Analytical Note

Wednesday, July 10, 2019

THE INCLUSION OF CHINA IN MAJOR GLOBAL INVESTMENT INDICES: IMPLICATIONS FOR REGIONAL CAPITAL FLOWS[1]

I. Introduction

1. **The reweighting of major global investment indices, which is underway, is expected to result in a reallocation of capital throughout emerging markets.** Major stock and bond index providers have started, or have announced that they intend, to increase the weighting of **China's** securities in their respective benchmark indices over the course of 2019–20. The outcome will be that China's asset markets become inescapably more important for global investors, notwithstanding the "noise" introduced by the escalating U.S.-China trade tensions. Concurrently, **Thailand's** stock market should also get a boost owing to a change in an index inclusion method.

2. **A main concern for emerging markets is that the impact on their domestic stock and bond markets may not be insignificant, given the proposed magnitude of adjustments.** Specifically:

- Global index provider MSCI Inc. ("MSCI") announced in February that it would expand the representation of China's domestic equities, the A-shares, in its flagship global indices. China's coverage in the MSCI Emerging Market Index ("MSCI-EM"), for example, will increase from its current coverage of 235 large-capitalization A-shares to 253 large and 168 mid-capitalization stocks, including 27 listed on ChiNext, a Nasdaq-style technology board.[2] On a pro forma basis, A-shares will constitute 3.3 percent—a significant increase from the current 0.7 percent—of the MSCI-EM index when the process is completed in November (Figure 1).[3]

- Separately, MSCI started qualifying several categories of non-voting depositary receipts in calculating Thailand's stock market capitalization from May 2019. This methodology is expected to boost Thailand's presence in the index from the current 2.5 percent to 3.0 percent.

- The FTSE Russell, the first international index provider of mainland China benchmarks 20 years ago, has promoted China's A-shares to emerging market status and started adding them to the FTSE Emerging Markets Index ("FTSE-EM") from June 24, 2019. Upon full implementation of Phase 1 by March 2020, the A-shares will make up 5.7 percent of the index.

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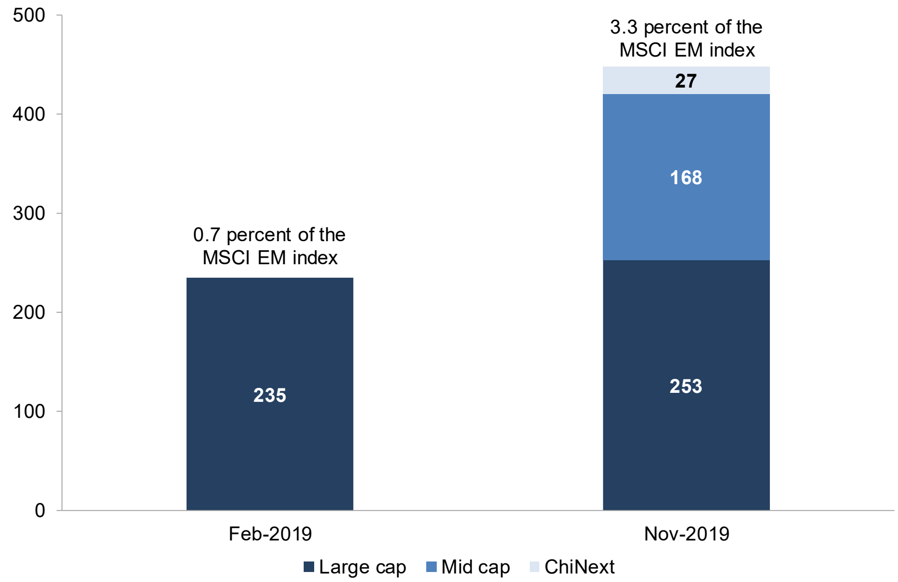
[2] The MSCI-EM currently covers approximately 85 percent of the free float-adjusted market capitalization across 24 emerging market economies (MSCI 2019). The weight of each economy in the index is determined by the market capitalization of its eligible shares, along with a pre-defined inclusion factor.

[3] China's presence in the other MSCI indices is relatively small and hence is not included in our analysis.

- The S&P Dow Jones will start adding 1,241 Chinese A-shares to its global market indices from September 2019, using similar inclusion methodologies, but information is limited at this stage.

- The Bloomberg Barclays Global Aggregate Bond Index ("BBGAB") started the process of including China's yuan-denominated government and policy bank bonds as a constituent, on April 1. Following a 20-month phasing-in period, some 364 securities will account for 6.1 percent of the index. Other index providers, such as the FTSE Russell and JPMorgan, are reportedly also considering adding China's debt to their gauges as well. Overseas investors currently make up 2.6 percent of China's onshore bond market, and own around 8 percent of sovereign notes.

Figure 1. China: Composition of A-Shares in the MSCI-EM Index
(Number of companies)



Sources: Invesco; and AMRO staff estimates.

3. **The MSCI, FTSE Russell and BBGAB indices cover a sizable share of investible markets in the world.** They are used as benchmarks for trillions of dollars of internationally focused investment funds, specifically:

- The MSCI-EM alone is tracked by an estimated USD 1.9 trillion in assets under management (AUM) from pensions, endowments, passive funds and other investors (Loder and Chiu 2018). Under the announced MSCI adjustment, 203 more A-shares become eligible and their inclusion factor will increase from 5 to 20 percent. As China and Thailand become larger constituents in the index, the weightings of other markets will be correspondingly reduced.

