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When Index Deletion Carries News: MSCI Reviews, Free-Float Credibility and Price Pressure in Indonesia

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Abstract

We study 160 MSCI index review events for 96 Indonesian stocks from 21 quarterly reviews between 2021 and 2026; because not every review changed Indonesian membership, additions and deletions each fall on 16 announcement dates. Additions earn a cumulative abnormal return of +3.8% over days [−1,+1], significant even when each announcement date counts as one observation ($p = 0.023$), followed by a reversal of similar size that is not significant at the date level. Deletions lose −9.4% over [0,+5], but the average hides a break. Before 2026 they lose −3.8% (12 dates, $p < 0.001$). From 2026, when MSCI began removing Indonesian stocks for high shareholding concentration and overstated free float, they lose −15.3%, four times as much. Daily Indonesia Stock Exchange (IDX) data show the passive channel directly: foreign investors sell deleted stocks heavily at the implementation close, but not significantly more in 2026 than before, whether scaled by shares outstanding or by free float. The 2026 deletions sit on four announcement dates, so the smallest attainable date-level p-value is 0.125, against $p < 0.001$ in event-level tests. We argue that the 2026 deletions are not pure demand shocks but also carry news about governance and Indonesia's market classification, in contrast to the disappearing index effect in the United States. Index-change studies should not pool events across a rule change, and inference should treat the announcement date as the independent unit.

Keywords: Index reclassification · MSCI · Price pressure · Free float · Event study · Indonesia

JEL: G14, G15, G23, G34

1. Introduction

Index reconstitutions are the standard natural experiment for testing whether demand curves for stocks slope downward. An index provider changes membership by a published rule, passive funds must trade, and prices respond without any change in fundamentals (Harris and Gurel 1986; Shleifer 1986). In the United States the effect has largely disappeared as index changes became predictable and liquidity provision around rebalancing deepened (Greenwood and Sammon 2025), even though passive ownership is larger than commonly measured (Chinco and Sammon 2024). The design rests on one assumption: the decision to add or delete a stock carries no information about its value.

That assumption is easiest to defend in a quiet market. It is hardest to defend when the provider changes its rules because it distrusts the market's own data. Indonesia in 2026 is such a case. MSCI began treating Indonesian ownership disclosures as unreliable, used more granular shareholder data from the central depository to recompute free float, and removed stocks flagged for high shareholding concentration. In May 2026 alone it deleted six Indonesian names from the Global Standard index and added none. The same review season carried a live threat to Indonesia's emerging-market status.

We use this setting to ask a simple question: does an index deletion mean the same thing before and after such a rule change? We assemble 160 MSCI review events for 96 IDX stocks from 21 quarterly reviews between 2021 and 2026 and estimate abnormal returns with a market model. We make three contributions.

1. **Price pressure from MSCI changes in an emerging market under scrutiny.** Additions earn +3.8% over [−1,+1] and +2.8% over [0,+5], and give back −6.0% over [+6,+20], although this reversal is not significant at the date level. The announcement effect remains significant when each of the 16 announcement dates counts as one observation ($p = 0.023$ in [−1,+1]), and IDX data show the matching foreign buying at the implementation close.

2. **A regime break in the meaning of deletion.** Pooled deletions lose −9.4% over [0,+5]. Before 2026 the loss is −3.8% and significant at the date level; in 2026 it is −15.3%. Foreign net selling around implementation is not significantly different between the regimes, relative to shares outstanding (61 and 58 basis points) or to free float (204 and 254 basis points), so the extra fall in 2026 is not a larger passive outflow. We argue that 2026 deletions bundle governance news with the demand shock, which undermines the exogeneity that the design needs.
3. **Inference when events pile up on a few dates.** The 38 deletions of 2026 fall on four announcement dates. Standard tests (Patell, BMP, Corrado) assume events are independent and report $p < 0.001$. Such cross-correlation inflates rejection rates (Kolari and Pynnönen 2010); treating the announcement date as the unit, the smallest attainable p-value of an exact sign-flip test is 0.125 (Young 2019; Canay et al. 2017).

The paper also offers a practical lesson for researchers working with free data in emerging markets. We show that the main threat in our sample is not unadjusted stock splits, which free data handled correctly, but the pooling of events across regimes and dates.

Section 2 describes the institutional setting. Section 3 reviews the literature and states the hypotheses. Section 4 describes data and methods. Section 5 reports results. Section 6 discusses interpretation and a narrative-based extension. Section 7 concludes.

2. Institutional background

2.1 MSCI index reviews

MSCI reviews its Global Investable Market Indexes four times a year, in February, May, August and November. Results are announced about two to three weeks before implementation, and changes usually take effect at the close of the last business day of the review month; in four of the 21 reviews in our sample (May 2021, November 2024, August 2025 and November 2025) they took effect a few days earlier, and we use each review's announced effective date. The announcement is the information event; the implementation close is the day passive funds trade. We therefore anchor the event study on the announcement date and treat the implementation close as a known later date inside the post-event window.

A stock can move in three ways. It can be **added** to or **deleted** from the Global Standard (large and mid cap) or Global Small Cap index, or it can **migrate** between them. A migration appears in MSCI's lists as two lines, a deletion from one index and an addition to the other, on the same day. We treat each migration as one event.

2.2 Indonesia's 2026 free-float regime

From late 2025, MSCI questioned whether reported free float in Indonesia matched shares that outside investors could actually trade. It opened a consultation on free-float treatment in September 2025 (KB Valbury Sekuritas 2026). In 2026 it recomputed free float with shareholder data above the 1% disclosure threshold from the central securities depository (KSEI), and it applied a high shareholding concentration (HSC) screen (Bisnis.com 2026).

The May 2026 review, announced on 12 May and implemented at the close of 29 May, removed AMMN, BREN, TPIA, DSSA, CUAN and AMRT from the Global Standard index, with AMRT moving to Small Cap and no Indonesian additions. BREN and DSSA were removed under the HSC screen; AMMN, TPIA and CUAN after their free float was revised down (Bisnis.com 2026; RCTI+ 2026). Thirteen names left the Small Cap index in the same review. A broker estimated outflows of US$2.2–2.7 billion at the rebalance (BRI Danareksa Sekuritas 2026).

Two features of this episode matter for identification. First, the deletion criterion was itself a judgement about governance: concentrated ownership and opaque free float. Second, the review coincided with MSCI's market accessibility review, which kept open the possibility of downgrading Indonesia from emerging-market status (The Star 2026). Indonesian regulators responded by discussing a higher minimum free float, from 7.5% to 15% (Sasmita 2026). A deletion in 2026 therefore told investors something about the company and about the market, not only that index funds would sell.

3. Literature and hypotheses

Price pressure and downward-sloping demand. Harris and Gurel (1986) found that S&P 500 additions rise on announcement and largely revert within weeks, which they read as temporary price pressure. Shleifer (1986) found little reversal and argued that demand curves for stocks slope down. Kaul et al. (2000) used a pure change in index weights at the Toronto Stock Exchange and found permanent price effects without any information content. Petajisto (2011) shows that the index premium grows with passive assets tracking the index. Pavlova and Sikorskaya (2023) show that the price effect of index changes rises with benchmarking intensity, and Kashyap et al. (2021) show that benchmark inclusion raises valuations through the same demand. Demand-system estimates imply that demand for individual stocks is inelastic (Koijen et al. 2024; Haddad et al. 2025), which lets predictable index trades move prices. In the United States, however, the S&P 500 index effect has largely disappeared over the past two decades (Greenwood and Sammon 2025), and Patel and Welch (2017) examine how far the returns to index changes extend beyond the event window.

