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# Oil & Gas Upstream Risk/Reward Index

Our Upstream Oil & Gas Risk/Reward Index (RRI) quantifies and ranks a market's attractiveness within the context of the oil industry, based on the balance between the **Risks** and **Rewards** of entering and operating in different markets.

We combine industry-specific characteristics with broader economic, political and operational market characteristics. We weight these inputs in terms of their importance to investor decision making in a given industry. The result is a nuanced and accurate reflection of the realities facing investors in terms of: 1) the balance between opportunities and risk; and 2) between sector-specific and broader market traits. This enables users of the index to assess a market's attractiveness in a regional and global context.

The index uses a combination of our proprietary forecasts and analyst assessment of the regulatory climate. As regulations evolve and forecasts change, so the index scores change providing a highly dynamic and forward-looking result.

The Upstream Oil & Gas Risk/Reward Index universe comprises **72 markets**.

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## Benefits of using BMI's Upstream Oil & Gas RRI

- **Global Index:** A global table, ranking all the markets in BMI's universe for upstream oil & gas from most attractive (closest to zero) to most risk (closest to 100).
- **Accessibility:** Easily accessible, top down view of the global, regional or sub-regional Risk/Reward profiles.
- **Comparability:** Identical methodology across 72 markets for oil and gas allows users to build lists of markets they wish to compare, beyond the confines of a global or regional grouping.
- **Scoring:** Scores out of 100 with a wide distribution, provide nuanced investment comparisons. The higher the score, the less favourable the profile.
- **Quantifiable:** Quantifies the Rewards and Risks of doing business in the upstream sector in different markets around the world and helps identify specific flashpoints in the overall business environment.
- **Comprehensive:** Comprehensive set of indicators, assessing industry-specific risks and rewards alongside political, economic and operating risks.
- **Entry Point:** A starting point to assess the outlook for the upstream oil & gas sector, from which users can dive into more granular forecasts and analysis to gain a deeper understanding of the market.
- **Balanced:** Multi-indicator structure prevents outliers and extremes from distorting final scores and rankings.
- **Methodology:** The Index is created using a combination of proprietary BMI forecasts, analyst insights and globally acceptable benchmark indicators.



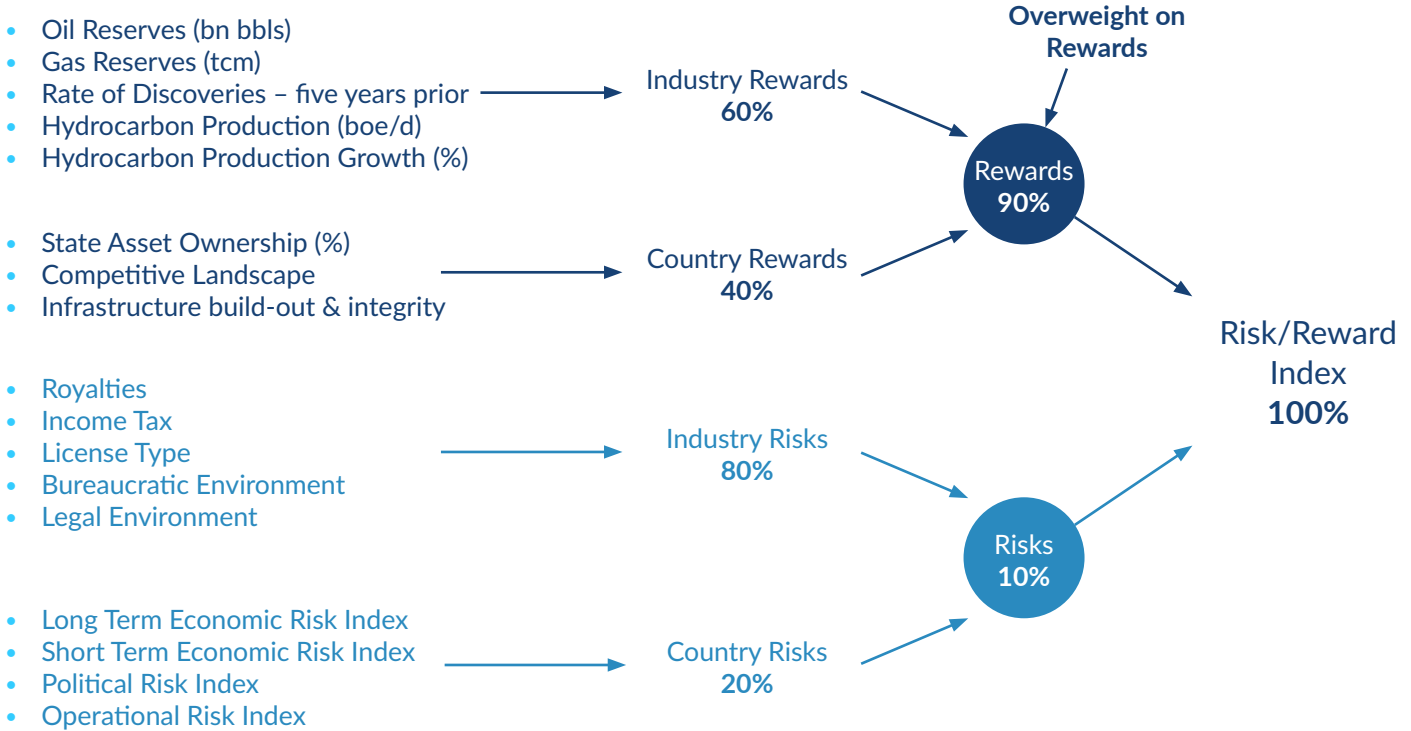
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# Weightings of Categories and Indicators

