



# JODI Data in Energy Market Analysis

Presented by

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**Importance of data transparency**

**Advantages of using JODI oil data**

**Shortcomings of JODI oil data**

**Recommendation**

**Conclusion**



## Support decision making

Crude oil prices have been trapped in a downward slide since mid-2014, entering the longest of six cycles, accompanied by high volatility.

The market also entered into a period of abundance of supply above market requirements, turning into stock overhangs.

This development has translated into significant capital expenditure reduction in E&P.

Therefore, given these conditions and the importance to respond in a timely manner, the market needs more transparency in data of oil supply, oil demand, inventories, refining and trade-related issues, to improve short-term forecasting.

# Advantages of using JODI oil data



- **Official and direct information with comprehensive metadata country notes**
- **Monthly data with just a two-month time lag**
- **Freely accessible**
- **Contains unique information that cannot be found elsewhere**
- **Provides timely and reliable data on fundamental oil flows**
  - Production
  - Demand
  - Trade
  - Storage
  - Refining
- **For more than 90 countries & with significant overall coverage**



## **Demand**

Demand forecasts are based on the consumption with a lag, among other factors – the accuracy of the base year is essential in estimating the year ahead

## **Non-OPEC supply**

Non-OPEC supply forecasts are based on a bottom-up approach, adding growth projections to an existing baseline – the base is essential in estimating the year ahead

