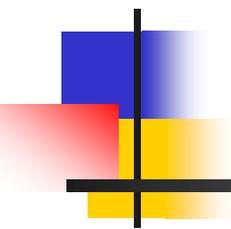


# Outlook for International Oil Market in 2014

A decorative graphic on the left side of the slide, consisting of a vertical black line and a horizontal black line intersecting. To the left of the intersection are three overlapping squares: a blue one on top, a red one on the left, and a yellow one on the bottom.

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**414<sup>th</sup> Regular Research Report  
Presentation Session  
December 20, 2013 (Friday)**

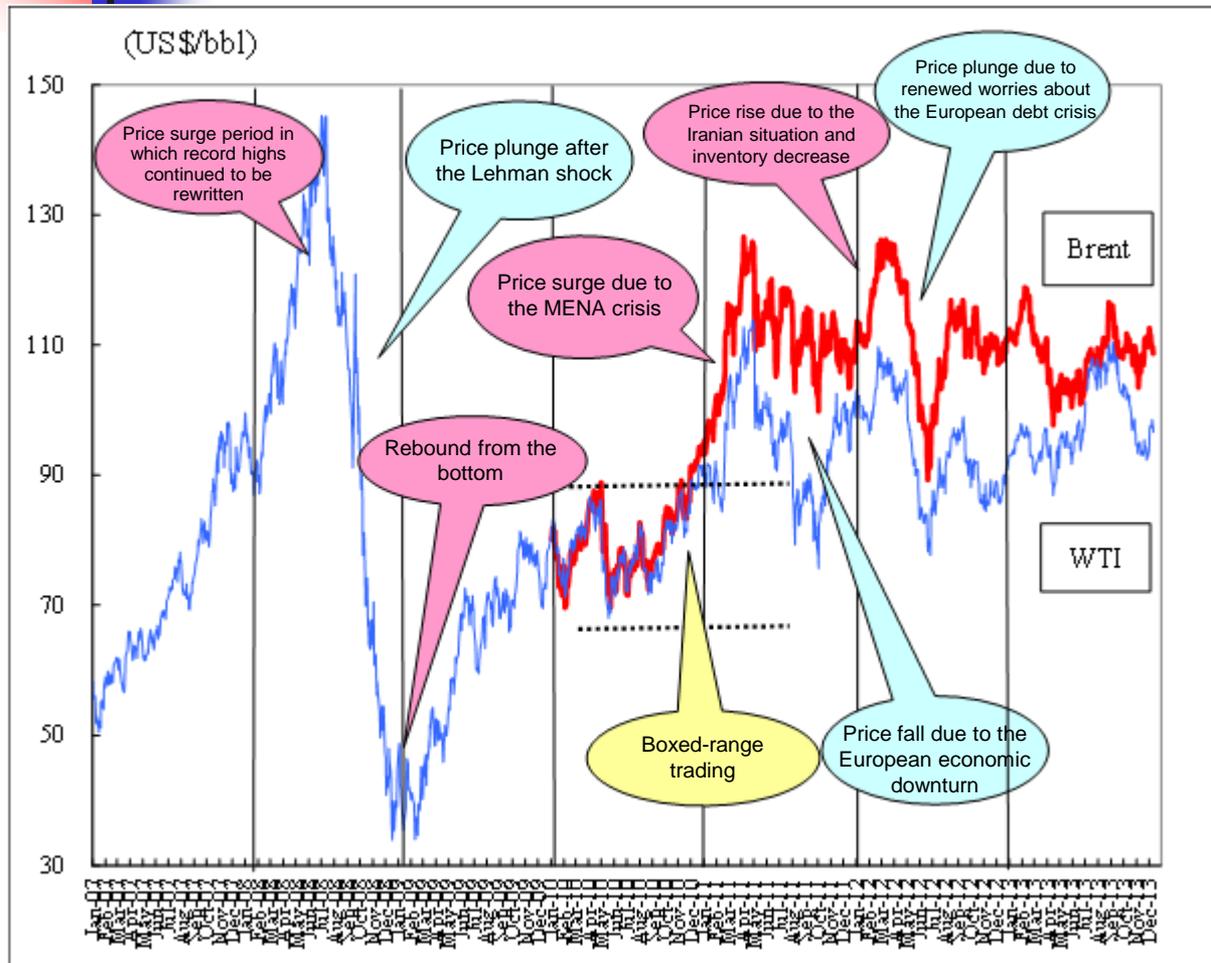
**Ken Koyama, PhD  
Chief Economist, Managing Director  
The Institute of Energy Economics**

Contact: [report@tky.iecej.or.jp](mailto:report@tky.iecej.or.jp)

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# Recent trend of crude oil futures prices

## Crude oil prices in 2013 stayed at high levels for the third consecutive year.



- The average Brent futures price in 2013 (daily closing level for the front-month contract) was \$109/bbl and the WTI futures price was \$98/bbl.
- Prices stayed high for three consecutive years from 2011.
- The Brent price rose close to \$120/bbl in August due to geopolitical risks.
- In April, the Brent price fell below \$100/bbl due to forecasts of easing of the supply-demand balance but rebounded later.
- Basically, the Brent price stayed slightly above \$100/bbl during 2<sup>nd</sup> half of the year.

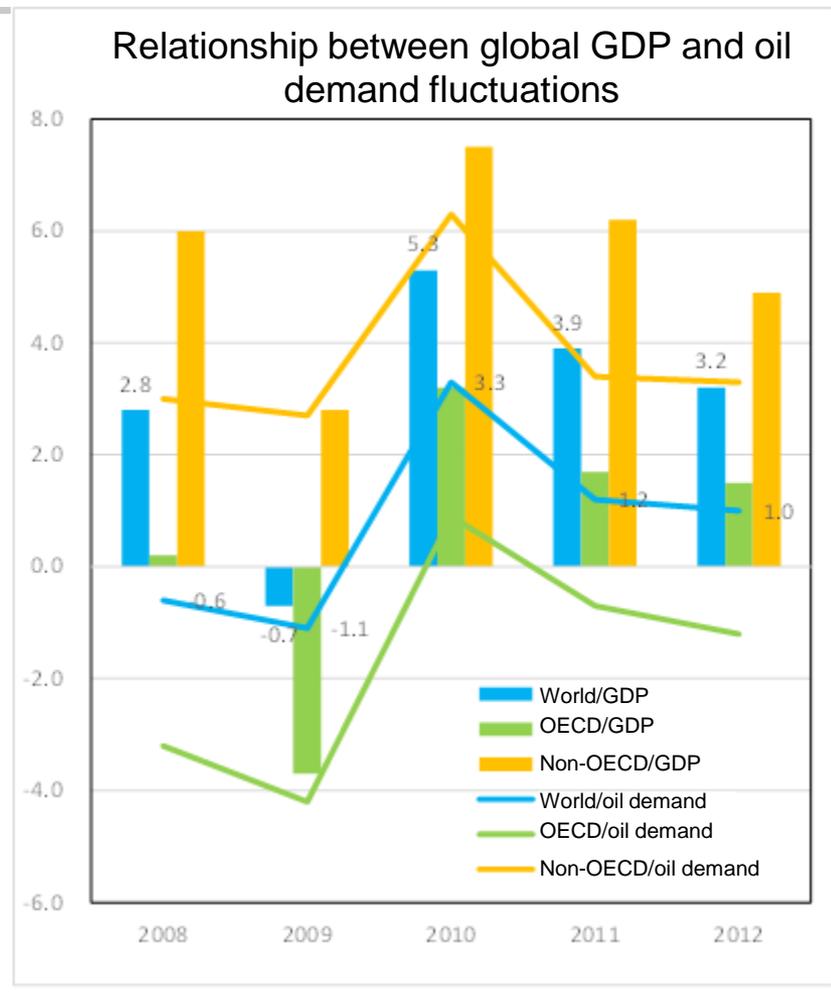
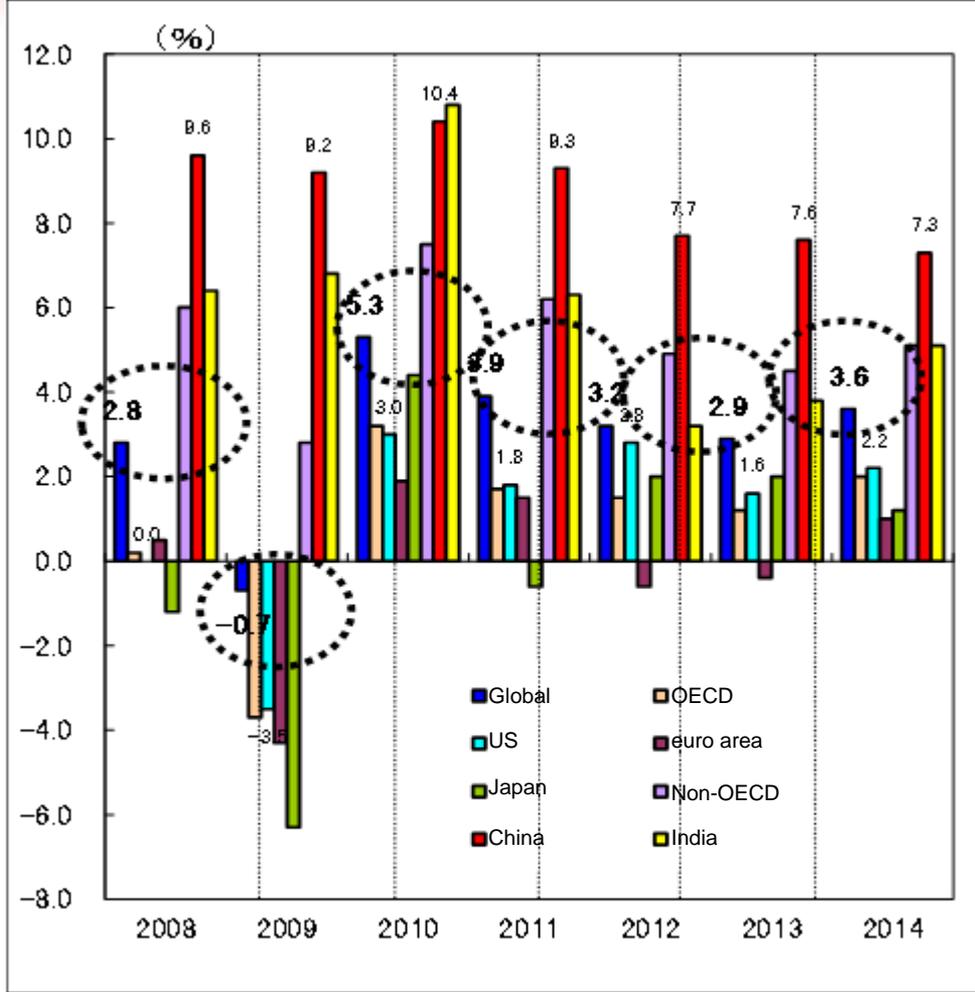
Source: compiled from NYMEX reference materials



