

ECONOMIC EXPOSURE IN GLOBAL INVESTING TILTING PORTFOLIOS BASED ON MACROECONOMIC VIEWS

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Market capitalization-based indexes classify companies based on their country of domicile and do not reflect the sources of constituents' revenue. Economic Exposure Indexes, however, aim to reflect the performance of companies with significant exposure to target regions or countries, regardless of their domicile. As such,

economic exposure indexes can be used by asset managers to implement their macroeconomic views. They may serve as useful tools for global investors in active portfolio construction, asset allocation, risk management and passive product creation.

KEY FINDINGS

- Economic Exposure Indexes provide key insights into how companies are exposed to risk in various countries and regions that are not available from an index based on corporate domicile.
- Exposures of global companies to country and regional risks are key risk factors driving stock performance. Empirical results suggest that companies are sensitive to the performance of the economies to which they are exposed.
- Economic exposure indexes can be used by asset managers to implement their macroeconomic views, form the basis for security selection and for portfolio measurement.

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Economic Exposure in the Investment Process

Institutional investors are increasingly abandoning the traditional split between domestic and international stocks in favor of a global equity allocation. The cap-weighted global investment opportunity set forms the benchmark of choice at the policy level. However, at the strategic level, investors increasingly choose to construct portfolios that are alternatively weighted and therefore may adopt MSCI Economic Exposure Indexes as benchmarks.

There are several ways investors can use these indexes in portfolio construction, active and passive management and risk monitoring:

- Active managers can use economic exposure-based insights in equity allocation. They can tilt portfolios towards regions with higher projected growth and away from those facing macroeconomic uncertainty.
- Investors can shift their regional exposures by using an economic exposure index-based fund to complement their existing passive portfolio.
- Asset owners can use economic exposure data to understand macroeconomic risk embedded in investment mandates and benchmarks, as well as to understand how the global equity opportunity set can be dissected into new baskets of stocks based on economic exposure.

- Risk managers may use economic exposure data to identify and manage macroeconomic risks arising from a portfolio's economic exposure at country and industry levels.

Economic Exposure of Global Equity Benchmarks

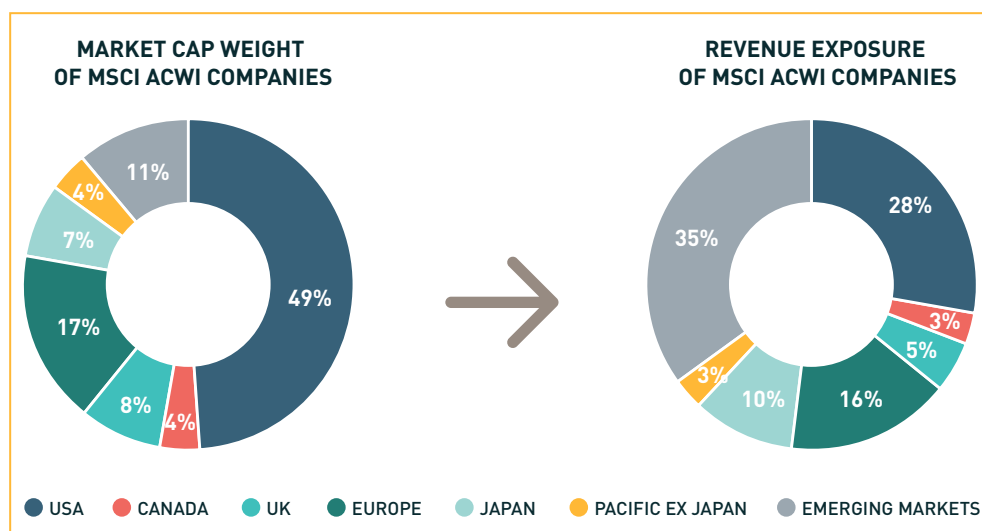
As companies operate across regions, their revenues are exposed to economic activity in countries beyond their own. For example, as of June 30, 2014, Korea-domiciled Samsung Electronics Co. derived 90% of its revenues outside of Korea and close to 50% outside of emerging markets (EM). Within the MSCI ACWI Index, a global equity index, 25% of the companies by market cap weight had more than 75% of their revenues exposed to international markets. Exhibit 1 contrasts the benchmark weights and revenue exposures of the MSCI ACWI Index. This difference between cap weights and revenue exposure is apparent in other MSCI regional indexes as well as MSCI sector indexes.

Stock Sensitivity to Country/Region Risks

Studies show that the exposures of global companies to country and regional risks are a critical component of their valuations and are key risk factors driving stock performance. Empirical analysis suggests that the performance of companies is sensitive to the economies from which they derive their revenues. For example, the performance of North American, European

and Pacific companies with high EM exposure historically experienced high correlation with emerging markets performance, while domestically oriented firms, in contrast, had a lower correlation with emerging markets. These findings present potential opportunities for institutional investors, as discussed in the later sections of this paper.

EXHIBIT 1: MARKET CAP VS. REVENUE EXPOSURE OF MSCI ACWI INDEX



Data as of June 30, 2014.

The revenue exposure to emerging markets also includes the frontier markets and other countries

Economic Exposure in Global Equity Allocation

Within global mandates, institutional investors generally use two different approaches to introduce exposure to a target region. The first approach is through broad international mandates that include targeted allocations to specialized areas. For example, EM can be accessed through ACWI ex USA, EAFE + EM or ACWI mandates. The second is through dedicated regional mandates.

A third approach to target specific regions is through mandates linked to the family of MSCI Economic Exposure Indexes. This approach is useful for investors who have constraints on direct investing in securities in certain regions or countries.

