Global energy markets

FRAGILE BALANCE IN THE GLOBAL OIL MARKET

According to the International Energy Agency (IEA), the global market of liquid hydrocarbons progressed from undersupply in 2017 to oversupply in 2018. At the end of 2018, the oversupply reached 2.3 mbd while the year-average oversupply stood at 0.9 mbd. This imbalance emerged amidst the steadily growing demand mainly due to liquid hydrocarbon production ramping up in the USA, which was outpacing the rise in global consumption. The incremental supply of liquid hydrocarbons in the USA exceeded 2 mbd, including biofuel and liquefied petroleum gas (LPG).

The rising production in the USA was in part offset by a lower output in Venezuela and then Iran whose oil exports suffered from renewed U.S. sanctions. However, the market seemed to be balanced in 1H 2018. At the start of 2018, OECD commercial reserves reached the 5-year average target which was in line with the OPEC+ agreement. This allowed OPEC+ countries to ease oil cuts in the run-up to summer. By the end of 2018, the oversupply became obvious thus forcing OPEC+ to decide on new oil cuts.

The oil prices remained highly volatile due to a fragile balance of demand and supply, geopolitical tensions and fast-changing sentiments in financial markets. Despite OPEC+ attempting to enforce countercyclical production tweaks, Brent crude prices used to swing in a very wide range from $ 50 to 87 per barrel. The year-average price of Brent crude was around $ 71 per barrel vs $ 54 in 2017.

Though the supply was adequate or even in surplus, oil prices remained relatively high, in particular benefiting from the USA resuming sanctions against Iran. In May 2018, the USA announced that it would withdraw from Iran nuclear deal and decided to resume sanctions in August. Before the restrictions on Iran's energy sector came into effect in November, some offtakers started refusing Iranian oil, which resulted in a slump in the country's production. As a result, the USA temporarily allowed key importing countries to keep buying Iran oil, which contributed to a drop in oil prices in November. The demand and supply balance in 2019 will depend largely on whether sanctions against Iran continue and the USA is consistent in enforcing the same.

$ 71

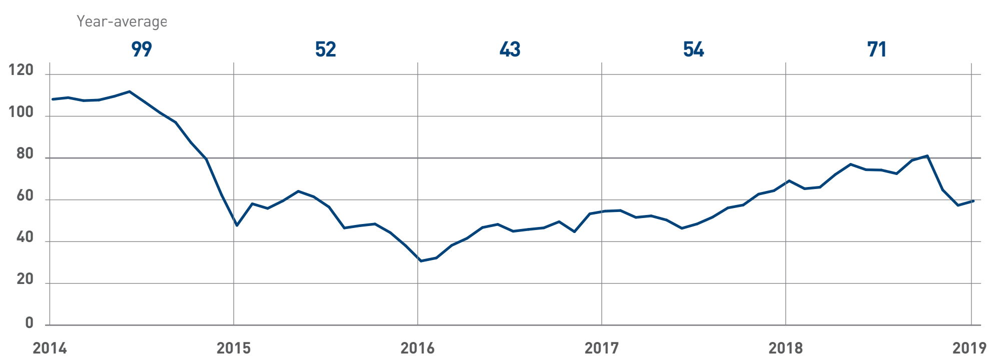
PER BARREL
average Brent crude price in 2018

+1.3

MBD
increase in demand for liquid hydrocarbons in 2018

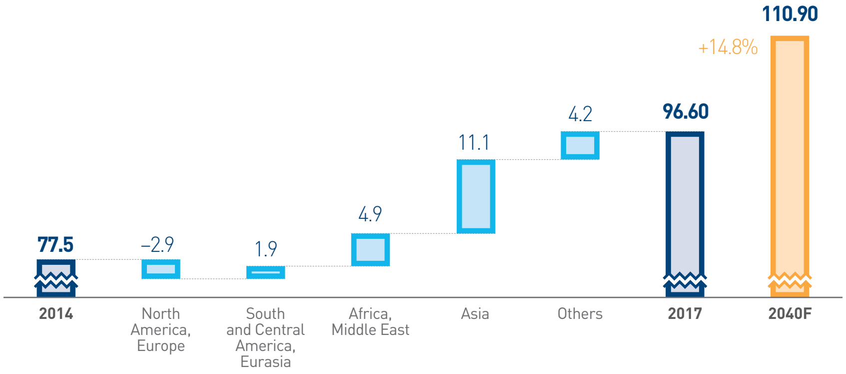
Brent crude price in 2014 through to early 2019 ($/bbl)

