The Case For Global Stock Portfolios

Looking at the big picture

By Michael Branch

'The whole is greater than the sum of its parts.'

—Aristotle

When investors choose their asset allocation for international stocks, they have tended to carve up the world between developed markets and emerging markets, based on the assumption that these two are sufficiently distinct asset classes to justify treating them separately. However, trends in globalization and the increasing size and importance of emerging markets have brought into question a number of old assumptions about the best way to categorize and invest in global stocks.

Traditionally, investors or wealth managers have justified treating emerging markets separately for two reasons: 1) they believe that while indexing may work with developed markets, they're presuming that active managers will succeed in tilling the less-well-plowed terrain of emerging markets; or 2) they want to overweight or underweight emerging market exposure, thus actively managing their asset class exposure. Updated research suggests that on the first issue, successful stock picking in emerging markets can be as challenging as it is in developed markets. As for the second issue of incorporating active weightings, investors now have access to much more flexible ways to manage their asset allocation to emerging markets while avoiding the drag on performance from taxes and transaction costs that results when foreign stocks are divided into two distinct baskets.

In this paper, we analyze the trade-offs of managing portfolios with distinct mandates for developed versus emerging markets as well as U.S. versus foreign markets. We begin in the first section with research on the perhaps surprising failure of most active stock pickers in emerging markets and yet how investors still justifiably desire to control the overall allocation to emerging markets. In the section after that, we turn to the evidence for global portfolios that combine developed, emerging, domestic and foreign into a single asset class. Finally, we weigh the advantages and disadvantages of various means of implementing global portfolios among ETFs, traditional open-end mutual funds and separately managed accounts.

THE RATIONALE FOR DISTINCT MANDATES

The division of foreign markets into developed and emerging segments dates back to 1981, when Antoine van Agtmael, an economist at the World Bank, referred (in a flash of marketing brilliance) to what were then called third-world countries as emerging markets.[1] In the 30 years that followed, investment practitioners have used this classification system for defining asset class boundaries and constructing their international equity asset allocations. A typical example of this "building block" approach is a stand-alone developed-market portfolio benchmarked to the MSCI EAFE (Europe, Australasia, Far East) Index combined with an emerging market portfolio benchmarked to the MSCI Emerging Markets (EM) Index.[2]

Historically, investors have relied on two fundamental justifications for partitioning their equity allocation into developed and emerging market segments. The first justification rests on the premise that specialist active managers will successfully outperform a passive index. The second justification is based on strategic or tactical asset allocation decision-making.

Do Specialist EM Managers Outperform?

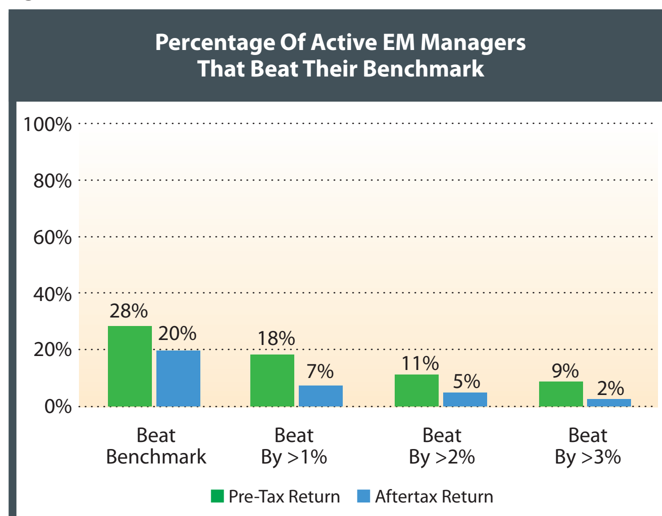
One of the more persistent myths about active investing is that it may not work in efficient markets such as U.S. large-caps, but still adds value in less efficient markets such as emerging markets. Unfortunately, the empirical evidence does not support the proposition that specialist EM investment managers can successfully exploit market inefficiencies and earn outsized returns. In a recent performance study, Aperio Group examined 10 years of return data for all active emerging markets mutual funds listed in the Morningstar Principia database, adjusting for taxes and survivorship bias.[3] On a pretax basis, only 28 percent of active mutual funds outperformed their representative benchmark. After taxes, the number of winners dropped to 20 percent. (See Figure 1.)

This finding is consistent with research by Gottesman and Morey (2007), who find that emerging market mutual funds underperform passive indexes and that the only predictor for fund performance is the expense ratio.[4] Lower ratios predicted better fund performance.

