



natural gas, and its byproduct, ammonia (also known as nitrogen hydride, NH<sub>3</sub>).

Farming mixes nitrogen, phosphate, and potash for application to the soil. But in the stock market, companies producing a mix of chemical and mineral fertilisers are assigned an asset discount. That is because the cost of natural gas makes up about 90% of the cost of producing ammonia and its fertiliser off-takes. You might say that nitrogen fertiliser is nothing more than the conversion of a gas into a solid, but with greater profitability than the feedstock.

There is an obvious reason the profitability of this conversion causes the market to devalue the chemical fertiliser companies - the price of natural gas can go sharply up, and down, in tandem with crude oil. Volatile energy pricing makes for unpredictable costing and, if you are stuck at the end of the fertiliser production chain, squeezed profitability. So, when you are in the nitrogen business, you find that the market does not like you as much as when you are in the potash business. The underlying fundamentals of demand for fertilisers - more mouths to feed, more food at a higher price, less land to grow it on, premium pricing for the fertilisers essential to lift crop yields - favour the market caps and valuations of pure potash plays. In the global market, there are very few of these. Russia happens to host two of the big three - Uralkali and Silvinit.

It also happens that, at the beginning of time, the great global manure god favoured the production of nitrogen fertiliser in Russia as well. That is because Russia is endowed with the world's largest reserves of natural gas, and the world's largest producer and exporter of gas, Gazprom. So long as the Russian economy was under Soviet control, the economics of gas pricing were driven by the domestic priority of holding gas prices down, and the relatively higher priority of limiting the cost of fertilisers, in order to sustain agricultural yields, raise crop output, and achieve self-sufficiency in food supply. Then, after the collapse of the planned economy, a decade of asset larceny and cashflow fraud followed.

Recently, another way of thinking about fertiliser occurred to a fresh group of Russian entrepreneurs connected to the production and sale of gas. Because that business is dominated by Gazprom, and because this is more a ministry than a corporation, the entrepreneurs we are talking about happen to be government officials, or Gazprom officials, or some combination of the two.

Here is what they have been thinking: If nitrogen products, like ammonia, are mostly gas, and if the profitability of selling gas in the domestic, price-regulated market is lower than the price of selling gas derivatives in the export market, then why not buy up Russian exporters of ammonia, and enjoy the bigger profit margin at the point of export sale?

That is a rhetorical question; the answer is obvious. But this is not quite so for those divisions of Gazprom, which make their living taking cash from domestic sales to the chemical fertiliser producers. In short,

**Potash:** is the common name for potassium chloride (also referred to as muriate of potash). It is the most common source of potassium. Plants cannot achieve maximum growth and yield without potassium, nor can the functions that potassium performs be carried out by other nutrients. Nearly every aspect of plant growth development, yield and quality is dependent upon an adequate supply of potassium. Potash is mined from ore deep underground or extracted from brine by means of solution mining and is milled on the surface. In its processed state, potash appears as a granular mineral of varying sizes and ranges in colour from white to reddish depending on the presence of trace elements, notably iron, which remain after processing. There are two principal potash grades: Granular/Coarse, and Standard/Fine. Standard/Fine includes white muriate of potash and pink muriate of potash. These grades differ in their particle size distribution specifications. Potash can be applied directly to crops or blended mechanically or chemically with other fertiliser nutrients. The concentration of potash reserves is high, with three countries controlling roughly 85% of the total. A little over 38% of known potash reserves are located in Canada, with Russia second, controlling roughly one-third of global reserves. The third-ranked, Belarus, has 9% of global potash reserves. The potassium content in Russian reserves is higher than in other countries.

**Phosphate:** almost 90% of phosphate rock production annually finds its way into chemical fertiliser products. Phosphate fertiliser demand is therefore by far the most important factor in demand for phosphate rock. Industrial end-use sectors consume around 6% of phosphate rock produced, with animal feed additives making up the remainder. The four largest phosphate-rock producers are China, the US, Morocco and the former Soviet Union, which account for about three-quarters of global phosphate rock supply. Several procedures are used to convert mined phosphate rock into usable fertilisers. Each process produces a fertiliser material with unique characteristics. The final product may be a dry granular material or a liquid.

**Nitrogen:** all commercial fertilisers contain their nitrogen in the ammonium and/or nitrate form or in a form that is quickly converted to the ammonium form once the fertiliser is applied to the soil. World production of ammonia was 121.6Mt in 2006, with Asian countries accounting for approximately 64%. Higher natural gas prices have contributed to higher nitrogen fertiliser prices. ☺

some departments of Gazprom favour investing in downstream fertiliser production, and holding down the cost of gas, so as to increase the profit margin for fertiliser exports. Other departments of Gazprom favour the highest domestic price of gas they can fetch - and keeping their cash-paying customers, the ammonia converters and nitrogen fertiliser manufacturers, without taking them over.

