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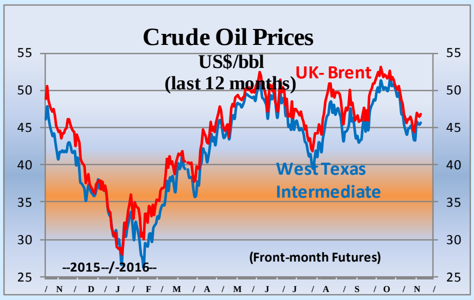
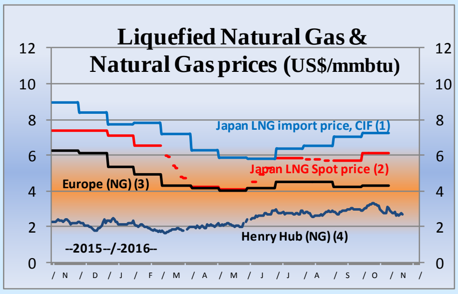
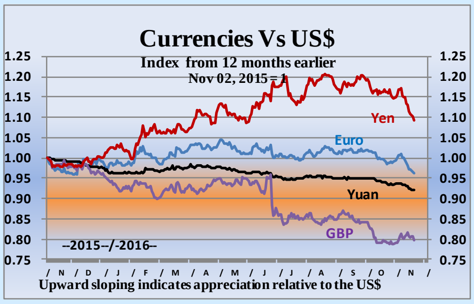


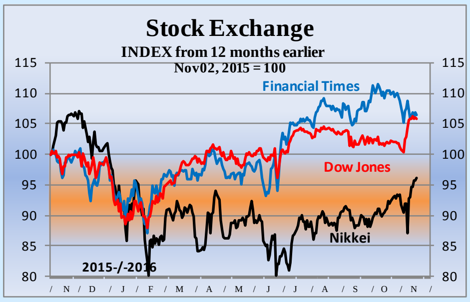
Source: DOE-EIA, Financial Times, NASDAQ



Sources:
(1) Ministry of Finance "Japan Trade Statistics"
(2) Ministry of Economy, Trade and Industry
(contract month basis)
(3) Estimated by World Bank and World Gas Intelligence
(4) DOE-EIA, NYMEX (Front-month Futures)



Source: x-rates.com



Source: Financial Times

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1. EU: Switzerland and the Nuclear Phase-out Policy

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On October 6, the Swiss government announced that it would hold a referendum on November 27 on the initiative (popular initiative) to accelerate the abandonment of nuclear power to 2029. This initiative was led by the Green Party, which gathered the required number of signatures. The initiative demands a ban on all new nuclear construction, and limiting the operating period of the country's five existing reactors to 45 years, thus closing the Beznau and Muhleberg nuclear power plants in 2017, Gesgen in 2024, and Leibstadt in 2029. However, the Swiss government has clearly indicated that it does not support the nuclear phase-out initiative.

The government has given the following reasons for not supporting the initiative. First, the initiative does not consider the time required to replace nuclear power with hydropower, solar PV, wind, and biomass. With nuclear power accounting for approximately 35% of the country's power generation, the government points out that it is impossible to substitute all lost nuclear capacity with renewable energy by 2017. The government further indicates that premature closure of the nuclear power stations would increase the dependency of other countries, particularly Germany, on coal, causing energy security and environmental concerns. Further, importing large quantities of electricity could strain the connection line capacity and compromise supply stability. Premature closure would also involve compensation for nuclear power companies and cause a shortfall in the decommissioning fund, which will have to be shouldered by the government and ultimately the people. The poll conducted from October 3-14 showed that 57% are for the initiative, 36% are against it, and 7% remain undecided. However, due to the strong opposition by the center-right political parties, the federal parliament, the government, and economic groups, the initiative could well be rejected by the referendum.

In December 2011 following the Fukushima Daiichi accident, the Swiss government released the draft "Energy Strategy 2050" which includes a gradual shift away from nuclear power. The Strategy includes, in addition to the phased closure of existing reactors, promoting energy saving and developing hydropower and renewable energies, and renovating the power grid. Following deliberations in the federal parliament, in September 2016, the first draft measure package of the Strategy was approved in both houses. The Green Party demanded the closure of all nuclear power stations that have operated for 45 years, but the majority of both houses favored a phased decommissioning without setting a clear operation period, and accordingly, the draft package does not state a clear term. Germany and Switzerland are often considered alike in that they both turned away from nuclear power after the Fukushima Daiichi accident. However, their stances are actually quite different if we compare Switzerland's current situation to Germany which immediately announced a specific schedule for site closure.