Emerging market hedge funds have delivered slightly better results than mutual funds. Abugri and Dutta (2009) find that emerging market hedge funds slightly outperform benchmark indexes on a pretax, risk-adjusted basis.[5] The margin of superiority (0.05 percent), however, was not proven to be statistically significant. Given the notorious reputation of hedge funds as tax-inefficient investments, these findings (based on pretax returns) are likely to overstate the actual after-tax results experienced by U.S. taxable investors.

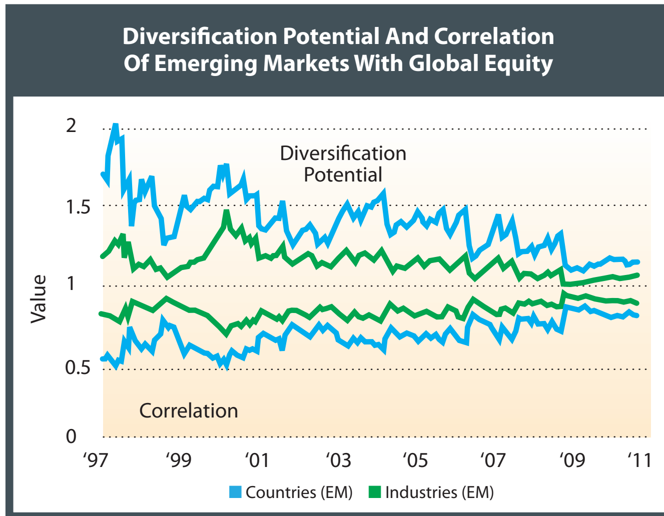
Since neither active mutual funds nor hedge funds were able to consistently outperform the market, the justification for distinct emerging market mandates based on the premise of superior investment returns is unfounded. The supporting empirical evidence favors a passively managed and low-cost index approach.

Figure 1



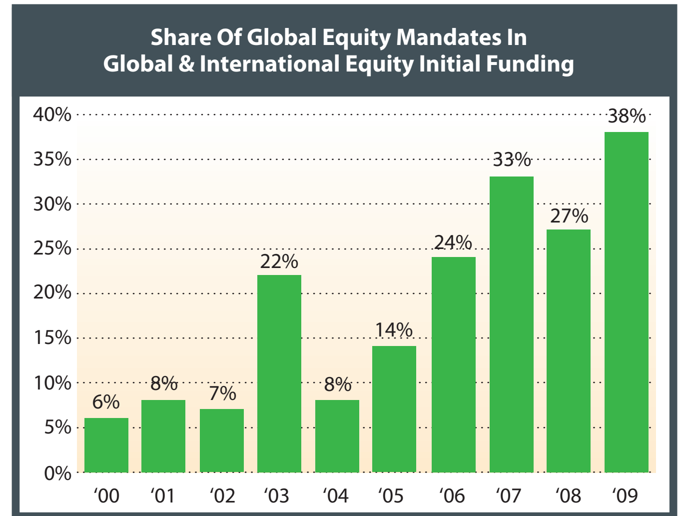
Sources: MSCI and Aperio Group. Analysis period = 12/31/00 to 12/31/2010 Manager universe = Morningstar Emerging Market Category. Benchmark = MSCI EM

Figure 2



Sources: MSCI. Analysis period = 1/01/96 to 9/30/10

Figure 3



Sources: InterSec Research. Analysis period = 1/01/00 to 12/31/09

Equity Asset Allocation

Regardless of active or passive bias, many investors prefer distinct developed/emerging mandates to execute strategic or tactical asset allocation decisions. For these investors, the global market capitalization weights may be inconsistent with the stated risk/return objectives of the overall portfolio. In such cases, separate developed/emerging market portfolios provide an easy way to structure the equity asset class mixture or reflect what can be a justifiable home country bias.

Distinct developed/emerging mandates are not the only way to achieve asset allocation flexibility. As will be discussed in greater detail later, separately managed accounts (SMAs) can provide an alternative and novel approach to fulfill asset allocation objectives within a single portfolio. SMA portfolios facilitate geographic customization, allowing investors to deviate from benchmark weights and "tilt" the portfolio to express their investment views. For example, an investor might decide to over/underweight an entire class like emerging markets, a country grouping like BRIC (Brazil, Russia, India, China) or a single country like Japan.

If asset allocation tactics can be executed through either distinct mandates or a single integrated portfolio, then why should investors opt for a global investment approach? In the next section, we demonstrate how global portfolios can produce higher returns for investors and lower operating costs for financial advisors.