# Outlook on the world economy in 2014

**GDP growth will accelerate in 2014 from the previous two years. There are also downside risks.**

## Economic growth outlook for major countries (2008-2014)



# Viewpoints concerning the outlook on the world economy

## Uplifting factors

**U.S. economic recovery**  
(Positive effects of the shale revolution)

**Gradual stabilization of the European debt crisis**

**Continued growth of the Chinese and other emerging economies**

The economic conditions are improving, as evidenced by stock price rises.

?

## Destabilizing factors

**Destabilization of the U.S. economy**  
(Financial and fiscal problems)

**Renewed concerns over the European debt crisis**

**Downturn of the Chinese economy**

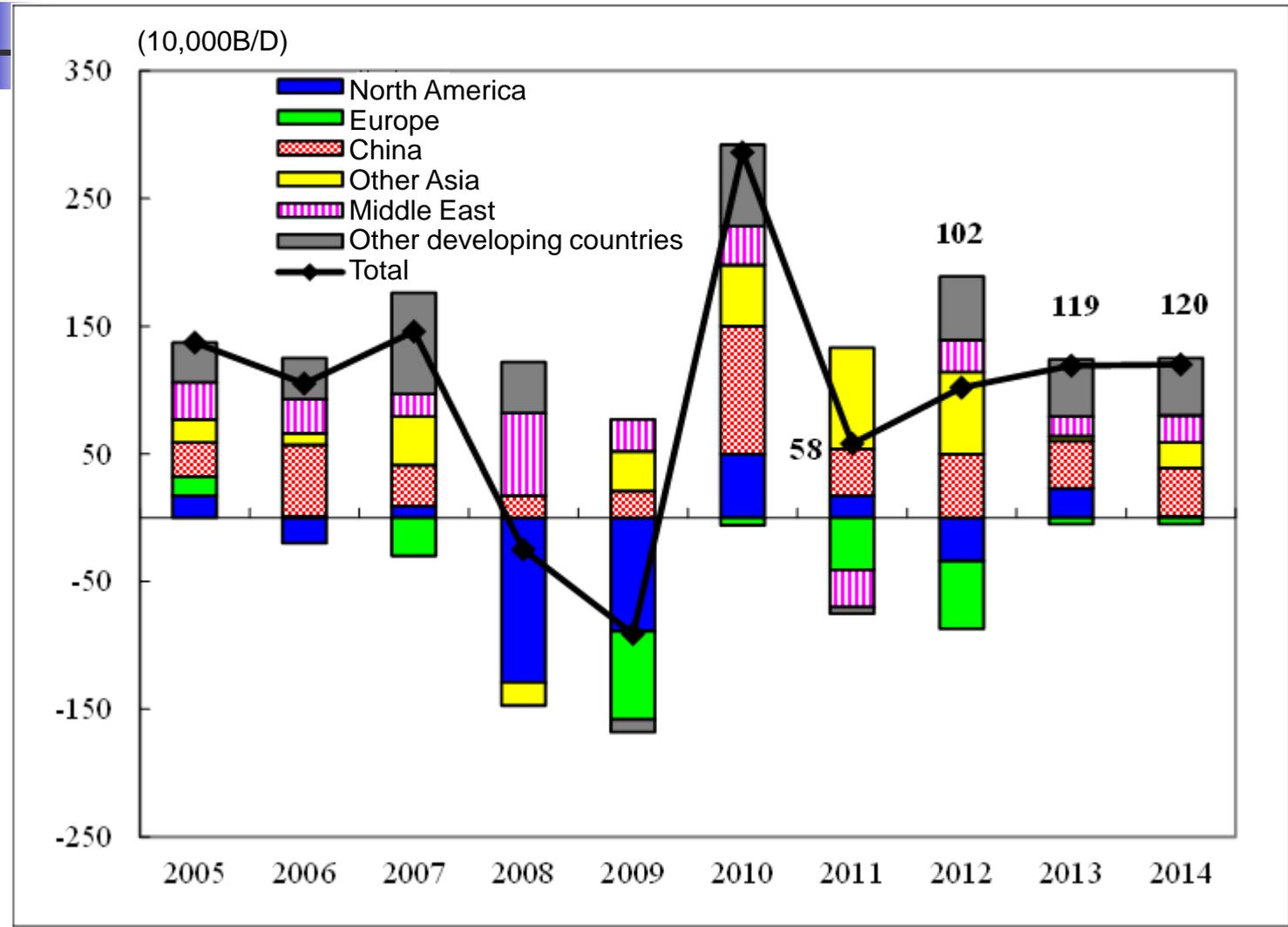
There are also geopolitical risks.

?



# Global Oil Demand Outlook

Global demand in 2014 may grow by about 1 million B/D from the previous year.

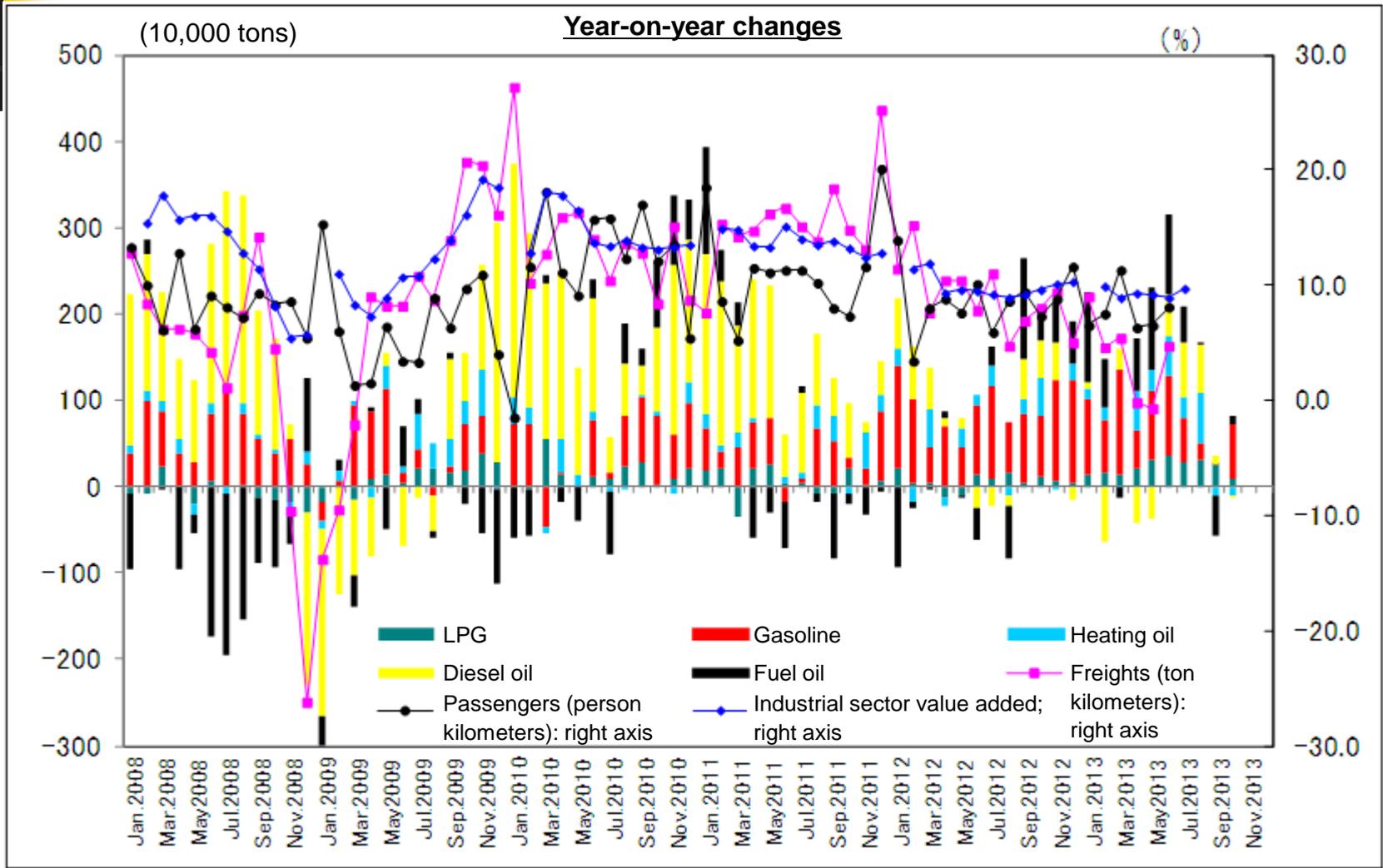


Source: compiled from IEA "Oil Market Report"



# Oil Demand (Apparent Consumption) Trend in China

Demand fluctuations are closely related to economic and industrial activities.  
 In recent years, demand growth has been slowing down.