Asymmetry and information. Chen et al. (2004) document that S&P additions have permanent gains while deletions recover, and attribute the asymmetry to investor awareness. Denis et al. (2003) find that added firms subsequently beat earnings forecasts, so inclusion may carry information. For MSCI specifically, Chakrabarti et al. (2005) find significant announcement and implementation effects across many countries, larger in emerging markets. Kumar et al. (2023) revisit the asymmetry between S&P 500 additions and deletions and propose a resolution of the puzzle.

Global benchmarks and emerging markets. Global benchmarks move capital across countries. Benchmark weights shape mutual-fund allocations and capital flows (Raddatz et al. 2017), index rebalancings move sovereign bond prices and flows (Pandolfi and Williams 2019), and ETFs transmit global shocks to emerging markets (Converse et al. 2023). Hau et al. (2010) use MSCI's switch to free-float weights in 2001–2002 as an exogenous demand shock, and MSCI country reclassifications produce large price swings between announcement and effective date (Burnham et al. 2018). At the stock level, the inclusion of Chinese A-shares in MSCI indexes changed liquidity, synchronicity and price efficiency (Dong et al. 2023; Jiao et al. 2024), and Avci et al. (2023) study returns around changes in MSCI Standard and Small Cap composition in Turkey. Across 38 countries, additions to the MSCI Standard Index earn permanent gains while the losses of deleted stocks are transient (Chen et al. 2019). Foreign institutions, the main MSCI trackers, can improve price efficiency (Kacperczyk et al. 2021); in Indonesia, their trading performance differs from that of domestic investors (Koesrindartoto et al. 2024).

Passive ownership, free float and governance. A related literature studies what passive ownership does beyond the event itself. Index investing changes who holds a stock but need not reduce price efficiency (Coles et al. 2022; Ahn and Patatoukas 2022), although passive ownership can lower price informativeness before earnings announcements (Sammon 2025). In equilibrium, benchmarking and indexing alter prices and the incentives of active managers (Buffa et al. 2022; Bond and García 2022), passive flows raise the prices of the largest firms most (Jiang et al. 2025), and index rebalancing itself shapes the composition of the market (Sammon and Shim 2026). Free float matters for both liquidity and index demand: lower float goes with lower liquidity around the world (Ding et al. 2016), and float adjustments change index demand without changing fundamentals (Hau et al. 2010). Passive owners are also weak monitors (Heath et al. 2022). We argue that this leaves the index provider's own eligibility screens as one of the few governance checks that index capital applies.

Inference. Event-study tests standardise abnormal returns by each stock's estimation-period volatility (Patell 1976). Boehmer et al. (1991) correct for event-induced variance, and Corrado (1989) offers a non-parametric rank test. All three assume independent events. Kolari and Pynnönen (2010) show that even modest cross-correlation among abnormal returns on a common event date leads to large over-rejection. With few clusters, randomisation tests are more reliable than asymptotic clustered standard errors (Cameron et al. 2008; Young 2019). Cluster-robust and wild-bootstrap inference can over-reject when clusters are few or only a few clusters are treated (MacKinnon and Webb 2018; MacKinnon et al. 2023), while sign-change randomisation tests and suitably designed wild bootstraps remain valid with a small number of large clusters (Canay et al. 2017; Canay et al. 2021).

Gap. Index-change studies treat the provider's decision as exogenous to firm value. Recent work asks why the effect has shrunk in developed markets (Greenwood and Sammon 2025). To our knowledge, no study examines what happens when the provider's own criterion becomes a governance judgement about a whole market. Indonesia in 2026 offers that test. The paper therefore addresses three gaps, one for each contribution in Section 1: evidence on MSCI changes in an emerging market where float itself is contested, a test of whether a deletion means the same thing before and after the provider changes its criterion, and inference when events cluster on a few dates.

Hypotheses.

- **H1 (price pressure).** Additions earn positive abnormal returns around announcement that partly reverse in the following weeks.
- **H2 (passive demand).** Effects are larger for Global Standard than Global Small Cap changes, because far more passive capital tracks the Standard index: the largest US-listed ETF on the MSCI Emerging Markets Index held about US$30 billion in early 2026, against about US$0.4 billion for the corresponding iShares MSCI Emerging Markets Small-Cap ETF (iShares fund data, accessed November 2026). Index effects also differ with company size (Biktimirov and Xu 2024) and between the two MSCI indexes (Avci et al. 2023).
- **H3 (regime).** Deletions announced under the 2026 free-float and HSC regime fall more, and recover less, than earlier deletions, because they also carry governance and market-classification news.
- **H4 (migration).** Migrations between Standard and Small Cap move prices less than outright additions or deletions, because demand from one index partly replaces demand from the other.
- **H5 (foreign flows).** Abnormal net foreign trading follows the direction of the index change and concentrates at the implementation close, because foreign institutions hold most of the passive money that tracks MSCI indexes.

4. Data and methodology

4.1 Event sample

MSCI does not publish an archive of country-level constituent changes, so we compiled the event list by hand. For each quarterly review from May 2021 to November 2026 we took the announcement and implementation dates from MSCI's review press releases and the Indonesian names from the financial press (Kontan, Bisnis Indonesia, IDX Channel). Each row records its sources and a confidence grade for the dates. The list covers 21 of the 23 reviews in the period (we found no press report of Indonesian changes for August 2021 and August 2022) and has 177 rows for 97 issuers. Cross-checking against several outlets corrected errors in earlier drafts: Global Standard changes first recorded under November 2024 belong to the November 2025 review, a TINS deletion that never took place was removed, and the announcement dates of four reviews were corrected. The correction log is part of the replication package.

Some pairs of rows record the same stock leaving one of the Standard and Small Cap indexes and entering the other on the same date. We collapse each such pair into one migration event, which leaves **160 events for 96 issuers** with price data (WSKT has no series in the free source). With usable estimation data there are 55 additions, 78 deletions and 14 downward migrations; the remaining two events are upward migrations, too few for separate tests. Additions and deletions each span **16 distinct announcement dates**. The 38 deletions announced in 2026 fall on four of them (February, May, August and November 2026).

4.2 Prices and data checks

Daily prices for 2 January 2020 to 18 November 2026 come from Yahoo Finance (IDX tickers with the .JK suffix), with the IDX Composite (IHSG) as the market index. Daily foreign buying and selling for each stock, in shares, come from the IDX's public trading summaries (Section 5.6). Free-float percentages come from the IDX monthly shareholder registry reports (Laporan Bulanan Registrasi Pemegang Efek), using the last report each issuer filed before the announcement; the IDX archive starts in 2024. We use split-adjusted closing prices. Free data for IDX are often said to mishandle corporate actions, so we tested this directly.

