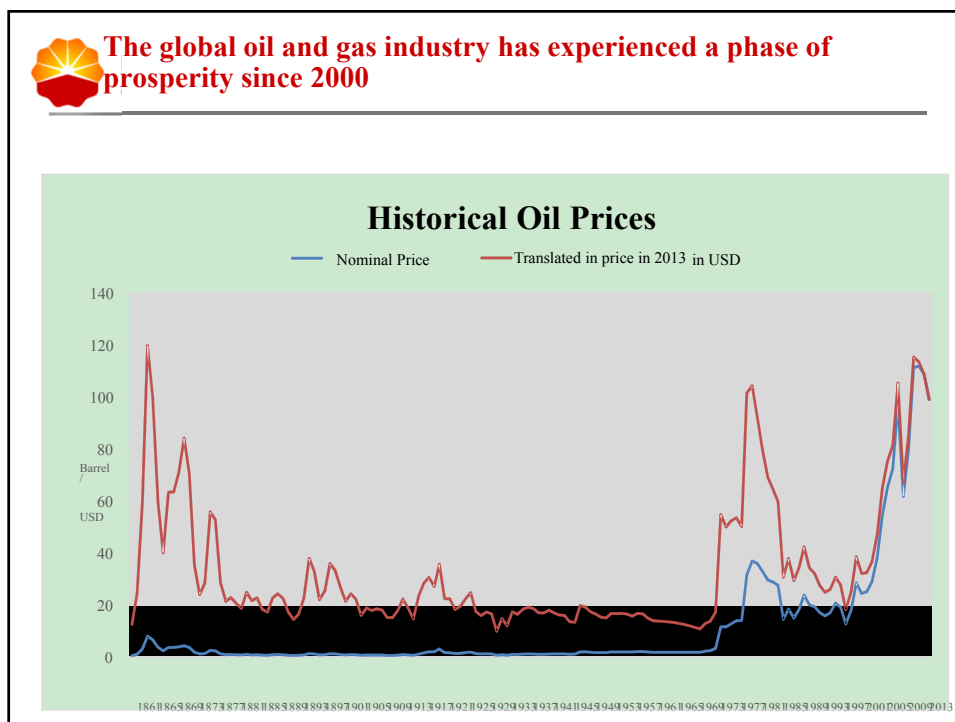



中国石油

Features and Trends of International Oil Market under New Normal

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November 3, 2015

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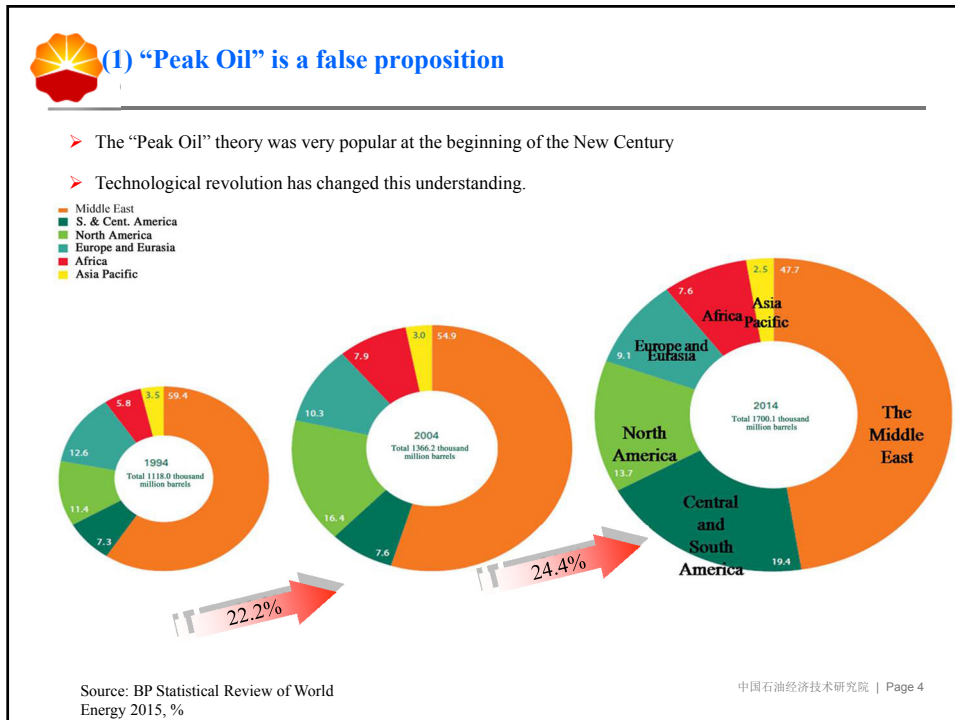
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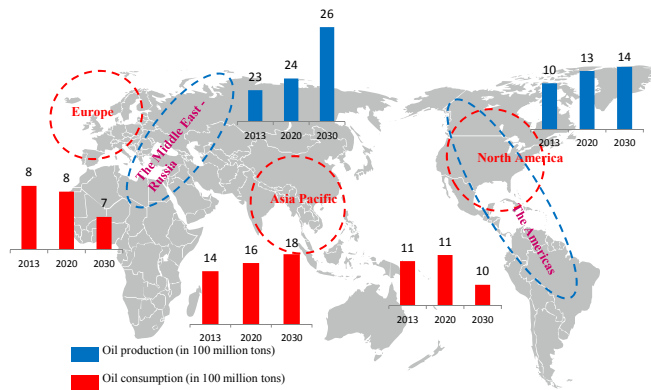
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(2) A pattern of “two supply belts and three consumption centers” has formed, with production shifting westwards and consumption eastwards

