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Workshop Series is a program hosted by European University in which leading energy professionals are invited to present on a specific aspect of their work. These professionals include energy think-tank experts, policy makers, representatives from major energy companies, and ranking members of international organizations. *Workshop Review* is a subsection of *ENERPO Journal* where students relay the content of these presentations and provide commentary.



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Is Gazprom's Pipeline Export Monopoly Under Threat?

—Andras Szekely

Gazprom has a reputation of being the ultimate monopolist, the company on which both Siberian babushkas and German industry are dependent. Since Alexey Miller was appointed CEO of the company, Gazprom has played a crucial role both in the domestic Russian market and in the European gas market. For a long time Gazprom's dominant position was unquestionable in the domestic market, mainly because of two reasons: first, Gazprom owns the pipeline system and was unwilling to provide access for independent gas producers. Second, although regulated gas prices have been growing since the early 2000s (but from a very low base) Gazprom and the independents could barely make any profit in the domestic market (Gazprom became profitable in the Russian market for the first time in 2011). It was its export monopoly - the law on export monopoly was adopted in 2006 - that allowed Gazprom to both finance its giant projects and supply the Russian industry with cheap gas and Russian households with even cheaper gas.

From the point of view of the Kremlin, Gazprom missed two things in the last decade: it wasn't able to reach a deal with China and it also failed to enter the growing LNG market –with the exception of its Sakhalin II project.

There are three arguments for Gazprom's export monopoly: first, for the sake of profit maximization (from the point of view of the state) Russia should avoid a situation in which Russian companies would

compete for the same markets; second, it is in the Russian people's interest to export their national resources through state owned companies (or the state has to control this strategic industry); third, Gazprom needs extra money to be able to supply Russian consumers with cheap natural gas. However, under the surface one could observe slow shifts that eventually challenged these arguments. First, after the Yukos affair, Rosneft became the biggest oil company in Russia (a state owned company!) with a growing gas production capacity. Second, Gazprom itself was lobbying for higher domestic prices - the company needed money for its domestic and international pipeline projects as well as for developing new green fields - that not only questioned the legitimacy of the export monopoly, but also helped independents to increase their market share year by year. In the meantime, the financial crisis, the growing share of LNG in international natural gas trade and the shale gas revolution in the US (and its consequences) pointed at Gazprom's inability to preserve its market share in Europe, entering the Asian market both through LNG and pipeline gas.

From the point of view of the Kremlin, Gazprom missed two things in the last decade: it wasn't able to reach a deal with China and it also failed to enter the growing LNG market –with the exception of its Sakhalin II project. At the same time, independent gas producers have been increasing their market share in Russia steadily. In the mid-2000s the decreasing market share for Gazprom was arguably even beneficial; the company was able to export more to the more lucrative and growing European market (Gazprom even bought Turkmen gas in order to be able to supply both the European and its domestic market). However, Gazprom continued to lose its domestic market share even after the 2008 crisis, when both consumption and prices began to decline in the European market.

Here, it is important to understand that independents increased their share not because they successfully



competed with Gazprom (although arguably it could be a factor) but because of the regulation. The market share of independents and Gazprom in Russia is formed by the delicate balance between transport tariffs (which are lower for Gazprom than for independents), discounts from the regulated prices (that until recently made independents more attractive, as for Gazprom it was illegal) and the obligation to sell gas for households (that is an unprofitable business, except for three regions where Gazprom is the only supplier). Thus, it was the more successful lobbying of independent gas producers in different governmental agencies rather than market competition that has decreased Gazprom's domestic market share from almost 90% in the 2000s to 72% in 2013. In other words, the independents' share (and production) increased not in spite of but, rather thanks to state regulation.

On the 25th of February, Vice PM Dvorkovich instructed both governmental agencies and natural gas producers to work out their own proposal for exporting gas through pipelines.

Open Challenge From Independents

A reason for that, or at least partly, is that Gazprom's challengers have become bigger not only by higher production but, also by acquisitions. Most importantly, Rosneft bought TNK-BP and Itera, tripling Rosneft's gas production. With Rosneft headed by Igor Sechin - who is also the secretary of the Presidential Commission of Energy Affairs - independent gas producers got a major lobbyist. Novatek, too, was a success story. The company managed to conclude a deal and launch the first LNG project of Russia (Rosneft - a partner of Exxon - played a very minor role in the Sakhalin project) in a consortium with Total and CNPC - Yamal LNG

project. Another potential player in the future can be Lukoil. The company has had a very conservative strategy - supposedly to avoid any conflicts - Lukoil sells more than half of its natural gas at the wellhead to Gazprom (thus, Lukoil does not supply industrial or residential consumers at all). However, Lukoil has lately been making joint statements together with Rosneft and Novatek on reforming the natural gas industry.

The independents' share (and production) increased not in spite of but, rather thanks to state regulation.

Having acknowledged that Gazprom itself is not capable of realizing the Kremlin's plan – supplying both Europe and China while at the same time reaching other countries through LNG - the government decided to liberalize the LNG market at the end of 2013. The new law opened the door to ship LNG abroad only for private companies that received gas extraction licenses of national importance before January of 2013 and for operations of state groups from offshore fields - that is Novatek and Rosneft. The logic of this limited liberalisation was the same as in the case of the Yamal LNG project. Novatek's LNG does not threaten a possible Gazprom-China pipeline deal, though CNPC contracted 3 million tons from the project's annual production, such volumes clearly leave room for Gazprom's gas in China. Also, Novatek's owners - Michelson and Timchenko - have close personal ties to President Putin, which indicates that the Kremlin does not have to fear gradually losing control.

The liberalization was a big success for the independents - and for the Ministry of Energy –but they did not stop here. In January of 2014 the CEO of Lukoil proposed a plan that would allow independent gas producers to export natural gas through pipelines. On the 25th of February, at a governmental commis-



sion on energy meeting, vice prime-minister Dvorkovich instructed both governmental agencies (Federal Tariff Service, Federal Anti-Monopoly Agency and the Ministry of Economics) and natural gas producers to work out their own proposal for exporting gas through pipelines. Whatever will be the result, it is a matter of fact that Gazprom's (pipeline) export monopoly is under serious threat. Just a few months earlier it would have been unimaginable that CEOs of independents would openly question Gazprom's export monopoly and even call for its elimination.

It seems that decision makers understood that for the sake of huge (international) projects - such as the Nord Stream, South Stream and the Power of Siberia pipelines or development of green fields - domestic burden on Gazprom has to be limited.

If we have a look at the three arguments for Gazprom's export monopoly we will see that although they have altered since 2006, they have not changed fundamentally. The Kremlin (and other governmental bodies too) do not want Russian gas to compete for the same markets. Also, there is no reason to believe that control over natural gas export has become less important for Moscow. Rather, the Kremlin is just ready to make some concessions and change the means of its control. What really changed it is Gazprom's role in the domestic market, the perception that Gazprom should gasify remote areas, and conduct unprofitable business for the sake of the people (remember the Russian government's plan to introduce European netback prices by 2020). It seems that decision makers understood that for the sake of huge (international)

projects - such as the Nord Stream, South Stream and the Power of Siberia pipelines or development of green fields - domestic burden on Gazprom has to be limited.

A Future Without a Monopoly?

As a consequence, what we could see in the future is limited export via pipeline by independents. The CEOs of both Novatek and Lukoil suggested at the Gastech-2014 conference held in Seoul, that independents could be allowed to export an amount of gas via pipeline proportional to their share in Russia's natural gas production. That means if Novatek produced approximately 10% of Russia's natural gas, the company would be allowed to export 10% of its production. Surely if the government decides to change the law on natural gas export, the regulation will be very specific – more than likely there will be conditions which only some exact companies can fulfill. A possible solution can be a law that clearly defines which companies are allowed to export their products - as is the case of the law on Arctic oil and gas fields.

However, there is another important aspect, geography. It is unlikely that independents will be allowed to export pipeline gas to Europe. Gazprom has built up its infrastructure to Europe for decades; the company has no problem with supplying its customers from its major West-Siberian fields (also a new Russian supplier would challenge Gazprom's long-term contracts in Europe). What provides a real option for natural gas pipeline export by independents in the near future is a possible deal with China. Gazprom has been trying to sign a deal since the early 2000's and the two parties have agreed on everything but the price. If the deal is made, Gazprom will face a need for huge investments - construction of the Power of Siberia pipeline (61 bcm) plus the development of Chayanda and Kovykta fields that are to supply China. Seeing Gazprom's inability to make a deal and the growing demand for new giant investments in the stagnating Russian economy, Rosneft is trying to



get access to the Power of Siberia pipeline. Rosneft has a reputation as a company that can make deals with the Chinese; also, the company has reserves near the route of the future pipeline. The Yurubcheno-Tochomskoe and Srednebotuobinskoe fields have reserves of 387 and 115 bcm, respectively, with the second field to be developed together with CNPC – a fact that probably makes the deal more attractive for China.

As a solution, Michelson (CEO of Novatek) suggested that Gazprom pay the netback price for an independent's gas.

Yet another question is whether independents will be allowed to sign contracts with foreign partners directly. In the Chinese case (the only case that could be realized in the near future) it is unlikely. Russia faces a monopsony in China - that is probably the main reason why Gazprom has not been able to reach an agreement so far - direct deals of independent gas producers with China would even further decrease Russia's bargaining power. As a solution, Michelson (CEO of Novatek) suggested that Gazprom pay the netback price for an independent's gas. Such a scheme seems favorable from the point of view of the Kremlin since it could retain its control over the country's natural gas exports while also avoiding competition between Russian gas in foreign markets.

To sum up, what we could see in the future is limited natural gas export by independent gas producers via Gazprom's pipeline system with geographical restrictions, and Gazprom as an intermediary between independents and foreign consumers. A true liberalization - elimination of the export law and deregulation of the domestic market - is very unlikely under the current political regime. ♦

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American LNG Export to Save Europe From Gazprom is Mostly Hot Air

—Michael Camarda

In the search for ways to punish Russia for its military incursion into and subsequent annexation of Crimea, the US and EU have both imposed sanctions, visa restrictions, assets freezes on Putin's inner circle, as well as suspended Russia's G8 membership. The more vaunted sectoral sanctions, with finance and energy being the most drastic, have not been imposed as of writing. The reason is clear to all that there is significant interdependence between Russia and the EU, especially in the field of energy where Europe receives between 25-30% of its gas and 1/3rd of its oil from Russia. The kind of sanctions that might deter Russia, scare European countries like Germany or Italy too. Such an economic disturbance could derail a European economy that seems on the verge of emerging from a five-year period of negative or flat GDP growth. Street protests continue to rock Athens and Madrid, violence driven by the volatile mixture of high unemployment and austerity programs.

With "little green men" standing triumphant in Crimea, the anti-Kiev Donetsk People's Republic standing firm as of writing, the threat of even more "little green men" entering Eastern Ukraine, and Europe still with a weak economy and energy dependency on Russia, politicians like House Speaker John Boehner or Arizona Senator John McCain see America riding to the rescue of Western Civilization, just like in 1917 or 1941. Save NATO's increased activity, this time Uncle Sam is not brandishing tanks or planes, but ships, and not cruisers or destroyers, but LNG tankers.

