Newbuilding Forecast
- Offshore Market Outlook-

Korean Shipbuilders,

Sailing Blue Ocean with Creative Innovation

JECKU 2013

Contents

1 Oil / Gas Market

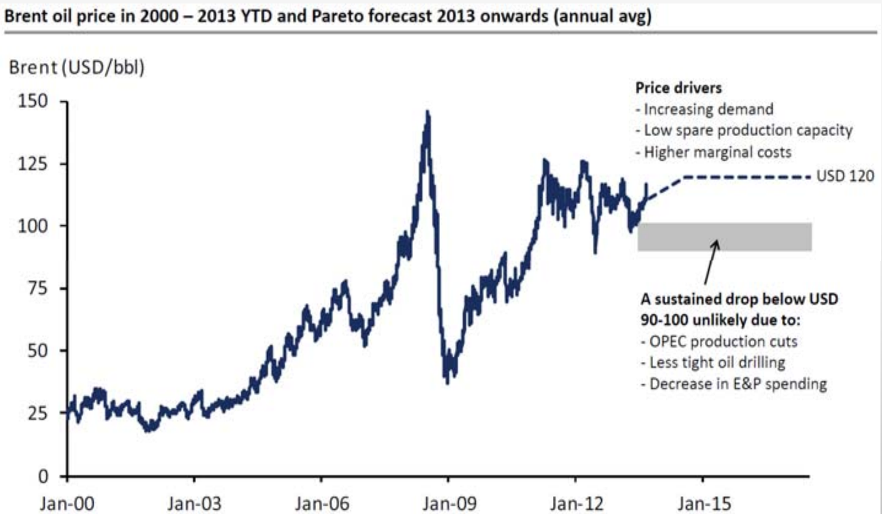
Current Oil Price Trend Will Hold in the Medium Term

- Oil price is expected to remain stable in the near future due to increasing demand,
- Tight oil (Shale oil) : Major damage on the offshore industry in near future?
  or Only limited impact due to its uncompetitive development price?

Green Light on Offshore Oil & Gas Industry

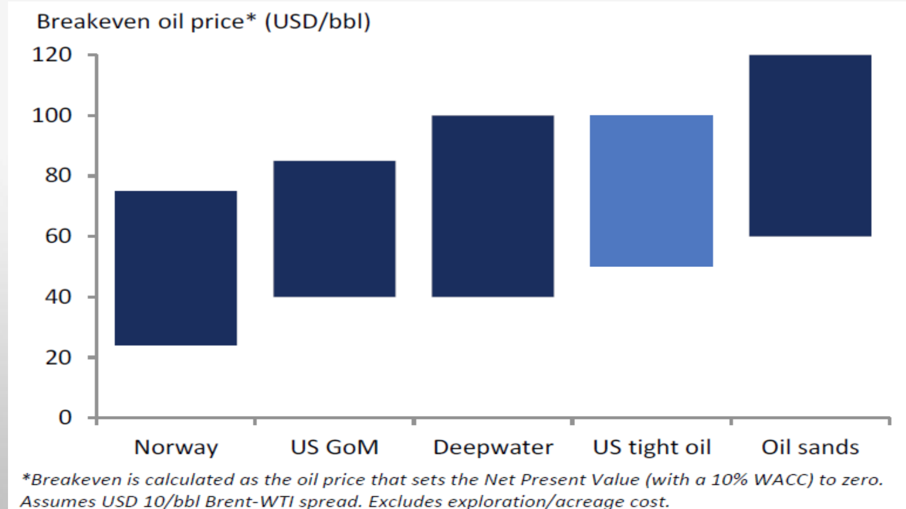
- Moderate recovery of Global economy leads to increasing energy demand
- Deficient spare capacity of OPEC and high price of tight oil will not make dramatic oil and gas price fluctuation

Oil Price Forecasting in the medium-term



(Source : Pareto)

Break Even Oil Price Range



(Source : Wood Mackenzie, IEA, Pareto)

2 Drilling Unit

*Floater rig demand will continue with offshore development and high oil price environment.

