

Commodity risk management IV

In this fourth installment in our series of articles we will look at how we can utilize our insight from the fundamental and technical analyses in our practical work with prices and suppliers.



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In the first installment of our series we studied raw materials markets and volatile prices. We saw how most raw material prices can increase or fall by as much as 400, 500 or 600%, which is a huge problem for most companies and their purchasers. Such heavy fluctuations in raw material prices can make it difficult to navigate for the purchaser and the heavy fluctuations impact negatively on the earnings of the company.

In the second installment we studied raw materials using the fundamental analysis. We got some indications that our selected raw material - aluminium - had some of the characteristics, which can lead to falling prices: Increasing supply, flagging demand, increased stockpiling and falling production costs.

In the third installment we studied raw materials using the technical analysis, where the mathematical models warned of an upcoming fall in the price of aluminium. Consequently the technical and the fundamental analyses were in agreement about the direction of prices.

In this fourth and last article we will see how these models are applied in practical terms. Everybody will agree that theories are useless unless they are applied in practice. Consequently this article will focus on the practical work with suppliers, contracts and financial hedging.

In chronological order the first step is to be prepared for an upcoming price change. This first step is the hardest both to accept and to implement. This situation is best shown in practice. In our last article we studied aluminium, where prices have been increasing heavily over the last four years. The increase continued in 2007, but the mathematical models in the technical analysis have given early warnings that the price development will change direction and begin a downward trend. See figure 1, which was

also shown in our last article (Commodity risk management III).

The technical analysis told us that the price of aluminium seems to be about to fall, without saying anything about the exact timing of this fall. Knowing this, it will be sensible to avoid entering into long-term price agreements. We would like to avoid committing ourselves over a long period to a high price level. Naturally we have to source for our production to keep it going, but we should not enter into a fixed price agreement running for a

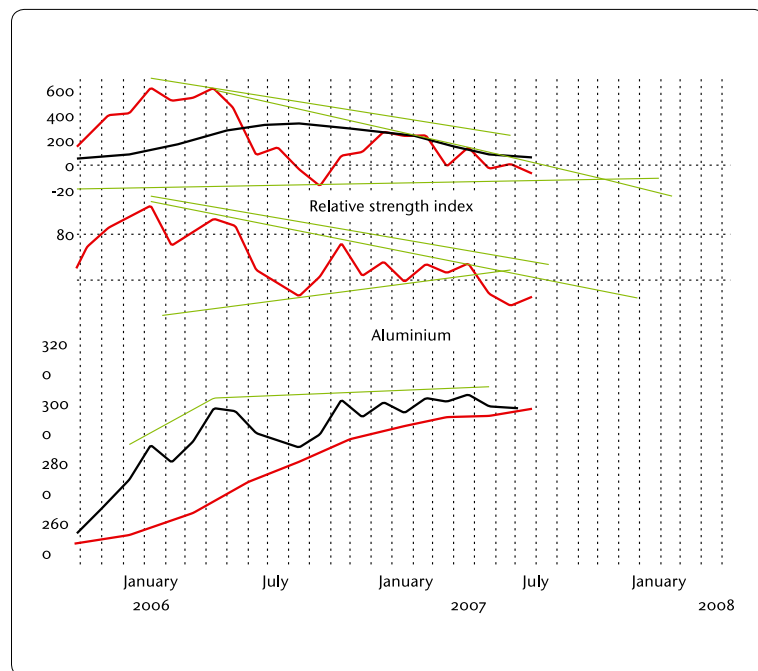


Figure 1. Price of aluminium and the technical analysis models. Source: London Metal Exchange and Kairos



number of years. This is the hardest step. It is hard because prices continue to go up throughout 2007. As long as the price is still going up, there will be nagging doubts about the wisdom of the decision, in particular if top management start asking critical questions concerning the agreement made. But in this top range of prices is exactly where one should be careful about entering into long-term price agreements with the supplier. It is obvious that the technical analysis is really useful when it comes to providing more objective documentation, comprehensible also to top management. The essence of the first step is to avoid making the wrong decisions (which in this case would be a long-term fixed price agreement).

If, for example, one has regular annual meetings with one's supplier, say in April, where the price agreement is revised for the coming year, then it is time this year to do something entirely different. It will not be necessary to cancel the meeting with the supplier. Options will be to either prolong the existing price agreement for an unspecified number of months ahead, or to agree on a floating price, which is linked to the daily prices at the London Metal Exchange.

