MSCI

Investment Risk Summit

「不確実性の時代におけるポートフォリオ・レジリエンスの構築」

MSCI
Investment Risk Summit

プレゼンテーション：
新たな市場環境に適応する投資モデル

Steven Ng

MSCI

APACアナリティクス・テクニカル・スペシャリスト／ヴァイス・プレジデント

MSCI

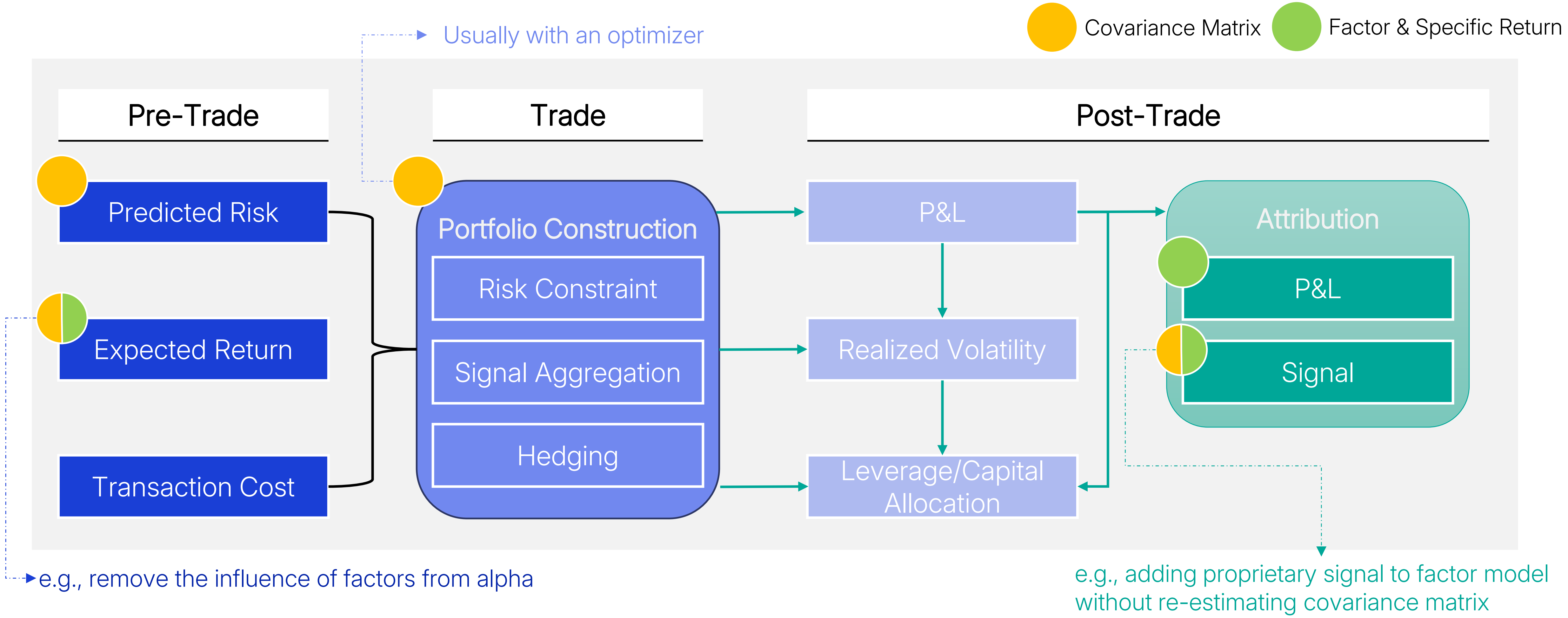
Adapting Investment Models to a New Market Environment

LLM based peer clusters, custom hedging baskets and innovative performance attribution model

Steven Ng – MSCI

Evolution of the Buy-side portfolio management process

A possible organization of the investment process and its strong connection to Multi-factor models



From Linked Specific Risk (LSR) to Peer Specific Risk (PSR)

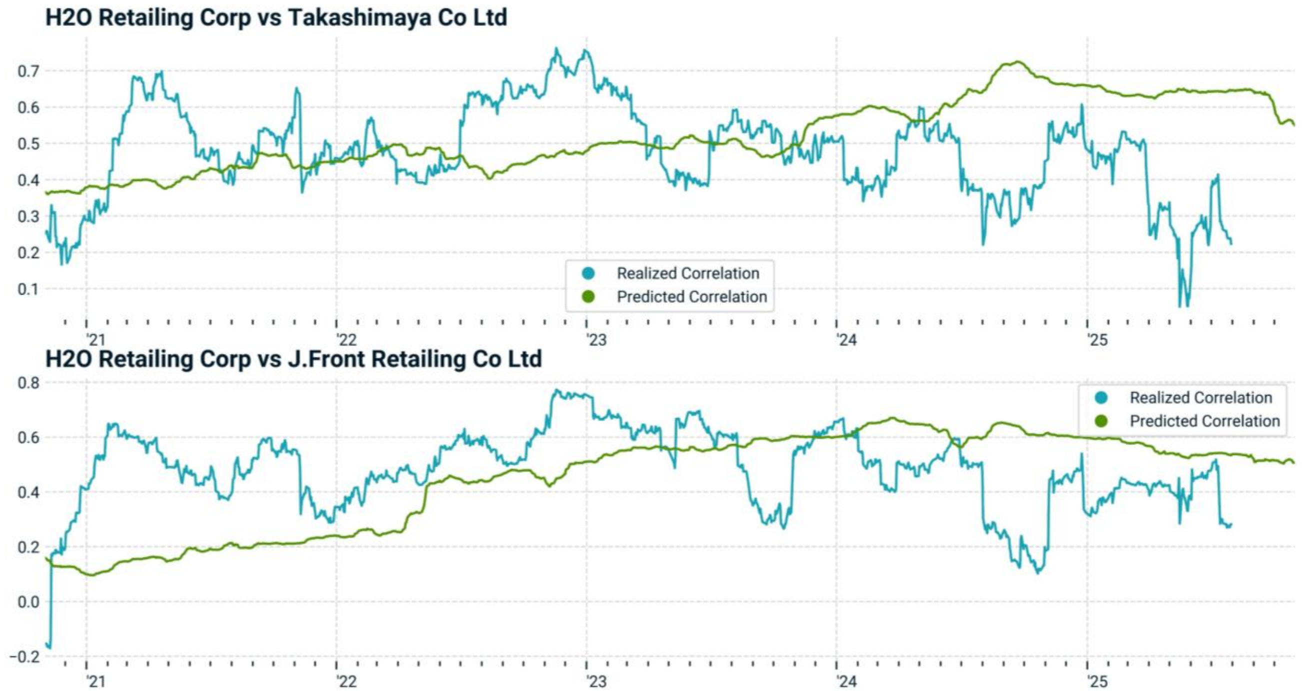
→ One assumption of Linear Regression: **independent** residual (specific) return;

→ While it holds true for a broad universe, there still might be subsets of stocks highly correlated in idiosyncratic space;

→ **Linked Specific Risk (LSR): Ex-Ante Specific Correlation** between multiple classes of stock, Global depository receipts (GDRs), American depository receipts (ADRs) by the **same issuer:**

Full list of LSR pairs in JPMEFM as of October 31, 2025

Company	Common Stock	Preferred Stock	LSR (Oct 2025)
Ito En	2593	25935	0.85
Infroneer Holdings	5076	50765	0.85



→ **Stocks with different issuer** might also have specific correlation as shown above;

→ We cannot and should not add all these relationships as factors, so an objective and systematic approach is needed to estimate these specific correlations;

→ **MSCI Peer Specific Risk (PSR)**

The rolling 42-day realized specific correlation was computed using the daily specific return from MSCI JPNEFMTRD model from October 31, 2020 to October 31, 2025.
The Peer Specific Risk (PSR) was from MSCI JPNEFMTRD model from October 31, 2020 to October 31, 2025.