The goal for America is to weaken Russia's energy position over Europe through what amounts to energy containment. This idea is not new; it goes

back over 30 years from the Reagan Administration's trying to block the Soviet Union's Urengoy-Pomary-Uzhgorod gas pipeline to supply Western Europe to the more recent trans-Turkey Nabucco Pipeline that would take Azeri and potentially Iraqi or even Turkmen gas westward to make redundant Russia's South Stream through the Black Sea. Both attempts to contain Russia through energy failed. There is much to believe that this current LNG plan will end in the same. What is new in this case is that the potential energy is coming not from a third country but from America itself. The recent shale revolution has turned America from a gas importer to a potentially major gas exporter in the coming years. America is now the world's largest natural gas producer passing Russia. Russia remains the number one natural gas exporter, but some Americans hope to pass them in that category as well. The Shale Gas Revolution truly has been a remarkable "game-changer" for world energy markets, and stands as a testament to the ingenuity of the American small and medium size businessman and to the unique extraction laws in the United States.

This strategy of exporting via LNG American gas to Europe as a means to weaken or perhaps even dislodge Russia from the EU market is so chock full of ignorance of markets and so dependent on numerous unlikely scenarios, that it cannot be seen as anything but mere political posturing in a time of crisis.

With this new export potential set against the backdrop of the Ukraine Crisis, American policy planners, who likely have given up for the time being on ex-



porting a Color Revolution to Russia (given the +80% approval being enjoyed by Vladimir Putin due to the Sochi victory and the Crimean Crisis), now seek to export the products of our shale gas revolution to their European allies in hopes of weakening Russia's geopolitical posture once again. From the Arab oil embargo of the 1970s to the 2006/2009 Gas Wars between Ukraine and Russia, it seems history has not served as a guide—that the overt mixture of politics into the free (energy) market usually ends up a toxic brew for both producer and consumer.

This strategy of exporting via LNG American gas to Europe as a means to weaken or perhaps even dislodge Russia from the EU market is so chock full of ignorance of markets and so dependent on numerous unlikely scenarios, that it cannot be seen as anything but mere political posturing in a time of crisis. Boehner's proposals read more like a wish list of his corporate sponsors, i.e., approval of the Keystone *OIL* pipeline, something entirely irrelevant to the debate of Europe's position vis-à-vis Russia's Gazprom. Let us count the ways American LNG cannot save Europe from Russia, which has been a remarkably reliable supplier to countries that pay on time and in full over the last thirty years, through its state collapse, hardship, wars, and recession.

Boehner seems to have forgotten the fact that decisions between private corporations are almost solely made along the lines of profits, not politics.

On Approval Process

In principle John Boehner is right to demand a faster, clearer approval process for natural gas export. He cites the Department of Energy's own website

showing six approvals in the last three years with 24 still pending approval (a seventh was approved as of late March, a welcome step). What's driving the need for an approval process? Answer: the law. U.S. natural gas exports require federal approval pursuant to Section 3 of the Natural Gas Act with the DOE's Office of Fossil Energy and the Federal Energy Regulatory Commission (FERC). John Boehner calls for quick liberalization. Boehner claims "In response to Mr. Putin's aggression in Ukraine, President Obama should announce a series of steps that will dramatically expand production of American-made energy, beginning with lifting this de facto ban on exports of U.S.-produced liquefied natural gas."

A quiet debate is raging on the sustainability of the entire Shale Gas Revolution. Some see it as a bubble that will soon burst.

As the lifting of this ban would lead to a fully free market situation, there is, for example, the possibility of American gas feeding the growth of China. Hypothetically, China could develop infrastructure linking its LNG facilities to impoverished, nuclear-armed North Korea. Boehner seems to have forgotten the fact that decisions between private corporations are almost solely made along the lines of profits, not politics. But certainly Boehner is right to question a very old law that less and less reflects the US energy reality. Approval processes should be expedited so America is no longer artificially constrained to exporting its natural gas to countries only with which it has a free-trade agreement. Perhaps a simple black list of non-FTA countries should be drawn up, countries whose reception of US Shale gas would be deemed to fall outside "the public interest." This is a debate in and of itself; for the sake of this article, let us assume the US regulatory framework is totally liberalized and US shale gas can be shipped unabated and uninhibited to all corners of

the world. Will Europe somehow then be safe Europe?

Will the Shale Revolution Literally Run out of Gas?

It's the dirty little secret that gets less press attention than it should, the US Shale Revolution is based on significantly higher drilling and extraction inputs than conventional gas require. Despite the attention-grabbing headlines of the USA as the "New Saudi Arabia" and IEA reports that show head-spinning potential, a quiet debate is raging on the sustainability of the entire Shale Gas Revolution. Some see it as a bubble that will soon burst. Call it the cyclical nature of the oil and gas business, the high prices of the mid-2000s drove new technologies that have given us the current gas glut and record low Henry-hub prices in the United

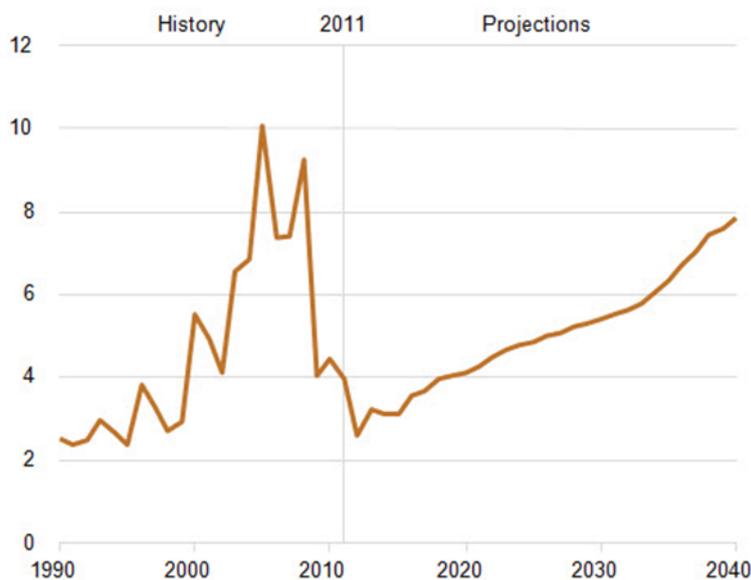
States, the price is likely to increase, as per the IEA (Figure 86). With every dollar rise in the Henry Hub price, this will eat into the much needed profit margins that would fuel any feasible export to European markets

If you are a gas company, where would you rather ship your gas...to Europe, whose growth is flat, or to Asia, with an \$8 more per mmBtu margin and room for much more growth?

The dragon in the room of this entire debate, the one that puts the EU rescue plan most in doubt, is Asian

consumers. Asian spot LNG prices are as of March around \$18 per million British thermal units (mmBtu), while EU LNG hovers around \$10 per mmBtu. Even if prices at the Henry Hub buck the experts predictions, even if production remains high, while price remains low (perhaps due to new technologies), if you are a gas company, where would you rather ship your gas...to Europe, whose growth is flat, or to Asia, with an \$8 more per mmBtu margin and room for much more growth? While Japan's nuclear reactors will likely come back on, they won't likely be on at pre-Fukushima levels, even if China's economy continues to cool off (no longer at 9-10% a year) but now at a modest

Figure 86. Annual average Henry Hub spot natural gas prices, 1990-2040 (2011 dollars per million Btu)



Henry Hub spot natural gas prices. US Energy Information Administration.

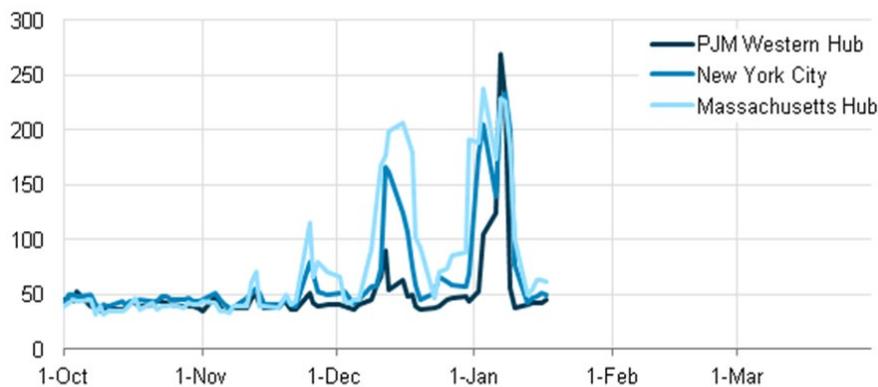
States. Even if production lasts longer than the naysayers have anticipated, most economists and energy experts say that the current price of US gas cannot remain so low; many shale gas players are no longer making a profit. Even if production re-

7%, this is still enormous in terms of growth potential for a country whose small political leadership has seen some unrest in protest of the Dickensian coal-based smog plaguing many Chinese cities.

Other Domestic Factors

Despite Boehner's economic voodoo assertions in his WSJ article that opening up exports will reduce consumer prices, many in the US don't see it that way. Dow Chemical and many in the manufacturing sector have pushed (lobbied) hard to keep the export regulations in place. It is no secret that the comparative advantage that American manufacturing companies have enjoyed from the lowest natural gas prices in the world is something that they would like to keep. Any look at the political map of the United States shows that any candidate for the 2016 presidential elections will likely not fully embrace, at least rhetorically, a full, liberalized export.

Day-ahead daily average on-peak power prices (\$/MWh)



Day-ahead daily average on-peak power prices. US Energy Information Administration.

Why? States that are most in favor of exporting LNG, Texas and Louisiana, are solid Republican states; the heart of the Rust Belt are key "battleground states" of Pennsylvania, Ohio and Michigan. The last candidate to win without Ohio will be 56 years ago come 2016.

Any look at the political map of the United States shows that any candidate for the 2016 presidential elections will likely not fully embrace, at least rhetorically, a full, liberalized export.

This past winter on the East Coast proved brutally cold, snowy, and long. Prices spiked for consumers in the New York area, where higher demand coupled with power plant outages and gas equipment failures showed the need to invest in our own infrastructure before giving initiative to LNG export terminals to fund foreign markets.

Timing is Everything and the Quantity Matters

Lastly on the domestic front, only around 9-12 bcm, depending on one's sources, of American LNG production have been so far approved by FERC. This is a



drop in the bucket in comparison with the 140 bcm Europe currently imports from Russia and the 500 bcm it consumes (down from 512 in 2012 due to increased of cheaper coal). So not only is any American rescue years away, there must be substantial increase in LNG capability to even make the impact Europe needs to shift away from Russian gas.

