RBC Global Asset Management

Diversification benefits of owning Asian Equities – Japan

The RBC Asian Equity team

- Regional and global equity portfolios are often underweight Asian equities, but we believe they should produce the best risk-adjusted returns when sources of alpha are diversified. Our study shows how Japanese equities can help global and developed market investors lower volatility and add uncorrelated sources of alpha.

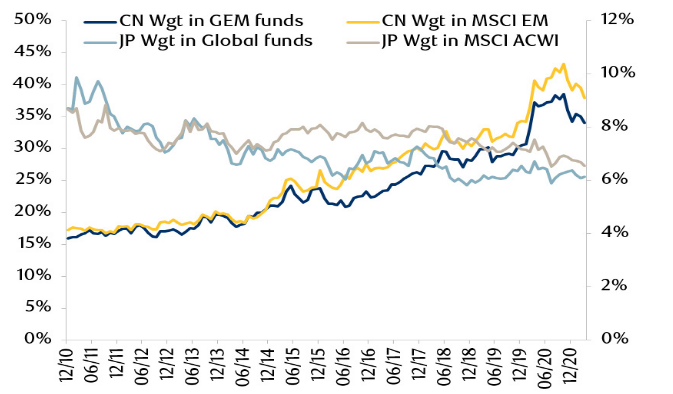
- Idiosyncratic alpha opportunities in Japan are what makes the country a more interesting market over the long term. This disruptive growth is best captured through an active manager that understands how Japan and Asia are changing; plain index exposure could be backward looking and lacks bottom-up considerations on environmental, social and governance (ESG) risk.

Why diversification matters and how we measure it

Most investors would agree that no single asset class can be an outperformer forever. In the last decade, U.S. equities outperformed all other major indices, while in the preceding decade, emerging markets (EM) equities was the stand-out asset class.[1] There are cycles to relative performance among regional equities and outperforming markets can change. The danger for global allocators is to underestimate this possibility and to invest only in recent winners without paying sufficient attention to diversification and risk management.

Global investors are often underweight Asian equities.[2] Japan is the second largest country in the MSCI World Index after the U.S. but many have yet to consider a long-term active investment strategy for Japan and some have no exposure at all to Japan. Similarly, China is the second largest economy after the U.S. but it is still 'emerging' and has the growth potential of EM. However many global, even EM equity, investment managers do not appear to appreciate fully the importance of the inclusion of the China A shares in MSCI indices and how this is affecting their China or EM strategies. According to a 2019 survey,

Exhibit 1: Country weight held by fund managers relative to benchmark



Source: Citi Research, EPFR. Japan vs MSCI ACWI Index (right hand side) and the China vs. MSCI Emerging Markets Index (left- hand side). Data as at December 2020.

30% of EM managers and 73% of global equities managers had zero exposure to China A shares, despite it being announced as a part of the MSCI Emerging Markets Index in 2017.[3] (Exhibit 1)

1 Bloomberg, MSCI, data as at May 2021.
2 Citi quantitative research, MSCI, EPFR data as at March 2021. Sample size of 99 GEM (global emerging markets) managers and 141 ACWI (all country world index) managers, representing USD572bn and USD733bn in total AUM respectively.
3 Greenwich Associates. April 2020. Crafting the Optimal China Allocation Strategy: The Asset Owner's Perspective. Interviews were conducted in 2H of 2019 with 118 institutional investors globally and 20 investment consultants.

"As one of the most rapidly aging, globally connected, technologically advanced and urban societies, Japan can lead future global disruption as it finds new sources of growth."

This oversight is understandable. At the index level, Asian equities achieved long-term returns comparable to those of EM or Europe and the aggregate weight of Japan and China currently, based on the MSCI All Country World Index (ACWI), is only 10%-12% which is well below that of the U.S. at around 55%. The Japanese economy has been struggling to reinvent itself for a few decades and its weight in the ACWI has been eroding over time whereas China's role in the global economy has been growing along with its index weight. Global investors remain hesitant however, possibly due to EM equities struggling since the global financial crisis, or because of concerns about corporate governance or geopolitical risk.

Nonetheless, we believe allocating capital to Asian equities, namely Japan, China, and China A shares, deserves careful consideration by global investors seeking to lower their portfolio risk in a meaningful way while also accessing new and different sources of alpha.

