
Developing Petroleum Fiscal Policy



Castle Gap Advisors, LLC.
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House Resources Committee

Rich Ruggiero, PE

Rich has 40 years of diversified energy industry experience. He spent the first two decades in roles of increasing responsibility at operator Amoco Production Company (operations, asset management, commercial, regulatory, and LNG development). Following that Rich has a decade of experience as a senior executive at Gaffney, Cline and Associates where he primarily provided energy fiscal policy advice to the executive level of several NOCs as well as ministry-level strategic resource development guidance to governments. Key clients include Alaska, Australia, Brazil, Indonesia, Iraq, Kuwait, Saudi Arabia, Trinidad and Venezuela. In particular, Rich worked as an advisor to the Alaska Department Of Revenue from 2007 to 2010 with particular input to ACES, AGIA and oil and gas decoupling.

After the acquisition of Gaffney Cline by Baker Hughes, Rich held executive lead roles in Field Development and Strategic Planning where he created, built and managed their direct investment division and the strategic planning group.

Rich is a licensed professional engineer and has a BSc degrees in Chemical and Petroleum Refining Engineering from the Colorado School of Mines.

Developing Petroleum Fiscal Policy

- Background perspective
 - The only energy industry constant
 - Need for strategic drivers
 - Determining “Fair Share”
 - Things to think about
- How does Alaska compare
- Observation on current tax structure
- The need for data transparency

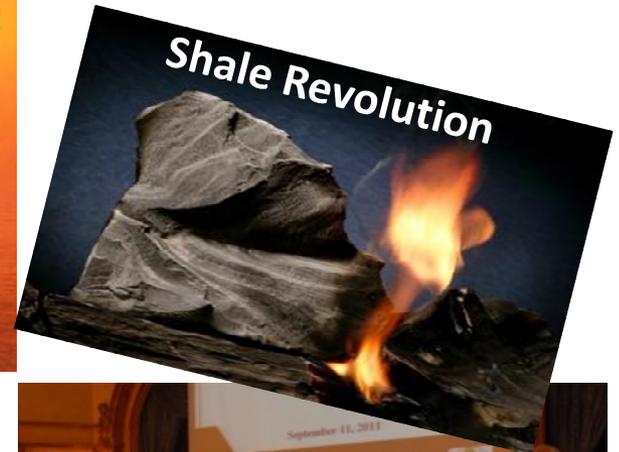
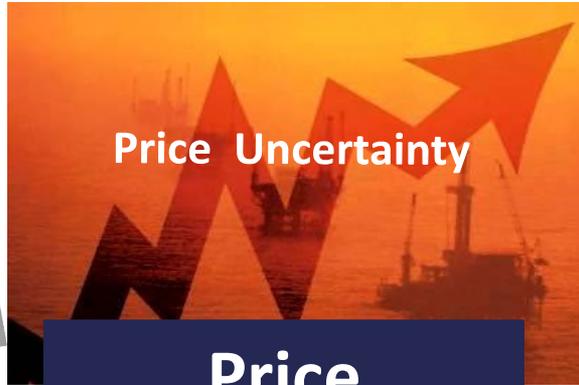
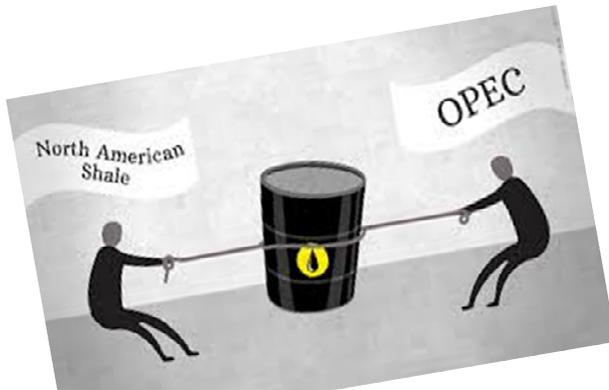
1. BACKGROUND PERSPECTIVE

Foreword

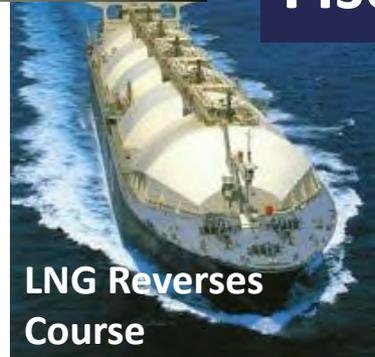
- This section contains a number of dated slides from various sources. If updated, the messages contained therein would be the same. The intent is to present a 100,000 foot view of the petroleum fiscal policy development landscape.
- Hindsight gives understanding of how various industry players responded to the many historical factors impacting the energy business. Basing new legislation on past reactions should be done with caution as it is not necessarily an indicator of the future.
- Working from a common understanding will help everyone better understand the input that will be received from various respondents putting forth self-serving opinions.

THE ONLY INDUSTRY CONSTANT

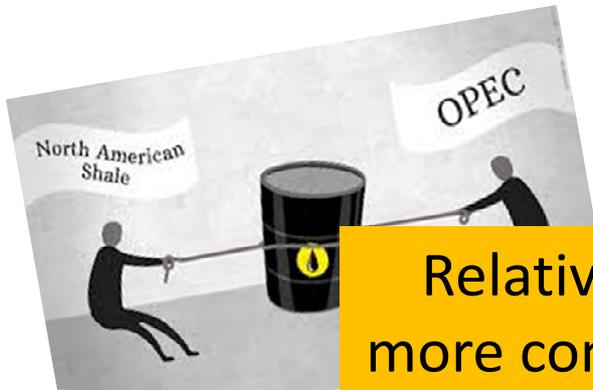
The Oil Patch's Only Constant Change!



Price
Policy
People
Technology
Fiscal Systems



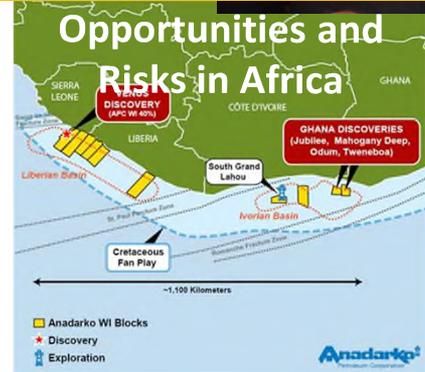
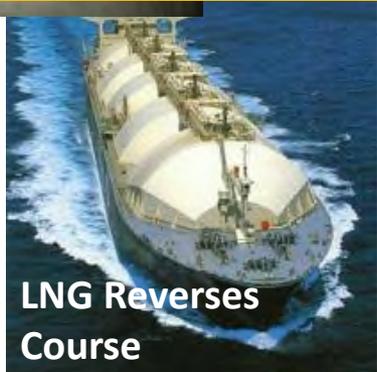
The Oil Patch's Only Constant Change!



Relatively speaking, things today are no more complex, dynamic or challenging than they were at any time in the past

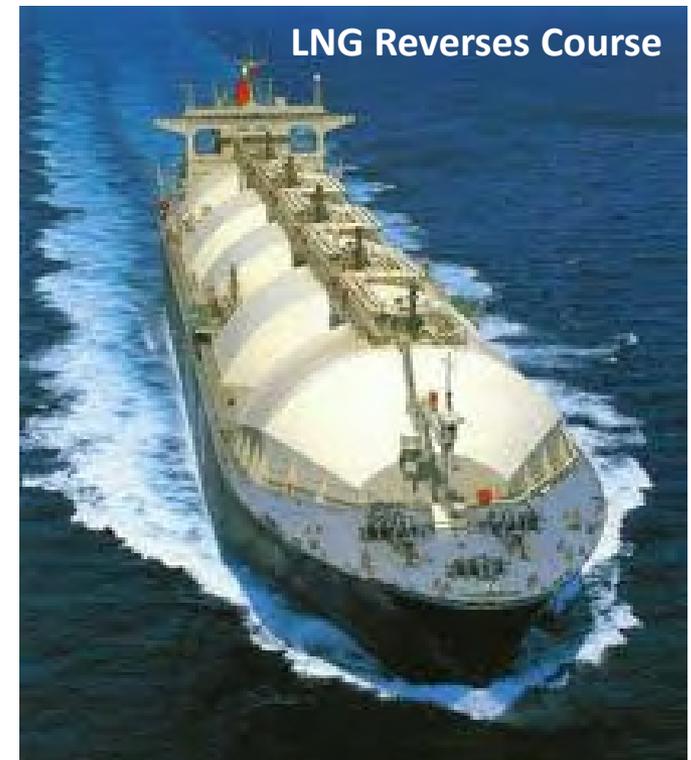


How do you design a "stable fiscal regime" in a world that is anything but stable?



Change Can Be Rapid.....and Significant

- US 2005
 - Common wisdom was the US would be IMPORTING >8 bcf/d of LNG (gas) by 2015
 - 40+ regasification terminals in permitting
- US 2015, just one decade later
 - Developed a 180 year supply of natural gas
 - 40+ filings for liquefaction terminals
 - Plans for EXPORTING >8 bcf/d LNG
- >16 bcf/d supply/demand flip in 10 years
- This development impacted field and project timing on 5 continents



However, if There Were a 2nd Constant, it Would Be...