- The provider records 14 splits for sample stocks, including CUAN (1:10, July 2025), DSSA (1:10, July 2024) and PTRO (1:10, January 2025). Adjusted prices show no discontinuity at any of them.
- No daily return exceeds 35% in absolute value. The 13 days above 30% are consistent with IDX auto-rejection limits rather than unadjusted splits.
- No such day falls inside any [−20,+20] event window. One (ADMR, 2022) falls inside an estimation window.
- Rights issues (WIKA and INCO, both 2024) are not adjusted in free data; a planned MBMA rights issue was not carried out in the sample period, and BUMI's bond conversions added under 0.01% of its shares. We matched the two largest to their ex-dates. WIKA went ex-right on 17 April 2024, with a theoretical price of Rp204 against a last cum price of Rp240, while its shares were suspended. INCO went ex-right in mid-June 2024, with dilution of at most 5.7%. Both dates fall in the estimation windows of the August 2024 additions, not in their event windows, so they can bias beta and residual volatility but not the event-window CAR directly. Appendix A lists these and the splits.

Days with zero volume (trading suspensions) are set to missing. Eleven events, mostly recent listings, lack enough estimation-period data for a market model and are excluded from every statistic (Appendix B).

4.3 Abnormal returns

For stock i and event e we estimate a market model over 250 trading days that end 31 trading days before the announcement (minimum 120 observations):

$$AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt}, \qquad CAR_e[t_1, t_2] = \sum_{t=t_1}^{t_2} A\,R_{it}$$

MSCI releases review results after the New York close, which is early morning of the next day in Jakarta, before the IDX opens; the November 2025 results, for example, reached Indonesian investors at 05:00 WIB on 6 November (IDX Channel 2025). Day 0 is therefore the first IDX trading day after the US announcement date. We report four windows: [−1,+1] and [−3,+3] around announcement, [0,+5] for the first week after announcement, and [+6,+20] for the weeks that follow. Implementation falls a median 8 to 11 trading days after day 0 (Table 6), so [0,+5] ends before implementation and [+6,+20] contains it.

4.4 Inference

We report the cross-sectional t-test, the Patell (1976) test, the BMP test of Boehmer et al. (1991), and the Corrado (1989) rank test. For the rank test, ranks are computed over the full estimation and event period, and the standard deviation of mean ranks is taken from the estimation period only.

These tests treat events as independent. In our sample they are not: a single review date can carry 10 or more Indonesian events, all exposed to the same market news. We therefore also treat the **announcement date as the unit**. Let C be the number of dates and m_c the mean CAR of events on date c:

$$\bar{m} = \frac{1}{C}\sum_{c=1}^{C} m_c\,, \qquad t_C = \frac{\bar{m}}{s_m/\sqrt{C}} \sim t_{C-1}$$

Because C is small, we also report an exact sign-flip randomisation test, which compares the observed mean with all 2^C means obtained by flipping the sign of each date's mean (Young 2019; Canay et al. 2017). With C = 4 the smallest attainable two-sided p-value is 0.125, and with C = 3 it is 0.25. This is the honest measure of how much independent evidence the data contain.

4.5 Regimes

We split events at 1 January 2026, the start of the free-float and HSC regime described in Section 2.2, and report every test separately for events before and after the split.

4.6 Software and AI assistance

All estimation is done in Python (pandas, NumPy, SciPy); the code is in Online Resource 1. A large language model (Claude, Anthropic) was used to help write and test the data-collection and estimation code, to check the event list against press sources, and to edit the text. The authors specified every step, verified the code, data and results, and take full responsibility for the content.

5. Results

5.1 Full sample

Additions rise and deletions fall (Table 2). Additions gain +3.8% in [−1,+1] and +2.8% in [0,+5], and the [−3,+3] estimate (+4.0%) is close to the core window. They then give back −6.0% in [+6,+20] (BMP p = 0.005, Corrado p < 0.001), slightly more than the announcement gain in point terms, so the point estimates suggest a complete rather than partial reversal. The announcement effect is significant at the date level in [−1,+1] (16 dates, p = 0.023) and marginal in [0,+5] (p = 0.056); the reversal is not significant at the date level (p = 0.27). Deletions lose −3.8% in [−1,+1], −8.7% in [−3,+3] and −9.4% in [0,+5], all significant at the date level (16 dates, p = 0.038, 0.003 and < 0.001), and show no reversal in [+6,+20] (−0.03%). Downward migrations show no significant announcement effect, but lose −6.0% in [+6,+20] (BMP p = 0.019, date-level p = 0.069).

Table 2. Cumulative average abnormal returns, full sample (160 events)

Group	Window	N	CAAR (%)	Median (%)	p BMP	p Corrado	Dates C	p date-level
Addition	[−1,+1]	55	+3.82	+3.35	<0.001	<0.001	16	0.023
Addition	[−3,+3]	55	+3.98	+2.56	0.006	0.002	16	0.123
Addition	[0,+5]	55	+2.76	+1.20	0.024	0.022	16	0.056
Addition	[+6,+20]	55	−5.99	−4.76	0.005	<0.001	16	0.269
Deletion	[−1,+1]	78	−3.81	−2.43	<0.001	<0.001	16	0.038
Deletion	[−3,+3]	78	−8.73	−3.75	<0.001	<0.001	16	0.003
Deletion	[0,+5]	78	−9.39	−5.28	<0.001	<0.001	16	<0.001
Deletion	[+6,+20]	69	−0.03	−1.78	0.586	0.703	15	0.475
Migration down	[−1,+1]	14	−0.46	−1.03	0.438	0.495	12	0.549
Migration down	[−3,+3]	14	−1.71	−4.71	0.550	0.213	12	0.392
Migration down	[0,+5]	14	−0.97	−4.11	0.615	0.416	12	0.489
Migration down	[+6,+20]	13	−5.95	−4.96	0.019	0.269	11	0.069

Notes: day 0 = first IDX trading day after the US announcement date. Market model over 250 days ending 31 days before day 0. Eleven events without enough estimation data are excluded (Section 4.2). N falls in [+6,+20] because events from November 2026 are not yet complete. For the November 2026 review, [0,+5] contains the five trading days up to 18 November 2026, the last day in the data; restricted to the 30 2026 deletions with a complete window, CAR[0,+5] is −18.0% on three dates (Section 5.4). Dates C = distinct announcement dates. Date-level p = the larger of the cluster t-test and the exact sign-flip test (Section 4.4). The two upward migrations are not shown.

The deletion mean (−9.4%) is almost twice the median (−5.3%), a first sign that a subset of events drives it. Pre-event abnormal returns are borderline jointly significant in the pooled event-time profile (Wald test over days −10 to −1, $\chi^2 = 18.29$, $p = 0.050$), which points to anticipation; Section 5.4 discusses it.

5.2 Global Standard versus Small Cap

Point estimates for both additions and deletions are larger in the Global Standard index, in the direction H2 predicts (Table 3). Standard deletions lose −19.9% in [0,+5] against −7.5% for Small Cap deletions, and none of the 12 Standard deletions has a positive CAR in that window. Standard additions gain +5.1% against +2.4% for Small Cap additions.

