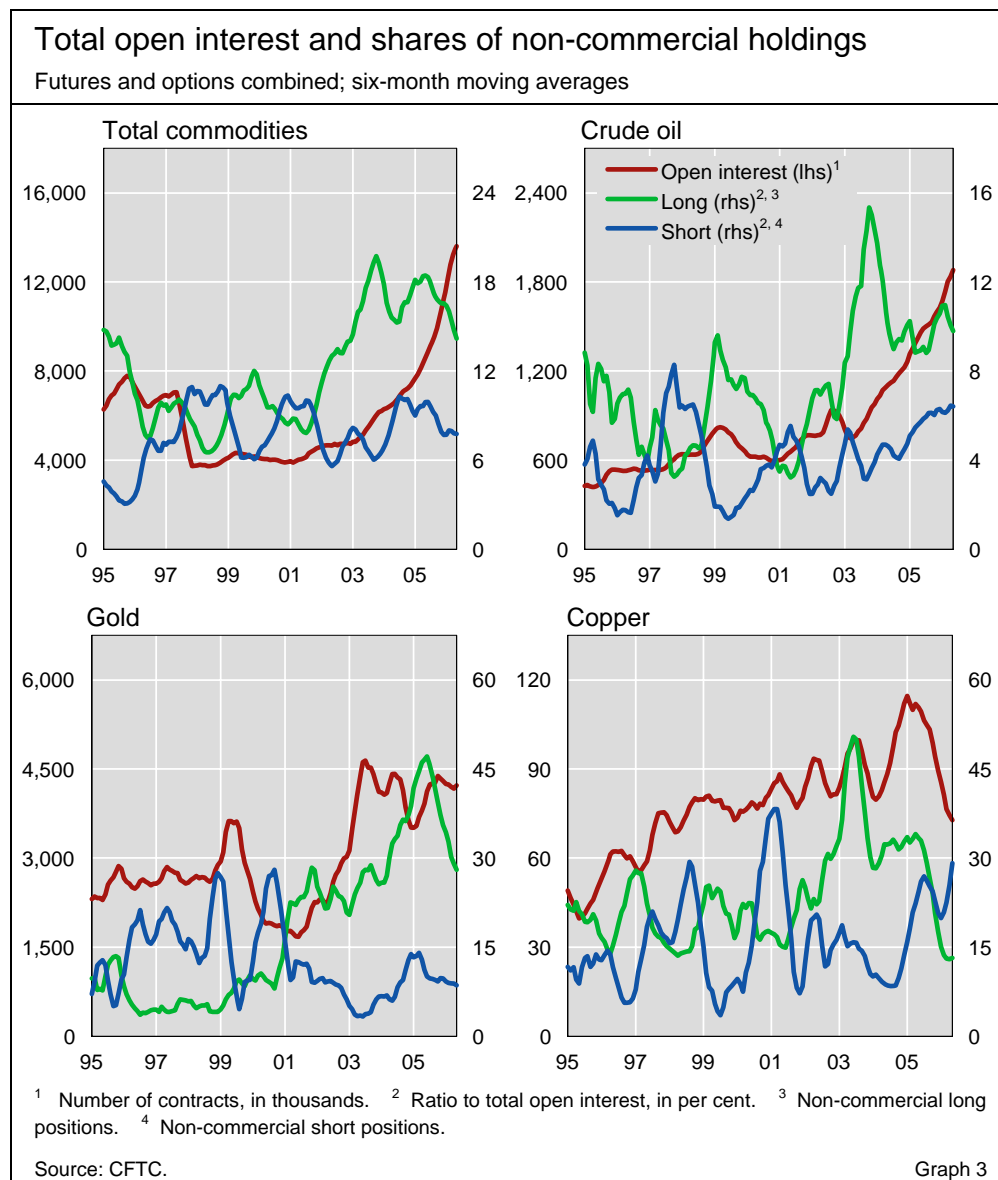
Growing presence of investors with shorter-term focus

² It is important to note that these calculations are all in US dollars and therefore the correlation between commodity prices and exchange rate movements is not a consideration. To the extent that commodity prices are in US dollars and other assets in the portfolio under consideration are not, currency hedging may be important for obtaining diversification benefits.