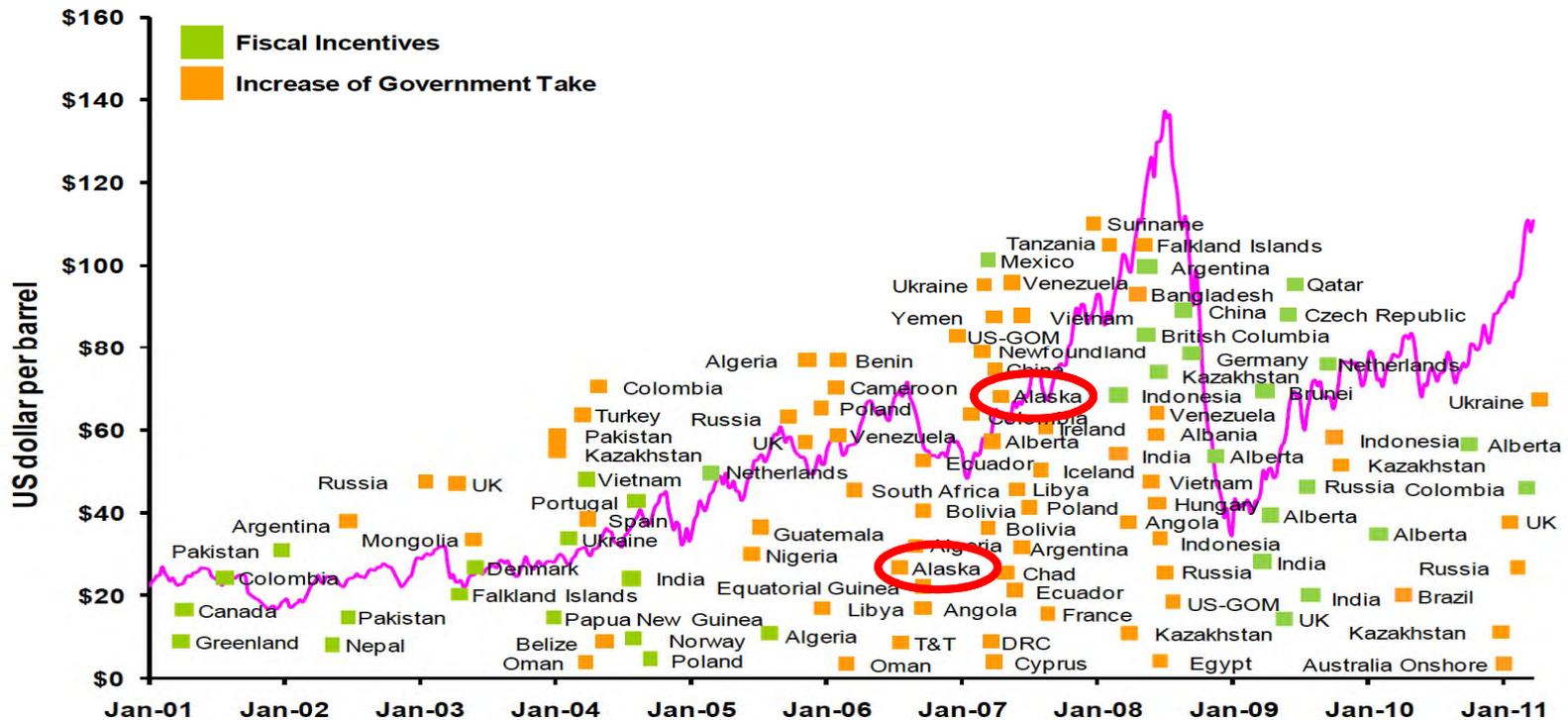
How oil companies react to any suggestion of increased government take

- Operators routinely deploy the top 3 detractor themes
 - Stability: instability negatively impacts new developments, investments
 - Competition: other regimes will be more attractive in comparison
 - Jobs: jobs are at risk due to potential lower activity
- The same message has been delivered regularly for decades
 - Operators large and small are driven to maximize profitability
 - In their world there is no concept of the operator earning too much and a government earning too little
- Although most projects are long term in nature, even operator actions can become near term focused
 - Executive management goals and bonus metrics are based on the near term results

Alaska is Not the Only Government Changing Taxes!

Regimes routinely ranked most stable by International Oil Companies (IOCs) appear multiple times below

Figure 1: Government Action Reflecting Commodity Prices



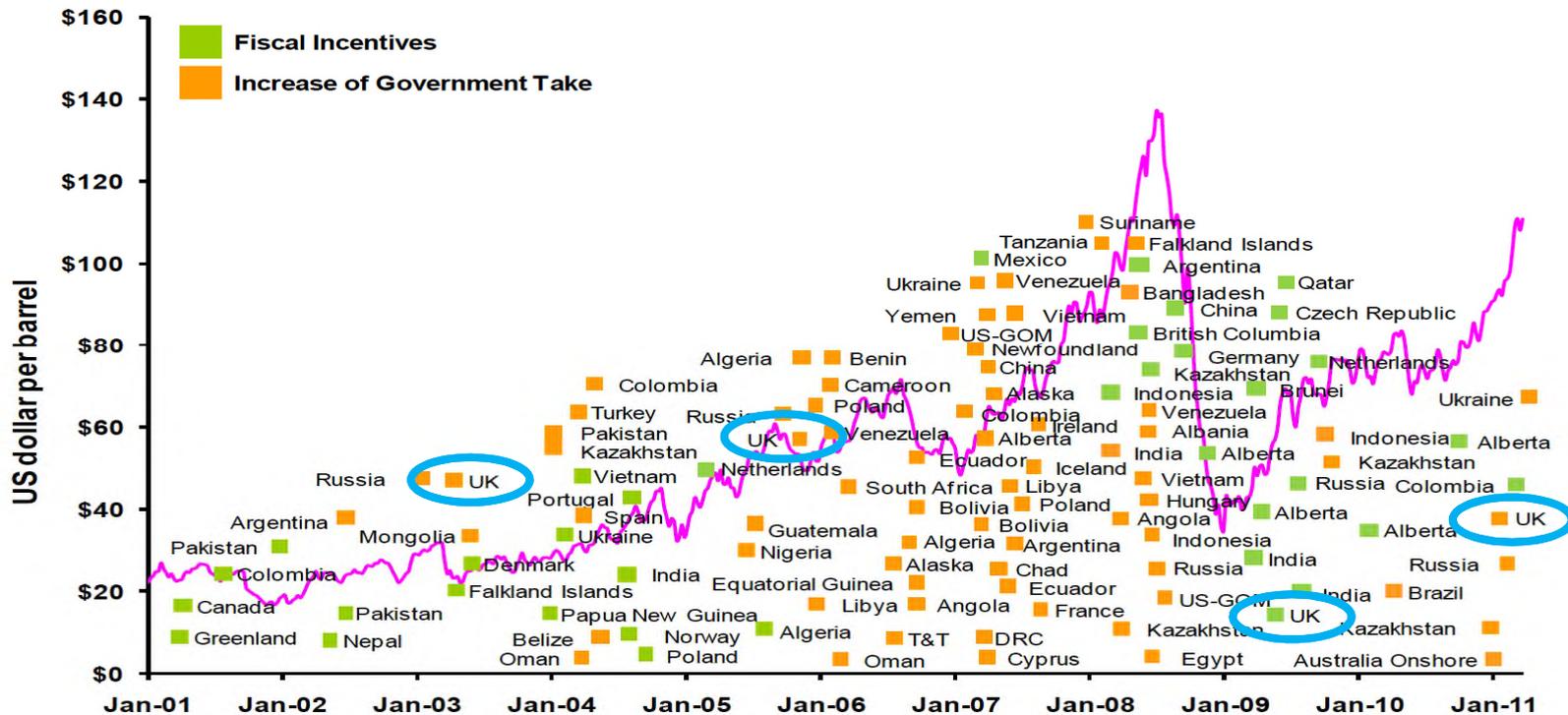
Source: IHS CERA

The period of 2012 to 2016 is populated with many more changes similar to the above

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Figure 1: Government Action Reflecting Commodity Prices



Source: IHS CERA

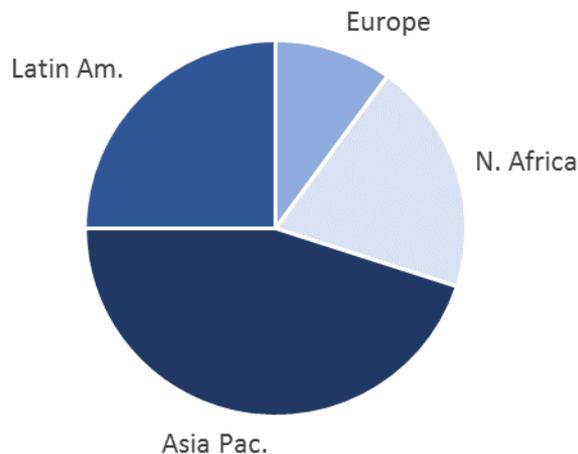
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“Hot Spots” Are Continually Changing Your Competition

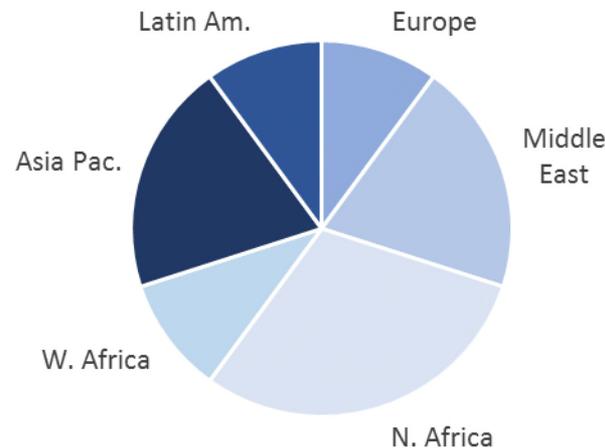
- Regimes or basins you are competing against today likely are not your competition tomorrow or in the future
- This exemplifies the challenge in trying to decide what to benchmark your fiscal system against
- Which will be the new hot areas for 2018 and beyond?