Diversifying makes even more sense when global markets are increasingly volatile and there may be structural shifts in major sources of economic growth. China's meteoric economic rise in the last two decades - and the subsequent challenge to world order - is one shift that is still evolving. Japan's 'quiet revolution' is still in full swing and should be observed closely. As one of the most rapidly aging, globally connected, technologically advanced and urban societies, Japan can lead future global disruption as it finds new sources of growth.[4]

Diversification helps investors to remain steadfast and fully invested for the long term while managing volatility and risk. Portfolio diversification can be achieved by owning stocks from different sectors, geographical areas or those with different style exposure, regardless of investment mandate and objective, be it to maximize Sharpe ratio or to minimize risk.

There are minimal diversification benefits if two assets are highly correlated and therefore checking empirical data for low correlation is useful to gauge whether a set of two assets (such as adding Asian equities to a global equities portfolio) can provide lower volatility in aggregate and effective diversification. On the other hand, it is also necessary to understand the historical data and contextualise it to form a forward-looking view. As active investors, we also try to consider why something is or is not correlated from a fundamental point of view.

In this article, we will expand on our current thinking to explain why allocating to Asian equities should benefit global investors, mainly through diversification but also idiosyncratic alpha generation. We will then examine how owning Japanese equities can help to lower risk for global or developed markets (DM) equity-focused investors.

We ask ourselves the following questions, broadly employing the same analytical framework:

1. Who are the key market participants here (e.g. retail vs institutional and domestic vs foreign)? Is this market unique in terms of who dominates the trading volume, and how does that affect volatility? How is this changing over time?

2. How correlated is the market to other markets? What does earnings growth rely on for companies in this country/market? How sensitive is this market to global macro events? How much of the economy is made up of domestic rather than global business? How connected is the economy to the rest of the world?

3. Is this a stock picker's market? Are there opportunities to capture idiosyncratic alpha through stock-picking led by fundamental research and active investing? By definition idiosyncratic alpha is not highly correlated with factors; as such unique sources of alpha also help to lower risk and offer diversification benefits.

[4] McKinsey Global Institute. *The Future of Japan: Reigniting Productivity and Growth*. March 2015.

How can Japanese equities offer diversification benefits?

Japan is the second largest DM country and fourth largest exporter globally.[5] This DM status sets it apart from other Asian countries that are generally considered to be EM. While Japan is often regarded as a separate asset class from other Asian equities, it is also quite different from western economies or DM equities. Owing to both its geographic proximity and cultural affinity, Japan has deep ties with Asia's growth trends, demonstrated by shared supply chains and economic transactions. Nearly 60% of Japan's exports are within the Asia Pacific region, while only 25% of its exports are to the Americas and 16% to others including Europe and Africa.[6] As Japanese companies grow their businesses overseas and Asian countries like China continue to rely on Japanese technology to achieve their economic development goals, Japan's economic ties with Asia's growth should remain strong. We do not believe that Japanese equities are highly correlated with global or DM equities, and as such the asset class offers clear diversification benefits as well as being a unique source of alpha.

Empirically, however, Japan does not show meaningful diversification benefits at the market level. Data since 2012 shows Japan as 76% and 63% correlated to DM and EM equities respectively, only marginally better than Europe at 81% and 74%. Data since 1996 shows Japan as 59% and 56% correlated to DM and EM equities respectively, showing markedly better diversification potential (Exhibit 2).

As active investors offering a portfolio of bottom-up stock ideas, and not merely exposure to the market index, we believe that a more granular approach to the analysis could generate a more realistic correlation study. To this end, we compare more specific market exposure through pairwise correlation at the style level, e.g. U.S. Growth, U.S. Value, Japan Growth, Japan Value etc. (Exhibit 3). Here we find that Japanese equities do show low correlation between their own style factors and style factors in other markets.