Section 01

Peer clusters identified using LLM and traditional metrics…

Inputs

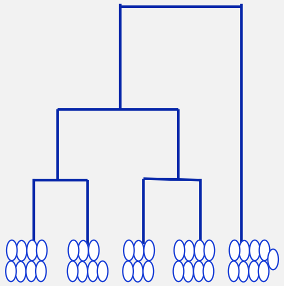
10-K Filings & company descriptions + Financial Statements + News co-mentions + Return Correlations + ESG key issue weights

Output

Similarity Score Matrix

	MSFT	GOOG	FB	IBM	JPM	XOM	PG	JNJ …
MSFT	1	0.495	0.430	0.435	0.287	0.268	0.295	0.361
GOOG	0.495	1	0.543	0.358	0.296	0.271	0.269	0.327
FB	0.430	0.543	1	0.320	0.282	0.242	0.255	0.318
IBM	0.435	0.358	0.320	1	0.310	0.251	0.308	0.303
JPM	0.287	0.296	0.282	0.310	1	0.220	0.249	0.257
XOM	0.268	0.271	0.242	0.251	0.220	1	0.261	0.306
PG	0.295	0.269	0.255	0.308	0.249	0.261	1	0.322
JNJ	0.361	0.327	0.318	0.303	0.257	0.306	0.322	1
⋮								

Clusters (Peer Groups)



- → Clusters are updated **quarterly**;
- → Only clusters with the shortest distances would be incorporated into the factor models → ensure the matrix is sufficiently sparse to still be "invertible";
- → Pairwise specific correlation would be estimated **daily** using the historical asset specific return.

From Peer Clusters to Peer Specific Risk in MSCI Factor Models

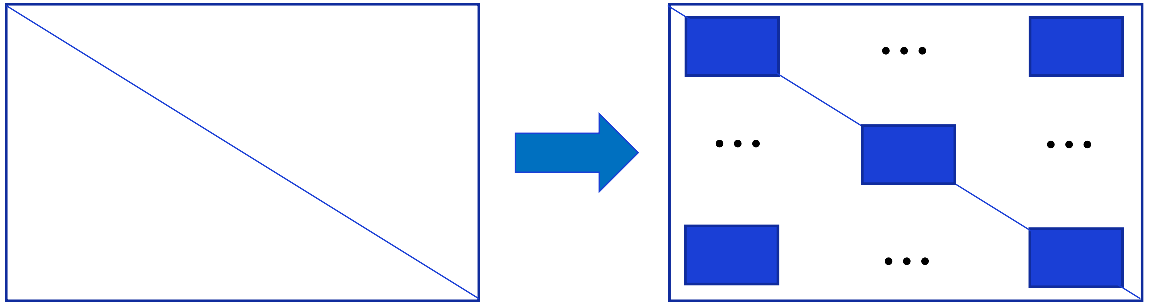
Total Risk = Systematic + Specific Risk

$$\sum = W\, X\, \Omega\, X^T\, W^T + W \boxed{\Delta} W^T$$

$\sum$: portfolio's total risk
W : asset weight
X : asset factor exposure
Ω : factor covariance matrix
Δ : asset covariance matrix

Traditional Specific Covariance Matrix

New Specific Covariance Matrix



Only diagonals (variances) matter
All off-diag elements = 0
(All specific return correlations = 0)

Select off-diag elements matter
Select off-diag elements ≠ 0

Sample Peer Clusters

Ticker	Name	Main Industry
8233	TAKASHIMAYA	JP Department Store GMS and Super Market
3086	J.FRONT RETAILING	JP Department Store GMS and Super Market
3099	ISETAN MITSUKOSHI	JP Department Store GMS and Super Market
8242	H2O RETAILING	JP Department Store GMS and Super Market

Ticker	Name	Main Industry
8331	CHIBA BANK LTD	JP Regional Banks
8308	RESONA HOLDINGS	JP Banks
8354	FUKUOKA FINANCIAL	JP Regional Banks
7186	YOKOHAMA FINANCIAL	JP Regional Banks
5831	SHIZUOKA FINANCIAL	JP Regional Banks
5830	IYOGIN HOLDINGS	JP Regional Banks
7389	AICHI FINANCIAL	JP Regional Banks

Ticker	Name	Main Industry
7282	TOYODA GOSEI	JP Automobiles and Parts
3116	TOYOTA BOSHOKU	JP Automobiles and Parts
6995	TOKAI RIKA	JP Automobiles and Parts
7250	PACIFIC INDUSTRIAL	JP Automobiles and Parts
7283	AISAN INDUSTRY	JP Automobiles and Parts

The selected peer clusters were from MSCI JPNEFMTRD model as of October 1, 2025.

Section 01

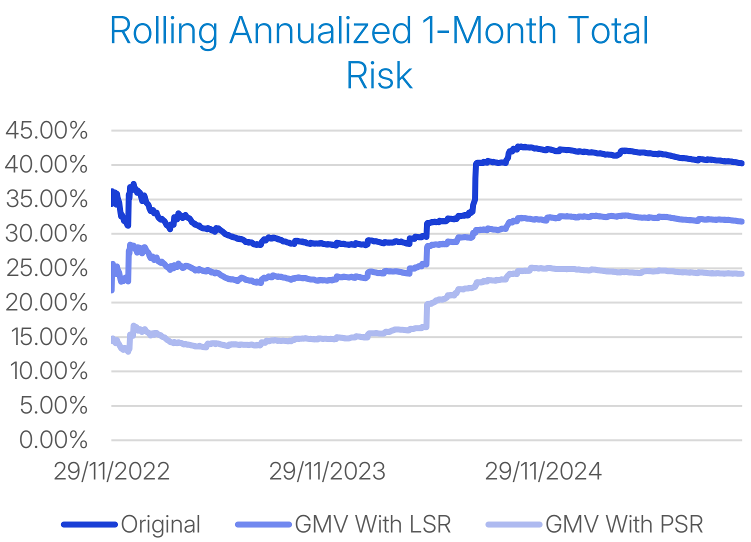
More accurate risk forecast and efficient portfolio construction with PSR

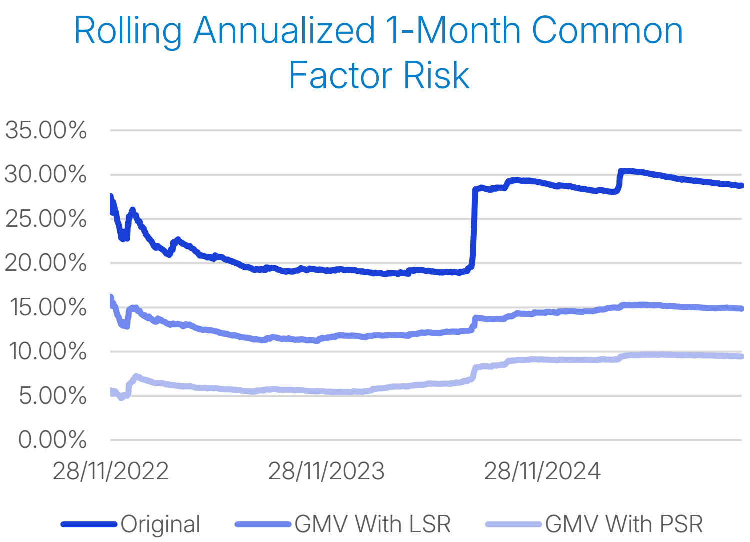
→ To showcase the difference between the two specific correlation methodologies, a **global minimum variance (GMV)** optimization on Isetan Mitsukoshi (3099) was run weekly with LSR and PSR respectively:

1. **Short Universe**: MSCI Japan IMI;
2. **Max # shorts** = 5;
3. **Dollar Neutral;**
4. **Path Independence.**

→ The methodology with a **lower realized risk** indicates a better risk forecast as the objective is to minimize the overall portfolio volatility.

→ The turnover (and # unique stocks used) with PSR was **significantly lower** due to the additional correlation information.





Statistics	GMV with LSR	GMV with PSR
Volatility reduction	-14.47%	-27.46%
Average Weekly One-way Turnover	9.11%	1.45%
Unique # Shorts used throughout the period	46	15

The GMV optimization was conducted using MSCI JPNEFMTRD model on a weekly basis from November 4, 2022 to October 31, 2025.
The realized risk was computed and annualized using rolling 1-month daily returns.