THE CASE FOR GLOBAL PORTFOLIOS

The world is converging. Economies and financial markets are becoming increasingly integrated as corporations pursue global strategies. Many large companies in emerging markets have become global players, competing with their peers in developed markets. Conversely, U.S. companies are increasingly looking outside their own borders for new sources of revenue growth. Coca-Cola, for example, is headquartered in Atlanta, but derives approximately 80 percent of its revenue from non-U.S. markets.[6] Is Coke an American or foreign company?

The distinction between domestic, international and emerging markets is becoming increasingly outdated and artificial. The world, it would seem, is heading toward a single, all-encompassing global equity asset class. This is best illustrated by Figure 2, which displays the long-term rise in correlation between emerging markets and the rest of the world, and the corresponding decline in diversification potential.[7]

The trend toward international and global investing is a natural consequence of the overall globalization of the economy and international financial system. Institutional investors are at the forefront of this movement as they deploy assets to broader global investment strategies. Figure 3 highlights the dramatic increase in the initial funding of global equity mandates for institutional investors: From a mere 6 percent in 2000, it has grown to represent 38 percent of all global and international initial funding in 2009.

Aside from the secular trend toward a single equity asset class, we have identified several clear and concrete advan-

Figure 4

Historical MSCI Reclassifications

Country	Market Reclassification	Date	Index Turnover MSCI EM
Israel	From Emerging to Developed	May 2010	5.6%
Greece	From Emerging to Developed	May 2001	9.2%
Portugal	From Emerging to Developed	Nov 1997	8.0%

Sources: MSCI and Aperio Group as of 3/31/11

tages of global portfolios compared to distinct developed/emerging mandates. As will be discussed in the following section, these advantages include reduced portfolio turnover and lower operating costs for financial advisors.

Reduced Portfolio Turnover Costs

Investors tracking regional indexes such as the MSCI EAFE or MSCI EM pay recurring costs due to changes in market classification. As countries "graduate" from emerging to developed status, indexers systematically rebalance their portfolios, paying commissions, fees, taxes, bid/ask spreads and market impact costs. For all this activity, investors receive nothing in return. They still hold the same securities in aggregate, only in different accounts.

Since reclassifications are announced in advance of effective index changes, arbitrageurs are able to front-run index fund managers. Realizing that index funds are constrained by tracking error minimization, arbitrageurs buy the stocks to be added to the MSCI EAFE when the additions are announced with the expectation of selling the stocks to index funds at a higher price on the effective date. Similarly, upon announcement, arbitrageurs sell short stocks that are to be deleted from the index and expect to repurchase them from indexers at a lower price. Not surprisingly, arbitrage returns are realized at the expense of index fund investors. While no data currently exist for the MSCI EAFE, Petajisto (2011) estimates the drag from index arbitrage costs investors 21-28 basis points annually for the S&P 500 and 38-77 basis points annually for the Russell 2000.[8]

Since index turnover costs are not widely publicized, they are often overlooked or ignored. The magnitude of the expense, however, is nontrivial. Figure 4 details the historical market reclassifications and corresponding index turnover for the MSCI Emerging Markets (EM) Index.

Of the 21 countries in the MSCI EM Index, currently two are on the "watch list" for possible promotion to developed market status in 2012. Korea and Taiwan, currently the third- and fourth-largest countries in the MSCI EM, represent significant market-cap weights in the index.[9] If these two countries are reclassified, the event will represent the single largest change in the index's history. Using current market-cap weights, we are able to simulate the index reconstitution and quantify the magnitude of this change. As shown in Figure 5, index funds could systematically turn over 50.5 percent of the MSCI EM and 16.4 percent of the MSCI EAFE portfolios.

In addition to transaction charges and index arbitrage costs, taxable investors may also be exposed to tax liabilities in their current EM portfolios. If Korea and Taiwan are promoted, the sale of appreciated assets may trigger a significant capital gains tax bill, thereby reducing after-tax returns. Figure 6 shows the performance of the MSCI Korea and Taiwan country indexes over the last decade, highlighting the potentially adverse tax consequences of a market reclassification.