This is unique in the sense that a similar comparison of style factor correlation between U.S. and European

Exhibit 2: Pairwise market correlation with other regions – Japan

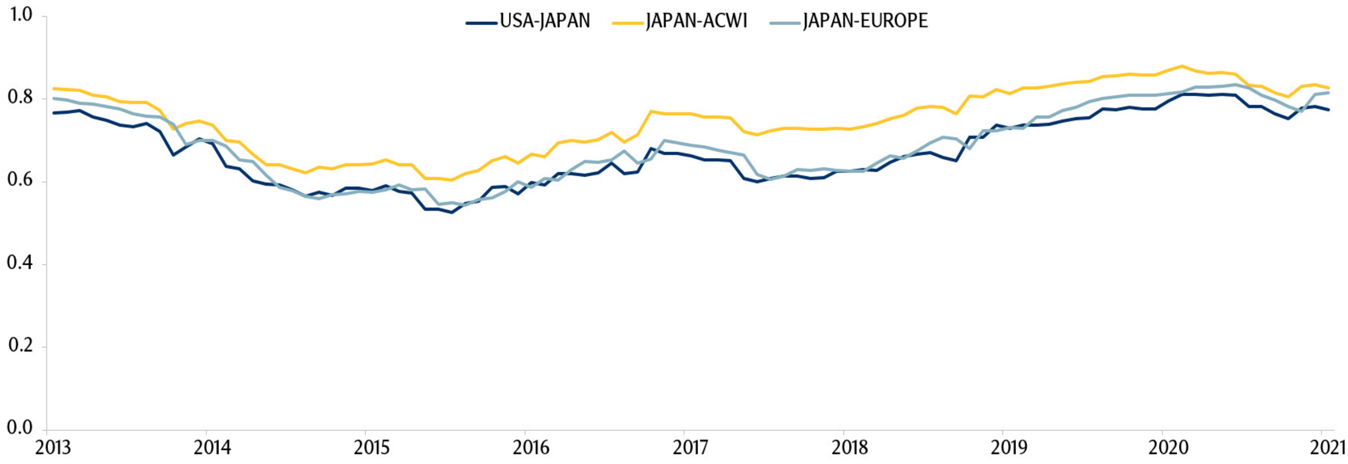
Correlation matrix since 1996 - (December 1995)							Avg pairwise correlation		
	JP	US	EU	AxJ	LatAm	EMEA	DM	EM	Global
JP	-	0.59	0.60	0.60	0.50	0.59	**0.59**	**0.56**	0.58
US	0.59	-	0.84	0.70	0.68	0.71	0.71	0.69	0.70
EU	0.60	0.84	-	0.70	0.73	0.79	0.72	0.74	0.73
AxJ	0.60	0.70	0.70	-	0.75	0.76	0.67	0.75	0.70
LatAm	0.50	0.68	0.73	0.75	-	0.84	0.63	0.79	0.70
EMEA	0.59	0.71	0.79	0.76	0.84	-	0.70	0.80	0.74

Correlation matrix since 2012 - (December 2011)							Avg pairwise correlation		
	JP	US	EU	AxJ	LatAm	EMEA	DM	EM	Global
JP	-	0.75	0.77	0.67	0.55	0.68	**0.76**	**0.63**	0.69
US	0.75	-	0.84	0.72	0.59	0.70	0.80	0.67	0.72
EU	0.77	0.84	-	0.74	0.68	0.80	**0.81**	**0.74**	0.77
AxJ	0.67	0.72	0.74	-	0.70	0.80	0.71	0.75	0.73
LatAm	0.55	0.59	0.68	0.70	-	0.85	0.61	0.78	0.68
EMEA	0.68	0.70	0.80	0.80	0.85	-	0.72	0.82	0.76

Source: Citi research. Data as at February 2021. .

[5] World Bank, data as of 2019.
[6] CEPII (Le Centre d'études prospectives et d'informations internationals) BACI HS6 REV. 1992 (1995 - 2019). OEC (Observatory of Economic Complexity), data as of 2019.

Exhibit 3: Rolling correlation with other regions – Japan



Source: UBS research. Data as at January 2021. A closer look at the data suggests an apparent cyclicality to Japan's correlation with global or DM equities. Correlation figures drop to 60% or lower in the period 2014-2016, but it can be as high as 80% in years like 2013. What drives this cyclicality is not obvious but it is important to understand that these figures can be dynamic and correlation can be driven by both the evolution of Japan's economy or by broader global equity market trends.

