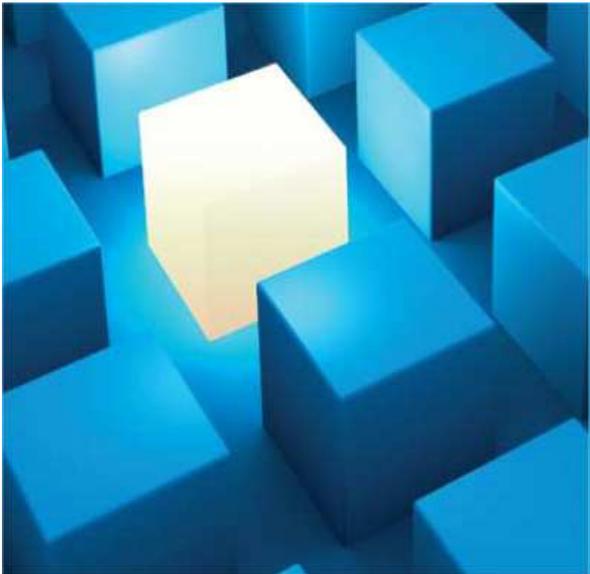


NERA

Economic Consulting



Economic Analysis for Transfer Pricing Oil and Gas Industry

Sébastien Gonnet, Vice President, Beijing/Paris
Amanda Pletz, Senior Consultant, London

7-8 December 2012, Kuala Lumpur



Contents

- **About NERA**
- **Background**
- **Objectives and Contents**
- **Cost-Benefit**
- **Financing**
- **Valuation**



About NERA



About Our Firm

NERA Economic Consulting is an international firm of economists who understand how markets work.

- NERA economists devise practical economic advice related to highly complex business and legal issues arising from:
 - Competition, regulation, public policy, strategy, finance, and litigation
- We create strategies, studies, reports, expert testimony, and policy recommendations that:
 - Reflect our specialization in industrial and financial economics
 - Build upon our more than 45 years of practical experience
- We are widely recognized for our independence
 - Our clients come to us expecting integrity and the unvarnished truth
 - We commit to deliver unbiased findings

NERA Economic Consulting was founded in 1961 as National Economic Research Associates.



Our Practice Areas

NERA has influenced how markets work around the world for more than half a century. We employ a multi-disciplinary approach to apply economics to challenging issues our clients face in the following areas:

- Antitrust and Competition Policy
- Complex Commercial Litigation
- Communications
- Employment and Labor
- **Energy**
- Environment
- Financial Risk Management
- Health Care
- **Intellectual Property**
- Market Design
- Mass Torts and Product Liability
- Regulation and Public Policy
- **Securities and Finance**
- Survey Design
- **Transfer Pricing**
- Transport
- **Valuation**
- Water



NERA was ranked the No. 1 Economic Consulting Firm on the Vault.com 2011, 2010, and 2009 list of top consulting firms



Our Global Presence

Our global team of more than 500 professionals operates in more than 20 offices across North America, Europe, and Asia Pacific.





Our Representative Clients

Our Broad and Diverse Client Base Includes:

- Law firms
- Industrial MNCs
- Trading companies
- Financial Services Companies
- Public entities (e.g., regulatory authorities, European Commission, World Bank)



NERA's Transfer Pricing Practice

▪ **Global Practice**

- NERA's **Global Transfer Pricing Practice** provides world-class expertise in **Europe, North America, and Asia.**
- NERA has transfer pricing specialists located in **London, Paris, Geneva, Madrid, Frankfurt, Chicago, Los Angeles, New York, San Francisco, Washington, DC, Toronto, Tokyo, Beijing, and Shanghai.**

▪ **Experts**

- Our experts have developed cutting-edge approaches in transfer pricing economics, including pathbreaking developments related to profit split methods
- As part of a network of professional economists, we share resources and knowledge to deliver unbiased and robust analyses to our clients
- NERA's experts publish frequently on the subject of economics and transfer pricing

▪ **Clients**

- NERA works with top law and accounting firms and leading multinational enterprises in a wide range of industries. Our clients include some of the largest and best known companies in the world and cover numerous iconic brands