Source: Energy Information Administration, U.S. Department of Energy



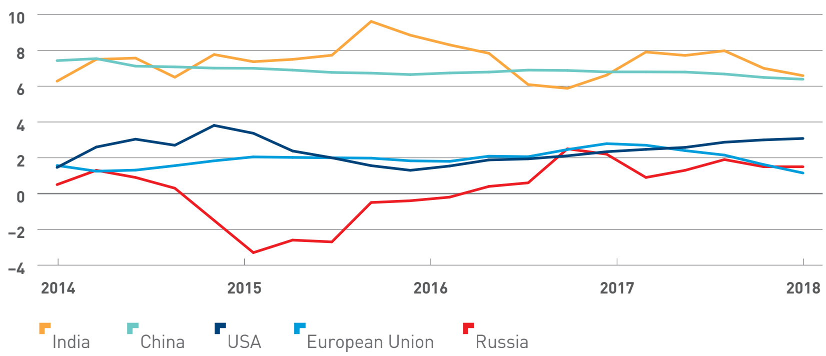
Oil demand by country/region in 2014–2018 and IEA expectations up to 2040 (mbd)

Source: Energy Information Administration, U.S. Department of Energy



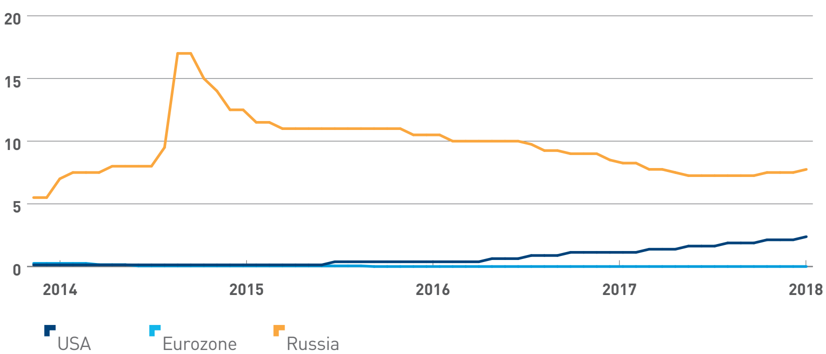
Key economies' GDP in 2014–2018 (% y-o-y)

Sources: Bureau of Economic Analysis, U.S. Department of Commerce; Eurostat; National Bureau of Statistics of China; Central Statistical Organisation, India; Federal State Statistics Service (Rosstat)



Central bank rates in key economies in 2014–2018 (%)

Sources: Central Bank of the Russian Federation, U.S. Federal Reserve, European Central Bank



SLOWER GROWTH OF CONSUMER DEMAND AND STATE OF GLOBAL ECONOMY

In 2018, the global consumption of liquid hydrocarbons continued to grow, though at a slower pace. According to the IEA[1], the demand for liquid hydrocarbons added 1.3 mbd in 2018 vs 1.5 mbd a year earlier.

China was facing a slowdown in consumption of petroleum products driven by much lower growth rates of its GDP and industrial output. The USA accounted for the bulk of global consumption growth, with demand for liquid hydrocarbons (mainly LPG) rising by 0.5 mbd, based on U.S. Department of Energy estimates. Thus, the global oil market became even more dependent on the U.S. economy in terms of both supply and demand.

The U.S. economy was gaining momentum and contributing to the global economic growth which the International Monetary Fund estimates at 3.7% in 2018. However, the IMF expects the economic growth to be rather slower than faster in 2019–2020. Economists' concerns mainly stem from reignited trade wars and the rising global debt burden, possibly resulting in adverse sentiments across financial markets.

The global debt burden becomes even more critical as key economies are stepping up interest rates. Throughout 2018, the U.S. Federal Reserve rose its rate by a total of 1 pp, which affected the yields on U.S. Treasury bonds and other debt instruments. The European Central Bank kept a zero rate but is likely to start scaling back its monetary stimulus going forward. The pending Brexit as well as the last year's failure to agree on its terms raise additional tensions.

The global automotive industry is effectively slowing down which is also a signed of restrained economic sentiment. In 2018, passenger car sales remained flat in the USA and Europe but dropped by 4% in China, driven by shrinking incentives in the Chinese car market, the trade conflict between China and the USA and tougher environmental requirements in Europe.

[1] International Energy Agency.

The anti-diesel trend was unfolding in Europe with sales of diesel cars plummeting due to more stringent emission regulations. This trend is likely to have a material effect on future consumption patterns in one of the world's largest markets of petroleum products.