funds active in energy markets has reportedly tripled to more than 500 since the end of 2004, with an estimated \$60 billion in assets under management (Fusaro and Vasey (2006)). The \$6 billion loss on natural gas derivatives that the hedge fund Amaranth reportedly incurred in September 2006 is a further indication of the size of positions that hedge funds take in commodity markets. Partly as a result of increased demand from financial investors following shorter-term strategies, the number of exchange-traded funds (ETF) for commodities has increased since the first ETF for gold was opened in 2003. A related area of growth is the development of instruments that facilitate the implementation of more complex strategies, including cross-market arbitrage or taking positions on volatility. A specific example is the rapid expansion in structured commodity notes (McNee (2006)).

CFTC data ...

An important source of quantitative information on trading activities in commodity markets is the Commodity Futures Trading Commission (CFTC), which publishes weekly data on the open positions in US futures markets of commercial and non-commercial traders (Graph 3). The non-commercial trader



Activity of managed money traders in selected commodity markets						
Market	Number of MMTs holding positions ¹			MMT open interest as % of total open interest ²		
		1994 ³	2003–4 ⁴		1994 ³	2003–4 ⁴
Crude oil	Average	40	80	Long	6.4	14.0
	Maximum	48	100	Short	2.2	6.9
Natural gas	Average	33	66	Long	2.3	11.9
	Maximum	44	81	Short	7.0	15.4

¹ Daily averages and maximums. ² In futures and options markets. ³ April–September 1994. ⁴ August 2003–August 2004.

Sources: CFTC (1996); Haigh et al (2005). Table 2

group includes participants who are not primarily using the market for hedging, and encompasses a variety of subgroups. In 2003–04, the non-commercial trading category for both natural gas and oil was dominated by managed money traders (MMTs) (Haigh et al (2005)). This group includes specialised investors such as commodity pool operators and funds advised or operated by commodity trading advisers. Hence, it is likely to capture most financial investors who are operating in centralised commodity markets.

The importance of MMTs seems to have grown significantly since 1994. Data available for the crude oil and natural gas markets show that the average number of MMTs trading has roughly doubled and their share of total open interest in each of these markets has increased sharply (Table 2). In addition, assets under management by commodity trading advisers are significant and rose from about \$20 billion in 2002 to about \$75 billion by end-2005 (IMF (2006)).

The share of non-commercial traders in aggregate has gone up from about 17% in the second half of the 1990s to about 25% in the past three years. This increase is mainly attributable to an upward trend in the share of long positions held by non-commercial investors. While this broad pattern holds across markets, the share of non-commercial positions varies considerably. Since spring 2006, the share of open interest attributed to non-commercial traders has fallen by almost 3 percentage points. This is consistent with a withdrawal of investors during the period of falling commodity prices since May last year, but also with an increase in the hedging activity of commercial producers (JPMorgan Chase (2007)).

As regards OTC commodity derivatives markets, the available evidence also supports the notion of a rapidly growing presence of financial investors.

... confirm growing importance of financial investors

Share of financial traders varies across markets

Limited information on OTC markets

Participants in OTC trading on the ICE			
OTC participants' trading (as % of total commissions)	2003	2004	2005
Commercial companies	64.1	56.5	48.8
Banks and financial institutions	31.3	22.4	20.5
Hedge funds, locals and proprietary trading shops	4.6	21.1	30.7

Source: ICE (2006). Table 3

IntercontinentalExchange (ICE) reports that hedge funds, locals and proprietary trading shops accounted for almost one third of trading commissions paid on OTC transactions conducted through ICE in 2005, compared to less than 5% in 2003 (Table 3). However, this increase might in part reflect the higher propensity of institutional investors, in particular hedge funds, to use electronic trading platforms (Davidson (2006)). It may therefore overstate the increase in financial investor participation in commodity markets as a whole.