- The FTSE-EM inclusion is estimated to result in inflows into China amounting to USD 10 billion from passive investor funds alone (Shen and Randwich 2018).

- The BBGAB, which covers global investment grade debt from 24 local currency markets, is tracked by an estimated USD 2.5 trillion in AUM (Deutsche Bank 2019).

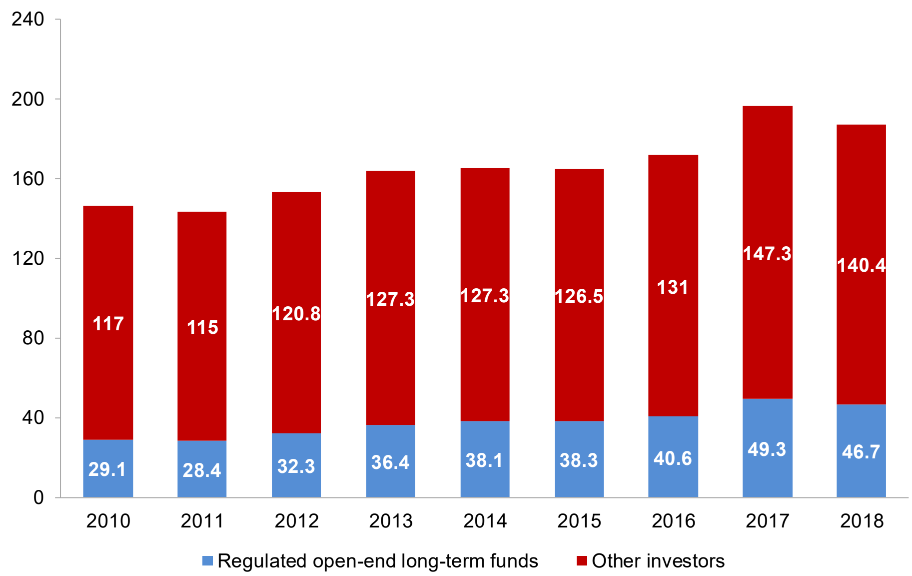
4. **An increased weighting for China' securities in these indices and Thailand's stocks in the MSCI would mean a larger investment of AUM by foreign fund managers into the two markets.** While this shift would be a welcome development for both Chinese and Thai enterprises seeking financing and global investors searching for emerging opportunities, it potentially represents bad news for other emerging markets.

5. **That said, the implications for capital flows from the re-weightings and consequent investor reallocations should not be viewed in isolation.** There are a couple of important mitigating factors that could potentially offset any impact, notably: (i) the investment index changes will be phased in over many months, which will allow investors to gradually and smoothly reallocate; and (ii) the continuing inflow of new AUM across constituent markets, which should help to further smooth capital flows.

II. Fund Management and Index Benchmarking

6. **In the global fund industry, the two major groups are the institutional investment funds, such as pension funds, endowments and insurers, and the mutual funds.** Together, they manage an estimated USD 187 trillion in assets (Figure 2). Most of these funds are domiciled in the United States, Europe and developed Asia (Cremers and others 2016), but they have been investing in emerging market assets for higher returns. Given the size of their AUM, any reallocation across borders is likely to cause significant movements in capital and considerable price fluctuations.

Figure 2. Regulated Open-end Long-term Funds vs. Other Investors
(Trillions of U.S. dollars)



Source: Investment Company Institute.
Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds. Long-term funds include equity funds, bond funds, mixed funds but exclude money market funds. Open-end fund can issue an unlimited number of shares, sell shares directly to investors and redeem them as well. They are vastly more common than their opposite, the close-end funds. Other investors include sovereign wealth funds, central bank reserves, defined benefit pension plans, insurance companies, etc.

7. **Broadly speaking, fund managers apply active or passive investment strategies or a hybrid of both.** A passive fund manager aims to deliver the total returns of a particular index, while active fund managers aim to use their skills or untapped information to search for excess return ("alpha"), or "beat the market." Specifically:

- Passive fund managers would, by design, typically hold portfolios that mirror or closely track the constituents of the respective benchmark indices. They would rebalance almost mechanically when the composition or weights of those indices change. Williams, Raddatz and Schmukler (2017) estimate that a one percentage point increase in a country's weighting in a benchmark index is associated with an average 0.9 percentage point increase in a passive fund's allocation to this market, after other country, industry and fund characteristics are accounted for.[4] Hence, the "benchmark effect" could be significant.

- Active fund managers do not necessarily track indices closely, but they do not deviate too significantly either, given that their performances are still referenced to those benchmarks. Williams, Raddatz and Schmukler (2017) show that the "benchmark effect" for active funds, albeit also sizeable, is smaller—a one percentage point weighting increase for a country in a benchmark index would result in about a 0.6 percentage point increase in an active fund's allocation to this market.

8. **The passive strategy has become more popular, with active funds typically failing to beat the market as they are mandated to do.** The evidence suggests that fewer than half of the active funds in the market, which are also more resource-intensive to run, manage to outperform the market, especially over longer horizons (Figure 3). Passive funds are also getting a boost from pension providers in many countries, where passive investment vehicles are being made available to their beneficiaries as a less expensive option in defined contribution pension schemes (The Economist, 2014).