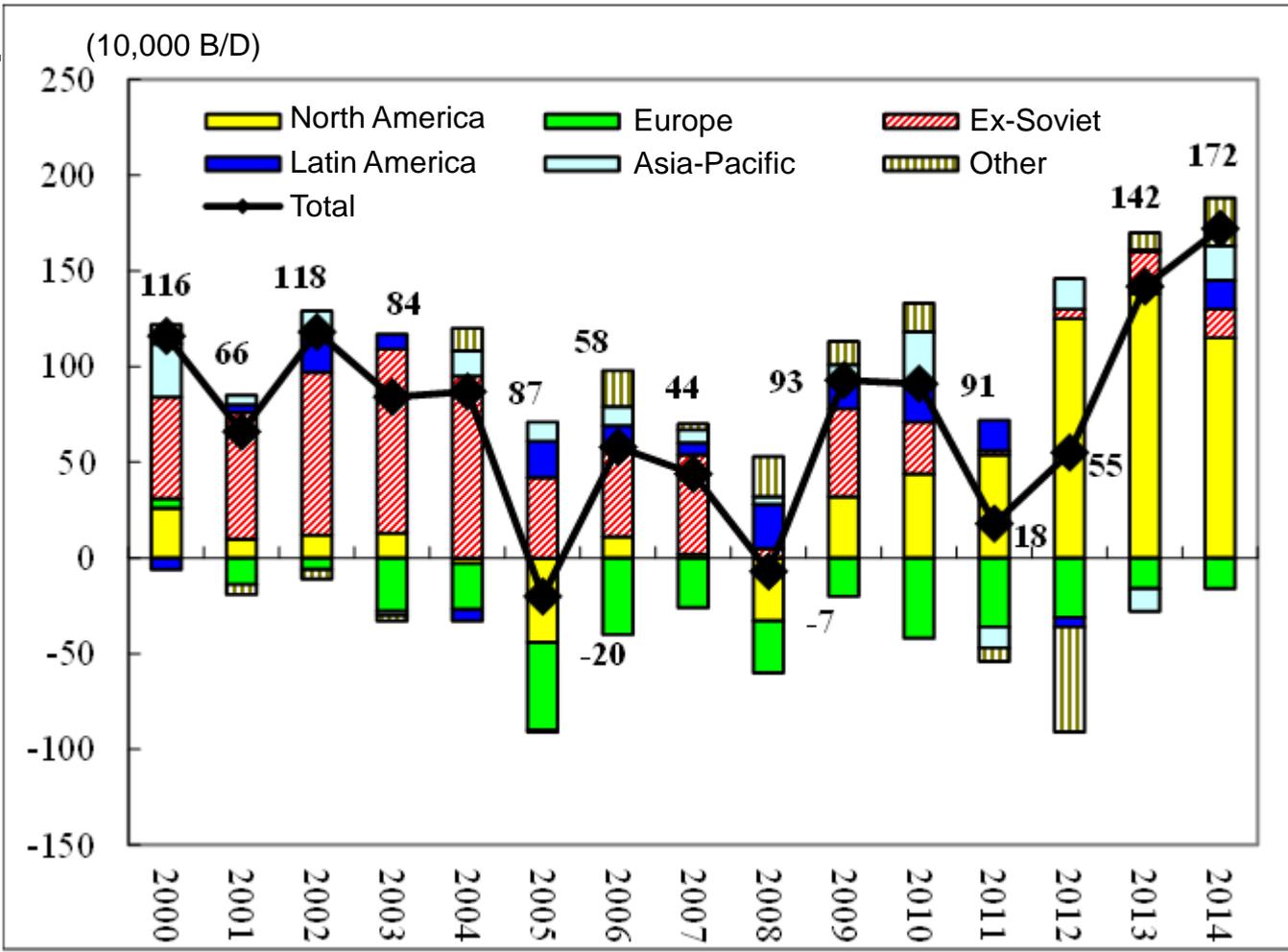
Note: Apparent consumption = production at oil refineries + imports - exports. Excluding data concerning naphtha and other oil products

Source: APEC Energy Database, National Bureau of Statistics of China



# Changes in Non-OPEC Oil Production

Non-OPEC oil production in 2014 is expected to increase steadily, led mainly by production in North America.



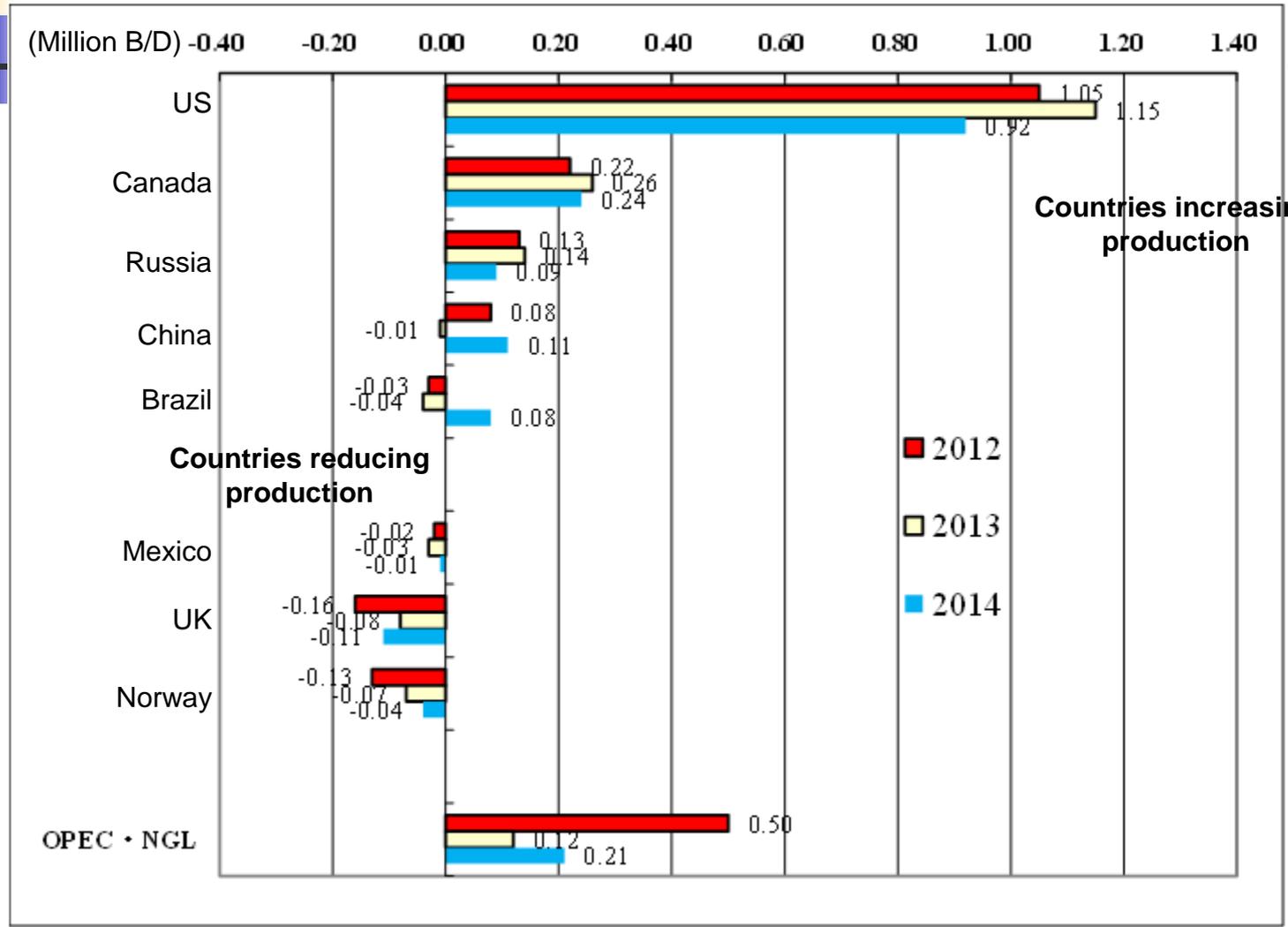
Note: Non-OPEC does not include either Angola or Ecuador but includes Indonesia.