Not to mention, the first LNG plant at Sabine Pass, Louisiana will likely come online in late 2015, four years after it was FERC approved, assuming no delays. With 24 more pending approvals and modifications likely for some of those contracts, it is hard to see how Ukraine or Eastern Europe will somehow be "saved" by American LNG anytime really before 2018. And this assumes all the aforementioned domestic scenarios go in favor of export to Europe. Meanwhile, Australia has embarked on the most ambitious LNG infrastructure projects in the world. Couple this with discoveries of Israeli and Cypriot gas fields, a potential easing in sanctions with Iran (a longer term prospect in terms of LNG) and the mere potential of Gazprom to sacrifice profits for market share if it feels threatened by lowering prices, makes

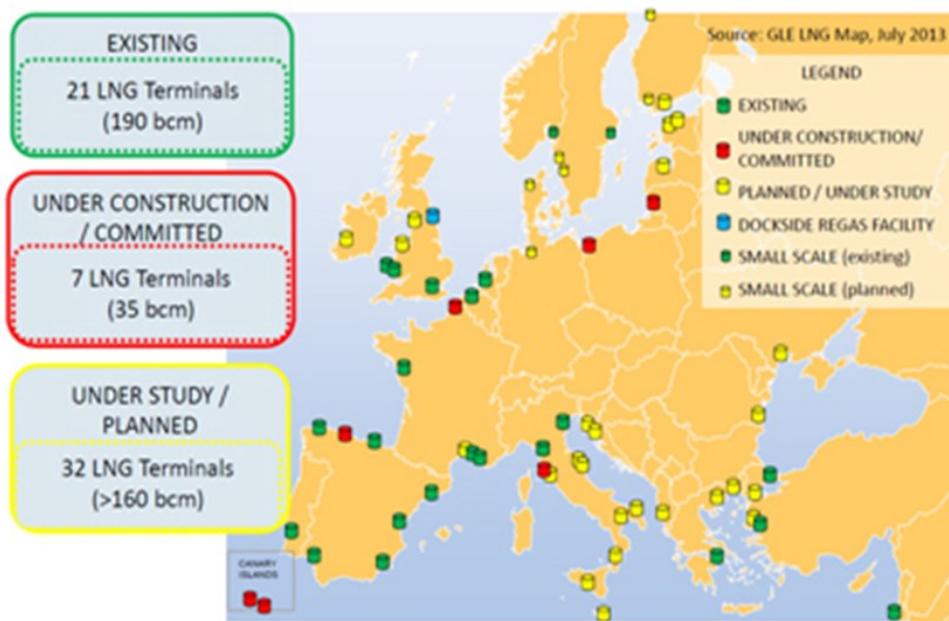
American gas export on any significant scale highly unlikely; America may be able to fill in needs on a piecemeal or emergency basis for Europe. And yet there are even more reasons to be skeptical and those can be found in Europe itself.

Europe's Got Its Own Issues to Solve

Firstly, even if the US lawmakers and regulators cancel all regulatory approval processes tomorrow and address the aforementioned domestic factors, Boehner's plan cannot be implemented without Europe first putting its house in order, that is – de-

port terminals.

It's hard to imagine a Texas launched LNG tanker crossing the Atlantic just to service Lithuania. Where in the world can you get a single slice of pizza delivered? This is essentially what the Baltic states are asking for.



LNG Terminals in Europe. GIE (Gas Infrastructure Europe) LNG Map, July 2013.

Porting at the member state level to commit itself to LNG. The “EuroCrisis” must end before any hopes of serious investment needed across the continent could make any kind of energy independence from Russia a reality. Only a more financially stable Europe can afford the very expensive infrastructure needed to place LNG plants in all countries with ports. A conventional LNG regasification terminal can vary widely in cost, but a typical one with average storage capacity runs around \$500M. This is not small change for a country that already receives Russian gas to make the switch for the mere sake of diversity of suppliers. Ukraine itself, the country most in need of saving, has a total of zero LNG im-

port terminals. It must be remembered that save some Crimean style operation, land-locked Hungary, Slovakia, Czech Republic, and Austria have no hope of ever having an LNG terminal; these countries will require more pipeline infrastructure linked up with the LNG terminals. The last major hurdle is who will specially deliver LNG to the tiny Baltic states whose volumes are so small, it's hard to imagine a Texas launched LNG tanker crossing the Atlantic just to service Lithuania. Where in the world can you get a single slice of pizza delivered? This is essentially what the Baltic states are asking for when Lithuania's Energy Minister Jaroslav Neverovic pleaded with the US to speed up its approval processes. Simply put, you need large order volumes to be economically viable to ship from the Gulf of Mexico; the gas usage of the Baltic states is too small to be profitable unless linked with another country's LNG shipment. If Lithuania is so desperate to have its LNG regasification terminal full, why doesn't it consult with closer Qatar who is the world leader of LNG instead of publicly pleaded for Ameri-



can help? To be marketable, any Baltic LNG orders would most likely have to be tied into deliveries with a bigger state from the region, perhaps Poland.

The Energy Weapon That Wasn't, But America Still Has Influence

Given the context of this idea, let's just admit it was an attempted American version to wield the "energy weapon," that is, inject politics into energy markets, something the US government and the Western press never misses an opportunity to chide Russia for. However, America is the largest energy market in the world, when considering production and consumption combined. The mere fact that America is no longer an importing nation has hurt Russia, just look at the failed Shtokman Field plan to ship Russian LNG to the United States. As the natural gas market becomes less regionalized over the next decade and if the US shale gas trend continues, we might see more depressed prices in Europe due to the mere fact that the US is no longer buying, causing potential headaches for Gazprom's account.

This LNG grandstanding should be seen for what it is: a quick, knee-jerk political posturing that reflects little of reality and is simply hot air.

So coming back to those in Congress like John Boehner who think that LNG export coupled with the "construction of the Keystone XL oil pipeline and halting the effort to take coal out of America's electricity generation mix" is going to help Europe, whose reduction in gas consumption is a direct result of buying cheap American coal, need to reevaluate. As the veritable leader of the Republicans in Washington, it seems Boehner has forgotten the

free-market principles his party is supposed to espouse, principles that will send US LNG if it makes it out of port to Asia, not Europe. In the words of Mark Twain, "reader, suppose you are an idiot. Or suppose you were a member of Congress, but I repeat myself." This LNG grandstanding should be seen for what it is: a quick, knee-jerk political posturing that reflects little of reality and is simply hot air. ♦

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Reimagining the Petrodollar

—Colin Chilcoat

Cryptocurrencies, or digital mediums of exchange, have been trading since 2009. Bitcoin (BTC), the first of these alternative currencies to become available, recently traded at values greater than 1,000USD/1BTC. The digital currency has gained notoriety for its use on the Silk Road, a virtual black market, which deals heavily in the trade of narcotics. More recently, bitcoin has been pegged as a surprise candidate to usurp America's monetary hegemony over oil pricing, an institution since the early 1970's. The decentralized bitcoin certainly has a lot to offer frustrated OPEC (Organization of the Petroleum Exporting Countries) producers. However, all that [digitally] glitters is not gold.

Bank of America recently assessed Bitcoin's maximum market capitalization at \$15 billion.

What's Behind a Bitcoin?

If at first glance Bitcoin seems to be drawn from thin air, that's because it more or less is. The fundamentals of Bitcoin are loosely based on finite minerals like oil and gold. However, cryptography and complex algorithms developed by the US National Security Agency (NSA) have replaced Earth's natural processes. Unlike fiat money, which derives its value from government regulation, no one party can manipulate the production of bitcoin or similar cryptocurrencies. Simply put, the number of possible units has been capped and further production follows a predetermined path. In one final parallel, bitcoins are useless without "miners" to extract them. The good news is anyone with a computer can mine bitcoins. The bad news is few actually have a chance of succeeding.

Mining is technically a "distributed consensus sys-

tem," but can be more easily understood as a cross between public bookkeeping and entering the lottery. Each bitcoin transaction is added to a public ledger, which is shared between every Bitcoin user. The first miner to not only verify the transaction, but also encrypt it, is awarded freshly minted bitcoins in addition to transaction fees. A sizeable amount of computational power is necessary to accomplish this task and for all, but the most dedicated users, the energy costs outweigh the gains. It is possible for miners to pool their resources and distribute the computational load across several users. However, the computing power of the field still has a vast advantage over any mining collective. Miners are integral to the survival and overall security of the Bitcoin network, but mining is not the only means to the end.

Bitcoins are most commonly acquired through exchanges, online or face-to-face. With no one entity controlling the worth, these exchanges represent the genesis of bitcoin's tradable value, which remains very much subjective. However, Bank of America recently assessed Bitcoin's maximum market capitalization at \$15 billion, lending some credence to its promise as a medium of exchange. While governments are taking a wait and see approach, bitcoin is pushing the boundaries of what was previously thought possible. The currency has already expanded beyond online retail and today trades at ~500USD/1BTC. The future appears bright, but does this path lead to the Middle East?

For several OPEC producers, supplanting the petrodollar system has both significant financial and ideological considerations.

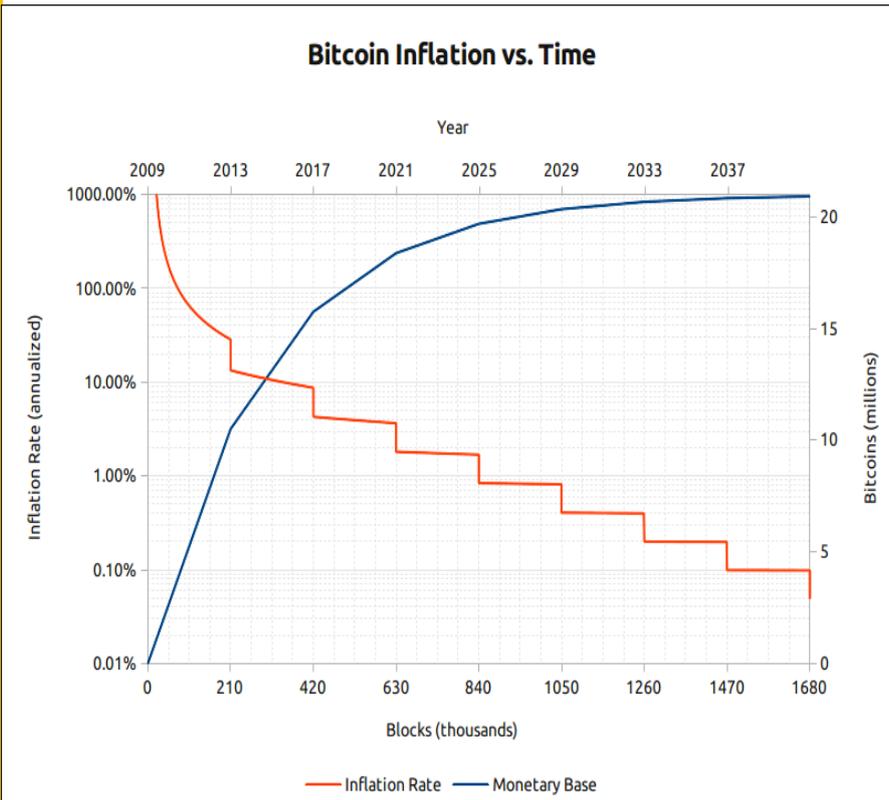
Moving Away from the Petrodollar System

In 1973 Saudi Arabia agreed to accept only US dollars for its oil in return for American military protection. The remaining OPEC nations followed suit soon after



and the petrodollar system, as it's called, has dominated world oil trade ever since. In the wake of the Bretton Woods system, which mandated a monetary policy for participating nations tied to the US dollar, the deal cemented the dollar's hegemonic status as the primary currency for international trade and has guaranteed that the demand for those dollars remains high. In short, the petrodollar

OPEC producers looking to step outside the influence of national banks may find solace in the decentralized bitcoin, of which production can never be manipulated.



