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ABSTRACT

Almost $10 trillion is benchmarked to Morgan Stanley Capital International's Developed, Emerging, Frontier, and standalone market indexes. Reclassifications from one index to another require thousands of investors to decide how to react. We study a comprehensive sample of past reclassifications to inform this decision. On average, reclassified markets' prices substantially overshoot between the announcement and effective dates—prices fall when a market moves from an index with more benchmarked ownership to one with less, such from Emerging to Frontier, and vice-versa—but largely revert within a year. We identify alpha-maximizing responses to reclassifications for both benchmarked and more flexible investors.

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Morgan Stanley Capital International's Developed Markets, Emerging Markets, and Frontier Markets Indexes provide benchmarks for stock markets at different stages of development and international investability. The Indexes are used to allocate trillions of dollars in equities by thousands of proper indexers, active asset managers, pension funds, hedge funds, banks, and individuals around the world. Other major index providers also classify equity markets into development levels, but the MSCI classifications are by far the most followed for global equities investing (for example, see MSCI (2016a) and Authers (2015)).

The MSCI's Index Policy Committee reclassifies markets when investability conditions change. Its criteria encompass openness to foreign ownership, the ease of capital flows, the efficiency of the operational framework, and the stability of the institutional framework.[2] Qatar and the United Arab Emirates graduated from Frontier to Emerging status in June 2014 after institutional improvements, for example. Trinidad and Tobago was declared unsuitable for even the Frontier index in February 2011, on the other hand, and since June of that year has been tracked only as a standalone market. Most recently, MSCI upgraded Pakistan to the Emerging index, effective May 2017. Table 1 lists the major, non-partial reclassifications between 2000 and 2015.[3]

[2] Openness criteria include investor qualification requirements, foreign ownership limits, foreign room levels, and the rights of foreign vs. domestic investors. Ease-of-Flows criteria include capital flow restrictions and degree of currency market liberalization. Operational Framework criteria include registration & account setup difficulty, market regulations, information flow, clearing and settlement, custody, registry/depository considerations, trade execution, transferability, stock lending and short selling. Also considered are the degree of competition among financial services providers and the stability of the institutional framework. There is an additional requirement on gross national income per capita for Developed status. See MSCI Global Market Accessibility Review (2016b).

[3] We exclude Serbia's and Lithuania's 2008 reclassifications. Their announcements conditioned the final decision on aspects of market performance between the announcement and the potential effective date, making it unclear what if anything investors should be doing in the meantime. In addition, the Frontier index was introduced in 2007. We do not include the markets included at the inception of this index since the announcement and effective dates were nearly contemporaneous and, presumably, the flows associated with the classification would be small.

Given the huge importance of the MSCI indexes and the fact that reclassifications require thousands of asset managers to decide how to react, it is surprising that there has been little systematic study of what happens around reclassification events. The most closely related scholarly study is Saidi, Prasad, and Naik (2012), who focus on a small number of Middle Eastern countries' reclassifications between Frontier and Emerging indexes, and the brokerage research we could find is also anecdotal or event-specific.

In this short paper, we address these basic questions: What happens to returns around market reclassification events? Should a benchmarked investor trade at the announcement date? Wait a few months until the effective date? Wait for a year while the dust settles? Break the tie based on non-alpha considerations such as tracking error? Does it matter whether the investor tracks the new or old index? Are "upgrades" always good and "downgrades" always bad? Are there opportunities for unbenchmarked investors? To answer these questions, we study the 17 reclassifications between 2000 and 2015 listed in Table 1. The sample, while small, is comprehensive for this sample period.

It is not possible to observe flows directly, and abnormal trading volume is difficult to measure given the changing circumstances of the markets involved and the varying lengths of time between the announcement and effective dates, but the return patterns we document appear to highlight the importance of flows. Using MSCI data on the extent of benchmarking—which includes both passive indexers and active managers who use an index as a benchmark—we find that when a market is moved from a less-benchmarked to a more-benchmarked index, such as from Frontier to Emerging, its MSCI country index rises between the announcement and effective date by around 15%. By one year after the effective date, however, this upward price pressure appears to have

fully reverted. We also find that the overshooting happens in reverse when a market is reclassified to a less-benchmarked index.