Section 02

Hedging against unintended characteristics

→ Hedging is the process of **reducing the risk of a portfolio** by augmenting that with some investments having a **negative correlation to it**.

→ The most common forms of hedging are **market hedging** and currency hedging:

1. by means of a future or liquid asset;
2. By buying tradable baskets from banks to hedge (or even speculate) on political risk (e.g., elections) or thematic risks;
3. Creating an in-house hedging basket to reduce the unwanted risk from factor exposures **all at once**.

→ **Hedge with caution**: Some assets and factors have non-zero expected return. Hedging them can in fact be counterproductive because the gain in Sharpe Ratio (risk reduction) could be countered by expected P&L losses.

Not all factors are born equal – understanding factor volatility and correlation to control the hedging cost and turnover

Factor Group	Top 5 Factors by volatility	Ex-Ante Volatility (2025-10-31)
Market	Japan Equity	18.29%
Industry	Banks	23.08%
	Broadcasting Media	20.03%
	Plant Machinery and Engineering	22.21%
	Semiconductor and Equipment	37.50%
	Telecommunications	25.06%
Risk Indices	Beta	5.61%
	Momentum	4.23%
	Residual Volatility	2.87%
	Short-Term Reversal	2.85%
	Size	3.29%

The annualized raw factor volatility was from MSCI JPNEFMTRD model as of October 31, 2025.

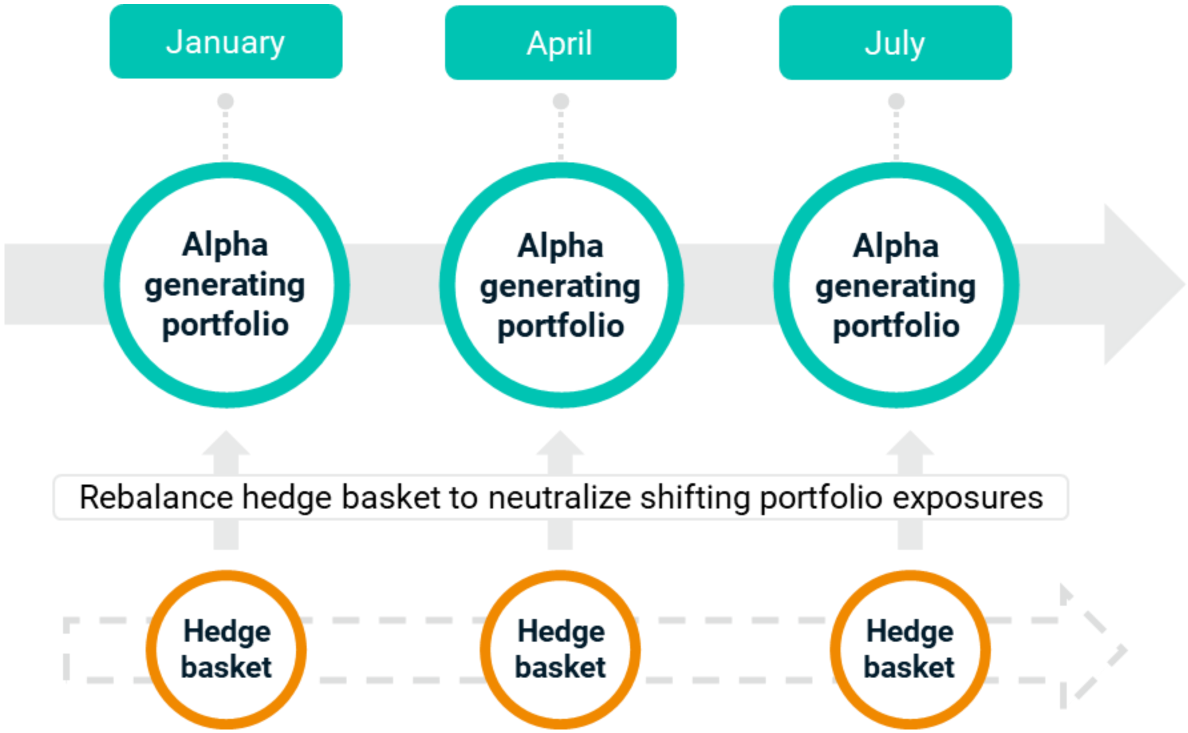
Section 02

Creating Efficient and Tailor-made Hedging Basket

→ Sell-side brokers usually provide baskets to hedge certain risks of a portfolio or an **inventory book (Market Makers/Delta One)**;

→ While they help hedge certain exposures, they might **introduce other unintended risk** or jeopardize the expected return as the basket is not tailored to the target portfolio or carry non-zero expected returns;

→ MSCI Factor Models and Optimizer helps create a tailor-made hedge baskets by considering the practical constraints below.



Leverage Constraint

Control the additional capital to construct the hedging basket

Asset Weight Constraint

Limit any weight change of the existing names, and maximum asset weight in baskets

Factor/Sector Exposure limits

Control the basket's exposure to selected factors or sectors

Turnover/Transaction Cost Constraint

Optimize or limit the turnover/transaction cost, with customizable transaction cost modeling

Specific Risk Constraint

Create a diversified basket which has the minimum specific risk to avoid impact to alpha

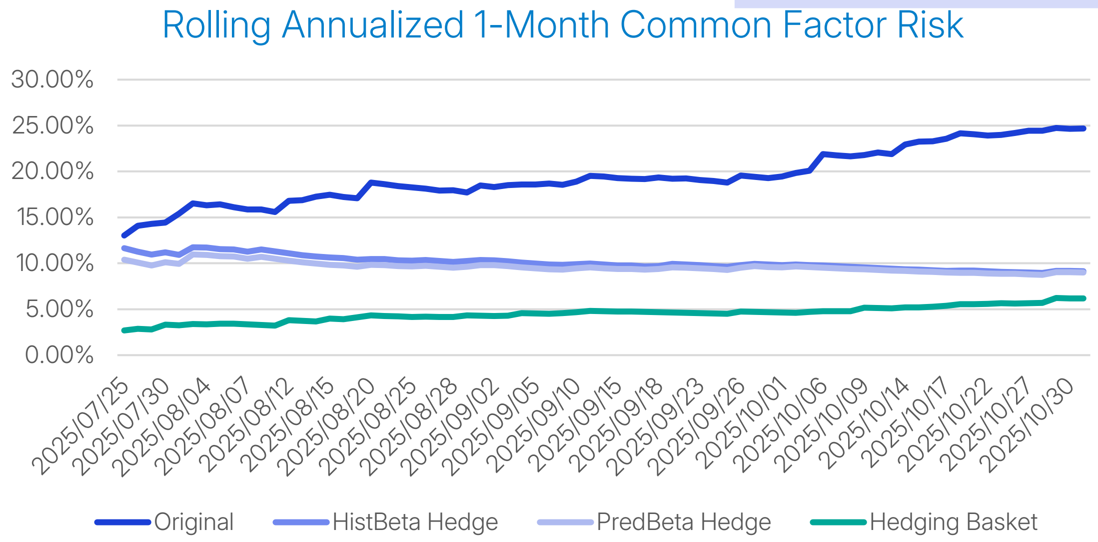
Section 02

Comparing and Evaluating different hedging strategies

→ To compare different hedging strategies, it was assumed that we had a Japan AI portfolio as of July 1, 2025.

→ The investment goal is to reap the AI stock specific return without exposing to the systematic risk.

