Fiscal Policy for Natural Resources: Options for Liberia

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Managing Natural Resource Revenue Seminar

Monrovia, March18, 2013

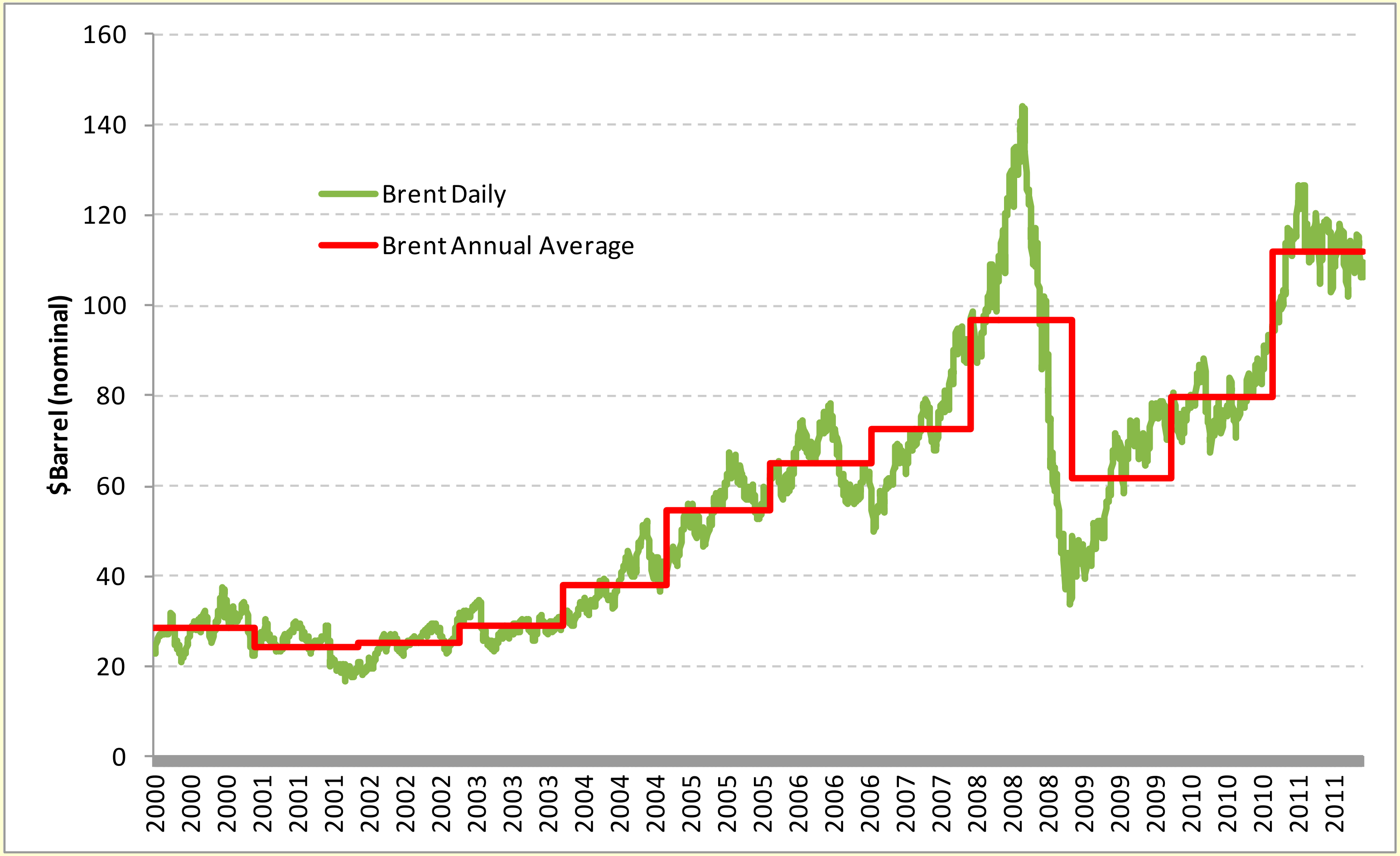
Outline

- Special Sector Characteristics
- Fiscal Objectives
- Fiscal Instruments
- Evaluation of Fiscal Regimes
- Fiscal Administration
- Transparency
- Options for Liberia