For investors, the large returns around reclassifications illustrate the importance of properly accommodating the event. We delineate the alpha-maximizing policies for benchmarked and more flexible investors. The results also shed broader light on market resiliency and price pressures writ large, because MSCI reclassifications are uniquely important events for the markets involved. The patterns are clearly inconsistent with a simple "upgrades are good, downgrades are bad" hypothesis. If a reclassification is a positive event, it should be permanently so. Instead, the results are most consistent with differences in demand for the reclassified market by those benchmarked to the old and new index causing short-run price pressures that eventually revert.

Supply, Demand, and Index Inclusion Effects

It might surprise the layman that stock market prices are often studied at the highest practitioner and academic levels with no explicit reference to supply and demand. For many purposes in finance, that is a reasonable simplification, but it is hard to justify in the context of the potentially large rebalancing-driven demand changes around market reclassifications. What does prior research lead us to expect around these events?

Efficient markets theory—embraced by many passive indexers—would, in the extreme, imply that we will observe no price change. Under this view, reclassifications are inconsequential because stock fundamentals are unchanged. They are simply decisions made by a committee of non-investors who are not even attempting to evaluate

investment merits and are using largely public information. Any observed change in return properties such as risk or liquidity would be attributed to the structural changes that drove reclassifications in the first place, not the reclassifications themselves.

An alternative view, associated with inefficient markets and active management, is that stock prices sometimes respond to supply and demand forces unrelated to fundamentals. Adherents of this view would also acknowledge the structural and operational changes leading to reclassification events, but they would suggest that the trading of passive index funds—not to mention other categories of benchmarked investors—might contribute to the very distortions that their investors deny.

The accumulated evidence from other index inclusion settings suggests that we should not be surprised if reclassifications cause price dynamics. The classic research in this area involves S&P 500 inclusions. Harris and Gurel (1986) and Shleifer (1986) both argue that such inclusions contain no information about stock fundamentals, consistent with the stated position of the S&P Index Policy Committee, and both find that inclusions are associated with price jumps of a few percentage points. An important point of disagreement is that Harris and Gurel find that this jump eventually reverts.

In October 1989, the S&P changed its announcement policy. It separated the announcement date of a change from the effective date. Lynch and Mendenhall (1997) find that this policy introduced a jump on the announcement, a further rise between the announcement and effective date, and a partial reversion thereafter. Since the effective date is even more plainly informationless than the announcement itself, this is compelling evidence that inclusions induce price pressures.

More recently, Madhavan (2003) and Cai and Houge (2008) find inclusion effects for the Russell 2000, and Petajisto (2011) finds that the S&P 500 inclusion effects have grown since the early studies. Kaul, Mehrota, and Morck (2000) study a unique experiment from the Toronto Stock Exchange 300 and find more evidence of demand-induced price changes, thus extending the evidence on index inclusion effects to international markets. In a setting closer to our own, albeit still involving individual stock-level events and only a three-year time sample, Chakrabarti, Huang, Jayaraman, and Lee (2005) find that inclusions into the MSCI country indexes beget a rise between the announcement and effective date, which partially reverts. See Petajisto (2009) and Wurgler (2011) for further overviews of this large literature.

In modern, liquid markets, how can information-free inclusion effects persist? Apparently, basic supply and demand considerations overwhelm short-term arbitrage forces. Wurgler and Zhuravskaya (2002) point out that Scholes's (1972) classical efficient markets argument—that sophisticated investors would elastically supply new investor demand for the included stock because they can simply short an equivalent stock—isn't realistic. The vast majority of an individual stock's variability is idiosyncratic. There is no washing away of this risk through a long-short trade, and no way to form a portfolio of inclusions when they are isolated events.

The classical logic fails even more strongly at the level of MSCI country reclassifications. Who would have shorted a basket of U.A.E. stocks to accommodate the sudden demand from benchmarkers that followed its upgrade to the Emerging index? What exactly would those investors buy in order to hedge the risk that U.A.E. fundamentals improved while they were short? Put together, the theory and evidence

suggest that we should not be surprised if MSCI country reclassifications generate interesting price dynamics. How interesting presumably depends on how much demand actually changes. We approach this question next.

Potential Flows Around Reclassifications

In the case of MSCI reclassifications, thousands of benchmarked funds must consider how to adjust their holdings in a short period of time, and passive indexers will presumably do so fully. In light of the nearly $10 trillion now benchmarked to the MSCI indexes, the collective action of these non-fundamental traders may be large.