There are billions of US dollars at stake in the contest between these factions. Accordingly, the decision has been kicked up to the Kremlin, where President Vladimir Putin's advisers are still thinking which way to go.

Last December, a strategy for downstream acquisitions of fertiliser companies was drafted by Sibur-Mineral Fertilizers (SMF), a brand new unit of Sibur, and flag-waver for the fertiliser takeover crowd.

Sibur Holding, in turn, is the semi-divested downstream production and sales division of Gazprom. Headed by Dmitri Konov, it has a product portfolio including most of the petrochemicals (76% of revenues); tyres (16%), plastics feedstocks and chemical fibres (8%). Audited revenues in 2006 totaled to US\$4.5bn.

The holding's motto, headlining its website, is 'the art of subtle transformation'. Just how subtle Sibur needs to be is spelled out in the small print of the auditor's notes to the International Financial Reporting Standards' financial statements for 2006. Referring to Russian transfer pricing rules, introduced in 1999, making taxable transaction prices that differ from market prices by more than 20%, the notes caution: 'it is possible with the evolution of the interpretation of the Russian transfer pricing rules...that such transactions could potentially be challenged in the future.'

Head of the new SMF is Andrei Teterkin, a petrochemicals executive at the defunct Yukos Group, then head of strategy for the Evraz steel group. In February 2007, he took charge of SMF. In May 2007, he got the SMF board to accept what the company briefly described as 'the concept of the development strategy focused on further company's growth in Russian mineral fertilisers market.' According to an industry analyst, "I do not believe Gazprom allows SMF to swim

alone in the sea, so these papers were jointly produced, and it is difficult to identify where the head sits."

To build momentum behind his fertiliser asset plan, Teterkin has briefed Moscow investment banks on his business plan, and leaked pages of it to the Moscow business media. The idea started to become public in July 2007; namely, buy up the Russian fertiliser makers, which depends on gas, and raise profitability on the spread between the cost of the input and the value of the output. SMF currently owns 76% of Kemerovo

Azot Joint Stock Company (ammonia) and a minority stake in Orton JSC (Kemerovo), which it took over from the holding structure. Early in September 2007, it announced the purchase of a 3.15% stake in Perm Mineral Fertilizers (PMF). Another 31% or more of PMF has reportedly been sold to an unidentified consolidator; this looks to be Teterkin. The price paid of about US\$200m, according to industry analysts, was at a 40% premium to the market valuation of PMF. Teterkin is also reported to be negotiating for an increase in SMF's 14% shareholding in Rossosh Minudobreniya.

Just how small mineral fertilisers amounted to in Sibur's business was reported in the financial statements for 2006, before SMF was formed. In that year, sales of mineral fertilisers came to just US\$132m, just 3% of Sibur's aggregate sales. According to Teterkin's strategy document, SMF currently holds just 9% of the Russian nitrogen fertilisers market. By 2009, he aims to take a 50% share.

Among the nitrogen fertiliser producers targeted for takeover so far, the biggest is resisting; this is Togliatti Azot (ToAZ), which is controlled by chief executive Vladimir Makhlai. ToAZ is the largest of Russia's ammonia producers, and the single largest cash customer for Gazprom. The takeover attempt has also involved regional government tax checks, and a civil lawsuit alleging transfer pricing violations (now dismissed). Direct negotiations between Sibur and ToAZ were reported in April 2007. Eight months later, no outcome is clear.

Another target has been the Odessa Port Plant (OPP), the second largest fertiliser producer in the Ukraine. On 12 September 2007, however, the government in Kiev intervened, issuing an immediate ban on the scheduled privatisation sale of the company for fear that it would pass into Russian hands. The SMF strategy document totes up the acquisition cost of ToAZ, OPP, and various sized stakes in other Russian companies at more than US\$3bn. If successful, the Teterkin plan estimates the capital value of SMF in 2009 at US\$5bn.

Teterkin's acquisition plan for SMF goes further than nitrogen fertilisers. His proposed buy-back of apatite assets, reclaimed by the government from the Yukos group, would establish SMF strongly in the phosphate business. Teterkin aims at taking control of the potash fertiliser companies as well. A source, who has been shown the SMF business plan, said: "My personal opinion is that the potash part of the plan is far from alive, but it is there, in the papers."

Teterkin's scheme, as it has been reported from the SMF business plan, concedes that SMF will need a local partner to accumulate the capital and cash required to enter the potash market. But if that can be negotiated, the plan calls for an aggressive takeover of potash miners. According to the Teterkin plan, if he gets his way, by 2009 SMF will hold 58% of the home market for ammonia; 65% for phosphate (apatite) fertilisers; and 48% for potash fertilisers.

