MAPPING THE ENERGY FUTURE

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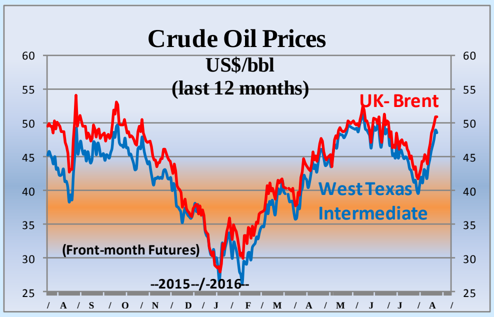
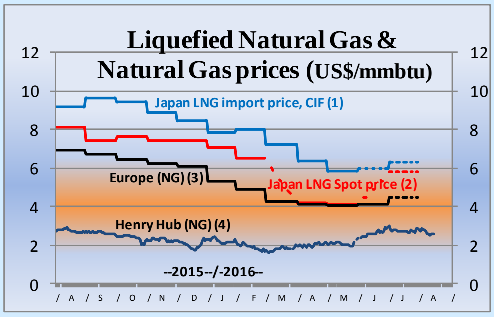
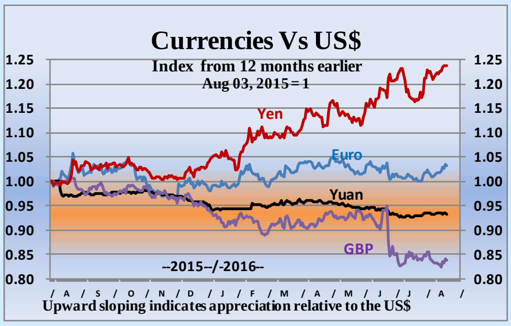


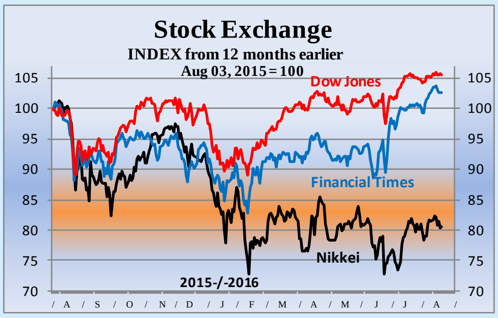
Source: DOE-EIA, Financial Times, NASDAQ



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. US: Various Parties Calling for Climate Action

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ExxonMobil's internal research and studies on climate change are causing a stir. It began with a media report in October 2015 that the company was aware of the risk from as early as the 1970s that GHG emissions from energy consumption cause climate change. Nevertheless, the company continued with PR denying the scientific grounds for climate change. The justice departments of several states including New York and California saw this as manipulating public opinion by misleading investors and society, and began investigations based on state laws. In response, Republican lawmakers of Congress summoned the Attorney Generals of the states concerned claiming unjust manipulation, to which the Democratic lawmakers of Congress reacted by condemning this as unjustified intervention in the states' rights. Further, environmental groups are demanding that the Republican lawmakers disclose the sources of their political funds, claiming that their actions are motivated by political donations from ExxonMobil and the oil industry.

As a result of this issue, the Democrats added text to their Platform released on July 25 demanding that the Justice Department investigate certain fossil fuel companies' research on climate change. ExxonMobil, the world's largest private oil company, has long taken a skeptical stance toward the scientific basis of climate change, and has been a symbolic target for environmental groups. How will this issue involving the company affect other energy firms and private companies in general? In particular, if government oversight does reach into corporate research and studies, it could greatly affect others such as the tobacco, pharma, and food industries that depend on scientific knowledge on health and safety. It will be interesting to see on what legal grounds the Democratic Party justifies its oversight of corporate research and studies.

