

Russia's Pipeline Overstretch: Market Monopolisation at the Expense of Reliability

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Abstract

The Nord Stream pipeline, which is going to reach full capacity this year, is a crucial tool for Russia's long-term influence in the EU gas market. In times of high uncertainty over future gas demand and market structure, it has the dual goal of cementing market share at oil-indexed (or in other words, high) prices, and strengthening Russia's market and political power vis-à-vis Ukraine by creating overcapacities for gas transport to the EU. Although not the most efficient transport route to the EU market, the pipeline may realise modest gains in transport efficiency in comparison with the Ukrainian corridor as production moves to the Yamal peninsula. Nord Stream is thus hugely advantageous for Russia, while it is not of particular value from an EU perspective. Meanwhile, the proposed South Stream pipeline is less efficient in terms of transport economics. Russia's strategy to construct new costly undersea pipelines is eroding Gazprom's reliability and competitiveness: Investment resources are being diverted towards long-term potential benefits of market monopolisation, while investments of immediate necessity in storage and production are being postponed.

Gazprom's Nord Stream pipeline through the Baltic Sea is close to completion and will possibly reach its full annual capacity of 55 bcm this year. This will realize Russia's first "Ukraine bypass" project. It implies that Russian export capacities to the EU will stand at roughly 250 bcm at the end of 2012, while actual exports in 2011 were merely 112 bcm—not even half of the expanded capacity that Nord Stream will contribute to. Meanwhile, Gazprom has been ordered by Putin to start construction of a second pipeline project, South Stream, during 2012. It has a planned annual capacity of 63 bcm and is intended to run through the Black Sea to Bulgaria. Costs for both pipelines may reach €40 billion. This strategy of building significant overcapacities begs the question why was it pursued in the first place?

Context of Gas Markets in Russia and the EU

Gazprom is highly reliant on export markets for gas—they contribute 70% of revenues, while only receiving about 40% of Gazprom's total natural gas sales. This predisposes Gazprom towards pursuing a strategy aimed at preserving high prices in export markets. Even though Gazprom pays lower taxes in comparison to the oil industry, it is Russia's biggest taxpayer because of its sheer size. Not only this fact, but also its huge cash flow that can be used for various inefficient and politically motivated investments in Russia and abroad, account for the extraordinary interest among political actors in maintaining and strengthening the export vector of the company. Thus, even assuming that the Russian political leadership and Gazprom are separate entities with differing interests, and while they may come into conflict over raising internal gas prices,

they both agree on a strategy to extract maximum value from export markets.

In Gazprom's main market, the EU, gas supply has been severely shaken up by the EU's market liberalisation policies, and the coincidence of the technologically driven "shale gas revolution" in the US with an economic downturn in the EU. This helped the arrival of significant quantities of liquefied natural gas (LNG) into the EU market, while demand has been depressed, greasing the wheels of gas-to-gas competition. The emerging spot markets for natural gas, in conjunction with persistently high oil prices, are severely depressing the balance sheets of EU utilities, which are mostly bound to suppliers by oil-indexed long term contracts. The traditional structure of the market, which meant that EU utilities could easily take on oil-indexed long-term commitments as they could be certain that they could sell their products, is gone for good. So is the once unwritten rule of the European gas industry that no upstream or downstream partner would pursue profits, while the other is making losses. In their adversity, utilities try to negotiate with suppliers or take them to arbitration in an effort to replace oil indexation with other benchmarks or spot prices. The problematic issue is not so much long-term take-or-pay commitments, but rather the lack of competitiveness of oil-indexation in the current context.

Nord Stream: in Pursuit of Long-Term Structural Effects

In this context, Gazprom's declared goal is to restore the integrity of oil-indexed long-term contracts by limiting the purview of the market. To achieve this, Gazprom made only modest concessions on its long-term contracts with some minor customers or enterprises in

which it shares ownership, but resisted any redesign of oil-indexation. As other upstream players have been more flexible, Gazprom's strategy resulted in a loss of market share, while prices stayed high in line with oil prices. This "value maximization" strategy, which is pursued instead of prioritising the enlargement of market share, seems to be somewhat at odds with the ambitious program for export pipeline construction.

This signifies that Nord Stream is not primarily about rapidly increasing market share. This remains a future possibility, but the prime reason for constructing the pipelines is to divert gas flows away from the Ukrainian corridor and to trigger structural effects in the target markets by way of a large investment project. Also, as Ukraine is currently reaping a transit rent from its position as the main transit country for Russian gas, and as subsea transport consumes less fuel gas for transport, Nord Stream may be a more cost-efficient way of transporting gas to the North-Western European market in the long run. This is helped by the fact that Gazprom passed substantial investment costs that are connected to Nord Stream on to EU utilities. But due to its high construction costs, Nord Stream is less efficient than comparable overland routes. Furthermore, additional costs for constructing new storage facilities have to be taken into account, as Ukraine boasts high amounts of storage capacities which have to be substituted if Nord Stream is meant to replace the Ukrainian corridor.