Source: Compiled from IEA "Oil Market Report"



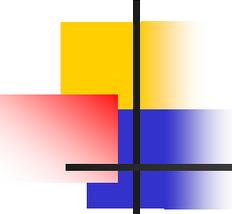
# Changes in Oil Production by Major Non-OPEC Countries in 2014

Production in the US, Canada and Russia will grow, while North Sea oil production will decline. NGL production will grow steeply.



Source: Compiled from IEA "Oil Market Report"

# Economic Sanctions on Iran and Geopolitical Risks

- 
- A decorative graphic consisting of overlapping colored squares (yellow, red, blue) and a black crosshair.
- 
- **Attention focusing on how the issue of economic sanctions on Iran will unfold**
    - The Geneva agreement paved the way for a freeze on the enhancement of economic sanctions for six months.
    - During the six-month period, crude oil exports will remain unchanged at the current level (approx. 1 million B/D).
    - Although it is unclear whether the sanctions will be fully lifted in the next phase, crude oil exports may increase moderately.
    - It will take time for the Iranian oil sector to recover in earnest, but there is huge potential for a production increase in the medium to long term.
  
  - **Notable geopolitical risks**
    - How the consequences of the Arab spring, including the situations in Syria and Egypt, will unfold and their impact
    - The future of Libya's reduced crude oil production and exports
    - The situations in Nigeria and Venezuela

# Possibility of Oil Production Expansion in the Medium Term

## ■ North America

- Continued expansion of shale oil (LTO) production in the U.S.
- Increase in production of oil sands and other resources in Canada

## ■ Middle East

- An increase in Iranian production expected if the economic sanctions are lifted
- Iraq's plan to expand production substantially

## ■ Latin America

- The production potential of Mexico, which has shifted to a policy of opening the upstream sector to foreign investment
- An increase in production by Brazil, which is promoting a large-scale off-shore development project
- Venezuela's abundant resource potentials

## ■ Expectations for resource development in Kazakhstan and Russia as well as frontier and deep-sea resource development

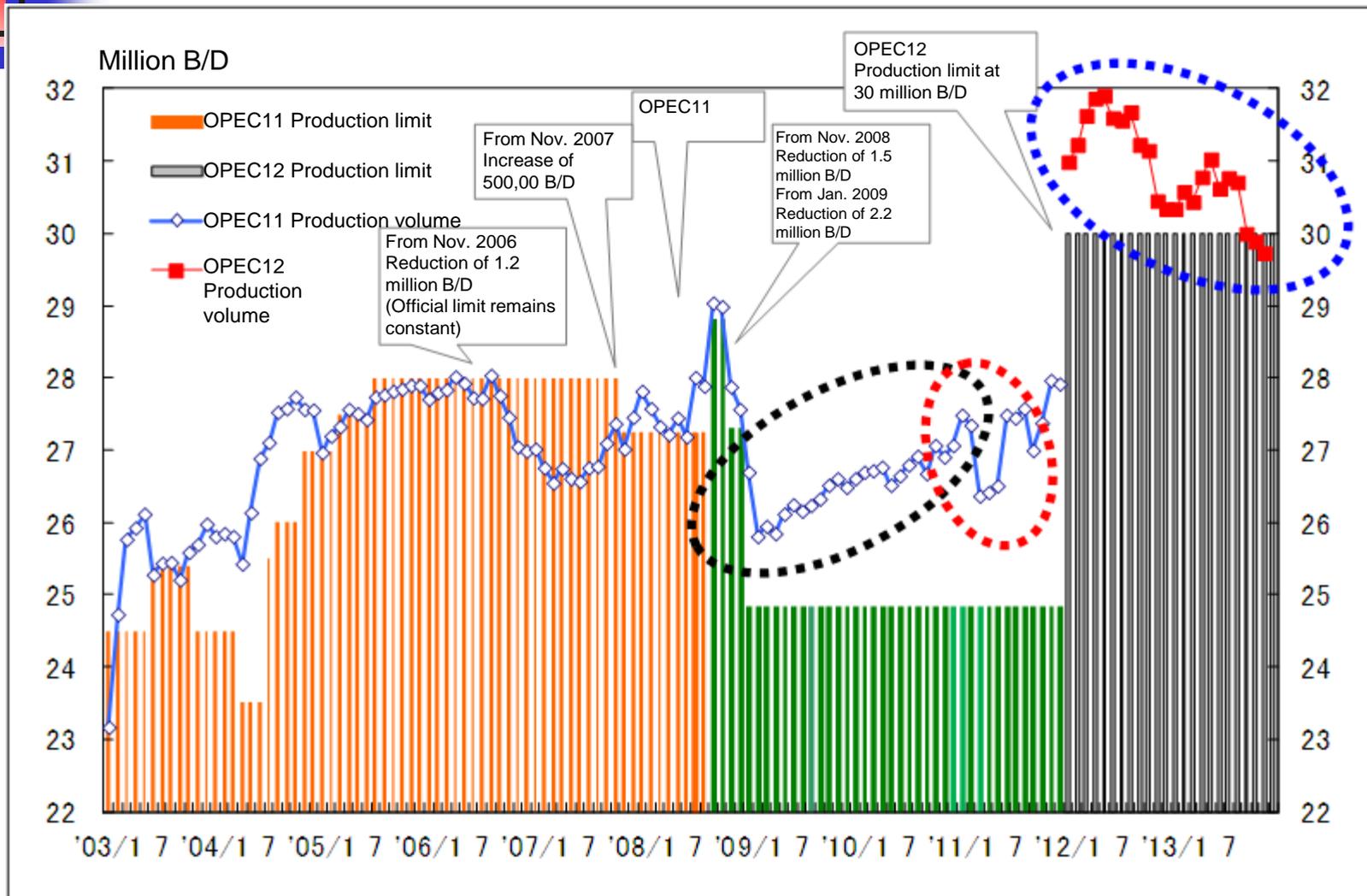


## ■ Major factors behind production increase

- High crude oil prices, development and spread of advanced technologies, opening of the upstream sector and introduction of foreign investment

# Changes in OPEC Production

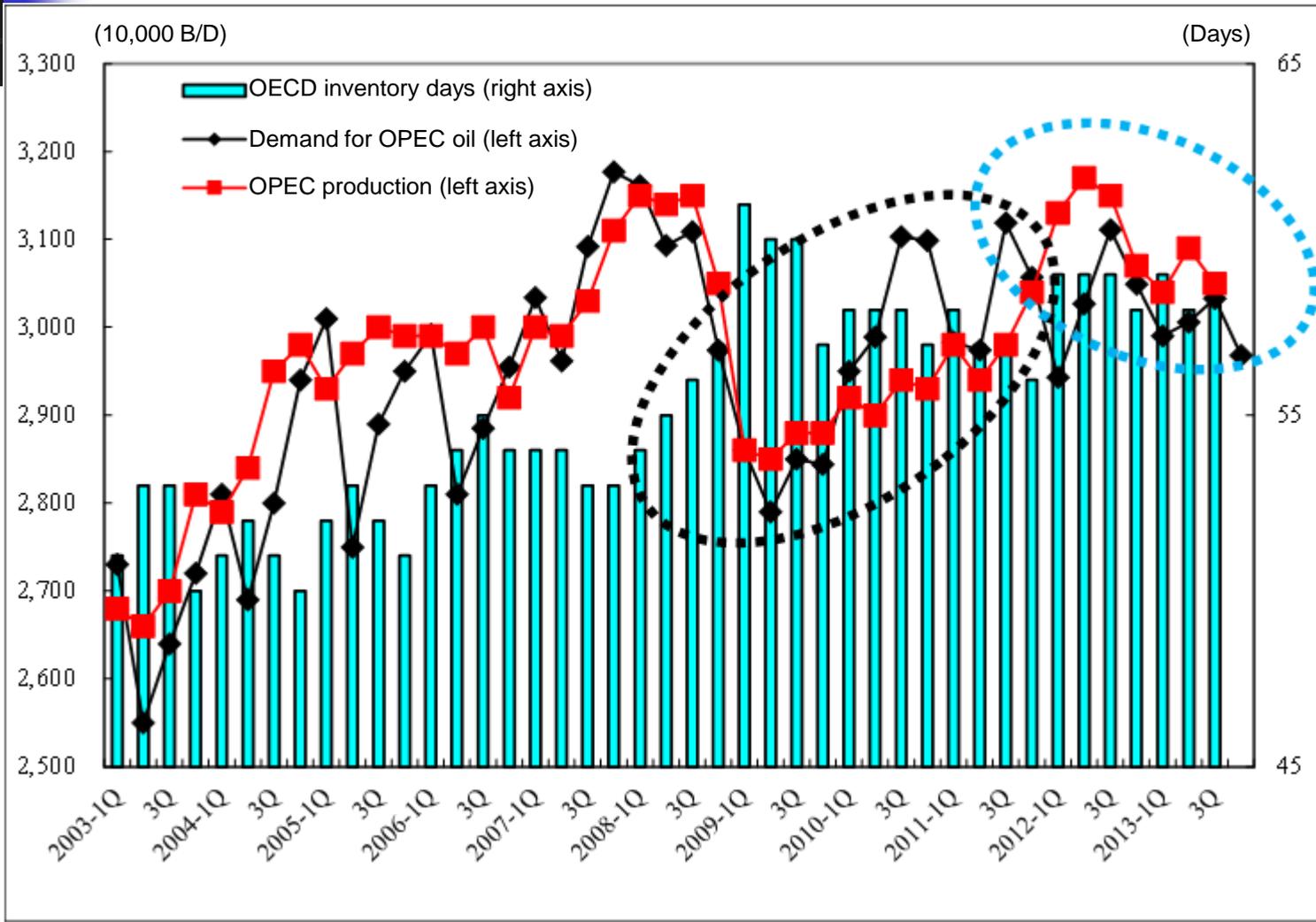
Since 2012, OPEC has kept the production volume above its production limit (30 million B/D). However, the volume has recently been declining.