9. **Indeed, passive funds, notably index mutual funds and index ETFs, are claiming a bigger proportion of the mutual fund industry.** In the United States, their share increased by 20 percentage points between 2008 and 2018 (Figure 4). Globally, the passive portion of the fund industry is reported to be between 20–40 percent (Cremers and others 2016; BIS 2018; Comtois 2018). The growing presence of passive funds suggests that global fund allocations are becoming increasingly more sensitive to benchmark adjustments and consequently, could cause even more concerted capital movements cross borders than before.

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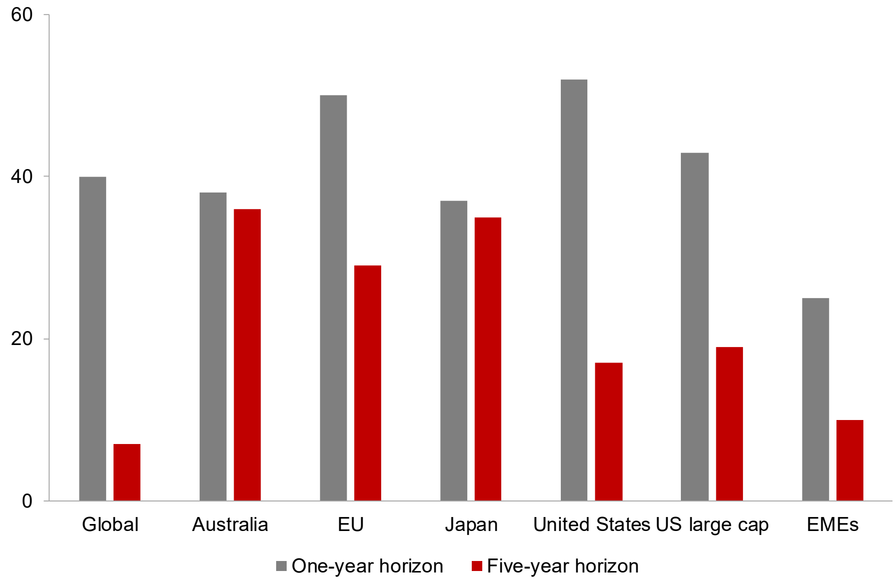
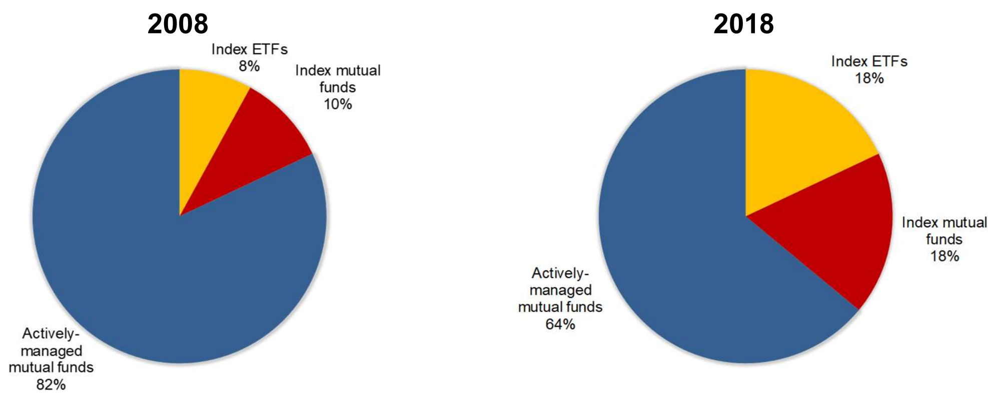
[4] Passive funds, in this context, include both explicit and closet indexing funds. They closely, but may not completely, track an index. Hence, the benchmark effect is about 0.9, on average, rather than 1.

Figure 3. Share of Active Global Equity Funds that Beat Their Benchmarks, as of End-June 2017
(Percent of total)



Source: Bank for International Settlements.

Figure 4. United States: Composition of the Mutual Fund Market



Sources: Investment Company Institute; and AMRO staff calculations.

III. Potential Impact of Re-weighting on Regional Capital Flows

10. **To what extent will the inclusion, or share increase, of China and Thailand in the major stock and bond indices, affect emerging markets in general, and the ASEAN+3 region specifically?** Some back-of-the-envelope calculations of the capital flows into and out of regional stock and bond markets, are undertaken to estimate flow of funds across regional markets, following the anticipated rebalancing of portfolios by fund managers (Table 1, Panel 1):[5]

- Almost all constituent markets should see their weightings in the MSCI-EM, FTSE-EM and BBGAB indices shrink after the adjustments. Consequently, reallocations should result in outflows from these markets into China onshore markets, and to Thailand's stock market.

- China's onshore stock market is estimated to receive around USD 85 billion to add to its USD 6.7 trillion capitalization, or the equivalent of 1.3 percent of its current size, following the MSCI adjustment. It should boost the foreign holdings of A-shares from the current 6.7 percent to 8 percent, but this increase would be offset by outflows of USD 32.3 billion from the offshore market. Thailand's stock market would see an influx of foreign investment, equivalent to 3.4 percent of its current market capitalization.