An empirical examination of investor activity

Empirical approach To obtain a general sense of the changes in the motivations underlying investment activity, we next estimate the relationship between the activity of financial investors and possible motivating determinants. The results of this simple, illustrative exercise are broadly consistent with the view that the motivations for investing in commodity markets have changed along with the growing presence of financial investors. Given data limitations, this exercise is constrained to using CFTC data on non-commercial open interest in US exchange-traded commodity markets. The dependent variable is defined as the share of net long open interest of non-commercial traders in four somewhat heterogeneous commodity markets that have experienced particularly large price movements since 2002: crude oil, natural gas, gold and copper.³

Explanatory variables To capture the effect of expected returns on the share of non-commercial traders, we include the percentage changes in spot commodity prices and a variable capturing the size of the roll return over the previous 12 months.⁴ The standard deviation of monthly percentage changes in three-month futures prices is included to capture any response there may be to volatility in returns. A priori, the effect of such volatility on the position-taking of financial investors is ambiguous. On the one hand, rising volatility may discourage position-taking because it lowers risk-adjusted returns, all else equal, particularly for strategies such as carry trades. On the other hand, volatility is likely to attract more activity if traders are actively taking exposure to it. Another shorter-run return consideration may be the opportunity cost of investing in commodities. To account for this, a world short-term interest rate has also been included. The longer-term demand for commodities arising from their diversification properties is proxied in two ways: by the correlation between percentage changes in commodity prices and a measure of world equity prices over the

³ Net long positions of non-commercial traders are frequently used as a variable to capture financial investor activity in commodity markets; see eg IMF (2006) and Micu (2005). By defining the dependent variable as a share, factors that increase net long positions for commercial and non-commercial traders have been controlled for. However, the dependent variable cannot distinguish an increase in non-commercial net long open interest arising from factors that have increased financial activity across all financial markets from an increase arising from a portfolio shift towards commodity markets as a whole, or portfolio shifts between individual commodity markets. These issues serve as qualifications to the interpretation of the estimates.

⁴ This variable is defined as the difference between the spot price and the three-month futures price, normalised by the spot price, averaged over the previous 12 months. To the extent that roll returns encourage investor activity, the estimated coefficient on this variable should be positive. All explanatory variables are included with a lag of one month.

previous five years; and by inflation expectations, defined as the difference between nominal and real bonds.

Two broad observations can be made by comparing the results of estimating this model for the period 1998–2001 with those for the period 2002–06 (Table 4). First, shorter-term factors reflecting return considerations appear to have become, on balance, more important over time. Past increases in spot prices have a significant positive effect on the share of non-commercial net long positions across both periods, as expected. Higher roll returns have a more positive effect on the share of non-commercial net long positions in the second period than in the first in the natural gas and oil markets, which have been backwarddated for considerable periods since 1998, as well as in the copper market, although the estimated coefficient is not significant.⁵ The volatility of futures returns has a negative effect across markets in the second period, which is particularly significant in the copper market. This pattern is consistent with a growing importance of leveraged investors speculating on short-term price trends, as this group is particularly sensitive to short-term price fluctuations.

Shorter-term factors seem to have become more important ...

Regression results ¹							
Dependent variable: non-commercial long minus short positions, as a share of total open interest							
Expected sign	Return ²	Roll ³	Volatility ⁴	Interest ⁵	Correlation ⁶	Inflation ⁷	Adjusted R ²
	+	+	–	–	–	+	
1998–2001							
Crude oil	0.04	-0.45**	3.30**	2.88**	-0.01	-2.12	0.67
Natural gas	0.11**	-0.19	1.15	-2.47*	0.53**	11.17**	0.60
Gold	1.09**	18.97*	-1.06	-3.17	-0.58**	5.19	0.39
Copper	-0.03	-26.30**	4.10	-4.86	-2.19**	24.24**	0.59
2002–06							
Crude oil	0.11**	1.35**	-1.61*	4.50**	0.30**	3.01*	0.42
Natural gas	0.02*	0.15*	-0.26	1.44*	0.06	0.92	0.15
Gold	0.53*	-23.10*	-1.75	-11.77*	0.22	8.03*	0.41
Copper	0.24	1.14	-9.56**	-36.51**	-0.63	1.50	0.81
Note: * indicates significance at the 10% level, ** at the 5% level; bold red indicates expected sign and significance; light red indicates expected sign and non-significance; bold black indicates incorrect sign and significance; light black indicates incorrect sign and non-significance.							
¹ The seemingly unrelated regression methodology was used to estimate these results on monthly data in order to allow for contemporaneous correlation in the errors across equations. All variables are lagged once. Other lag structures were tested, but the effectiveness of this strategy was limited by the relatively short sample period. ² Monthly percentage change in the spot price. ³ Twelve-month moving average of the spot price minus the three-month forward price, divided by the spot price. ⁴ Twenty-month rolling standard deviation of the monthly percentage change of the three-month futures price. ⁵ Average of three-month interest rates of Canada, Germany, Japan, Sweden, the United Kingdom and the United States. ⁶ Correlation between the percentage changes in the spot price and in the Morgan Stanley world equity price index over a rolling period of five years. ⁷ The difference between nominal and real US 10-year bonds.							
Sources: Bloomberg; CFTC; Datastream; Goldman Sachs Research; national data; BIS calculations.							Table 4