The subsequent measure packages of Energy Strategy 2050 are also to be discussed further, and thus Switzerland's efforts to switch energies have only just begun. On October 12, the three nuclear power operators announced the withdrawal of license applications for the replacement framework that they had submitted in 2008. The efforts by the government and the operators to phase out nuclear power in a country that has a relatively high percentage of nuclear electricity must continue to be monitored as a leading example of switching energies.

2. China: Developments in the Carbon Pricing System for Automobiles

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The Paris Agreement is now set to become effective on November 4. Aiming to achieve its long-term goal in the INDC efficiently, China is strengthening its measures for introducing various carbon pricing systems including carbon emissions trading. For automobiles, it has set a binding goal to improve the corporate average fuel consumption (CAFC) per 100 km for passenger cars to 5 L in 2020, and aims to improve it further to 3.2 L in 2030. It also aims to increase annual sales of next-generation vehicles (NEVs) to 2 million units in 2020 and at least 10 million units in 2030. To achieve these goals efficiently, the Guiding Opinion on Accelerating New Energy Vehicle Promotion and Application (published in July 2014) clearly indicates that "a system for CAFC credit trading including rewards and penalties will be established and implemented, and in evaluating the CAFC, incentives will be introduced to promote NEVs". Accordingly, on September 22 this year, the Ministry of Industry and Information Technology published a Temporary Management Regulation for Corporate Average Fuel Consumption (CAFC) and New-Energy Vehicle (NEV) Credits, which proposes simultaneously introducing the CAFC regulation, NEV regulation, and the relevant credit trading system, and allowing the use of NEV credits to meet the CAFC regulation.

In other words, CAFC credits trading will be introduced for companies that are subject to the CAFC regulation. As an incentive for NEVs in calculating the CAFC, the fuel consumption of a NEV will be calculated as zero, and one NEV will be counted as five (2016) to two (2020) gasoline-powered vehicles (to increase the number of vehicles and hence the denominator for the CAFC calculation). Any company surpassing the regulatory standard will be awarded credits with a three-year expiry limit and which are allowed to transfer (relative trading) to automobile-related companies with capital tie-up. Any shortfall from the standard must be offset by the company's own CAFC credits, those transferred CAFC credits from its affiliated companies and the NEV credits (explained later) including those purchased from the market. The Regulation sets clear penalties for any failure to settle the difference, including registration on a "blacklist of noncompliant companies" and its release, rejection of applications to produce new models, and suspension of production of certain existing high-fuel-consumption models. Meanwhile, the NEV regulation and the associated credit trading system assign the target companies yearly sales ratio requirements for NEVs (e.g. 8% for 2018) together with the requirement to obtain matching credits, and newly introduce NEV credits trading. In calculating the NEV credits, the higher the performance of a NEV (battery-powered mileage), the more credits are awarded. Any company achieving more than the regulatory standard will earn resalable credits, which cannot be carried over to the next year. Any company failing to meet the standard must settle the difference with NEV credits purchased from the market. If the company fails to settle the difference, it will be subject to the same penalties as those for CAFC. The former is expected to be implemented from 2017, and the latter from 2018.

The Temporary Management Regulation is highly regarded in that it would improve fuel economy and increase the sales volume of NEVs by strengthening manufacturer regulations, instead of depending on government subsidies to consumers. On the other hand, regarding the use of NEV credits for achieving the CAFC regulation, many think that it would blur the intended goals of the respective regulations, which are to improve fuel economy and promote NEVs, making it difficult to verify their true effectiveness. Many also think that the grounds for offsetting the excess NEV credits (counted in units of vehicles) and the CAFC credit shortages (measured in L/100km/unit) are unclear, and thus the government should introduce these two systems separately. There are currently diverse opinions and positions, with some stating that instead of NEV credits, the carbon reduction quota trading (NEV-CER) proposed by the National Development and Reform Commission on August 2 (see the August 2016 edition of this Newsletter) should be introduced as the trading system for NEV regulation. The total system should be designed from a broad perspective, without being hindered by barriers between ministries. Any new developments must be closely watched.

