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**QUARTERLY INSIGHTS ON STRATEGY AND MARKET DYNAMICS** 

# COLLAPSING DEMAND: CAN A PRICE WAR BE AVOIDED?

### SPOTLIGHT ON THE POTASH INDUSTRY



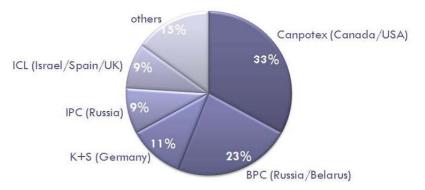
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## HAGEN LINDSTÄDT, PETRA DIETL

No other industry has been on such a rollercoaster ride. In 2008, potash prices sky-rocketed – and continued their upward surge even when demand started sagging -, in 2009 they took a deep fall as demand collapsed. Admittedly, this is an extreme example. But it is just one of many instances where the global crisis caused a drop in demand. Price wars loom everywhere, and they threaten to affect the long-term profitability of entire industries, in particular those with oligopoly structures. What are the factors driving market dynamics in such situations – and how can the downward spiral be avoided?

## THE CHALLENGE

The global potash industry is in the hands of a few suppliers. Some of them maintain export partnerships, of which the two largest ones – Canpotex, the US-Canadian joint venture between PCS, Mosaic, and Agrium, and BPC, the Russian-Belarusian exporter representing Belaruskali and Uralkali – account for more than half of all potash sales worldwide (exhibit 1). Next in line is German-based Kali + Salz, followed by a group of others.



Percentage of production for companies and large export cooperations in 2008 Source: Institute for Management, Karlsruhe University/KIT (own research)

### WITHIN JUST A YEAR THE AVERAGE POTASH PRICE HAD MORE THAN TRIPLED

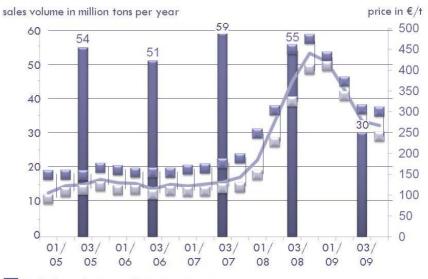
### THE POTASH IN-DUSTRY IS CLEARLY AT A CROSSROADS

Until mid-2007, the industry was relatively stable. Price levels remained more or less constant; sales volumes changed in line with the consumption of fertilizer (for which potash is almost exclusively used). In late 2007 there was a drastic change in dynamics: first the spot market price surged – which, interestingly, had no material impact on sales volumes –, then in early 2008 there was another price increase which also hit the tender market. Within just a year the average potash price had more than tripled.

How could this happen? Two factors played a major role: One was the market's low price sensitivity, as exploding wheat prices enabled farmers to spend generous sums on fertilizers. The second was suppliers' enormous price discipline – no one attempted to undercut the other one's prices.

In II-2008 the peak had passed. When wheat prices fell (due, among other things, to the financial crisis) but potash prices were still relatively high, demand started sagging as price sensitivity went from low to high. Farmers would empty their potash stocks, or leave their fields without potash fertilizer for a season, or simply cut down the doses.

During all this time the second major price driver – suppliers' price discipline – still remained surprisingly stable. Then, in 2009, when the crisis finally hit the industry, the added pressure from global overcapacities and low utilization caused prices to tumble (exhibit 2). Today, potash prices are roughly 40% below the 2008 maximum, but still nearly twice as high as in 2007. Just how long they will stay there is an open question. The potash industry is clearly at a crossroads.



total sales volume in million tons per year
worldwide average price with maximum and minimum average prices of competitors
Source: Institute for Management, Karlsruhe University/KIT (own research)

DEMAND COL-LAPSES CAN SEND ENTIRE INDUSTRIES INTO SHOCK

If fixed costs are high – which is true for the majority –, shrinking sales are bound to put pressure on margins. Only if capacities can be scaled down will companies be able to reduce their fixed capacity costs to offset the lower volume, at least in part. That is not always possible, though, or it may involve considerable extra costs. In those cases, players will often make desperate attempts to fill their capacities at the expense of others – by cutting prices. A downward spiral is set in motion, and it can damage the industry's long-term profitability much more than the demand downturn alone would have.