The price was still above moving average when the third article about technical analysis was written in July 2007, and consequently we had nothing but the early warnings from the mathematical models. Naturally, the price of aluminium has developed since July, and we can see the price development since the last article in figure 2.

As you can see, the price broke through the simple moving average in August, and this is the final confirmation of the early warnings, which our third article described in July. It is really praiseworthy that the international metal markets have decided to demonstrate to the readers of this article how early warnings are followed up by a final confirmation and a decline in prices. This opens up for a long-term downward price trend. There are no 100% guarantees in this world, and technical analysis can also give false signals. But generally speaking it is highly probable that it will be sensible to heed the signals. At least we can conclude that it made sense to listen to the early warnings, as prices have now started a downward trend.

We have had the early warnings from the mathematical models, and now we have had the decisive indicator – a break through the simple moving average. When, and not before, this break-through comes, is the time to act. Such a break-through is most often followed by 1 or 2 years of falling prices, and this is what we will have to prepare for. How do we secure the best price in such a falling market? By entering into price agreements with the supplier, where the invoiced price depends on the market price, which in this case is the price at the London Metal Exchange. This way we ensure that falling market prices also result in falling invoiced prices from the supplier.

In practical terms there is a difference depending on whether you buy raw materials or finished components, but in

theory the same treatment is required: If the prices of aluminium drop over a prolonged period – which is what we expect – then we will have to ensure that the price will go down in step with falling market prices. If we buy raw aluminium in sheets that we process ourselves, then the price is easier to identify in relation to the market price. If we buy more or less processed components, where aluminium may be one of a number of raw materials, then it becomes harder to identify the price. In this scenario one has to look at how many kilos of aluminium have gone into the products and then calculate prices on that basis. In complicated instances it may be necessary to split up the final invoice price into wages, various raw materials and profit before designing a price formula, which is fair to both parties. The overall message is simply that we have to ensure that we benefit from falling prices. It is important that we benefit not just at the beginning but over the entire period when we consider a price trend continuing for a year or two. Much too often purchasers enter into agreements where suppliers have clauses concerning possible price increases, but at the same time they deftly avoid clauses concerning falling prices.

Undoubtedly some will react to the previous claim that aluminium is headed for a long-term downward trend. Some suppliers and analysts have their own agenda and analysis. In cases where we expect falling prices and where the supplier expects increasing prices, it would be an obvious possibility to simply agree the LME market price – in this case both parties, at least in the short run, ought to feel reasonably covered. However, we have to take the buyers' perspective here and take those actions, which are the most responsible and probable, i.e. an expectation of a long-term fall in prices. As previously said: There are no guarantees regarding the outcome. However, should this downward trend at some point stop and instead reverse into an upward trend, then we are faced with a new situation, and this is where the technical analysis will send the appropriate signal. This way our action pattern is no longer determined by routines and fixed annual negotiations, but instead by flexibility. We adapt to a dynamic world having a flexible action pattern. Should the price begin an upward trend, then we will adapt by entering fixed price agreements with the supplier. It is as simple as that. The world is dynamic, prices change constantly, and

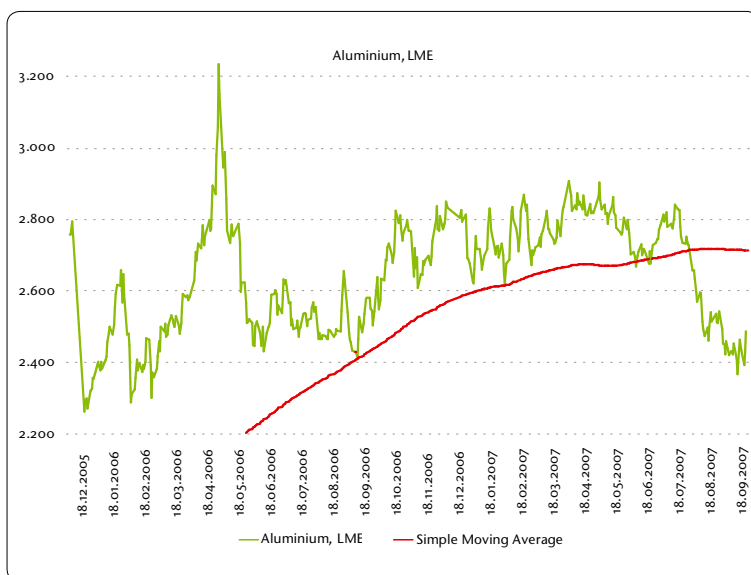


Figure 2. The price of aluminium and simple moving average. Source: London Metal Exchange and Kairos