- Elsewhere, Korea would see the biggest absolute amount in outflows from the MSCI-EM reallocation, estimated at almost USD 14.9 billion, or 1 percent of its market capitalization. The projected outflows for Malaysia, Indonesia and the Philippines are relatively small, at between USD 1.2–2.5 billion, or less than 1 percent of their respective stock market capitalization. That said, short-term price fluctuations might not be insignificant.

- The re-weighting of the FTSE-EM would also result in similar capital flow trends across constituents as those of the MSCI-EM. However, the amounts would be significantly lower, given the relatively smaller size of AUM that are tracking the former.

- If the fund inflows into Thailand are excluded, total capital outflows from Malaysia, Indonesia, the Philippines and Korea attributable to the benchmarking effect of the MSCI-EM and FTSE-EM would total about USD 22 billion. This amount approximates the portfolio equity outflows from the ASEAN-5 plus Korea in 2018, when the region was hit by sell-offs in emerging market risk assets (Figure 5).

- The capital outflows attributable to the re-weighting of the BBGAB would be largest for the United States, Euro Area and Japan, in absolute U.S. dollar terms. Approximately USD 107 billion would be reallocated to China's bond market. Redemptions of local currency debt securities for the rest of the region (including Korea, Singapore and other ASEAN markets) would amount to an estimated total of USD 2.5 billion, given their collective small presence in the index. Such magnitude could be considered modest compared to the volatility in the actual bond market flows over the past year and a half (Figure 5).

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[5] See Appendix for detailed assumptions.

Table 1. Net Flows from Reallocations and New Assets under Management

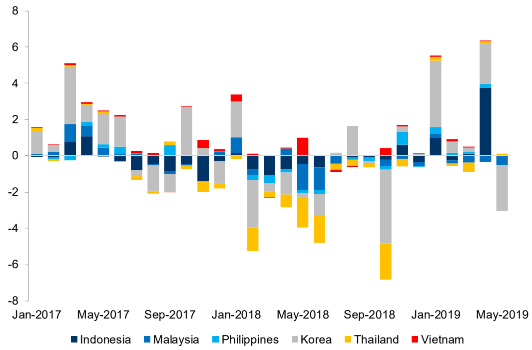
(In billions of U.S. dollars unless indicated otherwise)

Constituent	Capital Flows from Reallocation			Capital Flows from New AUM			Total Capital Flows	
	MSCI Emerging Markets Index	FTSE Russell Emerging Markets Index	Bloomberg Barclays Global Aggregate Bond Index	MSCI Emerging Markets Index	FTSE Russell Emerging Markets Index	Bloomberg Barclays Global Aggregate Bond Index	Amount	Percentage of FX Reserves
United States	0.0	0.0	-48.3	0.0	0.0	28.1	-20.1	-4.4
Euro Area	0.0	0.0	-26.2	0.0	0.0	15.3	-10.9	-1.3
Japan	0.0	0.0	-18.0	0.0	0.0	10.5	-7.5	-0.6
Singapore	0.0	0.0	-0.2	0.0	0.0	0.1	-0.1	0.0
Hong Kong, China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
China, Offshore	-32.3	-6.7	0.0	37.1	4.2	0.0	2.3	0.1
China, Onshore	85.0	19.3	107.2	4.2	0.7	4.0	220.4	6.9
Korea	-14.9	0.0	-1.4	17.1	0.0	0.8	1.7	0.4
Taiwan POC	-11.6	-2.4	0.0	13.3	1.5	0.0	0.8	0.2
India	-9.0	-2.3	0.0	10.4	1.4	0.0	0.5	0.1
Brazil	-8.4	-1.7	0.0	9.6	1.1	0.0	0.6	0.2
Thailand	17.8	-0.7	-0.4	3.8	0.4	0.2	21.2	10.0
Malaysia	-2.5	-0.6	-0.3	2.8	0.4	0.2	0.0	0.0
Indonesia	-2.4	-0.5	-0.3	2.7	0.3	0.2	0.1	0.0
Philippines	-1.2	-0.3	0.0	1.4	0.2	0.0	0.1	0.1
South Africa	0.0	-1.4	0.0	0.0	0.9	0.0	-0.5	-1.0
Other	-20.7	-2.9	-12.1	23.8	1.8	7.0	-3.0	

Source: AMRO staff estimates.

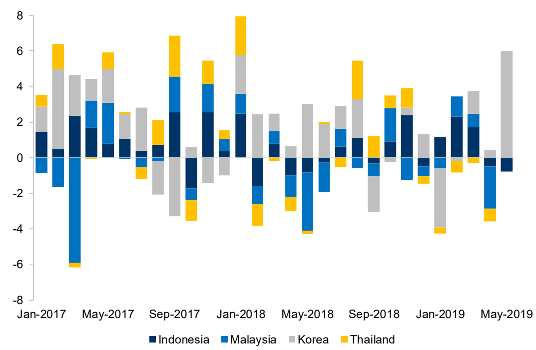
Figure 5. Portfolio Flows from ASEAN-4 and Korea
(Billions of U.S. dollars)

Equities



Sources: National authorities, AMRO staff calculations.

Bonds



Sources: National authorities, AMRO staff calculations.