Exhibit 4: Pairwise style correlation with other regions

Factor return correlation since 2011	JP							US						
	Value	Growth	Price	Earning	Risk	Quality	Size	Value	Growth	Price	Earnings	Risk	Quality	Size
JP Value	-	-0.27	-0.46	-0.46	-0.37	-0.33	-0.42	0.38	-0.15	-0.20	-0.22	-0.26	-0.16	-0.24
JP Growth	-0.27	-	0.08	0.12	0.02	0.48	0.44	-0.24	0.35	-0.08	0.02	-0.17	-0.11	0.00
JP Price	-0.46	0.08	-	0.74	0.53	0.49	0.41	-0.20	0.03	0.42	0.32	0.39	0.31	0.35
JP Earnings	-0.46	0.12	0.74	-	0.40	0.35	0.34	-0.16	0.00	0.34	0.31	0.30	0.24	0.32
JP Risk	-0.37	0.05	0.53	0.40	-	0.67	0.34	-0.21	0.00	0.45	0.31	0.60	0.46	0.46
JP Quality	-0.33	0.48	0.46	0.35	0.67	-	0.54	-0.21	0.11	0.23	0.19	0.28	0.23	0.31
JP Size	-0.42	0.44	0.41	0.34	0.34	0.54	-	-0.23	0.20	0.10	0.13	0.11	0.09	0.21
US Value	0.38	-0.24	-0.20	-0.16	-0.21	-0.21	-0.23	-	-0.68	-0.24	-0.53	-0.19	-0.11	-0.35
US Growth	-0.15	0.35	0.03	0.00	0.00	0.11	0.20	-0.68	-	-0.24	-0.53	-0.19	-0.11	-0.35
US Price	-0.20	-0.08	0.42	0.34	0.45	0.23	0.10	-0.24	0.17	-	0.73	0.79	0.83	0.77
US Earnings	-0.22	0.02	0.32	0.31	0.31	0.19	0.13	-0.53	0.47	0.73	-	0.51	0.53	0.61
US Risk	-0.26	-0.17	0.39	0.30	0.60	0.28	0.11	-0.19	0.11	0.79	0.51	-	0.86	0.81
US Quality	-0.16	-0.11	0.31	0.24	0.46	0.23	0.09	-0.11	0.17	0.83	0.53	0.86	-	0.80
US Size	-0.24	0.00	0.35	0.32	0.46	0.31	0.21	-0.35	0.30	0.77	0.61	0.81	0.80	-
Europe Value	0.43	-0.12	-0.32	-0.27	-0.46	-0.39	-0.25	0.65	-0.42	-0.33	-0.40	-0.42	-0.31	-0.41
Europe Growth	-0.11	0.34	0.14	0.07	0.19	0.27	0.19	-0.45	0.69	0.28	0.36	0.29	0.32	0.33
Europe Price	-0.17	-0.04	0.41	0.34	0.45	0.27	0.13	-0.25	0.23	0.78	0.56	0.71	0.70	0.62
Europe Earnings	-0.21	-0.03	0.42	0.40	0.39	0.24	0.17	-0.24	0.29	0.63	0.57	0.59	0.58	0.58
Europe Risk	-0.28	-0.10	0.36	0.27	0.60	0.33	0.12	-0.20	0.13	0.64	0.40	0.79	0.70	0.61
Europe Quality	-0.13	-0.03	0.28	0.18	0.49	0.29	0.08	-0.20	0.25	0.59	0.36	0.72	0.69	0.62
Europe Size	-0.26	0.05	0.32	0.29	0.45	0.37	0.24	-0.38	0.30	0.45	0.42	0.57	0.52	0.62
EM Value	0.39	-011	-0.26	-0.26	-0.28	-0.20	-0.21	0.46	-0.28	-0.34	-0.40	-0.32	-0.21	-0.35
EM Growth	-0.02	0.31	0.01	0.01	-0.09	0.09	0.06	-0.21	0.32	0.04	0.12	-0.03	0.00	-0.02
EM Price	-0.18	0.03	0.38	0.36	0.28	0.21	0.12	-0.29	0.17	0.56	0.46	0.40	0.37	0.42
EM Earnings	-0.06	0.12	0.21	0.23	0.05	0.12	0.14	-0.31	0.21	0.29	0.39	0.10	0.09	0.18
EM Risk	-0.26	-0.09	0.29	0.26	0.53	0.29	0.08	-0.27	0.11	0.60	0.43	0.39	0.57	0.55
EM Quality	-0.17	-0.07	0.21	0.21	0.37	0.23	-0.01	-0.17	0.09	0.52	0.37	0.58	0.53	0.47
EM Size	-0.14	0.11	0.16	0.18	0.15	0.22	0.21	-0.29	0.25	0.25	0.29	0.22	0.19	0.33