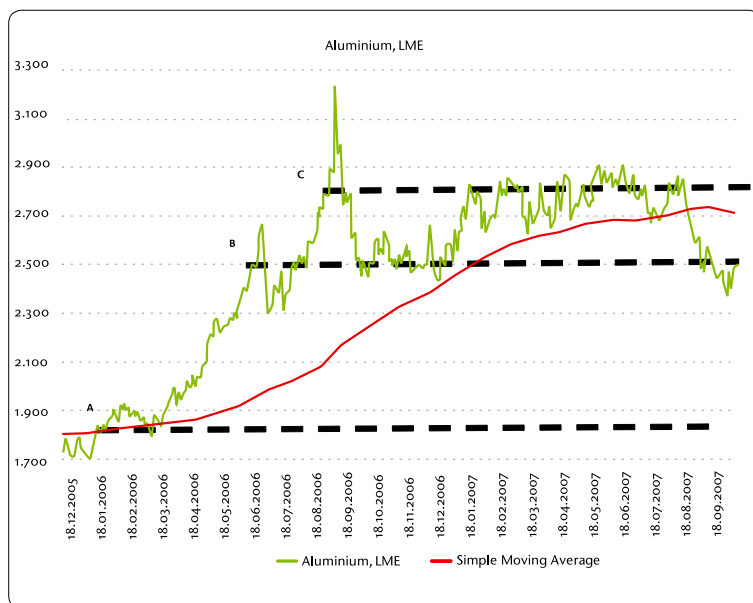


Figure 3. The price of aluminium and three examples. Source: London Metal Exchange and Kairos

we have to be able to handle both types of price trends. The last price trend started in 2003, i.e. an upward trend for four years, which is a little longer than average. We have to change our action pattern when the price trend changes. As purchasers we need to have two hats hanging on the wall behind our desk. One hat is for the upward price trend, the other is for a downward price trend.

We have now examined how prices can be secured in a falling market by linking the invoice price to the market price / exchange price. In an increasing market (which we have had for the last four years) we will have to negotiate with the supplier about fixing prices for a suitable period. The short version is that falling markets have to be handled using floating prices, and increasing markets have to be handled using fixed prices.

When is the right time for fixing prices? This is the essential question. The whole basic principle of "Kairos", which is DILF's new raw materials portal, is the important timing. Good negotiation skills are important too, but timing is the most important thing. Let us illustrate this with a practical example: Please see point A in figure 3. At this point the price breaks through the simple moving average, in an upward direction, and here Kairos tells us that this is the right timing for buying. We have to actually, physically buy, and we also have to call in our supplier in order to negotiate the price and establish a 2-year fixed price (depending on company policy, a decision can be

made to fix the price for 1 or 2 years). As appears from point A in the figure, the break happened at 1800 usd/ton, and a 2-year fixed price might be negotiated at a little above the 1800 usd/ton.

Normally we might not call in the supplier at this point in time, but instead when the current contract expires. Let us, in this example, say that this is December 2005, which is marked as point B. At this point we may be able to fix the price at 2500 usd/ton. This is not a bad price to fix the contract at. As can be seen from the dotted line, 2500 usd/ton is below the market price over the next two years. So we have done a fairly good job as purchasers by buying at point B at 2500 usd/ton (we have consciously chosen not to show a less fortunate example such as point C, where prices are fixed at the top of the curve – even though we have seen far too many examples of this actually having been done).

