risk management COMMODITIES

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onsider this: between mid-2008 and mid-2009, the price of oil roughly halved to around \$70 a barrel, and the price of aluminium – the world's most heavily traded base metal – fell by a similar proportion to around \$1,250 a tonne. Both commodities are essential to an industrialising world and their value and volatility are felt in all aspects of economic life. The scale of the price falls experienced over the course of 12 months represents a new and complex challenge for corporate treasurers.

A commodity has traditionally been a raw material that is an essential ingredient in a manufactured product. The raw materials of cocoa, copper and oil, for example, are key constituents of chocolate, electrical wire and petrol. More recently, the definition has expanded to encompass manufactured basic industrial inputs such as steel and plastics, and even rights such as carbon emissions, which are created by legislation rather than nature (see Box 1).

However, the need to manage exposure to commodities, direct and indirect, is not a new one. Commodities are diverse, widely traded and pervasive in their correlations with other exposures such as currencies, interest rates and securities. Indeed, it is now possible to deploy resources across asset classes to reduce risk within each class and, critically, between classes.

Most significant commodities are traded as futures and options contracts on exchanges, although there are important exceptions such



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Executive summary

At first sight the extreme diversity between the world's many different commodities seems to exclude them from being treated as an asset class. But commodities share supply and demand fundamentals that predispose them to being traded as futures and options contracts on exchanges, and growth in exchange-traded commodities is expected to continue.

as iron ore, which is traded on a spot market. The industry expects the number of exchange-traded commodities to grow considerably in the next few years. To understand their impact, it is necessary to understand how and why commodities have become an asset class.

A CHANGING COMMODITIES WORLD This diversity might seem to militate against the idea that commodities can be treated as a class. Certainly, there are big differences between them. One of those differences is market size. At around \$20 trillion, the value of oil traded on the world market in 2008 is a far cry from the \$625bn market for nickel in the same year.

Another difference is the nature of the raw materials. The scope for substitution between metals, energy and food commodities is limited. Even within a category such as metals, precious metals – notably gold – have little in common with base metals. Volatility, investors, users and market psychology can all be different.

A further variation is market structure. The top five tin-producing countries account for 90% of global output, while the proportion for gold is less than half. And some commodities, predominantly oil, are highly politicised, although the rise of China as the major consumer and producer of many raw materials has increased the political sensitivity of nearly all commodities.

But there are important similarities between commodities as well. The clue is in price behaviour. Between March and December 2008, IN THE FIRST OF A TWO-PART FEATURE, PETER G SELLARS OFFERS TREASURERS A GUIDE TO UNDERSTANDING AND MANAGING A NEW ASSET CLASS.

the RBS Base Metal Price Index tumbled 61%. It then staged a strong recovery, bouncing back 70% between January and August of 2009.

For all the diversity of the asset class, the index was responding to two basic stimuli. The first was the collapse of industrial demand as world economic growth slowed to virtually zero and major industrial regions such as North America, the EU and Japan saw output shrink. Being physical materials, commodities are subject to conflicting forces of supply and demand. Adjustments to production can lag well behind changes in demand if prices hold up; bringing a new mine or oilfield into operation, for example, can take up to a decade or more. Commodity prices therefore tend to anticipate the expected longerterm supply and demand balance as it adjusts to economic conditions.

The second stimulus was financial. In 2007 and early 2008 investors drove up commodity prices beyond what many analysts believed market fundamentals justified. Few commodities escaped. The explosion of investment in commodities had similar drivers to the price inflation in other assets such as property. Low interest rates led to a sharp rise in global liquidity as banks' balance sheets expanded. Investors tried to compensate for low interest rates and returns on equities by searching out higher yields elsewhere – not least in commodities. The rapid growth of emerging economies, led by Brazil, Russia, India and China (the BRIC nations), added to the pressure by raising physical demand for commodities and ushering in a new class of wealthy private and corporate investors. Producer countries learnt the lessons from OPEC (Organization of the Petroleum Exporting Countries) and drove a harder bargain with buyers.

Many investors withdrew from the market as the gravity of the recession became clear. But by early 2009 they had returned, sensing a new opportunity. The colossal scale of government intervention to stave off depression and revitalise output and consumer confidence, combined with relatively robust Chinese economic growth, raised hopes of an eventual return to economic expansion and an expectation that inflation was unavoidable. Investment in gold, the traditional inflation hedge, rose to record levels.

Box 1: Carbon emissions trading

Carbon emissions trading is a completely new market which has arisen since about 2005. Its origins lie in economic theory, government legislation and international agreements. The aim is to cut emissions of carbon dioxide (CO₂), the main gas contributing to global warming. The theory is that organisations – predominantly energy-intensive companies – will restrict their CO₂ emissions if they have to pay to emit more than an agreed amount. Markets make the idea work by giving participants the ability to trade these rights. Governments make the idea work by setting CO_2 limits for their countries by international agreement and for organisations under their jurisdiction.

There are two main schemes, which are related. The first involves the national limits set under the 1999 Kyoto Protocol, which came into operation in 2005. The US is the main industrial country that is not a signatory. Kyoto established a system called the Clean Development Mechanism (CDM), by which validated carbon credits from concerns in developing countries can be traded internationally.

The second scheme is the EU's Emissions Trading Scheme (ETS), also launched in 2005, which caps emissions from some 12,000 large installations such as power plants and carbon-intensive factories in the EU. ETS meets the terms of Kyoto and covers about half the EU's carbon emissions. One EU allowance is equivalent to the right to emit 1 tonne of CO_2 . Some US states have introduced a similar, though voluntary, scheme to trade Renewable Energy Certificates.

Trading in carbon emissions has grown rapidly since 2005. Between 2006 and 2007, the value of trading in ETS credits, which account for the bulk of world carbon emissions trading, doubled to \$50bn.

Exchanges and contracts have sprung up to serve the new market. The biggest exchange is the European Climate Exchange (ECX), based in London. It offers futures, options and spot-like contracts in EU allowances and certified emissions reductions available under the CDM. The contracts are listed and traded on ICE Futures Europe. The value of contracts traded more than doubled from 2007 to 2008, to €92bn. ECX also trades certified emission reductions from CDM projects.

Other exchanges trading carbon contracts include the Chicago Climate Exchange, the Green Exchange (part of Nymex), Nord Pool (Norway) and BlueNext (part of Euronext in Paris). Related energy contracts such as biomass (for example, wood chips) are also under development.

Other factors that promoted a recovery in commodity prices were stockpiling, especially by the Chinese taking advantage of low prices; vehicle scrappage schemes, which sparked demand for a wide range of raw materials; and hefty supply cutbacks – about a fifth of aluminium and nickel capacity shut down.

Weakness in the trade-weighted US dollar accentuated the situation. Commodities are priced in US dollars, so as a general rule the weaker the dollar, the higher the dollar-denominated price. Hence, producer currencies such as the rand and the Canadian and Australian dollars have strengthened, creating further cost pressures for the metal and mining companies and keeping supply constrained.

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Next month: part 2, the birth of a new asset class