New York and California are the two most politically liberal states in the country. Particularly, actions by New York, where the stock exchange is located, have major ramifications. In 2007, New York's justice department launched an investigation into the annual financial report submitted by the US's largest coal company, Peabody Energy, to the US Securities and Exchange Commission, suspecting insufficient analysis of future business risks and providing excessively optimistic information. A settlement was reached in November 2015, and the company agreed to base future financial reports on the most pessimistic outlook for coal demand from the IEA and other neutral organizations, and to factor into the report all laws and regulations that could affect the business. If applied to other firms, this settlement would at least affect the fossil fuel- and energy-intensive manufacturers headquartered and listed in the United States. Thus, this move cannot be ignored, especially as major financial institutions including JP Morgan and Bank of America and institutional investors such as insurance companies and pension funds are already tightening their lending policies toward energy companies, citing corporate social responsibility (CSR) and the worsening business outlook which serves as the basis for credit decisions.

As social pressure on fossil fuels mounts, ExxonMobil is ramping up its PR activities that a carbon tax is simpler and has lower social cost than emissions regulations and emissions trading promoted under the current administration's climate action policy. This argument has not changed since 2009, but Democratic candidate Hillary Clinton has reportedly refused to incorporate a carbon tax into her campaign promises despite requests by liberals led by Senator Sanders. The involvement of various parties is clouding the outlook for US climate policies.

2. EU: Investment in the EU's Energy Infrastructure

Kei Shimogori, Researcher
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On July 15, the EU member states agreed on the European Commission's proposal to invest 263 million euros in key energy infrastructure projects. Most of the investment will be spent to build Balticconnector, a gas pipeline that will connect Finland and Estonia (EU to contribute 187.5 million euros, or 75% of the total cost). Nine energy-related projects have been selected to receive funding (210 million euros for 5 gas projects and 53 million euros for 4 electricity projects), but as the EU's planned contribution for 2016 is 800 million euros, it is currently selecting the second group of projects for 2016.

Even for energy infrastructure projects, financing from the market is a basic principle. Nevertheless, the EU has set up investment support programs such as the Connecting Europe Facility (CEF) and European Fund for Strategic Investments (EFSI), under its goal of strengthening the energy infrastructure that interconnects the member states. CEF supports infrastructure projects in the three areas of energy, transport, and telecoms of the EU, with 5.35 billion euros allocated to the energy area in total from 2014 to 2020. To receive CEF's support, a project needs to be approved by the EU Commission as a project of common interest (PCI). So far, 195 projects have been recognized as such. Meanwhile, EFSI, also called the Juncker Plan, is one of the pillars of Europe's investment plan and is run by the European Investment Bank (EIB) Group. The program targets projects whose risks are greater than those that the EIB would normally support, and provides 16 billion euros of credit guarantee from the EU budget together with 5 billion euros from the EIB. The European Commission aims to invest 315 billion euros between 2015 and 2017, and expects a multiplier effect of around 15%.

The PCI list is updated every two years, and the current list (2016-2017) names the Northern Seas Offshore Grid, North-South Electricity Interconnections in Western Europe (electricity and gas), and North-South Electricity Interconnections in Central Eastern and South Europe (electricity and gas) as priorities, among others. While a great number of projects are located in Central, Eastern, and Southern Europe, it is interesting that the list also includes projects of Western Europe including Britain. According to a June 2016 report, the energy industry accounts for 22% of all transactions under the EFSI, half of it being Britain's wind power plant construction and smart meter-related projects.

The UK's new Prime Minister, Theresa May, was sworn in on July 13 to succeed Prime Minister Cameron, and a new Cabinet was formed. The Prime Minister visited Germany on her first official overseas trip, and announced that the UK intends to not submit the notification to leave the EU this year. Attention must be paid to the next update of the PCI list due in 2017, together with the progress of negotiations on Brexit, which are due to start at around that time.

3. China: Climate Action Plan for Industry

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In China, industry is a major source of CO_2 emissions following only the power generation and heat supply sectors, accounting for 31.3% of total emissions (IEA statistics for 2013). Thus, emissions reduction in industry is a top priority for China, together with emissions reduction in the power generation and heat supply sectors by increasing the use of renewable electricity and improving the efficiency of coal-fired thermal power.