Bitcoin Inflation vs. Time. Bitcointalk.org

The relative strength of the euro over the dollar made it an early suitor and in 2000, then Iraqi dictator Saddam Hussein made the euro Iraq's default currency for its oil exports. The change, largely in response to heavy sanctions imposed by the United States, was short-lived and following US intervention in Iraq, the tender was switched back to dollars in 2003. Similarly burdened with sanctions, oil-and-gas-rich Iran has long sought a replacement for the petrodollar, utilizing the euro and more recently Chinese renminbi. With China primed to take over the US as the number one consumer of oil, pricing leverage has the

potential to shift eastward. For the time being however, stricter financial regulations in China favor the dollar. Enter Bitcoin, devoid of politics and easily movable across borders.

system, and the dollar's status as a global reserve currency in general, is quite advantageous for the US and its fiscal policies. In spite of America's declining influence worldwide, and especially in the Middle East, the arrangement survives today. For several OPEC producers, supplanting the petrodollar system has both significant financial and ideological considerations. There are few examples of countries completely abandoning the dollar, but current trends indicate the dollar will have company at the top.

potential to shift eastward. For the time being however, stricter financial regulations in China favor the dollar. Enter Bitcoin, devoid of politics and easily movable across borders.

Chief among the cons is the lack of government backing. To date China and Russia have both declared the currency unusable in their respective banks.



OPEC producers looking to step outside the influence of national banks may find solace in the decentralized bitcoin, of which production can never be manipulated. Score one for the cryptocurrency. Additionally, with low transaction costs and relative anonymity, dealing in bitcoin is ideal for those looking to circumnavigate rigid sanctions. Volatility is currently extremely high, the result of an influx of speculators, but its founders insist the growing pains will eventually give way to a relatively inflation-free future. What bitcoin doesn't have, however, is faith. The startup currency has few believers, at least where it matters, and perhaps for good reason.

Growing Pains and the Future of Cryptocurrencies

First, its rise to popularity on the tails of the online black market vendor Silk Road has done it no favors. Second, security is a big issue. Bitcoin's largest exchange, Japan-based Mt. Gox, was recently hacked, an act, which many users believe to have been carried out by its developers to siphon the digital wallets of the users. Despite its high levels of encryption, the Bitcoin network is a hot bed for cyber criminals and the potential for criminal activity will only grow with the user base. Chief among the cons is the lack of government backing, ironically enough. To date China and Russia have both declared the currency unusable in their respective banks. The United States has yet to make a significant ruling, but in any scenario featuring limited OPEC adoption it's hard to envision a judgment in favor.

Today, the chances of ever seeing petrobitcoins are remote. Nonetheless, the currency has proved it has value and could easily find a role in the larger scheme of

payments system for oil and gas.

The market for startup currencies is now burgeoning thanks to Bitcoin's early successes. At worst, the cryptocurrency is a fresh take on the way we think about money and how we value it. Commodities are transacted today in an increasingly diverse array of currencies, under a variety of conditions. The dollar's status as the global reserve currency is likely safe for the foreseeable future, but global forces may indeed bring about an overhaul of the petrodollar system. While several other currencies lie in wait, bitcoin offers a unique alternative. Today, the chances of ever seeing petrobitcoins are remote. Nonetheless, the currency has proved it has value and could easily find a role in the larger scheme of payments system for oil and gas; all it needs is opportunity. ♦

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Financial Turbulence in the CPR—China’s First Ever Corporate Bond Default

—Anthony Guida

Rising debt levels, unhealthy excess capacity and a rickety financial system are some of the many descriptions offered by journalists of China’s current economic conditions following Premier Li Keqiang’s speech during the annual National People’s Congress session, where he stated that “China is braced for a wave of industrial bankruptcies as its slowing economy forces companies with sky-high debt to the walls”. Politicians are now faced with the task of containing disproportionate credit expansion that is responsible for the People’s Republic first corporate default. In 2013 government liabilities accounted for 30% of China’s GDP (¥17.9trln) and shadow-banking represented an industry of \$6 trillion, during Li’s intervention his announcement of a regulated regional borrowing mechanism shows the government concern for borrowers to be subject to greater market discipline in which more selective lending and discrimination in terms of credit risk will tame China’s wild lending behavior.

The Chaori Incident Aftermath

On March 7th, 2014 solar power maker Shanghai Chaori Solar Energy Science & Technology became the first Chinese firm ever to default on its onshore corporate bonds. After having announced the company’s inability to repay a \$14 million interest fee on a \$161.5 million bond issued in 2012, the government decision to deny bail manifests China’s new attitude toward banking accountability and emits an aura of caution amongst speculators and investors. Investors have confidently splurged in corporate bonds of Chinese firms on the belief that state banks would repay their debts. This attitude was well summarized by Leland Miller, president of China Beige Book who told BBC reporters earlier

this March: “There’s never been a corporate bond default, so investors have been conditioned that there is no such thing as risk in China.”

“China is braced for a wave of industrial bankruptcies as its slowing economy forces companies with sky-high debt to the walls.”

—Premier Li Keqiang

As a result, cheap financing and local government support has lowered the market entry barrier to many industries, which has caused unsustainable overcapacity. Following the last financial crisis, the number of Chinese companies with debt doubling their equity has risen steeply. According to Bloomberg, since 2007 the number of publically traded companies with a debt-to-equity ratio exceeding 200% has risen to 256 from 163 (57%). As of now research tallies the total debt of these companies at \$1.98 trillion (risen from \$607 billion in 2007), 63% of these companies’ debt-to-equity ratio now exceeds 400%. The majority of them are involved in household appliance manufacturing, materials, renewable energy and software companies.

The price-to-book ratio is used to compare a stock market value to its book value (the value of an asset as listed on a balance sheet) and is a good indicator for a company’s growth potential and health. If a company trades for less than its book value (P/B ratio <1), then either the market believes that the asset value is overstated, or a company is earning poorly (or even negatively) on its assets. In January a survey conducted by South China Morning Post revealed that 10 Chinese banks listed in Hong Kong had a price-book ratio of 0.98. In other words, their balance sheets included a high proportion of non-performing loans, a perturbing recording given the importance banks play in China’s growth strategy.



According to a SCMP survey, the amount of inert loans is not 0.97% as banks claim but 13%; assuming that Chinese banks are able to realize 30 fen on the Yuan (similar to what was recovered during South-east Asia's financial crisis during the 1990's), the amount of zombie bonds today would total ¥7.4 trillion (14.2% of GDP), 13 times the ¥564 billion declared in September.

Q1 GDP growth dropped to 7.4% this month, making it the weakest advance since 1990. Growing concerns about China's financial health have prompted mainland banks to cut lending by 20% to industries with surplus capacity.

Reaction of Banks and the Effect on Manufacturing

As of March 2014 China's manufacturing industry had weakened for five consecutive months, straining the government-set growth target of 7.5%. The median estimate of Q1 GDP growth dropped to 7.4% this month, making it the weakest advance since 1990. Growing concerns about China's financial health have prompted mainland banks to cut lending by 20% to industries with surplus capacity. The Chaori default has prompted the state to protect its economy in the long term by inquiring into lending accountabilities; for the first time the China Banking and Regulatory Commission (CBRC) has asked banks to include loans linked to debt financing and derivative products in their annual report of outstanding loans, underscoring the regulator's concern regarding financial risks posed by heavily indebted sectors in particular steel, cement, aluminum, flat glass and shipbuilding. Particularly under the CBRC's radar are commodity imports namely steel and copper - the price of which has collapsed - partly in response to growing debt concerns. The

immediate response has affected commodity traders in steel and iron ore, as producers received letters from banks stating that their credit limit compared to 2013 would be reduced by 20%.

Although banks have begun to reduce loans to struggling sectors, the CBRC has not set an official reduction lending target. However, the State Council announced that credit extensions to these sectors must be cut and that no new project approvals will be passed until 2017. The government has taken advantage of this restructuring of uncompetitive producers to raise environmental standards of polluting industries adding more upward pressure to operational costs.

Compared to 2012, manufacturing deals have fallen by \$490 million, yet over the first half of 2013 Chinese M&A activity has risen to \$35.3 billion (majority composed of CNOOC's acquisition of Canadian Nexen worth \$15.1 billion). Outbound deals are increasing with Chinese investors mainly focused on energy, resources, and consumer based assets. Chinese bidders have increased their exposure in the U.S (14 acquisitions worth \$11.4 billion) and in Western Europe, where the number of acquisitions has increased though the amount of investment has declined. The main reasons behind such behavior are appetite for natural resources and the globalization of Chinese SOE's however financial market volatility, U.S economic growth and quantitative easing must also be taken into account as negative macro-economic drivers for near-term M&A strategy.

The Asian Century

Increased domestic competition, labor shortages, investment discrimination and other upward pressure costs are undermining investment security. Currently half of the world economy is represented by the United States and Europe whereas only 25% by Asia. By 2050 the situation is expected to be reversed. For this transition to come to fulfillment the financial sector is expected to be equal parts import and manu-



facturing. Asian financial markets are underdeveloped, heavily regulated, and have capital controls and other constraints. In the last years, a massive accumulation of foreign currency reserves has restrained markets and private savings. According to Warren Hogan, ANZ chief economist, only by allowing a country's exchange rate to be determined by the supply and demand of a currency in relation to other currencies in the foreign exchange market (floating exchange rate) will the private sector grow, thereby generating significant opportunities for financial institutions, market growths and two-way capital flows. The bulk of foreign reserves are addressed to government bonds and U.S treasuries; if the private sector becomes the recipient of these reserves, money will be distributed more equally, flowing into different classes of assets, reports Hogan in a Financial Times interview. With this being said, there are large discrepancies in the source of Chinese capital. State owned enterprises and coastal region municipalities are largely responsible for the bulk of investments whilst inland cities and SME's export little or no capital. For China to develop into a high income consumer-led economy a fiscal reform must ensue to create a high performance financial system where markets are responsible for allocating capital. As less money deposits into treasuries and more goes towards equities, foreign direct investments originating from Asia (in particularly China) will increase as the cost of capital for emerging economies declines.

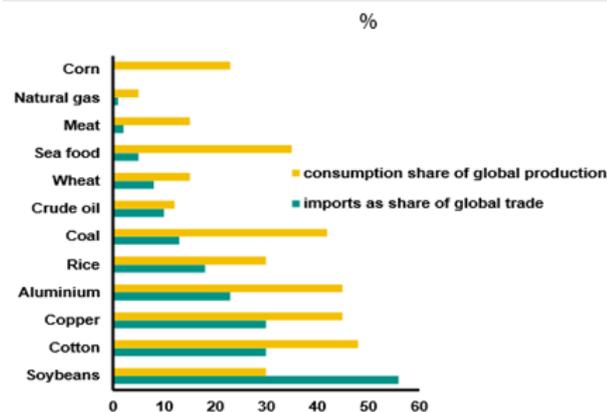
Chinese Presence in Commodity Markets

Due to China's hefty presence in world commodity markets, the price of oil and base metals can be subject to short-term shocks caused by the world largest consumer economy. Chinese policy regarding strategic reserves, trade and the environment is capable of having a large impact on commodity prices, which in turn can cause inflation, affecting other emerging economies. China consumes 20% of non-

renewable energy sources, 23% of major agricultural goods and 40% of base metals. The transition to lower GDP growth as compared to previous years doesn't necessarily imply less consumption, yet commodities linked to rising income will outperform those involved in construction/consumer led growth.