# OPEC Production and Call on OPEC

Since 2012, OPEC production has exceeded Call on OPEC. Attention is focusing on how OPEC will act in the future.

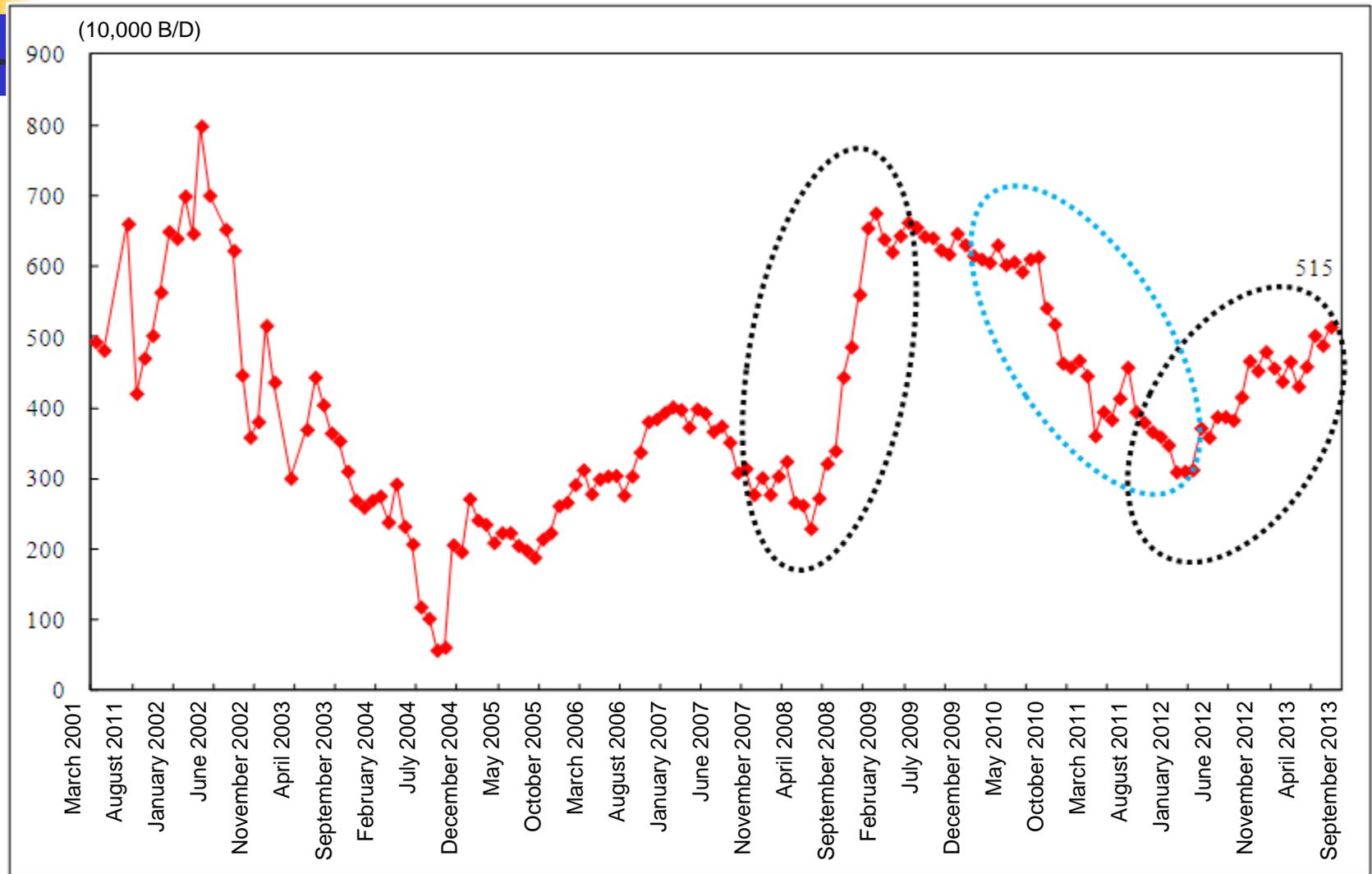


Source: Compiled from IEA "Oil Market Report"



# Changes in OPEC's Surplus Production Capacity

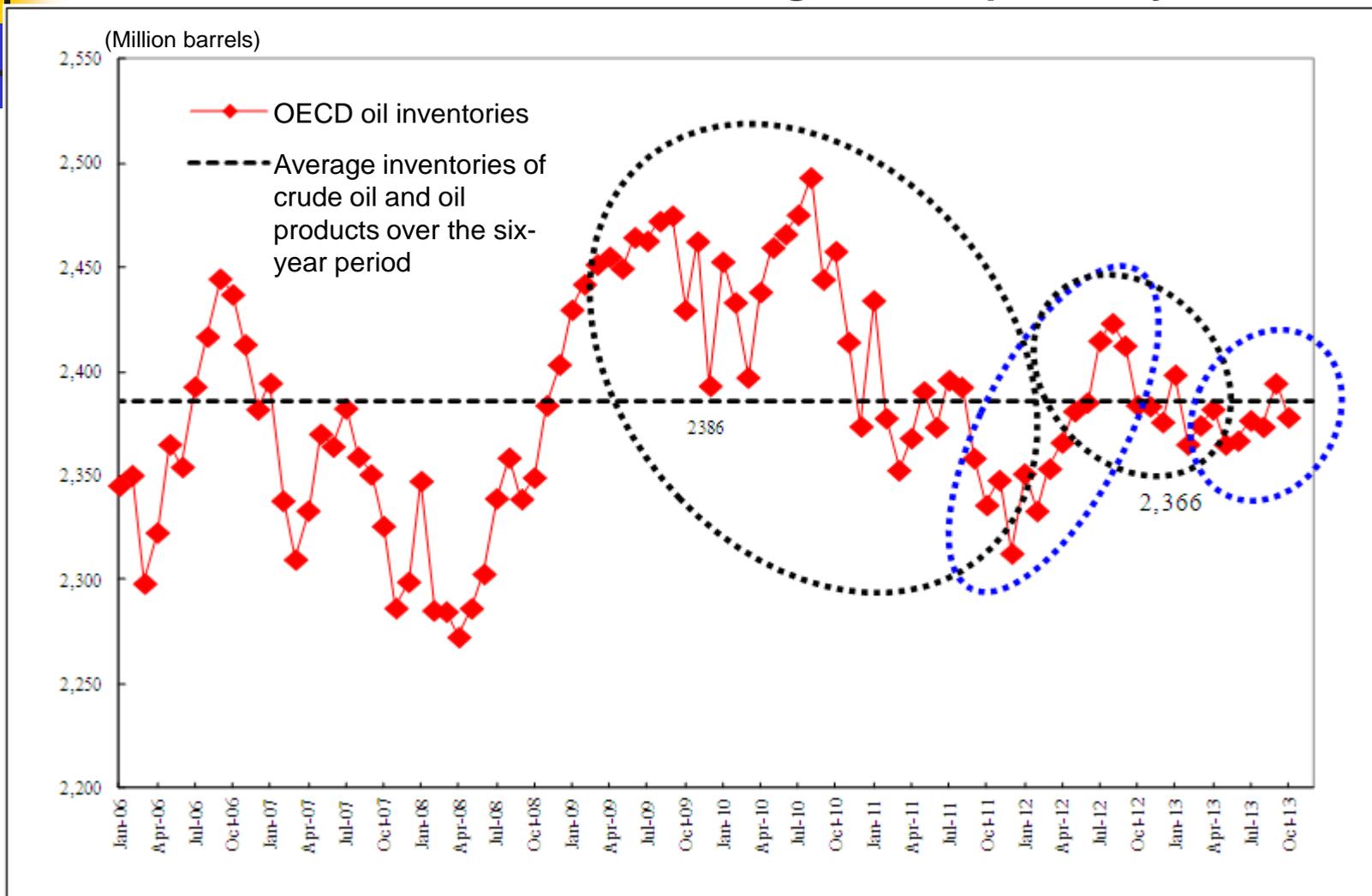
Surplus production capacity, which has grown due to a recent production decline, was at 5.15 million B/D in November 2013.