IV. The Offsetting Impact of New AUM

11. **The continuing inflow of new AUM should help counter the impact across countries from the index re-weighting.** It assumes that global macro-financial conditions remain sufficiently conducive for funds to grow, and at around historical average rates. Realistically, the investment reallocations would not occur in isolation. Aside from unpredictable global and domestic developments that could influence the magnitude of investment flows to countries, adjustments for index changes would typically be undertaken when new investment flows enter the system (rather than in isolation), to be allocated according to the revised weightings. The positive inflows into should help to offset the outflows from each country (Table 1 Panel 2):

- For regional assets, the estimated new AUM allocations to the MSCI-EM would be largest for China's offshore markets, followed by Korea's. The former would receive about USD 37.1 billion, with more than USD 17.1 billion destined for the latter. China's A-share market is estimated to receive inflows of about USD 4.2 billion in new funds. The new allocations to ASEAN markets would approximate the size of the reallocation outflows.

- The new equity inflows benchmarked against the FTSE-EM would be significantly smaller across all markets compared to the MSCI-EM; the BBGAB-related bond flows would largely benefit the advanced economy markets, with an estimated USD 4.0 billion allocated to the China market.

12. **All else being equal, the estimated aggregate outcome from both the reallocation from existing positions and the allocation of new funds should be largely neutral for the majority of ASEAN+3 members.** China's domestic markets would be the biggest winner, with additional foreign investment of approximately USD 220.4 billion, the equivalent of almost 6.9 percent of its FX reserves (Table 1 Panel 3). Thailand would post net inflows of USD 21.2 billion, underpinned largely by the MSCI reallocation, which would increase its FX reserves by about 10 percent from current levels. For the other regional markets, the estimated capital outflows from investment benchmark changes should be sufficiently offset by new investment funds moving into those markets, assuming that no major shock to emerging markets or country-specific event were to occur during that time.

V. Conclusion

13. **Adjustments to major international investment indices could potentially introduce volatility to a country's capital flows.** They could affect domestic asset prices and the exchange rate. However, mitigating measures and a conducive macro-financial environment can, to a large extent, offset the changes because:

- index providers typically phase in proposed changes over a reasonable period of time to ensure more orderly realignments in investor portfolios; and
- continuing growth in global investment funds (and their allocation to index constituent countries) would translate to capital inflows that compensate for asset reallocation out of a country.

Capital flows could also be volatile as a result of global, regional or domestic developments, but their impact would be difficult to separate from the rebalancing exercise. Where a country's economic fundamentals remain strong, temporary and large capital outflows could potentially be supported by regional buffers, such as the CMIM, to ensure financial stability.

Appendix. Assumptions and Estimations

1. The new weights for other countries, following the increases to China across the various indices, are assumed to be proportionate to their original weights (Appendix Table 1).

- The "benchmark effect" is assumed to be 0.9 percentage point for passive and 0.6 percentage point for active funds (per Williams, Raddatz and Schmukler 2017) (Appendix Table 1).

2. Fund flows are assumed to be proportionally distributed across fund types, that is, mutual versus institutional funds, active versus passive funds (Appendix Table 2):

- The latest share between mutual and institutional funds is estimated by averaging their respective historical shares over the 2010-2018 period (per ICI 2019, Figure 2):
    - Mutual funds are hence assumed to represent 25.7 percent of total fund assets globally;
    - The balance (74.3 percent) is accounted for by pensions, endowments, insurance companies, sovereign wealth funds and others.

- The mix of passive versus active funds is assumed to be 40/60 percent (per Cremers and others 2016):
    - The AUM of passive funds tracking the MSCI-EM index is assumed to be USD 1.9 trillion in 2018 (per Loder and Chiu 2018).
    - The passive fund inflows into China from the FTSE-EM inclusion is assumed to be USD 10 billion in 2018 (per Shen and Randwich 2018).
    - The total AUM of both passive and active funds managed against the BBGAB is assumed to be USD 2.5 trillion in 2018 (per Deutsche Bank 2019).

3. Global fund assets are assumed to grow at the compound annual rate since early this decade, that is, 7.0 percent for mutual funds and 2.6 percent for institutional funds (per Figure 2), which are applied to the 2018 amounts to estimate the new AUM flows for 2019.