As the expansion of different overland routes, such as Yamal–Europe, would have been more efficient than the subsea pipeline, we are left with the economic explanation of the pipeline being a "strategic investment" aimed at creating a binding effect on consumers, thereby limiting gas-to-gas competition. As the commitment of resources from downstream participants grows with project size, a more expensive project results in a more pervasive and longer strategic effect on target markets and is therefore preferable over a less expensive project from the supplier's point of view. The key is then to get downstream utilities subscribed to the project, despite its non-optimal nature.

In the case of Nord Stream, Gazprom not only succeeded in getting several EU utilities to provide economic resources and take over project risks as shareholders, but also concluded new oil-indexed long-term contracts related to the pipeline. The former limits their economic resources available for diversification, whereas the latter is cementing the oil indexation principle while enlarging subscribed volumes.

The "strategic investment" character of the project is reinforced by the fact that it triggered "adjustment investments" at the infrastructural level in the EU. They are a result of Nord Stream's impact on gas flows in

the EU: Significant amounts of natural gas from Russia will now land on the German shore and travel from North to South-West, rather than from East to West. This will leave the gas transit infrastructure of Central Eastern European countries, such as Slovakia, the Czech Republic but also Austria, idling. It thus necessitated knock-on investments in reverse flow capacities from the West to the East. Although not totally redundant from an EU internal market perspective, these investments are consuming economic resources that could have been used more effectively on diversification and interconnections. Not to mention the devaluation of existing pipelines that did not yet reach the end of their economic lifetime. Also, on a regulatory level, Nord Stream is challenging EU market integration legislation, as exemptions from third-party access are vigorously being pursued by the shareholders of the new connecting pipelines, not only via due process, but also by deploying diplomatic and other resources of the Russian state. This has been partly successful in Germany, where one of the two connecting pipelines was granted exemptions from third-party access.

Concerning Ukraine, the Nord Stream project erodes its position as the dominant transit state for the supply of Russian gas to Europe, which helps to enlarge both the bargaining power of Gazprom and the possibilities to use gas as a political tool. Already, Ukraine pays the highest gas price on a netback value and is Gazprom's best consumer, while enjoying only a modest transit rent. But ironically, Russian interest in taking over the Ukrainian gas network, which has been a long-time goal, has been reduced by the advent of Nord Stream: As Nord Stream is designed as a way of bypassing Ukraine, taking over the Ukrainian gas transit system would bring the former into competition with the latter and create incentives to break Nord Stream's ship-or-pay contract, as the Ukrainian corridor is more flexible due to its storage facilities. But breaking the contract would create a huge backlash for Gazprom in the credit markets, which is therefore not likely to occur. Hence, a takeover of the Ukrainian gas transit and storage system is now less likely than before, as it could not be used to its full capacity, with the commitment to Nord Stream being contractually guaranteed.

To sum up, for consumers in the EU Nord Stream is not a good deal, as it fragments rather than integrates the EU's gas market and is strengthening the market power of an already very potent actor. Also, it helps to uphold oil indexation in the EU's gas market, which is not an adequate solution in light of the large differences in the availability of oil and gas resources in general. The first casualties are the EU's gas utilities, which are locked into their dependence on oil indexation and

have to accept negative margins due to the lower spot market price for gas.

German Corporatism and Geopolitics: Why Downstream Actors Cooperated in Nord Stream

The key to understanding the commitment of EU utilities to Nord Stream lies in politics. In Germany, Nord Stream was kicked off by German chancellor Gerhard Schroeder. Schroeder believed that it was necessary to more strongly integrate Germany and Russia, in order to master competition with China and the US. Even if shrouded in economic terms, what he envisaged was essentially a geopolitical and geo-economic alliance between two land-based Eurasian states that would help both of them become stronger economically, and politically. According to the terms of this “modernisation partnership”, one (Russia) would provide energy resources, the other (Germany) technologies. Economically, high forecasts for future German gas imports that proliferated in the aftermath of the (first) decision in 2000 to phase out nuclear energy helped to justify the project for the less geopolitically minded. In this light, increased gas imports from Russia seemed inevitable in the eyes of society and policy-makers. At the same time, the dominant German gas importer and transmission system owner, Ruhrgas, was focussed more on economics, which led it to reach a contrasting conclusion that did not envisage a huge growth of the German gas market. It was also less sanguine about Nord Stream, rightly seeing the project as the most expensive possibility to bring gas to the EU.