- Driven by US energy independence, the production center is shifting to the Western hemisphere, eventually forming the eastern and western supply belts
- The global oil and gas consumption is shifting to the Eastern hemisphere, resulting in the establishment of three major oil and gas consumption centers: North America, Asia Pacific, and Europe



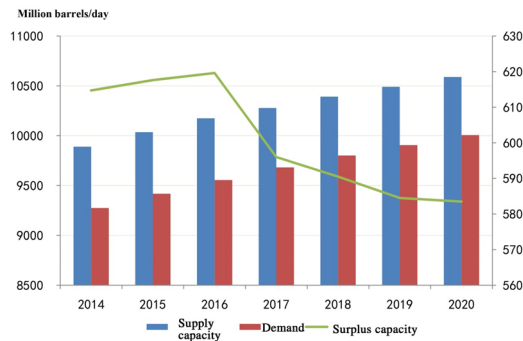
Global Oil Supply and Demand Distribution

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(3) Easing global oil supply and demand has become “New Normal”

- In 2020, oil demand will reach 99 million barrels per day (bpd); global oil supply capacity will reach 1.05 billion bpd, 6 million bpd higher than the demand



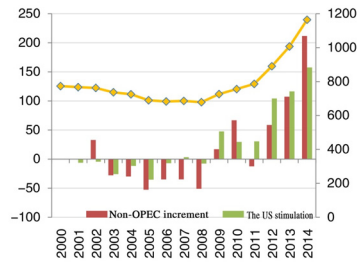
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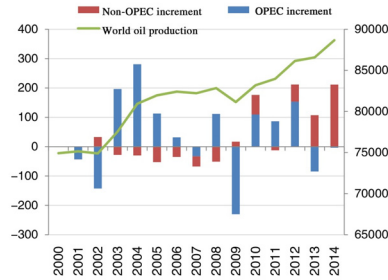
(4) The balance of power in supply between OPEC and non-OPEC countries has changed

- Saudi Arabia is a traditional oil producer.
- The US is becoming a new oil producer.

The US oil production and growth, in 10,000 bpd



The world oil production and growth, in 10,000 bpd



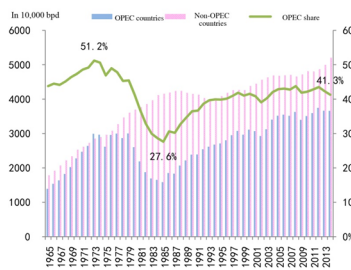
Source: BP Statistical Review of World Energy 2015



(5) OPEC has shifted its market strategy from protecting oil prices to securing the market share

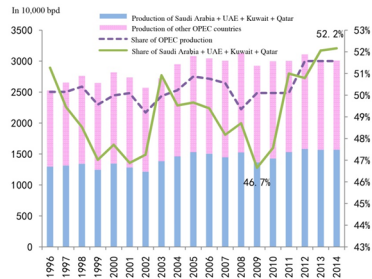
- Since the new century, with the exception of 2002, OPEC oil production has been accounting for over 40%.
- In 2009, the share of US oil production in the world's total oil production began to pick up, increasing to 12.6% in 2014.