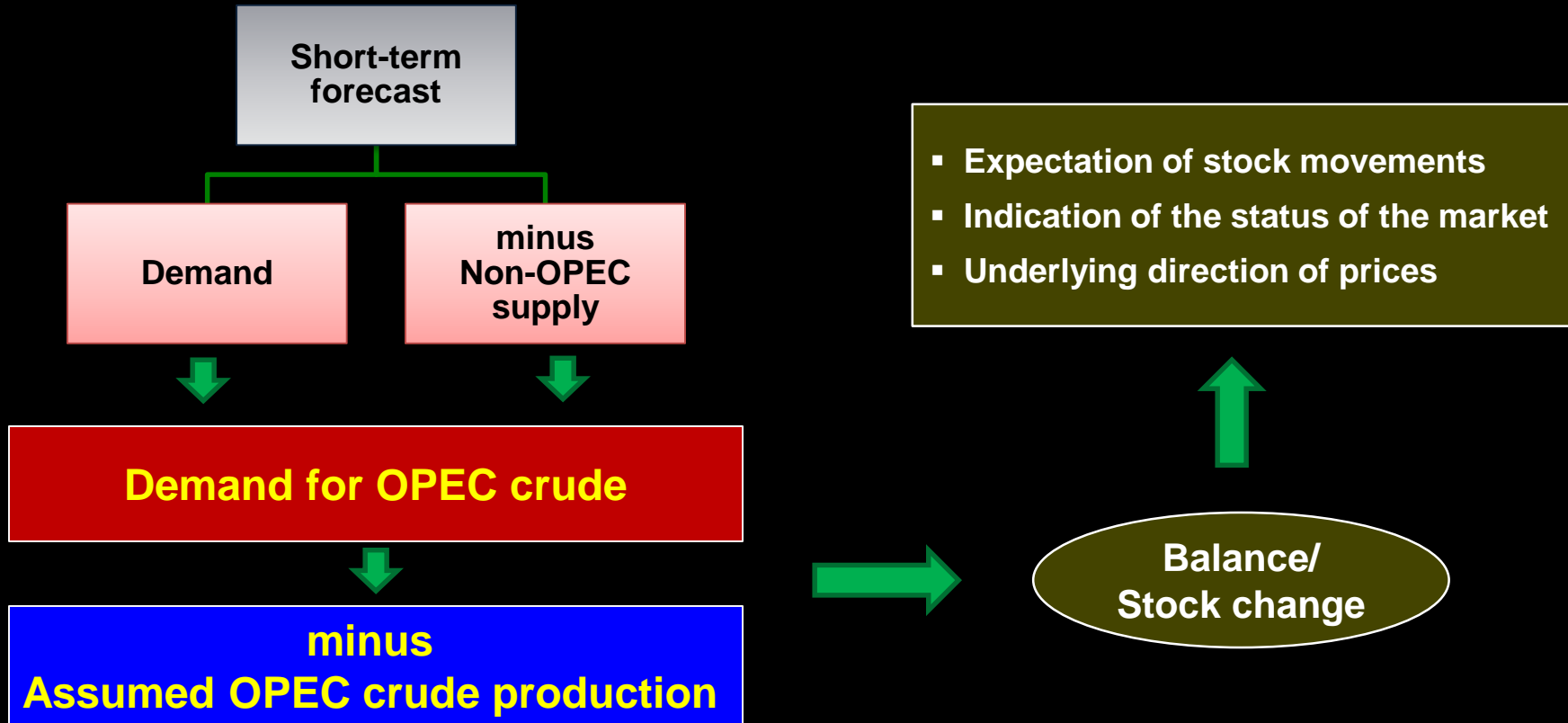
## **OPEC production**

Added to non-OPEC production, global supply indicates the status of the market when compared to total world oil demand

## **Global stocks**

Oil inventories should reflect interaction between supply and demand forces – the global picture of stocks is the ultimate source for checking accuracy of supply and demand numbers

# Advantages of using JODI oil data



# Advantages of using JODI oil data



## Demand

Around **83%** of total oil demand is covered in the JODI data base, some of the new consumer countries have been included

## Crude oil production

Large coverage of producers, about **92%** of total crude oil production is covered in the JODI data base

## Refining

Around **86%** of total refinery intake and output are covered in the JODI data base

## Trade

About **88%** of total crude oil and product exports and imports are covered in the JODI data base

## Inventories

In addition to the OECD, a few non-OECD countries are also covered

## Time lag

Improvement in reporting time, two months for many countries



# Advantages of using JODI oil data



JODI database is an important source for updating oil supply/demand information for a number of countries, for which information is not available elsewhere.

## JODI data as input to “*world oil demand*”

- Data for main petroleum products in non-OECD countries is available to check supply demand by product

## JODI data as input to “*non-OPEC oil supply*”

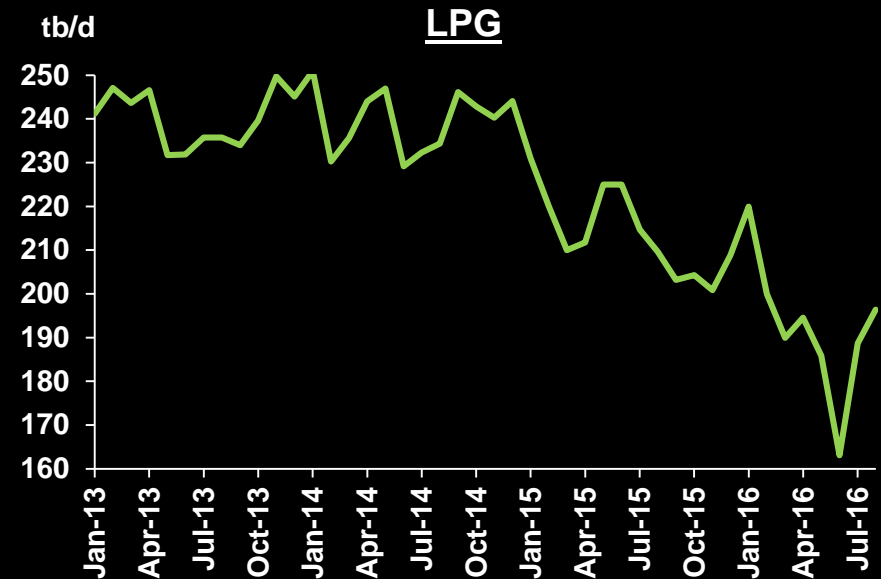
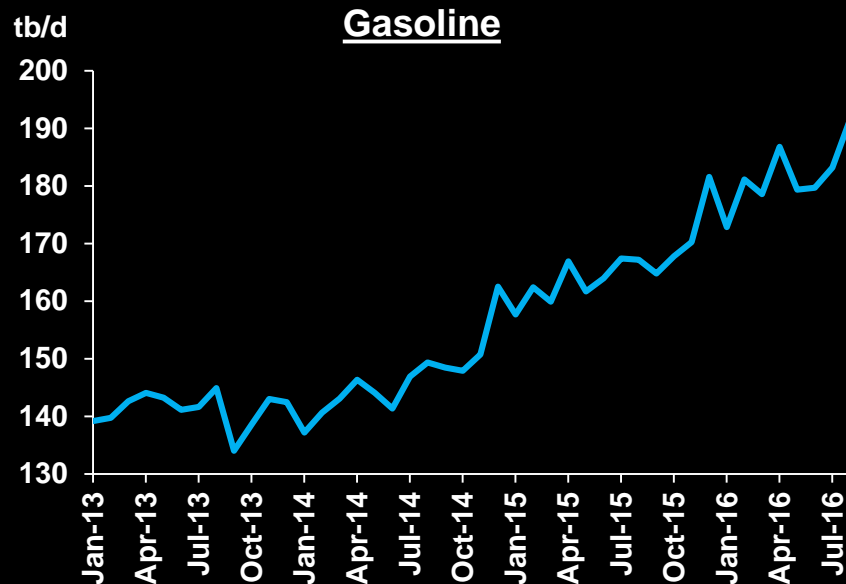
- JODI data is more timely than national information, and hence, is used as the first estimate (e.g. Canada, Australia, India, Argentina)
- Data for smaller producing countries is taken from JODI, after having been reviewed and compared with national information, to ease and speed up the update (e.g. smaller oil producing OECD countries, such as Austria, France, Germany, Japan)
- For some oil producing countries, no other information is available (e.g. Brunei, Bolivia, Tunisia)