Appendix Table 1. Passive and Active Funds: Index Weights and Estimated Changes

Constituent	Index Weights		Average Weights	
	Pre-Adjustment	Post-Adjustment	Passive 1/	Active 2/
	(1)	(2)	(3) = (2) * 0.9	(4) = (2) * 0.6
	MSCI Emerging Markets Index			
	Feb 2019	Nov 2019	Nov 2019	Nov 2019
United States	-	-	-	-
Euro Area	-	-	-	-
Japan	-	-	-	-
Singapore	-	-	-	-
Hong Kong	-	-	-	-
China, Offshore	30.36	29.40	26.88	16.74
China, Onshore	0.77	3.30	3.02	1.88
Korea	13.98	13.54	12.38	7.71
Taiwan	10.90	10.56	9.65	6.01
India	8.48	8.21	7.51	4.68
Brazil	7.87	7.62	6.97	4.34
Thailand	2.47	3.00	2.74	1.71
Malaysia	2.32	2.25	2.05	1.28
Indonesia	2.23	2.16	1.97	1.23
Philippines	1.12	1.08	0.99	0.62
South Africa	-	-	-	-
Other	19.50	18.88	17.26	10.75
Non-China A-share total	99.23	96.70	96.98	98.12
	FTSE Russell Emerging Markets Index			
	Mar 2019	Mar 2020	Mar 2020	Mar 2020
United States	-	-	-	-
Euro Area	-	-	-	-
Japan	-	-	-	-
Singapore	-	-	-	-
Hong Kong	-	-	-	-
China, Offshore	34.55	32.58	29.78	18.55
China, Onshore	0.00	5.70	5.21	3.25
Korea	-	-	-	-
Taiwan	12.62	11.90	10.88	6.78
India	11.81	11.14	10.18	6.34
Brazil	8.76	8.26	7.55	4.70
Thailand	3.60	3.39	3.10	1.93
Malaysia	3.02	2.85	2.60	1.62
Indonesia	2.36	2.23	2.03	1.27
Philippines	1.38	1.30	1.19	0.74
South Africa	7.1	6.70	6.12	3.81
Other	14.80	13.96	12.76	7.95
Non-China A-share total	100.00	94.30	94.79	96.75
	Bloomberg Barclays Global Aggregate Bond Index			
	Jan 2019	Nov 2020	Nov 2020	Nov 2020
USD	45.06	42.33	38.70	24.10
EUR	24.48	23.00	21.02	13.09
JPY	16.78	15.76	14.41	8.97
SGD	0.19	0.18	0.16	0.10
HKD	0.02	0.02	0.02	0.01
-	-	-	-	-
CNY	0.00	6.06	5.54	3.45
KRW	1.27	1.19	1.09	0.68
NTD	-	-	-	-
INR	-	-	-	-
BRL	-	-	-	-
THB	0.33	0.31	0.28	0.18
MYR	0.29	0.27	0.25	0.16
IDR	0.29	0.27	0.25	0.16
PHP	-	-	-	-
ZAR	-	-	-	-
Other	11.29	10.61	9.70	6.04
Non-CNY total	100.00	93.94	94.46	96.55

Sources: Investment Company Institute: Invesco, data as of Feb 15, 2019; FTSE Russell, data as of March 29, 2019; Bloomberg Barclays, data as of January 29, 2019; and AMRO staff estimates.
1/ Benchmark effect = 0.9. 2/ Benchmark effect = 0.6.

Appendix Table 2. Regional Capital Flows from the Inclusion of China in Major Global Investment Indices and the Allocation of New AUM (In billions of U.S. dollars unless indicated otherwise)