So what can companies do when demand sags? Is a global price decline the only way to go? Or are there strategic measures to maintain profitability – in particular when the market is dominated by a handful of suppliers?

## THE RESPONSE

The good news is: a price war is not inevitable. But it does take plenty of discipline and strategic circumspection to stop price decreases before they develop their own dynamics. Companies in oligopoly industries have to realize that they are not masters of their own destiny – rather, the actions of all market players will ultimately determine everyone's fate. It only takes one single company to cause serious difficulties for the entire industry. The order of the day, therefore, is to avoid overheated reactions – and to analyze the situation coolly and thoroughly, then determine the most promising strategic route.

The following four questions will guide the analysis. To illustrate the meaning, we will include a few considerations referring to the potash example.

## A PRICE WAR IS NOT INEVITABLE

## 1. How will the overall price elasticity of demand develop in the medium term?

A lot depends on the answer to this question: if demand is expected to stay low in the long run, the player that is quickest to adjust its prices may win in the end. Things can look very differently, however, if midterm dynamics are more positive: in that case, suppliers adjusting too quickly to an expected low in profitability may well trigger an unstoppable process.

In the case of potash, price elasticity largely depends on the price of wheat since the cost of fertilizing is only acceptable up to a certain share of wallet. There are strong factors pointing to a decrease in price elasticity within the near future: most analysts expect the wheat price to increase medium term. And once farmers have emptied their stocks they will need to buy more fertilizer; at the same time, they may reconsider the volumes needed when the impact of the currently lower dosage starts showing – which is not until the second harvest after the change.

# 2. Will suppliers' price discipline hold long enough to avoid a downward price spiral?

This is much more difficult to predict as it requires a sound judgment of competitors' reactions. For the potash industry, it will be key to avoid strong price decreases over the next nine to twelve months (or until demand can be expected to recover).

As a general rule, companies first need a monitoring system to detect price attacks into their own customer base. Such attacks can mark a strategic breakpoint, and experience has shown that they are often directed against minor customer accounts and thus harder to detect.

Second, powerful ways to keep a price discipline include mechanisms for limited retaliation, in order to effectively discipline competitors. It also helps to divide up the overall market into segments where competitors can establish a home turf logic.

### 3. Can capacities be scaled down to take away margin pressure?

Operating at excess capacity – in many industries, utilization is less than 70% – puts pressure on companies' margins due to fixed capacity costs. And apart from strategic pricing decisions, it is actually the changes in capacity which drive an industry's prices in the medium to long term. In an excess capacity setting, downsizing can be one of the most powerful ways to keep prices stable for a while. Of course it may also come at a cost, as it may spoil individual players' chances of gaining market share once demand is back to normal. The European steel industry is currently struggling with this dilemma.

### STRONG FACTORS POINT TO A DECREASE IN PRICE ELASTICITY

PRICE DISCIPLINE REQUIRES MECHANISMS FOR LIMITED RETALIATION

DOWNSIZING CAN BE MOST POWERFUL TO KEEP PRICES STABLE

# 4. Are there any profound structural changes to be expected in the industry?

This question refers to factors that can change the face of an entire industry such as customers' buying power, technology leaps, or substitutes.

In the potash example, we have a spot market and a large-tender market (mainly China and India) with very different dynamics: in the bulk market, single players' risk of losing large volumes is much higher during bidding periods while the situation is rather stable in between; the spot markets distributes risk more evenly over time. Also, customers' market power is obviously greater in the large-tender market: at the time of the price surge, Asian bulk buyers would obtain potash up to 40% cheaper than spot market buyers.

STRATEGY DEVEL-OPMENT WILL FIL-TER OUT SCENA-RIOS INCLUDING COMPETITORS' REACTIONS When faced with collapsing demand, companies need to understand the logic, impact, and break points of the economic forces at work. What are the factors driving demand, price sensitivity, and capacity utilization in the industry, and will these drivers be affected by structural changes?

In analyzing these questions, however, companies should not expect to eliminate all uncertainty to the point where they arrive at one single scenario. Instead, strategy development will begin by filtering out, from the limitless range of possibilities, a set of scenarios describing likely future developments, including competitors' reactions and their impact on all players. It will then require determining the strategic approach that offers the best robust combination of upward potential and downside risk against this set of scenarios.



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