Research on the Integration of Price Between Chinese Refined Oil and International Refined Oil

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Abstract There are five price reforms in this decade in China. Although pricing mechanisms of Chinese refined oil has changed fundamentally, it does not show enough vitality and mobility. This paper analyzes from the volatility of international refined oil, the evolve of pricing mechanisms of Chinese refined oil and correlation of Chinese refined oil and international refined oil. At the same time, it gives some advices about the integration of these two prices, to improve the ability to respond to the risk of refined oil.
Key words Refined oil price; Integration; Volatility; Pricing mechanisms

1 Introduction

China promulgated reform program of refined oil price and tax on December 18, 2008. Depending on the level of different international oil prices, it adopts different pricing strategies. It also changed fluctuation of the current retail base price of refined oil to implementation of the maximum retail price, and appropriately reduced the price differentials in circulation. Since the implementation of new refined oil pricing mechanism, China adjusted nine prices of refined oil by fluctuations of international refined oil price. Chinese refined oil price showed stepped up trend affected by this situation. At present, international oil prices still significantly affected by the unstable factors, and the impact of China's refined oil prices are increasing. This paper will discuss China's reform of energy prices from the point of view of volatility of international product oil and the evolve of pricing mechanisms of Chinese refined oil. At the same time, it gives some advices about the integration of these two prices, to improve the ability to respond to the risk of refined oil.

2 Volatility of International Processed Oil Price

2.1 Increasing demand of processed oil

Along with the steady and rapid growth of international economy in recent years, the processed oil price is more sensible to demand-supply relationship because of the tight balance between supply and demand of processed oil. That is to say, on the demand side, robust global growth supported by the rapid (and continual) economic expansion in emerging Asia, particularly in China and India, has been cited as a fundamental break with the past; and then minute fluctuation of demand-supply can lead to intense volatility of processed oil price.

2.2 Hard to increase supply in short term

The proved petroleum reserve is 1.2 trillion barrels which is distributed extremely uneven. Most of the world's petroleum production occurs in the Middle East. They are responsible for 68% of the total production, followed by North America, Africa, Russia and Asia-Pacific, which account for 14%、7%、4.8% and 4.27% respectively [1]. Though supply is likely to respond to higher prices, petroleum production is limited due to low levels of OPEC spare capacity and the fact that the big oil companies are finding it more difficult to replenish their reserves. On the whole, oil prices will probably continue to soar.

2.3 Risks of oil-producing countries

Shortage related to lack of capacity to produce more affects oil prices to some extent. On one hand, ratio of reserves to production is falling all the time, for example, Saudi Arabia basic production rates is at max; Russia's production rates is falling. On the other hand, political turmoil happen in some oil-producing areas such as conflicts in Middle East, Sudan, Nigeria, Iran and etc are frequent. In addition, emergencies such as Cyclone Ivan can also lead to petroleum production reduction.

2.4 Petroleum futures speculation

The price of crude oil today is not only made according to traditional relation of supply to demand. The surge in oil prices in the past several years has led some experts to argue that at least some of the rise is due to speculation in the futures markets. By purchasing large numbers of futures contracts, and thereby pushing up futures prices to even higher levels than current prices, speculators have provided a financial incentive for oil companies to buy even more oil and place it in storage. The large influx of speculative investment into oil futures has led to a situation where we have both high supplies of crude oil and high crude oil prices.

3 Consequence of International Processed Oil Price Flctuality

China, the world's second-largest energy consumer, increased crude oil purchases to a record in 2009 to meet rising demand spurred by the government's $586 billion stimulus spending. Crude oil imports reached 203.8 million metric tons in 2009, or 4.1 million barrels a day, according to preliminary data released by the General Administration of Customs. Then China's crude oil dependency reached alarming levels last year with more than half of the country's total oil consumption coming from abroad, latest official statistics show. Thus, as a fresh player in the international oil market, China has acted only as the buyer not the seller and the surging oil prices will adversely impact on China's oil markets in the following ways.

(1)Huge government subsidy on oil refining enterprises while those enterprises are not motivated

Chinese oil refiners have been given subsidies to offset the gap between high international crude oil prices and controlled domestic fuel prices. However, domestic refining enterprises are still caught up in huge losses while the government continually subsidies those enterprises considerably. Soaring oil prices bring about sharp increase of material prices, rising cost and low productivity. Accordingly, Oil companies are still facing huge operating losses in their refining businesses, while some of the smaller, independent refiners have stopped or reduced production. Thus, processed oil supply is severely affected [2].

(2)Increasing transportation cost

Petroleum is the main power of various transportation means. And fuel fees account for 30% in transportation cost approximately. Then Oil prices can raise transport costs definitely.

