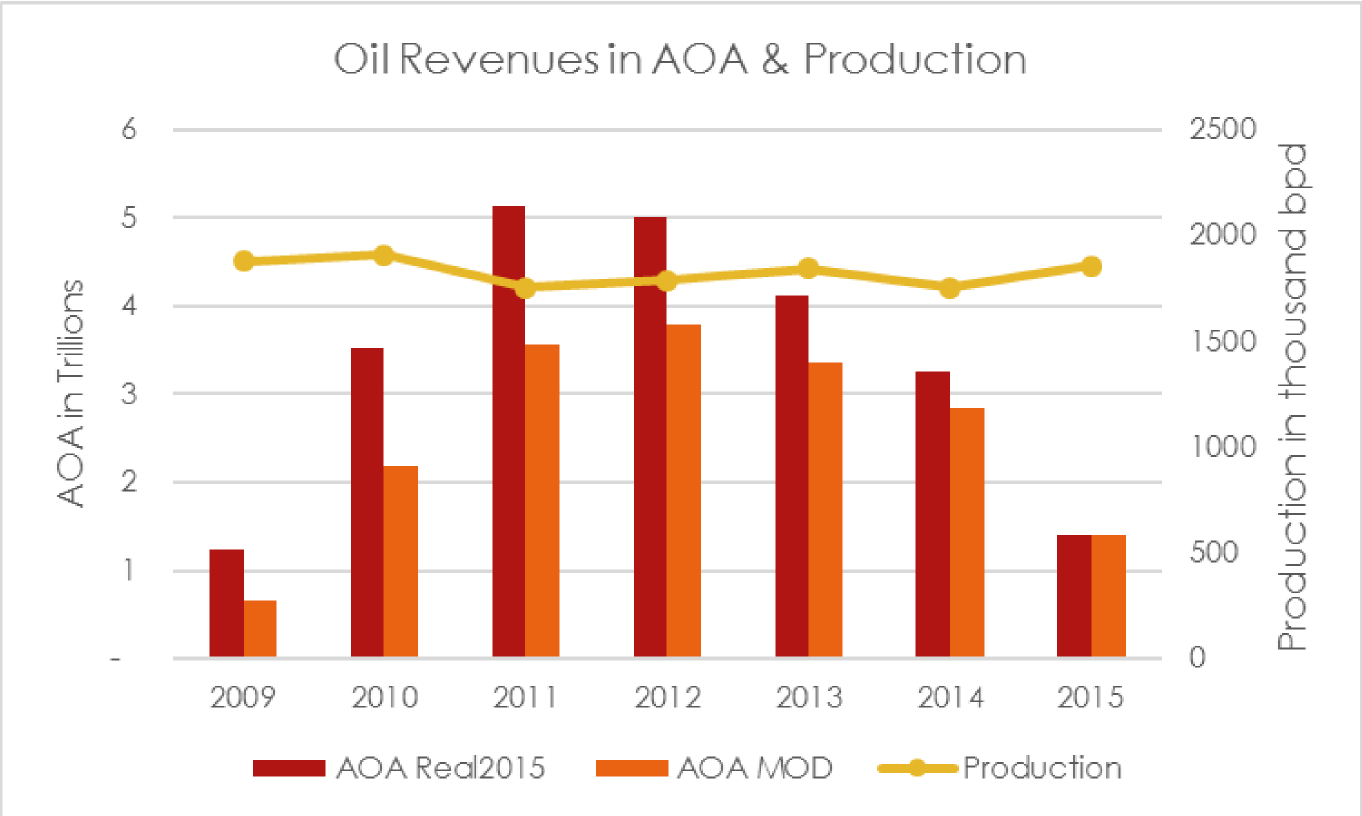
The Economic Evaluation of the Angolan PSA's in the 2016 Low Oil Price Environment

Cláudio Alexandre Amaral Padrão

1495 UNIVERSITY OF ABERDEEN

Motivation

- Angola produces 1.8mmbbls of oil per day. Oil sector represented 45% of GDP, 95% of total Angolan exports, 80% of total fiscal revenues between 2011 and 2013.
- PSA terms with profit sharing based on contractor's rate of return were revised in 2007 at time of increased revenues due to global oil price increase and enhanced production.
- Vastly different situation in 2016 due to low oil prices with the Government expecting $5.3 Billion less in oil tax receipts and GDP growth falling 2% when compared to 2014.