Amanda Pletz, London



- Ms. Pletz is an Economist in NERA's Global Transfer Pricing Practice specializing in inter-company pricing with a focus on financial services, company valuation, and financial transaction valuation and pricing.
- She has been involved in a range of transfer pricing planning and documentation studies in various industries including real estate, financial services, commodities trading, fund management, private equity, clothing retail, pharmaceuticals, beverage, and various other technology and manufacturing-related industries.
- She has performed large global transfer pricing planning studies, the objectives of which were to realign the group's transfer pricing policies with the new business model.
- She has also performed pricing studies on:
 - Inter-company capital structure issues
 - Inter-company loans and guarantees
 - Structured convertible bond offerings
 - Loan and company valuations
 - Valuation Oil field exploration ventures
- In litigation, she has been involved in cases considering inter-company guarantees, notably with respect to the banking industry, retrospective banking business valuations, trade analysis, and a construction sector project related to profit margin evaluations in Africa.
- Ms. Pletz was a lecturer in economics and banking for the Department of Economics, University of Pretoria South Africa as well as a seminar leader in Microeconomics for the London School of Hygiene and Tropical Medicine of the University of London. She has a Masters degree in Economics from the University of Pretoria South Africa



Sébastien Gonnet, Beijing/Paris



- Based in Paris and Beijing, Mr. Gonnet is an Economist in NERA's Transfer Pricing Practice specializing in transfer pricing and intellectual property. For a number of years, he has advised multinational companies on defining and implementing their transfer pricing policies and assisting them with documentation. Mr. Gonnet also assists groups

in the context of intellectual property-related projects, notably with respect to the structuring and valuation of IP intra-group relationships.

- In recent years, Mr. Gonnet has been particularly involved with managing transfer pricing design and IP planning projects for multinationals in China, Europe, and Africa, in a range of industries including oil and gas, pharmaceuticals, retail, luxury goods, food and beverage, telecom, chemical, commodities, and software.
- Mr. Gonnet also acts as an expert economist in Advance Pricing Agreements (APAs) and tax audits. He has authored numerous publications in the area of transfer pricing and is a frequent speaker at conferences in China and in Europe.
- Prior to joining NERA, Mr. Gonnet was an economist in the KPMG tax network.
- Mr. Gonnet holds a Masters of science in business and administration, HEC (Ecole des Hautes Etudes Commerciales), Paris, France , and a Masters in tax law (with a specialization in international taxation), Paris II Law University.



Objectives and Contents



Objectives

Illustrate how the application of proper economic analysis can help...

▪ Taxpayers

- Design and defend economically robust and tax-efficient transfer pricing systems
- Mitigate risks
- Generate opportunities

▪ Governments

- Review TP systems in light of sound economic principles
- Economic tools to correctly tackle the TP subject

In TP, (objective) economic analysis should help solve disputes and facilitate growth



Contents

Three illustrations of the role of economic analysis for TP for O&G companies

- **Cost-Benefit Analysis:**

How to appropriately and objectively demonstrate the arm's length nature of cost charges from a parent company to a subsidiary?

“A big Exploration and Production Company may provide more than \$ 1 billion intercompany services to affiliates annually”. (International Tax Review, July 2012)

- **Financing**

How to appropriately and objectively determine an arm's length interest rate for an inter-company loan?

“As energy firms discover and exploit new reserves which require significant amounts of financing, tax authorities have increased their focus on the intra-group financing transactions”. (International Tax Review, No 71)

- **Valuation**

How to appropriately and objectively determine the arm's length value under uncertainty?

“Valuing oil & gas exploration companies is quite tricky. You're valuing possibilities and probabilities, rather than actual resources”. (www.stockopedia.co.uk)



Cost-Benefit Analysis

A methodology to help tax payers demonstrate and quantify the benefits received from central services



Confirmation of Central Costs Allocation by Benefits-Based Analyses in South East Asia

Background

- A global multinational in the O&G industry provides routine as well as entrepreneurial services to affiliates worldwide
 - *Note: the case has actually involved another industry than the O&G industry.*
- The current system is a typical cost-allocation system and has been challenged in a number of South-East Asian countries

NERA's Assignment

- NERA was hired to design, quantify and test a **benefit-based system** for charging for entrepreneurial services provided by the HQ
- The corporate charge system was redesigned to compute **corporate charges based on benefits** received by the local entities



Confirmation of Central Costs Allocation by Benefits-Based Analyses in South East Asia

Designed a benefit-based system with two components

- **Fee for routine* services**
 - Determined based on costs the local entities would have to incur had they procured such services independently
 - Expert surveys were utilized to test replacement costs
- **Fee for entrepreneurial services**
 - Determined based on a value chain contribution analysis facilitating an evaluation of bargaining power of the HQ and local entities
 - Expert surveys used to test bargaining power as well as total benefits received

* “Routine” indicates the absence of significant intangibles – i.e., a type of services that could also relatively easily be outsourced externally.