3. ME: Iraqi Forces Launch Campaign to Recapture Mosul

Koichiro Tanaka, Managing Director &
President of JIME Center

After more than two years since the start of airstrikes by the US and other forces, Islamic State (ISIS/ISIL) is finally losing ground. Starting with the capture of the northern Syrian town of Dabiq from ISIS/ISIL by the Free Syrian Army backed by Turkey's shelling, the next day the Iraqi forces, backed by US airstrikes, began the long-awaited operation to recapture Mosul. It will take time to know to the extent of success of this military campaign.

Meanwhile, the disagreement between the countries involved has not completely disappeared, as Turkey, wary of the expansion of Kurdish groups, has decided to send troops to Syria and northern Iraq for another year, and has conducted airstrikes on the Kurdish armed forces (YPG) that are holding the frontline against ISIS/ISIL. The conflict of views between the US and Russia is also intensifying, and as a result, the two UN Security Council resolutions demanding an immediate end to the airstrikes on Aleppo and the fighting were both rejected. This will add further to the plight of civilians in northern Syria.

In Yemen where the civil war continues, a UAE military vessel traveling through the Bab Al-Mandeb Strait connecting the Red Sea and the Gulf of Aden was hit and destroyed by a surface-to-ship missile. Subsequently, a US military vessel was subjected to a similar missile attack, and so the US forces destroyed the radar facilities on the Yemeni coast now ruled by the Houthi anti-government forces. US military intervention has opened a new stage in the civil war in Yemen. Meanwhile, in the capital Sana'a, Saudi military aircraft bombed civilians attending a funeral, killing and injuring many. In response, the US, which had been backing the airstrikes, began an investigation. The 72-hour ceasefire called by UN special envoy Cheikh Ahmed has not managed to end the fighting, and the transitional government and the Houthis are fighting each other more fiercely than ever.

The US House of Representatives and Senate both managed to gather enough endorsements from lawmakers to reverse President Obama's refusal to sign the Justice Against Sponsors of Terrorism Act (JASTA). Saudi Arabia, which may be sued for damages by the families of the 9/11 victims under JASTA, has been threatening to retaliate by selling US government bonds to hamper the deliberations of the bill. The enactment of JASTA is certain to worsen the US-Saudi relationship and affect the environment for implementing Saudi Vision 2030. Under such circumstances, Japan's communication giant Softbank attracted attention when it announced an agreement with the Saudi government to establish a fund worth 10 trillion yen. Meanwhile, Saudi Arabia is making great efforts to emphasize its collaboration with Russia to restore oil prices. It held a meeting of energy ministers of the five GCC OPEC members and Russia in Riyadh following the negotiations at the World Energy Congress in Istanbul.

The US Department of the Treasury made additional explanations on the foreign exchange procedure between non-US dollar third country currencies to clarify the measures to alleviate the economic sanctions on Iran. However, this has not managed to resolve the concerns of major European financial institutions that hesitate to start doing business again with Iranian banks. Now, with a Trump victory in the US presidential elections, the environment for maintaining the nuclear deal with Iran looks murky than ever.

4. Russia: Turning to India as a Solution

Sanae Kurita, Senior Researcher
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In time for the eighth BRICS Summit (October 15-16) held in Goa, India, President Putin met with India's Prime Minister Modi. The two countries signed 18 agreements on energy and defense including the joint production of military helicopters. In the nuclear area, the leaders agreed to sign a framework agreement on the construction of Kudankulam Units 5 and 6 within this year. Further, the ground-breaking ceremony for Units 3 and 4 of the power station was held and Unit 2 which started operation in August was officially handed over to India, both during the Summit period, strongly emphasizing the progress of the bilateral nuclear collaboration.