Currently half of the world economy is represented by the United States and Europe whereas only 25% by Asia. By 2050 the situation is expected to be reversed.

China's share in global commodity markets



Source: United Nations COMTRADE database and ABN AMRO Group Economics

China's share in global commodity markets. *United Nations Comtrade database and ABN AMRO Group Economics.*

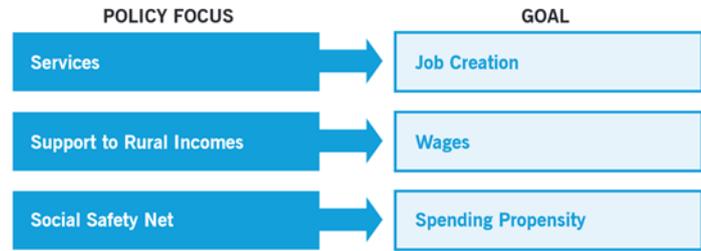
China Investment Corporation (CIC), the world's 5th largest sovereign wealth fund (\$575.2 billion), has reconfigured its action plan in an attempt to capitalize on recovering U.S and EU economies whilst unloading behemoth energy and commodity holdings. CIC's recent activities involve shedding \$1.5 billion worth of shares in international companies spanning U.S electrical power companies, Hong Kong based green energy companies, and a \$37 billion involvement in Canadian oil-sands projects. China's M&A in oil, gas and mining activities for 2013 accounted for



\$44 billion, up 14% since 2012.

China's pollution problem stemming from coal consumption, of which it is the largest producer, consumer, and importer (50% of world consumption) has created demand for more gas imports via pipeline and LNG.

pansion in GDP, FDI inflows, of which China, as a developing country, remains the largest recipient, are no longer the principle contributor to China's trade surpluses, industrial output or tax revenues.



Framework of 12th five-year plan. S. Roach, Morgan Stanley. "China's 12th year plan: Strategy vs. Tactics." April, 2011.

China, which became the largest global energy consumer in 2011, is expected to surpass the U.S. as the largest net oil importer by 2014, in part due to rising oil consumption accounting for 1/3 of global consumption growth in 2013. Idem with natural gas: China's pollution problem stemming from coal consumption, of which it is the largest producer, consumer, and importer (50% of world consumption) has created demand for more gas imports via pipeline and LNG.

Understanding the 12th Year Plan

China has set a 7.5% target for economic growth in 2014 (to which trade committed partners and commodity prices have responded favorably) spurring a wave of critics who say the prioritization of growth will surmount the effectiveness of reforms. Their argument claims that if your ultimate priority is growth then your effectiveness in restructuring the economy will be distorted. Li Keqiang's predecessor Wen Jiabao, in 2011 described the Chinese economy as strong on the surface, yet "unstable, unbalanced, uncoordinated and unsustainable". The main goal for China's 12th Year Plan (2011-2015) is to capitalize on its 1.3 billion potential customers: to shift away from export-led growth to increased internal private consumption, the best defense against weak global demand. Due to a dynamic ex-

A strong emphasis will be put on employment and on generating local purchasing power. By 2015 China's goal is to have created 45 million urban jobs. To do this, it must recycle rural labor surpluses into the urban workforce which accounts for already 46% of total employment. From 1980-2009 the rural share of the population fell by 27% and urban population intensity doubled (the migration tallies between 15-20 million people per annum). China's tertiary sector generates 35% more jobs per unit of GDP than its secondary sector; transitioning towards service-led growth will accelerate labor intensive development and aid income generation. Service bound FDI has outpaced manufacturing FDI showing that China's middle class is growing. According to a 2010 report published by the IMF, the average savings rate for urban household has risen to 30% by 2009. But what does this mean for business?

By 2015, non-fossil fuel energy is planned to account for 11.4% of total primary consumption whilst targeting a 15% reduction in energy consumption and 17% in CO₂ emissions per unit of GDP. The manufacturing industry will be negatively affected by these changes: Stephen Roach from Morgan Stanley Asia predicts that by 2015 the industry will have declined to about 37% of GDP, the lowest since 1991 before China's modern industrial revolution. The new leadership plans to accelerate the consolidation of industries by



removing inefficient businesses and encouraging more outbound investment. Small regional suppliers of pharmaceuticals, chemicals and food retailers are expected to be replaced by national distributors to eliminate oversupply capacities and prevent reductions in the quality of goods, idem for the petrochemical and manufacturing industries. The key to achieving economies of scale is establishing creative partnerships. Sectors previously dominated by state owned enterprises such as oil and gas, transportation and aviation will gradually become more receptive towards private involvement. Efforts to increase incomes and wages will boost private spending but they force companies to integrate higher labor costs into BAU scenarios (minimum wage increase 13% per year). The new plan focuses on developing Strategic Emerging Industries (alternative-fuel cars, high-end equipment manufacturing, energy conservation, biotechnology etc.) and to increase their percentage in GDP from 3% to 15% by 2020. To aid this growth, R&D spending will have doubled in 2015, re-enforcing the niche for educated human capital.

The government must now change its essence by transforming the nation's agenda from exclusive GDP growth to the incorporation of private sector growth which will normalize and allow capital distributions to be set by markets.

Oil and gas company SINOPEC earlier this year announced to sell up to 30% of its retail oil business to boost the company's downstream value. The exploration of unconventional natural gas resources, new nuclear power plants and renewable energy stations are sectorial examples where for-

ign participation is strongly encouraged. With regards to the Chinese shale gas agenda (China hosts the largest shale gas reserves), multiple foreign companies including French TOTAL and Dutch SHELL have been invited to partner with Chinese NOC's to overcome technological hurdles that prevent gas from reaching markets.

Conclusion

Chaori's inability to repay its debts has attracted a wide range of comments, some more informal than others. According to Barclay's analysts, the impact on overall bond and financial markets is expected to be minimal; however, others predict this to be the first of many corporate bond defaults. In the long term, development of bond markets will benefit as investor behavior in China will ensure that returns reflect risks. China's 12th Year Plan acts upon years of unparalleled economic progress. The government must now change its essence by transforming the nation's agenda from exclusive GDP growth to the incorporation of private sector growth which will normalize and allow capital distributions to be set by markets; in return, prosperity will flourish and a production-led economy will set stable ground from which 1.3 billion residents will become China's main asset.♦

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Workshop Review: Sergey Komlev of Gazprom Export—Pricing on the European Gas Market

—*Tsvetalin Radev, Athina Sylaidy, and Colin Chilcoat*

The European Union's Third Energy Package has become a reality, thus increasing the level of liberalization of the European energy markets. Moreover, the European Commission has launched an anti-trust lawsuit against Gazprom, as the Russian gas monopoly has allegedly been hindering competition in Eastern and Central Europe. The Gazprom-favored model (long-term contracts with a take or pay clause) is being challenged by the development of spot prices and increased gas liquidity in Europe. Yet, the EU's securitization of supply goes hand in hand with Gazprom's security of demand. The uncertainty reigning over the future of European markets—demand, legal and institutional frameworks—are natural concerns for the gas monopoly. The debate over contracts and pricing mechanism is at the very heart of the future of Russia-EU energy trade and relations.

Dr. Komlev argues the oil-indexed prices are more reflective of the market equilibrium than the recent anomalous hub prices in the US.

Dr. Sergey Komlev, Head of Contract Structuring and Pricing Directorate at Gazprom Export, addressed these concerns and more in his presentation on February 28, 2014 on price setting in the

European market.

This report consists of two parts: a summary of Dr. Komlev's arguments in favor of Gazprom's current gas contracts and a transcription of the subsequent question and answer section that has been edited for length and clarity.

Existing Pricing Mechanisms

An understanding of the existing gas pricing mechanisms is key to understanding the current pricing debates and Dr. Komlev set right out to differentiate



From left: Tatiana Romanova, Sergey Komlev, Maurizio Recordati. EUSP. February 28, 2014.

between the models. Oil-indexation dominates Gazprom's long-term pricing agreements. This is a way of pricing a commodity by linking the price of gas to that of oil. It is an alternative pricing mode to the traditional supply and demand based methods. It should be noted that oil-indexation is the only form of pricing in Asia. North America tends to rely on supply and demand, exemplified by the Henry Hub price index. Australia employs a more "eclectic" model utilizing both long-term contracts (LTCs) indexed to alternative fuels and spot pricing on the FRC Hub. The "hybrid" pricing system, which characterizes the European market features primarily long-term oil/oil product-indexed contracts with a parallel functioning of the trade hubs. Of the four primary models, Gazprom has a demonstrated preference for the oil-indexed and hybrid systems.

There are, however, two emerging pricing systems gaining ground in Europe and Asia. The first links LTCs to gas indexes, utilizing hub pricing. It is Gazprom's view that this system is not stable however, and eventually transforms into a purely hub-based model. Emerging model number two refers to LNG pricing. It also employs LTCs, priced on a base of Henry Hub indexes plus the tolling fees for gas liquefaction. Tolling fees for liquefaction refer to the agreed volumes of LNG and represent take-or-pay obligations in these LTCs. Gazprom takes a more neutral stance regarding this second model.

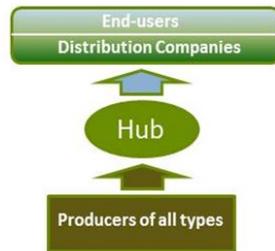
The Fair Price of Gas

The emergence of so many models owes to the fact that there is no global benchmark for natural gas prices. There are three different pricing centers: North America Europe, as well as Asia. The prices significantly differ at each of these centers, begging the question: "What is the fair price of Natural Gas?" Of course there is no definitive answer to this question as political, ideological, and geographical considerations must all be taken into account, but Dr. Komlev set to lay bare Gazprom's reasoning behind what it believes to be fair pricing on the European market.