To get a sense of the magnitudes involved it is helpful to understand how MSCI indexes are constructed. A highly simplified explanation, with some relevant caveats and details noted later in the paper, is as follows. Each index involved is roughly value-weighted (to be more precise, free-float weighted). MSCI country return indexes are averages of a set of major stocks trading in the local market. Regional sub-indexes are averages of a set of country indexes. Finally, the major indexes, including Developed, Emerging, and Frontier indexes, are averages of combinations of the above.

The tiered and approximately cap-weighted structure of the indexes allows us to estimate the size of the potential flows associated with a reclassification. If benchmarked investors hold shares at index weights, then, under idealized assumptions, the net percentage flow driven by the reclassification itself is the difference between the fraction of the new index held by index-tracking investors and the fraction of the old index held by index-tracking investors.

Although actual flows driven by reclassification events are difficult to track, it is possible to obtain some rough upper bounds using Table 2. The key data in Table 2 are the estimates of net percentage index ownership from MSCI. For example, classification as an Emerging Market entails inclusion not only in the MSCI Emerging Markets Index, where the percentage of benchmarked ownership is high (45% as of June 2014), but also in the All Country World Index, where the percentage of benchmarked ownership is low (6% as of June 2014). The cap-weighted structure of the Indexes implies that approximately 51% of a given Emerging Market is owned by benchmarkers at that date.

A further promotion from Emerging to Developed, on the other hand, may actually cause a net *decline* in index-tracking ownership, at least in recent years. The country's ACWI status does not change, but—in the most recent data—it stands to lose its 45% ownership from its Emerging index affiliation while replacing this with only about 32% from its new inclusions into the World index, the Europe, Australasia and Far East index, or (typically) either the Europe or Asia ex-Japan index. This net decline may be contrary to intuition, given that so many more *dollars* are benchmarked to Developed than Emerging, and perhaps a general intuition that an upgrade must somehow be better than a downgrade. However, in the same way there can be a larger clientele for a corporate bond at one rating than at the next-higher rating, whether a country is upgraded or downgraded need have no fundamental bearing on aggregate demand by benchmarked investors.

Using these coarse estimates to calculate reclassification-driven flows should be done with great caution. First, fund families that track the old index in one vehicle and the new index in another may be able to transfer some of their holdings through internal

accounting, which would not contribute any price pressure. Second, actively-managed funds using an index as a benchmark may, as a group, overweight or underweight some countries relative to their actual index weights. Third, benchmarkers may decide that the reclassification event is too small to be worth responding to any time soon. In general, any tracking error and portfolio alpha consequences of a reclassification will typically be far greater for the followers of the lesser-developed index, given its smaller total cap. Fourth, to the extent that investability criteria differ between the old and the new index, an upgrade means that some stocks will be sold by those benchmarked to the old index and not bought by those following the new index; conversely, a downgrade means that some stocks will be bought by those benchmarked to the new index but are not being sold by those benchmarked to the old index. For example, when a market is moved from Frontier to Emerging, a few stocks that were included in the Frontier will not satisfy the new and stricter liquidity and size criteria. For these stocks, the demand by benchmarked investors will actually fall, rather than rise dramatically. We return to this point below. Finally, benchmarking is often a matter of degree. Our data do not distinguish between funds devoted to indexing strategies and funds that are more loosely benchmarked. How this distinction would affect the results is an interesting topic for future research.

In light of such limitations, it is most appropriate to regard the net flows to reclassifications implied by Table 2 as *directionally* correct for the majority of stocks, especially on a capitalization-weighted basis. However, it is an idealized estimate of the net flows that follow reclassifications and is most likely overstated for many less-developed markets. We therefore group events simply by the ordering of net demand by

benchmarkers—Emerging (highest), Developed, Frontier, standalone (lowest)—and do not attempt to make detailed estimates of demand elasticities.

Returns Around Reclassifications

The ultimate question is whether, and how, reclassifications affect returns. Typically, when a market's accessibility has been improving or deteriorating, MSCI announces that it has been placed on a watch list, gathers feedback from institutional investors over the next several months, and then announces a decision to reclassify the market or to remove it from the watch list. If the market is reclassified, MSCI specifies a date, again several months down the road, at which the reclassification becomes effective.