**Floater rig: Semi-rig, Drillship*

Portion of global oil production			
year	2000	2010	2020
Offshore Oil (Deepwater Oil)	31% (2%)	33% (9%)	34% (13%)

New Build Sector

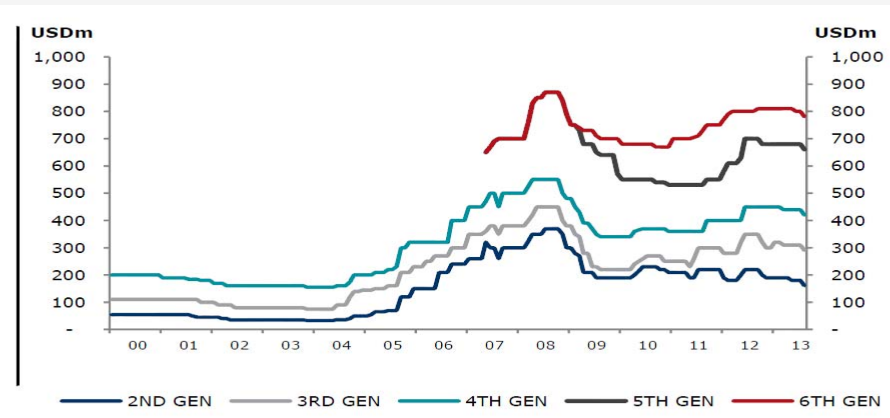
▷ Deepwater Floater remains Firm and Steady

- Newbuild may be restricted by heavy order book in short-term, but limited players with strong backlog to continue newbuild in medium-term.

▷ Mid-water Market to Renew

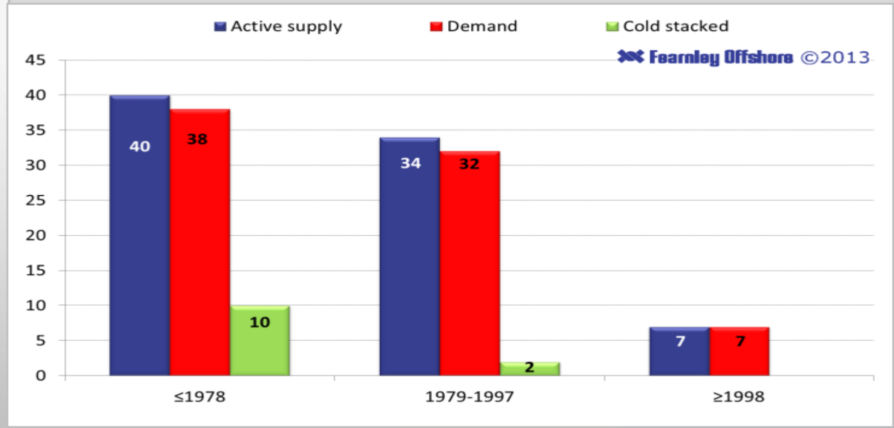
- Old Mid-water fleets are about to be replaced (39% of UDW rigs are working in Mid-water)
- More demands for Mid-water Semi for Harsh Environment but economic constraints.

Estimated Value of floaters as per Generation



(Source : RS Platou)

Mid-water Semi Age Distribution



(Source : Fearnley)