Table 3. Cumulative average abnormal returns by index

Index	Group	Window	N	CAAR (%)	% positive	p BMP	Dates C	p date-level
Global Small Cap	Addition	[−1,+1]	48	+3.77	69	<0.001	15	0.003
Global Small Cap	Addition	[0,+5]	48	+2.41	65	0.053	15	0.042
Global Small Cap	Addition	[+6,+20]	48	−6.24	27	0.011	15	0.315
Global Small Cap	Deletion	[−1,+1]	66	−2.81	32	0.003	16	0.050
Global Small Cap	Deletion	[0,+5]	66	−7.48	20	<0.001	16	<0.001
Global Small Cap	Deletion	[+6,+20]	58	−2.92	36	0.143	15	0.982
Global Standard	Addition	[−1,+1]	7	+4.16	71	0.310	5	0.491
Global Standard	Addition	[0,+5]	7	+5.12	71	0.282	5	0.503
Global Standard	Deletion	[−1,+1]	12	−9.32	25	0.004	8	0.094
Global Standard	Deletion	[0,+5]	12	−19.91	0	0.011	8	0.075
Global Standard	Deletion	[+6,+20]	11	+15.24	73	0.115	7	0.797

Notes: as in Table 2. Downward migrations are reported in Table 2 and the two upward migrations are not shown. The Standard addition [+6,+20] row is omitted for space: 7 events on 5 dates, CAAR −4.3%, 29% positive, date-level p = 0.25 (Online Resource 1, file R07).

The Standard estimates rest on few events and dates, however: 7 additions on 5 dates and 12 deletions on 8, and neither is significant at the date level at 5% (p = 0.50 and 0.075). H2 therefore holds in direction but is not established statistically. Well-anticipated Standard inclusions also leave less to price on the day: BREN and BRMS, added in November 2025, had risen ahead of the review and fell after the announcement (Katadata 2025). The Small Cap results carry most of the evidence. Small Cap additions gain +3.8% in [−1,+1] (48 events on 15 dates, date-level p = 0.003), and Small Cap deletions lose −7.5% in [0,+5] (66 events on 16 dates, $p < 0.001$), a result that survives winsorisation. The deletion effect is therefore not confined to the large Standard deletions of 2026.

5.3 The 2026 regime

The deletion effect grows about fourfold in 2026 (Fig. 1). Before 2026, 40 deletions on 12 announcement dates lose −3.8% in [0,+5] (median −3.2%). This is significant on BMP (p = 0.002), Corrado (p = 0.004) and at the date level ($p < 0.001$). It is weak in [−1,+1] (−0.8%, not significant) and grows over [−3,+3] (−2.8%, date-level p = 0.014), which suggests a reaction that builds over the days to implementation. From 2026, 38 deletions lose −15.3% in [0,+5] (median −12.3%).

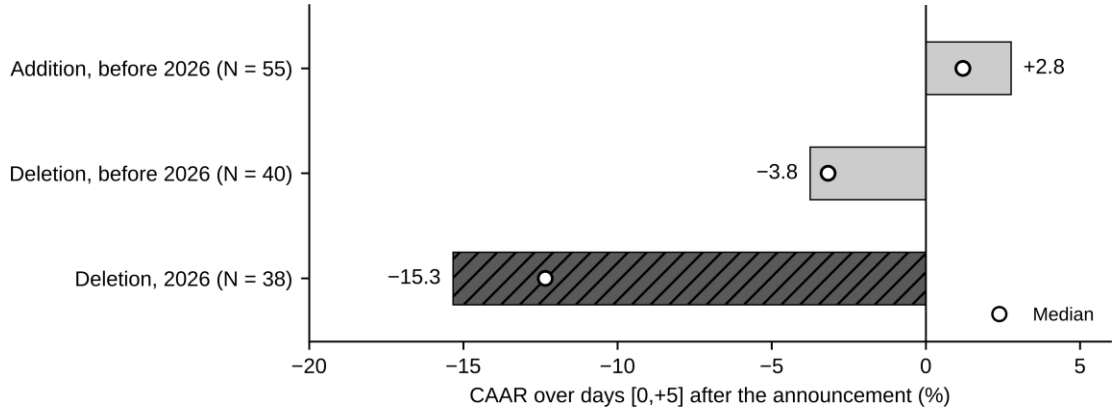


Fig. 1 CAAR over days [0,+5] after the MSCI announcement, by event type and regime, Indonesia, 2021–2026 (%). Bars show means and circles medians; day 0 is the first Jakarta trading session after the announcement

The 2026 deletion bar is four times the pre-2026 one, and its median (−12.3%) is close to its mean, so the result is not driven only by a few stocks.

Table 4. Deletions by regime

Regime	Window	N	CAAR (%)	Median (%)	p BMP	p Corrado	Dates C	p date-level
Before 2026	[−1,+1]	40	−0.75	−0.87	0.730	0.588	12	0.211
Before 2026	[−3,+3]	40	−2.79	−2.06	0.008	0.112	12	0.014
Before 2026	[0,+5]	40	−3.75	−3.17	0.002	0.004	12	<0.001
Before 2026	[+6,+20]	39	−2.41	−2.61	0.251	0.763	12	0.939
2026	[−1,+1]	38	−7.02	−6.35	<0.001	<0.001	4	0.125
2026	[−3,+3]	38	−14.99	−12.18	<0.001	<0.001	4	0.125
2026	[0,+5]	38	−15.33	−12.34	<0.001	<0.001	4	0.125
2026	[+6,+20]	30	+3.08	−1.42	0.593	0.799	3	0.335

H3 is half supported. The 2026 deletions fall about four times as much on announcement, as predicted. Whether they recover less is not settled. Over [+6,+20] they gain +3.1% on average, but the median is −1.4% and neither is significant (BMP p = 0.59; three dates, date-level p = 0.34), while earlier deletions drift down a further −2.4%, also insignificant. Market reports describe a rebound in some names: the deleted Global Standard stocks rose together on 2 June 2026, the first trading day after implementation, led by BREN and CUAN (Katadata 2026), and MSCI kept Indonesia's emerging-market status (AEI 2026). In the full sample, though, the rebound is confined to a few stocks, and the data do not support a systematic overshoot followed by reversal.

The inference problem is sharpest here. The 38 deletions of 2026 fall on four announcement dates. An exact sign-flip test on four date means cannot give a p-value below 0.125, and that is exactly what it gives in every 2026 window up to [0,+5], against event-level p-values below 0.001. All four date means are negative, so the direction is not in doubt; the amount of independent evidence is. We report the date-level tests as primary.

Additions are unaffected by the split: all 55 with usable data were announced before 2026, because MSCI made no outright Indonesian additions in 2026. The addition result (H1) therefore rests on the pre-2026 regime alone.

Migrations are in line with H4 on announcement, although the test has little power against small effects (Section 5.4): downward migrations lose −1.0% in [0,+5], an order of magnitude less than outright deletions, and no announcement window is significant. After implementation, however, pre-2026 downward migrations drift down −8.6% over [+6,+20] (10 events on 8 dates; BMP p = 0.005, date-level p = 0.012), which we did not predict. One reading is that Small Cap trackers do not absorb all the shares that Standard trackers sell at implementation, so prices keep falling as active holders exit. With ten events we treat this as a pattern to test, not a finding. The three downward migrations of 2026 with a complete window show no such drift.