European Hub Prices are not an Indication of Supply and Demand Fundamentals



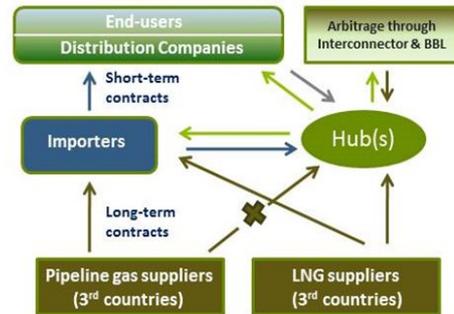
U.S. Pricing Model



PH_{US} – hub price in the USA
 S_{US} – total supply
 D_{US} – total demand

$$PH_{US} = F(S_{US}, D_{US})$$

Hybrid Pricing Model



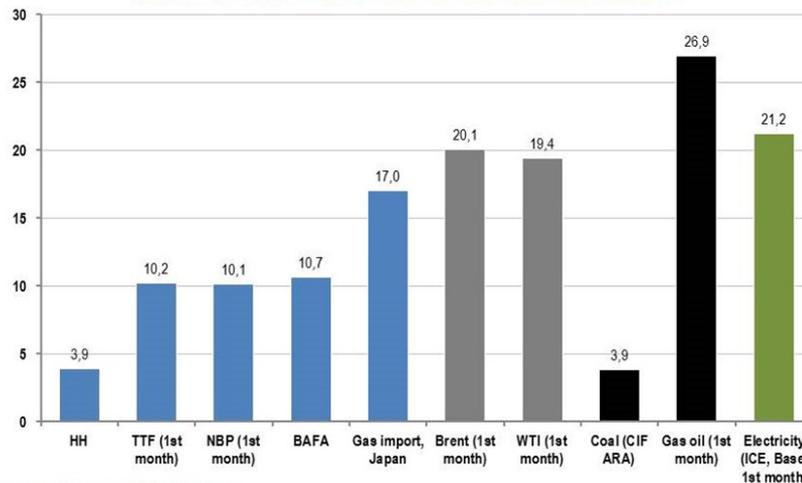
$PH_{CE} \neq F(S_{CE}, D_{CE})$
 PH_{CE} – hub price in Continental Europe
 S_{CE} – total supply = $SHI_{CE} + SHEU_{CE} + SLNG_{CE} + SUK_{CE}$,
 where:
 SHI_{CE} – sales to hubs by importers
 $SHEU_{CE}$ – sales to hubs by end-users (ToP obl.)
 $SLNG_{CE}$ – LNG supply to hubs
 SUK_{CE} – UK supplies through the Interconnector & BBL
 DHI_{CE} – demand by importers for hub gas
 $DHEU_{CE}$ – demand by end-users for hub gas
 DUK_{CE} – UK deliveries through the Interconnector and BBL

$$PH_{CE} = F\{(SHI_{CE} + SHEU_{CE} + SLNG_{CE} + SUK_{CE}), (DHI_{CE} + DHEU_{CE} + DUK_{CE})\}$$

European Hub Prices are not an Indication of Supply and Demand Fundamentals. Taken from Komlev's PowerPoint presentation. EUSP, February 28, 2014.

Variety of Gas Prices, no Global Benchmark

Energy Commodity Prices by Calorific Value, USD/mbte (July 2013)



Sources: Bloomberg, BAFA, World Bank

Variety of Gas Prices. Taken from Komlev's PowerPoint presentation. EUSP, February 28, 2018.

Gazprom supports non-discriminatory price indexation as an arguably natural extension of the market commonalities that exist between oil and gas. Among the commonalities, exploration and drilling technologies, cost structures, and an increasing convergence

in end-use markets are the most relevant. Additionally, when compared to a broad range of commodities, oil-indexed natural gas prices exhibit similar growth. Dr. Komlev argues the oil-indexed prices are more reflective of the market equilibrium than the recent anomalous hub prices in the US.

The distinction between oil-indexed and hub price is important, but Dr. Komlev also stresses that their symbiotic relationship is what makes the hybrid pricing system ideal for the European market. According to Gazprom Export, hub prices are derivative of their own and other producers' LTCs. Hub prices are not immune to supply and demand modulations, but rise and fall in tandem with oil indexes. The hybrid system places oil-indexed prices in the leading and dominant role, establishing a competitive market value; while hub prices have a balancing and subordinate role, imparting necessary supply and demand fundamentals.

Dr. Komlev suggests the strongest argument for oil-indexation concerns long-term investments and supply security. In short, price instability on European hubs undermines long-term investments, while oil-indexation allows for a greater degree of revenue planning and financing of large-scale projects.

Further comparison of the US and European pricing

systems reveals underlying differences, which support the contrasting approaches to pricing. Liquidity (churn ratio) on the European hubs is significantly lower than that of their US counterpart. The smaller physical volumes open up the door for short-term arbitrage opportunities not seen on Henry Hub. Combined with the complexity of the supply chain

Tandemic and Asymptotic Contract and Hub Price Behavior



Sources: Bloomberg, BAFA

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Tandemic and Asymptotic Contract and Hub Price Behavior. Taken from Komlev's PowerPoint presentation. EUSP, February 28, 2014.

hub prices alone fail to embody supply and demand fundamentals necessary to ensure fair market value.

Security and Flexibility

Considering the inherent weaknesses, Gazprom Export does not regard the traditionally lower hub prices as a viable and competitive benchmark for its LTCs. On this point, Dr. Komlev urges us to consider the worth of premiums such as security of supply and flexibility. The worth of security of supply is near impossible to quantify, but it does have value, most clearly demonstrated at times of gas shortages. Recent projects like Nord Stream and South Stream represent concerted efforts to further increase security of supply. In addition to security of supply, Gazprom Export believes flexibility is a quantifiable aspect of its LTCs. Purchases on market hubs are almost always completely inflexible; the buyer is required to take



exactly the same volume of gas in each day of the delivery period. While allowing the buyers to match supply and demand, the added flexibility also enhances arbitrage opportunities; buyers may purchase excess gas at LTC prices and trade when the spot markets are high and vice versa. As natural gas prices continue to become more unpredictable, the security and flexibility offered in LTCs takes on more value.

The price discrepancy between hub and oil-indexed LTC prices is not only due to the aforementioned premiums, but also a result of direct and indirect enforcement of hub pricing. Several European regulators have enacted measures that introduce spot

more of a cost than driving that rental car yourself (read spot markets).

The Natural Remedy

In response to the European regulators Gazprom envisions three possible outcomes: 1) Adjust LTC prices to hub level while keeping oil-indexation in place 2) Completely abandon oil-indexation and introduce hub price tracking in the LTCs or 3) Gas-indexation remains along with traditional LTCs (hybrid pricing).

In the first scenario graduated indexing towards hub prices, removal of flexibility, and the establishment of price corridors may bring the price mismatch to a

tolerable level. However, it is not without its drawbacks. The removal of midstream flexibility threatens European energy security. Gazprom is the major provider of supply flexibility to Europe and in the last decade the seasonal swing in daily deliveries of Russian gas has doubled. Complete abandonment of oil-indexation presents different problems for both gas suppliers and buyers. As oil-indexation is phased out, the take-or-pay clauses



Explanation of the Contract-Hub Price Gap: Contracted Gas Offers Enhanced Delivery Flexibility

Cost of Seasonal Midstream Flexibility	Average cost of full-cycle gas storage <i>(assumes that over the year the volume of gas pumped into underground storage equals to the volume of withdrawals)</i>	US\$21.45/mcm
Cost of Short-term Midstream Flexibility (1)	Additional transportation capacity payments for flexible capacity <i>(7,000 hours of flexibility)</i>	US\$13.7/mcm
Cost of Short-term Upstream Flexibility (2)	Average price for a 10% daily production swing in UK <i>(Deloitte)</i>	USD\$ 4.0/mcm

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Explanation of the Contract-Hub Price Gap. Taken from Komlev's PowerPoint presentation. EUSP, February

market components in gas pricing. Many have already linked regulated gas prices 100% to the spot markets. This does not sit well with key exporters like Gazprom whose margins are greatly affected. "Gazprom, via ex-post rebates and contract adjustments, acts as a major sponsor of European energy security by observing its historic obligations to deliver gas in an environment that poses a threat to the very existence of the LTCs." Dr. Komlev offers the following analogy regarding the price mismatch: renting a car with a driver (read LTCs) carries

embedded in LTCs lose their function as a guarantee of demand security as buyers can dispose of excess volumes on the hubs with zero risk. While this is certainly advantageous for the buyer, Gazprom cannot accept such arrangements that lead to price manipulations.

Dr. Komlev suggests the strongest argument for oil-indexation concerns long-term investments and supply security. In short, price instability on European hubs undermines long-term investments, while oil-



indexation allows for a greater degree of revenue planning and financing of large-scale projects. Looking to the US once again, Dr. Komlev examines the depressing effects of the shale gas revolution on the US gas market, where producers like ExxonMobil are struggling to turn profits. Oil-indexation and LTCs are a proven instrument for surviving such market dips with supply security intact.

Looking to the US once again, Dr. Komlev examines the depressing effects of the shale gas revolution on the US gas market, where producers like ExxonMobil are struggling to turn profits.

Dr. Komlev and Gazprom see little rationale for a market overhaul: Oil and gas still compete in both the residential and industrial sectors; oil-indexation serves as a hedge against price manipulation; and liquidity on European markets is still insufficient to fairly price gas as an independent commodity. Furthermore, Gazprom predicts the oil-gas link will be reinforced in the future due to increased competition in the transportation sector. “Gazprom is the largest producer of dry gas in the world and believes that oil-indexation is the only way to secure the intrinsic long-term value of gas.”

After Dr. Komlev finished his presentation, the floor was opened up to students for questions.

Question: What is your view on the Gas Target Model in Europe? Isn't it in fact dividing the internal market of Europe?

Dr. Komlev: I think this Target Model is supposed to come online this year, 2014, but is still a long ways away. If you look at prices of electricity, they are not converging but diverging. In a similar way if

you look at end user prices in European countries, in Denmark prices are maybe 5 times higher than in Germany, thus there is no harmonization. I think that to a large extent plans to create common market – although we have nothing against that – are a little idealistic and naive. Market functions in natural gas are extremely complicated and even if you take the case of US where there are thousands of independent gas producers, the laws and regulations are present, the architecture of the market is there, but still the market is dysfunctional. Market reforms are extremely complicated and there is no recipe how to do them, especially when you have conflicting policies. For instance, on the one hand you are saying “we need to enhance competition and develop free markets” and on the other hand you are appealing towards sort of a planned economy. A prominent example of that is the reincarnation of the GDR in Germany in one single industry called *renewables*. There is a guarantee of purchase and the presence of a regulated tariff, so one can conclude that this is a planned economy. So you see on one hand you want to have free market forces and on the other you have a planned economy and they don't match together. As a result there is a collapse of gas in power generation. So there are too many conflicting elements in what is called reforms in Europe. Therefore, at the moment they have produced a total mess, and I would like to underline that this is not my conclusion, but Europeans are admitting this themselves.

Question: If another Russian competitor like Novatek were allowed to compete on the European market would they use spot market pricing or oil-indexed? If so, how would this affect Gazprom's strategy in the European market?

Dr. Komlev: Gas prices in Europe are not set up by supply and demand and do not represent market equilibrium. Although the influence of supply/demand is there, the base line of prices are set up by long term oil-indexed contracts because at the moment

they dominate the market. Definitely, you can sell at hub or below hub prices right now and this price would be convenient for buyers. Novatek project has high costs and I do not think that it is in the interest of the company to damp their gas.

Question: Do you think the expected increase of US exports, with regards to LNG, will have a rectifying effect on the dysfunctionality of the US gas market and that prices will come close to other regions' prices?

Dr. Komlev: It is very difficult to make predictions in the gas market. There was a study on the US and it showed that there are a lot of shale gas reserves, which will allow for domestic prices to stay at the current levels even if large volumes are dedicated to exports. I was asking US and EU consultants for their opinion on this price anomaly, "For how long will this price anomaly stay?" and from what I am observing, there will be no change of that trend prior to 2030.

"At the moment the only market where the US can deliver gas and make a profit is the Asian market, which will require additional transportation costs. So, I don't believe that there will be huge inflow of inexpensive shale gas to Europe."

In reality price adjustments may take place much earlier because the number of rigs drilling for dry gas are lowest for the last 20 years. Drilling for wet gas has only compensated losses in output of the dry gas wells. An increase in Henry Hub prices by \$2 per MMBTU from their current level of \$4.5 per MMBTU will make US exports to Europe impossible.