2 Drilling Unit

■ Jack-up Rig Market

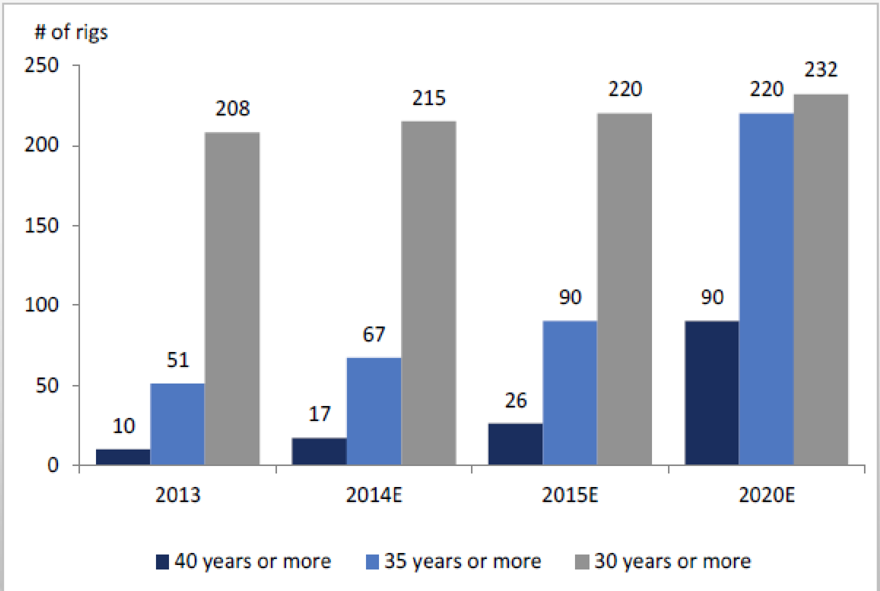
▷ Replacement cycle will be continued

- 55% of current Jack-up rigs are more than 30 years old
- Expecting more newbuilds to come
- Middle East (Saudi, Iran), SE Asia, Mexico are major driving area for growing demand

▷ More High Spec Jack-up Newbuild expected

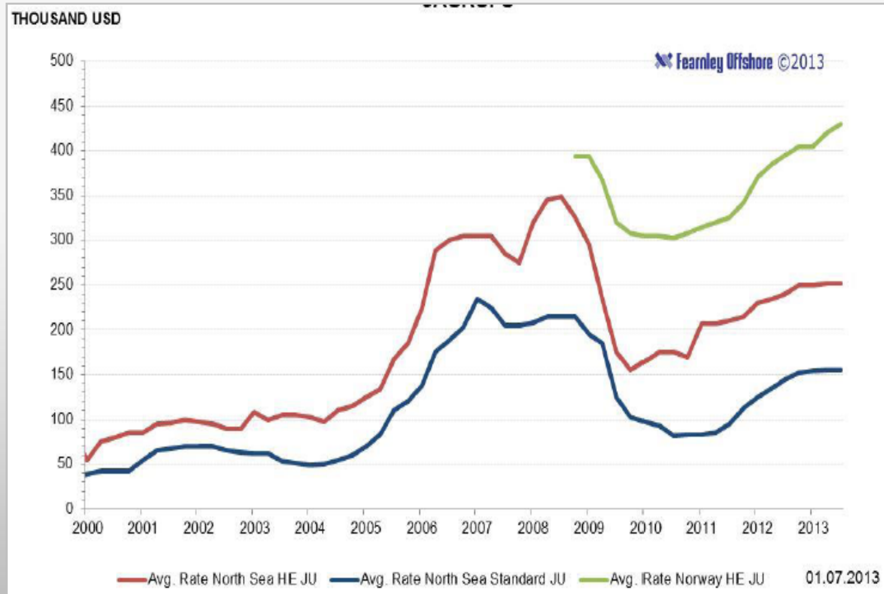
- New discovery & continuous development in NCS will create High spec jack-up demand
- Dayrates of High Spec Harsh Operation Jack-up are steadily increasing

Age Development of Contracted Fleet



(Source: Pareto Research, IHS-Petrodata)

Average Rate in North Sea Jack-ups



(Source : Fearnley)