5.4 Robustness

- **Winsorising** daily abnormal returns at 1% and 99% changes little. Additions move from +3.8% to +3.4% in [−1,+1] (date-level p = 0.027) and deletions from −9.4% to −8.3% in [0,+5] (p < 0.001); the post-implementation drift of downward migrations is unchanged (−5.9% in [+6,+20], p = 0.027). Winsorisation alone is not enough to show robustness here, because the 2026 deletions are large and consistent, not a few outliers.
- **Exchange data.** We re-estimated everything with IDX closing prices, taking each day's return against the exchange's own reference price (which IDX adjusts for splits and rights issues), and with the IHSG closing series, which matches the index closes published by IDX on every date we checked. The results barely change: additions +3.8% in [−1,+1] (date-level p = 0.023), deletions −9.6% in [0,+5] (p = 0.001), pre-2026 deletions −3.6% (p = 0.001) and 2026 deletions −15.9% (p = 0.125). The drift of downward migrations strengthens slightly (−6.1% in [+6,+20], p = 0.050), and eleven of the twelve largest CARs are the same events. Exchange returns exclude cash dividends, which is why the main tables keep the dividend-adjusted Yahoo series; Appendix C, Table C1 sets the two side by side.
- **Market index without event stocks.** The IHSG contains several deleted stocks with large weights, which can bias betas and abnormal returns. For each announcement date we built a control index from the sample stocks with no event on that date, equal-weighted and weighted by lagged market capitalisation (closing price times listed shares), and re-estimated the market model with it. The results barely change. Additions earn +3.6% (equal-weighted) and +3.7% (capitalisation-weighted) in [−1,+1], against +3.8% with the IHSG (date-level p = 0.023 and 0.030). Pre-2026 deletions lose −3.2% and −3.3% in [0,+5] (date-level p ≤ 0.002), against −3.8%. For the 2026 deletions with a complete [0,+5] window (30 events on three dates), the loss is −19.6% and −18.5%, against −18.0% with the IHSG on the same events; over [−1,+1], with all 38 events, it is −7.5% and −7.6% against −7.0%. The larger 2026 fall is therefore not an artefact of the deleted stocks' weight in the market index.
- **Excluded events.** Eleven events with too little estimation data are excluded throughout (Appendix B).
- **Day 0.** MSCI announces after the New York close. Placing day 0 on the US announcement date would put it one session before the news reaches the IDX and shift part of the reaction into day −1; we use the Jakarta convention throughout.
- **Anticipation.** Abnormal returns over days −10 to −1 are borderline jointly significant in the pooled profile (Wald $\chi^2 = 18.29$, p = 0.050). Several large events were anticipated. MSCI said on 20 April 2026 that it would delete stocks on the Indonesian high-shareholding-concentration list, and DSSA then fell for eight consecutive sessions before the May review (IDX Channel 2026). BRMS rose on expectations of a Standard index inclusion before the November 2024 review (Kontan 2024) but stayed in the Small Cap index (CNBC Indonesia 2024). Anticipation means the announcement windows understate the total revaluation, most of all for 2026 deletions. It does not contaminate the market model, whose estimation window ends 31 trading days before day 0, and foreign flows show no abnormal trading in the same days (Section 5.6).
- **One crowded date.** Six of the twelve largest CARs fall on the May 2026 review (Section 5.5), when MSCI's decisions coincided with governance and free-float news. Date-level inference already counts that day as one observation, which is why we report the 2026 evidence as thin rather than drop the date. Without the 12 May 2026 events, the remaining 2026 deletions still lose −4.2% in [−1,+1] (20 events on three dates) and −13.2% in [0,+5] (12 events with a complete window on two dates), more than three times the pre-2026 loss (Appendix C, Table C2).

- **Corporate actions.** As noted in Section 4.2, provider-adjusted prices show no split discontinuity in any event window, and the largest CARs match IDX closing prices (Section 5.5).
- **Power.** The minimum detectable CAAR in the pooled sample is about 2.9%, so the insignificant announcement effect of downward migrations (−1.0%) cannot be read as evidence of a zero effect.
- **Overall verdict.** We call an effect robust only if it is stable under winsorisation, present before 2026, and significant at the date level at 10%. Additions and deletions pass all three. Downward migrations fail: their [0,+5] effect is not significant before 2026 (date-level p = 0.51) or in the full sample (p = 0.49), although their post-implementation drift is.

5.5 Extreme events

Ten of the twelve largest absolute CARs in [0,+5] are deletions, eight of them from 2026, and six fall on a single day, the May 2026 review (Table 5). The two largest, TPIA (−72%) and DSSA (−59%), agree with IDX closing prices and press reports; DSSA's 1:25 split in April 2026 is adjusted in the provider data. We checked the three largest values from outside 2026 against IDX closing prices, which carry each day's previous close. WIKA's +45% after its August 2024 Small Cap addition comes from gains of 24%, 19% and 8% on 13–15 August 2024; CARE's −30% after its May 2024 deletion comes from falls of 11% and 21% on 20–21 May 2024; DSSA's +30% after its August 2025 Standard addition starts with a 20% limit-up day on 8 August 2025. None coincides with a split or rights issue, so they are genuine price moves, although WIKA's estimation window includes its trading suspension and its April 2024 ex-right day (Appendix A).

Table 5. Twelve largest absolute CAR[0,+5]

Stock	Event	Index	Review	CAR (%)
TPIA	Deletion	Global Standard	May 2026	−72.0
DSSA	Deletion	Global Standard	May 2026	−59.2
WIKA	Addition	Small Cap	Aug 2024	+45.0
TCPI	Deletion	Small Cap	Aug 2026	−44.9
BANK	Deletion	Small Cap	May 2026	−40.6
CUAN	Deletion	Global Standard	May 2026	−37.1
SSMS	Deletion	Small Cap	May 2026	−35.5
CARE	Deletion	Small Cap	May 2024	−30.1
DSSA	Addition	Global Standard	Aug 2025	+30.0
FILM	Deletion	Small Cap	Aug 2026	−27.7
MCAS	Deletion	Small Cap	Nov 2022	−22.7
DSNG	Deletion	Small Cap	May 2026	−20.7

5.6 Foreign flows

If index changes move prices through passive demand, the trades should be visible in the flows of the investors who track MSCI indexes, nearly all of them foreign. IDX reports daily foreign buying and selling, in shares, for every listed stock. We measure abnormal net foreign buying as foreign purchases minus foreign sales, in basis points of shares outstanding, less its mean over trading days −70 to −11. We cumulate it over the ten days before the announcement, the announcement window [0,+1], the run-up from day +2 to the day before implementation, the

implementation day itself (the close at which MSCI's changes take effect), and the ten days after it (Table 6). The events are those of Table 2.

Table 6. Abnormal net foreign buying (basis points of shares outstanding)

Group	N	Dates C	[−10,−1]	[0,+1]	[+2,I−1]	Day I	[0,I]	[I+1,I+10]
Addition	55	16	−3.1 (0.53)	+3.6 (0.30)	+10.5 (0.08)	+15.1 (0.03)	+29.1 (0.03)	+0.2 (0.28)
Deletion, before 2026	40	12	+1.6 (0.86)	+0.9 (0.74)	−22.7 (0.07)	−38.9 (<0.001)	−60.7 (0.001)	−11.1 (0.14)
Deletion, 2026	38 (30)	4 (3)	−0.2 (0.65)	−3.4 (0.39)	−27.0 (0.25)	−27.3 (0.25)	−58.3 (0.25)	−18.8 (0.50)
Migration down	14 (13)	12 (11)	+3.7 (0.27)	−12.1 (0.07)	−23.9 (0.012)	−107.7 (0.001)	−144.1 (0.001)	−49.8 (0.001)

Notes: mean cumulative abnormal net foreign buying; date-level p in parentheses (the larger of the cluster t-test and the exact sign-flip test). Day 0 as in Table 2. I = implementation day, the last IDX trading day on or before MSCI's effective date; median days from day 0 to I are 11 for additions and pre-2026 deletions, 8 for 2026 deletions and 11 for downward migrations. Baseline = mean over days −70 to −11. In [I+1,I+10], 30 of the 2026 deletions and 13 downward migrations are complete. The November 2026 review takes effect on 30 November 2026, after the last day in the data (18 November), so its eight deletions and one downward migration enter only the [−10,−1] and [0,+1] columns; figures in parentheses after N and C give the counts for the other columns.