The emissions reduction target for industry has been set consistently with China's Intended Nationally Determined Contributions (INDC). In May 2015, the State Council released "Made in China 2025" [1], set targets of cutting CO_2 emissions per unit added value by the manufacturing industry (emissions intensity) by 22% in 2020 and 40% in 2025, both from 2015 levels, and reducing energy consumption per unit added value (energy intensity) by 18% in 2020 and 34% in 2025 from 2015 levels. Accordingly, China's INDC, which was submitted one month later at the end of June last year, set the targets of raising the percentage of non-fossil energy to around 20% and cutting emissions intensity by 60-65% from 2005 levels by 2030, and achieving peak total emissions as early as possible, around 2030.

As a post-Paris Agreement action plan, the Ministry of Industry and Information Technology released the "Industrial Green Development Plan (2016-2020)" on July 18. Succeeding the "Made in China 2025", the Green Plan sets targets of cutting the emissions intensity by industry by 22% and the energy intensity by 18%, both from 2015 levels, by 2020. Compared with the overall targets in the Thirteenth 5-Year Plan on the Country's National Economic and Social Development, the Green Plan's reduction targets are 4 points higher for emissions intensity and 3 points higher for energy intensity. The Green Plan also sets a new target of raising the percentage of low-carbon energies in industry's energy consumption from 12% in 2015 to 15% in 2020. It also requires reaching the peak energy consumption of some heavy chemical industries and bringing the carbon emissions of some industry sectors close to the peak, but does not specify a total volume target for the entire industrial sector. As policy measures, the Plan mentions introducing a top-runner system[2] of energy utilization efficiency in energy-intensive industries such as steel and cement, increasing the average efficiency of electric motors and internal combustion engines by five points, promoting solar PV development in factories and industrial parks and the use of micro smart grids, and improving the efficiency of renewable electricity utilization. It further mentions conducting low-carbon company model experiments as well as demonstration projects on carbon capture, utilization, and storage (CCUS) in particular industries such as chemicals.

During the Paris Agreement negotiations, China made an international commitment to open a nationwide carbon emissions trading market in 2017. The eight applicable business sectors will encompass five areas of industry (excluding power generation and heat supply) including steel and cement. The Green Plan states to establish carbon emissions reduction targets and action guidelines for these business areas. The key is how to ensure compatibility between these and the Thirteenth 5-Year Plan led by the National Development and Reform Commission, concerning (1) the supply and demand for energy with a clear target for the total volume, (2) global warming countermeasures, and (3) allocation of emissions to companies eligible for emissions trading. As the deadline approaches for opening the trading market, attention will focus on the forthcoming final solution.

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[1] http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm

[2] For instance, China's energy consumption per ton of crude steel was 11.2% higher than that of Japan (2014) in 2015, but the gap is projected to close to 8.9% in 2020.

4. Middle East: Unending Cycle of Violence

Koichiro Tanaka, Managing Director &
President of JIME Center

Still reeling from the terrorist attacks at Istanbul Ataturk International Airport, Turkey then suffered a failed coup attempt by parts of the military. Following the incident, an increasingly authoritarian President Erdogan ordered a three-month state of emergency, and accused his political enemy and religious leader Fethullah Gulen, based in the US, of being the mastermind behind the coup. He also rapidly ordered the arrest, detention and suspension of numerous members of the military, police, government officers, judges and teachers, causing concern over the loss of function as a nation. Further, tensions are rising between the supporters of the ruling party who took to the streets to block the coup and the citizens who opposed the military coup but still are concerned about the deepening autocratic-style ruling.

In view of the turmoil, rating agencies downgraded Turkey’s sovereign rating one notch, and the currency, the lira, fell to its lowest level ever. Possible confrontation with the US over the extradition of Mr. Gulen could hurt Turkey, especially as the country’s diplomatic woes, including its relationships with Israel and Russia, were showing signs of improvement. The coup attempt will effectively terminate discussions on Turkey’s EU membership, and could cause disagreements over the military operations against ISIS/ISIL among coalition forces.

Despite losing Fallujah located to the west of Baghdad, Iraq, ISIS/ISIL perpetrated one of the largest terrorist bomb attacks since the Iraqi war, demonstrating that its offensive strength are not confined to the battlefield. Terrorist attacks continue to spread as ISIS/ISIL claimed responsibility for a series of recent attacks, including the one at a café in the Bangladeshi capital of Dhaka, the truck attack in Nice in the south of France, and the suicide bombing in Kabul, the capital of Afghanistan. A failed terrorist attempt also occurred in the Saudi holy city of Medina, preceded by one in Jeddah, as well as attacks in Germany by Muslim immigrants, though culprits’ links to ISIS/ISIL remain unclear. These attacks have dealt a heavy blow to Germany and Chancellor Merkel, known for her tolerance toward refugees, thus complicating Europe’s migrant issue.