⁵ The crude oil futures curve has been backwarddated around half the time since 1998. Over this period, the natural gas market has been backwarddated only 15% of the time, while copper has been backwarddated 34% of the time. The futures curve for gold has almost always been in contango due to the large level of above-ground inventories. Since 1975, the gold market has backwarddated only four times (in August 1976, May 1983, March 1986 and January 1993).

... although differences across markets appear considerable

The coefficient on the interest rate is more significant across markets in the second period, although with different signs. This supports the view that the size and character of financial investor activity differ considerably across markets. The negative sign for the gold and the copper markets, where the shares of non-commercial positions are three to four times larger than the share for crude oil markets (Graph 3), might indicate that the interest rate variable reflects opportunity costs of financial investors with a shorter time horizon. In energy markets, the positive coefficient might capture a trend increase in net long positions resulting from passive tracking of commodity indices, which tend to place a high weight on energy commodities. For example, oil had an average weight of 27% in the second subperiod in the GSCI index. However, no separate role could be found in the regression for the GSCI commodity weights.

Diversification benefits less significant

The second observation is that the share of non-commercial net long positions appears to have been less influenced by perceived diversification benefits than in the past. In the earlier subperiod, before prices started to accelerate, there is a negative relationship between investor activity and the correlation between returns on commodities and world equities in most cases. In the second subperiod, this relationship is either statistically insignificant, or has a perverse sign. One possible alternative explanation for this outcome is that short-term strategies have been more important than before and dominate the variation in the data. Another possibility is that the correlation variable does not capture the full range of assets which have been relevant for the assessment of diversification benefits in the recent period, although including the correlation between commodity returns and other asset classes such as high-yield credit does not change the result. Commodity investment might also have been motivated by long-term historical correlations that are not apparent in the relatively short span of the second subperiod. The relationship between the share of non-commercial long positions and expected inflation is generally positive, although not always significant, consistent with commodities being purchased as a hedge against future inflation.

Financial investors and market dynamics

Questions

Changes in the scale and character of involvement of financial investors in commodity derivatives markets may have affected the price dynamics of these markets. The first question in this regard is whether the exploitation of perceived profit opportunities by financial investors has fundamentally changed the relationship between prices and the physical characteristics of commodity markets. The second issue is whether the broadening of the investor base has led to significant market deepening and hence affected features such as short-term price fluctuations.

The relationship with physical commodity markets

Investor activity and commodity prices

Intuitively, one might expect large inflows of funds into commodity markets to cause prices to rise sharply, possibly to higher levels than are justified by economic fundamentals. The prima facie evidence seems to support this view,