The passive-demand channel shows up clearly, as H5 predicts. Foreign investors are net sellers of deleted stocks and net buyers of added stocks, and most of the trading happens at the implementation close rather than at the announcement. Before 2026, deleted stocks see abnormal net foreign selling of 61 bps of shares outstanding from announcement to implementation (median 40 bps, negative for 93% of events, date-level p = 0.001), 39 bps of it on the implementation day alone. Additions see net buying of 29 bps (p = 0.03), 15 bps of it on the implementation day. On implementation days foreign investors account for 70–80% of trading volume, against 27–41% in the baseline, and turnover is about seven to fifteen times its usual level (36 times for downward migrations). Valued at the daily VWAP, abnormal foreign buying on the implementation days of additions sums to about Rp6.3 trillion, and abnormal foreign selling on the implementation days of deletions to about Rp3.4 trillion before 2026 and Rp4.9 trillion in 2026.

Three further results bear on the interpretation. First, the 2026 deletions do not attract significantly more foreign selling relative to their size: 58 bps from announcement to implementation (median 58 bps, 30 events), against 61 bps (median 40 bps) before 2026, a difference far from significant (Welch t-test p = 0.85). The fourfold larger price fall in 2026 is therefore not explained by a larger foreign outflow relative to shares outstanding, which is consistent with the reading in Section 6.1 that these deletions carry news beyond the demand shock. Second, downward migrations see the heaviest foreign selling of any group, 144 bps from announcement to implementation and 108 bps on the implementation day, negative for all 13 events whose implementation day is in the data, and the selling continues over the next ten days (−50 bps, date-level p = 0.001). This matches the post-implementation price drift in Section 5.3 and the reading that Small Cap trackers do not absorb what Standard trackers sell. Yet the same group shows no significant price reaction at the announcement. A flow this large and this predictable may be absorbed by liquidity providers until implementation, a conjecture we do not test directly (cf. Greenwood and Sammon 2025), and to move prices only as the selling continues after it. Third, no group shows abnormal foreign flows in days −10 to −1, so the price anticipation noted in Section 5.4 was not led by foreign investors.

Scaling by shares outstanding understates the selling pressure on low-float stocks, and the 2026 deletions were selected precisely for low or overstated free float. We therefore also express abnormal net foreign buying in basis

points of free-float shares, using the free float in each issuer's last IDX monthly shareholder registry report before the announcement. These reports are archived from 2024 and cover 99 of the 101 events announced since then, so the comparison is between 2026 deletions and 2024–2025 deletions. Scaled this way, foreign investors did not sell the 2026 deletions significantly more heavily: 254 bps of free float from announcement to implementation (median 213 bps, 30 events on three dates) against 204 bps (median 163 bps, 23 events). The difference is not significant (Welch t-test p = 0.48; Mann–Whitney p = 0.65; exact permutation of announcement dates p = 0.68), and the two groups had similar free float before the announcement (30% and 31%, p = 0.80). Downward migrations again show the heaviest selling, 365 bps of free float (median 353 bps, date-level p = 0.008). Low free float therefore does not explain the larger 2026 price fall either.

A cross-sectional regression makes the same point event by event (Table 7). Among deletions, CAR[0,+5] is unrelated to the abnormal net foreign buying a stock receives between announcement and implementation, and the 2026 coefficient, about −14 percentage points, barely moves when foreign flows and a Global Standard dummy are added. Its p-value is 0.02 under a randomisation test that assigns the 2026 label to every set of three of the 15 dates (455 assignments; Online Resource 1, file R15), the date-level counterpart of Section 4.4, and about 0.01 under a wild cluster bootstrap (Cameron et al. 2008), but with only three treated dates the wild cluster bootstrap can over-reject (MacKinnon and Webb 2018), so the 2026 effect carries the same caveat as Table 4. For additions, foreign buying does not predict CAR either (p = 0.36). Within each group, then, the price impact of an MSCI change does not scale with the foreign trade it triggers.

Table 7. Deletion CAR[0,+5] (%) on net foreign buying and the 2026 regime

	(1)	(2)	(3)
2026 deletion	−14.36 [<0.001; 0.009]	−14.39 [<0.001; 0.012]	−13.55 [<0.001; 0.006]
Net foreign buying [0,I], % of shares		+1.25 [0.74; 0.98]	−0.41 [0.85; 0.88]
Global Standard			−10.70 [0.17; 0.57]
Constant	−3.59 [<0.001; 0.004]	−2.83 [0.24; 0.26]	−2.49 [0.27; 0.32]
R^2	0.23	0.24	0.30

Notes: OLS on 70 deletions over 15 announcement dates (the eight November 2026 deletions have no implementation day in the data), with CAR from IDX exchange prices (Section 5.4). In brackets: p-value from cluster-robust standard errors by announcement date (t with 14 df), and p-value from a wild cluster bootstrap with the null imposed (9,999 Rademacher draws). The same regression for 55 additions gives a flow coefficient of +1.98 (p = 0.36).

6. Discussion

6.1 What a 2026 deletion measures

Before 2026, MSCI deletions in Indonesia behave like the textbook case. They are modest, about −3.8% over six days, and clearly significant even once dates are the unit (12 dates). From 2026, the same event label carries a different treatment. A stock removed for high shareholding concentration has been told, in public, that its free float is not what it reported. Investors learn about the firm's ownership, about the likely response of regulators, and about the risk that the whole market is downgraded. The −15.3% six-day loss is the sum of these channels. The event study alone cannot separate them, but foreign flows narrow the possibilities: relative to shares outstanding, foreign investors sold the 2026 deletions not significantly more heavily than earlier ones (Section 5.6). The extra fall is therefore not explained by a larger foreign outflow, whether scaled by shares outstanding or by free float, nor by a

market index that contains the deleted stocks (Section 5.4), which makes news about governance and market classification a plausible source. This also sets Indonesia apart from the United States, where the index effect has largely disappeared (Greenwood and Sammon 2025): when float and ownership are themselves in question, an index decision can still carry information.

This has a direct implication for research design. A pooled deletion estimate of −9.4% would be reported as strong evidence of downward-sloping demand. In this sample about four-fifths of it comes from the 38 deletions announced on four days in 2026, which carry governance news as well as a demand shock. Studies that use index changes as exogenous demand shocks should test for, and report, regime breaks in the provider's methodology.

6.2 How much evidence there is

Event-level tests count stocks; the market produced a handful of review days. When 10 or more stocks are announced together, they share that day's news, and their abnormal returns are correlated. Our date-level tests are deliberately conservative: with four 2026 dates they cannot go below $p = 0.125$ however large the effect, and that is what they return. We see this as the correct statement of uncertainty, not a weakness of the test. The addition result is better placed: it rests on 16 pre-2026 dates and stays significant at the date level ($p = 0.023$ in $[-1,+1]$). So does the smaller pre-2026 deletion effect (12 dates, $p < 0.001$ in $[0,+5]$).