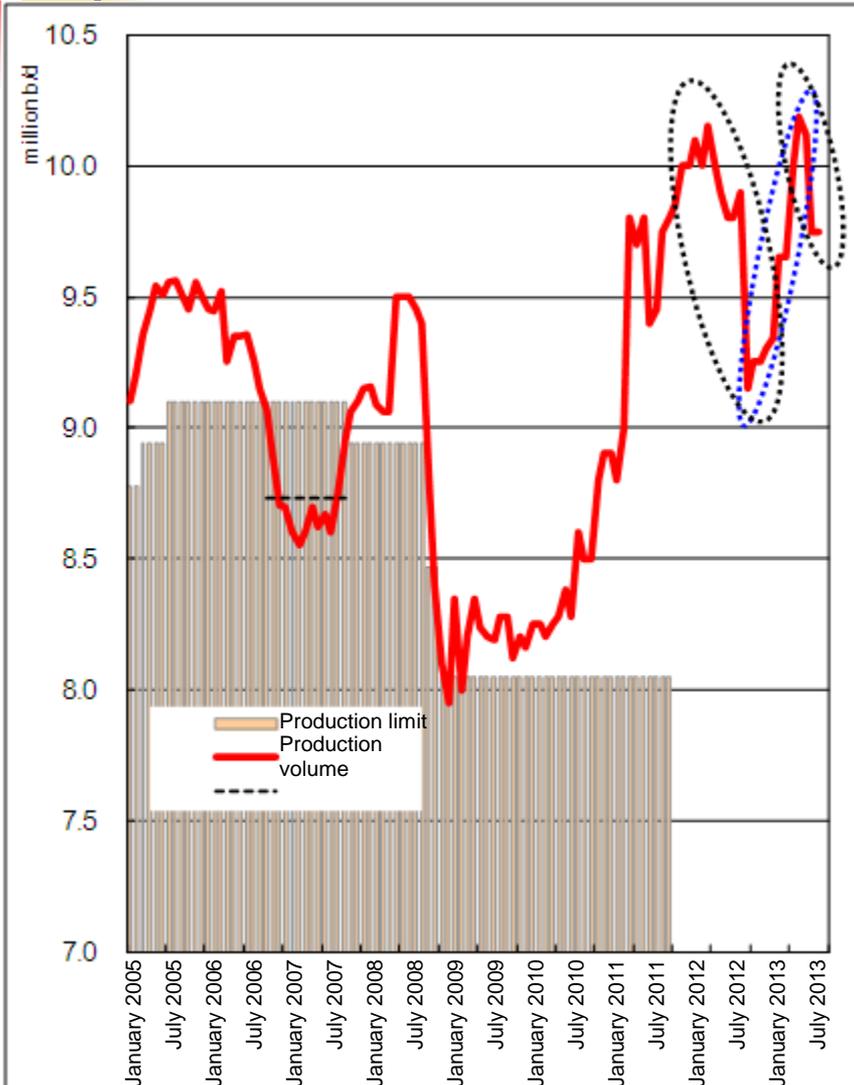
# Changes in OECD Oil Inventories

Private-sector inventories, including crude oil and oil products, were almost in line with the average for the past six years.

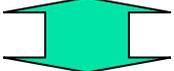
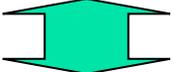


# Attention focusing on Saudi Arabia's production policy

## Trend of crude oil production by Saudi Arabia



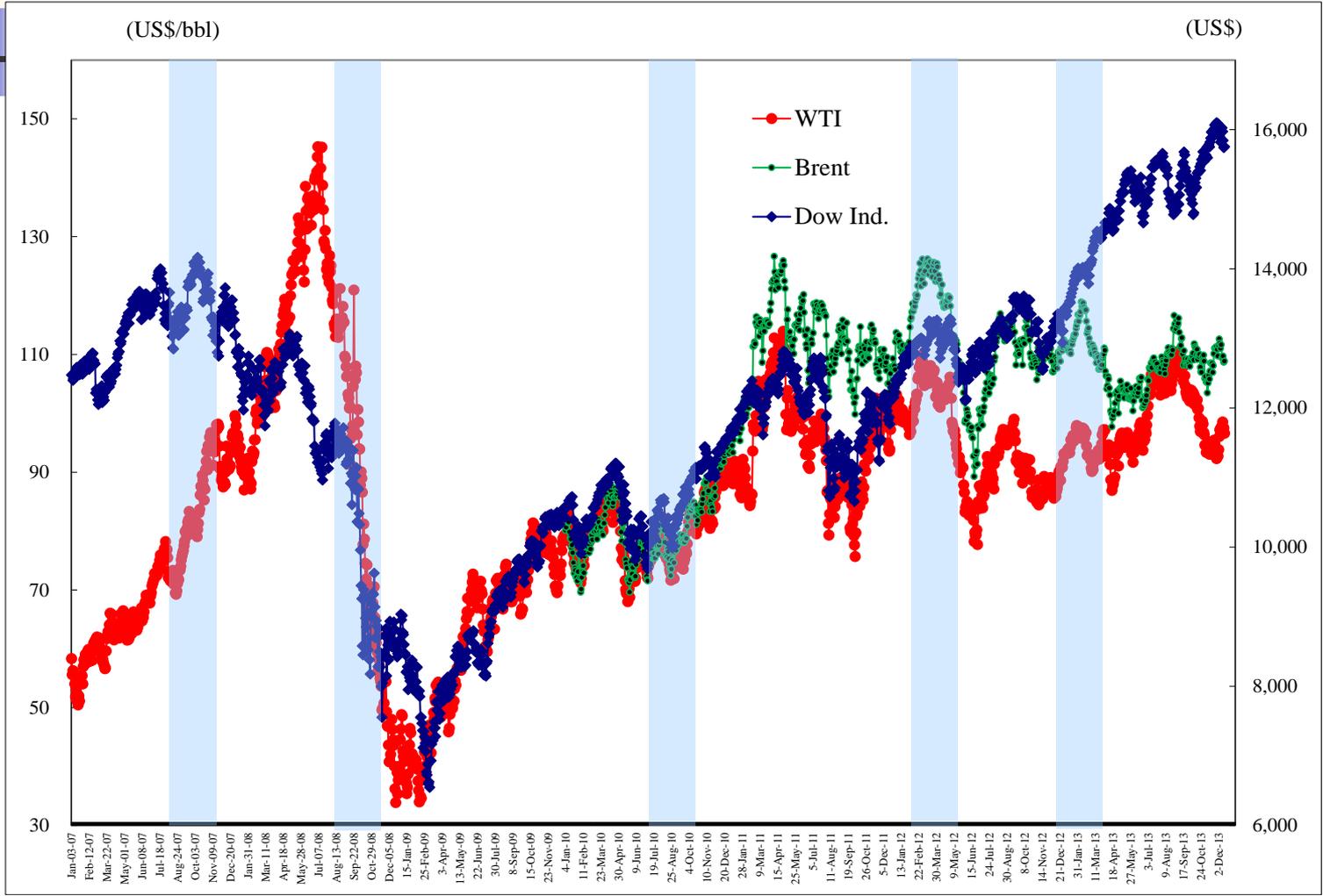
Source: Compiled from IEA "Oil Market Report"

- The world's lowest production cost
  - Crude oil price as the key to balancing the budget
  - Importance of maximizing oil revenue in the long-term
  - Consideration for geopolitical risks
- 
- Impact of the unstable MENA situation, the budget balance and crude oil price rise
  - Production decline due to the recent supply-demand balance
  - Response to an increase in non-OPEC oil, mainly U.S. tight oil
  - Role of a coordinator in dealing with future instability of the supply-demand balance
- 
- Growing importance of Saudi Arabia's policies



# Financial Markets and Crude Oil Prices

The linkage between crude oil and stock prices has recently weakened. The importance of supply-demand factors is growing.



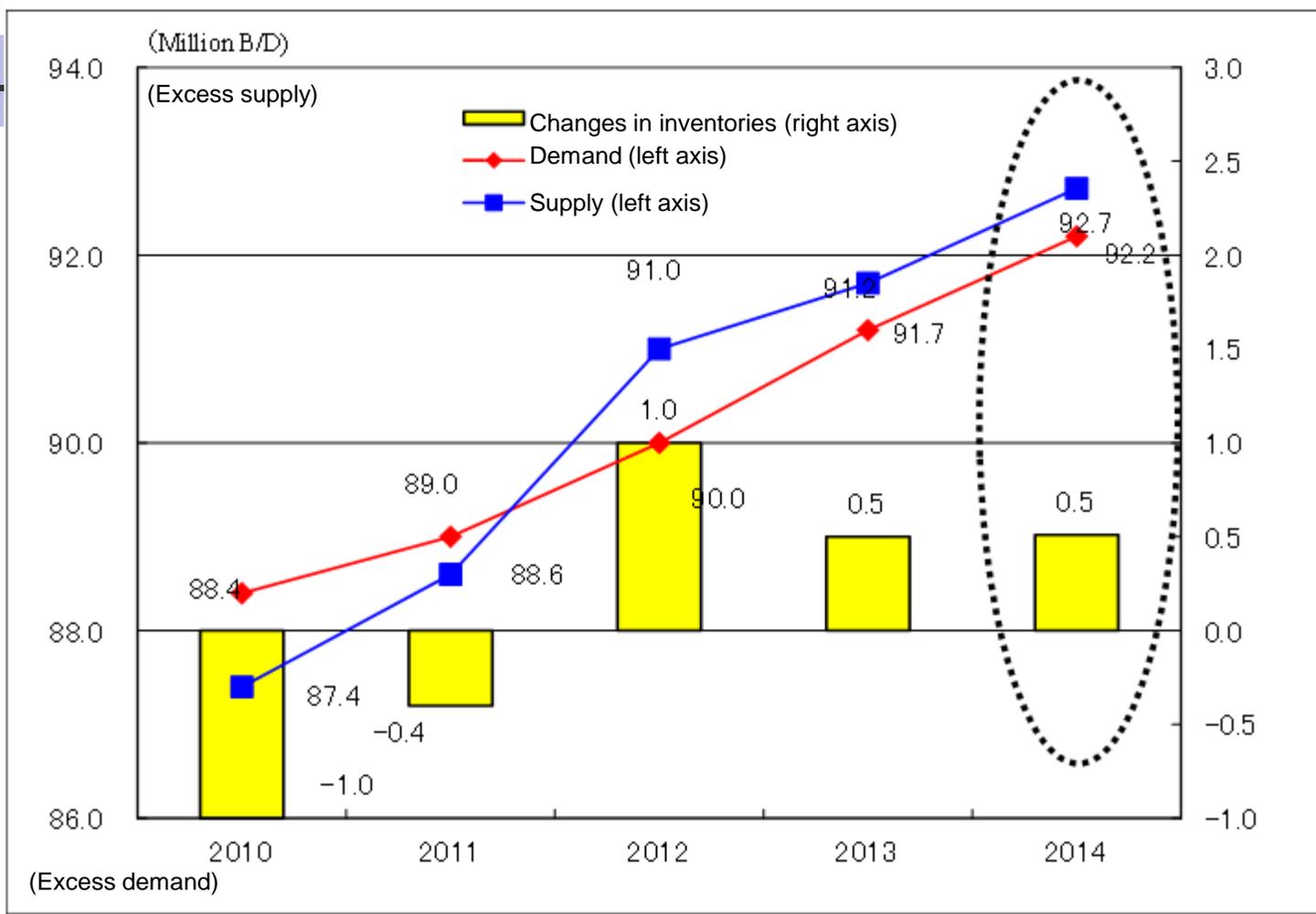
# Reference Scenario for the 2014 International Oil Market