If we take a price of \$6.5 from Henry Hub you have to add an additional \$1 per MMBTU to bring the gas

to a regasification terminal, then there will be additional cost of \$3 per MMBTU for liquefaction, then additional \$2 per MMBTU to transport the gas to Europe, and then maybe \$0.5 per MMBTU for marketing the gas in Europe, so this adds up to a total of more than \$13 per MMBTU. Hence, at the moment the only market where the



Dr. Komlev's presentation to ENERPO students in EUSP's Golden Hall. EUSP, April 4, 2014.



US can deliver gas and make a profit is the Asian market, which will require additional transportation costs. So, I don't believe that there will be huge inflow of inexpensive shale gas to Europe.

Question: Last year Statoil switched its contracts, especially those targeting northern Europe, to hub prices. Do you think that was in their interest? And if it was, then why is it not in Gazprom's interest?

Dr. Komlev: We (Gazprom) do not comment on the actions and policies undertaken by our competitors.

“My experience tells me there are certain media outlets that tend to twist our words so that Gazprom is presented in a negative light. It is also fuelled by some geopolitical interests and I think there is nothing that could be done to change those perceptions.”

Q.: Talking about a competitor on the gas market...How do think the competition, if we can call it like that, in the Southern Corridor between gas suppliers, namely Azerbaijan and Gazprom, is going to play out? Did you compete for market space at least initially, taking into account that Azerbaijan, which is using a pricing formula, would be able to undercut Gazprom? And are you planning any response?

Dr. Komlev: Commercial contracts are not released to the public. But the rumors that I have heard are that the contracts signed by the Azeris

with Europe are all oil-indexed. We don't think that the creation of the Southern Corridor and gas deliveries from Azerbaijan will be able to change Gazprom's position in Europe. However, if there is huge inflow of Iranian or Turkmeni gas, something may change. But let's take a look at the Shah Deniz II field. It is one of the most complex projects in the world and operates two semi floating platforms. These platforms can only function when there is no wind and for roughly 30% of the year there is strong wind. Also, the gas is extracted and produced from a well that is 6km in depth. The platforms themselves require special heating system in order to prevent paraffin from firming. Another point is that if you take a look at TAP's route, it is not going to Baumgarten (a major gas hub and transit point for Russian gas in Austria). In case it goes to Baumgarten we believe that there could have been competition with our gas. But instead it is going to southern Italy, where it will merely compensate for the nearly 10bcm in lost supply from Algeria. So, in reality it is not changing the balance and it is not bringing new volumes to the market, just compensating for those volumes that were taken away by the Algerians.

Question: You mentioned a couple of times negative perceptions in the West about Gazprom being the “bad guys”. Don't you think that there is much to be done in changing those perceptions? And if you do, should that strategy be targeting high level officials or the wider public?

Dr. Komlev: My experience tells me there are certain media outlets that tend to twist our words so that Gazprom is presented in a negative light. It is also fuelled by some geopolitical interests and I think there is nothing that could be done to change those perceptions. You can spend a lot of time explaining Gazprom's point of view, but it is a different question whether the people to whom you are explaining will actually listen. And we have decided that there are certain mass media representatives that are pointless



to talk to because they will always deliver our messages in a misleading way.

“There is of course some positive change in perception, namely in understanding that the gas industry is special and oil-indexation is closer to Pareto optimal pricing than the existing malfunctioning market.”

Follow-up question: So, that goes to journalists. What about your activities in Brussels and the representative office that Gazprom has just recently opened there. Are you trying to tackle the issue by targeting high ranking officials?

Dr. Komlev: But public opinion is set up by journalists. Mindset of the Western experts is set up around mantras such as increased competition, free markets, transparency and so on. However, we have done a lot especially with regards to the European Commission to underline that gas is a special commodity and requires special treatment. For a while the EC had decided to outlaw oil-indexation in gas contracts, while in our view oil-indexation is vital to the success of the gas industry because it is a pure “market” remedy for market failure. There was also a report on pricing commissioned by the EC and the initial idea was to criticize oil-indexation as a major reason while gas prices are so “high” in Europe. When I looked at the report I found no mentioning of oil-indexation at all. According to the report, high prices stemmed from the different taxation schemes and the introduction of a number of new taxes. There is of course some positive change in perception, namely in understanding that the gas industry is special and oil-indexation is closer to

Pareto optimal pricing than the existing malfunctioning market.

Question: Talking about European pricing, would you please say a few words on the dialogue between Gazprom and China, and why there is such a dispute over the pricing formula?

Dr. Komlev: There is no dispute over the pricing formula; there is dispute over the price level. And to be more precise it is business negotiations rather than dialogue. Deliveries of Russian gas to China will take place no earlier than 2018. At the current moment the prices on the Chinese domestic market are regulated - they are set by the government like here in Russia. The Chinese have to clearly state what the domestic price levels will be several years from now, in 2018, and it is not easy for them to do. There is no way that such an amount of gas that will be coming from Russia - 40bcm - would be completely subsidized. For instance, there was an estimate that Petro-China alone paid \$42 billion in subsidies in 2012 to cover the differential between incoming and domestic prices. So the Chinese have to decide what the level of domestic and possibly regulated prices will be in 2018 - surely not an easy task. However, they also understand that without such a decision there will be no construction of pipelines. So, they have to make this choice; the clock is ticking.

Question: Is Gazprom aiming at high prices and oil-indexation because its current production projects such as Yamal are very capital intensive?

Dr. Komlev: If you have a long term project and you don't have security of your cash flow then that, in itself, is an issue. Therefore, we support oil-indexation and in our view it is not only in the interest of Russian producers. If you take a look at the break-even-cost of Australian producers you are looking at \$16/\$17 per MMBTU and it will be only



marginally profitable if the Australians are able to sell it on the Japanese market for \$20 per MMBTU. Thus, it is also in the interest of consumers to pay a price that is supportive of the investment cycle in the gas industry. If your output price has gone up less than three times over the last 10 years you might be in trouble, as the inputs (labor, steel, chemicals, etc.) have gone up roughly three times and that means that you cannot resume your investment cycle. There is no reason to believe that prices based on supply/demand will be able to guarantee the prices needed to recoup the investment. Markets are not perfect; they need certain adjustment. In our view this adjustment comes in the form of oil-indexation, which is the best mechanism that does not require government intervention.

“[The Ukrainians] also understand that they might not be able to pay for the gas they are taking and that’s why they simply decreased the offtake. Quite a reasonable move on their side.”

Question: All of us are pretty much aware of the important role that Ukraine is playing with regards to gas deliveries to Europe and also the difficult relationship between Gazprom and Naftogaz over the last couple of years. How do you see the fact that Ukraine has sharply decreased purchases of Russian gas in light of the current events?

Dr. Komlev: You have to consider the unusually warm weather in Ukraine at the moment. Therefore, there is less demand for gas. The winter season is pretty much over and [decreasing purchases] is quite a reasonable move on their side. They also understand that they might not be able to pay for the gas they are taking and that’s why they simply

decreased the offtake. Quite a reasonable move on their side.

Question: Do you see Ukraine coming back to price levels of over \$400 or do you think they will be able to stay at the current levels and keep the discount that Gazprom has provided?

Dr. Komlev: It’s a difficult question really. In fact the current contract allows us to come back to price levels of over \$400 per 1000 cubic meters. But of course it depends on developments in Ukraine. Ukraine is paying for the oil and oil products it consumes. Some people are saying that even \$260 is a high price as the price in the US gas is much lower. That is fine with us; if you want, you can go and buy gas from them.

Question: Could you comment on how coal plays a role in pricing schemes? How does cheap coal affect pressure on Gazprom to change the price formula?

Dr. Komlev: I believe in markets, but there should be selective and smart approaches to their functionality. There could be market failures and we have to take this into consideration. What really happened in the US is a price anomaly related to shale gas. Shale gas is extremely expensive gas, more expensive than conventional gas, but still we have very low prices because shale gas is a waste product of shale oil production. We live in a closely interconnected world and this price anomaly of cheap shale gas resulted in shale gas replacing, to a certain extent coal, in power generation in the US. But then US energy companies started to export their relatively cheap coal to Europe. Another example of this price anomaly could be found in the renewables sector. All this combined together to create a dreadful cocktail and resulted in a situation where you see conventional gas being squeezed out of the energy mix. And in our view we need to work towards resolving the effects of those



chain reactions that distort the value chain by targeting the very core – the price anomaly itself.

Question: Why are there no fixed price contracts?

Dr. Komlev: No, there are fixed contracts in the end user market. We sell gas to our clients, which are large mid-streamers, they in turn sell to end users. End users usually have one year contracts with their mid-stream supplier at a fixed price. Maybe we will also start thinking about developing these short-term fixed-price contracts.

Question: I know that back in 2006 «Межрегионгаз» was operational for two years and also PM Medvedev was a big proponent of the gas exchange. What do think the future of the function of gas exchange in Russia is?

Dr. Komlev: To be honest, the only reason this exchange was set up was so that Mezregiongaz could sell gas at a price 4%/5% higher than that which was set by the Federal Commission for Tariffs.

“It may take [Iran] 5, 10 or even 15 years to develop [their gas] industry, but now their hands are tied because of the sanctions.”

Follow-up question: But this is a division of Gazprom, right?

Dr. Komlev: Yes, but in my view it is completely irrational to have any kind of exchange if there is no free market pricing. Again, if 90% of the prices are set up by the regulator, then obviously the price cannot diverge much from the one that the regulator puts forward. There is no need for such

an exchange in a market that is dominated by regulatory decisions.

Question: You have mentioned Iran and Turkmenistan. How fast and in what sense do you think their possible exports can affect European gas markets?

“If you ask my personal view, there is no need to build a pipeline to the UK, it is rather better to build additional capacity of LNG.”

Dr. Komlev: With regards to Iran, although they have huge reserves, at the moment they are a net importer of natural gas. It may take them 5, 10 or even 15 years to develop the industry, but now their hands are tied because of the sanctions. Their assets are frozen, they cannot sell natural gas for hard currency, thus they are limited to barter deals.

Question: I have a question about South Stream and its proposed capacity of 63bcm, do you think there is a possibility that we might end up with less than that, and if so what circumstances might cause that to happen?

Dr. Komlev: Gazprom’s plans are to build secure routes to deliver gas to Europe that go around Ukraine. Currently, Ukraine transits 80bcm of natural gas destined for the European market, and we don’t know what might happen with those 80bcm. Of course we hope that everything will be fine with those deliveries. If we build a 63bcm capacity pipeline then we plan to use it. For example, last year, out of the 55bcm capacity of Nord Stream, we were only able to use 23bcm. But if we have both Nord and South Stream in place, this will give us more flexibility



in going around Ukraine. In short, Gazprom's plans are to have secure routes so we can deliver our gas to Europe.

Question: In recent press releases the expansion of Nord Stream was an object of much talk, with the possibility of targeting the UK as a driver behind that. Having in mind the National Balancing Point and the fact that spot trading is dominating the British market, do you think that Gazprom's stepping more prominently into the British market would allow some of your EU partners to argue that Gazprom should move away from LTC and introduce spot prices on their markets as well?

Dr. Komlev: There have been discussions over construction of the new lines of Nord Stream; however, there are no details at the moment. If you ask my personal view, there is no need to build a pipeline to the UK, it is rather better to build additional capacity of LNG.