For most investors, the relevant dates involve the announcement and effective dates of reclassifications. We look for patterns between the announcement and effective date (excluding both dates themselves) and, to detect reversion, between the effective date (inclusive) and one year afterward. We do not examine price dynamics around the watch list date because it has no clear investment implication for the majority of benchmarkers.

We measure alphas on the reclassified country's index in two ways. For investors using the old benchmark, a relevant notion of alpha is the country index return over that benchmark. For investors in the new benchmark, a relevant comparison is with the new benchmark. For reclassifications from (to) standalone status, we calculate the old (new) benchmark as zero and track total returns. With such a small number of events and the

question of how to take account of differences in risk across what are already benchmark indexes, more detailed risk adjustments are difficult. The Appendix lists all sample returns for the concerned reader.

A limitation of our returns data is the use of MSCI country indexes rather than the precise subset of stocks affected by a switch. MSCI changes the constituents of the country index when the market is reclassified. In an upgrade, some companies that were allowed into the old index may not make the cut. For them, the selling pressure from those benchmarked to the old index is not offset by buying demand from those benchmarked to the new index. Likewise, in a downgrade, stocks in the old index will be affected but additional stocks will now meet the new, lower bar. This issue is somewhat ameliorated by the value-weighted nature of the country indexes, since the largest stocks in the country will always be included in either the upgrade portfolio or the downgrade portfolio. In any event, the use of country indexes typically biases our results against detecting an effect.

Figure 1 presents the main results. In the top panel, we track the average returns on country indexes for the nine reclassifications that, according to the estimates in Table 2, most likely resulted in less ownership by benchmarkers. In these cases, there was likely to have been net selling pressure as investors adjusted. The results are indeed consistent with short-term selling pressure which subsequently abated. The average total return between the announcement and effective dates was -12.5%, but this loss was more than recovered in the 23.3% total return in the year after the effective date. Using returns relative to the original index or the new index—two notions of alpha—leads to the same impression of a large fall followed by a substantial reversion.

In the bottom panel, we track the average returns for the eight reclassifications that most likely resulted in *more* ownership by benchmarkers, and therefore net buying pressure around the event. Here, and also strongly consistent with an overshooting price-pressure pattern, we see the opposite pattern in returns. There is a 23.2% total return between the announcement date and effective date, but this is to a large extent given back by the -12.4% return after the effective date. (We view the similarity in returns reported in this paragraph and the previous paragraph as coincidental.)

These differences in average returns between less- and more-benchmarked reclassifications are so large that they are statistically significant despite the modest sample size. For example, the -12.5% announcement-to-effective date total return in the less-benchmarked case is significantly lower than the corresponding 23.2% return in the more-benchmarked case (t = -2.1). The 23.3% post-effective total return in the less-benchmarked case is significantly greater than the corresponding -12.4% post-effective date return in the more-benchmarked case (t = 2.6).

We cannot rule out a complete return reversal. The sample is too small and returns are too variable to reject the hypothesis that the initial drop is equal and opposite to the subsequent rebound in Panel A. Likewise, we cannot reject that the initial rise is equal and opposite to the subsequent drop in Panel B.

How do upgrades and downgrades compare? Buying pressure tends to be higher for upgrades, so one might ask whether it is the direction of the reclassification that really matters. An upgrade would seem to increase visibility and liquidity, after all, and such effects might be reflected in positive returns even after the event. In unreported results, we split the sample between upgrades and downgrades. The results are similar to the split

across predicted net flows. (In fact, they are slightly weaker, but the sorts are hard to separate statistically because the direction of reclassification and the direction of new flows by benchmarkers are highly correlated.) The fact that the two splits lead to similar results tells us something important and consistent with only the price pressure story. If upgrades were good for valuations, they should be permanently good. If downgrades were bad for valuations, they should be permanently bad. Instead, the data show that alphas between the announcement and effective dates tend to revert in the same pattern that we see in the Figure 1 sorts. A simplistic "upgrades are good for returns, downgrades are bad" view of MSCI reclassifications is not as consistent with our findings as a temporary price pressure explanation.