How likely are Korea's and Taiwan's reclassification? Given the size of the markets and recent economic developments, analysts remain optimistic for a near-term promotion by MSCI.[10] Many of the competing index providers have already upgraded Korea, including FTSE, S&P and

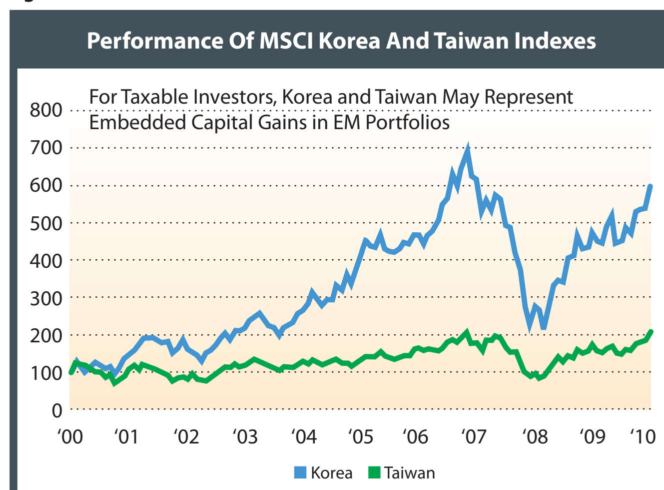
Figure 5

Simulated MSCI Index Turnover (Korea & Taiwan)

Country	Index Turnover	
	MSCI EM	MSCI EAFE
Korea Only	27.6%	9.3%
Taiwan Only	22.9%	7.8%
Korea and Taiwan	50.5%	16.4%

Sources: MSCI and Aperio Group as of 3/31/11
Note: See Appendix 1 for a detailed breakdown of the simulated index reconstitution

Figure 6



Source: MSCI. Analysis period = 3/31/00 to 3/31/11

Dow Jones. Taiwan has been upgraded by Dow Jones, and is currently being evaluated by FTSE for possible promotion. The International Monetary Fund (IMF) reclassified both Korea and Taiwan as developed countries recently based on level of per capita income, export diversification and degree of integration into the global financial system.

By investing in broadly defined global portfolios that hold both developed and emerging market securities, investors can easily sidestep the whole issue while still achieving their targeted exposure.

Lower Operating Costs For Financial Advisors

Several additional benefits accrue to financial advisors who implement global mandates. By consolidating to fewer accounts, advisors save on monitoring, rebalancing, operational and administrative costs. Fewer accounts can mean less frequent rebalancing, simpler client reporting and less paperwork. If the number of managers is reduced, there may also be a corresponding reduction in due diligence costs.

Furthermore, global strategies transfer the responsibility of portfolio monitoring and rebalancing from financial advisors to fund managers. Given the sophisticated trading and tax-management systems employed by professional fund managers, they are often better suited to make optimal rebalancing decisions. Delegating the portfolio monitoring and rebalancing activities leaves more time for financial advisors to concentrate on their most productive activities such as building relationships, giving advice, strategic asset allocation, etc.

Now that we've seen the merits of a global investment process, what is the best way to implement a global mandate? In the following section, we discuss the advantages, disadvantages and trade-offs among various investment vehicles.

IMPLEMENTATION OPTIONS

There are three main options for implementing global mandates: mutual funds, ETFs and SMAs. The appropriate strategy for any given investor depends on a number of factors, including overall portfolio size, tolerance for tracking error, tax sensitivity and customization requirements.

Mutual Funds And ETFs

Mutual funds and ETFs offer retail and nontaxable investors a convenient and low-cost way to take advantage of the many benefits of global indexing. These investment vehicles boast low fees, tight index tracking and low investment minimums.

Taxable investors may prefer ETFs over mutual funds due to a regulatory loophole that shields investors from capital gains distributions until final sale of the ETF. As shown in Figure 7, many popular international/global ETFs have not paid capital gains distributions over the life of the fund.

As the ETF industry has evolved, investors now have more options and greater flexibility if they want to customize their portfolio beyond traditional capitalization-weighted indexes. By introducing style, sector and factor bets (e.g., growth/value, size, leverage, etc.), investors can adjust and control the risk/return profile of the overall portfolio. However, in order to adjust geographic weightings, mutual fund and ETF investors currently must partition their equity allocation into distinct funds. As established earlier, this approach can increase portfolio turnover, often to the detriment of investment returns, especially in the presence of taxes.

Separately Managed Accounts

For investors with sufficient assets to qualify, SMAs offer several additional benefits that are not available with mutual funds and ETFs. These unique advantages include tax management strategies and portfolio customization. To achieve these benefits, however, there is an associated cost in the form of additional tracking error. In this section, we explore each of the benefits and drawbacks of SMAs.