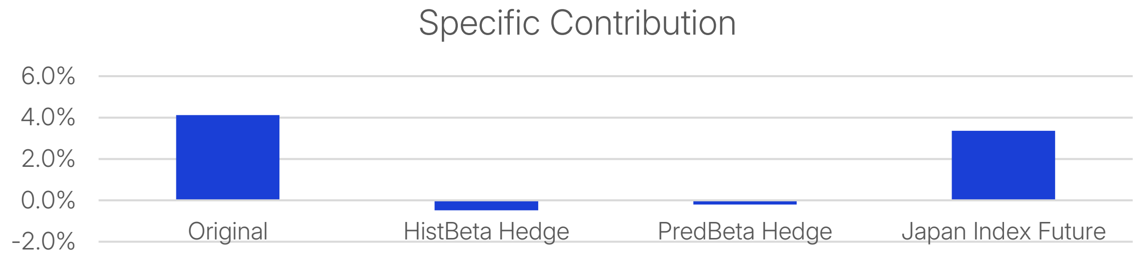
Hedging Strategies	Objective	Short Universe	Other constraints
Hedging with Index Future (Predicted beta *)	Minimize systematic risk	A Japan Index Future	-
Hedging with Index Future (Historical beta *)	Minimize systematic risk	A Japan Index Future	-
Hedging with custom hedging basket with an optimizer	Minimize portfolio risk	Constituents in MSCI Japan IMI	Max number of shorts: 30 Max short weight: -10%



Highlights

→ The average weekly one-way turnover of the basket is only **3.7%**;

→ The underlying index of the Japan index future had a **substantial positive specific return (3.35%)** from July 1 to October 31, 2025. Hedging with the index would impact the specific return of the overall portfolio.



* Beta factor exposure is sometimes confused with portfolio beta. The former represents a systematic strategy, while the latter represents the sensitivity of an asset/portfolio to a reference benchmark.
The basket is rebalanced weekly on Fridays from 2025-07-04 to 2025-10-31. The realized risk was computed and annualized using rolling 1-month daily returns.

Section 03

Factor Based Performance Attribution

Same factors used for risk & performance:

Common Factor Return
Factor Model Data

Factor Exposures x Factor Returns

Specific Return

$$r = \overbrace{X\, f}^{\text{Common Factor Return}} + u$$

Asset Local Return

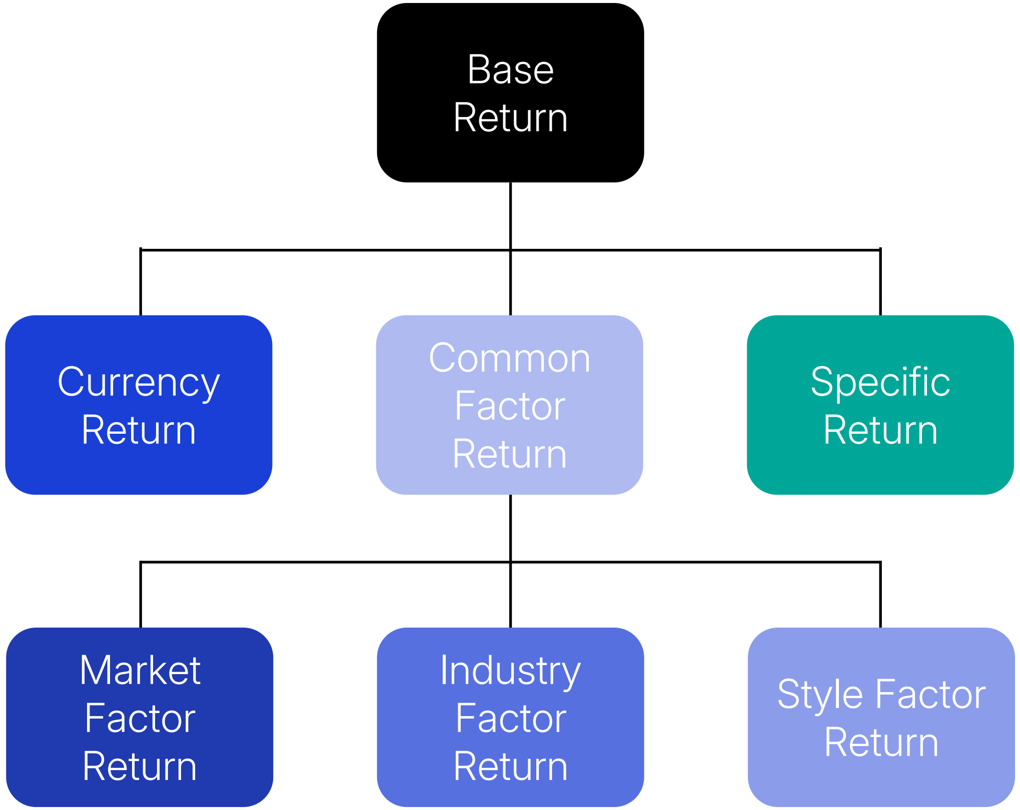
Common factors capture important shared characteristics

→ Market: Overall Equity Market

→ Industry: Industry classifications

→ Style: Balance sheet info, technical indicators...

Model Structure:



Source: MSCI, Linear Factor Model Nov 2025

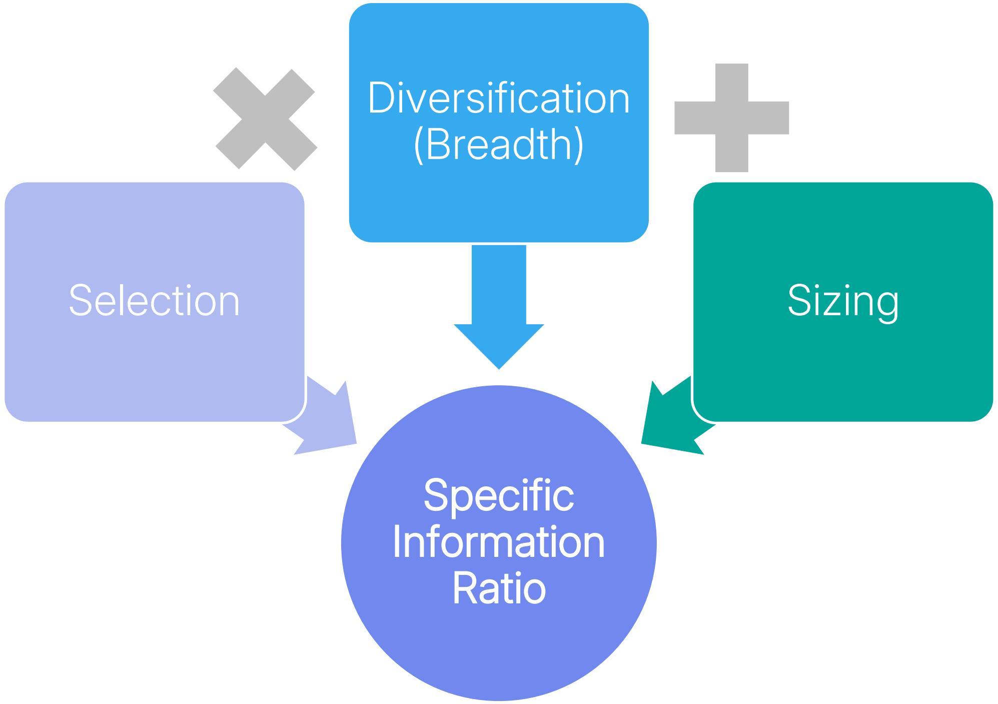
Section 03

Decomposing Specific Contribution further – Selection, Sizing and Diversifiaction

Pure Factor   Pure Alpha *

- → Active strategies are never binary, but a spectrum;
- → Factor Based Performance attribution framework fits factor timing and rotation strategy well;
- → However, when a portfolio manager tightly controls the factor exposure, the specific return contribution would dominate. In this case, the asset level specific contribution is the only additional information;
- → This might not fully align with the manager's decision-making process: **selection, sizing and diversification**.

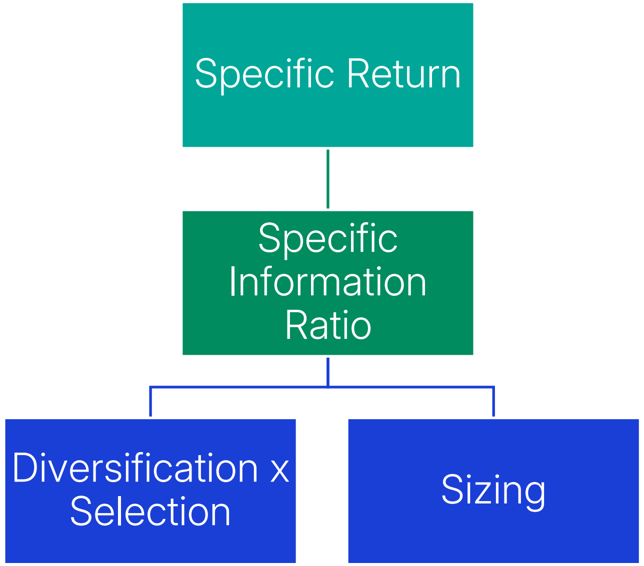
Introducing the factor based specific information ratio performance attribution model



Source: Paleologo, G. 2023. "Information Ratio = Selection × Breadth + Sizing." The Journal of Portfolio Management 49 (8): 71 – 82.
* The alpha here does not imply active return, but rather the asset specific return that could not be explained by common factors.