What happens right around the announcement and effective dates? If the action is too fast then both the implications for market efficiency and the strategic investment opportunities are narrower. To investigate this, we excluded short windows around the event dates, but found that the results are only slightly weakened. For example, the average total return between two days after the announcement date and two days before the effective date is -9.2% for classifications that decrease benchmarked ownership and 21.3% for classifications that increase it. These closely resemble the numbers in Figure 1. The post-effective reversion effects are also similar upon excluding short windows around event dates.

Finally, we examined risk and liquidity patterns around reclassifications. An interesting possibility is that the reclassified country index's beta with respect to the new index increases over time and the beta with respect to the old index decreases. Vijh (1994) and Barberis, Shleifer, and Wurgler (2005) document such a pattern for S&P 500

changes. We did not find any significant changes in the MSCI reclassification setting, however. We also looked at the first-order autocorrelation of country indexes as a proxy for liquidity, but we found no changes in autocorrelations for upgrades or downgrades.

Implications

Our core finding is that countries transitioning into a less-benchmarked classification face net selling pressure, and negative alpha, between the announcement and effective dates. After the move becomes effective and the selling pressure abates, there is a reversion with positive alpha. The opposite is true when countries move toward a more-benchmarked classification. In each case the long-run return is roughly flat.

These patterns do not matter for passive indexers devoted solely to matching a benchmark. Those investors must rebalance at, or very near, the effective dates. But there are important implications for benchmarkers that have discretion. Table 3 summarizes the alpha-maximizing strategies implied by the evidence.

In some cases, the best trade is unambiguous. When a market is downgraded from Emerging to Frontier, for example, those benchmarked to the Frontier index should buy on the effective date. This not only eliminates the tracking error of buying early, it avoids the low returns associated with the net selling pressure between the announcement and effective dates. Conversely, for upgrades from Frontier to Emerging, those benchmarked to Frontier should wait to sell on the effective date. This allows Frontier benchmarkers to ride the net buying pressure before the effective date and, again, eliminates tracking error.

In other cases, the optimal strategy is less obvious, and alpha effects must be balanced against tracking error. Consider a reclassification from Frontier to Emerging from the perspective of Emerging benchmarkers. Buying at the effective date has the benefit of no tracking error. But it also means buying at the peak: the buying-pressure-driven return between announcement and effective has been missed, while any post-effective reversion has still to be endured. There are two strategies to avoid negative alpha. One is to buy at announcement and hold through both the run-up and the reversion. The other strategy is to buy well after the effective date, when the cycle will have played out. Both strategies involve accepting some tracking error.

The advice for absolute return investors is straightforward enough to not be worth tabulating. They should underweight the reclassified market in situations when its expected returns are low and vice-versa. Figure 1 clearly identifies these situations.

The alpha point estimates in Figure 1 are, as usual, upper bounds on what might have been attainable in practice. The MSCI country index returns being analyzed are cap-weighted, so they already emphasize the most investable and liquid stocks. As of this writing, expense ratios for MSCI iShares are less than 100 basis points and inside spreads are 25 basis points or less, including for Qatar and the United Arab Emirates, the two most recent cases in Table 1, which also had the highest total return between the announcement and the effective date. But it would have been difficult for a U.S. investor to take a large position in, say, Trinidad & Tobago after it was downgraded from the Frontier index. And, of course, if the abnormal returns are created by price pressure in the first place, trading to take advantage of them would tend to reduce profits.

An interesting question for future research is the extent to which market reclassifications also affect unreclassified markets. Downgrades may require those benchmarked to the new index to sell existing markets to accommodate a new constituent market which may enter with a very high weight, perhaps 20% of the reconstituted new index. Likewise, upgrades may lead to significant buying pressure across the remaining old index members. It is possible that global equities benchmarking is now pervasive enough to produce such spillover effects.

To wrap up, MSCI market reclassifications do not happen every day, but when they do happen they can be important events for thousands of asset managers and tens of millions of end investors. The analysis of past reclassifications sheds new light on the effects of benchmark-driven ownership and identifies strategies to help benchmarked investors take best advantage of large, predictable price pressures.

