

MSCI Japan Equity Factor Models

The next generation of the Japan Equity Factor Model suite builds on a half-century of experience constructing equity indexes and risk models for investors. Deep research, comprehensive data and computational power convene to solve modern investing's most pressing challenges. The model introduces factors like Crowding, Machine learning and Sustainability - redefining the way models are constructed and delivered in addition to modular factor structure and advanced risk-forecasting methodologies.



New investment insights

- Point-in-time fundamental data to facilitate more realistic back tests
- Help your portfolios weather changing market regimes over multiple cycles with the help of adaptive factor covariance
- Capture new sources of investment risk with the addition of Dividend Yield, Profitability, Short Interest and Earnings Variability factors
- An implied volatility adjustment to factor covariance matrix to improve risk forecast by incorporating forward-looking information contained in the Nikkei Stock Average Volatility Index (NKVI)
- Assess the 'bubbline' or level of crowding of stocks and portfolios with stock crowding factor
- Understand and capture non-linear relationships between factor exposures and returns using machine learning
- Measure the exposures of your portfolio to sustainability and understand its contribution to portfolio risk and return
- Understand the carbon intensity of your portfolio to meet your decarbonization or net zero commitments
- Identify clusters of highly similar companies that may lead to "cluster risk" in your portfolio
- A dynamic adjustment to industry factor exposure to capture the differences in sensitivities of stock return to industry return
- Enhancements to existing factors including Beta, Momentum, Residual Volatility, Growth, Earnings Yield, Value, Investment Quality (Management in JPE4), Liquidity, Foreign Sensitivity and Analyst Sentiment (Sentiment in JPE4) to improve handling of IPOs, performance, interpretability, coverage and/or stability

A factor structure aligned to multiple investment horizons

Designed for	Long-Term Models	Trading Models
	• Active and passive asset managers • Asset owners • Sell side – Banks and Market makers • Buy Side- Hedge Funds • Fundamental and quantitative managers	• Equity hedge fund managers • Quantitative asset managers • Algorithmic traders • Sell-side traders • Risk managers
Focus	• Designed with a focus on portfolio construction • Decompose complex portfolios into intuitive risk factors; provides managers, investors and regulators a clearer understanding of risk exposures and risk-adjusted performance • Available in Stable and Responsive variants	• Most responsive model in the family with a daily forecast horizon, enabling you to swiftly adapt to market disruptions • Designed for analyzing risk in short term portfolios • Constructed for short-term trading, hedging, and daily risk monitoring

Elevate your investment process with our latest innovations

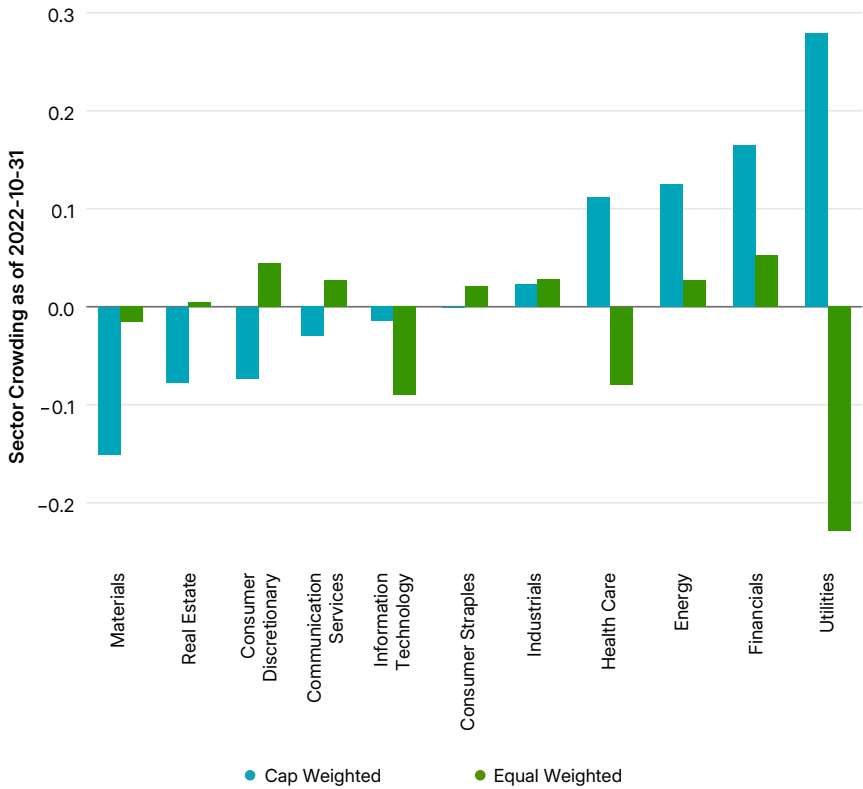
Quantify the impact of carbon emissions on portfolio returns while adjusting for other effects

Climate Index	Active (%) ¹	Sales ex. Carbon (%)	Industries (%)	Specific (%)	Carbon(%)
MSCI Japan Climate Paris Aligned Index	-5.0	-3.1	-0.8	-0.5	-0.6
MSCI Japan Climate Change Index	-1.6	-0.5	-0.3	-0.6	-0.2

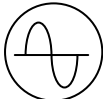
Sample performance attribution of active returns (Jun 2020 – Nov 2022)

1. The active returns were calculated relative to the MSCI Japan IMI Index

Understand how bubbly are your holdings, portfolio and market segments



Japan equity content set - What does it cover?

Coverage	26 Style Factors	4,000+ securities	43 industry factors
Asset Classes	Depository receipts Cross Listed securities Stocks Equity Index Futures ETFs		
Factors	 VOLATILITY  YIELD  QUALITY  MOMENTUM  VALUE  SIZE  MACRO  SENTIMENT  GROWTH  LIQUIDITY  NONLINEARITY  SUSTAINABILITY		



Model distribution and access

Access MSCI's models on cloud via Snowflake, through MSCI applications including BarraOne, Barra Portfolio Manager, through direct data delivery (Models Direct), or through third-party vendor platforms.

About MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

To learn more, please visit www.msci.com.

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