Tax Management Strategies

SMAs allow investors to pass through tax losses generated from inside the portfolio to offset capital gains anywhere outside the portfolio. A program of systematic "tax loss harvesting" can consistently and predictably increase after-tax returns from 0.80 percent to 1.74 percent per year vs. ETFs.[11]

Moving to broader indexes makes tax-loss harvesting even more effective. Indexes that include both developed and emerging markets have two distinct advantages. First, they hold more securities and hence provide more replacement options for depreciated assets. For example, a developed market technology company like Sony can be sold and replaced with an emerging market company like Samsung Electronics while maintaining similar investment exposure. Second, broad indexes exhibit higher cross-sectional volatility. Cross-sectional volatility is a measure of the dispersion of stock returns within an index. As volatility increases, portfolio managers have more opportunities to harvest losses. As reported in Figure 8, the MSCI ACWI ex US exhibited 7.3 percent higher cross volatility than the MSCI EAFE (29.5 percent vs. 22.2 percent).

In addition to tax-loss harvesting, SMA managers can add value by providing tax management of asset class rebalancing and other liquidity events (e.g., redemptions). Since developed and emerging market securities reside in the same portfolio, all rebalancing and liquidity trades are executed to simultaneously maintain target asset allocation weights and minimize the impact of capital gains taxes. By considering the entire equity allocation when making investment decisions, managers provide a more efficient solution while still conforming to the stated objectives of the portfolio.

Portfolio Customization

Because SMAs are built from the ground up using individual securities, flexibility around portfolio customization is virtually unlimited. Investors can customize or "tilt" their portfolios around dozens of styles and factors including, but not limited to, geography, size, growth/value, yield, profitability, volatility, social/ESG concerns, sectors, industries and individual securities. These factors can be isolated or combined in order to achieve a desired risk/return objective.

In the context of a global portfolio, geographic customization is one of the more compelling features of SMAs. Within

Figure 7

ETF Fees And Capital Gains Distributions

BENCHMARK	iShares		Vanguard	
	MSCI ACWI Ex US	MSCI ACWI	FTSE All-World Ex US	FTSE All-World
Ticker	ACWX	ACWI	VEU	VT
Markets Covered in Fund	Developed & Emerging ex. US	Developed & Emerging	Developed & Emerging ex. US	Developed & Emerging
Inception Date	3/26/08	3/26/08	3/2/07	6/24/08
Expense Ratio	0.35%	0.35%	0.22%	0.25%
Capital Gains Dist.	N/A	N/A	N/A	N/A

Sources: iShares, Vanguard and Aperio Group as of 3/31/11

Figure 8

International And Global Index Characteristics

MSCI Index	EAFE	World Ex US	ACWI Ex US	ACWI
Markets Covered in Index	Developed ex. US & Canada	Developed ex. US	Developed & Emerging ex. US	Developed & Emerging
Number Of Securities	966	1,066	1,875	2,466
Cross-Sectional Volatility	22.2%	23.7%	29.5%	27.3%

$$\sigma_x = \sqrt{\sum_i w_i (r_i - R)^2}$$

where w_i = 3/31/10 market-cap weight of stock i
r_i = Total return of stock i for 12 months ending 3/31/11
R = Benchmark index return for 12 months ending 3/31/11

Sources: MSCI and Aperio Group as of 3/31/11. See Appendix 2 for individual country weightings in the MSCI ACWI IMI.

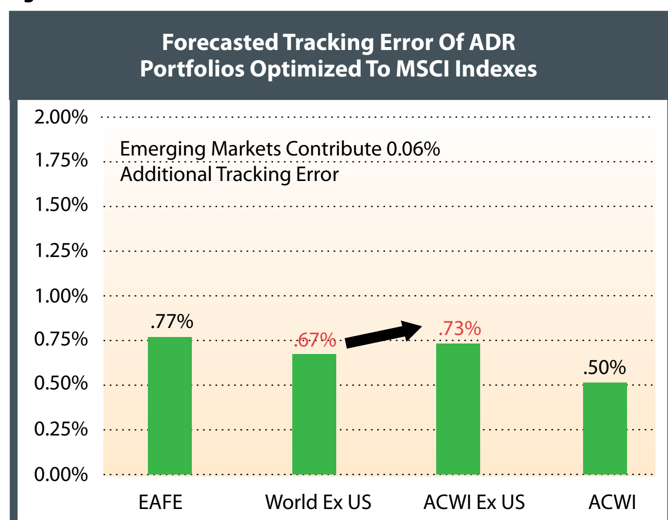
Figure 9

ADR Coverage By Holdings And Market Capitalization

		Coverage By # Of Holdings			Coverage By Market Cap ($Trillion)		
Market	**Weight Index**	**Index**	**ADRs**	**Coverage**	**Index**	**ADRs**	**Coverage**
Developed	66.8%	1,066	335	31.4%	16.35	9.93	60.8%
Emerging	33.2%	809	122	15.1%	8.13	2.92	36.0%
Total	100.0%	1,875	457	24.4%	24.47	12.85	52.5%

Sources: MSCI and Aperio Group as of 3/31/11. Index = MSCI ACWI ex US

Figure 10



Sources: MSCI and Aperio Group as of 3/31/11
Number of securities: EAFE = 200, World ex US = 250, ACWI ex US = 350, ACWI = 500

a single portfolio, investors can over/underweight an entire region (e.g., emerging markets), a country grouping (BRIC) or a single country (China). With SMA portfolios, investors need not sacrifice asset allocation flexibility or tax advantages in order to benefit from a global investment process.