(3)The price of crude oil is higher than that of processed oil

So as to in tune with international oil prices, the price of China's refined oil has been on the rise since June 20th in 2008. Though the petrol price, diesel price and aviation kerosene price increased 1000yuan per ton, 1000yuan per ton and 1500yuan per ton respectively, with average about 20% growth rate, the price of crude oil is still much higher than that of domestic processed oil [3]. However, progressively narrowing gap between high international crude oil prices and controlled domestic fuel prices can promote industrial restructuring and optimize energy consumption in China. Meanwhile, market fluctuations can be prevented to a certain degree.

(4)Increasing inflation pressures

An increase in oil prices can cause an inward shift in short run aggregate supply and put upward pressure on the price level – in other words a sharp jump in the price of crude oil causes an exogenous inflationary shock and the impact will be greatest when a country is a large-scale importer of oil and has many industries that use oil as an essential input in the production process such as China. Meanwhile, escalating oil prices can have a great impact on agriculture. The indirect impact is much more server than the direct impact of rising oil prices [4].

4 Pricing Mechanisms Analysis of Chinese Refined Oil

Refined oil is a special commodity and strategic materials in desperately needed related to people's livelihood, it is always a hot topic for its price.

China's current oil pricing mechanism is very complicated. It mainly base on oil products trading prices of Singapore, New York, Rotterdam markets, reference to transport fees, insurance and domestic tariffs and the cost of refined oil circulation determined by the State, finally it forms the retail base price of Chinese refined oil promulgated by the Development and Reform Commission. CNPC and Sinopec fluctuated the 8% range based on this base price, and finally determined the terminal retail prices. This pricing mechanism's purpose is that Chinese refined oil price closely internation, and integrate international refined oil price by administrative means. But there are many factors affected international oil prices, including not only the supply and demand of global energy market, but also the changing of oil strategy of energy powers, some times it also manipulated by speculative factors. It always hardly effectively regulates the Chinese refined oil market linked with international refined oil prices. China's reform process of refined oil pricing mechanism shows in Figure 1.

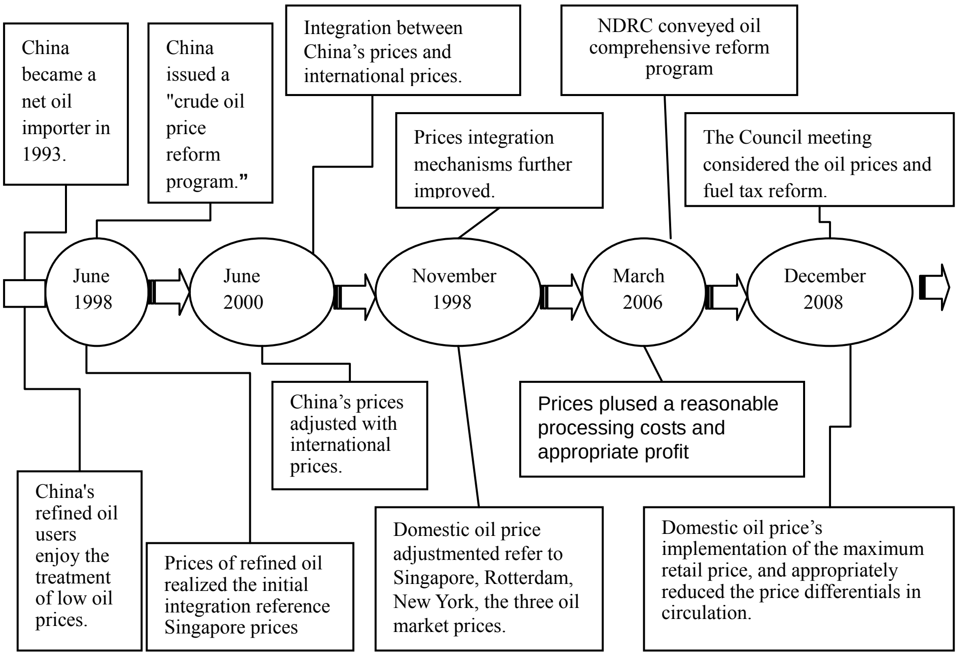

Figure 1 China's Reform Process of Refined Oil Pricing Mechanism

There are five price reforms in this decade in China, and the pricing mechanisms of Chinese refined oil have changed fundamentally. It reflects the operation of the market economy mechanism, and injects some vitality to refined oil price management system. But it's still a passive setup judging from the situation these years.