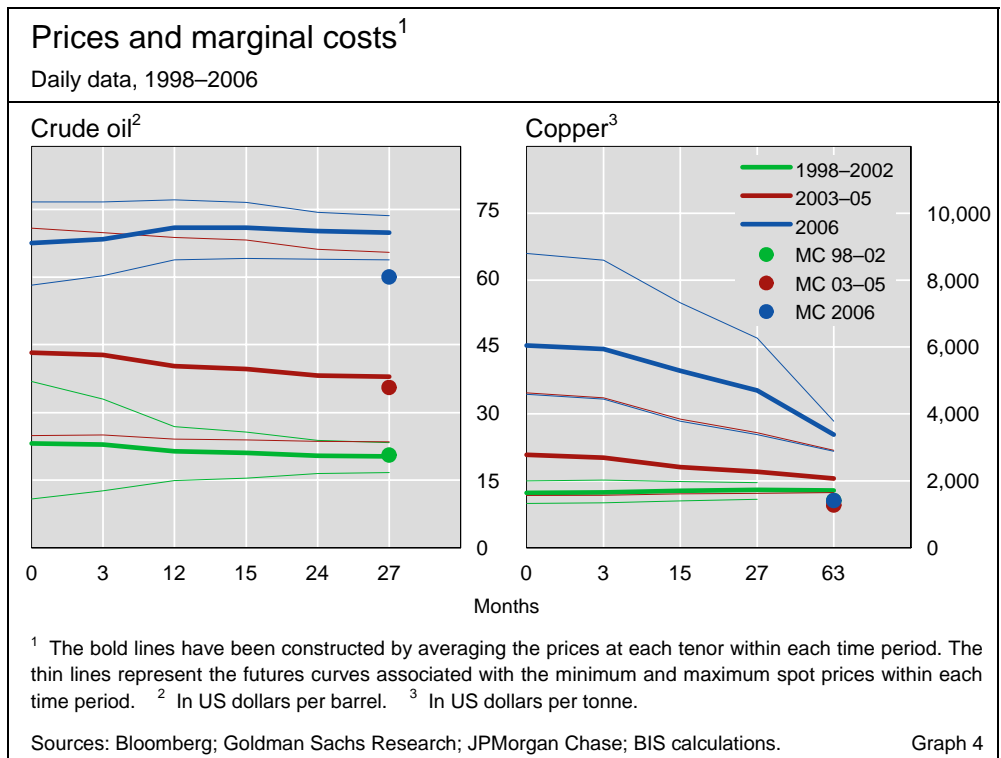
as financial activity has broadly increased in parallel with prices during the past four years. However, the results of empirical work on the impact of the growing presence of financial investors on commodity prices are less clear-cut. Several recent studies, which explore the relationship between investor activity and commodity prices, indicate that price changes have led to changes in investor interest rather than the other way around (Haigh et al (2005), IMF (2006)).

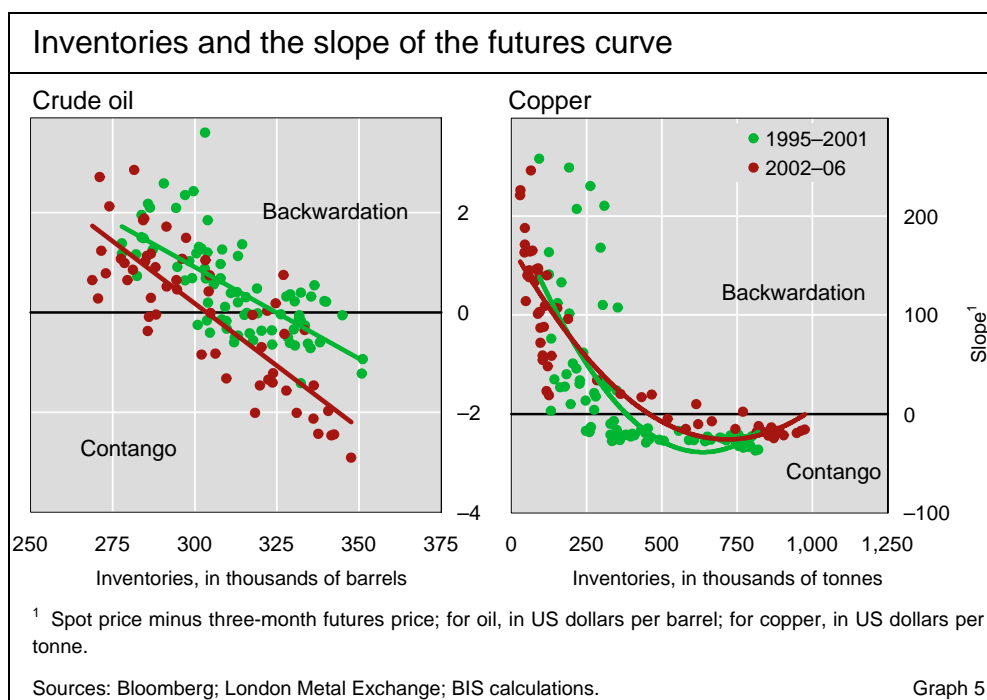
This section uses the physical characteristics of specific commodities as a rough benchmark for assessing whether the increased presence of financial investors has altered price dynamics. Constraints on supply and storability affect the prices of commodity derivatives. In the longer run, production can be changed and the elasticity of commodity supply depends on the marginal costs of production. In the short run, supply from production is relatively inelastic and depends more on above-ground stocks. With the exception of gold, above-ground commodity stocks are small relative to demand. For example, it is usual for four to six weeks of demand to be held in inventories for base metals. For gold, in contrast, stocks either available for production or for lease represent close to 45 years' worth of demand, depending on how this is measured (O'Connell (2005)).