Research Questions

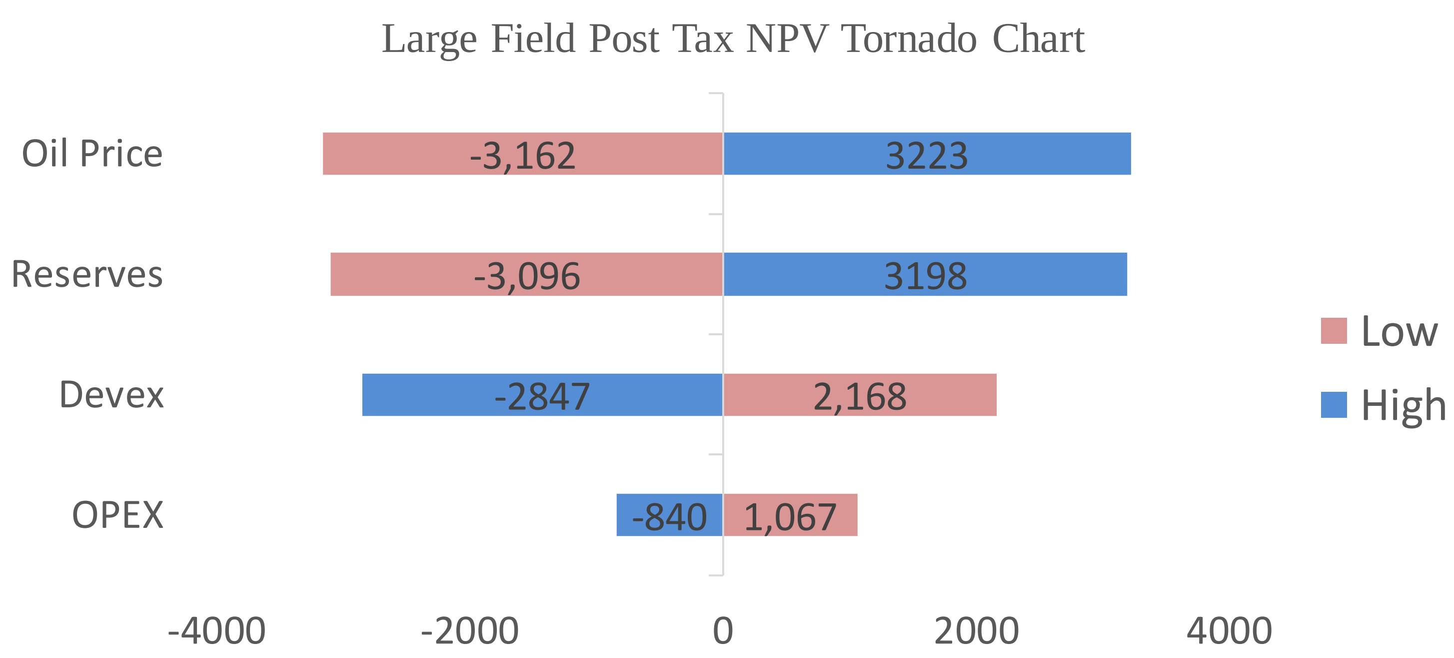
1. How robust are the 2005 established Angolan fiscal policies against the 2016 environment?
2. Is the Angolan Government with current fiscal policies, able to maximise resource rents from Deepwater PSA's whilst still attracting investors to go ahead with the very high cost projects?