Aligning the decision-making process of alpha focused manager

Extending the Factor Based Performance Attribution model



→ To achieve a higher specific IR, one could increase:

Decision	Value-add from the decision when:	Underlying Intuition
Selection	**Selecting stocks in the right direction**, e.g., Long stocks with positive specific returns.	The product of the sign of that asset's holding and z-score specific return
Diversification (Breadth)	Holding **higher effective number of stocks**	The ratio between the weighted average of individual asset standard deviations and portfolio specific volatility (**the reverse of diversification ratio**)
Sizing	**Weighting the stocks correctly** based on the asset level risk-adjusted specific return	Cross-sectional correlation between being on the right side of a bet and the bet size

Source: Paleologo, G. 2023. "Information Ratio = Selection × Breadth + Sizing." The Journal of Portfolio Management 49 (8): 71 – 82.

Appendix

Appendix

Sample Japan AI Portfolio Holdings as of July 1, 2025

Ticker	Asset Name	Weight (%)
6857	ADVANTEST	7.68%
5801	FURUKAWA ELECTRIC	6.93%
5803	FUJIKURA	6.79%
9984	SOFTBANK GROUP	6.46%
6146	DISCO	6.22%
6701	NEC	5.68%
8035	TOKYO ELECTRON	5.54%
5802	SUMITOMO ELECTRIC INDUSTRIES	5.41%
6526	SOCIONEXT	5.18%
6702	FUJITSU	5.05%
4063	SHIN-ETSU CHEMICAL	4.91%
6758	SONY GROUP	4.48%
4062	IBIDEN	4.47%
6723	RENESAS ELECTRONICS	4.21%
9432	NTT	4.20%
6752	PANASONIC HOLDINGS	4.17%
4307	NOMURA RESEARCH INSTITUTE	2.97%
3436	SUMCO	2.78%
6590	SHIBAURA MECHATRONICS	2.37%
7731	NIKON	0.86%
4477	BASE	0.75%
3993	PKSHA TECHNOLOGY	0.68%
4443	SANSAN	0.50%
4483	JMDC	0.49%
4180	APPIER GROUP	0.47%
2980	SRE HLDGS	0.39%
4493	CYBER SECURITY CLOUD	0.13%
4259	EXAWIZARDS	0.12%
5132	PLUSZERO	0.11%

This sample portfolio was only used as a baseline to evaluate different hedging strategies. It does not constitute any investment opinion or advice.

MSCI Investment Risk Summit

プレゼンテーション：MACモデルの活用事例：テーマ型カスタムバスケット戦略 —マルチアセット分析で強化するテーマ投資アプローチ —

中西 均

モルガン・スタンレーMUFG証券

株式統括本部 クオンツ・デリバティブ戦略部／ヴァイス・プレジデント

Morgan Stanley

MAC Use Case with Thematic Baskets
Integrating Multi-Asset Models and Custom Basket Strategies
MACモデルの活用事例：テーマ型カスタムバスケット戦略
— マルチアセット分析で強化するテーマ投資アプローチ —

Morgan Stanley Quantitative and Derivative Strategies (QDS)

Nov 13th, 2025

Quantitative and Derivative Strategies
Hitoshi Nakanishi | hitoshi.nakanishi@morganstanleymufg.com
QDS Asia | qds_asia@morganstanley.com

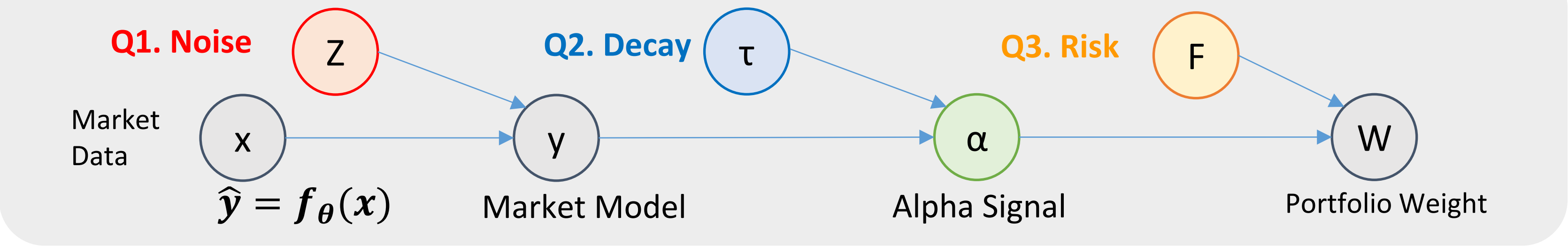
MS QDS Asia Group (MS クオンツ・デリバティブ戦略グループ)

Our Goal: To provide the portfolio / derivative solution to clients by the quantitative analysis

Objective function: to maximize **Alpha Signal** α and minimize (hedge) **Risk** F

under constraints (market liquidity, turnover, single stocks/sector/factor weight cap, corporate actions, and events)

$$\textbf{maximize} \quad \alpha^T w - w^T F\, w + \lambda g_{\psi}(w)$$



- **Alpha**: **MS Research** – Strategist, Economist, Sector analyst,
  Thematic ideas – Market flow, Positioning, Corporate and index events
  Client Enhancement – Portfolio Consultation over Non-Disclosure Agreement **(NDA)**
- **Solution:** (1) **Sector / Factor / Thematic / Alpha / Hedging** – Custom baskets
  (2) **Liquid Index Replication** – Combination of futures and custom baskets
  (3) **Portfolio analysis / Back-testing** – **Client tailored solution** of portfolio or derivative analysis

What is a Custom Basket? (カスタムバスケットとは?)

A flexible and operationally efficient investment product

What is a custom basket?

A custom basket is a tailored group of securities, constructed to meet specific investment, hedging, or thematic objectives. Unlike standard indices or ETFs, custom baskets **are designed with flexibility in mind, allowing clients to define the composition, weighting, and strategy based on their unique needs.**

Why clients use custom baskets?

Basket advantage: **Operational Efficiency (Single Instrument Execution), Cross-Market Access**
Purpose: **Alpha Generation, Thematic Investing, Hedging (Sectors / Factors)**
MS Baskets: **700+ general marketing baskets, 12k+ tailored baskets in Asia**

Examples of Investment Themes

Core Theme	Topics	Universe	Style
US political leadership	**Global Trade Tensions, Defense** (+Crypto, IRA)	Asia	Macro
US and JP monetary policy	**JP and US Yield Curve move**	Asia	Macro
Currency and Gold	**Weak dollar, Weak Asian** (CNY, INR, JPY, VND), **Gold**	Asia	Macro
AI	NVIDIA, OpenAI, **LLMs and Robotics** (World models)	Asia	Thematic
Asia Thematic	**Korea: DPK (Defense, Corporate Reform, Shipbuilders)** **China: AI and Semi Localization, HK: AH dual listing**	Asia	Thematic
India Thematic	Weekly options, **Mutual Funds**	India	Thematic
Japan Thematic	**Corp Reform**, **FX Sensitive**, AI, and Asset inflation	Japan	Thematic
Positioning and Crowding	Index Option - **Dealers' Gamma**, Futures - **CTA flow**, Equity - **Short Squeeze**, **MEME** and **FOMO**	Asia	Positioning

MSR Japan Analyst Stock Rating (MSRアナリストのレーティング戦略)

Japan Midcap Adventure in Alliance 2.0 - MSMS and MUMSS Joint Venture - (QDS report on 2025-02-12)