Composition of world oil production and share of OPEC



Source: BP Statistical Review of World Energy 2015

Crude oil production in OPEC countries

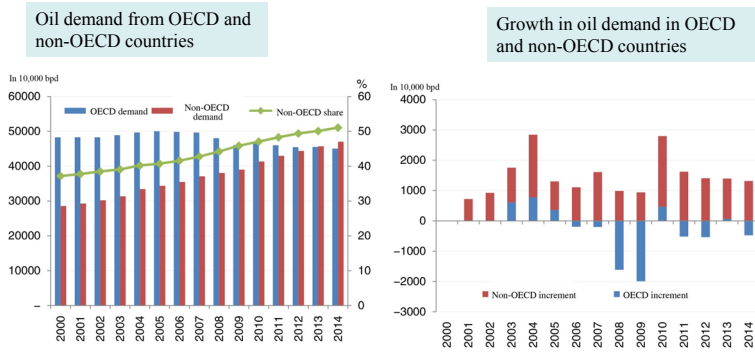


Source: U.S. Energy Information Administration (EIA)



(6) The balance of power in supply and demand between OECD and non-OECD countries has changed

- The non-OECD share is greater than the OECD share.
- The growth in demand is contributed mostly by non-OECD countries.

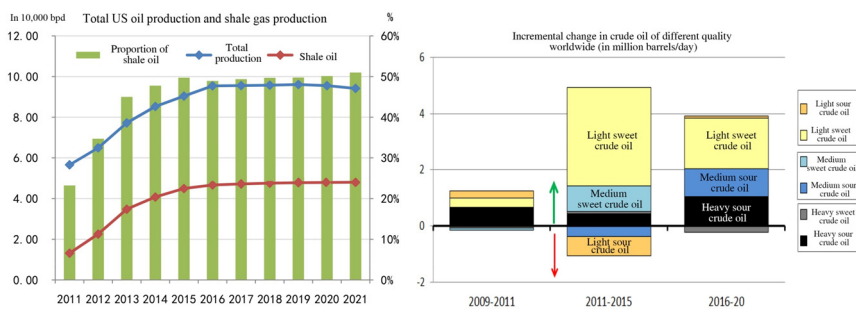


Source: BP Statistical Review of World Energy 2015



(7) The world oil quality structure has changed from heavy oil to light oil

- Before 2011, it was dominated by heavy and high-sulfur oil.
- After 2011, it has been dominated by light and low-sulfur oil.



Source: U.S. Energy Information Administration (EIA)

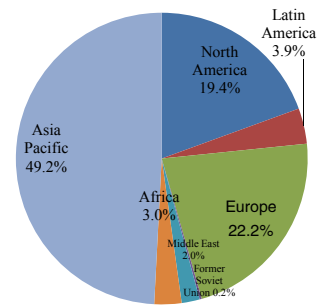
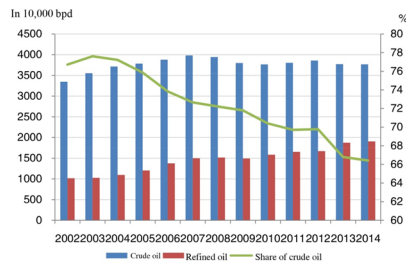


Increase in the proportion of trade in refined oil (8) The trade center is shifting to the Eastern Hemisphere



➤ In 2014, the crude oil trade volume was 37.68 million bpd, accounting for 66%, 7 percentage points down from the level of 2007 (73%).

Proportion of global oil import trade amount in 2014



Source: BP Statistical Review of World Energy 2015

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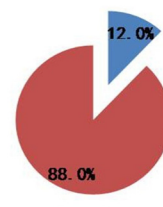
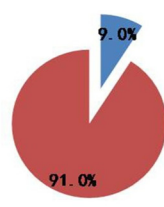
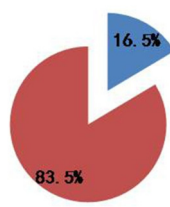
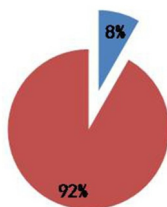
(9) Many sources of supply target at China, highlighting China's position

➤ In 2014, China's share of oil trade in the world's total trade increased to 16.5%, while China's share of oil demand in the world's total increased to 12%.