Special Sector Characteristics

- Sector characteristics have important implications for fiscal regimes:
- Long, costly exploration periods
- Exceptionally capital intensive development
- Significant geological, technical and political risks
- Diverse outputs (crude oil qualities, natural gas, NGLs)
- Variable costs
- Volatile and unpredictable prices

Oil Price Volatility



Fiscal Objectives

- Efficient, broad–based development
- Progressive state capture of rents
- Robust to changed circumstances
- Early and dependable revenue
- Internationally competitive
- Match with administrative simplicity

Fiscal Instruments

- Profits taxes
- Revenue or volume-based fees or taxes
- Production sharing
- Explicit rent–capture mechanisms
- Bonuses
- Equity participation
- Contract award process

Royalties Are Regressive

	Calculation	Low Cost High Profit	High Cost Low Profit
(1) Gross revenues		100	100
(2) Cost		40	60
(3) Pre-tax margin	(1) – (2)	60	40
(4) Royalty (10%)	0.10 x (1)	10	10
(5) Royalty as % of margin	(4) / (3)	16.7	25

Production Sharing

- A percentage of gross production is set aside for the recovery of costs (“Cost Oil”)
- Remaining production (“Profit Oil”) is shared between the investor/contractor and government (or its agent) based on a percentage(s) fixed or negotiated between government and the contractor
- Profit Oil share is analogous to a profits tax
- Cost Oil limit has the same impact as a royalty

Rent Capture Mechanisms

- Fiscal mechanisms explicitly targeting capture of perceived excess profits
- Considerable variety
- Efficiency, progressivity, robustness depends critically on their design
- Depending on specification, revenues may be deferred
- Uncertain revenues
- Administratively difficult?
- Widely applied to petroleum

Achieving Rent Capture In Practice

Link fiscal instrument(s) to:

- An easily observable proxy for profitability:
  - Production
  - Price
  - Revenue
  - Cost
  - Location

or

- Profitability itself (actually achieved ROR)

Responsiveness of Proxies to Profitability

	Government "take" responsive to:				
Government "take" linked to	*Production*	*Price change*	*Costs*	*Timing of CF*	*Cost of capital*
Production (daily or cumulative)	**Yes**	No	No	Partly	No
Price (price caps or base prices)	No	**Yes**	No	No	No
Cost recovery (uplifts and write-off rates)	No	No	**Yes**	Partly	Partly
Simple indicators (location, vintage, and so forth)	No	No	Partly	No	No
Financial ratios (e.g., taxable income to revenue)	**Yes**	**Yes**	**Yes**	No	No
Rate of return (ROR)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Problems With Proxies

- Partial, inaccurate, measurement of profitability
- Likely to quickly become outdated
- Simplicity they appear to provide often proves an illusion. Instead:
  - Complexity
  - Require revisions
  - Enhanced perceptions of risk
  - Pressures for stability clauses

Nigeria's Petroleum Industry Bill: "Bells and Whistles"

- Royalties are a function of:
  - Price
  - Daily production rate
  - Type of hydrocarbons
  - Location (water depth)
- Production sharing is a function of:
  - Daily production rate
  - Location
- Tax regime varies with
  - Location
  - Type of hydrocarbons
  - Field size

Pros and Cons of the ROR Approach to Rent Capture

- Pros:
  - Efficient
  - Strongly progressive
  - Robust: adjusts automatically to all changes in circumstances affecting profitability
  - Based on actually achieved outcomes not “guesstimates”
  - Facilitates negotiations
- Cons:
  - Complex: no more than income tax or production sharing and based on same data.
  - Gold-plating risk: minimal, depending on specification
  - Limits investor upside: no more than other progressive mechanisms. Investor profitability continues to increase with project profitability

Bonuses

- Lump sums paid on signature or attainment of a certain level(s) of production. Typically bid or negotiated
- Efficient. Non-distorting of investment decisions (“water under the bridge”) but may reduce funds for exploration
- Early revenue for government, but geological and political risk concerns may result in under-bidding
- Easy to administer

Equity Participation

- Purchased equity
  - Equal basis with private sector
- Carried equity
  - State is “carried” by private contractor through exploration and possibly development with contractor reimbursement of carry plus interest out state share in event of success
- Free equity/”citizens’ equity”
  - State pays nothing for its share

Fiscal Packages

- Multiple fiscal objectives require multiple instruments
- But the number of instruments and parameters should be kept to a minimum
- Two most common packages:
  - Tax/Royalty
  - Tax/Royalty Production Sharing