Mikhail Stiskin, fertiliser sector analyst at Troika investment bank in Moscow, said: "For now we see

Below: Vladislav Baumgartner president and chief executive of Uralkali



that Sibur assigned a separate entity for fertilisers. The growth of this entity seems logical as production of these two significantly depends on the gas, which Gazprom can supply. For now Sibur-Mineral Fertilisers doesn't have any serious assets, but the trend is very clear - it is that Sibur does not want to limit itself only to nitrogen fertilisers, but to move into potash and phosphates. The logic is that the companies producing all three types of fertilisers, and which can mix them to produce mixed fertilisers, are quoted at significantly higher multiples than single fertiliser producers. As to the multiples, the potash producers have the highest within the fertiliser industry. If Sibur will go this way it will have to acquire Silvinit and Apatit. Both companies have problems in management, and can be pushed to lower their sale value by Gazprom."

Uralkali, Russia's largest potash producer and the world's largest pure potash play, is already too big for SMF to swallow, according to industry sources. Uralkali's market capitalisation was US\$6.2bn before the completion of its initial public offering in London in October 2007. The company floated 10% of its stock on the London Stock Exchange and in Russia for a reported price of US\$2.8-3.5/share.

That exposes Silvinit to a Sibur takeover. Yelena Sakhnova, an analyst with the United Financial Group in Moscow, said: "I really doubt Pyotr Kondrashov will sell Silvinit to Sibur. It is hard to guess what will happen to potash prices if this purchase will be made. I saw the Sibur plan and can tell you that it has all assets in the industry you can imagine."

"There is no doubt that the fertiliser industry has to be consolidated", said Marina Alexeyenkova of Renaissance Capital, "as everything depends on gas prices, which are rising. I saw the [Teterkin] strategy and can confirm it has Silvinit and FosAgro there." A source close to Silvinit said that a recent decision by Silvinit's board to lift dividend payments to shareholders by eight times, compared to 2005, is strongly suggestive of the belief on the board that Gazprom will use its muscle to back an SMF takeover.

The parallel moves by SMF into phosphates and potash can be delayed. But sources inside the fertiliser industry say they believe the strategic momentum of state intervention to control the price of fertilisers to the Russian farm market cannot be resisted. Concern for the rising prices of farm grains, and of bread, have been troubling election campaign managers for the Kremlin for months. The appointment of Victor Zubkov in September 2007 as Russia's new prime minister is likely to reinforce the sensitivities of the new government to farmers and consumers; Zubkov's early career was as an administrator of collective farms in the Leningrad region.

A well-placed source in Moscow said: "the impact of SMF's takeover of

Silvinit, which now looks probable, is that Gazprom will direct a sizeable part of its potash production to satisfy demand in the domestic market. The government's anti-monopoly agency has already sent public signals that the price of potash is too high for Russian farms to afford. So you can expect that Gazprom will certainly consider the wishes of Russia's agro-industry."

This in turn is likely to impact on the volume of Russian exports of potash, part of which are managed by Belarusian Potash Corporation (BPC), a joint venture of Uralkali and Belaruskali. (Silvinit does not market its exports through the BPC.) Silvinit, according to industry sources, cannot lift its production capacity by much; Uralkali can. The latter announced that in the eight months to 31 August 2007, it turned out 3.4Mt of potash; this is up 33% on the same period of 2006.

If Gazprom eats Silvinit, it is anticipated that Silvinit will be obliged to satisfy the government's priority, and divert its current export tonnage of potash to domestic sales. Company reports indicate that in 2006 Silvinit produced 5.3Mt of potash (up 7% on 2005). Export volume were up 80%. Counting both Silvinit and Uralkali, domestic supplies of potash in 2006 amounted to about 1.5Mt. Annual consumption of potash fertilisers in Russia has been projected by the federal government to double in three years to about 2.4Mt.

Diversion of 1Mt from export - about 14% of the current export total - would be felt immediately as a deficit of Russian potash available for sale internationally. That market has already been feeling the impact of 3% to 5% annual growth of demand, and prices have been rising sharply. Teterkin's business plan for the great Russian fertiliser takeover has yet to be fully endorsed by his bosses at Gazprom and the Kremlin. But the scramble for assets is already transmitting a signal that, for supplies of potash over the next two years, the commodity market should be prepared to accept higher prices. Accordingly, the stock market is preparing a wager on the acceleration of share prices for the potash producers. ☺



Left: Uralkali fertiliser plant in Perm region, Russia.