Upstream Capital Spend of the Largest IOCs

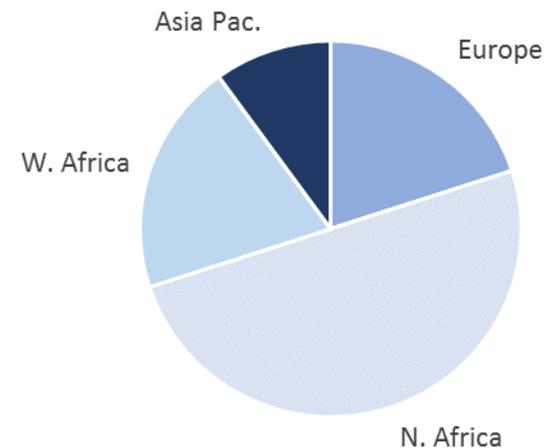
1994



2000

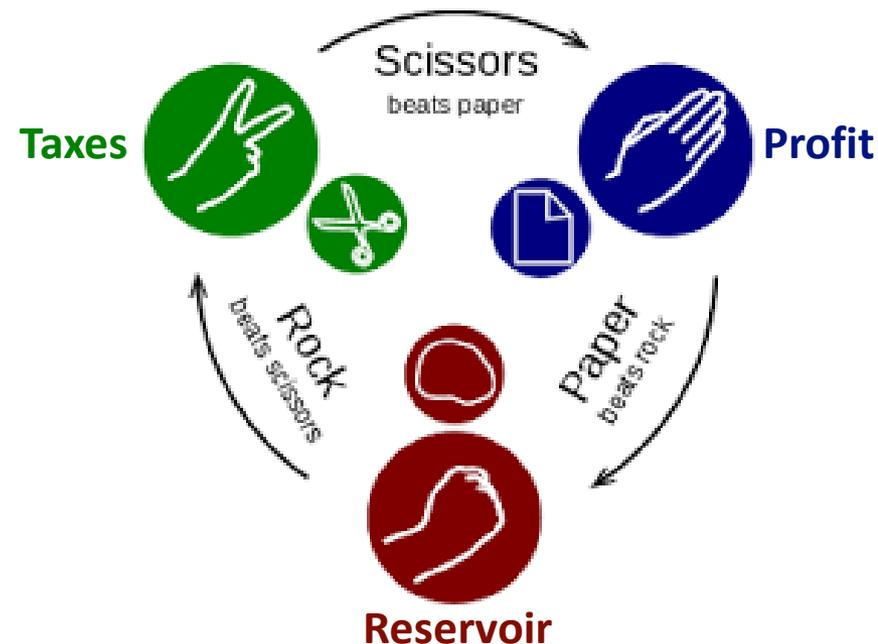


2006



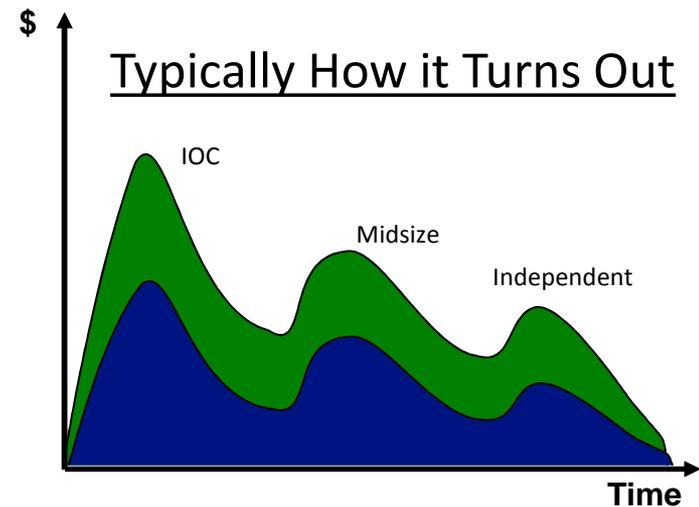
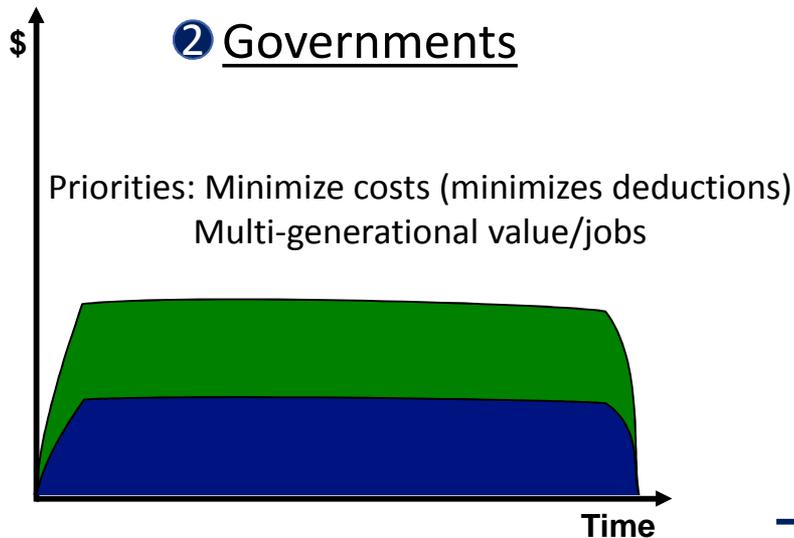
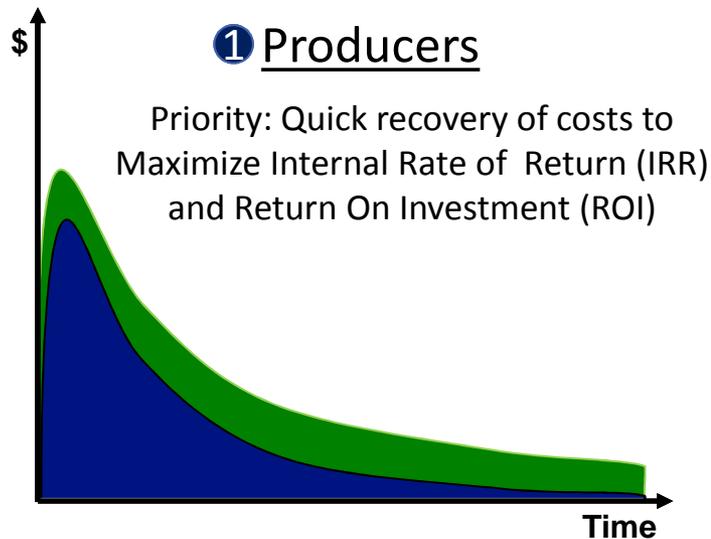
Balancing Risks – Operator Decision Making

- The risk/reward balance used by operators in their investment decision process can be generally explained with a rock, paper scissors analogy
 - **Rock** is the reservoir
 - **Paper** is the profit
 - **Scissors** are taxes
- So which factor “wins”?
 - Great **Reservoirs** overcome high **Taxes**
 - Quick, low risk **Profit** makes up for marginal **Reservoirs**
 - **Taxes** reduce windfall **Profits**



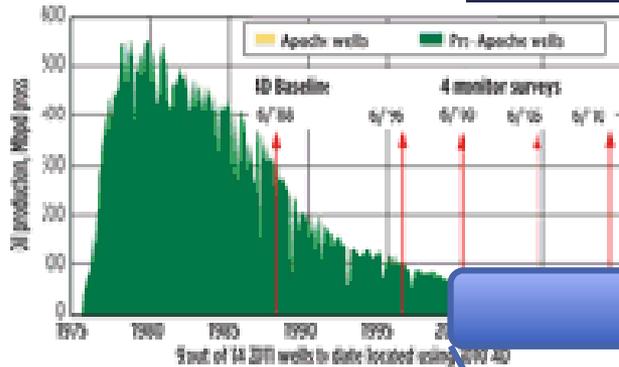
Alaska, and other top quartile taxing countries, all have good **Rock**