6.3 Policy relevance

For Indonesian issuers and regulators, the results put a price on free-float credibility. Controlled companies that kept public float low saw large price declines at index review, concentrated in a few days. The proposed rise in minimum free float from 7.5% to 15% targets exactly this channel. Because benchmark membership raises valuations (Kashyap et al. 2021), losing it on governance grounds is costly for issuers. Whether a credible float increase reverses the 2026 losses is a natural test once data through 2027 are available.

6.4 Extension: the narrative channel

The event study cannot tell whether investors priced governance news or simply anticipated passive selling. Retail narratives offer one way to separate them. Social media shape how retail investors disagree and which information they see (Cookson and Niessner 2020; Cookson et al. 2023); retail attention and herding are visible in trading data (Barber et al. 2022; Welch 2022); and investment research and sentiment posted online contain information about returns (Bradley et al. 2024; Cookson et al. 2024). Narratives can move markets (Shiller 2017), and text-based measures now capture them at scale (Gentzkow et al. 2019; Bybee et al. 2023). Indonesian retail investors follow equity commentary on YouTube closely, and both the creators' framing and the audience's reaction are observable.

The planned extension collects, for each event, videos from a fixed frame of Indonesian finance channels, using channel upload lists rather than keyword search, which is non-replicable and decays over time (Rieder et al. 2026). For each video we separate the creator's transcript from the comment tree and score sentiment by aspect (index event, flow and liquidity, valuation, governance risk, macro policy, calls to action), using a transformer classifier adapted to financial text (Huang et al. 2023). A narrative divergence index measures the gap between creator and audience on each aspect:

$$D_{va} = 1/2\ |S^{c}_{va} - S^{r}_{va}|, \qquad NDI_{v} = \sum_{a} \omega_{va}\, D_{va}$$

Here S^c and S^r are creator and audience polarity on aspect a, and ω is the aspect's share of comment volume. Aggregated to stock-days, this gives two predictions for future work.

- **P1.** In the 2026 regime, the governance-risk aspect dominates both creator and audience discussion of deleted stocks, while before 2026 flow and liquidity dominate.
- **P2.** Higher pre-implementation divergence predicts a larger $[+6,+20]$ reversal, as retail investors who disagree with the creators' bearish framing buy after the passive sell-off.

The pipeline for this extension is built and tested, including an annotation protocol with Krippendorff's $\alpha \geq 0.80$ as the reliability threshold (Krippendorff 2018). A seed frame of 69 channels (42 independent creators, 17 news media, 10 brokerages) was identified on 19 November 2026 from 15 MSCI-related queries returning 194 videos. The data themselves have not yet been collected, so no results are reported here.

6.5 Limitations

The main tables use Yahoo Finance prices; re-estimation with IDX exchange prices gives nearly identical results (Section 5.4), although exchange returns exclude cash dividends. Foreign flows identify foreign trades, not passive ones, and their rupiah values use the daily VWAP rather than transaction prices. The event list was compiled by hand from press releases and the financial press, and some Small Cap dates carry medium confidence. It has been corrected several times (Section 4.1); two reviews (August 2021 and August 2022) are not covered, three Small Cap deletions in November 2021 could not be named, and 11 events from August 2025 rest on a single source. Pre-event returns point to anticipation (Section 5.4), so announcement windows understate the total effect. The November 2026 events are not yet complete over [+6,+20]. The control index in Section 5.4 is built from the sample stocks rather than from every listed stock, so it is narrower than the market. Free float is available only from 2024, so the free-float comparison sets 2026 deletions against 2024–2025 deletions rather than all earlier ones, and it rests on three 2026 announcement dates. Two alternative explanations for the larger 2026 fall remain untested: tighter limits to arbitrage in low-float stocks, and market-wide sentiment on 12 May 2026, when the deletions coincided with the threat of a downgrade. Finally, the design has no matched control sample of non-event stocks.

7. Conclusion

MSCI additions in Indonesia earn about +4% around the announcement, and the point estimates suggest that they give it back within a month, consistent with temporary price pressure, and the announcement effect holds when each date counts once. Deletions cost more. Before 2026 they lose about −3.8% in six days, a well-established effect on 12 announcement dates. In the 2026 regime, in which MSCI removed stocks for concentrated ownership and overstated free float, they lose −15.3%, and these deletions drive most of the pooled estimate. Foreign selling at implementation was not significantly heavier in 2026 relative to shares outstanding, or to free float, so the larger fall is more consistent with news than with a larger passive outflow. Because the 2026 deletions share four announcement dates, the amount of independent evidence behind them is small. Standard-index changes move prices more than Small Cap changes, as H2 predicts, but on too few dates to be significant; migrations move prices far less than outright changes on announcement (H4), though their stocks drift down after implementation; and foreign trading follows the direction of every change and peaks at the implementation close (H5).

Three lessons follow. Index-change studies should test for breaks in the provider's methodology before pooling events. When many events share a date, the date, not the stock, is the unit of inference. And free data for emerging markets can be used with care: in our sample they handled splits correctly, and the main risks came from pooling, not from prices. For Indonesia, the episode shows that free-float credibility is priced, quickly and heavily, when a global index provider decides to act on it.

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Data availability

The hand-collected event list (177 rows with sources, date-confidence grades and a correction log), the list of excluded events and all estimation code are provided as Online Resource 1 (files S1–S6, with code that rebuilds every table). Daily foreign buying and selling come from the IDX's public trading summaries. Free-float percentages come from the IDX monthly shareholder registry reports filed by each issuer. Prices for the main tables come from Yahoo Finance; the exchange prices and IHSG series used in Section 5.4 and Table 7 come from IDX and Yahoo Finance respectively, checked against index closes published by IDX.

Online Resource

Online Resource 1 (ESM_1.zip, version 1.2) contains the data and code behind every number in the paper:

- **S1 – Event list.** 177 ticker-review rows (80 additions, 97 deletions; 97 tickers; 21 reviews) with announcement and effective dates, index, sources and a date-confidence grade.
- **S2 – Excluded events.** The eleven events dropped from the price event study (Appendix B) and the reason.
- **S3 – Free float.** Free float from the last IDX monthly shareholder registry report before each announcement, with report date and link; 101 events from 2024, 99 with a value (Section 5.6).
- **S4 – IDX daily trading data.** Daily trading summary for the 97 sample stocks, 2 January 2020 to 18 November 2026 (151,159 rows): prices, volume, value, foreign buying and selling, listed shares.
- **S5 – Result tables.** R01–R15, the tables behind Tables 2–7, Fig. 1, Sections 5.4 and 5.6 and Appendix C, including event-level CARs (R07, R13) and foreign flows (R05, R09).
- **S6 – Replication code.** Python code and configuration; reproduce.sh rebuilds S5 from S1–S4 after downloading prices and the IHSG from Yahoo Finance, which are not redistributed. A data dictionary and a README describe every file.