ADR Coverage And Tracking Error

Depending on the size of the portfolio, a potential drawback of SMAs relative to mutual funds and ETFs is higher tracking error. This tracking error stems from the pool of liquid securities (either American depositary receipts (ADRs) or foreign-listed shares) available to track a particular index. For smaller-sized portfolios, fund managers may be restricted from investing directly in foreign markets due to trade size requirements and other investment minimums. For larger portfolios, however, managers have greater flexibility to choose where and how to invest.

For portfolios with less than $10 million to $20 million in assets, the preferred method of international investing is often through ADRs. ADRs provide U.S. investors with convenient and low-cost access to foreign markets. ADRs are particularly advantageous when investing in emerging markets, where local-market trading and operational costs can be prohibitively expensive. However, the universe of ADRs only covers a fraction of the opportunity set of foreign equities, as shown in Figure 9.

Given the coverage constraints, how well do ADR portfolios match the risk and return characteristics of an international or global benchmark? Figure 10 compares the forecasted tracking error of optimized ADR portfolios tracking the best-known and most widely followed international and global indexes.[12]

ADRs facilitate the effective tracking of developed market indexes. Coverage in terms of both holdings and market capitalization is sufficiently wide-ranging to satisfy the needs of most investors. Most importantly, ADR portfolios have low forecasted tracking error (0.67 percent for a 250-security World ex US portfolio).

ADRs are considerably less effective at tracking standalone emerging market indexes. Coverage is less robust and forecasted tracking error is higher than in developed markets. However, in the context of a global portfolio, the impact of emerging markets ADR coverage is negligible. The incremental tracking error from adding emerging market

securities to a diversified developed market portfolio is only 6 basis points (0.73 percent for ACWI ex US vs. 0.67 percent for World ex US). Such remarkably low tracking error differences are possible for two reasons. First, as demonstrated previously in Figure 2, emerging markets and global equities are highly correlated. Second, portfolio optimizers can successfully replicate emerging market risk/return characteristics using securities from outside the emerging markets universe. In other words, certain developed market securities may serve as suitable proxies for emerging markets exposure.

ADRs are not a viable option for investing in international small-cap securities. In most cases, ADR programs have not been developed yet. Given the trading, operational and liquidity constraints of local-market small-cap investing, most investors find mutual funds or ETFs to be the most practical option for capturing this asset class.

SMA portfolios exceeding $20 million in assets can supplement ADRs with foreign-listed shares. At this portfolio size, fund managers can optimize the mix of ADRs and foreign shares to find the best combination of liquidity, tracking error and ongoing operational expense.

CONCLUSIONS

Our findings suggest that index-based global portfolios are a more efficient way to capture developed and emerging markets exposure than distinct EAFE and EM portfolios. By consolidating these two market segments into a single integrated portfolio, investors benefit from lower portfolio turnover and reduced operating costs.

The appropriate implementation strategy for any given investor depends on a number of factors, including portfolio size, tolerance for tracking error, tax sensitivity and customization requirements. Mutual funds and ETFs provide tight index tracking, low cost and low investment minimums. On the other hand, mutual funds and ETFs offer limited geographic customization unless investors partition their global allocation into regional market segments. Such a move can increase portfolio turnover, often to the detriment of investment returns.

For investors with sufficient assets to qualify, SMAs offer several additional benefits that are not available with mutual funds and ETFs. These advantages include tax management strategies and portfolio customization within a single portfolio. A potential drawback of SMAs, however, is higher tracking error resulting from limited ADR coverage. Once a portfolio reaches a certain size, however, this limitation can be reduced and/or eliminated by supplementing ADRs with foreign-listed shares.

When the Greek philosopher Aristotle, well over 2000 years ago, said: "The whole is greater than the sum of its parts," he probably didn't have portfolio allocation in mind. Even so, his words hold just as true for investors today as they did for scholars and philosophers back then. The simplicity, efficiency and flexibility of global portfolios (the whole) is greater than the sum of its regional parts.

Endnotes

[1] Thomas (1999).

[2] For detailed descriptions of MSCI indexes, see http://www.msci.com/.