Fund Type	Existing Share (Percent)	Benchmark Effect	Average Annual AUM Growth Rate (Percent)	MSCI Emerging Markets Index: Existing AUM: Stock: Current Position	MSCI: Existing AUM: Stock: After Reallocation	MSCI: Existing AUM: Reallocation Flow	MSCI: New AUM: Additional Flow	MSCI: Net Flow	FTSE Russell Emerging Markets Index: Existing AUM: Stock: Current Position	FTSE: Existing AUM: Stock: After Reallocation	FTSE: Existing AUM: Reallocation Flow	FTSE: New AUM: Additional Flow	FTSE: Net Flow	BBG Barclays Global Aggregate Index: Existing AUM: Stock: Current Position	BBG: Existing AUM: Stock: After Reallocation	BBG: Existing AUM: Reallocation Flow	BBG: New AUM: Additional Flow	BBG: Net Flow	Total Net Flow: Amount	Total Net Flow: Relative to FX Reserves (Percent)
	(1)	(2)	(3)	(4)	(5)	(6) = [(5) - (4)] * (2)	(7) = (5) * (3) * (2)/100	(8) = (6) + (7)	(9)	(10)	(11) = [(10) - (9)] * (2)	(12) = (10) * (3) * (2)/100	(13) = (11) + (12)	(14)	(15)	(16) = [(15)-(14)] * (2)	(17)=(15) * (3) * (2)/100	(18)=(16)+(17)	(19)=(8)+(13)+(18)	(20)
Total funds (U.S. dollar billions)				4,750.0	4,750.0	0.0	126.3	126.3	479.8	479.8	0.0	12.8	12.8	2,500.0	2,500.0	0.0	66.5	66.5	205.5	
of which:																				
Passive	40.0	0.9		1,900.0	1,900.0	0.0	65.3	65.3	191.9	191.9	0.0	6.6	6.6	1,000.0	1,000.0	0.0	34.4	34.4	106.3	
Active	60.0	0.6		2,850.0	2,850.0	0.0	61.0	61.0	287.9	287.9	0.0	6.2	6.2	1,500.0	1,500.0	0.0	32.1	32.1	99.3	
Mutual Funds	25.7		7.0	1,222.9	1,222.9	0.0	60.5	60.5	123.5	123.5	0.0	6.1	6.1	643.6	643.6	0.0	31.8	31.8	98.4	
of which:																				
Passive	40.0	0.9		489.2	489.2	0.0	31.3	31.3	49.4	49.4	0.0	3.2	3.2	257.5	257.5	0.0	16.5	16.5	50.9	
United States				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	116.0	109.0	-6.4	7.0	0.5	0.5	0.1
Euro Area				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.0	59.2	-3.5	3.8	0.3	0.3	0.0
Japan				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.2	40.6	-2.4	2.6	0.2	0.2	0.0
Singapore				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0
Hong Kong				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
China, Offshore				148.5	143.8	-4.3	9.2	4.9	17.1	16.1	-0.9	1.0	0.1	0.0	0.0	0.0	0.0	0.0	5.0	0.2
China, Onshore				3.8	16.1	11.3	1.0	12.3	0.0	2.8	2.6	0.2	2.8	0.0	15.6	14.3	1.0	15.3	30.4	0.9
Korea				68.4	66.2	-2.0	4.2	2.3	0.0	0.0	0.0	0.0	0.0	3.3	3.1	-0.2	0.2	0.0	2.3	0.6
Taiwan POC				53.3	51.6	-1.5	3.3	1.8	6.2	5.9	-0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	1.8	0.4
India				41.5	40.2	-1.2	2.6	1.4	5.8	5.5	-0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.3
Brazil				38.5	37.3	-1.1	2.4	1.3	4.3	4.1	-0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.3
Thailand				12.1	14.7	2.4	0.9	3.3	1.8	1.7	-0.1	0.1	0.0	0.8	0.8	0.0	0.1	0.0	3.3	1.6
Malaysia				11.3	11.0	-0.3	0.7	0.4	1.5	1.4	-0.1	0.1	0.0	0.7	0.7	0.0	0.0	0.0	0.4	0.4
Indonesia				10.9	10.6	-0.3	0.7	0.4	1.2	1.1	-0.1	0.1	0.0	0.7	0.7	0.0	0.0	0.0	0.4	0.3
Philippines				5.5	5.3	-0.2	0.3	0.2	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
South Africa				0.0	0.0	0.0	0.0	0.0	3.5	3.3	-0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Other				95.4	92.4	-2.8	5.9	3.1	7.3	6.9	-0.4	0.4	0.1	29.1	27.3	-1.6	1.7	0.1	3.3	
Active	60.0	0.6		733.8	733.8	0.0	29.2	29.2	74.1	74.1	0.0	2.9	2.9	386.2	386.2	0.0	15.4	15.4	47.5	
United States				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	174.0	163.5	-6.0	6.5	0.5	0.5	0.1
Euro Area				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.5	88.8	-3.3	3.5	0.3	0.3	0.0
Japan				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.8	60.9	-2.2	2.4	0.2	0.2	0.0
Singapore				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.0	0.0	0.0	0.0	0.0
Hong Kong				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
China, Offshore				222.8	215.7	-4.0	8.6	4.6	25.6	24.1	-0.8	1.0	0.1	0.0	0.0	0.0	0.0	0.0	4.7	0.1
China, Onshore				5.6	24.2	10.6	1.0	11.5	0.0	4.2	2.4	0.2	2.6	0.0	23.4	13.3	0.9	14.3	28.4	0.9
Korea				102.6	99.3	-1.8	4.0	2.1	0.0	0.0	0.0	0.0	0.0	4.9	4.6	-0.2	0.2	0.0	2.1	0.5
Taiwan POC				80.0	77.4	-1.4	3.1	1.6	9.4	8.8	-0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.4
India				62.2	60.3	-1.1	2.4	1.3	8.8	8.3	-0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.3
Brazil				57.7	55.9	-1.0	2.2	1.2	6.5	6.1	-0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.3
Thailand				18.1	22.0	2.2	0.9	3.1	2.7	2.5	-0.1	0.1	0.0	1.3	1.2	0.0	0.0	0.0	3.1	1.5
Malaysia				17.0	16.5	-0.3	0.7	0.3	2.2	2.1	-0.1	0.1	0.0	1.1	1.1	0.0	0.0	0.0	0.4	0.4