Regarding petroleum, a consortium led by Rosneft bought 98% of the shares of India's major private oil refiner Essar Oil, Vadinar Refinery (refining capacity of 400,000 barrels/day), and Vadinar Port in western India for a total of 12.9 billion dollars. According to Reuter, it is both the highest price a foreign company has paid for Indian companies and the most expensive overseas purchase by a Russian company. In practice, the deal could take the form of a swap transaction via a Venezuelan state-run oil company that has a strategic cooperation with Rosneft and has a track record of supplying oil to India. Furthermore, a consortium of three Indian oil companies purchased a 23.9% interest in the Vankor oil field in east Siberia from Rosneft for 2 billion dollars. Being the main supply source for the East Siberia-Pacific Ocean oil pipeline, India's Oil and Natural Gas Corporation Limited (ONGC) had already acquired a 15% interest in it in May 2015, and is expecting to acquire an additional 11% by the end of October. When the deal is complete, Indian companies will own a 49.9% interest in Vankor, with Rosneft holding 50.1%. There are further signs of deepening ties in the energy business between the countries, such as India's participation in the oil and gas development project in which BP is investing.

In the World Economic Outlook released on October 4, the IMF projects a growth rate of 3.1% year-on-year for the world economy this year, and a higher rate of 3.4% next year due to the economic recovery in major emerging markets and developing countries and regions. However, for the BRICS countries, it projects slower growth for China and South Africa at 6.6% and 0.1%, respectively, and a continued negative growth for Brazil and Russia at -3.3% and -0.8%, respectively. Meanwhile, India's solid growth is expected to continue at 7.6% next year. IEA also expects that India’s oil consumption will post the fastest growth in the world until 2040.

Russia is hoping to revitalize its severe economic situation by strengthening ties with the Indian economy, which is expected to grow substantially. Meanwhile, for the increasingly oil-dependent India, the ties with Russia could be important for ensuring a stable supply of energy. Will the deepening economic relationship with India help Russia find new opportunities? The effects of further development of the Russia-India energy relationship on the supply and demand for energy in Asia and the world must be closely monitored.

5. US: Gas Pipeline Construction Posing a Challenge (As of 2016/11/1)

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Hillary Clinton seems poised to win the presidential election. If she does, President Obama's climate actions will continue and the CO_2 regulations on power plans will likely be implemented as scheduled, although possibly with small delays depending on the outcome of lawsuits. The leaked emails of Clinton's campaign manager John Podesta reveal that Clinton is realistic regarding energy policy, does not support a total ban on hydraulic fracking or a premature shift away from fossil fuels, and acknowledges the present need to develop domestic oil and gas for the economy and jobs. The current shift in generation mix backed by abundant gas supplies is likely to continue for the time being.

As gas supplies in unconventional areas particularly the Marcellus gas field in Pennsylvania expanded, matched by a concurrent rise in demand for gas for power generation, from 2008 to 2011, pipeline operators invested in building new pipelines, expanding existing ones, and sending gas in reverse mode. However, the build-up of transportation capacity subsided from 2012, and regions like New England, whose transportation network has always been weak, remains without access to the cheap Marcellus shale and continues to import costly LNG. Transportation capacity is also known to be insufficient for the Midwest, where gas demand is expected to surge with the shift from coal thermal to gas thermal.

The main reason for the sluggish investment is the time-consuming review process by the Federal Energy Regulatory Commission, which grants construction licenses for inter-state pipelines. Further, construction licensing may take even longer as the Department of Transportation is currently formulating safety regulations on the internal pressure limit and the pressure test procedure for pipelines based on the Pipeline Safety Act that passed Congress in June 2016 following a series of gas leaks from old pipelines. Several license applications have been withdrawn as the gas market environment changed drastically during the lengthy review.

Protests by residents are also an obstacle. Since the rejection of Keystone XL which was to carry oil from oil sands, protests by residents have become more radicalized and uncompromising. Protests occur more readily in areas where the oil and gas industries have emerged with the shale revolution, where administrative agencies are inexperienced and weak in executing the law, and the residents are risk-aware. President Obama's encouragement for various stakeholders to participate is another factor fueling protests.

Meanwhile, some factors are unique to the Northeast. Last August, the Massachusetts Supreme Judicial Court prohibited utilities from signing long-term contracts for pipeline use and passing the cost onto electricity tariffs. The ruling may curb investments by making it difficult to recoup them. The ruling was influenced by the State Attorney General's report which concluded that energy conservation and demand response are more economical and environment-friendly than gas pipeline investment as a way of responding to additional power demand. While this is in line with Hillary Clinton's campaign promise, it could ironically delay the reduction of CO_2 emissions in the power sector. In terms of energy policy, the Obama years enjoyed the benefits of the shale revolution, but the next government may be forced to deal with the distortion that has resulted from it.

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