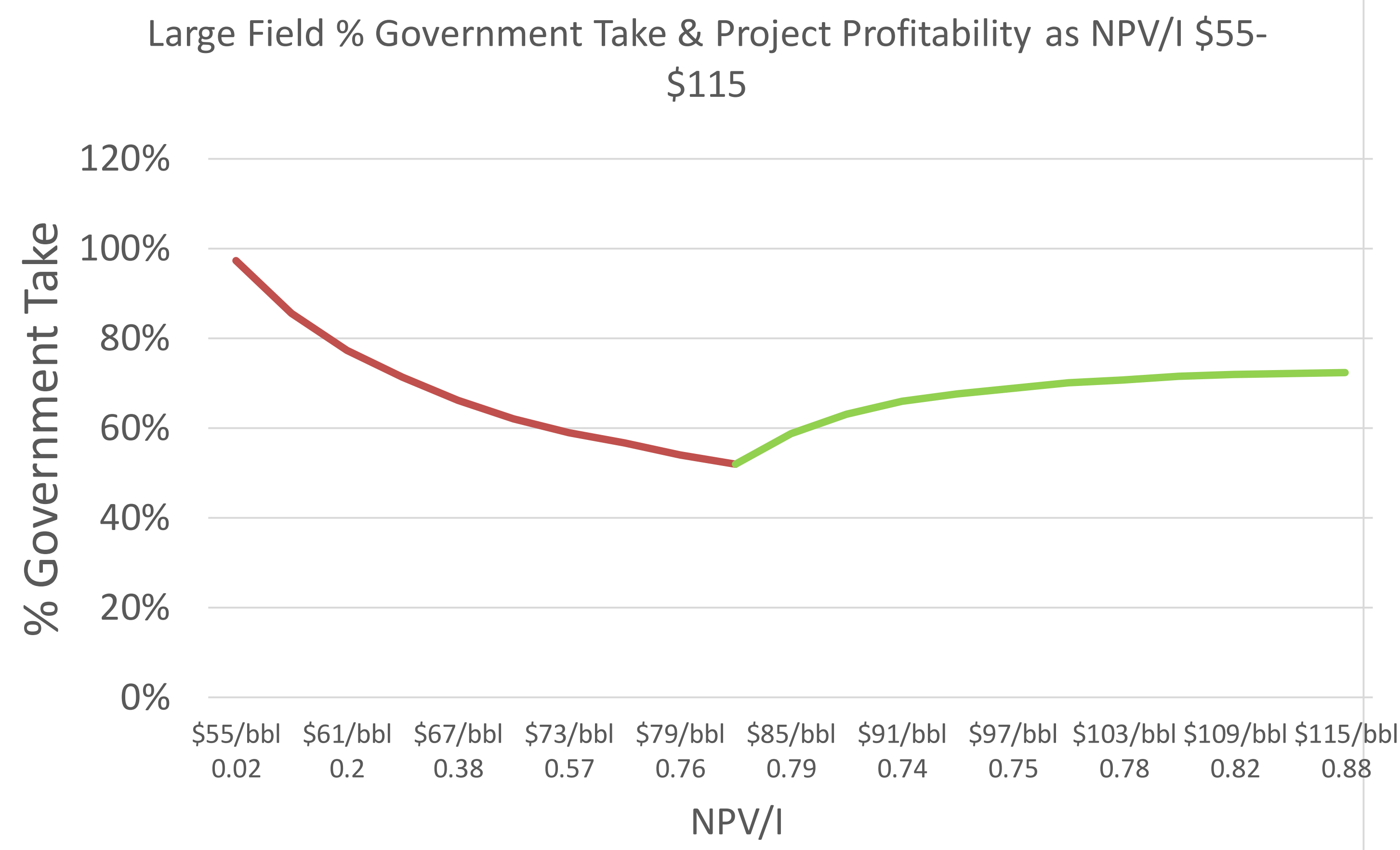
Methodology

- Construction of a Discounted Cash Flow Model with three hypothetical fields of 100, 250 and 500 mmbbls reserves, simulating offshore Angola deep water fields. Analysis on contractor's NPV, NPV/I and IRR.
- Deterministic Sensitivity Analysis on NPV of the contractor and on Government's percentage take of the economic rents. Variables: Oil price, Devex, Reserves, Opex, Income tax (Government take only).

Results

Financial Criteria	Small Field (100 mmbbls)		Medium Field (250 mmbbls)		Large Field (500 mmbbls)	
	Pre-tax	Post-tax	Pre-tax	Post-tax	Pre-tax	Post-tax
NPV	718	-212.01	1,916	-156.79	4,788	959
IRR (%)	17.2	7.3%	17%	9.3%	18.2%	12%
NPV/I	0.46	-0.14	0.57	-0.05	0.83	0.17
Government Take (%)		130%		108%		80%





Conclusions

- Under base case assumptions, imposing PSC terms deem small and medium fields unprofitable and large field with low profitability.
- Deterministic Sensitivity Analysis showing contractor's NPV with heavy dependence on Oil price.
- Modelling results give regressive behaviour of the PSC terms at low profitability levels and progressive behaviour at higher prices or lower development costs when the economic rents are greater.
- Reduction of income tax from 50% to 30% yields on the large field, NPV/I of 0.3 and ER share of 60%/40% in favour of the Government.

Cláudio Padrão c.a.amaralpadrao.15@aberdeen.ac.uk www.abdn.ac.uk
University of Aberdeen, King's College, Aberdeen, AB24 3FX