Different Drivers Create Different Priorities



The 'Best' Operators Leave Oil Behind

Forties Field, UK North Sea

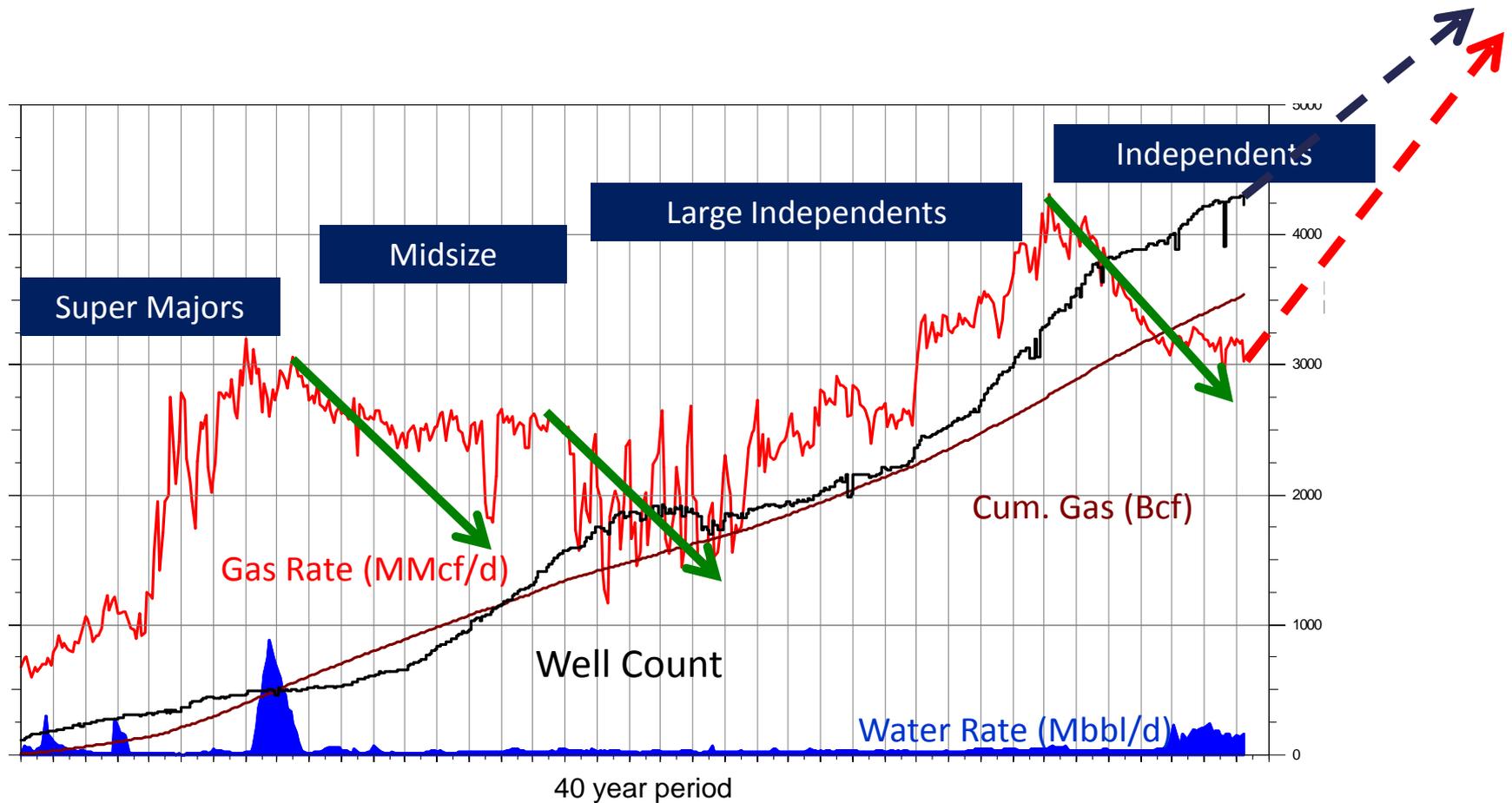


- New set of eyes!
- Fresh outlook
- Updated technology

**Expected
Performance**

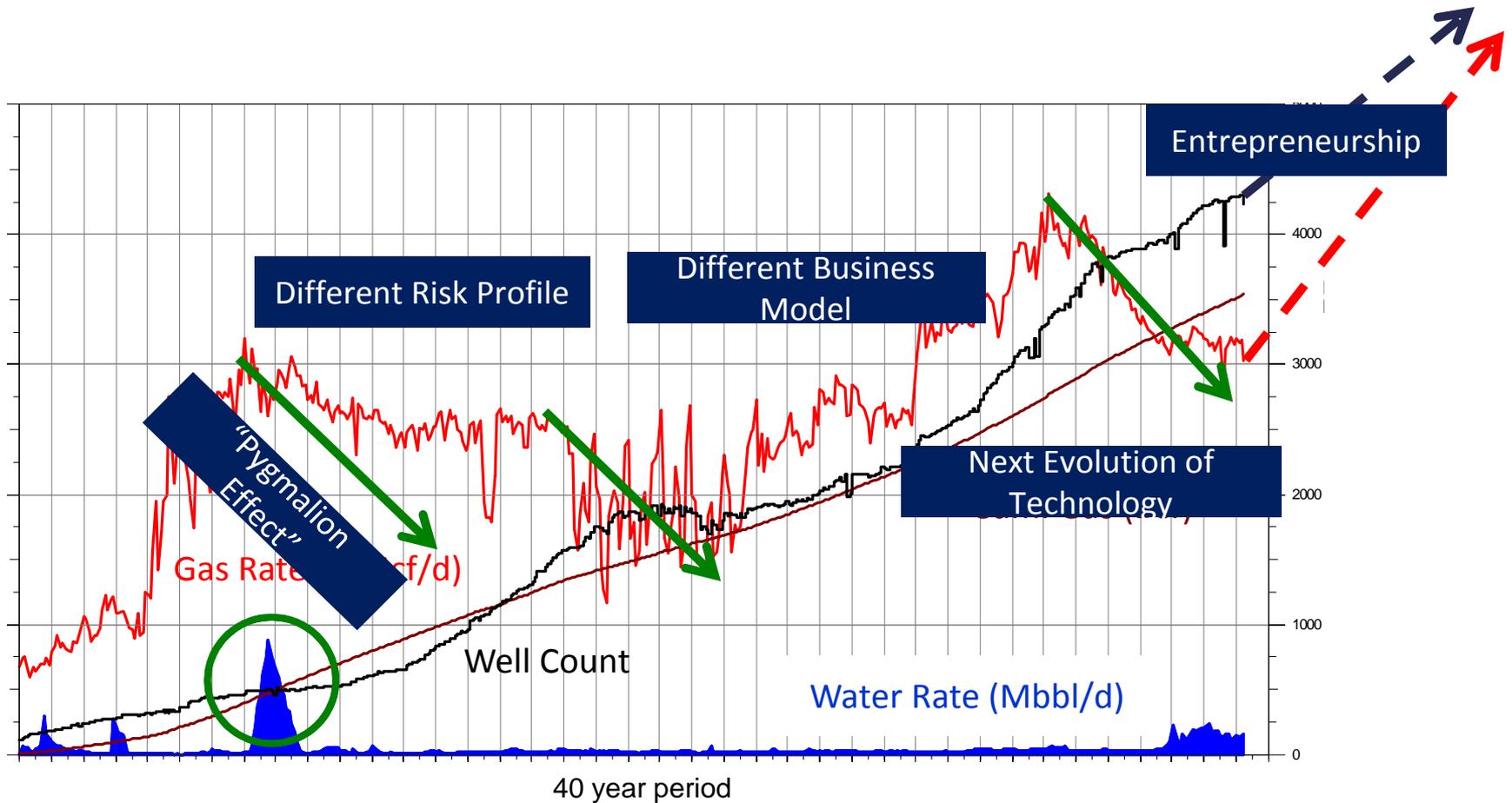
Upside exists even where the “best-of-the-best” managed fields in the past

New Operators Unlock Upside Potential



Given up as all but dead, 3 times, this field has lived on another 30 years!

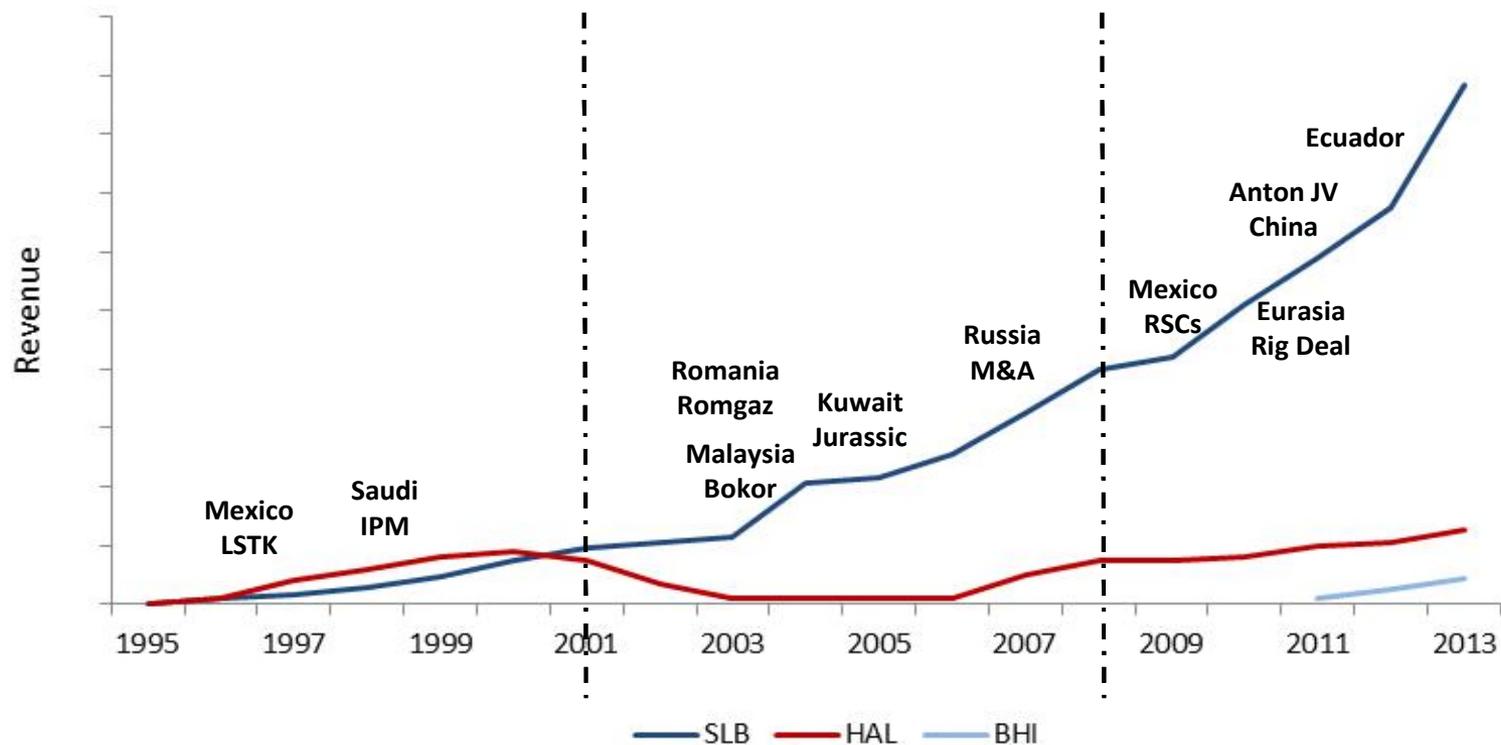
This Happens for a Number of Reasons



Unaware of any major field that has been developed and abandoned by the same large IOC

The Risk Service Contract is Bringing New Players

Even the Super Majors are entering into Risk Service Contracts in places like Iraq, Iran



The big service companies are providing capital, downhole technical expertise, the newest tools, field operations and technology

In Summary

- Change in the oil patch is continuous and that should be incorporated into your thinking as you put together a petroleum tax policy
- Any proposed increase in taxation will bring out the top 3 detractor themes from the operators. What would be most helpful instead is some specific insight into future plans or probabilities instead of generalities.
- New players are very important as they have an excellent track record of unlocking significantly more production from what are otherwise considered mature, even dying, areas
- Thus the challenging task of determining what is Alaska's fair share that creates growth for operator and the government

NEED FOR STRATEGIC DRIVERS

Strategic Planning is Very Important in Designing Policy

- Almost anyone with a computer can report on what happened in the past
 - What's important about the past is knowing **why** things happened as they did
 - Equally important is knowing if results met expectations, on all sides
- As noted earlier , what is hot today is not a great predictor of the future
 - Try not to tie policy or metrics to anything absolute, or a single scenario
 - More countries are moving to flexible, self-correcting terms
- Countries have always had different drivers, thus making regime-to-regime comparisons problematic, e.g.
 - Domestic Market Obligations (not usually included in government take)
 - Local content: Building local service companies
 - Infrastructure development (e.g. schools, hospitals, manufacturing plants, etc.)
 - Reference crude blend (proper mixture of heavy and light crudes)
 - Refinery, power station needs