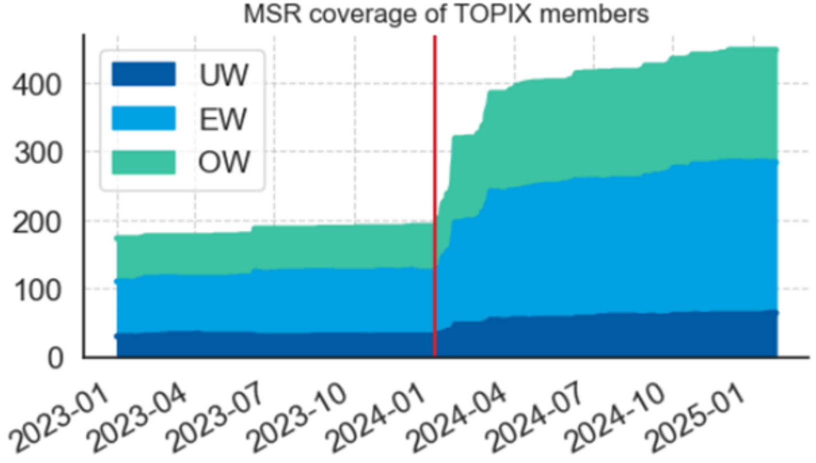
Basket Methodology

- **Universe**: TOPIX Index constituents
- **Screening**: Long Portfolio - MSR Overweight stocks
  Short Portfolio - MSR Underweight stocks
- **Weighting**: liquidity optimized with 3.0% cap, 30% sector cap
- **Risk factor constraint**: 0.5 factor exposure cap for spread
- **Minimum tail tradability constraint**: 50mn USD@20% ADV (MSAPJROW/UW trade 300mn, 100mn USD @ 20% ADV)
- **Rebalance mechanism**: Monthly rebalance
- **Back-test period**: 2019-Jan to 2025-Jan

Performance Statistics (2021-01-04 to 2025-11-07)

	MSR OW vs MSR UW
Absolute Return	67.8%
Return (ann.)	11.3%
Volatility (ann.)	7.8%
Return / Risk Ratio	1.45
Max Drawdown	-8.0%

MSR Analyst stock coverage



Source: MS QDS, LSEG Refinitiv, Data as of 2025-02-12

Equity Long Short Strategy Performance

Source: MS QDS, Bloomberg, Data as of 2025-11-07

Next-GEN TOPIX Market Anomalies (新TOPIX指数による市場アノマリー)

Next-GEN TOPIX Index Consultation (QDS Report published on 2024-06-28)

Estimated # of constituents of Next-GEN TOPIX

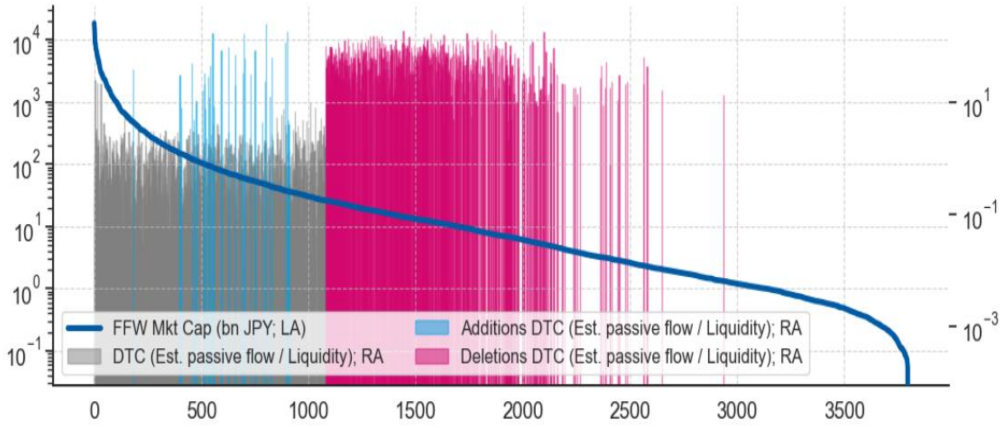
Segment	Total	Current TOPIX	Next-GEN TOPIX 2026 - 2028
TSEP	1629	1588	1012
TSES	1569	101	36
TSEG	603	0	12
Total	3801	1689	1060

Source: MS QDS, Bloomberg, Toyo Keizai, JPX, Data as of 2025-05-09

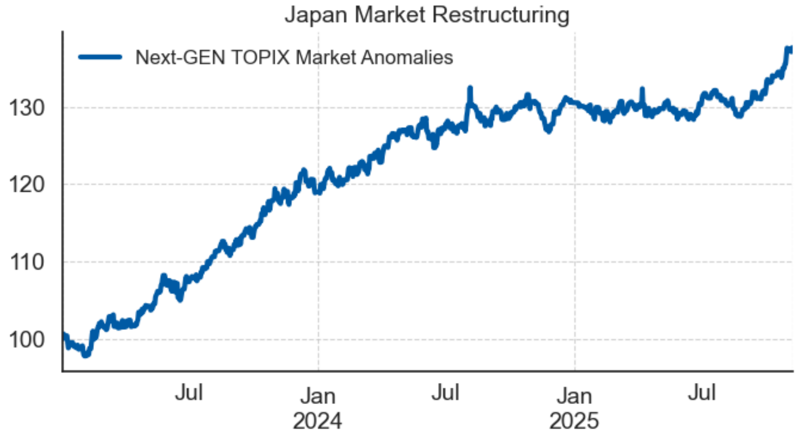
Performance Statistics (2021-01-04 to 2025-11-07)

	Next-GEN TOPIX Market Anomalies
Absolute Return	37.3%
Return (ann.)	11.8%
Volatility (ann.)	6.5%
Return / Risk Ratio	1.81
Max Drawdown	-4.3%

Free Float Market Cap of Japan Listed Stocks and Estimated market DTC impact on the Next-GEN TOPIX Index reform



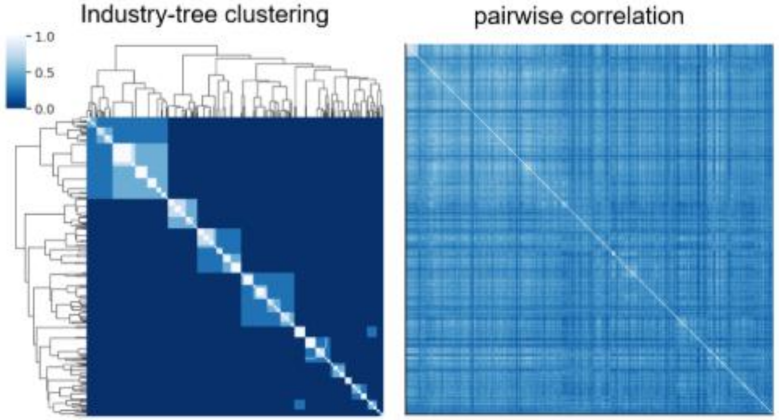
Equity Long Short Strategy Performance



Source: MS QDS, Bloomberg, Toyo Keizai, JPX, Data as of 2025-11-07

Lead-Lag Relationship in Industry (産業内のリードラグ関係)

Industry classification and Pairwise correlation of stock prices



Performance Statistics (2016-08-01 to 2025-11-07)

	Lead-Lag Market Anomalies
Absolute Return	74.7%
Return (ann.)	6.2%
Volatility (ann.)	4.9%
Return / Risk Ratio	1.28
Max Drawdown	-7.0%

Portfolio Factor Analysis

Portfolio Risk Estimation (as of 2025-04-30)	Lead-Lag Market Anomalies
Total Risk (Ann. Volatility)	4.3%
- Country Risk	0.0%
- Quant Factor Risk	0.7%
- Sector Risk	1.6%
- Idiosyncratic Long Risk	**3.2%**
- Idiosyncratic Short Risk	2.4%
Long Alpha Variance Ratio	**53.8%**
Short Alpha Variance Ratio	30.6%
Alpha Variance Ratio	**84.4%**

Alpha Variance Ratio = Idiosyncratic Risk^2 / Estimated Risk^2

Equity Long Short Strategy Performance

Source: MS QDS, Bloomberg, Data as of 2025-11-07
Back-test period: from 2016-07-01 to 2025-06-27, Transaction cost and stock borrow cost are not included.