In efficient markets, the expected marginal costs of commodity production should act as an anchor for longer-run futures prices. Consistent with this, the long ends of oil and copper futures curves have overall tended to fluctuate much less than spot and short-dated futures prices (Graph 4). The tenors that are affected by this "anchoring" may vary, depending on the time needed to adjust production. For instance, from 1998 to 2002, a period of ample spare capacity, marginal costs were steady and production could be expanded at relatively short notice. Indeed, futures prices at tenors from about one year were quite closely aligned with estimates of marginal costs of production in

Physical characteristics as a benchmark

Marginal costs of production have been a strong anchor for long-dated futures prices ...





both oil and copper markets over this period.

... but seem to have lost power since 2003 ...

Since 2003, however, long-dated futures prices have increasingly diverged from estimates of current marginal costs. In 2006, prices for two-year oil futures were on average about 20% higher than the measure of marginal costs shown in Graph 4. In the case of copper, the deviation was much larger. Several factors related to economic fundamentals could cause such a deviation. For example, a sharp increase in expected marginal costs owing to buoyant demand growth and uncertainty about the costs of further expansion of production in the face of capacity constraints may have been a factor in the oil market. Moreover, the need to explore and develop new sources has probably lengthened the time required to extend production.

... to a degree which is difficult to reconcile with fundamentals

In addition, futures prices are likely to embody risk premia, not least because long-dated futures markets are typically relatively thinly traded. Reluctance by producers to forgo upside opportunities through hedging in an environment of rising prices might have further reduced liquidity. In contrast, there is some tentative evidence that the size of the risk premium in oil futures markets is positively related to the share of net non-commercial long positions in the oil market, controlling for other factors (Micu (2005)). Notwithstanding all these factors, it still appears difficult to reconcile the increases in futures prices until mid-2006 with economic fundamentals, especially in the case of copper.

Inventory-slope relationship has remained intact ...

A second physical anchor is inventories, which link current and future supply and consequently connect the spot price and expected spot prices in the future (Gorton and Rouwenhorst (2004)). It is not clear that growing investor activity can have a systematic direct effect on inventory decisions: the convenience that producers derive from holding stock importantly depends on factors related to real activity such as production smoothing. Indeed, the strong historical relationship between the slope of the futures curve for non-gold

commodities and the level of physical inventories has remained intact (Graph 5).

It is more likely that financial investors could indirectly affect inventory decisions through futures prices. To the extent that taking long positions in futures markets increases futures prices, the value of holding inventories for future delivery increases. The effect on the slope of the yield curve remains open, depending on how spot prices respond to possible inventory decisions.