Need to Find Right Balance of Near and Long Term Drivers

- Short term needs or crises can seem all consuming

- Need to be careful that when addressing these short term issues that the larger and more lucrative longer term goals are not jeopardized
 - Do not cause the premature shutdown of TAPS
 - Generally speaking, new developments take longer to put together in Alaska than they do in most other areas of the world

- A robust petroleum fiscal policy will be the result of trying to find the right balance between any number of opposing issues such as:
 - short term v. long term benefits
 - conventional v. unconventional reservoir development
 - big v. small operators and fields
 - Domestic markets v. export markets
 - upstream v. midstream

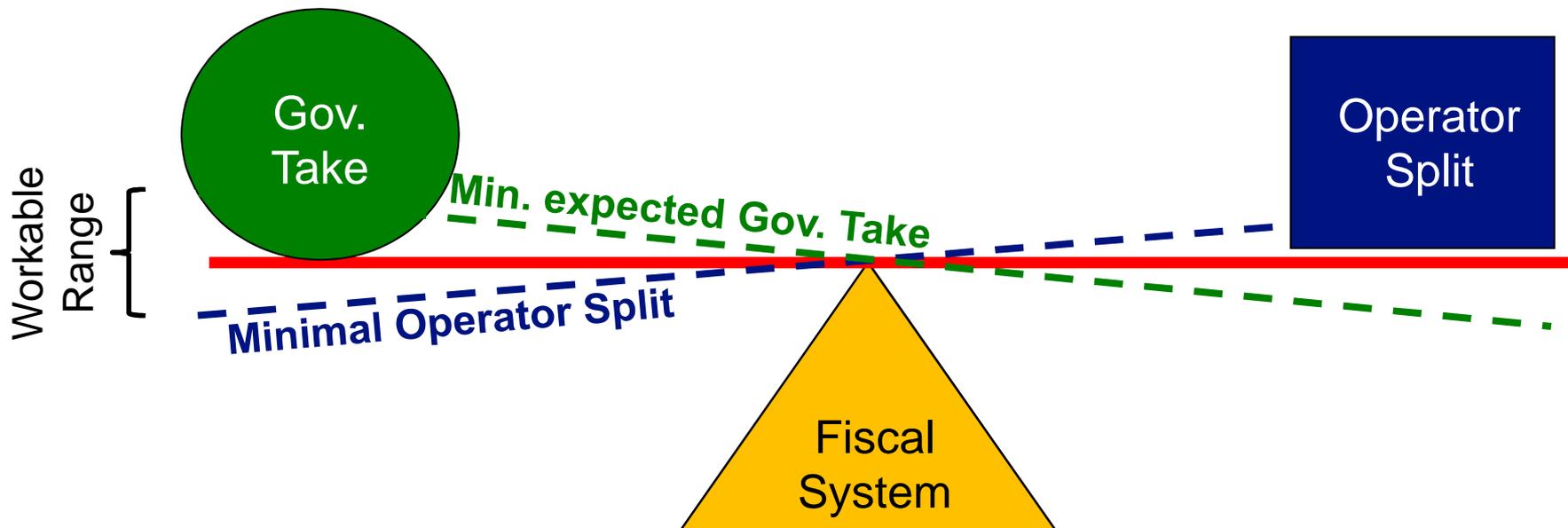
Some Possible 2017 Alaska Fiscal Design Goals

- Keep TAPS running as long as possible
 - Need new North Slope fields
 - Capture significant upside value from Prudhoe and Kuparuk
 - BP in 2007 said another 7.5B bbls were possible with investment
- Encourage New Players, Exploration and Discoveries
 - Diversify and reduce dependence on Big 3 operators
 - Find and develop challenging new fields
- Develop Cook Inlet gas for utility and industry needs
- Incentivize ‘Unconventional’ developments
 - Heavy Oil
 - Shale
- Durability
 - Create a self-correcting fiscal system for stability

WHAT IS “FAIR SHARE”?

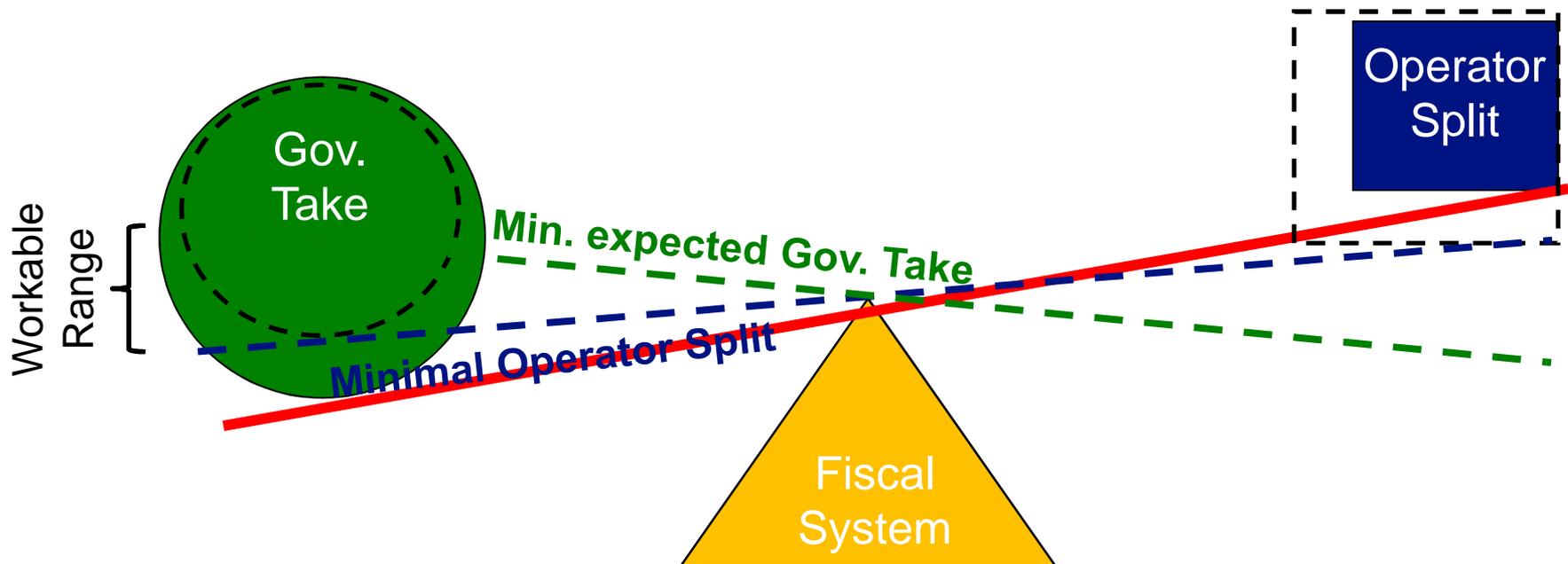
Finding the Right Balance

- There are numerous academics and industry practitioners that have been trying for decades to figure out how to do this
- Each country/regime has to balance their local needs within a global competitive market
- Systems work when neither side takes too much
- Problem is terms are set looking forward into an unknown future versus looking back with hindsight



“Fair Share” is 1 Part Science, 3 Parts ‘Art’

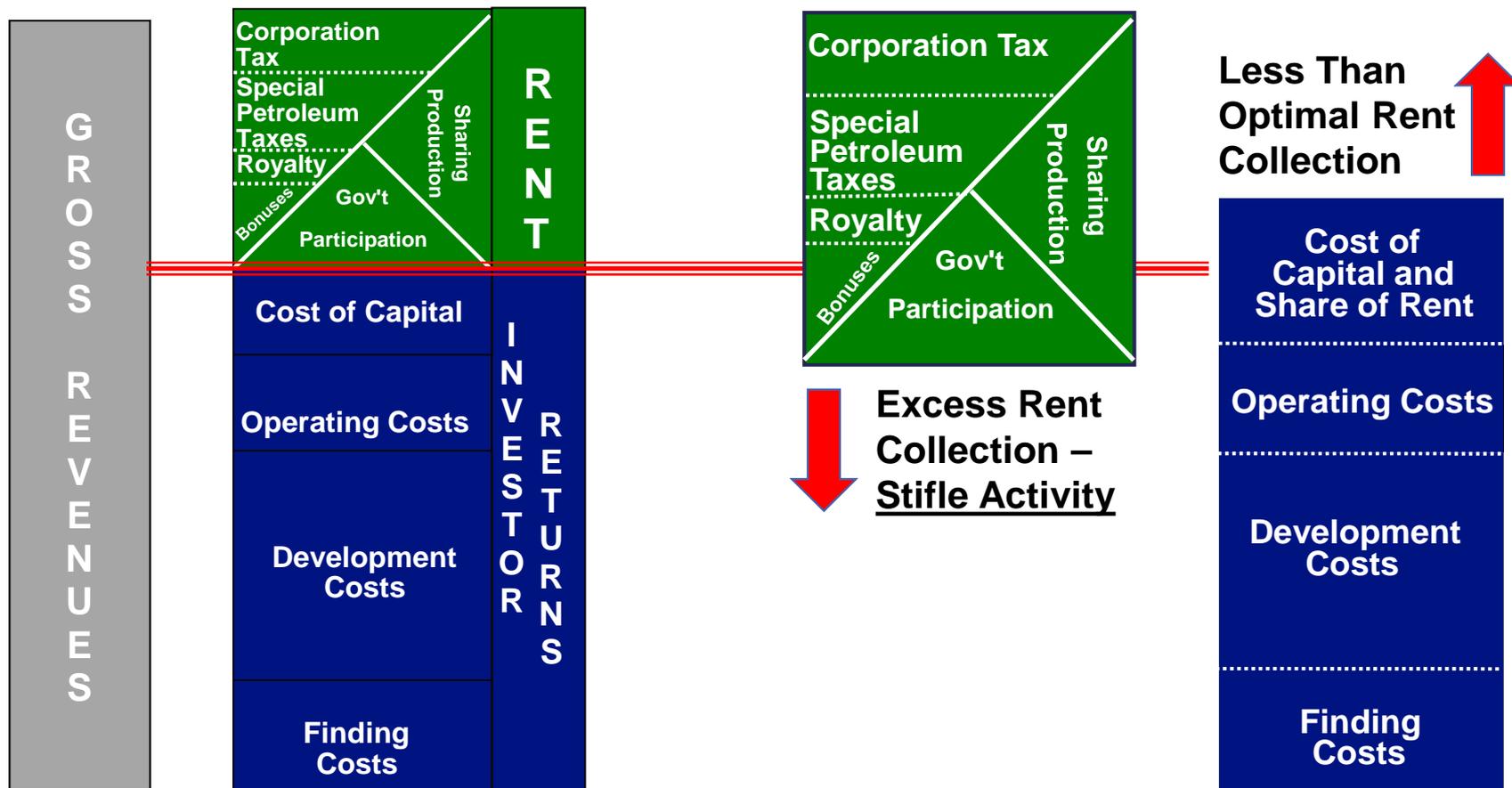
- Care must be taken as it is a zero sum game:
 - Any mechanism that grows the government take at the same time reduces the operator project economics
 - Easy to unknowingly upset the balance by taking just a little too much