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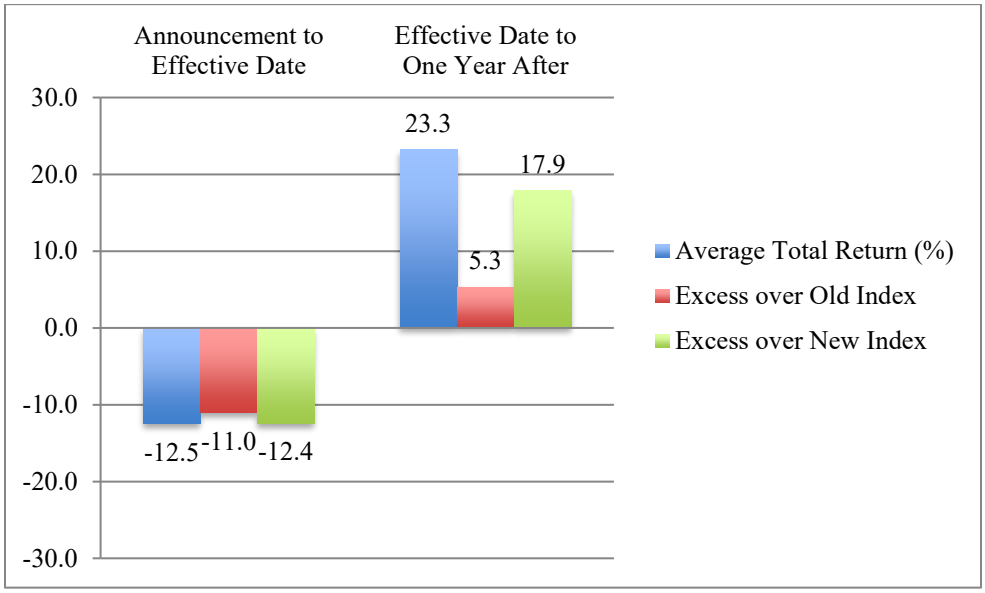
Figure 1. MSCI Country Index Returns Around Index Reclassifications. Returns on the affected market's MSCI Country Index, including total returns and excess returns over the old or new benchmark index (Frontier, Emerging, or Developed). For reclassifications from (to) standalone status, we replace excess returns with total returns. Table 1 and the Appendix list the sample events.

Panel A. Reclassifications to a Less-Benchmarked Index (n=9)



Panel B. Reclassifications to a More-Benchmarked Index (n=8)

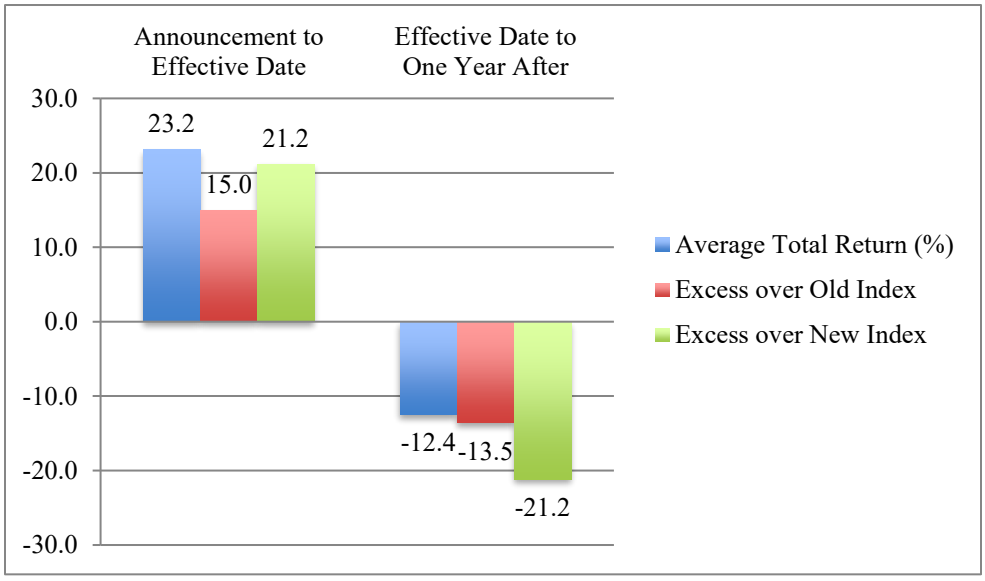


Table 1. MSCI Market Reclassifications, 2000-2015. DM denotes the MSCI Developed World Index, EM denotes the MSCI Emerging Markets Index, and FM denotes the MSCI Frontier Markets Index. The FM Index was introduced in 2007.