Evaluation of Fiscal Regimes

Modeling and evaluation of fiscal regimes is essential:

- Initial fiscal design
- Licensing rounds and negotiations
- Exercise of participation options
- Review, revision, updating
- Project assessment
- Cross-check of fiscal audits
- Sector/macro planning (scenarios)

And requires targeted sustained capacity building

Options for Liberia: Liberia's Existing Fiscal Regime

- Tax/royalty production sharing
- Rent capture: Production share escalates with daily production rate
- Bonuses
- State equity participation
- "Citizen's equity"
- Principal comment: royalties, cost oil limits and rent capture design constrain responsiveness to changed circumstances and encourage proliferation of terms

Options for Liberia: Comments and Recommendations

Principal comment:

- Royalties, cost oil limits and rent capture design constrain responsiveness to changed circumstances and encourage proliferation of terms

Recommendations:

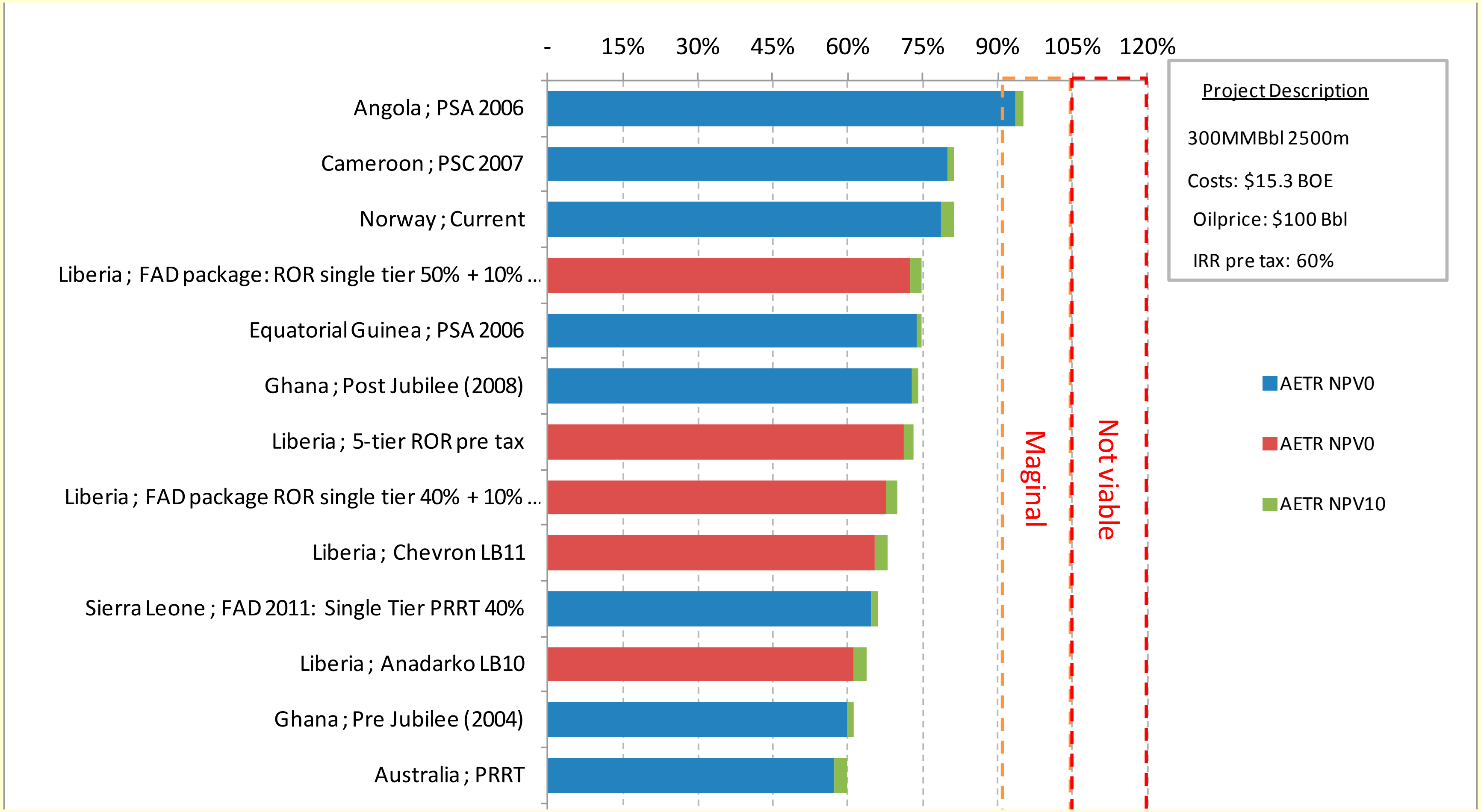
- Retain existing overall structure
- Reduce combined impact of royalty and COL
- Replace daily production thresholds with ROR