As ISIS/ISILIS struggles in northern Syria against the Kurdish forces, al-Nusra Front, the Syrian arm of the international terrorist group al-Qaeda, is becoming active once again. By announcing its split from al-Qaeda, the group has rebranded itself as the Sham Liberation Front, while many observers cast doubt over the genuine intention of the move. Further, a video surfaced showing the decapitation of a boy by a “moderate” rebel group supported by the US, exposing the difficulty of background checks of the parties involved in the prolonged civil war.

In the small country of Bahrain on the Persian Gulf, the political strife between the Sunni rulers and the Shi’ite majority is intensifying. Opposition party al-Wefaq, already been banned from engaging in political activities, was ordered by a court to disband, citing “ties with radical groups that resort to terrorism”. This development, likely to stir resentment from the opposition, has raised concern by the US and the UK that have military bases there. Meanwhile, in Iran, one year since the nuclear agreement, frustration is mounting over the delay in easing the sanctions, consuming the political capital of the country’s pragmatic President Rouhani.

5. Russia: Stagnant Relationship with the West and Economic Slump

Shoichi Itoh, Manager, Senior Analyst
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The IMF's World Economy Outlook released on July 19 projected Russia's real GDP growth for 2016 at minus 1.2% (revised up by 0.6 points from April 2016). The figure was supported by a modest rise in oil prices. However, the Outlook also noted that structural defects in the Russian economy and the negative impact of the West's sanctions would put downward pressure on growth.

At the St. Petersburg International Economic Forum in mid-June, President Putin commented that the Russian economy already "resolved its most urgent problems". However, a June public opinon poll, conducted by the Levada Center in Moscow (on 1,600 people in 48 regions nationwide) showed that 77% of the respondents thought that the Russian economy was in a crisis, with 70% expecting the crisis to continue for more than two years. According to a report by the Federal State Statistics Service on July 19, real disposable income for the first half of 2016 dropped by 5% (est.) year-on-year. Besides, the government faces a worsening financial situation. The reserve fund, provided as a means to make an emergency response to low oil prices is dwindling fast, down 50% year-on-year (dollar-based) as of the end of June, with 13 billion of the remaining 50 billion dollars spent in the second quarter of 2016 alone.

It is getting all the more important for Russia to have the West's economic sanctions lifted and to attract more foreign investment in order to overcome the crisis. However, there are signs that tensions with the West may intensify once again. Following Britain's exit from the EU (Brexit), more military and security officials are calling for prolonging the standoff with the West, including the Ukraine issue, hoping that the differences in the EU members' policies toward Russia will widen. Russia is now strengthening bilateral ties with the southern European countries, including Italy and Greece, which shows a reconciliatory stance toward Russia. Meanwhile, President Putin remains reluctant, despite being urged by German and French leaders, to implement the Minsk Agreement, which is a precondition for lifting the sanctions. Under such circumstances, in eastern Ukraine, the number of armed clashes between the Ukrainian government forces and the pro-Russian militants is once again rising after a brief period of tranquility.

At the NATO Summit, held in Warsaw on July 8 and 9, a decision was made to deploy 4,000 multinational troops to the Baltic States, namely, Estonia, Latvia, Lithuania, and Poland, to strengthen defenses against Russia. Russia takes this as "an attempt to contain Russia" and is becoming increasingly alarmed. US State Secretary Kerry met President Putin in Moscow to discuss the Syrian issue, but they failed to narrow their differences: Russia supports the Assad Administration and considers all rebels as terrorists, while the US sees defeating IS as the priority and is seeking possibilities for cooperation with Russia. The cooling relationship with the West over European and the Middle Eastern situations has various impacts on the Russian economy and the country's policy toward Asia. Japan must keep close watch over developments surrounding Russia, while finding a breakthrough in the bilateral relationship is such a big challenge.

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