Active managers can use MSCI Economic Exposure Indexes in equity allocation to implement their macroeconomic views, by choosing to tilt toward regions where they project higher than expected

growth. Conversely, they may be able to impose tilts away from specific regions that may have undesirable macroeconomic or geopolitical risk.

Active managers can use MSCI Economic Exposure Indexes in a number of different ways:

- Tilting their portfolios towards domestic stocks with higher international exposure, either passively or actively.
- Creating a more “pure” domestic bias in their portfolio.
- Dynamically allocating to (or away from) securities in countries or regions that display momentum.
- Overlaying Economic Exposure-linked funds over passive investments.

Accessing International Markets

Active domestic managers who believe international markets will perform better than the domestic market may tilt their portfolio towards domestic stocks with

EXHIBIT 2: ACCESSING EMERGING MARKETS THROUGH MSCI ECONOMIC EXPOSURE INDEXES

	North America	NA with EM Exposure	Europe	Europe with EM Exposure	Pacific	Pacific with EM Exposure	World	World with EM Exposure	ACWI	ACWI with EM Exposure	Emerging Markets
Total Return ¹ (%)	6.9	6.8	3.6	5.4	2.6	3.8	5.2	5.9	5.1	4.8	5.2
Total Risk ¹ (%)	16.7	17.9	22.2	23.7	17.6	22.4	17.9	20.9	18.4	23.3	25.2
Return/Risk	0.41	0.38	0.16	0.23	0.15	0.17	0.29	0.28	0.28	0.20	0.21
Sharpe Ratio	0.40	0.38	0.21	0.29	0.16	0.22	0.30	0.32	0.29	0.26	0.28
Active Return ¹ (%)	0.0	-0.1	0.0	1.8	0.0	1.2	0.0	0.7	0.0	-0.4	0.0
Tracking Error ¹ (%)	0.0	4.6	0.0	5.0	0.0	8.9	0.0	5.6	0.0	7.9	0.0
Information Ratio	NaN	-0.02	NaN	0.37	NaN	0.14	NaN	0.12	NaN	-0.05	NaN
Historical Beta	1.00	1.03	1.00	1.04	1.00	1.18	1.00	1.13	1.00	1.21	1.00
Turnover ² (%)	2.2	7.9	2.4	11.7	2.2	11.1	2.2	11.7	2.5	10.3	5.5
Price to Book ³	2.3	2.7	1.7	2.1	1.4	1.6	1.9	2.3	1.9	2.0	1.8
Price to Earnings ³	16.6	17.7	13.1	14.0	18.7	18.6	15.6	15.9	15.3	14.5	13.2
Div. Yield ³ (%)	2.1	1.9	3.7	3.1	2.6	2.0	2.7	2.5	2.7	2.6	2.6
Avg. No of Stocks ⁴	709	150	486	103	494	124	1696	305	2507	1010	811
Market Cap Coverage ⁴ (%)	100.0	31.3	100.0	29.4	100.0	29.9	100.0	23.0	100.0	27.5	100.0
Minimum Target Exposure ⁵		0.21		0.23		0.28		0.29		0.41	

1 Gross returns annualized in USD for the 11/30/2006 to 06/30/2014 period

2 Annualized one-way index turnover for the 11/30/2006 to 06/30/2014 period

3 Monthly averages for the 11/30/2006 to 06/30/2014 period

4 Average values across rebalancings from 11/30/2006 to 06/30/2014

5 Minimum security level economic exposure to target as of 06/30/2014

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high international exposure. Alternatively, active managers with strong positive view on the performance of a specific region may consider increasing their exposure to that region alone. Exhibit 2 compares the performance of regional benchmarks with those geared towards high emerging markets exposure from November 2006 to June 2014. The MSCI World with EM Exposure Index outperformed the MSCI World Index, in large part because many European and Pacific companies benefited from their exposure to emerging markets during this period. The underperformance of North America with EM exposure may be attributed to the underperformance of emerging markets relative to North America during this period.

Domestic Pure Play

Some investors may need to maintain a “pure” domestic bias in their domestic portfolios. However, these portfolios may have substantial foreign exposure. Investors can reduce that exposure by investing in core domestic equities through MSCI Economic Exposure Indexes. These indexes provide a “pure play” on the domestic economy, mitigate any influence from foreign exposure and offer a less correlated source of equity returns.

Macro Momentum through Economic Exposure

Global institutional investors may dynamically allocate to countries or regions to reflect regional momentum. One way to achieve this is by overweighting stocks that have high economic exposure to countries with high price momentum and underweighting ones with high economic exposure to countries with low momentum.

Economic Exposure Overlay on Passive Investments

Investors who have adopted a global mandate but seek to increase exposure to specific countries may tilt exposures through the use of funds based on the MSCI Economic Exposure Indexes. For example, investors who use the MSCI World Index as a policy benchmark can increase their exposure to EM by combining passive funds based on MSCI World and MSCI World with EM Exposure. The proportion in which these indexes may be combined will be dictated by the exposure targets of investors. Alternatively, investors who want to reduce their EM exposure may combine MSCI World and World with domestic exposure indexes.

CONCLUSION

Economic exposure indexes are becoming increasingly important as companies expand their global operations. A company’s exposure to country risk emanates not solely from where the firm is incorporated or traded but from where it does business. The family of MSCI Economic Exposure Indexes has made it possible for investors to obtain a better understanding of the revenue exposure profiles of the global and regional benchmarks and to gauge the true geographic exposures of their portfolios. The Economic Exposure Indexes offer investors new insights and tools for an increasingly globalized investment world.

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