Confirmation of Central Costs Allocation by Benefits-Based Analyses in South East Asia

Replacement costs for routine services

15. Legal & Regulatory

1. Assume the [REDACTED] had to engage an external legal consultant to replicate the services currently provided by [REDACTED] Legal and Regulatory team.

Could you please estimate the current hourly professional fees of such legal consultant?

Please indicate USD value (no USD sign)!

[REDACTED]

2. Assume the BU [REDACTED] hired a legal expert to replicate the services currently provided by [REDACTED] Legal and Regulatory team as a full-time employee.

Could you please estimate the full annual staff costs of such internal legal expert?

Please indicate USD value (no USD sign)!

[REDACTED]

3. How many legal experts would the BU [REDACTED] have to hire as full-time employees in order to replicate the services currently provided by [REDACTED] Legal and Regulatory team to the BU [REDACTED]?

Please indicate the required number of FTEs!

[REDACTED]

Expert survey for entrepreneurial services

- Business Development
 - *Local entities*: Companies with expanded product offerings
 - *Benefit*: estimated success of the product offering based on internal business evaluation, adapted for transfer pricing purposes
- Sales
 - *Local entities*: Local entities in business focus, i.e. with active sales support by Corporate Centre
 - *Benefit*: contribution of active sales support to gross or operating margin



Confirmation of Central Costs Allocation by Benefits-Based Analyses in South East Asia

NERA's Recommendations

- Maintain the global central cost allocation system
- Support costs recharged by local analysis of (1) replacement costs and (2) benefits based on expert surveys
 - A benefits-based system reflects more accurately the local benefits from Corporate Service Centres' activities and thereby increases defensibility of management service fees



Confirmation of Central Costs Allocation by Benefits-Based Analyses in South East Asia

For discussion – practical difficulties in APAC

Example: China

- *The scrutiny of management fees charges and global cost allocation systems is increasing*
 - *Local analysis of replacement costs is convincing as it takes into account possible location advantages, i.e., lower costs for similar services obtained locally*
 - *Local analysis of benefits is convincing because it reflects economic and other circumstances unique to business operations and the local market*



Financing Transaction

An analytical framework to determine an arm's length interest rate for an intercompany loan issued in the Oil and Gas Industry



Determination of an Arm's length Interest rate

Background

- A subsidiary of a large multinational group requires funding to execute trading transactions in the Oil & Gas sector
 - A cash rich entity in the group provides a subordinated loan to the operating company
 - It is important to establish in advance prior structuring such a transaction if given the credit profile of a company, the transaction would have occurred in a third party context