(1) Price adjustment lags, its failure to reflect changes in the market sensitivity. The standard price of refined oil sales in the current state, only adjusts when price-weighted average change over a certain range, and every adjustment at least is more than a month, sometimes stills a few months. At the same time, change in the international market does not fully reflect the domestic market, it also cannot reflect the real needs of the domestic market if we determine our prices according to international prices.

(2)Awkward integration distorts the normal market demand. First, the level of pricing fluctuates by a wide margin, it's normal of oil price per tons adjusts up and down in 200. The price adjustment sometimes time lag, at that time the price does not reflect the true price of refined oil, making little guidance for national guidance prices. Sometimes the price adjustment is too high, it not meets the actual price, and the price exists in name only. Sometimes the price adjustment is too low, it cannot achieve the purpose of promoting production [5]. Second, it is different of demand between China's oil market and international markets, and the domestic market is also different from other parts of the consumption structure, habits and seasonal changes. Awkward integration necessarily differs from the actual situation of the domestic market.

(3)Transparent lagging pricing mechanism would stimulate speculation. Lagging pricing mechanism may interfere with the normal operation and market order, and cannot achieve the purpose of stabilizing the market, and bring the unequal market opportunities to the operators. Domestic oil price adjustment and changes lag the international market for a long time, and set aside more room for speculative business.

(4)Asymmetric integration between crude oil prices and refined oil prices, affect the normal operation arrangements of oil production. Crude oil prices monthly adjustment fully according with changes in international oil prices, but refined price adjustment have a stable range. Purchase price of crude oil production enterprises does not match oil selling price, it's not conducive to link or connect with production and marketing.

5 Conclusions

An often happened situation caused by the shortcomings of the current pricing mechanism in China is that, considering about the inflation adjustment, even if international oil price exceed the established range, the domestic refined oil price may not be raised by Development and Reform Commission, even if up, rates are smaller. Another is that when the oil price falls as crude oil price, for the purpose of protecting the domestic oil refining enterprises, the domestic refined oil price doesn’t follow back. This has resulted in the correlation between domestic oil price and international prices of crude oil and refined oil is weak.

Oil price joints track with international standards essentially means pricing mechanism lines with international practice, what's more, price change may not be related to the international oil market simultaneously until forming a pricing mechanism with international standards. The author thinks that our oil product market joints track with the international standards should note the following:

(1)Joint track step by step is required. In view of the current state of affairs, the fall of international oil price will lower our prices accordingly, but this is only the integration of price level. A fundamental integration is market-oriented pricing mechanism. The real market-oriented is the realization of independent pricing system for refined oil, which based on the formation of the full competition of market subject. So it is a long-term goal.

In view of short-term transition, there are two ways that the pricing mechanism reform into line with international standards. One is the direct integration, referring to the domestic refined oil price integrated with international oil price, which is our present refined oil pricing mechanism which based on the market trading price of Singapore, Rotterdam and New York. The other is the indirect integration, referring to the domestic refined oil price integrated with international crude oil price, which tracks the price of three oil-producing areas of Brent, Dubai and Minas, on this basis, adds the state approved cost of processing crude oil to oil product and sales price difference.

(2)Enterprises power should increase. The State makes a medium standard price, and then enterprises make the price fluctuate in the range of the medium standard price. In addition, in order to prevent risks, the State also reserves the temporary price intervention, when international oil prices rise or fall, carry out the provisional price measures, such measures are only temporary. For indirect integration of the refined oil price marks crude oil price closely, although this approach is more strictly according to market-oriented operation, but if it is going on like this, not only the mining and marketing links can make money, the profitable of processing link is also institutionalized, this means enterprises transfer some aspects of risk to consumers.

(3)View from the long-term goal of reform, only by fully liberalizing the oil price and making price independently according to international and domestic market conditions by the enterprise itself, the pricing mechanism will realize market-oriented. To achieve this goal, the author believe that there are three aspects of work to do: first, develop the oil futures market as soon as possible, provide more market-based risk control measures; second is to build considerable scale of national oil reserve and moderate scale of the private oil reserves to ensure the national regulatory capacity of the market; third is the establishment of risk prevention mechanism, lower the negative impact of oil price fluctuations on the economy total output as much as possible [6].

In short, not only the factor of the changes in supply and demand causes a sharp rise in international crude oil prices, dollar depreciation and speculation of the international speculative capital contribute more to it. The reasonable price of crude oil crude oil prices and the future trend of international crude oil price need to be observed calmly. In any case, China's refined oil prices gradually integrate with the international oil prices undoubtedly is an important measure to actively and steadily push forward the reform of energy prices. It should be said that China's energy price reform is a complex process and need a long way to go.

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