... but indirect effect on inventory decisions possible

Market depth

The second question is whether the increase in the size and diversity of financial investors has increased market depth. Greater market depth would imply that transactions of a given size cause smaller fluctuations and, other things equal, that short-term price volatility should decline. The prima facie evidence on changes in commodity price volatility is mixed. Price volatility has declined in the oil market, especially in the shorter maturities of futures contracts where trading is particularly active (Graph 6). In contrast, it has increased in the copper market.⁶

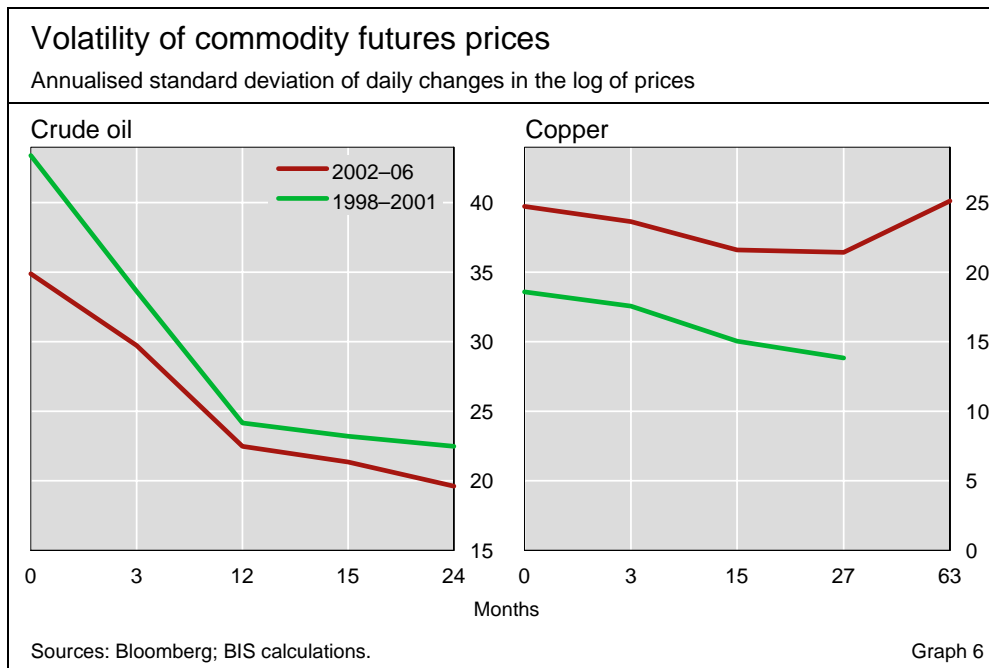
Financial investors and market depth

Another approach is to look at the interaction of the trading behaviour of commercial and non-commercial traders. Non-commercial traders will add to market depth if they contribute to a two-sided market. This is the case if they act as counterparties to commercial traders' hedging transactions or if they take positions offsetting other financial investors.

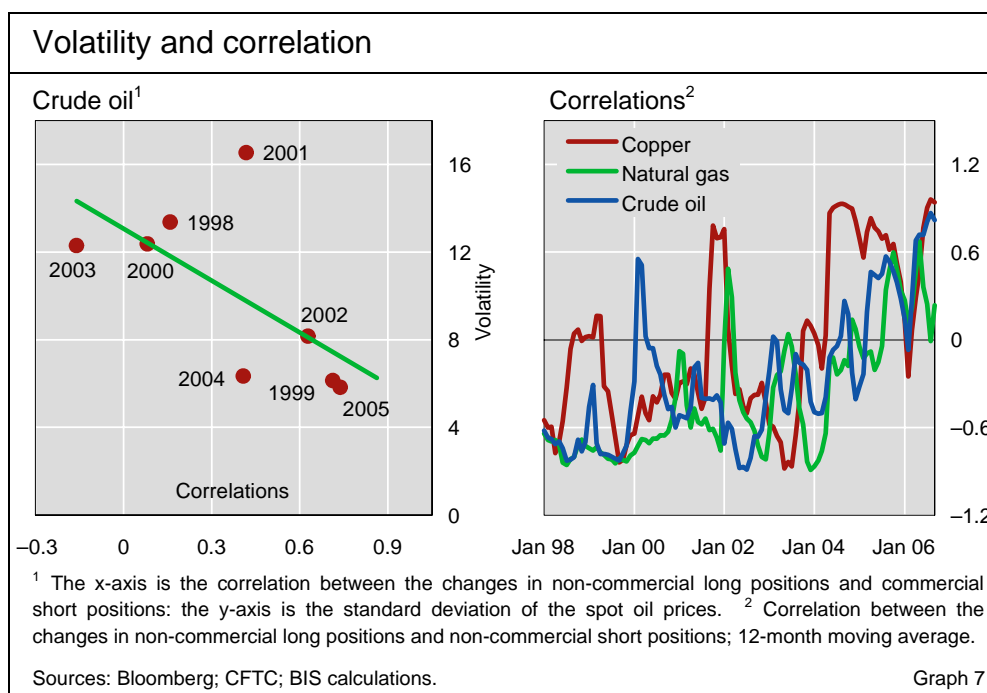
Interaction of commercial and non-commercial traders ...