“Fair Share” – Simple Theory Versus Complex Reality

Theory

Practice

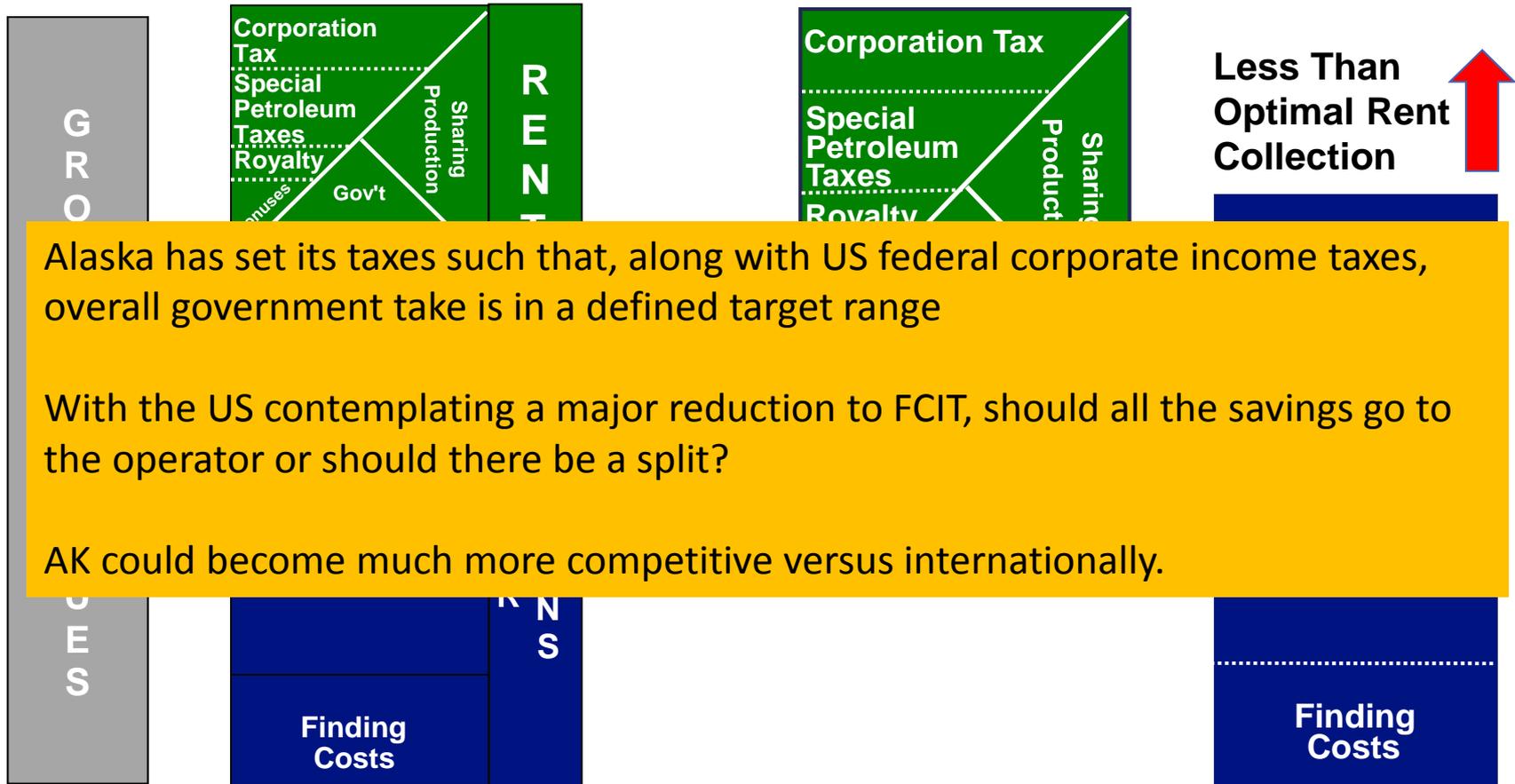


It is not as simple as “one third, one third, one third”

A potential 'Wrinkle' That Needs to be Considered

Theory

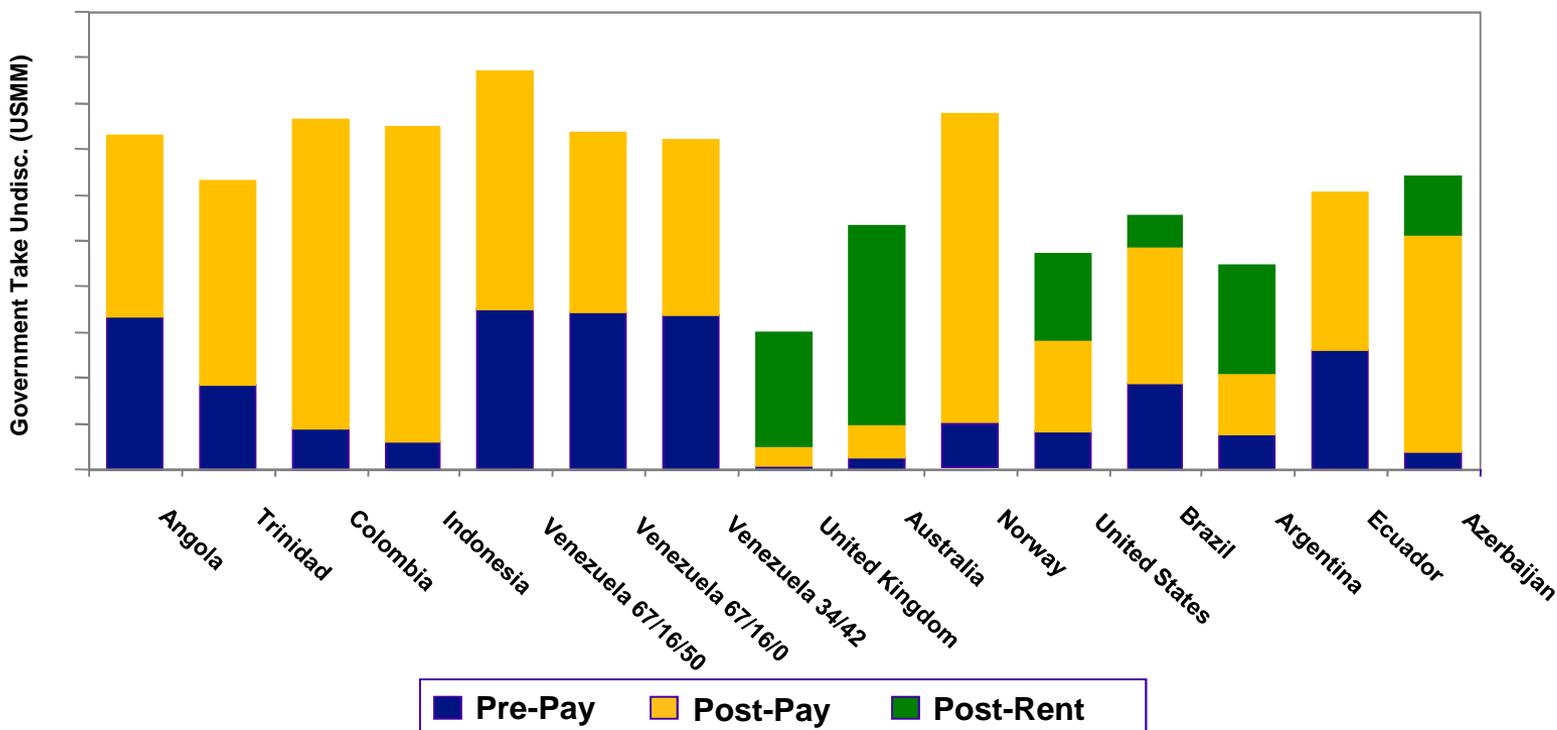
Practice



It is not as simple as "one third, one third, one third"