Indonesia				16.4	15.8	-0.3	0.6	0.3	1.7	1.6	-0.1	0.1	0.0	1.1	1.1	0.0	0.0	0.0	0.3	0.3
Philippines				8.2	8.0	-0.1	0.3	0.2	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
South Africa				0.0	0.0	0.0	0.0	0.0	5.3	5.0	-0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Other				143.1	138.6	-2.6	5.5	2.9	11.0	10.3	-0.4	0.4	0.1	43.6	41.0	-1.5	1.6	0.1	3.1	
Institutional Investment Funds	74.3		2.6	3,527.1	3,527.1	0.0	65.8	65.8	356.3	356.3	0.0	6.6	6.6	1,856.4	1,856.4	0.0	34.6	34.6	107.1	
of which:																				
Passive	40.0	0.9		1,410.8	1,410.8	0.0	34.0	34.0	142.5	142.5	0.0	3.4	3.4	742.5	742.5	0.0	17.9	17.9	55.4	
United States				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	334.6	314.3	-18.5	7.6	-11.0	-11.0	-2.4
Euro Area				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	181.8	170.8	-10.1	4.1	-6.0	-6.0	-0.7
Japan				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	124.6	117.0	-6.9	2.8	-4.1	-4.1	-0.3
Singapore				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.3	-0.1	0.0	0.0	0.0	0.0
Hong Kong				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
China, Offshore				428.3	414.8	-12.4	10.0	-2.4	49.2	46.4	-2.6	1.1	-1.4	0.0	0.0	0.0	0.0	0.0	-3.8	-0.1
China, Onshore				10.9	46.6	32.6	1.1	33.8	0.0	8.1	7.4	0.2	7.6	0.0	45.0	41.1	1.1	42.2	83.6	2.6
Korea				197.2	191.0	-5.7	4.6	-1.1	0.0	0.0	0.0	0.0	0.0	9.4	8.9	-0.5	0.2	-0.3	-1.4	-0.3
Taiwan POC				153.8	148.9	-4.4	3.6	-0.9	18.0	17.0	-0.9	0.4	-0.5	0.0	0.0	0.0	0.0	0.0	-1.4	-0.3
India				119.6	115.9	-3.5	2.8	-0.7	16.8	15.9	-0.9	0.4	-0.5	0.0	0.0	0.0	0.0	0.0	-1.2	-0.3
Brazil				111.0	107.5	-3.2	2.6	-0.6	12.5	11.8	-0.7	0.3	-0.4	0.0	0.0	0.0	0.0	0.0	-1.0	-0.3
Thailand				34.8	42.3	6.8	1.0	7.9	5.1	4.8	-0.3	0.1	-0.2	2.5	2.3	-0.1	0.1	-0.1	7.6	3.6
Malaysia				32.7	31.7	-0.9	0.8	-0.2	4.3	4.1	-0.2	0.1	-0.1	2.2	2.0	-0.1	0.0	-0.1	-0.4	-0.4
Indonesia				31.5	30.5	-0.9	0.7	-0.2	3.4	3.2	-0.2	0.1	-0.1	2.2	2.0	-0.1	0.0	-0.1	-0.3	-0.3
Philippines				15.8	15.3	-0.5	0.4	-0.1	2.0	1.9	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1
South Africa				0.0	0.0	0.0	0.0	0.0	10.1	9.5	-0.5	0.2	-0.3	0.0	0.0	0.0	0.0	0.0	-0.3	-0.6
Other				275.1	266.4	-8.0	6.4	-1.5	21.1	19.9	-1.1	0.5	-0.6	83.8	78.8	-4.6	1.9	-2.7	-4.9	
Active	60.0	0.6		2,116.2	2,116.2	0.0	31.8	31.8	213.8	213.8	0.0	3.2	3.2	1,113.8	1,113.8	0.0	16.7	16.7	51.7	
United States				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	501.9	471.5	-17.3	7.1	-10.2	-10.2	-2.3
Euro Area				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	272.7	256.1	-9.4	3.8	-5.6	-5.6	-0.7
Japan				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	186.9	175.6	-6.4	2.6	-3.8	-3.8	-0.3
Singapore				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.0	-0.1	0.0	0.0	0.0	0.0
Hong Kong				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
China, Offshore				642.5	622.2	-11.6	9.3	-2.2	73.9	69.6	-2.4	1.0	-1.4	0.0	0.0	0.0	0.0	0.0	-3.6	-0.1
China, Onshore				16.3	69.8	30.5	1.0	31.5	0.0	12.2	6.9	0.2	7.1	0.0	67.5	38.4	1.0	39.4	78.1	2.4
Korea				295.9	286.5	-5.3	4.3	-1.0	0.0	0.0	0.0	0.0	0.0	14.1	13.3	-0.5	0.2	-0.3	-1.3	-0.3
Taiwan POC				230.7	223.4	-4.2	3.4	-0.8	27.0	25.4	-0.9	0.4	-0.5	0.0	0.0	0.0	0.0	0.0	-1.3	-0.3
India				179.5	173.8	-3.2	2.6	-0.6	25.2	23.8	-0.8	0.4	-0.5	0.0	0.0	0.0	0.0	0.0	-1.1	-0.3
Brazil				166.5	161.3	-3.0	2.4	-0.6	18.7	17.7	-0.6	0.3	-0.3	0.0	0.0	0.0	0.0	0.0	-0.9	-0.2
Thailand				52.3	63.5	6.4	1.0	7.3	7.7	7.3	-0.2	0.1	-0.1	3.7	3.5	-0.1	0.1	-0.1	7.1	3.4
Malaysia				49.1	47.5	-0.9	0.7	-0.2	6.5	6.1	-0.2	0.1	-0.1	3.2	3.0	-0.1	0.0	-0.1	-0.4	-0.3
Indonesia				47.2	45.7	-0.8	0.7	-0.2	5.0	4.8	-0.2	0.1	-0.1	3.2	3.0	-0.1	0.0	-0.1	-0.3	-0.3
Philippines				23.7	23.0	-0.4	0.3	-0.1	2.9	2.8	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1
South Africa				0.0	0.0	0.0	0.0	0.0	15.2	14.3	-0.5	0.2	-0.3	0.0	0.0	0.0	0.0	0.0	-0.3	-0.6
Other				412.7	399.6	-7.4	6.0	-1.4	31.6	29.8	-1.0	0.4	-0.6	125.7	118.1	-4.3	1.8	-2.6	-4.6	

Sources: Investment Company Institute; Invesco, data as of Feb 15, 2019; FTSE Russell, data as of March 29, 2019; Bloomberg Barclays, data as of January 29, 2019; and AMRO staff estimates.

Note: The estimates under the “Current Position” and “After Allocation” columns refer to fund assets in each market if they were allocated purely based on the index weights before and after the adjustment. An A3 version of this table is included as a separate attachment.

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