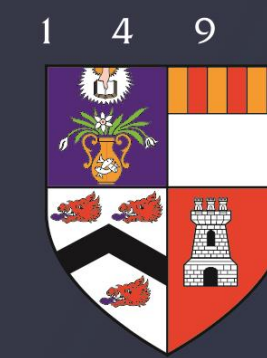


An Economic Analysis of Indonesia's Current Petroleum Production Sharing Contract: Special Mention of Offshore Frontier Oil Field

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Introduction

- More oil and gas reserves are found in Indonesia's deep water frontier area.
- An optimal fiscal regime is essential to capture the economic rent while avoiding investment disincentives.
- This study evaluates Indonesia's current PSC regime under deep water PSC fiscal terms, considering its flexibility and neutrality as a rent capture mechanism.

Indonesia's PSC - Deep Water Oil Fiscal terms

Fiscal System	Indonesia - Deepwater – Model PSC 2008 Terms
Bonuses	Signature Bonus: \$3 million for field A, \$2 million for field B, \$1,375 million for field C
First Tranche Petroleum (FTP)	20% of gross oil production split between Government and Contractor based on their production sharing
Cost Recovery	From 100% of gross production less the FTP (Cost oil limit = 100%). Therefore, effective cost recovery ceiling is 80%
Equity / Profit Sharing	After tax Government's profit oil share is 65% After tax Contractor's profit oil share is 35%
Income Tax	Combined income tax rate = 40% (consist of 25% income tax and 20% withholding tax). Levied on income less deductions and depreciations. Depreciations term = declining balance with 25% rate.
Domestic Market Obligation (DMO)	Subject to 5 years of DMO holiday, contractor should sell 25% of its profit crude oil at 25% of market price to the government.

Base-case Results

Profitability Indicators	Large Field (Field A)	Medium Field (Field B)	Small Field (Field C)
Pre-tax NPV (\$million)	3,032	1,114	455
Pre-tax IRR	24.3%	23.9%	22.7%
Post-tax NPV (\$million)	571	153	5.4
Post-tax IRR	14.1%	12.8%	10.2%
Government Take	68.6%	68.7%	69.6%

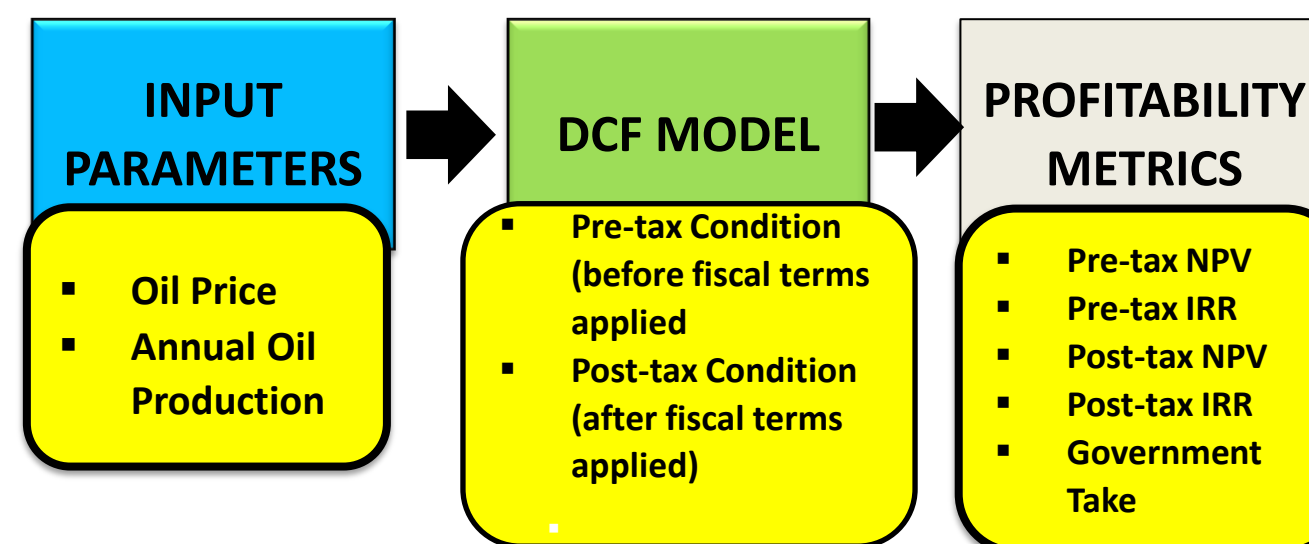
Data and Methodology

- Representative offshore – deep water oil fields are incorporated: large (250 mmbbls), medium (100 mmbbls) and small fields (50 mmbbls).
- Discounted Cash Flow method is used in the base-case scenario: NPV and IRR are the main yardstick.
- Sensitivity analysis and tornado charts
- Monte Carlo simulation is used to measure risk and uncertainty.

Key Data:

Field Size	Field A (250mmbbls)	Field B (100mmbbls)	Field C (50mmbbls)
Devex (\$/barrel)	15	17.5	20
Opex (\$/barrel)	15	17.5	20

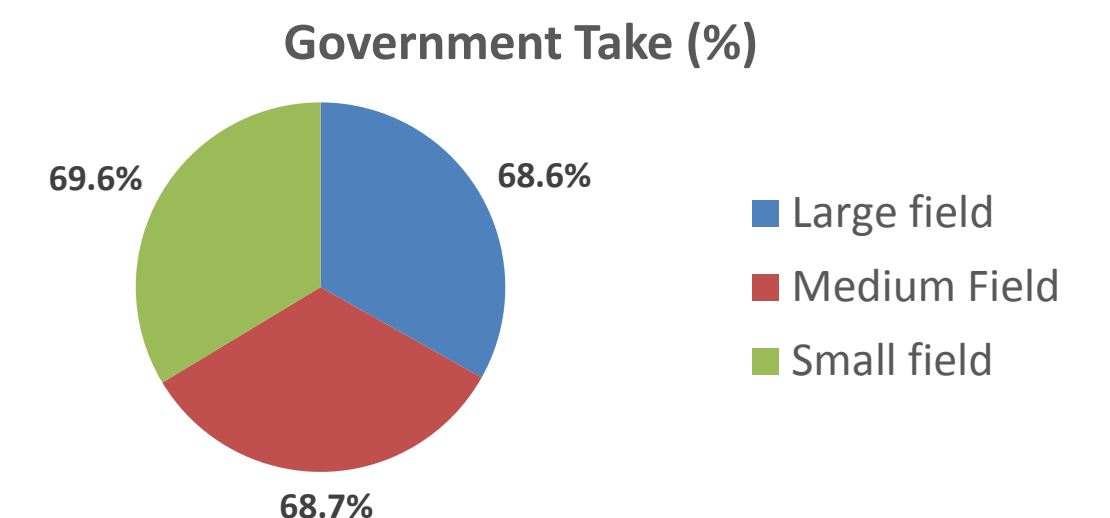
Flow of Methodology



Results

- Government take in all model fields are larger than 65%, due to the DMO policy.
- Government take is higher in less profitable oil fields.
- Two most sensitive variables that affect project profitability: oil price and development cost.
- Monte Carlo simulation: field C gives highest risk and uncertainty to the investor.

Share of Economic Rents



Conclusion

- Flexibility and neutrality are not yet present in Indonesia's PSC deep water oil fiscal term.
- Government fails to optimally collect the economic rent from oil field exploration and development activities.
- The current fiscal term discourage investments in marginal fields.