[3] Survivorship bias is the tendency for failed funds to be excluded from performance studies because they no longer exist. It often causes the results of studies to skew higher because only funds that were successful enough to survive until the end of the period are included. In this study, survivorship bias is corrected by dividing the number of funds that beat their benchmarks by the number of funds in existence at the start of the return period.

[4] Sample period: January 1997 – December 2005.

[5] Sample period: January 1997 – August 2008. Risk-adjusted returns calculated using modified Sharpe ratio.

[6] Source: The Coca-Cola Company, 2010 Annual Review.

[7] Menchero and Morozov (2011). Diversification potential measures the reduction in volatility that can be achieved by diversifying the portfolio across the world instead of concentrating it within a single country or country grouping.

[8] Sample period: January 1990 – December 2005.

[9] As of March 31, 2011, Korea and Taiwan represent 13.8 percent and 11.5 percent, respectively, of the MSCI EM Index.

[10] Chris Lobello of CLSA Asia-Pacific Markets remarked in a June 11, 2010 report, "We remain convinced that it is only a matter of time until the promotion takes place."

[11] Geddes (2010). Range based on various assumptions for state tax and disposition of assets (liquidation or bequest).

[12] Tracking error is a measure of how closely a portfolio follows the index to which it is benchmarked.

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Appendix 1

Market Reclassification Turnover (Korea & Taiwan)

			MSCI EAFE			MSCI EM		
Country	Market	Market Cap ($)	Original Index Weight	Simulated Index Weight	Change in Index	Original Index Weight	Simulated Index Weight	Change in Index
Japan	Developed	3,564,493,826,500	22.1%	20.3%	1.8%	0.0%	0.0%	0.0%
United Kingdom	Developed	3,438,444,827,700	21.3%	19.6%	1.7%	0.0%	0.0%	0.0%
France	Developed	1,532,314,942,700	9.5%	8.7%	0.8%	0.0%	0.0%	0.0%
Australia	Developed	1,416,113,892,400	8.8%	8.1%	0.7%	0.0%	0.0%	0.0%
Germany	Developed	1,327,439,203,700	8.2%	7.6%	0.7%	0.0%	0.0%	0.0%
Switzerland	Developed	1,293,076,537,800	8.0%	7.4%	0.7%	0.0%	0.0%	0.0%
Spain	Developed	526,329,991,500	3.3%	3.0%	0.3%	0.0%	0.0%	0.0%
Sweden	Developed	521,446,442,800	3.2%	3.0%	0.3%	0.0%	0.0%	0.0%
Hong Kong	Developed	459,572,352,600	2.9%	2.6%	0.2%	0.0%	0.0%	0.0%
Italy	Developed	418,183,939,500	2.6%	2.4%	0.2%	0.0%	0.0%	0.0%
Netherlands	Developed	403,423,041,900	2.5%	2.3%	0.2%	0.0%	0.0%	0.0%
Singapore	Developed	276,975,478,000	1.7%	1.6%	0.1%	0.0%	0.0%	0.0%
Finland	Developed	178,461,850,600	1.1%	1.0%	0.1%	0.0%	0.0%	0.0%
Denmark	Developed	160,484,217,300	1.0%	0.9%	0.1%	0.0%	0.0%	0.0%
Belgium	Developed	146,503,852,900	0.9%	0.8%	0.1%	0.0%	0.0%	0.0%
Norway	Developed	134,908,714,500	0.8%	0.8%	0.1%	0.0%	0.0%	0.0%
Israel	Developed	128,389,887,100	0.8%	0.7%	0.1%	0.0%	0.0%	0.0%
Austria	Developed	53,262,381,100	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%
Portugal	Developed	42,022,892,700	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%
Greece	Developed	39,634,110,200	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%
Ireland	Developed	37,513,250,700	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%
New Zealand	Developed	16,648,213,600	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
China	Emerging	984,002,224,700	0.0%	0.0%	0.0%	17.3%	23.1%	5.8%
Brazil	Emerging	902,903,592,300	0.0%	0.0%	0.0%	15.8%	21.2%	5.3%
Korea	*Emerging*	*786,516,181,400*	*0.0%*	*4.5%*	*4.5%*	*13.8%*	*0.0%*	*13.8%*
Taiwan	*Emerging*	*653,082,228,900*	*0.0%*	*3.7%*	*3.7%*	*11.5%*	*0.0%*	*11.5%*
India	Emerging	455,319,489,900	0.0%	0.0%	0.0%	8.0%	10.7%	2.7%
South Africa	Emerging	445,635,851,700	0.0%	0.0%	0.0%	7.8%	10.5%	2.6%
Russia	Emerging	365,353,791,700	0.0%	0.0%	0.0%	6.4%	8.6%	2.2%
Mexico	Emerging	257,556,988,000	0.0%	0.0%	0.0%	4.5%	6.0%	1.5%
Malaysia	Emerging	162,053,819,300	0.0%	0.0%	0.0%	2.8%	3.8%	1.0%
Indonesia	Emerging	130,584,958,900	0.0%	0.0%	0.0%	2.3%	3.1%	0.8%
Thailand	Emerging	96,435,920,100	0.0%	0.0%	0.0%	1.7%	2.3%	0.6%
Chile	Emerging	96,066,044,100	0.0%	0.0%	0.0%	1.7%	2.3%	0.6%
Poland	Emerging	91,502,106,200	0.0%	0.0%	0.0%	1.6%	2.1%	0.5%
Turkey	Emerging	85,870,269,900	0.0%	0.0%	0.0%	1.5%	2.0%	0.5%
Colombia	Emerging	45,447,802,200	0.0%	0.0%	0.0%	0.8%	1.1%	0.3%
Peru	Emerging	40,364,852,400	0.0%	0.0%	0.0%	0.7%	0.9%	0.2%
Philippines	Emerging	29,738,030,400	0.0%	0.0%	0.0%	0.5%	0.7%	0.2%
Egypt	Emerging	26,735,633,100	0.0%	0.0%	0.0%	0.5%	0.6%	0.2%
Hungary	Emerging	20,346,025,200	0.0%	0.0%	0.0%	0.4%	0.5%	0.1%
Czech Republic	Emerging	18,426,937,800	0.0%	0.0%	0.0%	0.3%	0.4%	0.1%
Morocco	Emerging	8,653,912,900	0.0%	0.0%	0.0%	0.2%	0.2%	0.1%
			100.0%	100.0%	**16.4%**	100.0%	100.0%	**50.5%**