Share of China's crude oil trade in the world's total in 2007 and 2014

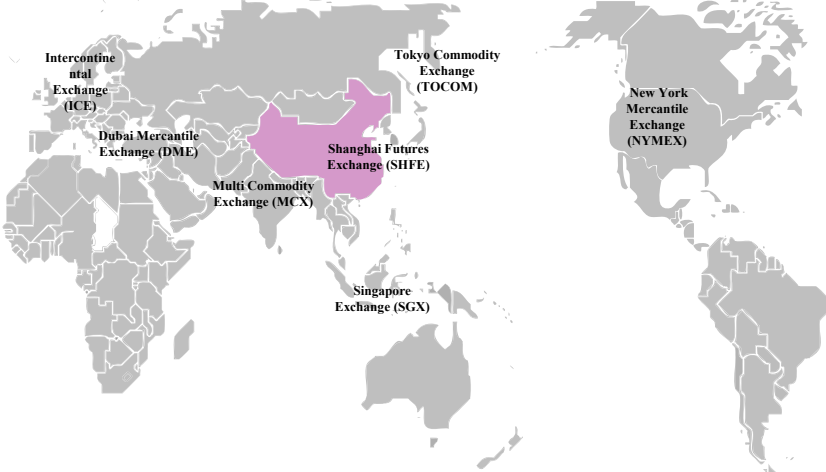
Share of China's oil demand in the world's total in 2007 and 2014




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 **(10) An Asian benchmark has been established and the international crude oil pricing system reshaped**


- > It helps eliminate the "Asian premium."
- > It helps improve the global pricing system.



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(1) Commodity feature —

Continued easing of oil market fundamentals

- > Continued easing of the world oil supply and demand
- > Moderate growth in oil demand, lack of new growth points

World oil demand growth in 2006 - 2016

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(1) Commodity feature —

Re-balance of supply and demand in a dynamic context

- > Low oil prices lead to capacity clearing.
- > Low oil prices stimulate oil demand.

Relationship between oil exploration and development investment and oil prices

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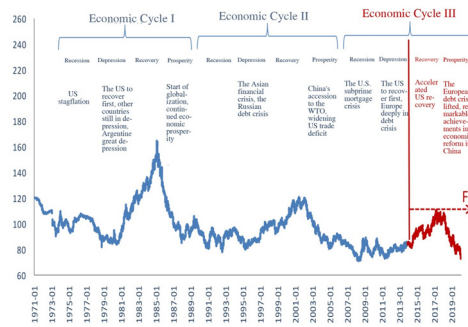


(2) Financial feature

A period of depreciation of the dollar

- **1971-1980**: a decade seeing the depreciation of the dollar;
- **1980-1986**: six years seeing the appreciation of the dollar;
- **1986-1996**: a decade seeing the depreciation of the dollar;
- **1996-2002**: six years seeing the appreciation of the dollar;
- **2002-2014**: a dozen of years seeing the depreciation of the dollar;

Periodic trend of the dollar in a medium and long term

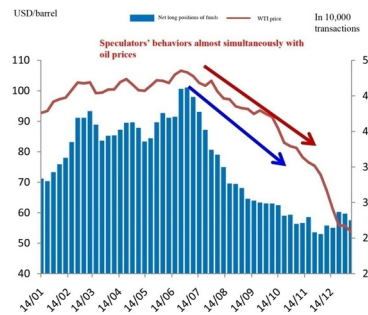
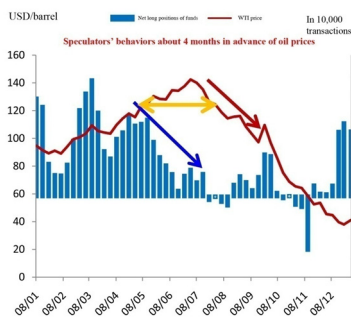