Options for Liberia: Comments and Recommendations

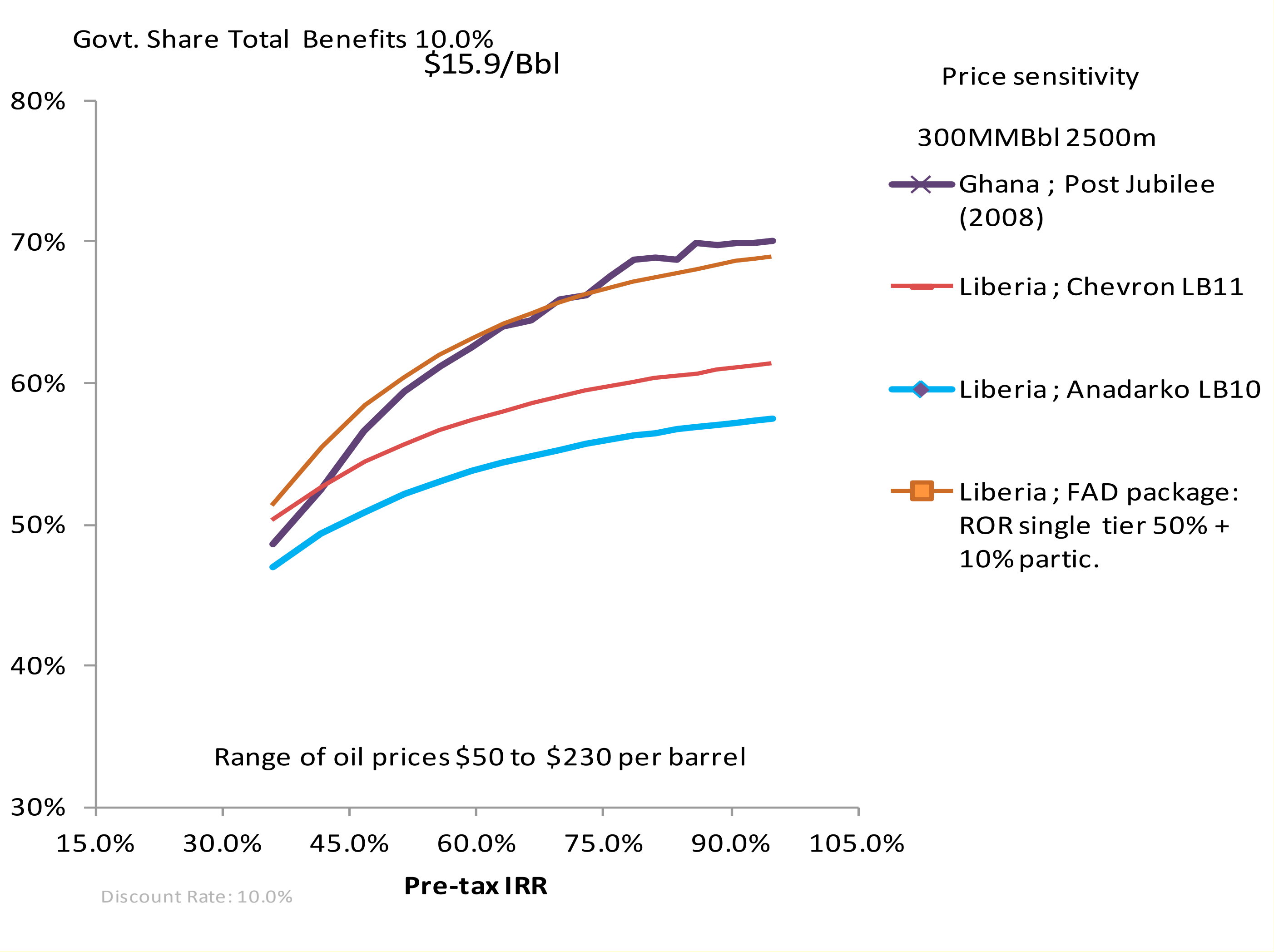
Recommendations (continued):