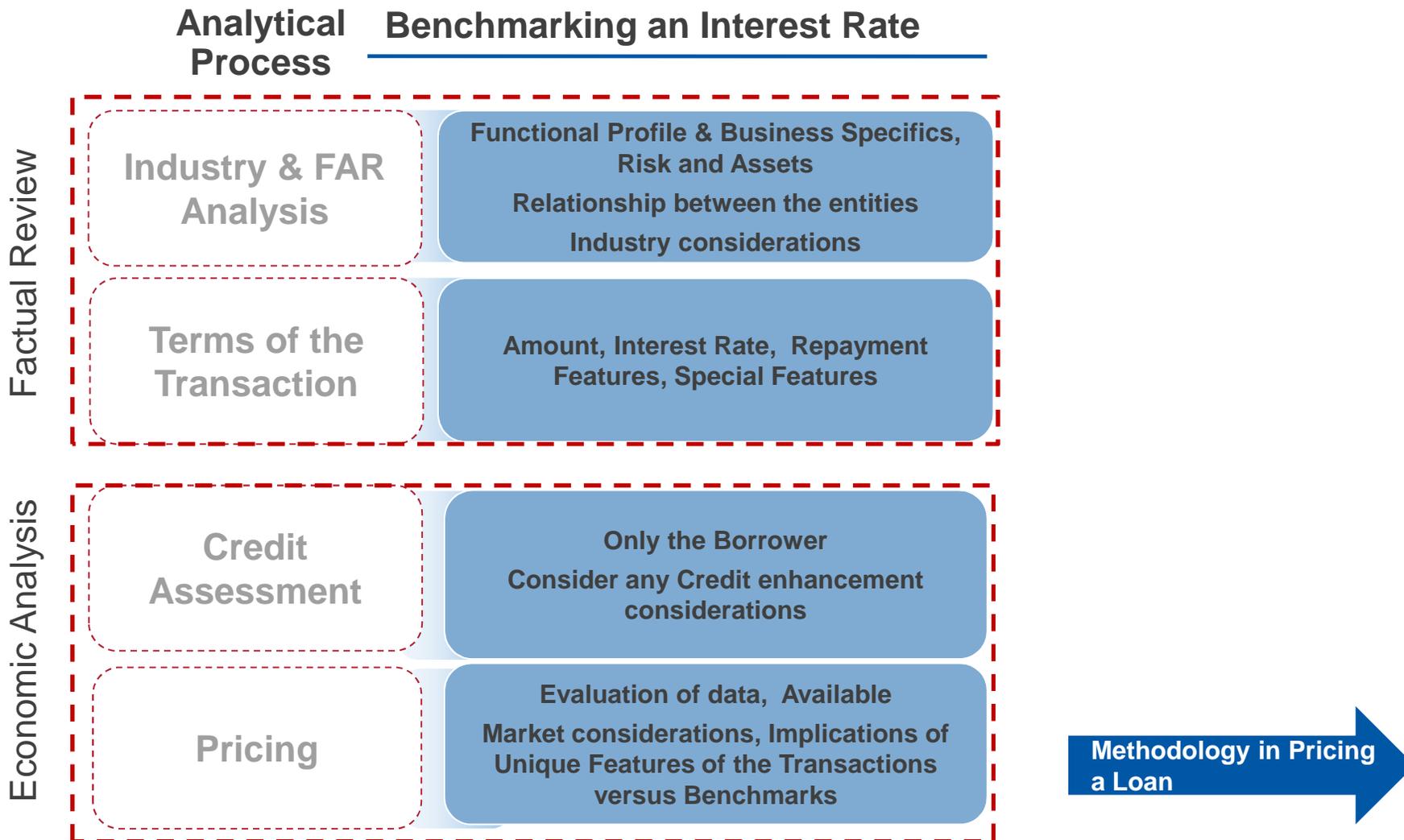
NERA's Assignment

- NERA was hired to determine the interest rate for the subordinated intercompany loan



Determination of an Arm's length Interest rate

A dynamic analytical process needs to be followed when determining the arm's length interest on an intercompany loan





Determination of an Arm's length Interest rate

The pricing will very much depend on the instrument, the terms of the instrument, and credit risk of the borrower.

Maturity of Loan (Issue date and repayment date)

Size of the loan

Currency in which it is denominated and Interest rate basis (i.e., fixed versus floating)

Collateral, Credit enhancement and Optionality Features

Credit quality of the borrower



Determination of an Arm's length Interest rate

- Transfer pricing method selected is the Comparable Uncontrolled Price Method (“CUP”)
 - Most direct comparison in similar loans but normally data on such transaction is not publicly available
 - As a second best method, secondary market data can be used (i.e., bond data). Typical shortcomings for which adjustments are needed:
 - Liquid instruments
 - Data availability and market condition
 - Size of bond instruments versus the loan
 - Interest rate = risk free rate / money market rate + credit spread
 - Alternative approaches include deriving interest rate through Loss given default probability analysis or regression analysis
 - Other adjustment includes for e.g., subordination



Valuation under Uncertainty

How to determine the arm's length fair market value of an asset given significant uncertainty



Valuation under Uncertainty

Background

- A multinational group has a invested stake in an offshore Oil Exploration prospect (“the asset”)
 - Drilling campaign has not yet started
 - The group wish to restructure their operations and move asset to a related party
 - There is significant uncertainty if oil may be found and also in relation to sovereign considerations

NERA's Assignment

- NERA was hired to determine the value of the invested stake for the purpose of transferring the asset



Valuation under Uncertainty

To determine the arm's length value under uncertainty is subject to several key considerations

What are the technical details and uncertainties that can influence value?

- Location
- Expectation e.g., Recoverable resource estimates, API gravity, chance of success
- Risks;
- Market;
- New Information; etc.

What valuation techniques can be used?

- Discounted Cash flow?
- Relative Valuation?
- Contingent Claims (real options)?

What inputs are needed given the valuation method?

- What are the costs?
- What are the revenues?
- What are the conditions that the costs and revenues are subject too?
- What are the probability distributions of those conditions?