Announcement	Effective	Market	Old Index	New Index	MSCI Press Announcement
Panel A. Upgrades					
June 2013	June 2014	Qatar	FM	EM	Increased foreign ownership levels; operational improvements
June 2013	June 2014	United Arab Emirates	FM	EM	Operational improvements; borrowing/lending regulations
February 2010	May 2010	Bangladesh	Standalone	FM	Achieved minimum required number of eligible securities
June 2009	June 2010	Israel	EM	DM	Met all requirements for DM upgrade
May 2009	June 2009	Trinidad & Tobago	Standalone	FM	Met liquidity requirements
March 2009	June 2009	Pakistan	Standalone	FM	Increased liquidity
July 2000	June 2001	Egypt	Standalone	EM	Improved liquidity and diversity of investment opportunities
July 2000	June 2001	Greece	EM	DM	Improvements on multiple economic and market criteria
July 2000	June 2001	Morocco	Standalone	EM	Improved liquidity and diversity of investment opportunities
Panel B. Downgrades					
June 2013	December 2013	Greece	DM	EM	Reduced market accessibility
June 2013	December 2013	Morocco	EM	FM	Deterioration of liquidity
February 2011	June 2011	Trinidad & Tobago	FM	Standalone	Deterioration of liquidity
February 2009	June 2009	Argentina	EM	FM	Ongoing restrictions on inflows and outflows
December 2008	January 2009	Pakistan	EM	Standalone	Deterioration of investability
June 2008	December 2008	Jordan	EM	FM	Constituents below size and liquidity requirements
April 2006	June 2006	Venezuela	EM	Standalone	Low liquidity; restricted investability
February 2001	June 2001	Sri Lanka	EM	Standalone	Constituents below size and liquidity requirements

Table 2. Benchmarked Ownership by MSCI Market Classification. The percentage of ownership by benchmarkers is estimated as the ratio of benchmarked assets of that index, from private correspondence with MSCI, to the total capitalization of that index, estimated from MSCI Index Factsheets data. Assets benchmarked to the Frontier Markets Index are estimated from the Emerging Portfolio Fund Research (EPFR) database. The Total % Benchmarked to the Developed Market Index includes the average of Europe and Asia (ex-Japan).

	June 2014	**Sept. 2013**	**Sept. 2012**
Panel A. Frontier Market (FM) index			
FM (Proper)			
Benchmarked ($bn)	23	n.a.	n.a.
Total Cap ($bn)	106	84	69
% Benchmarked	22%	n.a.	n.a.
Total % Benchmarked	*22%*	*n.a.*	*n.a.*
Panel B. Emerging Market (EM) index and components			
EM (Proper)			
Benchmarked ($bn)	1,746	1,364	1,451
Total Cap ($bn)	3,860	3,929	3,853
% Benchmarked	45%	35%	38%
ACWI (All Country World)			
Benchmarked ($bn)	2,287	1,714	1,152
Total Cap ($bn)	35,791	33,308	27,309
% Benchmarked	6%	5%	4%
Total % Benchmarked	*51%*	*40%*	*42%*
Panel C. Developed Market (DM) index and components			
MSCI World Index			
Benchmarked ($bn)	2,156	2,388	1,906
Total Cap ($bn)	31,946	29,421	23,544
% Benchmarked	7%	8%	8%

ACWI (All Country World)			
Benchmarked ($bn)	2,287	1,714	1,152
Total Cap ($bn)	35,791	33,308	27,309
% Benchmarked	6%	5%	4%
EAFE (Europe, Australasia, and Far East)			
Benchmarked ($bn)	2,010	1,682	1,438
Total Cap ($bn)	12,695	12,372	10,133
% Benchmarked	16%	14%	14%
Europe			
Benchmarked ($bn)	544	337	261
Total Cap ($bn)	8,434	8,234	6,606
% Benchmarked	6%	4%	4%
Asia (ex-Japan)			
Benchmarked ($bn)	329	372	300
Total Cap ($bn)	3,047	2,954	2,755
% Benchmarked	11%	13%	11%
Total % Benchmarked	*38%*	*35%*	*34%*

Table 3. Alpha-Maximizing Policies Around MSCI Market Reclassifications. Historical alpha-maximizing strategies based on sample of 17 reclassifications between 2000 and 2015. Note that some multi-level reclassifications, e.g. Frontier to Developed, have not occurred in this sample. Appropriate strategy is inferred from observed historical events.