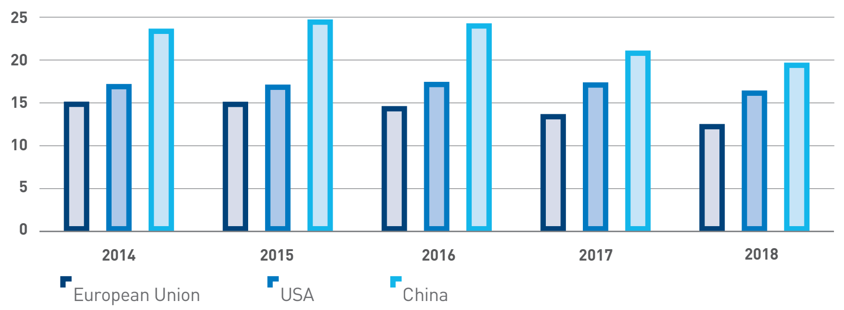
As the car markets were slowing down, the electric transport was booming. Based on estimates by industry pundits, EV sales (including plug-in HEVs) grew by 70% to 2 m in 2018, half of which were sold in China. Thus, EVs now account for more than 2% of global car sales.

Following a peak in 2017, air transportation slowed down in 2018 globally. Based on estimates by the International Air Transport Association (IATA), the passenger turnover added 6.5% and the air cargo traffic rose by 3.5% vs 8% and 9.7% in 2017, respectively. Despite a slowdown, aviation remains a key growth area for the global market of petroleum products.

The chemical industry is another dynamic segment driving demand for petroleum products. Based on the current IEA forecast, the petrochemical industry is likely to account for a third of the incremental global oil consumption until 2030 and up to a half by 2050. In addition, petroleum feedstocks will see tougher competition from hydrocarbon gases being increasingly produced in the USA and in more supply for the chemical industry.

Car sales in the USA, China and the European Union (m)

Sources: Autodata Corporation; China Association of Automobile Manufacturers



Passenger car sales breakdown in the USA and China in 2018 (m)

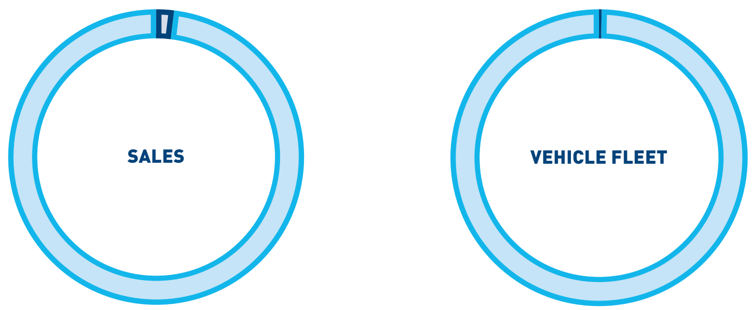
Sources: Autodata Corporation; China Association of Automobile Manufacturers

USA:
- 5.48 Passenger cars
- 11.74 SUV and MPV[1]

China:
- 11.52 Passenger cars
- 9.97 SUV
- 1.73 MPV
- 0.46 Other vehicles

Sales and global fleet of electric vehicles and internal combustion engine cars in 2018 (%)

Source: www.ev-volumes.com, Gazprom Neft analysis



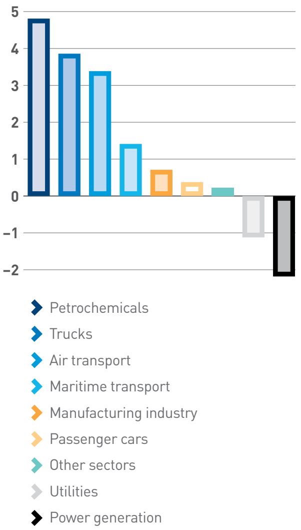
Sales:
- 2.10 Electric vehicles (including hybrid vehicles)
- 97.90 Internal combustion engines

Vehicle fleet:
- 0.43 Electric vehicles (including hybrid vehicles)
- 99.57 Internal combustion engines

[1] SUV (sport utility vehicle) is a category of all-wheel drive vehicles which are classified as light trucks but mainly used as passenger cars.
MPV (multi-purpose vehicle) is a type of minivans mainly based on a passenger car platform with a station wagon-style body.

Oil consumption growth by industry in 2017 through to 2040 (mbd)

Source: International Energy Agency



OIL COMPANIES RESHAPING THEIR STRATEGIES

As prices were recovering, global oil and gas players started ramping up exploration and development. 2018 saw a surge in both the number of new discoveries and value of approved upstream projects in terms of money and resources. Investment activities are supposed to continue well into 2019, with global majors set to increase their production.

