

**BMI**

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Petrochemicals Risk/Reward Index

Our Petrochemicals Risk/Reward Index (RRI) quantifies and ranks a market's attractiveness within the context of the Petrochemicals 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. As forecasts change, so the Index scores change providing a highly dynamic and forward-looking result.

The Petrochemicals Risk/Reward Index universe comprises **46 markets**.

Benefits of using BMI's Petrochemicals RRI

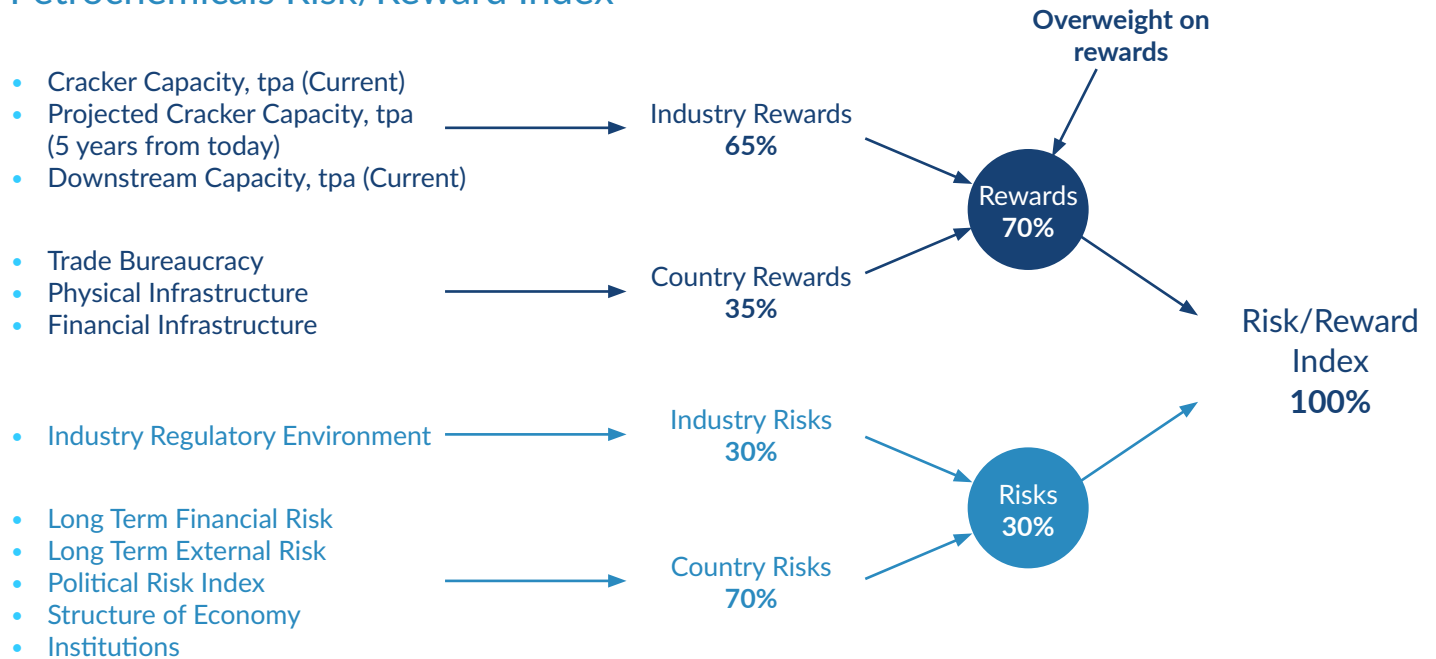
- **Global Rankings:** One global table, ranking all the markets in BMI's universe for Petrochemicals from most attractive (closest to zero) to most risk (closest to 100).
- **Accessibility:** Easily accessible, top down view of the global, regional or sub-regional Risk/Reward profile.
- **Comparability:** Identical methodology across 48 markets for Petrochemicals 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 Petrochemicals 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 Petrochemicals 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

Petrochemicals Risk/Reward Index



The RRI matrix divides into two distinct categories:

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**).

Assessing our weightings

Our matrix is deliberately overweight on **Rewards** (70% of the final RRI score for a market) and within that, the **Industry Rewards** segment (65% 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

Petrochemicals Reward Index, Indicators

Indicator	Source	Rationale
REWARDS		
Industry Rewards		
Cracker Capacity, tpa (Current)	BMI	Current size of the petrochemicals industry indicates potential for opportunities and scale of operations. Large markets more attractive than small ones.
Projected Cracker Capacity, tpa (5 years from today)	BMI	Projected future capacity of the petrochemicals industry indicates growth potential for opportunities (5 years forward looking from current year).
Downstream Capacity, tpa (Current)	BMI	Downstream capacity (PE, PET, PP, PS, PVC) is an objective measure of domestic demand for the petrochemicals industry products.
Country Rewards		
Trade Bureaucracy	BMI Operational Risk Index	Measure of general bureaucratic environment and trade restrictions that impact exports of petrochemical products.
Physical Infrastructure	BMI Operational Risk Index	Measure of the support infrastructure for manufacturing units such as power, water, transport facilities that are essential for petrochemical industry given the size of manufacturing units.
Financial Infrastructure	BMI Operational Risk Index	Measure of financial sector's development, to gauge ease of obtaining finance since.

Source: BMI

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Indicators – Explanation and Sources

Petrochemicals Risk Index, Indicators

Indicator	Source	Rationale
RISKS		
Industry Risks		
Industry Regulatory Environment	BMI	Subjectively evaluates de facto/de jure regulations concerning the operating environment for the petrochemicals sector.
Country Risks		
Long Term Financial Risk	BMI Country Risk Index	Evaluates currency volatility and the sophistication and depth of the local financial markets.
Long Term External Risk	BMI Country Risk Index	Evaluates a market's vulnerability to external debt dynamics, current account deficit, and other externally induced economic shocks, which tend to be principal triggers of economic crises.
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'.
Structure of Economy	BMI Country Risk Index	Denotes health of underlying economic structure of the market, including seven indicators such as volatility of growth, reliance on commodity imports, reliance on single sector for exports.
Institutions	BMI	Evaluates strength of legal institutions, ease of conducting business in a market from a bureaucratic perspective and the strength of legal institutions.

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

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