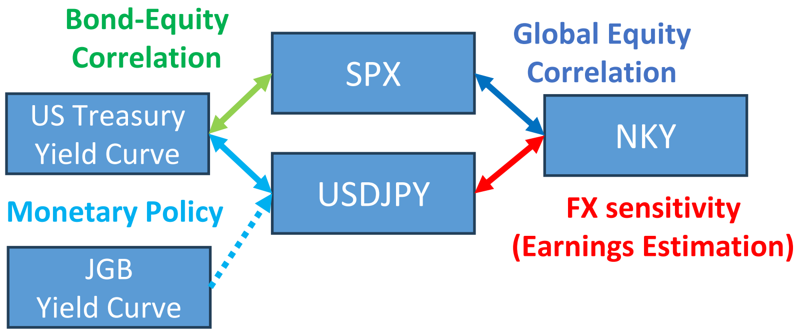
Morgan Stanley

SECTION 2

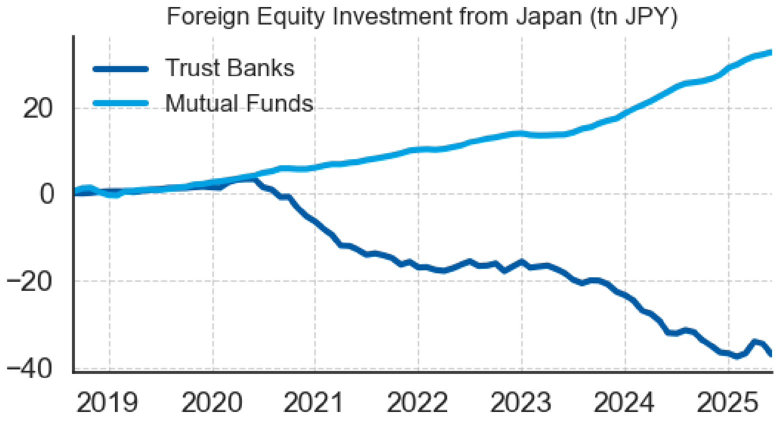
Integration with MAC Models

Multi-asset correlations and investors’ activity (マルチ･アセット相関と投資行動)

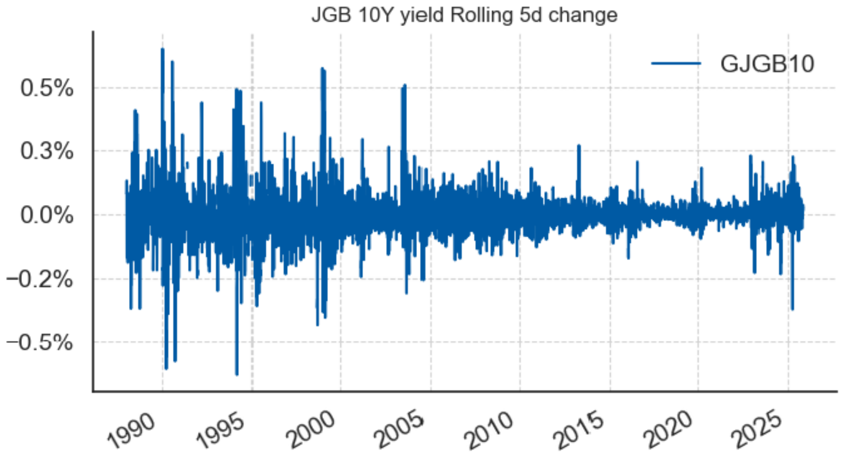
Multi-Asset Diagram



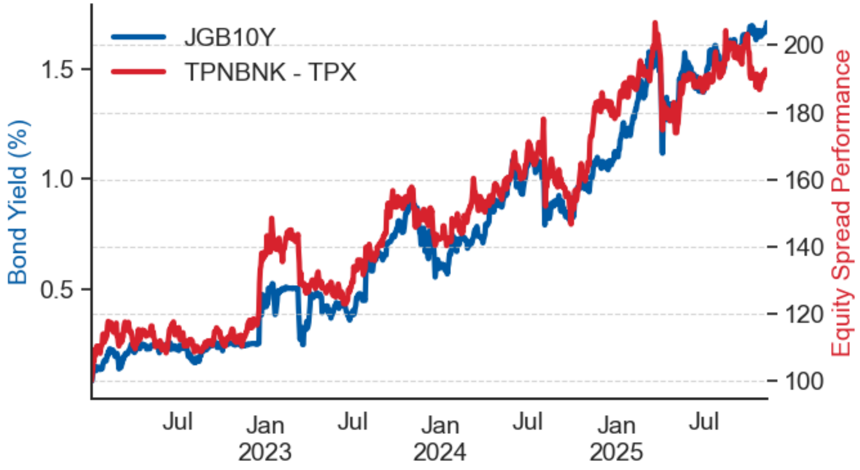
Multi-asset move changes the investors’ activities



JGB 10Y Yield Changes



Equity Spread of Financials sectors and TOPIX



Source: MS QDS, Bloomberg, Data as of 2025-11-07

MSCI MAC Model-based Macro Stress Test (Benchmark and Financials)

FX – Bond – Equity Correlated Estimation

Benchmark	US Rates 50bps cut (bull steepening)	US Rates 50bps cut (parallel shift)	JP Rates 25bps hike (parallel shift)	JP Rates 25bps hike (Bear Steepening)	USDJPY 10yen drop
TOPIX	-1.5%	-1.6%	2.6%	2.2%	-3.9%
NIKKEI 225	-1.4%	-1.2%	2.3%	1.9%	-4.1%
TOPIX Small	-1.6%	-1.9%	2.1%	1.8%	-3.4%
TOPIX Mothers	-1.8%	-1.6%	2.6%	2.2%	-3.6%
USDJPY	-1.9%	-3.4%	0.9%	1.0%	-6.7%
JP Rates					
JP Higher Rates Losers	-0.8%	-0.5%	1.0%	0.8%	-2.9%
JP Mega Bank Basket	-2.4%	-3.1%	5.9%	5.3%	-4.8%
JP Regional Bank	-2.5%	-3.2%	5.1%	4.5%	-4.4%
JP Fin Rate Sensitive	-2.5%	-3.1%	5.8%	5.2%	-4.7%

Bond – Equity Correlated Estimation (USDJPY Fixed)

Benchmark	US Rates 50bps cut (bull steepening)	US Rates 50bps cut (parallel shift)	JP Rates 25bps hike (parallel shift)	JP Rates 25bps hike (Bear Steepening)
TOPIX	-0.2%	0.7%	2.1%	1.6%
NIKKEI 225	0.0%	1.4%	1.7%	1.2%
TOPIX Small	-0.6%	-0.2%	1.6%	1.3%
TOPIX Mothers	-0.6%	0.4%	2.1%	1.6%
USDJPY	0.0%	0.0%	0.0%	0.0%
JP Rates				
JP Higher Rates Losers	0.2%	1.4%	0.6%	0.3%
JP Mega Bank Basket	-1.2%	-0.9%	5.3%	4.6%
JP Regional Bank	-1.5%	-1.3%	4.6%	3.9%
JP Fin Rate Sensitive	-1.3%	-1.1%	5.2%	4.5%

LDP	AI	Reform	Positioning	Micro topic

source: MS QDS, MSCI Barra MAC Model, Data as of 2025-11-12

MSCI MAC Model-based Macro Stress Test (Sectors and Thematic)