Valuation under Uncertainty

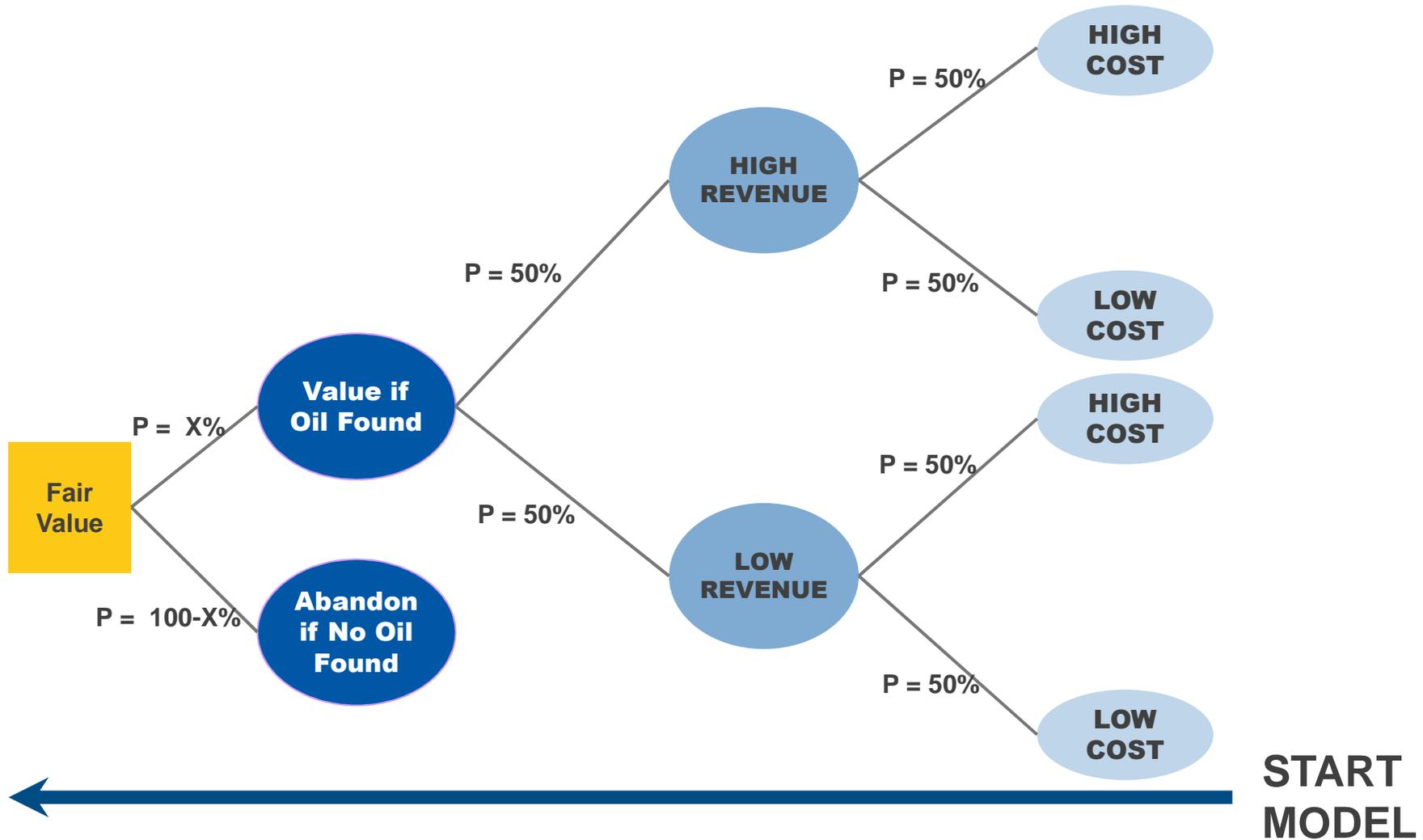
The starting point of a contingent claims real option model is the traditional DCF. Assessment of which uncertainties may impact the cash flows is key

Uncertainties impacting on Cash flows	Considerations
Costs – extraction of oil resources	Based on market benchmarks and considering a probability distribution
Costs – infrastructure development	Based on market benchmarks and considering a probability distribution
Costs – lead time (rig availability, political risk, and other complications in getting the oil into the open market)	Depending on the issue market information available can provide a good indication on expected lead times
Revenues – Oil price	Based on current forecasts and volatility estimates
Revenues – Recoverable resources & API gravity	Based on probability estimates provided typically included within the engineering reports
Revenues – Point at which full scale production start	e.g., 5 years, 10 years or 15 years from commencing with the exploration



The Valuation

Based on the DCF models and various scenarios of uncertainties and probability outcomes, a decision tree can be defined





Thank you!

Sébastien Gonnet

Vice President

NERA Economic Consulting

+86 10 139 1100 58 40

Sébastien.Gonnet@nera.com

Amanda Pletz

Senior Consultant

NERA Economic Consulting

+44 (0) 207 659 8528

Amanda.pletz@nera.com