(2) Financial feature

Strengthened financial regulation, weakened market speculation

2008: Speculators were trend settlers

2014: Speculators were trend followers



(3) Political features —

The US tightens its control over oil prices by political and market means

Market share

One action for many purposes

- To release strategic oil reserves
- To boost production together with Saudi Arabia and other countries
- To increase unconventional domestic oil and gas production
- To timely relax restrictions on crude oil export
- To relax restrictions on Iranian export

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(4) Two “traditional support” factors —

The marginal cost of production determines the long-term bottom line of oil prices

- > Declining marginal cost
- > Dynamic adjustments of the bottom line of oil prices

Oil production costs of different resources in different regions

Resource	Cost (USD/barrel)
Onshore oil Middle East	\$27
Oil Continental shelf	\$41
Onshore Oil Russia	\$50
Heavy oil	\$47
Onshore Oil Other regions	\$51
Ultra-deepwater oil	\$56
Deepwater Oil	\$52
shale oil North America	\$65
Oil sands	\$70
Oil Arctic	> \$70

Shale oil production cost distribution in the US

Cost Range (USD/barrel)	Frequency
20-40	~25
40-60	~125
60-80	~90
80-100	~35
100-125	~5
125-150	~5
Above 150	~5

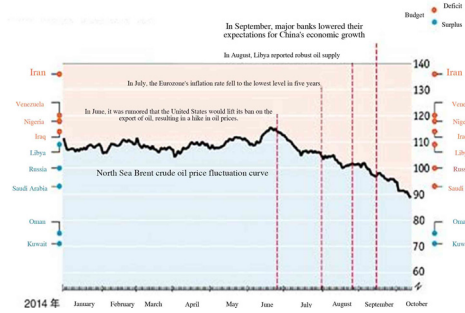
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(4) Two “traditional support” factors — The fiscal break-even price of oil in major oil producers

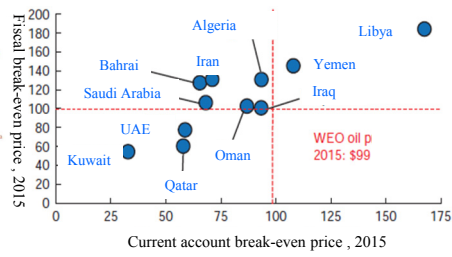
- The oil price is below the fiscal break-even price of oil
- Not sustainable

Relationship between oil price and balance of payment



Source: Deutsche Bank; Reuters

Forecast of break-even price in MENA oil producers in 2015



IMF Regional Economic Outlook: Middle East and North Africa (MENA)

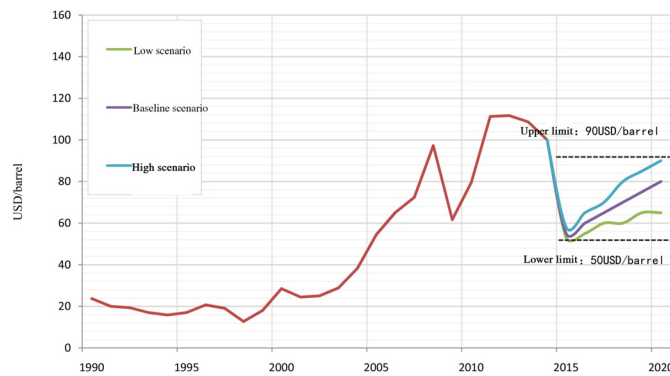
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(5) Low international oil prices, gradually increasing

- It takes time to restore the oil price.
- It has long been below 100 USD/barrel

Mid and long-term forecast of international oil price trend (Brent)



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Conclusions and Implications

- Trend 1** The world oil market is in the process of rebalancing, and it takes time to restore the international oil price
- Trend 2** With insufficient new growth points, the global oil demand is plagued by weak growth
- Trend 3** The exacerbated confrontation between OPEC and non-OPEC countries results in an increasingly fiercer competition to gain the market share
- Trend 4** A pattern of “two supply belts and three consumption centers” has taken shape, in which the production center is shifting to the Western hemisphere while the Eastern hemisphere is playing an increasingly important role in oil consumption
- Trend 5** China is playing an increasingly important role in oil trade, and the proportion of refined oil trade is on the increase
- Trend 6** The introduction of crude futures in Shanghai will accelerate the establishment of the benchmark crude oil price

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