3 Production Facilities

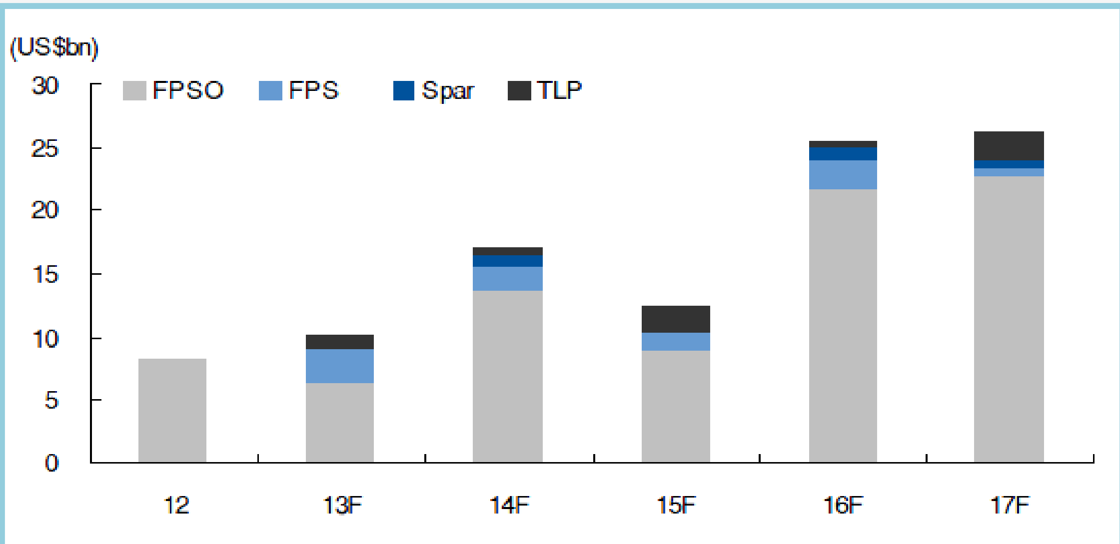
■ Rig cycle(2006~) → Production Facility cycle

- Demand for rigs starting from 2006 converted to Production Facility Cycle (FPU/Fixed platform).

■ FPU and Fixed platform order growth to continue

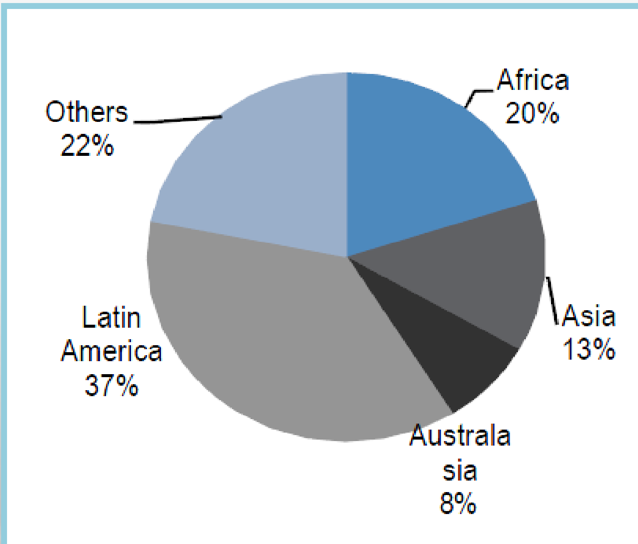
- Continuous Mid/Shallow water development
  - Fixed platform : North sea / Asia mid-water and shallow-water
- 80% of FPU Capex will be invested in FPSOs over the next 5 years
  - FPSO : Brazil / West Africa deep-water

FPU Capex by type



(Source : Douglas - Westwood)

FPU Capex by region (2013~2017)



(Source : Douglas - Westwood)