Appendix A. Corporate actions in the sample, 2024–2026

Stock	Action	Date	Treatment
DSSA	Stock split 1:25	Apr 2026	Adjusted by provider
CUAN	Stock split 1:10	Jul 2025	Adjusted by provider
PTRO	Stock split 1:10	Jan 2025	Adjusted by provider
BUMI	Private placement (convertible bond)	Q4 2024	Bond conversions added under 0.01% of shares (IDX data); no adjustment needed
DSSA	Stock split 1:10	Jul 2024	Adjusted by provider
INCO	Rights issue, 603.44m shares at Rp3,050	Jun 2024	Ex-right ~19 Jun 2024; in estimation window of Aug 2024 addition
WIKA	Rights issue, 46.81bn shares at Rp197	Apr–May 2024	Ex-right 17 Apr 2024 (theoretical Rp204 vs cum Rp240); in estimation window of Aug 2024 addition
MBMA	Rights issue, about 10% of shares (planned)	2024	Not carried out by mid-2025 (listed shares unchanged in IDX data); no adjustment needed

Appendix B. Events excluded from the price event study

Stock	Event	Review	Estimation days available
ADMR	Addition	May 2022	0
CMRY	Addition	May 2022	0
CUAN	Addition	Aug 2023	0
AMMN	Addition	Nov 2023	0
RATU	Addition	Aug 2025	0
BANK	Addition	Nov 2021	6
BEBS	Addition	Nov 2021	6

Stock	Event	Review	Estimation days available
ADMR	Deletion	Nov 2022	6
GOTO	Addition	May 2023	6
CUAN	Deletion	Feb 2024	6
AADI	Addition	Aug 2025	6

Note: a market model needs at least 120 days in the estimation window. Most excluded events are additions of recent listings. WSKT (deletion, August 2023) is not in the 160 events because the free price source has no series for it.

Appendix C. Additional robustness results

Table C1. CAAR (%) with alternative market indices and prices

Group	Window	IHSG, Yahoo prices (main)	Control index, equal-weighted	Control index, cap-weighted	IDX exchange prices
Addition	[−1,+1]	+3.82 (0.023)	+3.57 (0.023)	+3.68 (0.030)	+3.85 (0.023)
Addition	[+6,+20]	−5.99 (0.269)	−5.37 (0.377)	−6.47 (0.167)	−6.05 (0.259)
Deletion, before 2026	[0,+5]	−3.75 (<0.001)	−3.20 (<0.001)	−3.31 (0.001)	−3.59 (0.001)
Deletion, 2026	[−1,+1]	−7.02 (0.125)	−7.52 (0.125)	−7.55 (0.500)	−7.24 (0.125)
Deletion, 2026 (30 complete)	[0,+5]	−18.03 (0.250)	−19.60 (0.250)	−18.52 (0.500)	−17.95 (0.250)
Migration down	[+6,+20]	−5.95 (0.069)	−4.75 (0.130)	−6.37 (0.067)	−6.10 (0.050)

Notes: date-level p in parentheses. Control indices are built for each announcement date from the sample stocks without an event on that date (Section 5.4). The 2026 [0,+5] row uses the 30 deletions whose window is complete by 18 November 2026. Sources: Online Resource 1, file R06, R07, R12 and R13.

Table C2. 2026 deletions with and without the 12 May 2026 review, CAAR (%)

Window	Deletions before 2026	2026, all dates	2026 without 12 May 2026
[−1,+1]	−0.75 (40; 12)	−7.02 (38; 4)	−4.20 (20; 3)
[−3,+3]	−2.79 (40; 12)	−14.99 (38; 4)	−8.72 (20; 3)
[0,+5]	−3.75 (40; 12)	−18.03 (30; 3)	−13.18 (12; 2)

Notes: N and announcement dates in parentheses. [0,+5] uses complete windows only. With two or three dates, the smallest attainable date-level p-value is 0.50 or 0.25. Source: Online Resource 1, file R14.

Table C3. Abnormal net foreign buying under alternative scalings

Group	[0,I], multiples of baseline daily volume	Day I, multiples of baseline daily volume	[0,I], bps of free float (N; p)	Free float before announcement (%)

Group	[0,I], multiples of baseline daily volume	Day I, multiples of baseline daily volume	[0,I], bps of free float (N; p)	Free float before announcement (%)
Addition	+1.46 (0.63)	+0.41 (0.97)	+89 (25; 0.55)	21.6
Deletion, before 2026	−7.17 (0.001)	−4.22 (<0.001)	−204 (23; 0.06)	31.2
Deletion, 2026	−12.68 (0.25)	−6.03 (0.25)	−254 (30; 0.25)	30.1
Migration down	−12.53 (0.001)	−9.53 (0.001)	−365 (10; 0.008)	39.7
2026 vs before 2026, p	0.22 / 0.35	0.51 / 0.73	0.48 / 0.68	0.80 / 0.85

Notes: date-level p in parentheses. Baseline = days −70 to −11. Free float is available from 2024, so the free-float columns compare 2024–2025 with 2026 events. Last row: Welch t-test / exact permutation of announcement dates for 2026 against earlier deletions. Bps of shares outstanding are reported in Table 6. Sources: Online Resource 1, file R08 and R10.

Appendix D. Event sample by review

Table D1. Indonesian rows in the MSCI event list by review

Review	Announced (US date)	Effective (close)	Additions, Standard	Additions, Small Cap	Deletions, Standard	Deletions, Small Cap
May 2021	11 May 2021	27 May 2021	1	2	1	1
Nov 2021	11 Nov 2021	30 Nov 2021	0	9	0	0
Feb 2022	9 Feb 2022	28 Feb 2022	1	0	0	0
May 2022	11 May 2022	31 May 2022	3	11	1	2
Nov 2022	10 Nov 2022	30 Nov 2022	0	4	3	3
Feb 2023	9 Feb 2023	28 Feb 2023	0	3	1	1
May 2023	11 May 2023	31 May 2023	1	0	0	2
Aug 2023	10 Aug 2023	31 Aug 2023	0	3	0	2
Nov 2023	14 Nov 2023	30 Nov 2023	1	2	1	5
Feb 2024	12 Feb 2024	29 Feb 2024	0	2	0	1
May 2024	14 May 2024	31 May 2024	1	5	2	8
Aug 2024	12 Aug 2024	30 Aug 2024	0	5	1	0
Nov 2024	6 Nov 2024	25 Nov 2024	0	1	0	2
Feb 2025	11 Feb 2025	28 Feb 2025	0	3	3	4
May 2025	13 May 2025	30 May 2025	0	2	0	3
Aug 2025	7 Aug 2025	26 Aug 2025	2	6	1	2
Nov 2025	5 Nov 2025	24 Nov 2025	2	6	2	3

Review	Announced (US date)	Effective (close)	Additions, Standard	Additions, Small Cap	Deletions, Standard	Deletions, Small Cap
Feb 2026	10 Feb 2026	27 Feb 2026	0	1	1	2
May 2026	12 May 2026	29 May 2026	0	1	6	13
Aug 2026	12 Aug 2026	31 Aug 2026	0	1	2	9
Nov 2026	11 Nov 2026	30 Nov 2026	0	1	2	7
Total			12	68	27	70

Notes: rows of the hand-collected list (Online Resource 1, file S1) before migrations are combined; a migration appears as one deletion and one addition in the same review. We found no press report of Indonesian changes for the August 2021 and August 2022 reviews, the two reviews of the period not listed.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- ESM1.zip