

# Incentivizing marginal field development using the fiscal system

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## Introduction

The petroleum industry has had major impact on the Norwegian economy. With the recent decrease in oil price, the activity in the sector has declined and so have the state revenues. The downturn in oil price as well as the recent decrease in uplift has increased number of marginal fields.

The aim is to investigate how the fiscal system could be changed in order to incentivize marginal field development.

## Methodology

- Deterministic analysis incl. sensitivity analysis
- Probabilistic analysis (Monte Carlo Simulation)
- Simulating investors NPV under different fiscal systems

## Fiscal Systems

	CIT current	CIT old	CIT opex	CIT r-factor	RRT	RRT r-factor	Brown	Brown r-factor
Tax rate	78%	78%	78%	28-31%	78%	78%	78%	78-84%
Threshold					7%	4-9%		
Uplift	5.5%	7.5%	5%	0%				
Depreciation	6 years	6 years	6 years	6 years				
Interest LCF	0.09%	0.09%	0.09%	0.09%				

## Results

Deterministic	Pre tax	Not Consolidated				Consolidated				RRT	RRT r-factor	Brown	Brown r-factor
		CIT current	CIT old	CIT opex	CIT r-factor	CIT current	CIT old	CIT opex	CIT r-factor				
Tax take		186	124	185	144	-75	-173	-73	93	0	0	6	42
NPV	7	-179	-117	-177	-137	82	180	81	-86	7	7	2	-35

Probabilistic	Pre tax	Not Consolidated				Consolidated				RRT	RRT r-factor	Brown	Brown r-factor
		CIT current	CIT old	CIT opex	CIT r-factor	CIT current	CIT old	CIT opex	CIT r-factor				
Tax take mean		383	326	382	229	134	36	135	176	264	268	215	280
NPV mean	275	-97	-39	-95	58	141	240	140	99	11	7	61	-5
Prob. Loss	33%	67%	49%	67%	45%	10%	0%	10%	42%	33%	33%	33%	55%

- CIT creates disincentives to invest in marginal fields under no consolidation. This is mainly due to the interest on loss carried forward being lower than investors discount rate.

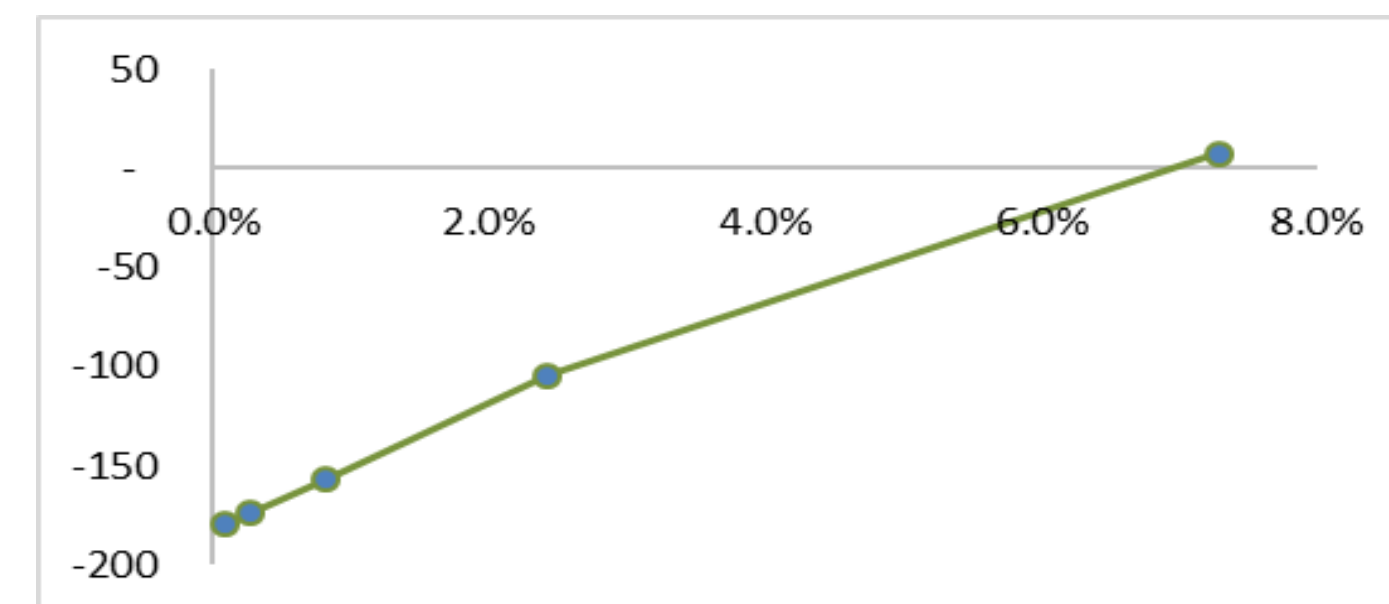
- CIT improves post-tax NPV compared to pre-tax NPV under consolidation due too favourable deductions

- CIT r-factor equalize investors to a greater extent

- RRT and Brown tax equalize existing investors and new entrants. Should not cause distortions to the same extent as CIT

- Brown tax using r-factor collects a too high share of economic rent

Sensitivity – interest LCF, Current CIT:



## Conclusion

- A more neutral system, RRT or Brown tax, should be adopted
- If CIT is kept, it is recommended that the interest for loss carried forward is increased and the uplift lowered in the case of consolidation