- **Financial and economic factors**
  - The growth of the world economy will accelerate to more than 3% in 2014 from the previous two years.
  - There are downside risks for the U.S., European and Chinese economies.
  
- **Supply and demand factors**
  - World oil demand will increase by around 1 million B/D from the previous year.
  - Non-OPEC oil supply will increase by around 1.5 million to 1.7 million B/D as a result of an increase in U.S. production. OPEC and NGL supply will increase by around 200,000 B/D.
  - Call on OPEC will decline by 800,000 B/D from the previous year to slightly over 29 million B/D.
  - OPEC needs to reduce production for supply-demand adjustments. The supply-demand balance is expected to be softened.
  
- **Risk factors**
  - If geopolitical risks materialize as destabilizing factors, they will trigger (upward) price movements.
  
- In the abovementioned environment of the 2014 international oil market, **the annual average Brent crude price will be around \$105/bbl ( $\pm$ \$10).**
  - If expectations of an easing of the supply-demand balance grow, the price may fall below \$100, while it may rise above \$110 if expectations of a tighter balance grow.
  
- **The annual average WTI price will be around \$95 ( $\pm$ \$10) and the CIF for Japanese imports will be around \$105/bbl ( $\pm$ \$10).**

# International Oil Supply/Demand in 2014 (Reference Scenario)



**In 2014, the supply-demand balance will ease if OPEC production stays at the current level.**



Note: The 2014 oil supply volume is based on the assumption that OPEC production will stay at the current level (around 29.7 million B/D).

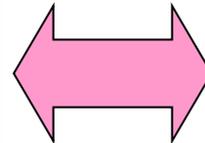
Source: The actual figures were taken from IEA "Oil Market Report" and the estimates were made by the author.

# Future Market-Destabilizing Factors

## <Factors for higher-than-forecast oil prices>

- **Key factor: Geopolitical risks for major oil-producing countries**
  - Crude oil prices may rise steeply depending on how the risks will play out.
- **Financial and economic factors**
  - Economic recovery in China and other emerging countries
  - Stabilization of the European economy and recovery of the U.S. economy
- **Supply and demand factors**
  - Higher-than-forecast growth in demand, mainly in emerging countries
  - A lower-than-expected increase in non-OPEC production
- **Risk factors**
  - Other geopolitical risks for oil-producing countries
  - Risk of accidents disrupting the oil supply chain

Higher-price scenario

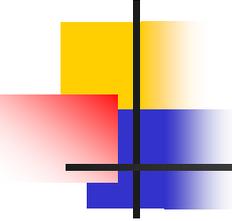


## <Factors for lower-than-forecast oil prices>

- **Key factor: Risks for the world economy**
  - Crude oil price may plunge depending on how the risks will play out.
- **Financial and economic factors**
  - In major countries, economic risks may materialize and the economy may slow down.
  - The Chinese economy also faces downside risks.
- **Supply and demand factors**
  - Oil demand growth will slow down.
  - Non-OPEC production will grow steadily.
- **Risk factors**
  - No risks will materialize or produce an impact.

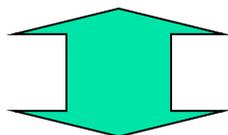
Lower-price scenario

# Outlook on crude oil prices in 2014

- 
- A decorative graphic consisting of overlapping colored squares (yellow, red, blue) and a black crosshair.
- Points of attention regarding the outlook on the 2014 international oil market are (1) world economy, (2) non-OPEC production, (3) the situation in Iran, and (4) geopolitical risks.
  - In the reference scenario, which assumes the absence of major unexpected events, the supply-demand balance will ease. The main point of attention regarding the supply-demand balance is OPEC production.
  - Crude oil prices (Brent) may vary widely in 2014 depending on how uncertainties regarding the world economy and oil supply and demand will unfold.
    - “Reference scenario”: around \$105/bbl ±\$10(annual average; the same shall apply below)
    - “Higher price scenario”: around \$115/bbl±\$10
    - “Lower price scenario”: around \$95/bbl±\$10
    - Probability: 60% probability for the reference scenario and almost equal probability for the higher and lower price scenarios.
  - The WTI price will be \$95/bbl and the Japan CIF will be \$105/bbl under the reference scenario.
  - The possibility of major price movements and high volatility should be kept in mind.

# Reference 1 Comparison of Actual Crude Oil Prices and Forecast for 2013

- The average futures price (daily closing level for the front-month contract) between early 2013 and December 17 was:
  - \$108.6/bbl for Brent; \$98.0/bbl for WTI

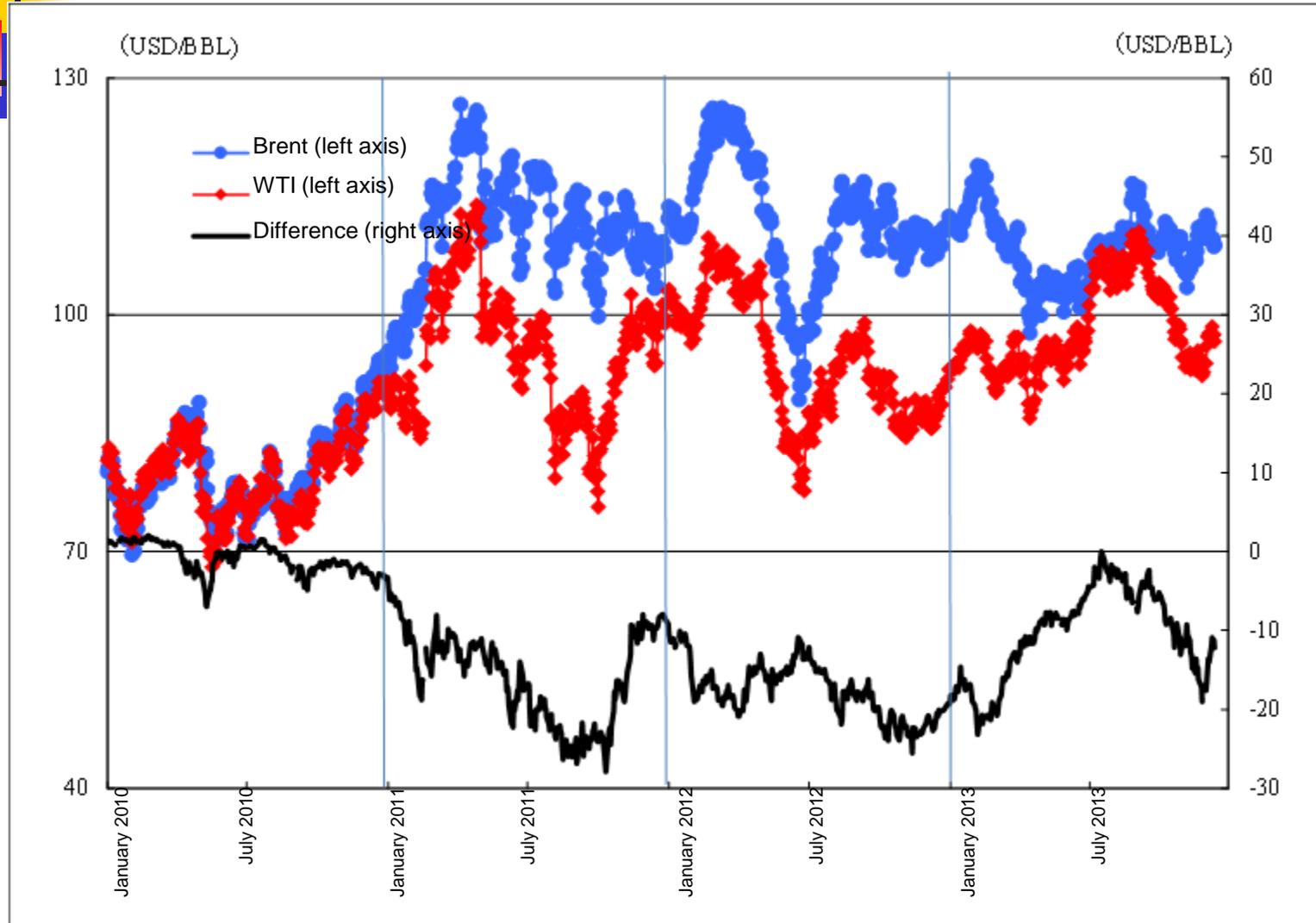


- The oil price forecast for 2013 released by the IEEJ in December 2012:
  - “Reference scenario”: around \$105/bbl ( $\pm$ \$10, annual average; the same shall apply below) for Brent and around \$90/bbl for WTI.
- The actual annual average prices were almost in line with the forecast prices under the reference scenario.