Factor return correlation since 2011	Europe							EM						
	Value	Growth	Price	Earning	Risk	Quality	Size	Value	Growth	Price	Earnings	Risk	Quality	Size
JP Value	0.43	-0.11	-0.17	-0.21	-0.28	-0.13	-0.26	0.39	-0.02	-0.18	-0.06	-0.26	-0.17	-0.14
JP Growth	-0.12	0.34	-0.04	-0.03	-0.10	-0.03	0.05	-0.11	0.31	0.03	0.12	-0.09	-0.07	0.11
JP Price	-0.32	0.14	0.41	0.42	0.36	0.28	0.32	-0.26	0.01	0.38	0.21	0.29	0.21	0.16
JP Earnings	-0.27	0.07	0.34	0.40	0.27	0.18	0.29	-0.26	0.01	0.38	0.21	0.29	0.21	0.16
JP Risk	-0.46	0.19	0.45	0.39	0.60	0.49	0.45	-0.28	-0.09	0.28	0.05	0.53	0.37	0.15
JP Quality	-0.39	0.27	0.27	0.24	0.33	0.29	0.37	-0.20	0.09	0.21	0.12	0.29	0.23	0.22
JP Size	-0.25	0.19	0.13	0.17	0.12	0.08	0.24	-0.21	0.06	0.15	0.14	0.08	-0.01	0.21
US Value	0.65	-0.45	-0.25	-0.24	-0.20	-0.20	-0.38	0.46	-0.21	-0.29	-0.31	-0.27	-0.17	-0.29
US Growth	-0.42	0.69	0.23	0.29	0.13	0.25	0.30	-0.28	0.32	0.17	0.21	0.11	0.09	0.25
US Price	-0.33	0.28	0.78	0.63	0.64	0.59	0.45	-0.34	0.04	0.56	0.29	0.60	0.52	0.25
US Earnings	-0.40	0.36	0.56	0.57	0.40	0.36	0.42	-0.40	0.12	0.46	0.39	0.43	0.37	0.29
US Risk	-0.42	0.29	0.71	0.59	0.79	0.72	0.57	-0.32	-0.03	0.40	0.10	0.69	0.58	0.22
US Quality	-0.31	0.32	0.70	0.58	0.70	0.69	0.52	-0.21	0.00	0.37	0.09	0.57	0.53	0.19
US Size	-0.41	0.33	0.62	0.58	0.61	0.55	0.62	-0.35	-0.02	0.42	0.18	0.55	0.47	0.33
Europe Value	-	-0.62	-0.58	-0.55	-0.61	-0.61	-0.60	0.51	-0.17	-0.32	-0.18	-0.50	-0.38	-0.33
Europe Growth	-0.62	-	0.53	0.50	0.47	0.61	0.43	-0.31	0.38	0.24	0.14	0.32	0.30	0.24
Europe Price	-0.58	0.53	-	0.82	0.78	0.80	0.59	-0.38	0.07	0.45	0.28	0.52	0.45	0.29
Europe Earnings	-0.55	0.50	0.82	-	0.67	0.64	0.54	-0.38	0.07	0.45	0.28	0.52	0.45	0.29
Europe Risk	-0.61	0.47	0.78	0.67	-	0.88	0.58	-0.36	0.05	0.42	0.09	0.70	0.60	0.24
Europe Quality	-0.61	0.61	0.80	0.64	0.88	-	0.61	-0.30	0.14	0.32	0.12	0.53	0.48	0.41
Europe Size	-0.60	0.43	0.59	0.54	0.58	0.61	-	-0.36	0.14	0.32	0.12	0.53	0.48	0.41
EM Value	0.51	-0.31	-0.40	-0.38	-0.36	-0.30	-0.36	-	-0.34	-0.55	-0.38	-0.53	-0.41	-0.49
EM Growth	-0.17	0.38	0.15	0.07	0.05	0.17	0.14	-0.34	-	0.21	0.23	0.10	0.26	0.22
EM Price	-0.32	0.24	0.56	0.45	0.42	0.40	0.32	-0.55	0.21	-	0.60	0.49	0.56	0.49
EM Earnings	-0.18	0.14	0.27	0.28	0.09	0.07	0.12	-0.38	0.23	0.60	-	0.19	0.19	0.40
EM Risk	-0.50	0.32	0.61	0.52	0.70	0.66	0.53	-0.53	0.10	0.49	0.19	-	0.75	0.34
EM Quality	-0.38	0.30	0.55	0.45	0.60	0.59	0.48	-0.41	0.26	0.56	0.19	0.75	-	0.41
EM Size	-0.33	0.24	0.27	0.29	0.24	0.25	0.41	-0.49	0.22	0.49	0.40	0.34	0.41	-

Source: Citi research. Data as at January, 2021.