“By fighting with dependence on Russia gas politicians are shooting themselves in the leg.”

Question: How about increasing your storage capacity in Western Europe and setting up trading houses that will allow Gazprom to capture the high margins depending on the seasonality?

Dr. Komlev: It is a good idea. But so far Gazprom Export has been really conservative in the sense that we are not involved in hub trading at all. We

are simply a large wholesale merchant/trader that delivers gas to a number of large customers, but are not involved in selling gas on short-term basis. But I think that it will be a real necessity for us to develop this kind of business, as we have our own storages and we can utilize the existing capacity. But I want to underline that in our view the current price mechanism is fair.

Question: A number of Gazprom's contracts



Gazprom is the Only Reliable Supplier from Outside

Supplies by the largest gas exporters, bcm

	2012	2013	Changes	Changes, %
Gazprom	138.8	161.5	22.7	16.3%
Algeria (incl. LNG)	46.5	37.9	-8.6	-18.5%
Libya (incl. LNG)	6.7	6.2	-0.4	-6.5%
Qatar	31.3	24.8	-6.5	-20.7%
Nigeria	12.1	7.5	-4.6	-38.0%

Supply by the largest European producers, bcm

	2012	2013	Changes	Changes, %
Norway*	121.4	115.4	-6.0	-4.9%
UK	43.8	40.9	-2.9	-6.5%
Netherlands	72.6	81.5	8.9	12.2%

* Volume of pipeline and LNG gas, delivered at European market

Sources: IEA, Eurostat, National Statistical Offices, Wood Mackenzie, Lloyd's, Gazprom Export estimation as of January 2014

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Changes in EU gas imports by source between 2012 and 2013. Taken from Komlev's PowerPoint presentation. EUSP, February 28, 2014.

are about to be renegotiated. Do you believe Gazprom will be successful in maintaining its position in these contracts, considering that Gazprom is facing EU's TPA (third party access) and a gradual move towards spot-pricing?

Dr. Komlev: At the moment there is really strong pressure and the problem is that our clients come to us and tell us "What can we do? If you don't decrease prices we will go bankrupt." And this is a consequence of EU's policy to enforce certain price principles, which they believe are the best in the world, but the fact of the matter is that this is simply not true. I think that Gazprom is in a unique and very



strong position. In 2013, Gazprom was the only reliable supplier of natural gas to Europe, all the rest failed; the Dutch also failed because there was a decision of the Dutch government to decrease output of the Groningen field by 20bcm. There is no one else but us and this is a result of the liberal reforms in the EU.

Follow-up question: But do you think that Gazprom's position will be adequately taken into account?

Dr. Komlev: In short, by fighting with dependence on Russia gas politicians are shooting themselves in the leg.

Question: How about investing in technologies to convert cars or trucks from gasoline to gas?

Dr. Komlev: Europe decreased its consumption of gas between 2010 and 2013 by 30bcm. This 30bcm could be easily reclaimed if we deliver to the transportation sector. At the moment, the use of natural gas in the transportation sector is really insignificant, less than 2%. That presents a huge opportunity. Technologies for compressed natural gas have existed already for maybe 30/40 years but still the results are not there. In my view, the only breakthrough in the development of natural gas role in the transportation sector may come with the development of heavy duty trucks running on LNG and also bunkering. As a fuel, LNG gives the same benefits as diesel and the time of refill is significantly less compared with CNG. Also there is no need to carry heavy gas bottles in the vehicle, whose presence changes the aerodynamics and requires additional space. ♦

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Workshop Review: Andrey Kostin, Chief of VTB—Russia and Europe: Past, Present, and Future

—Nicholas Watt

On April 4, 2014 European University at St. Petersburg welcomed VTB chief, Andrey Kostin, to the Golden Hall for his presentation entitled “Russia and Europe: Past, Present, and Future.” Kostin was introduced by Rector Oleg Kharkhordin to an audience of students and professors eager to hear what the head of one of Russia’s leading state banks had to say during this time of tense relations between Russia and Europe.

Kostin’s presentation began with a purview of the shared history of the two regions, and specifically how European influence altered the trajectory of Russian history. Kostin noted that though Christian values were what initially united them, Peter the Great’s dedication to European values and aesthetics pushed Russia closer to Europe.

“The Russian upper classes spoke French, read European books, and listened to European music.” The cultural exchange has not been just one way, though. Kostin pointed to major Russian cultural figures and specifically to the impression that the “War and Peace” section of the opening ceremony of the Sochi Olympics made on Western audiences.

Russia’s roughly 70 years of communism, in Kostin’s opinion, was a setback both to the country’s overall development, and to its relationship with Europe. During this confrontational period, however, eco-

nomics thrived; Kostin used the historic pipe for gas deal and other examples to illustrate his point. Kostin saw the end of communism as an opportunity for Russia to greatly improve its ties to Europe. How effectively did Russia capitalize on this opportunity?

Kostin’s response to his own question was mixed. He characterized the beginnings of the post-Soviet period as one of great, but overly optimistic goals. Despite the significant trade that has connected Russia and Europe (especially German consumers and French banks), there was much that has hindered increased cooperation. Kostin pointed to the inherent



Andrey Kostin, VTB Chairman. *EUSP*, April, 4, 2014.

difficulty in transitioning from 70 years of communism, the emergence of a multi-polar geopolitical landscape, and the breakdown of trust between Russia and western nations – the US in particular. The expansion of the EU, NATO, and constant criticism of Russia from the West regarding human rights has further damaged relations.

Kostin then turned to the current situation in Ukraine. Regarding the EU Association agreement, he said that though Russia respects any choice Ukraine makes, Russia is vocal in its opposition to the deal due to the exposure it would bring to the Rus-



sian economy. Kostin said that Russia believes what happened in Ukraine in February was a violent seizure of power that violated the legitimate resolution between Yanukovich and the opposition, which had been brokered by EU diplomats. Kostin conceded that Yanukovich's regime was poorly managed, but emphasized that Yanukovich was illegally stripped of power, as constitutionally mandated impeachment proceedings never took place. Dangerous radicals hold too much power in Ukraine's current government according to Kostin, who pointed out that Catherine Ashton (the EU's foreign secretary) had even been following the Russian government's position by condemning the Ukrainian radicals in a recent statement.

Kostin found the “silver lining” for the Russian economy in the increased confrontation with the West: Russia could be propelled to diversify both its domestic economy – Kostin noted the need for more high tech industry – and its customer base, with countries such as China, Japan, and South Korea representing increasingly attractive trade partners.

The topic then moved to the US-led sanctions targeting Russian officials, which Kostin viewed these as counterproductive. He thought that though the sanctions hurt, they did not represent a point of no return. More sweeping economic sanctions, such as those levied on Iran, would be disastrous, and not only for Russia, but the EU, especially. Kostin found the “silver lining” for the Russian economy in

the increased confrontation with the West: Russia could be propelled to diversify both its domestic economy – Kostin noted the need for more high tech industry – and its customer base, with countries such as China, Japan, and South Korea representing increasingly attractive trade partners. He said that Russia needs “reindustrialization”, and noted the increasing trend of manufacturing “coming back home”.

Kostin began finishing up his speech with an optimistic tone, pointing to Russia's newfound self-confidence. Russia's ascension to the WTO in 2012 was a big success and the country has begun to take on a more global posture. “The EU is no longer the great pole, as it was twenty years ago. We should look at a more global picture.” Kostin found that there was also a lot of untapped potential in Siberia, where economic development has become a national priority. Kostin was also optimistic about the prospects of the Eurasian Economic Union set to launch in 2015. The unification of the EU and the Eurasian Economic Union into one free-trade zone was even raised as a possibility in the future. He said that relations between Europe and Russia could be improved by a higher degree of mutual respect.

Question and Answer Session

The floor was then opened up to the audience for questions. The first question related to the position of the Russian state toward the administration currently in Kiev. Kostin answered that Moscow would recognize a fairly elected administration in Kiev. “If properly organized, these elections [in May] will create a legitimate regime.” He emphasized the need for the future regime to represent the interests of the majority of the Ukrainian population. In his answer, Kostin was also highly skeptical of the possibility of Russian military action in Ukraine.

The second question raised doubt about the effectiveness of a Customs Union that did not include Ukraine. Kostin conceded that the Customs Union would be more successful with Ukraine in it, but



highlighted the untapped potential in Siberia and South East Asia. Kostin regretted that a formula allowing Ukraine to cooperate in the economic sphere with one – either the EU or Russia – without hurting the other did not exist.

On a broader note, Kostin said that the EU “will never manage to succeed in Ukraine unless there is the support of Russia. Ukraine has a lot of problems but may have more problems if Russia turns its back on Ukraine. Ukraine will really struggle despite Western loans.”

should do more to “unfreeze the situation”, nothing that Western sanctions on Russian banks would be disastrous. He said such sanctions would be more damaging to Russia than vice versa. He brought up the example of Iran, where sanctions had completely isolated the country from any financial transaction. He said Russia should move to restore its relationship with the West.

Rector Kharkhordin then asked about the freedom of expression in the working environment of a Russian state company. Kostin answered, “I think we should talk, there should be more dialogue. Some people say we live in a closed society. I think it’s not true”. He said people have free access to travel and information – keys to an open society. Kostin said that he had fired only one person for political reasons only once, and it was because this individual had posted photos supporting Nazism. “We should develop society with a different and broader opinion,”

he concluded his response.

The fifth question was about the relative standards of living in Russia, as compared to Ukraine, and how it related to Crimea. Kostin said that in the 1970s, the Crimean populace enjoyed a much higher than average standard of living, with the beaches, the vineyards, and so on. Kostin said he loves the Crimea, and has been going there during the summer for 15 years and also owns a house there. He’s never had a problem with it



EUSP International Students. From left: Max Hoyt, Elisabeth Ludeking, Elizabeth Rattey, Michael Camarda, Will Sumpter, Vreni Veskimagi. EUSP, April 4, 2014.

The third question focused on the effect of Russia’s policy on Ukraine on intellectual life. Kostin approached answering from a more economic point of view, while admitting that sometimes Russia’s policy, specifically the manipulation of gas prices, left something to be desired. He thought Russia

being Ukrainian. He said the region is very close to the Russian heart with its literature, culture, and history, and then delved into the economic implications of the current situation. “It’s a fact of life that Russian society is about twice as wealthy as Ukrainian. Many



people there will benefit. But some will lose.” On a broader note, Kostin said that the EU “will never manage to succeed in Ukraine unless there is the support of Russia. Ukraine has a lot of problems but may have more problems if Russia turns its back on Ukraine. Ukraine will really struggle despite Western loans.”

The sixth and final question came from a person asking whether or not Russia would implement a national banking system in the case of further sanctions. Kostin said that it should not be “tit for tat” and that Russia could reasonably implement such a system – if banks such as his or Sberbank were sanctioned – within two months or so in order for Russians to be able to make payments. He said Russia could create its own card system in addition to Visa, but he was skeptical of its international acceptance and brought up the case of the Chinese card, which can only be used in some very high end stores. Kostin warned that Russia should not get rid of Visa or Mastercard.

After this answer, Kharkhordin interjected that Kostin had a flight to catch and with that, the audience applauded and the presentation was over. ♦

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