# Reference 2 WTI and Brent Price Trend

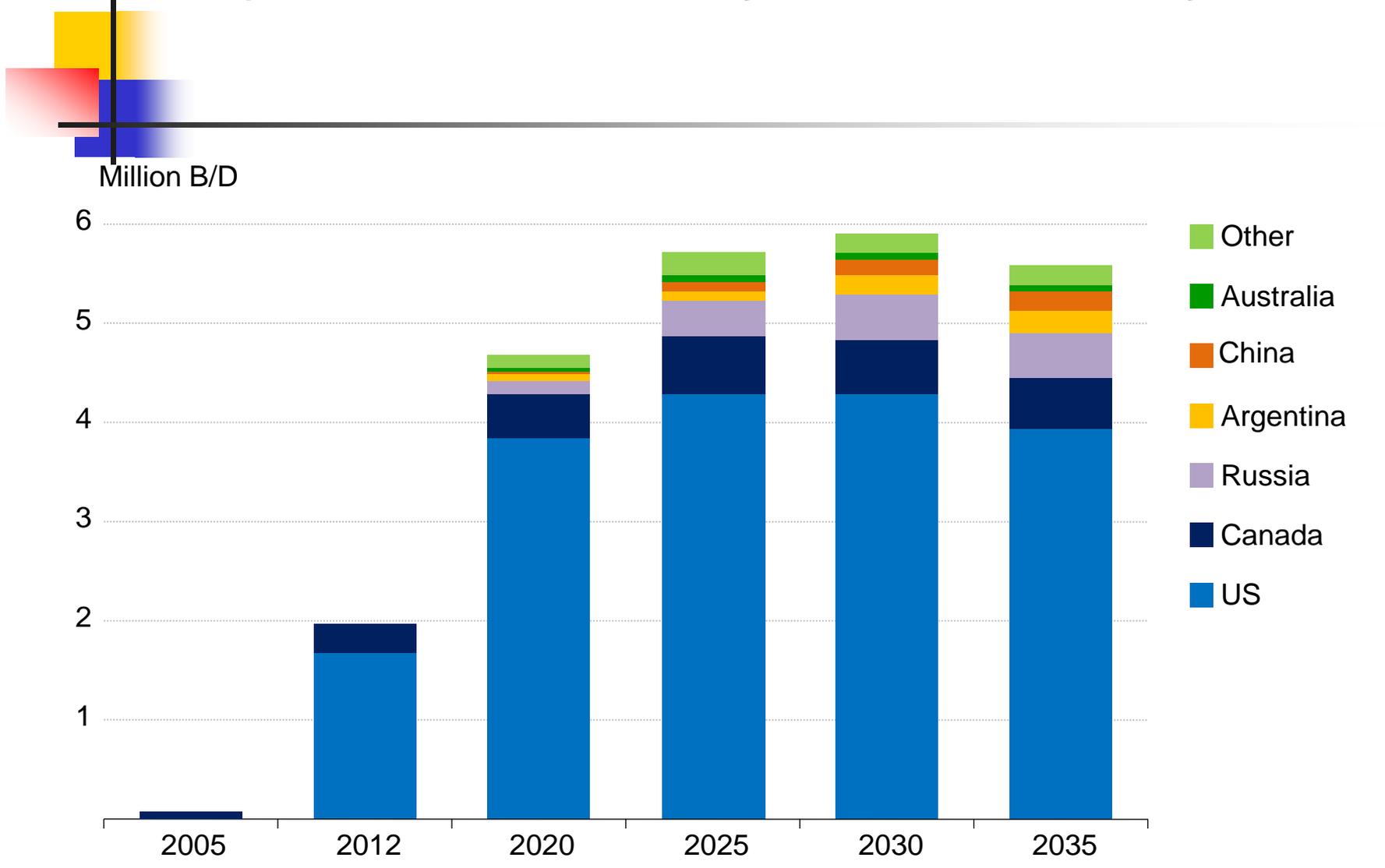
In 2013, the price difference between WTI and Brent fluctuated wildly.  
The difference has recently stayed at around \$15.



Source: Compiled from NYMEX reference materials, etc.

# Reference 3 Outlook on Shale Oil (LTO)

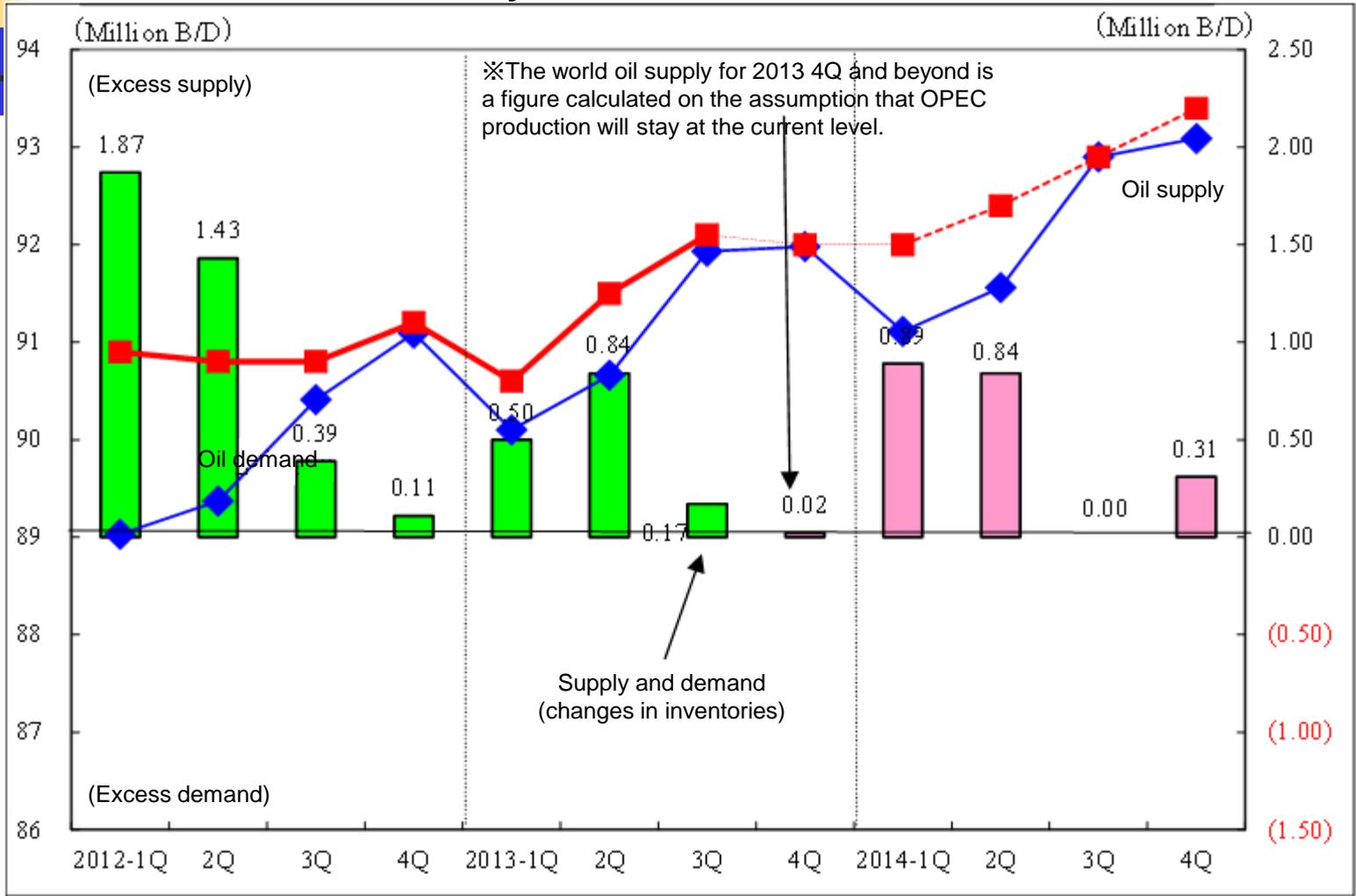
Shale oil production will increase steadily in the medium term, mainly in the U.S.





# Reference 4 International Oil Supply and Demand in 2014 (Reference Scenario)

**In 2014, the oil supply-demand balance will be easy if OPEC production stays at the current level.**



Note: The oil supply for 2013 4Q and beyond is an estimate based on the assumption that OPEC production will stay at the current level.

Source: The actual figures were taken from IEA "Oil Market Report" and the estimates were made by the author.