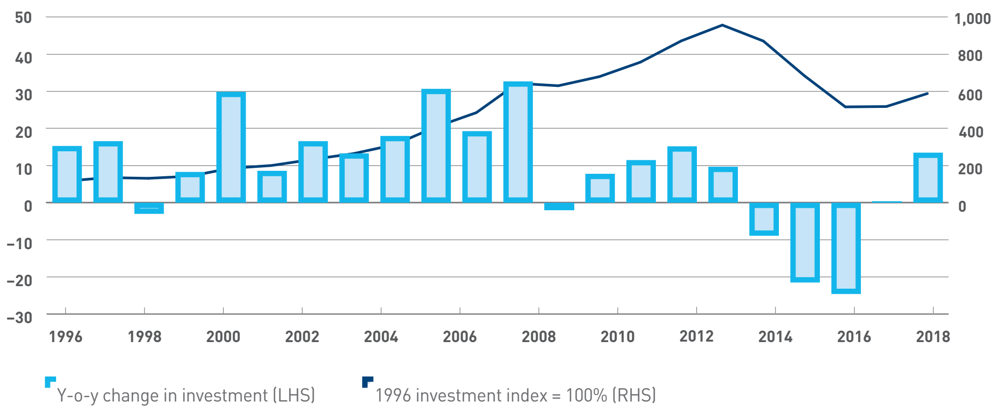
The U.S. shale industry remains the most dynamic segment in global oil supply. Based on U.S. Department of Energy data, the key shale plays added 1.4 mbd on average in 2018 vs 2017, which is in line with the global consumption growth rates for liquid hydrocarbons. The rising shale production helped the USA surpass the 1970 record in early 2018. Throughout 2018, the Permian Basin was struggling to increase production despite lacking pipeline capacities, which it hopes to fix by mid-2019.

Oil and gas majors become increasingly focused on shale projects aiming to achieve more flexibility in terms of production and investments in a volatile market environment. These companies are less sensitive to oil price fluctuations than small independent producers. Bigger players are capable of increasing shale production even when the market environment is not at its best. The investment boom involving both conventional and unconventional reserves is likely to escalate competition among producers going forward.

Oil and gas companies worldwide seek to enhance flexibility by investing in shale projects and managing their asset portfolios more actively but, more importantly, they also become more savvy in cutting-edge digital and Industry 4.0 technologies. The industry is leveraging new digital solutions to boost operational efficiency across the entire value chain and look for new business models. Global majors are developing and implementing digital strategies and organisational changes with a view to mainstreaming IT solutions.

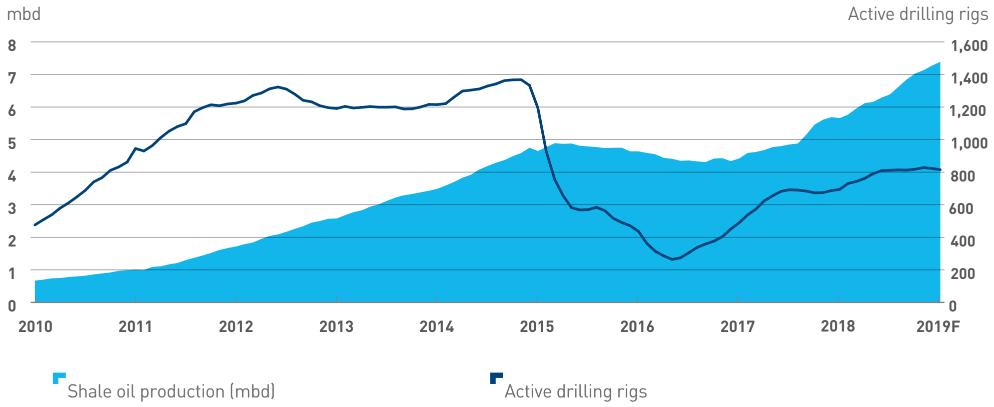
Investments by global oil majors (%)

Source: Company data, Gazprom Neft estimates



Oil drilling and production at low-permeability reservoirs in the USA
(mbd)

Source: Energy Information Administration, U.S. Department of Energy



Oil and gas majors continued their foray into new business segments. The European and U.S. players focused their diversification efforts mainly on low-carbon energy, with some companies starting to create value chains in electricity generation. They continued to set up standalone businesses to develop low-carbon energy as well as other projects. The industry is heavily investing in electricity generation and distribution, energy storage technologies and alternative fuel. The global climate and environmental policies make these focus areas even more attractive. Low-carbon technologies are also favoured by investors. These two factors seem to continue unabated going forward, thus urging western oil and gas players to diversify.

KEY DRIVERS OF THE OIL MARKET IN 2018

- Strong growth of global economy and oil consumption
- OPEC+ deal success
- Rapid growth of shale production in the USA
- Gradual recovery of investments in conventional projects
- Political turmoil in some oil producing regions