# Advantages of using JODI oil data



Data for main petroleum products in non-OECD essential for understanding oil market e.g.

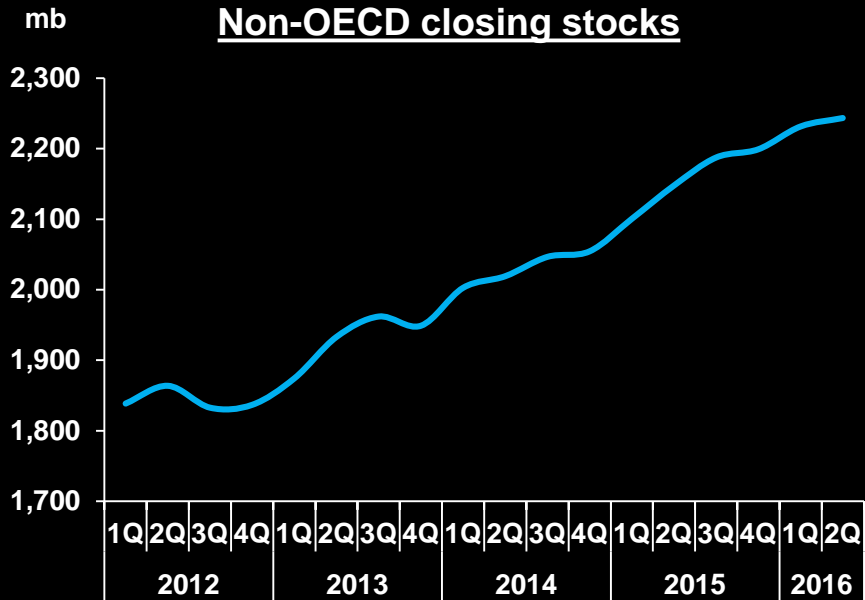
**Thailand**



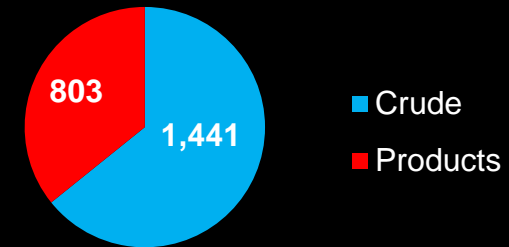
# Advantages of using JODI oil data



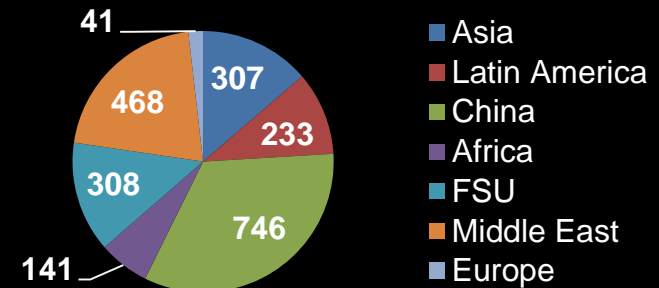
Considerable information in JODI to estimate total non-OECD inventories, although some data is still not available