- Model impact of specific fiscal parameter choices, targeting acceptable range of government take
- Standardize terms in law where possible

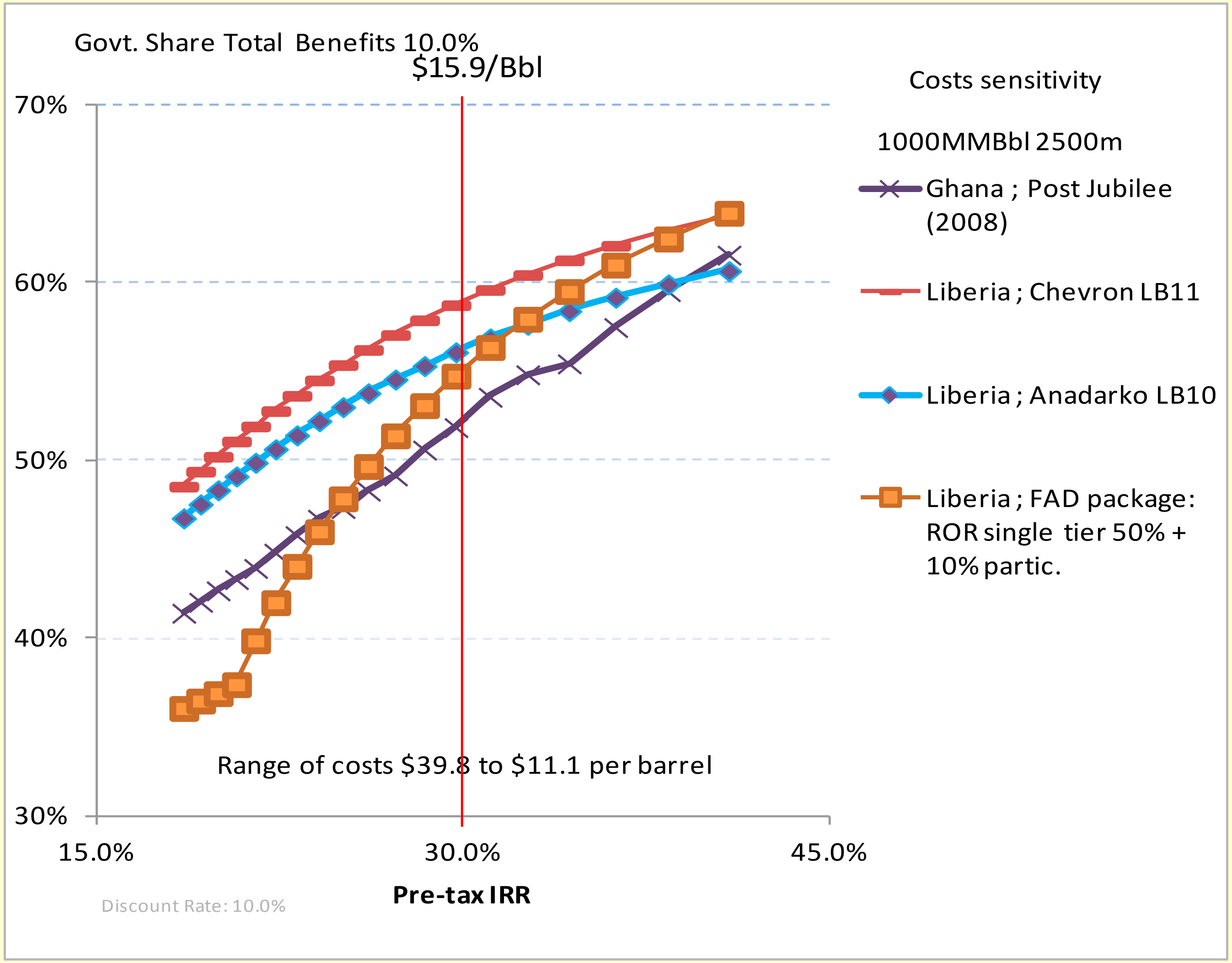
Modeling Government Take (AETR) Hypothetical Offshore Oil Field



Progressivity and Robustness wrt Variations in Price



Progressivity and Robustness wrt Variations in Cost



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Thank You!

Questions/Comments