By using the dynamic models in the technical analysis, we will get, as previously mentioned, a signal already at point A. Therefore we call in the supplier for a meeting and fix the price at perhaps 1900 usd/ton. This is a far better point of departure than 2500 usd/ton, and the technical analysis tells us that it is a secure time to fix the price. Consequently we call in the supplier merely six months before point B, where the contract is going to terminate, and this way we get a substantially better price. These six short months make all the difference. So timing is entirely essential. It would not be

an exaggeration to say that timing is more important than negotiation skills. At point B I can negotiate 2500 usd/ton, while an even bigger company, with a bigger budget and really good negotiators, might be able to force through a price of 2400 usd/ton when buying. But they will not be able to squeeze the price down to 1900 usd/ton no matter how good negotiation skills they might have. So: negotiation is good, timing is better. The whole idea is to use a dynamic model and act at the right time – and that way get the best result. Consequently the DILF raw materials portal has a tagline: "Kairos...because timing matters". There will be ample need for negotiation skills when we draw up the contract, but we need to get the timing right first.

This should provide action plans for increasing and falling markets respectively. As purchasers we have to be able to handle both types of situations, because there is serious volatility in raw materials markets, and it has become even more serious over the last few years. Consequently knowledge about and insight into the volatility of raw materials markets is decisive input for the sourcing plans of the company and should constantly be awarded a substantially greater importance as a determining factor than for example expiration of contracts – the latter being sourcing exclusively in accordance with Chronos – the god for linear time – but raw materials should be sourced, to a much larger degree, in accordance with Kairos – the god for the opportune moment.

Financial covering/hedging

In purchasing situations we typically focus on securing the prices of our physical supplies, either by agreeing fixed or floating prices. But there is another aspect, which has traditionally not received the same kind of attention in purchasing – the financial securing of prices, also called hedging. There is no tradition for focusing on this in purchasing, as the finance department is often in charge of this. Typically the finance department takes care of hedging currencies. However, currency is only a very small part of the company's risk picture. In connection with substantial raw materials risks the purchasing department and the finance department should cooperate in order to provide the best possible hedging.

Before we consider financial hedging, we first have to be certain about the company policy in this area – also called its

Goal	Policy
"To safeguard that the purchasing budget is not exceeded"	Defensive policy
"To ensure the earnings of the company"	Responsible policy, aligned with the overall goal of the company
"To obtain competitive advantages by getting better prices than competitors"	Offensive policy, aligned with the goal of sales

Figure 4. Some objectives for commodity risk management. Source: Kairos

"appetite for risk." Companies can be more or less prepared to cover or absorb their risks, and any policy may be equally valid. What exist are different objectives, as can be seen from figure 4.

Objective policy

First it is important to align the risk profile of the company with top management in order to identify the suitable type of financial hedging. These could be examples:

Defensive policy: Purchasing only has to secure prices of physical supplies, and the financial hedging is used by the finance department only in relation to currencies.

Responsible policy: Purchasing only has to secure prices of physical supplies, and the financial hedging is primarily used in emergencies. An example could be that aluminium prices have been fixed at the top (like point C in figure 3), and it has been discovered that a downward trend has started. This normally means that no benefit is derived from falling prices as the contract price has been fixed. However, the negative impact can be minimized if financial instruments, such as futures or options, are used in cooperation with the finance department. Consequently, a large fall in the market price will result in a heavy loss on the physical supplies, but in a corresponding gain in the financial market. This way the company hedges against a loss.

Another example is that some suppliers in certain industries have become very reluctant when it comes to entering agreements with fixed prices. The price increases of the last four years have negatively affected some companies, and consequently certain suppliers no longer dare fix prices for long periods of time. You cannot force the supplier in such cases, but you can use the financial markets to fix the price and that way achieve the same result.

Offensive policy: Purchasing secures prices of physical supplies, but at the same time uses financial hedging to-

gether with the finance department in order to maximize company earnings, and not just to cover losses.

It is important to know the financial instruments, such as futures and options, but it is a separate issue for another article. However, the primary task for purchasing is to secure the right purchasing prices, no matter whether you use financial instruments or not. Companies will always be subject to very volatile raw materials markets as long as they sell products made from raw materials. So far we have been tossed helplessly around like wooden rafts on the open seas of raw materials markets, but now we have tools that can help us in the same way that a ship has a compass and a barometer to aid its voyage. We have the possibility of seeing what is approaching and navigate accordingly. This enables us to make flexible and dynamic action plans for purchasing our raw materials. To do nothing is actually the most risky strategy – because that way one is entering a gigantic bet that all markets will fall – the problem is, of course, that it is a small number of the passive companies that realize how risky it is to do nothing. /

Specific fundamental and technical analyses for a wide range of raw materials are available, for a subscription fee, at Kairos website: www.kairoscommodities.com