Sectors Outperformance vs TOPIX	US Rates 50bps cut (parallel shift)	JP Rates 25bps hike (parallel shift)	USDJPY 10yen drop
JP Financials	-1.2%	2.4%	-0.6%
JP Materials	-0.9%	1.8%	-1.1%
JP Insurer	-1.0%	1.8%	-0.4%
JP Financials ex Banks	-0.8%	1.5%	-0.3%
JP Energy	-2.4%	1.1%	-1.6%
JP Brokers & Fintech	-0.5%	1.0%	-0.3%
JP Nuclear Energy	-0.2%	0.8%	-0.8%
JP Factory Automation	-0.3%	0.7%	-0.5%
JP Autos	-1.3%	0.7%	-1.5%
JP Industrials	-0.3%	0.6%	-0.4%
JP Materials	-0.4%	0.3%	0.1%
JP Semiconductors	0.2%	0.1%	-1.4%
JP Auto Components	-1.0%	-0.1%	-1.0%
Japan SPE	0.3%	-0.1%	-1.6%
JP Renewables	0.3%	-0.1%	1.0%
JP Info Tech	0.3%	-0.2%	-1.0%
JP Chemicals	-0.2%	-0.2%	0.5%
JP Utilities	0.8%	-0.5%	0.9%
JP Cons Disc	-0.1%	-0.6%	0.0%
Software as a Service	0.2%	-0.8%	0.4%
JP Games	0.4%	-0.9%	0.3%
JP Broadcasts	0.1%	-1.1%	0.7%
JP Telco & Media	0.7%	-1.1%	1.1%
JP Land Transport	0.2%	-1.3%	1.1%
JP Healthcare	1.4%	-1.4%	1.4%
JP Real Estate	1.0%	-1.4%	1.2%
JP Pharma	1.3%	-1.4%	1.4%
JP Internets	0.6%	-1.5%	1.5%
JP Cons Staples	1.4%	-2.6%	2.2%
JP Liquid JREIT	1.5%	-2.6%	3.3%
JP Food	1.2%	-2.7%	2.2%

Thematics Outperformance vs TOPIX	US Rates 50bps cut (parallel shift)	JP Rates 25bps hike (parallel shift)	USDJPY 10yen drop
JP Defense (Defense weight)	-0.8%	1.7%	-1.7%
JP Reflation	-0.8%	1.4%	-0.8%
JP Defense	-0.6%	1.2%	-1.4%
JP High-Beta Cyclicals	-0.3%	1.0%	-1.4%
JP Input Price Resilient	-0.4%	0.5%	-0.2%
JP Weak Balance Sheet	-0.2%	0.4%	-0.2%
JP Kyushu related	-0.2%	0.3%	-0.5%
JP China Sensitive Bskt	-0.3%	0.3%	-0.4%
JP EM Exposure	-0.3%	0.3%	0.2%
High India exposure JP basket	-0.2%	0.2%	-0.3%
Japan Big Rebuild	-0.2%	0.2%	-0.2%
JP Apple Suppliers	-0.1%	0.2%	-0.7%
JP Input Price Loser	0.0%	0.2%	-0.6%
JP Supply Chain Rebuilder	-0.1%	0.1%	0.0%
JP Exporters Basket	0.1%	0.1%	-0.9%
JP Data Center	0.2%	0.0%	-0.2%
JP Low Commodity Benefit	-0.5%	0.0%	-0.2%
JP China Reopening	-0.1%	-0.1%	0.0%
JP EUR Sensitive Basket	-0.1%	-0.1%	0.1%
JP Digitalization	0.2%	-0.1%	-0.2%
JP AI in Action	0.2%	-0.2%	-0.5%
JP Potential MBO	-0.1%	-0.4%	0.4%
JP High Quality Credit	0.3%	-0.4%	0.5%
JP Potential TOB	-0.1%	-0.6%	0.5%
JP Highly Shorted	0.0%	-0.7%	0.7%
JP Pricing Power	0.4%	-0.7%	0.8%
JP Domestics	0.4%	-0.9%	0.9%
JP Real Estate Unlock	0.5%	-1.2%	1.0%
JP Importer Local Earner	0.4%	-1.4%	1.1%
JP Inbound Tourism	0.4%	-1.5%	1.1%
JP Defensives	1.3%	-2.3%	2.0%

LDP | AI | Reform | Positioning | Micro topic

source: MS QDS, MSCI Barra MAC Model, Data as of 2025-11-12

MSCI MAC Model-based Macro Stress Test (Factors and Alpha)

Factors L/S Pair	US Rates 50bps cut (bull steepening)	US Rates 50bps cut (parallel shift)	JP Rates 25bps hike (parallel shift)	JP Rates 25bps hike (Bear Steepening)	USDJPY 10yen drop
Realized Vol	-1.0%	-0.6%	1.9%	1.5%	-2.2%
Momentum	-0.9%	-1.2%	1.9%	1.7%	-2.1%
Quality	0.4%	0.8%	-1.5%	-1.4%	0.6%
Growth	-0.4%	-0.2%	0.7%	0.6%	-0.7%
Value	-0.4%	-1.3%	1.2%	1.2%	-0.4%
Size	0.1%	0.4%	0.6%	0.5%	-0.5%
MSR Overweight vs Underweight	-0.1%	0.1%	0.4%	0.3%	-0.5%
Laggard vs Hedge	0.0%	-0.1%	-0.1%	-0.1%	-0.1%
Highly Shorted vs Hedge	0.0%	0.0%	0.1%	0.1%	0.0%
Dividend	-0.1%	-0.4%	0.1%	0.1%	0.3%
FX Sensitivity L/S Pair					
Foreign Sensitivity Low / High	0.1%	0.1%	-0.5%	-0.5%	0.3%
JPY Appreciation Winner / Loser	0.4%	0.5%	-0.9%	-0.7%	1.3%
Defensive vs Cyclical	1.7%	1.6%	-3.3%	-2.8%	3.4%
Corporate Reform L/S Pair					
X-share Unwind Beneficiary	-0.4%	-0.4%	1.3%	1.1%	-1.1%
JP High Foreigners Own	-0.1%	0.0%	0.1%	0.0%	-0.2%
JP Total Return	0.1%	-0.3%	-0.1%	0.0%	0.4%
Next-Gen TOPIX Anomalies	0.2%	0.1%	-0.1%	-0.1%	0.1%
JP Low PBR Cash Rich	-0.3%	-0.7%	0.3%	0.3%	-0.1%

LDP	AI	Reform	Positioning	Micro topic

source: MS QDS, MSCI Barra MAC Model, Data as of 2025-11-12

Conclusion and Future Work

Our Goal: To provide the portfolio / derivative solution to clients by the quantitative analysis

Objective function: to maximize **Alpha Signal** and to minimize **Risk**

- **Alpha**: **MS Research** – Strategist, Economist **=> Integrations with MAC Models**
- **Risk**: **Equity Factor Models** –Japan Specific Factors and Global Equity Factors
  MAC (Multi-Asset Class) Factor Models – Equity and Bond, Equity and FX
- **Solution:** (1) **Sector / Factor / Thematic / Alpha / Hedging** – 700+ general Asia custom baskets
  (2) **Liquid Index Replication** – Combination of futures and custom baskets
  (3) **Portfolio analysis / Back-testing** – **Client tailored solution** of portfolio or derivative analysis

Future Work

- **Further Integrations with AI**
  - Thematic ideas – Market flow, Positioning, Corporate and index events
  - Client Enhancement – Portfolio Consultation over Non-Disclosure Agreement (NDA)
- **Further Integrations with MS Platforms**
  - **IRIS** (Interactive Derivative Investment Strategies) – Option back-testing and analytics
  - **QIS** (Quantitative Investment Strategies) - systematic multi-asset strategy
  - **MSA** (Morgan Stanley analytics) – portfolio management and analytics tool

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Americas

United States
+1 888 588 4567 (toll free)

Canada
+1 416 628 1007

Brazil
+55 11 4040 7830

Mexico
+52 81 1253 4020

Asia Pacific

China
+86 21 61326611

Hong Kong
+ 852 2844 9333

India
+ 91 22 6784 9160

Malaysia
1800818185 (toll free)

South Korea
+82 70 4769 4231

Singapore
+65 67011177

Australia
+612 9033 9333

Taiwan
008 0112 7513 (toll free)

Thailand
0018 0015 6207 7181 (toll free)

Japan
+81 3 4579 0333

Europe, Middle East & Africa

South Africa
+ 27 21 673 0103

Germany
+ 49 69 133 859 00

Switzerland
+ 41 22 817 9777

United Kingdom
+ 44 20 7618 2222

Italy
+ 39 02 5849 0415

France
+ 33 17 6769 810

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