**2Q 2016 by component, mb**



**2Q 2016 by region, mb**



# Shortcomings of JODI oil data

## World oil demand & global oil supply



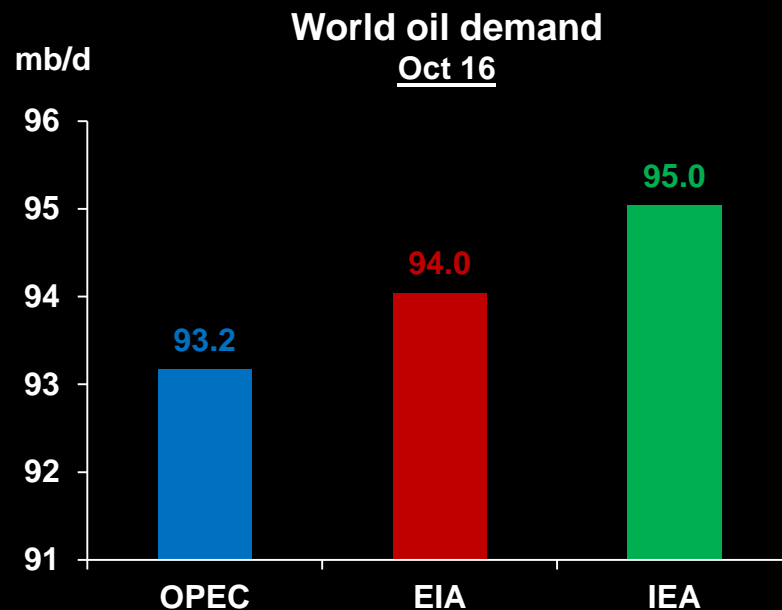
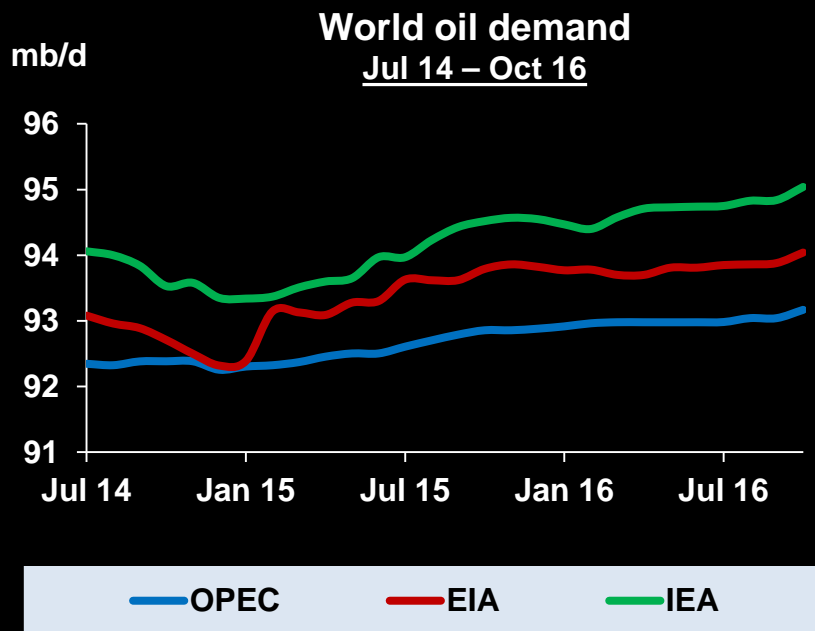
- Insufficient coverage distorts the base in estimating the period ahead (1.0% missing ~ 0.9 mb/d)
- Lack of data for main consuming countries (China, Russia, Singapore, UAE, ...)
- Revisions in historical data by organizations/agencies using JODI oil data not adequately reflected in the data base
- Discrepancy among various sources using JODI oil data