Nonetheless, the Schroeder government ensured partial political control over the gas industry, which eventually led to compliance: It allowed the acquisition of Ruhrgas by power utility E.ON in 2003, even though the cartel office had voted against the deal as it would unduly distort competition. In return for allowing a “national champion” to emerge, the Schroeder government required E.ON to provide assurances that the new entity would invest to ensure “security of supply”. This master-stroke led Ruhrgas to become dominated by an electricity supplier, which, in turn, had to take into account Schroeder’s preferences. Thus, in summer 2005, Schroeder and Putin could preside over the signing of a memorandum that foresaw E.ON Ruhrgas’s participation in Nord Stream. Even so, E.ON Ruhrgas dragged its feet, but was eventually persuaded by the competition from Gazprom’s joint venture on the German market, Wingas, and by reassurances from Schroeder. Although the German gas industry is now suffering from the after-effects of the Nord Stream adventure, the project has proven highly profitable for some other German industries, such as metals and pipe-rolling, and

also process engineering firms. This highlights that there is a broader macroeconomic rationale behind the German inclination to align with Russian interests: Through the recycling of petrodollars, Germany, as well as other competitive and industrialised EU states, tend to get compensated for higher energy prices. The German trade balance with Russia has been almost entirely positive throughout the 2000s. In essence, the gas industry has been exploited by Schroeder via a form of a corporatist arrangement to support German heavy industry in its efforts to gain market share in Russia.

Schroeder also organised public credit subsidies for the project, which made its financing a success. 80% of the bank loans for the offshore section are secured by German and Italian credit insurance agencies UFK, Euler Hermes and SACE. As Nord Stream has been financed in project finance mode, only 30% of the offshore pipeline is being financed by shareholders. Gazprom owns 51% of the pipeline, whereas European utilities contributed the rest of investment. The bank loans, which correspondingly provide 70% of financing, are only secured against the future proceeds of the pipeline, while no recourse to the project initiators (Gazprom and other shareholders) is possible. Concerning the onshore sections, Gazprom financed the Russian section on its own (€3.5 billion), whereas the German sections OPAL and NEL are financed by Ruhrgas and the Gazprom/Wintershall joint venture Wingas (€2 billion). The Czech section of Nord Stream, meanwhile, is financed by German utility RWE (€0.5 billion).

Gazprom committed to a ship-or-pay contract (under Swiss law) between itself and the pipeline consortium Nord Stream AG. It obliges the former to ship a certain amount of gas for 22 years and thus guarantees a future revenue stream for the project. While the problem of insufficient storage capacity in the EU persists, this obligation should be relatively easy to fulfill for Gazprom, as it may shift volumes for the German and French markets from the Ukrainian corridor to Nord Stream as long-term contracts are in place. Thus, while Gazprom is committed to bear the whole cost of the project over its lifetime, the risks are distributed across a broad constituency. The distribution of risks and benefits will help to increase the interest of EU utilities in the financial viability of the pipeline, especially when the ship-or-pay contract has expired, thereby rendering additional long-term take-or-pay contracts with Gazprom likely in the future.

South Stream: Same Goal, but Worse Economics

The South Stream project is also aimed at undermining Ukrainian bargaining power as a transit state, and,

similar to Nord Stream, strives to cement Gazprom's market position in the South Eastern European market. However, while Nord Stream may improve transport efficiency relative to the existing route through Ukraine, South Stream will certainly be less efficient than the current transport route through Ukraine, particularly for Gazprom's more important markets. South Stream is also aimed at a concrete competitor—Central Asian gas producers and the Nabucco pipeline—and is thus being advanced with a tighter time-frame in order to realize a greater strategic effect on the competitor. While it lacks the political support of a strong EU state and EU institutions, it draws on the competition of many small peripheral EU members that are vying for proposed future transit revenues.

The key problem for Gazprom is that it will be much more difficult to secure financing for South Stream in international markets, as shipping guarantees are less credible than in the case of Nord Stream. South Stream is much more expensive, and it comes as the second project, adding further capacities which are not covered by long-term contracts. The odds are that Russia may go for state-backed financing of the pipeline, which

will mean a large takeover of risks by the Russian state and by Gazprom. In any case, the risks for shareholders will be far greater than in the case of Nord Stream.

If South Stream goes ahead, it will signify the triumph of inefficient mega-projects over the more mundane investment requirements in the Russian gas industry. In addition to ordering a speedy construction of South Stream, Putin is also demanding higher taxes from the gas industry. The price for this "all in one chunk" approach will be paid by European gas consumers and utilities, as well as by Russian citizens and Gazprom shareholders (the least captive of all the actors named here). As the winter of 2011/12 revealed, existing export capacities are more than sufficient, while it is insufficient gas storage capacities in Russia that trigger supply shortfalls regardless of the new pipelines. Thus, Russia's approach, which is prioritising big strategic capital investments that reap quick political dividends and may result in the preservation of high prices and monopolised markets in the future, is overstretching its economic capabilities and leads to gross misallocations of capital. This has already become a manifest threat to Gazprom's reliability.

About the Author

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Recommended reading

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