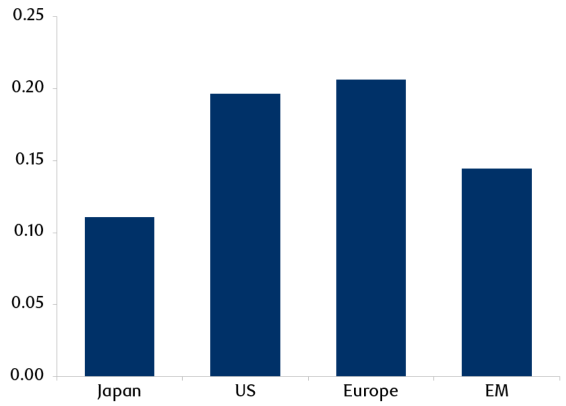
equities does not show the same low correlation found with Japanese equities. In fact, Japan shows lower style correlation with the U.S. or Europe, even when compared to EM. This low correlation exists when we compare the same factors across different regions (Japanese Value and European Value) but also holds for factors that, by definition, tend to exhibit higher correlations (e.g. price and earnings momentum) (Exhibit 4 & 5).

Because of these low correlations, even if allocations in Japan and other DMs have similar factor tilts, they will still provide diversification to some extent. This could allow for more flexibility in the allocation process in terms of factor exposure. And while this benefit is not as obvious as market-level diversification - and is sometimes neglected - we believe it is still valuable and should be considered when allocating to Japanese equities.

Finally, we consider the case for Japan as being a stock picker's market and whether or not it can be a unique source of alpha.

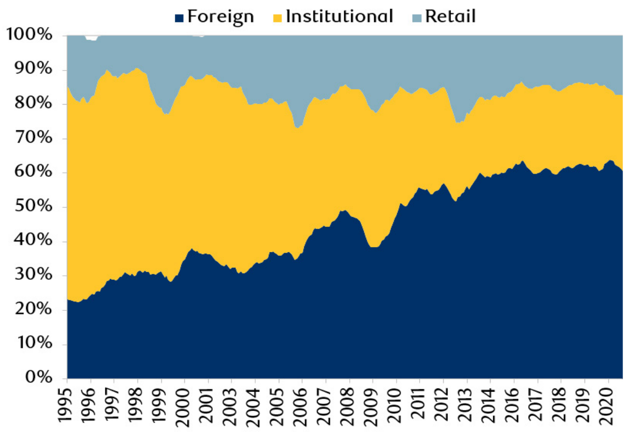
First, the mix of participants in Japan's highly institutionalised equities market has been stable over the past decade: foreign participation in Japanese equities has steadily climbed since the 1990s and now makes up almost 60% of trading volumes. Retail participation has remained within the 10%-30% range and domestic institutions make up the balance (Exhibit 6).

Exhibit 5: Pairwise style correlation with other regions



Source: Citi research. Data as at January 2021.

Exhibit 6: Japanese equities market participant mix



Source: Citi research, Tokyo Stock Exchange. Data as at January, 2021.

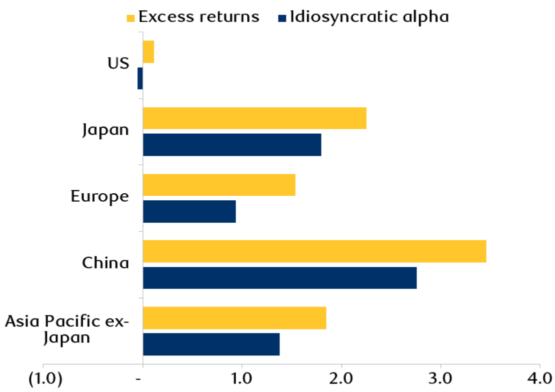
Unlike China or China A shares, the case for stock picking in Japan is more difficult to explain using empirical data. Standard analysis like stock correlation or return dispersion does not show Japan to be a meaningfully better market for stock pickers when compared with other developed markets like the U.S. or Europe.[7] When comparing the performance of active equity managers over the last decade in different regions Japan is ahead of the U.S. and Europe, both in terms of excess returns and idiosyncratic alpha.[8] Idiosyncratic alpha from Japan was not as exceptional as that of China but was comparable to Asia, which is generally considered to be a less sophisticated and less efficient market (Exhibit 7).