Case	If Benchmarked to Old Index	If Benchmarked to New Index
Reclassification to a Less-Benchmarked Index: DM to FM/Standalone, EM to DM/FM/Standalone, FM to Standalone	**Sell on announcement or several months after effective date.** Both strategies involve tracking error. Selling at announcement avoids wave of pre-effective net selling pressure but misses reversion after the effective date. In upgrades from Emerging to Developed, tradeoff needs to be weighed carefully due to (likely) present high weight in Emerging index.	**Buy on effective date.** Pre-effective net selling pressure and tracking error minimization both point to buying at effective date.
Reclassification to a More-Benchmarked Index: DM to EM, FM to DM/EM, Standalone to FM/EM/DM	**Sell on effective date.** Pre-effective net buying pressure and tracking error minimization both point to selling at effective date.	**Buy on announcement or several months after effective date.** Both strategies involve tracking error. Buying at announcement benefits from pre-effective net buying pressure but suffers from reversion after effective date. In downgrades from Developed to Emerging (or below), tradeoff with tracking error needs to be weighed carefully due to likely high weight in new (smaller-cap) index.

Appendix. Returns Around MSCI Market Reclassifications. Returns are calculated using daily MSCI Standard Country Indexes to account for intramonth event dates. Excess returns are calculated relative to the MSCI FM, EM, DM Indexes except where the market is tracked as a standalone, in which case only its total return is considered. The "+1 Year" return is based on the return over the next 365 calendar days.

							(Announcement, Effective) Return (%)			[Effective, +1 Year] Return (%)		
Announcement	**Effective**	**Market**	**Old Index**	**New Index**	**Upgrade**	**More Benchmarked**	**Total**	**Total - Old**	**Total - New**	**Total**	**Total - Old**	**Total - New**
June 2013	June 2014	Qatar	FM	EM	Yes	Yes	54.3	27.4	52.7	-12.1	-13.0	-19.5
June 2013	June 2014	United Arab Emirates	FM	EM	Yes	Yes	98.3	71.8	89.8	-11.3	-11.3	-16.6
June 2013	December 2013	Greece	DM	EM	No	Yes	52.4	40.0	44.2	-11.7	-19.6	-19.6
June 2013	December 2013	Morocco	EM	FM	No	No	3.6	-4.6	-1.1	4.8	-3.4	-19.6
February 2011	June 2011	Trinidad & Tobago	FM	Standalone	No	No	8.1	13.3	8.1	9.7	23.3	9.7
February 2010	May 2010	Bangladesh	Standalone	FM	Yes	Yes	3.1	3.1	5	-30.4	-30.4	-41.1
June 2009	June 2010	Israel	EM	DM	Yes	No	15.9	-7.1	1.7	11.9	-17.3	-16.8
May 2009	June 2009	Trinidad & Tobago	Standalone	FM	Yes	Yes	-2.5	-2.5	-10.7	-9.1	-9.1	-26.0
March 2009	June 2009	Pakistan	Standalone	FM	Yes	Yes	16.9	16.9	-13.4	25.1	25.1	21.9
February 2009	June 2009	Argentina	EM	FM	No	No	5.3	-45.1	-32.5	66.2	44.7	61.1
December 2008	January 2009	Pakistan	EM	Standalone	No	No	-50.1	-51.3	-50.1	2.5	-1.6	2.5
June 2008	December 2008	Jordan	EM	FM	No	No	-48.7	7.7	1.3	0.1	-61.3	-2.2
April 2006	June 2006	Venezuela	EM	Standalone	No	No	-3.2	6.7	-3.2	42.5	3.9	42.5
February 2001	June 2001	Sri Lanka	EM	Standalone	No	No	-11.7	-7.5	-11.7	93.4	88.0	93.4
July 2000	June 2001	Egypt	Standalone	EM	Yes	Yes	-23.5	-23.5	-4.4	-35.9	-35.9	-47.1
July 2000	June 2001	Greece	EM	DM	Yes	No	-31.7	-11.4	-24.3	-21.7	-28.4	-9.6
July 2000	June 2001	Morocco	Standalone	EM	Yes	Yes	-13.6	-13.6	6.5	-14.0	-14.0	-21.3