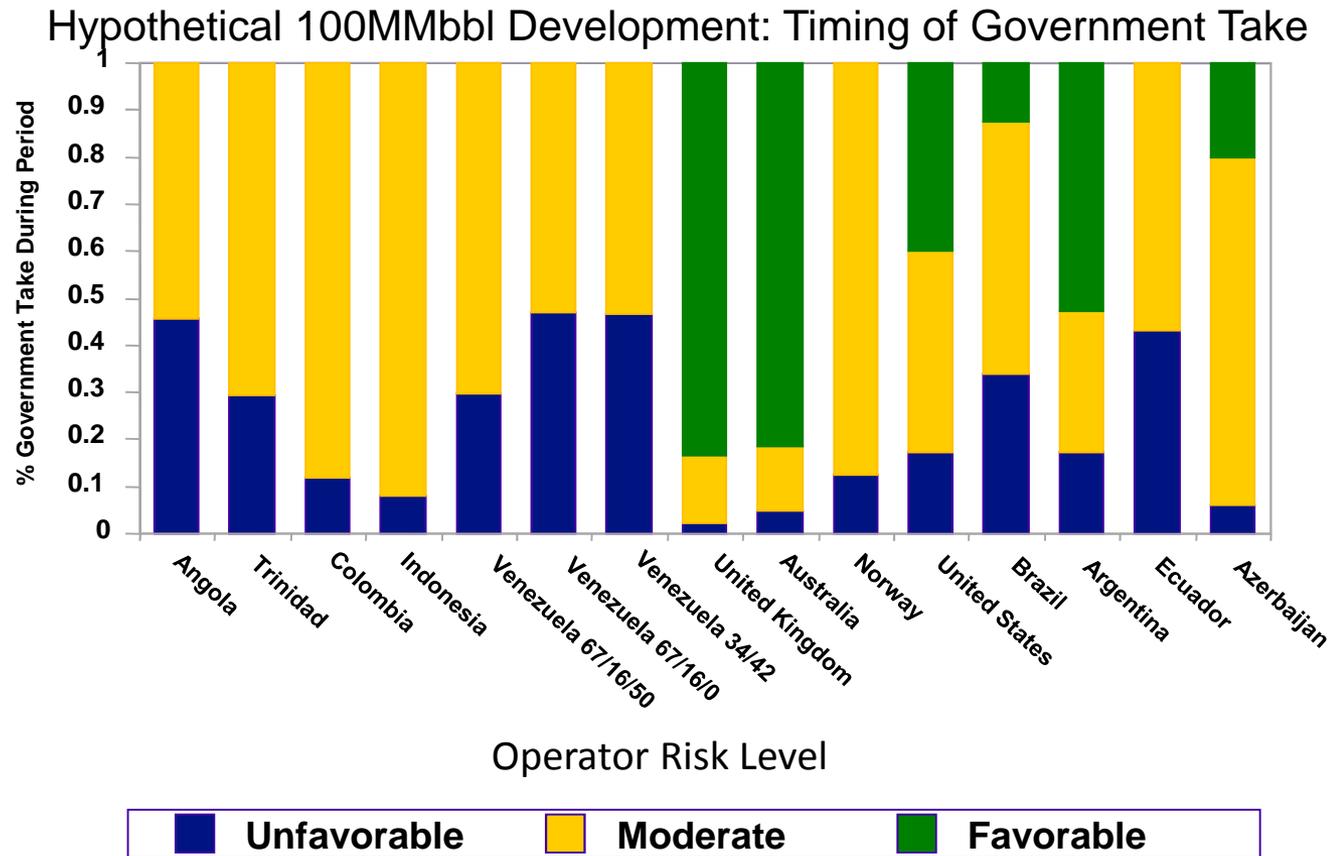
It's Not Only About How Much a Government Takes.....

Hypothetical 100MMbbl Development: Size of Government Take



- **Pre-Pay:** State Take before the Investor has recovered its costs
- **Post-Pay:** State Take after cost recovery but before a 15% return on capital
- **Post-Rent:** State Take after all costs plus a 15% return have been recovered by the Investor

....But Also When it is Taken!



- **Unfavorable:** State Take before the Investor has recovered its costs
- **Moderate:** State Take after cost recovery but before a 15% return on capital
- **Favorable:** State Take after all costs plus a 15% return have been recovered by the Investor

In Summary

- Personal experience in designing or redesigning fiscal systems for over a dozen countries has shown that no two are alike in:
 - Their needs or their wants
 - The size and proximity to market of their resources
 - Their geopolitical risks
- While there are some similarities, the operator mix is also quite unique in:
 - Size (e.g. Super Major, Major, Mid Cap, Independent, NOC, INOC)
 - Capital structure (private, public, balance sheet, private equity, exchange listed)
 - Style (explorer, developer, harvester, banker, etc.)
- Designing a fiscal system to get the government share of the economic rent is 1 part Science, 3 parts Art!

THINGS TO THINK ABOUT

Incentives Under PPT, ACES, SB21, HB247

- Credits were designed to be competitive and create drilling activity
 - Still early to tell but they appear to have been successful
 - Production levels are flat to increasing
(Capex spending primarily on existing fields)
 - Possible 6Bn bbls of new oil and future production wedges
(Capex on new field exploration and appraisal)
 - Production could take another 6 to 10 years to come on line
 - Operators will say they need “stability” to make major commitments

- If they are causing the desired behavior, the question is how to keep the incentives and credits without creating state financial hardship during low prices?
 - Fiscal policy design kit has several tools to employ

There is an Extensive Fiscal Tool Kit – Just a Few Examples

Royalty

- Fixed
- Variable
 - Tied to production levels
 - Tied to profitability
- Royalty relief
- First tranche concept
 - Gov't and operator

Capex

- Added credits
- Recovery period
 - Immediate
 - Depreciation/Depletion
 - Various methods: SL, MACRS, etc.

Abandonment

- Bond
- Escrow
- Deductibility

Operating Costs

- Non-Allowable
 - Overhead/indirect
- Allowable
 - State Carry
- Interest
- Uplifts
- Annual recovery caps

Marketing Costs

- Non-Allowable
- Allowable
 - Arms' Length
 - Internal Transfer Methodology
 - Recovery caps

Credits

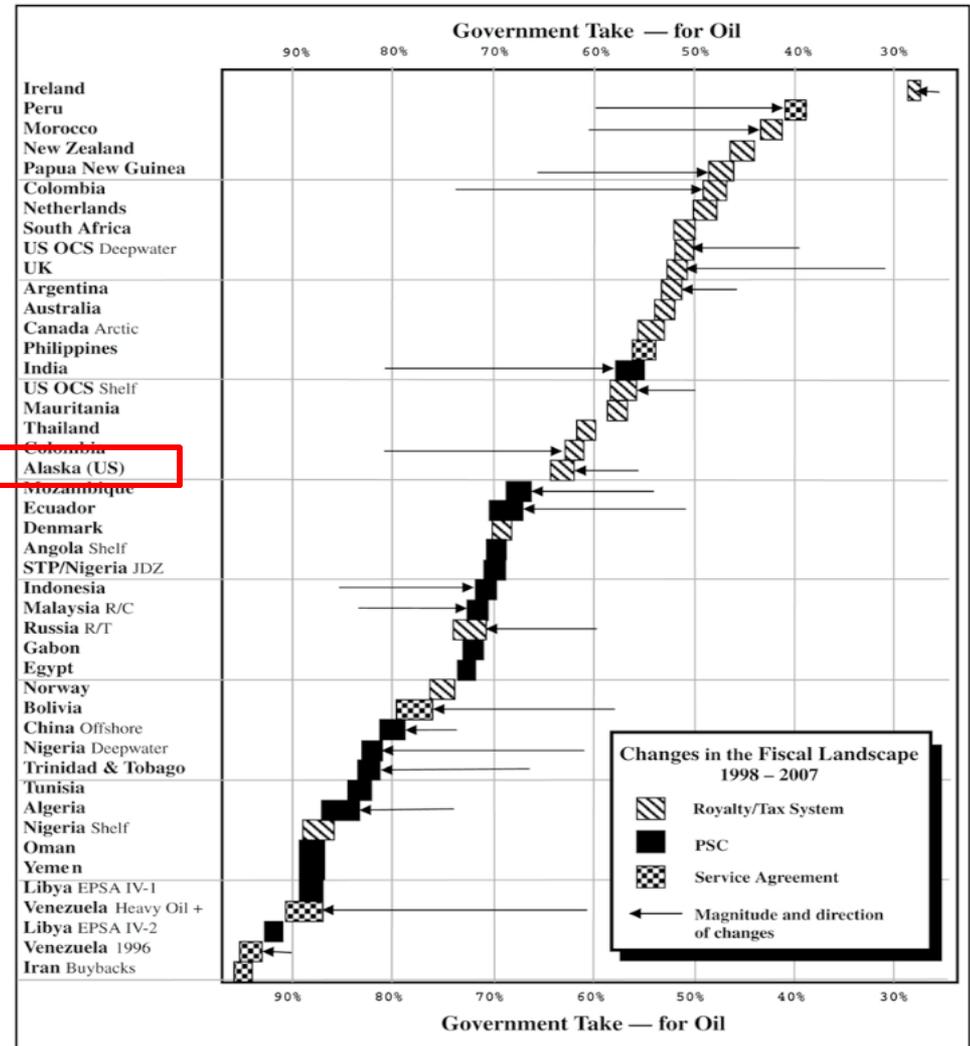
- Credit or Deduction
- Cashable

Drive the right behavior without bankrupting the state

2. HOW DOES ALASKA COMPARE TO OTHER REGIMES?

Widespread Comparison Data Available

- Various consultants and data firms produce comparison reports for fiscal regimes
- Before drawing a conclusion as to your competitiveness you need to ask, “What exactly is being compared?”
 - Full Cycle Economics?
 - Marginal Dollar Splits?
- What operator payments were included and what were excluded?



Source: Daniel Johnston 2008

Most are Apples to Oranges Comparisons

- Majority of the comparison charts do not tell the whole story
- For example, let's look at the Project Split for the entire project versus Marginal (dollar) Rates for a new hypothetical Alaska 100MMbbl North Slope project
 - Get 2 very different results
 - With credits and allowed deductions overall project profit split is near 40 -45% operator 55-60% government
 - However, on a marginal dollar basis, (depending on price) the split is nearer to 30% operator, 70% government
 - Which one shows up in the “chart” for each regime?
- This significant difference between overall project splits and marginal dollar splits exists for many other countries in the comparable tables
 - Data gap is due to many factors such as: Credits, uplifts, waterfall priority, caps, sliding scales, bonuses, annual renewal fees, average versus current royalty rates, in kind domestic obligations, etc.