This supports our belief that Japan offers a unique source of alpha. We believe that the Japanese economy is going through a 'quiet revolution' where companies are leading a grassroots change with the support of the government after decades of economic challenges. Domestic industries are enjoying an improvement in margins and return on invested capital (ROIC) with market consolidation and capex discipline. Digitalisation and the internet are disrupting traditional business models and industry market share. Globally competitive companies are expanding in emerging Asia and localising their businesses to capture consumption from the growing middle class. Despite that, sell-side coverage or active investor focus on Japanese equities still lags behind that of other developed markets (Exhibit 8).

It makes sense, therefore, for global or DM investors to diversify into Japanese equities to lower volatility and add uncorrelated sources of alpha. Even for an investor who wants to maintain a long-term bullish stance on U.S. Growth equities, it is worth considering the distinct options available to diversify risk, i.e. not only U.S. Value or EM Growth but also Japan Growth which can be an equally effective option, and often a less obvious or crowded one.

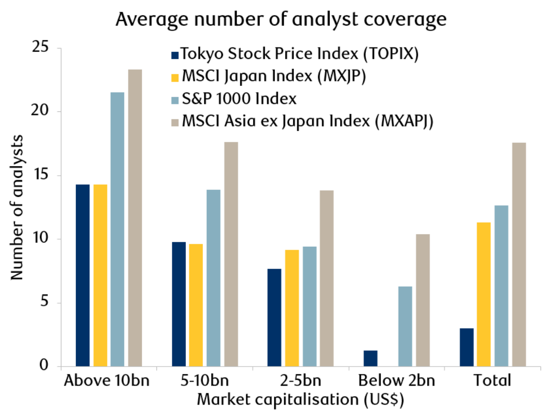
In conclusion, we maintain that Japanese equities provide clear diversification benefits in addition to being a unique source of alpha. We believe both global equity managers and DM-focused managers should utilise the opportunity that Japanese equities provide rather than being satisfied with indirect exposure to Japan via allocation in broader regional indices. The alpha opportunities also support a case for approaching Japan more proactively through a dedicated active manager with a solid investment process in place who can conduct bottom-up research using local insights and can engage directly with company management.

Exhibit 7: Excess returns and idiosyncratic alpha empirically captured by fund managers



Source: Bernstein research, trailing 3 years, June 2012 – December 2020. Data as at December, 2020.

Exhibit 8: Average number of sell-side analyst coverage



Source: Bloomberg. Data as at January 2020.

[7] Citi quantitative research, UBS quantitative research.

[8] Alphalytics by Bernstein, 28 October 2020, China – the Nirvana for Active? Source: eVestment, Morningstar, MSCI, S&P, Factset, Bernstein analysis.

ABOUT THE AUTHORS

Owen Ou, CFA

Portfolio Engineer, RBC Asian Equity team
RBC Global Asset Management (Asia) Limited

MStat (2020), The University of Hong Kong; CFA (2018); BEng (Civil Engineering) (2014), BBA (2014), Hong Kong University of Science and Technology, Hong Kong.

Owen is a Portfolio Engineer on the Asian Equity team at RBC GAM. He is focused on portfolio construction and risk analysis. Prior to joining the organization in 2018, Owen was an Analytics Consultant at a major financial data and software company, specializing in quantitative modelling and portfolio analytics.

David Soh

Head of Research, Associate Portfolio Manager, RBC Asian Equity team
RBC Global Asset Management (Asia) Limited

MSc (Investment Management) (2013), Hong Kong University of Science and Technology, Hong Kong; BSc (Political Science) (2005), Korea University, South Korea.

David is the Head of Research and Associate Portfolio Manager on the Asian Equity team at RBC GAM. Prior to joining the organization in 2014, David worked at a multinational investment bank specializing in quantitative investment strategies for Asian equities. Before starting his career in the investment industry in 2007, he was a management consultant at a global consultancy firm and an intelligence specialist in the military.

Publication date: July, 2021 GUKM/21/119/AUG22/A

For more information, please contact us at:
www.rbcgam.com