4 FLNG (LNG FPSO)

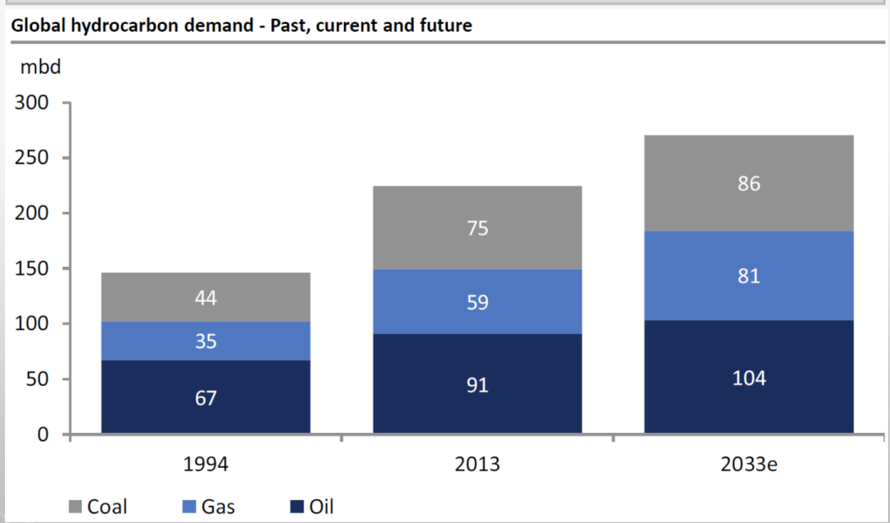
New paradigm of energy : natural gas

- Natural gas is taking a larger share of the energy market
- Rise of East Africa (Mozambique, Tanzania, etc)
  : Most of largest reservoirs found in 2012 are concentrated in East Africa

The New Solution for Gas Development - FLNG

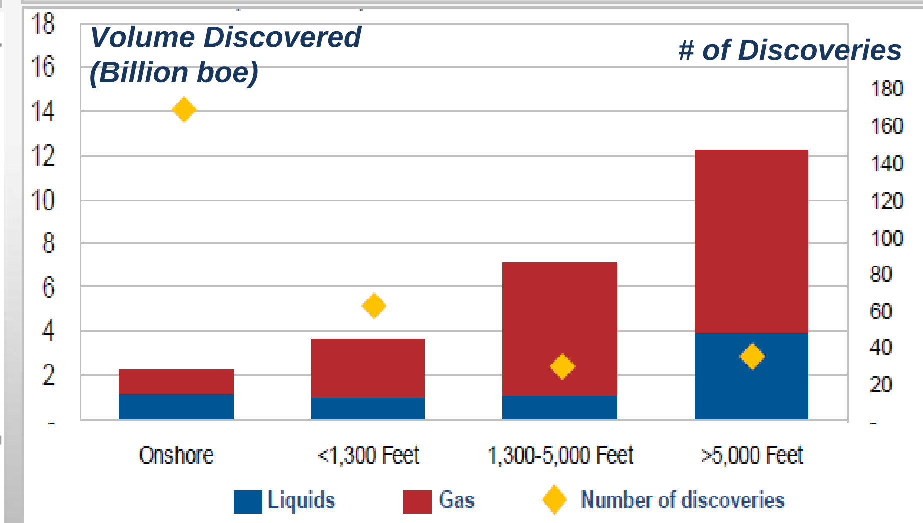
- Spotlight on FLNG as an alternative for onshore plants
- More energy companies are interested in FLNG solution
  (EMDC, Inpex, Woodside, GDF Suez, PTT, Noble, etc.)
- Currently, 32 MTPA capacity of FLNG is under development with FLNG
- But need to be proved with actual operation

World natural gas demand



(Source : IEA, Pareto)

New Field Resources Discovered in 2012 (by Water Depth)



(Source : Wood Mackenzie)

5 Summary

1. Gradual growth of oil/gas market is forecasted

- Recovery of global economy shall support oil demands
- Current oil price is expected to be hold for the medium term

2. Continued high demand for Drilling Rig is expected

- Premium Floater Rig will be of interest
- Replacement demands for Mid-water semi and High Spec Jack-Up

3. Positive outlook for Production Facilities

- Growing oil & gas demands and oil price will bring better economics and increasing development activities

4. Spotlight on FLNG as an alternative for onshore LNG plant

- Risks on proto type solution
- Need to be proved with actual operation