Quick Comparison AK v. TX – What the Operator Takes

- First, on which type of Texas lease is the activity?
 - Legacy lease: 12.5% royalty
 - New state land lease: 20% royalty or
 - New private leases: ranging from 15% to over 30% royalty?
- TX state severance and ad valorem gross taxes range from 4% to 10%
- Acreage is changing hands at \$2500/acre to over \$30,000/ acre
- Typical 300M to 500M bbl EUR Eagleford horizontal shale well on 160 acre spacing
 - 1. Acreage purchase, averages from \$5 to \$15/bbl
 - 2. Drilling Capex roughly \$4-7MM or \$8 to \$18/bbl
 - 3. Operating expenses \$8 to \$10/bbl
 - Total estimate operator cost ~\$20 to \$40/bbl
- Using \$60 flat oil pricing, in Texas the split is roughly
 - 30% Operator, 70% Others
 - Gets worse for the operator depending on annual fee payments

} Compare
new

Other US jurisdictions would yield a similar comparison

Norway, High Government Take, Activity

Loss carry forward

- Companies that do not have any taxable income may carry forward losses and uplift to subsequent years, with interest. These rights follow the ownership interest and may be transferred. Companies may also apply for a refund of the tax value of exploration costs in connection with the tax assessment. These rules are intended to ensure that exploration costs are treated in the same way for tax purposes regardless of whether or not a company is liable to pay tax.
- The petroleum taxation system is based on the rules for ordinary company taxation and are set out in [the Petroleum Taxation Act](#) (Act of 13 June 1975 No. 35 relating to the taxation of subsea petroleum deposits, etc.). Because of the extraordinary returns on production of petroleum resources, the oil companies are subject to an additional special tax. In 2017 the ordinary company tax rate is 24 %, and the special tax rate is 54 %. This gives a marginal tax rate of 78 %. In 2016 the rates were 25 % and 53 %.

Investment based deductions

- When the basis for ordinary tax and special tax is calculated, investments are written off using straight-line depreciation over six years from the year the expense was incurred.
- To shield normal returns from the special tax, an extra deduction is allowed in the special tax base, called uplift. This currently amounts to 21,6 % of the investments (5.4 per year for four years starting with the investment year). In 2016 the total uplift was 22 %.

3. OBSERVATION ON CURRENT TAX STRUCTURE

Observations on Alaska's Current Structure

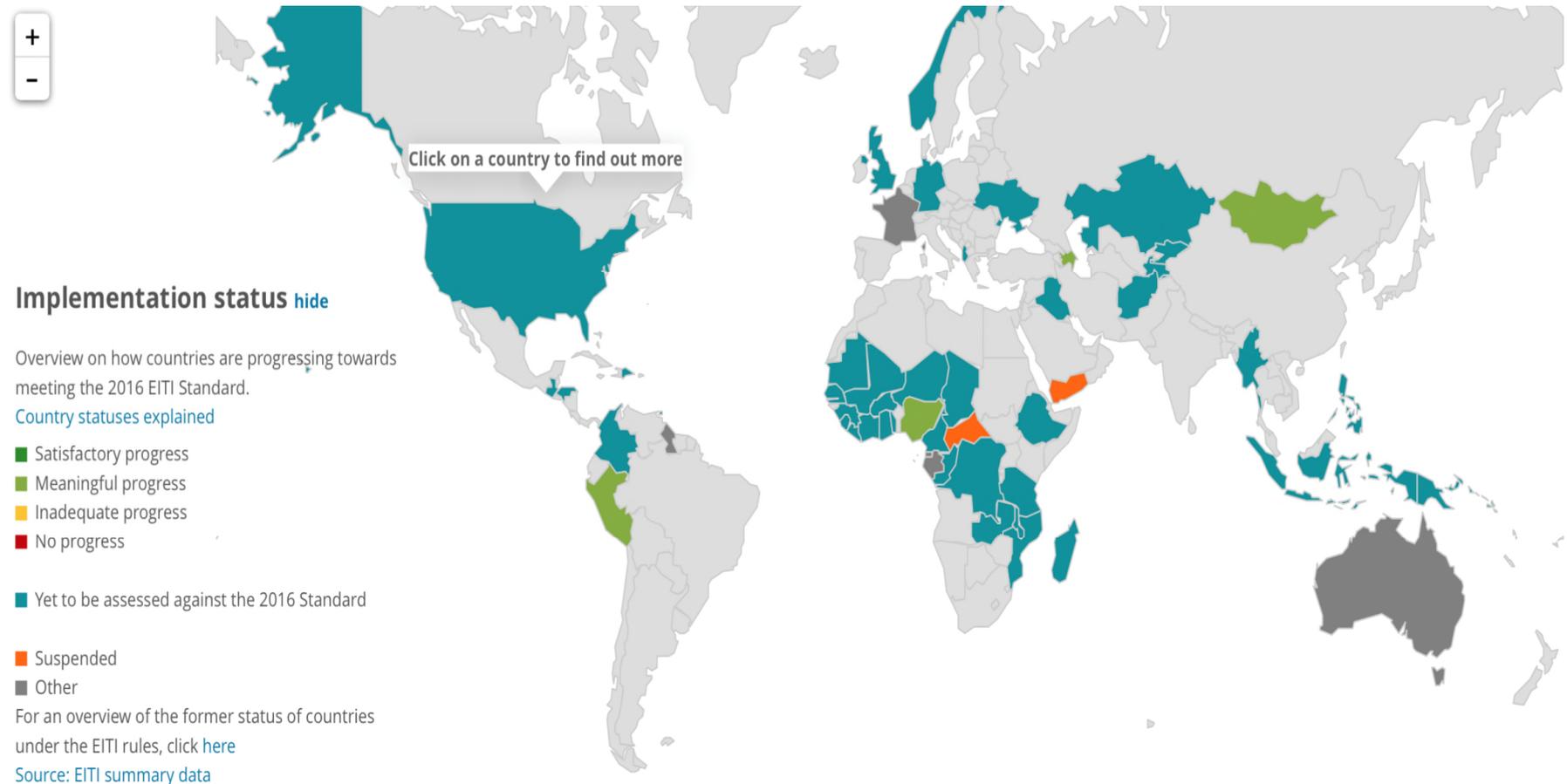
- Current system is complex with too many moving parts
 - Geographical separation
 - CIMENS
 - Allowances
 - Credits
 - Min tax
 - Credits versus deductions
 - Variability
- Lack of Data Transparency to make better informed decisions
 - Industry needs to partner more closely with the state as they do with governments in other jurisdictions
- Too many items tied to fixed prices
 - Not much that is self-correcting for unexpected situations

4. DATA TRANSPARENCY

Extractive Industries Transparency Initiative (EITI)

- Global movement to get governments to require extractive companies to publish any payments, of any type, to government entities
 - Minimize corruption
 - Level the playing field
- Many EU and African countries have put in place the laws and regulations as per the EITI recommendations
- The US is attempting to match the EU
 - SEC rule making in 2012 was struck down by the courts
 - New section 13(q) reflects the U.S. foreign policy interest in supporting global efforts to improve the transparency of payments made in the extractive industries in order to help combat global corruption and promote accountability
- In Q4 2016 SEC new rule mandates reporting for fiscal years ending after September 2018
- All SEC listed extractive companies will need to comply

EITI Implementation Status



Operator Tax Payments

- In Norway you can go online and find:
 - Lease bonus payments
 - Fees
 - Taxes
- **Data is there for BP, Conoco and Exxon
- In the UK, LSE listed companies must report by “Project”
 - For BP, each US state is listed as a project
 - Here are the 2015 reported payments to governments for Alaska

USA001	Alaska	USA	Fees	\$1,079,214	BP P.L.C.
USA001	Alaska	USA	Royalties	\$194,338,376	BP P.L.C.
USA001	Alaska	USA	Royalties	\$60,569,880	BP P.L.C.
USA001	Alaska	USA	Tax	-\$66,554,285	BP P.L.C.

- As can be seen in the previous map, many OECD countries are requiring disclosure – so why the continued resistance in Alaska and the constant mantra of “confidential taxpayer information”?

Operating Data is Not Much Different Than Tax Data

- In many countries you can go online and see the data and details related to fields and companies
 - In the US there are multiple state regulatory sites that make data available
 - Also, subscriptions services that aggregate US data like IHS, Drilling Info, etc.
- In other regimes, because the government grants the licenses they
 - Own or have rights to all the data; and
 - Publish everything that does not fit a generally 'narrow' definition of being confidential
- Historical data as well as 5 to 10 year future projections are generally listed
 - Production by product over time
 - Expected Capital spend and specific projects on which it is spent
- This aids the governments in ensuring their fiscal system is geared properly
 - Although you can't always accurately predict the future...
 - Governments and companies are better off with openness and transparency

APPENDIX

Acronyms

■ Numeric Units

- M Thousands
- MM Millions
- B Billions

■ Volumetric Units

- bbl barrels
- Bbl/d barrels per day
- cf cubic feet
- cf/d cubic feet per day

■ Economic Terms

- IRR Internal rate of return
- ROI return on investment
- PV present value
- NPV net present value
- EUR economic ultimate recovery
- MACRS modified accelerated cost recovery system
- SL straight line

■ Taxes

- CIT corporate income tax
- FCIT federal corporate income tax
- SCIT state corporate income tax
- Ptax petroleum tax

■ Entities

- IOC international oil company
- EITI extractive industry transparency initiative
- OECD organization for economic cooperation and development
- NOC national oil company
- INOC international national oil company
- LSE London Stock Exchange
- SEC Securities and Exchange Commission

- CIMENS Cook Inlet, Middle Earth, North Slope

Sources

■ BP payments to governments

- <http://www.bp.com/content/dam/bp/pdf/sustainability/group-reports/bp-report-on-payments-to-governments-2015.pdf>

■ Extractive Industries Transparency Initiative

As a founding member of the Extractive Industries Transparency Initiative (EITI), BP works with governments, non-governmental organizations and international agencies to improve transparency and disclosure of payments to governments. The EITI is an inclusive process that is tailored to fit the local fiscal and legal regimes.

We support governments' efforts towards EITI certification and have worked with many countries on implementation of their EITI commitments, including Australia, Azerbaijan, Indonesia, Iraq, Norway, Trinidad & Tobago, the UK and US.

■ US website

- <https://useiti.doi.gov>
- Has payments from all operators to the US government

Castle Gap Advisors, LLC



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