The pattern of changes in the open positions of commercial and non-commercial traders supports the view that financial investors have, overall,

... seems to have reduced volatility



⁶ This highlights one of the limitations of the econometric work done earlier, insofar as changes in investor activity cause changes in variables, such as volatility, that we have included as explanatory variables.



contributed to deeper markets.⁷ First, a higher correlation between changes in non-commercial long and commercial short positions has been associated with lower volatility in oil markets (Graph 7, left-hand panel). However, the correlation has not significantly increased since 2002, suggesting that a growing presence of financial investors may have accommodated increased hedging needs, but not fundamentally altered the character of the market.

Non-commercial traders increasingly active on both sides of commodity markets

Second, there is also evidence that non-commercial traders have, as a group, increasingly taken positions on both sides of commodity markets. Prior to 2002, changes in long and short positions of non-commercial traders were highly negatively correlated for copper, oil and natural gas: an increase in long positions typically went hand in hand with a reduction of short positions and vice versa. There is also some evidence that MMTs tended to act on the same side of the market at similar times in the past (CFTC (1996)). In the past few years, however, the correlation between changes in long and short positions of non-commercial traders has increased and become positive (Graph 7, right-hand panel). Evidence that non-commercial players are increasingly trading between each other is also provided by the growing share of spread positions, which arise when a trader takes long and short positions in the same commodity at different tenors of the futures curve.

Growing similarities with financial markets

The emergence of trading among financial investors in commodity markets on a substantial scale suggests that the determinants of market liquidity may become more similar to those in traditional financial markets. These determinants include the amount of risk capital that financial investors allocate to commodities trading and the heterogeneity of opinions of market participants. One key risk in both regards is a high concentration of trading

⁷ In order to gauge the position-taking of the investor groups on both sides of the market, we consider correlations of long and short positions separately (ie we do not calculate net long or short positions).

activity. The demise of Amaranth, which led to a sharp deterioration in liquidity conditions in those tenors of the natural gas futures market where the firm held extensive positions, provides a clear indication of these challenges.

Conclusion

The presence of financial investors in commodity markets has increased considerably during the past four years or so. While it is difficult to be precise about the exact magnitude and composition of inflows, there is much evidence that the investor base, and with it the range of instruments and strategies employed in commodity trading, has broadened substantially. It is not clear to what extent these changes reflect structural shifts in investor behaviour or a temporary boom supported by a “search for yield”. In any case, a full reversal of the trend towards a greater role of financial investors appears unlikely against the backdrop of greater investor sophistication and a broadening range of commodity-related financial instruments.

Commodity markets have become more like financial markets in some respects. Financial investors are increasingly active on both sides of trades, creating a kind of financial trading sphere. Yet the characteristics of physical markets, such as inventory levels and the marginal cost of production, are still important. A lack of liquidity especially in the long tenors of commodity derivatives markets and physical limits to short selling in the spot market may at times significantly affect market dynamics. These effects require further investigation.

While the increase in investor activity can be expected to bring benefits in terms of market efficiency, the ongoing “financialisation” of commodity markets raises issues similar to those in other financial markets. Among these is the question of how to ensure robust market liquidity.

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