Sources: MSCI and Aperio Group as of 3/31/11

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ON THE MOVE

Yorkville Hires Baker

Yorkville ETF Advisors said in a September press release that it had hired Jay Baker to lead its business development efforts.

Prior to joining Yorkville, Baker was the vice president of ETF business development in the electronic trading group at Goldman Sachs.

Baker will also take a role in advising Exchange Traded Concepts, the press release said. The firm, formerly known as ETF provider FaithShares, has repackaged itself as an ETF marketing platform that specializes in streamlining the process of bringing an ETF to market for other would-be ETF providers. Yorkville is Exchange Traded Concepts' lead investor, according to the statement.

Cantor Fitzgerald To Create ETF Arb Business

New York-based capital markets investment bank Cantor Fitzgerald is taking steps to build its own ETF arbitrage business. The company has enlisted Dan Segal, formerly of SEG Capital, to head its ETF arbitrage group, and hired a group of trader/market makers that include Joseph La Grasta, Todd Alberico and Kanellas Cafcules, who will focus on domestic ETFs, international/currency ETFs and fixed-income/commodities ETFs, respectively, according to a press release. The move brings Cantor Fitzgerald closer to competing firms like Knight Capital Group, Susquehanna, Wallach-Beth and other ETF market makers and APs.

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Appendix 2

MSCI ACWI IMI
Global Equity Markets (Large + Mid + Small)

Developed Markets	Index Weight
United States	43.7%
United Kingdom	8.0%
Japan	7.9%
Canada	4.9%
France	3.7%
Australia	3.4%
Germany	3.2%
Switzerland	2.8%
Spain	1.3%
Sweden	1.3%
Italy	1.1%
Hong Kong	1.1%
Netherlands	1.0%
Singapore	0.7%
Denmark	0.5%
Finland	0.4%
Norway	0.4%
Belgium	0.4%
Israel	0.3%
Austria	0.2%
Greece	0.1%
Ireland	0.1%
Portugal	0.1%
New Zealand	0.1%
Total	86.7%

Emerging Markets	Index Weight
China	2.3%
Brazil	2.0%
Korea	1.9%
Taiwan	1.6%
India	1.0%
South Africa	1.0%
Russia	0.9%
Mexico	0.6%
Malaysia	0.4%
Indonesia	0.3%
Thailand	0.2%
Poland	0.2%
Turkey	0.2%
Chile	0.2%
Colombia	0.1%
Philippines	0.1%
Peru	0.1%
Hungary	0.1%
Egypt	0.1%
Czech Republic	0.0%
Morocco	0.0%
Total	13.3%

Source: MSCI as of 3/31/11