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Oil Indexation as Remedy for Market Failure in Natural Gas Industry

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Oil-Indexation: Best Remedy for Market Failure

- Critics of O-I argue that even if ongoing competition between gas and oil is undeniable and the replacement value principle is still applicable, the emergence of hub-based pricing removes the necessity of using this exotic pricing mechanism. In the early days there was no option other than O-I to launch our highly capital intensive industry but as it matured the necessity for O-I has ceased to exist
- 'Historic' argument is wrong because market failure which brought O-I in natural gas industry to life is still there. In certain ways situation is getting only worse
- Market failure is a concept within economic theory describing when the allocation of goods and services by a free market is not efficient, or not Pareto optimal. In essence market failure is about mismatch between supply and demand of the traded commodity, its dearth or abundance compared to the situation when private and social welfare are maximized
- State intervention is a traditional medicine to fight market failure. But government guarantees, heavy taxation, and feed-in tariffs bring side affects more dangerous to the health of economy than a disease itself
- Key idea of my presentation is that market failure could be fixed by applying replacement value principle to a given dysfunctional market. This idea is based on the assumption that prices of the commodity that is chosen as substitute is a superior quality product of the 'invisible hand' work. This product brings us closer to optimal price than the original market price on a dysfunctional market
- Just as I consider natural gas to be a practical bridge fuel to a carbonless future economy, I believe that oil-indexation is not a problem but a solution in our imperfect world on the way to something better

Failure of Supply to Price Adjustment (Europe)

- Unique feature of the natural gas industry both globally and in Europe is coexistence of different types of price formation mechanisms, typically O-I and gas-indexation. They do not operate in independent, parallel mode but intermingle with one another resulting in creation of a hybrid pricing mechanism. O-I and quasi O-I prices still dominate in this hybrid and are setting a soft ceiling for the hub prices which are their derivatives in fact. Though free hub prices are not exactly what they thought to be – an indication of the market equilibrium for the whole market – that dominant influence of one pricing mechanism over another is not a symptom of market failure
- It was a comprehensive financialization of the firm delivery obligations of the suppliers under the LT oil-indexed contracts after 2009 that has let to emergence of market failure. Overcontraction caused by the overblown earlier expectations for demand growth in Europe resulted in s a permanent glut of paper gas over the actual physical demand for it. Long-lasting inability of the hubs to rebalance European gas market on their own is an obvious case of market failure.
- Midstreamers have found ways to go around take-or-pay obligations in their long-term import contracts by selling firm supplier commitments on a forward curve and buying back as much of these obligations on the hubs as needed by the end-user clients. Volumetric risks are vested on another party, brokers and financial institutions holders of the forward contracts. Hubs authenticate this ‘paper’ imbalance in a discount to the contract oil-indexed prices.
- Mismatch between the hub and contract prices forces producers to lower oil-indexed prices to the hub levels in order to endorse the midstreamers. These adjustments initiate a self-propelled process of price degradation. The inability of the hub’s free market pricing mechanism to curb this drive down on its own without external inference (contract renegotiation in order to liquidate overcontraction) is a market failure indeed.
- Hybrid pricing mechanism is not bad by itself. Europe and Asia needs combination of firm and flexible delivery obligations, combination of oil and gas indexation. But the existing hybrid needs overhaul in order to stop the irrational price degradation that is detrimental to very existence of the much needed LT import contracts.

Failure of Supply to Price Adjustment (North America)

- Price dysfunction is in place on the fully liberalized American market. Price anomaly in the USA is of the same type as on the liquid hubs in Europe – permanent oversupply of natural gas. The mechanism of oversupply though is different – in the USA methane became a spin-off of production of shale oil and gas liquids. Oversupply here is of physical nature. As it was mentioned above oversupply on the European liquid hubs is an outcome of a different, ‘paper’ nature
- Production of shale gas outpaces demand for it for seven years in the row. Permanent gas glut leads to depressed prices which do not cover full costs of dry shale gas production. Drilling for dry gas has nearly halted as a result. From the economically non-performing dry wells drilling relocated to the wet wells and, as result of this transformation, shale gas turned out to be a by-product of shale oil and gas liquids production. Indeed it is NGL-weighted production that tilts economics of Marcellus play, which is known as a major producer of dry gas too
- Mechanism of adjusting supply to price in gas got completely broken, because from the point of view of a shale oil/NGL producer methane it is not a self-sufficient commodity anymore. In the worst case when there are no pipelines around, dry gas becomes an unwanted waist product of shale oil extraction that has to be disposed of anyway. It is destined to flaring or pumping back into the well. In the best case it is an ‘added bonus’ to the price of core products. That explains ‘irrational’ behavior of gas producers who stubbornly increase deliveries to the oversaturated market. Dysfunctional market in natural gas is a clear indication of a market failure
- Although there are many parties that benefit from the depressed prices on the USA, I see no reason why the gas industry should be especially proud of a fact that it sells two products at a price of one
- Irony of the situation on the most liberalized and formally completely de-linked from oil gas market oil peg has reinstated itself. Supply of natural gas is driven by the fundamentals of oil market to a large extend. In that respect a sharp decline in the oil price which made shale oil production unprofitable in many locations may have a more profound influence on the supply of natural gas cut downs than any changes in the gas market own fundamentals over the last several years.

Market Failure: Price Risks for the LT Investments

- Instability and unpredictability of an energy commodity price is not a market failure by itself but it becomes a market failure when undermines investment incentives and eventually leads to the undersupply of this commodity. Market failure of this type reveals itself in higher than optimal prices until a new wave of investments fixes the problem
- For decades O-I was providing support to investment cycle in the gas industry but the liberal attack on oil peg has modified somewhat the mindset of the Asian buyers as they start showing reluctance to sign for the long-term O-I projects
- In 2013 there were only 7 final investment decisions (FIDs) in the gas industry on the back of growing long-term demand for gas in Asia. That is not enough to meet the growing global demand for LNG
- It is not a surprise that all the seven FIDs were gas liquefaction projects in the USA. Isn't it a signal that the banks start to except free market price LT risks in gas? Do not be misled. Banks do not take the Henry hub price risks, these risks are fully transferred to the off-takers of LNG
- EU Commission identified Hinkley Point nuclear plant construction project as a market failure. On that basis it approved a £10 billion credit guarantee by UK government and a subsidized price of £92.50 per MWh – roughly twice the current wholesale electricity price – paid out for a duration of 35 years.
- EU Commission finds 'no justification' for O-I in to-days Europe anymore although O-L in a market instrument for LT investment risks mitigation. It does not lead to the distortions attributed to the government intervention

Market Failure: O-I as Remedy Against Monopoly Abuse

- O-I in natural gas pricing turned out to be a remedy to the monopoly power abuse by the dominant suppliers. Almost all gas markets outside of North America lack the level of competition to create market mechanisms to fairly price gas as an independent commodity. Global gas markets are dominated by the large national companies that can potentially exercise their market power to distort prices in their own favor by limiting supply. With oil indexation in place this does not happen.
- Price manipulation by the dominant or even monopolistic supplier becomes impossible because none of these suppliers is capable of affecting one way or another prices of the replacement value basket made of oil and/or the oil products.
- And even more to it, daily nominations in the long-term oil indexed contracts comes from the buyers making it impossible for a seller to restrain supply without a penalty. There is a lot that importing nations can do with enhancing competition on their own domestic markets but they are not capable to overhaul a “god blessed” situation with the gas reserves concentrated in the hands of a few supplier nations
- Pricing based on supply and demand opens a Pandora box of endless conflicts in the natural gas industry