## Oil & Gas Risk/Reward Index – Upstream



The RRI matrix divides into two distinct categories:

Assessing our weightings

- Rewards:** Evaluation of an Industry's size and growth potential (**Industry Rewards**), and also macro industry and/or market characteristics that directly impact the size of business opportunities in a specific sector (**Country Rewards**).
- Risks:** Evaluation of micro, industry-specific characteristics, crucial for an industry to develop to its potential (**Industry Risks**) and a quantifiable assessment of the market's political, economic and operational profile (**Country Risks**).

Our matrix is deliberately overweight on **Rewards** (90% of the final RRI score for a market) and within that, the **Industry Rewards** segment (60% of final **Rewards** score). This is to reflect the fact that when it comes to long term investment potential, industry size and growth potential carry the most weight in indicating opportunities, with other structural factors (demographic, labour statistics and infrastructure quality) weighing in, but to a slightly lesser extent. In addition, our focus and expertise in Emerging and Frontier Markets has dictated this bias towards industry size and growth to ensure we are able to identify opportunities in markets where regulatory frameworks are not as developed and industry sizes not as big as in developed markets, but where we know there is a strong desire to invest.

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# Indicators, Rationale and Sources

## Table: Oil & Gas Reward Index – Upstream, Indicators

Indicator	Source	Rationale
<b>REWARDS</b>		
<b>Industry Rewards</b>		
Oil Reserves (bn bbl)	National Sources, BMI Data	Indicates size of the opportunity for oil developments. Data is for the current year.
Gas Reserves (tcm)	National Sources, BMI Data	Indicates size of the opportunity for gas developments. Data is for the current year.
Discoveries Rate – last 5 years	BMI Calculation	Outlines the prospectivity and potential of the upstream.
Hydrocarbon Production (boe)	BMI Forecast	Five year forward looking indication of production volumes.
Hydrocarbon Production Growth (boe, %)	BMI Forecast	Five year forward looking indication of production growth.
<b>Country Rewards</b>		
State asset ownership (%)	BMI Calculation	Total share NOCs control. Demonstrates the potential access and restrictions to resources.
Competitive Landscape	BMI Calculation	Divides resource base by the approximate number of companies operating to indicate the level of competition.
Infrastructure Integrity	BMI Calculation	Calculates the extent and quality of oil and gas infrastructure, indicating ease of access and level of maintenance investment needed.

Source: BMI

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# Indicators – Explanation and Sources

## Table: Oil & Gas Risk Index – Upstream, Indicators

Indicator	Source	Rationale
<b>RISKS</b>		
<b>Industry Risks</b>		
License Type	BMI Calculation	Outlines a market score based on whether oil and gas licenses are offered as concessions, production sharing agreements or service contracts.
Income Tax	Government Source	Outlines the relative tax rate incurred by oil and gas companies.
Royalties & Special Taxes	Government Source	Indicates further required payments (and supplementary taxes) beyond income tax.
Bureaucratic Environment	BMI Operational Risk Score	Outlines the ease of business processes, with a particular emphasis on mitigating the risk of delay to project timelines.
Legal Environment Risk	BMI Operational Risk Score	A second ease of business indicator, highlighting potential challenges with the transparency and effectiveness of rule of law.
<b>Country Risks</b>		
Long Term Economic Risk Index	BMI Country Risk Index	The LT ERI takes into account the structural characteristics of economic growth, the labour market, price stability, exchange rate stability and the sustainability of the balance of payments, as well as fiscal and external debt outlooks for the coming decade.
Short Term Economic Risk Index	BMI Country Risk Index	The ST ERI seeks to define current vulnerabilities and assess real GDP growth, inflation, unemployment, exchange rate fluctuation, balance of payments dynamics, as well as fiscal and external debt credentials over the coming two years.
Political Risk Index	BMI Country Risk Index	The Political Risk Index is a score made up of the mean average across three distinct pillars: Governance Risk, Society Risk, and Security Risk that are aggregated into an overall assessment of 'Political Risk'.
Operational Risk Index	BMI Operational Risk Index	The ORI focuses on existing conditions relating to four main risk areas: Labour Market, Trade and Investment, Logistics, and Crime and Security.

Source: BMI



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## About BMI

In an uncertain macroeconomic environment, BMI's systematic, independent and data-driven market insights, analysis and forecasts enable you to recognize and assess risks and opportunities across 200+ markets and 20+ industries.

For more than 40 years, we have provided impartial and transparent analytics, data and research across themes,

countries and sectors, with deep insight into emerging markets. Our detailed intelligence is frequent, consistent and systematic, enabling you to easily make comparisons and interrogate data to support your strategic plans and investment decisions.

Learn more at [fitchsolutions.com/bmi](https://fitchsolutions.com/bmi)

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## Client Services

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