# Shortcomings of JODI oil data

## World oil demand



### 2015: revisions in reporting agencies using JODI oil data

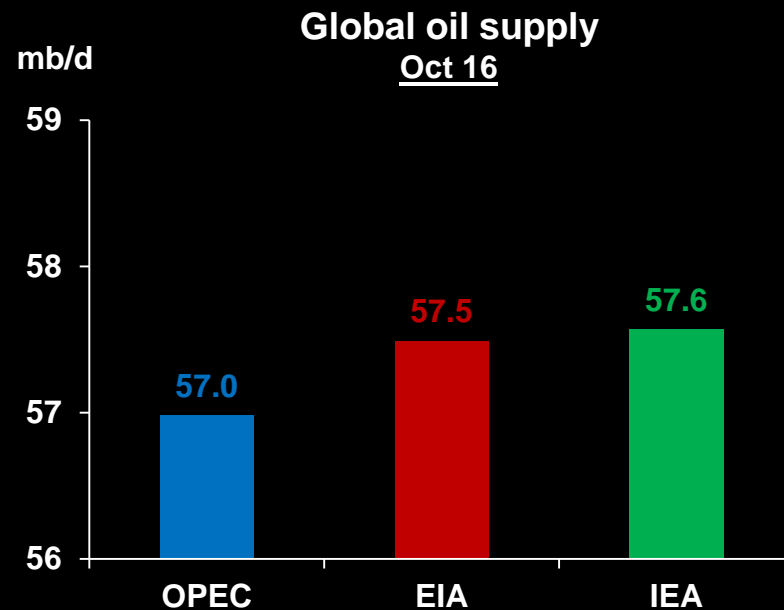
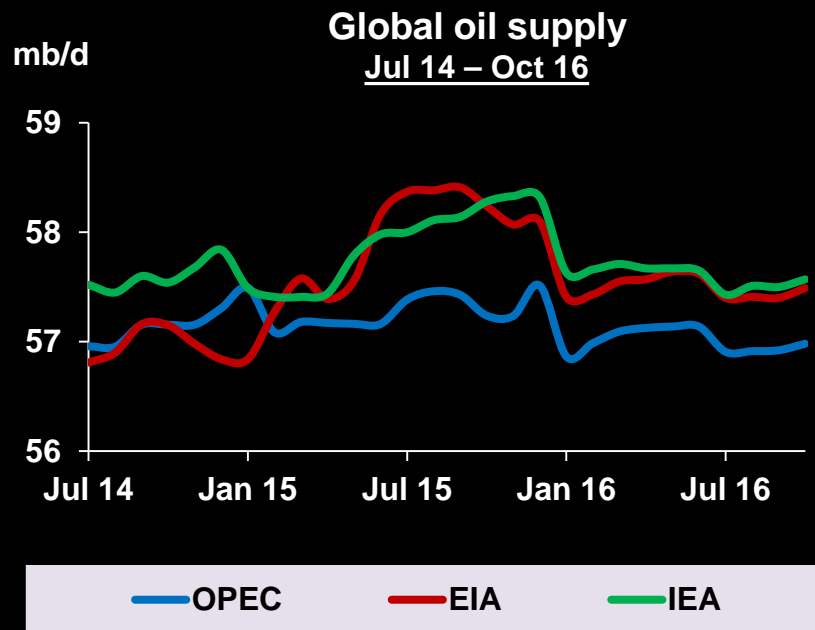


# Shortcomings of JODI oil data

## Global oil supply



### 2015: revisions in reporting agencies using JODI oil data





- Lack of major non-OECD countries' data (China, Russia, ...)
- Stock **changes** are reported for some non-OECD countries, but this is not sufficient information
- Inaccuracy of some non-OECD data
- Discrepancy between stock changes and balance (Supply/Demand) on the country basis
- Global stock levels are the source for checking the accuracy of supply and demand numbers. However, the lack/inaccuracy of stocks data makes an accurate assessment very difficult.



- Improvements in JODI data to promote its use globally
  - Cross-check data before updating the data base, both on country and organisation levels
  - Consistency in reporting different time-series
  - More effort needed to report missing countries' data
  
- Reporting organizations/agencies need to use official JODI data





- JODI oil databases contain official country data and valuable information, which cannot be found easily elsewhere
- Substantial usage of JODI oil data in oil market-related research
  - As feed to historical baseline data to improve short-term forecasting
  - As input for studies

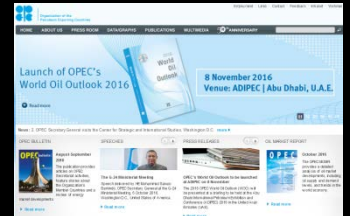
**More accurate data → improves forecast → better understanding of the market status → facilitates right decision**

# 14th Regional JODI Training Workshop

Moscow, 9th-11th November 2016



# Thank you



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