THANAAYA TECHNOLOGIES

RESEARCH NOTE

Same Test, Two Markets

Ten textbook stock-picking effects, tested the same strict way on India's NSE and Thailand's SET. One came close. It faded on the years it had never seen.

ABOUT THANAAYA TECHNOLOGIES

Thanaaya Technologies is a software company licensed by the Dubai Department of Economy and Tourism, building since 2021. We design, build and operate production systems across financial software, distributed ledger, gaming, commerce, media and quantitative research — and we run two of them as our own products rather than only delivering them for clients.

We take a small number of engagements at a time, and the engineer who designed a system is the one who gets called when it misbehaves. This paper comes out of a research programme carried out for a Thailand-based hedge fund (name withheld), which exists to find out cheaply whether an idea is real. We publish the negative results as well as the positive ones: an undocumented failure gets rediscovered, and a threshold nobody wrote down cannot be checked.

2021	24	80+	9
BUILDING SINCE	PRODUCTION DOMAINS	SERVICES IN PRODUCTION	INDUSTRIES SERVED

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PART ONE

In plain English

No mathematics in this section: what we tested, on which two markets, what came back, and whether the edge is smaller now.

1. The question

Is there a way of picking stocks on an Asian exchange that beats simply owning the most-traded stocks, after paying what trading really costs?

A Thailand-based hedge fund asked us that question twice: first about **India's National Stock Exchange (NSE)**, then about its home market, the **Stock Exchange of Thailand (SET)**. We answered both with the same machinery and the same rules, so the two results can be read side by side.

The candidates were ten of the best-known effects in finance research. They include *momentum* (recent winners keep winning), the *52-week high* (stocks trading near their yearly peak keep rising), *low volatility*, *low beta*, *short-term reversal* (recent losers bounce back) and *illiquidity*. Each is documented in decades of academic work on other markets, and each makes a natural first test on a new one.

2. How the test was built

Most backtests flatter themselves in three ways. We closed each one before looking at any result.

Missing failures	Free price histories usually contain only companies that still exist. We built both histories from the exchanges' daily records of *every* stock that traded, including companies later delisted, suspended or merged.
Prices you could not have traded	Every decision uses only information available at the close, and every trade happens at the next day's opening price.
Free trading	Every result is net of commission, taxes, exchange fees and the cost of crossing the bid–ask spread, then checked again with double the slippage.

The rules were written down and fingerprinted before the first result existed, and the most recent three years of each market were locked away unseen. A rule can be made stricter after a result. It is never relaxed.

3. What came back

0 of 10
effects that passed on India's NSE, after costs

0 of 10
effects that passed on Thailand's SET, after costs

0.46 vs 1.0
the best SET effect on its locked years, against the bar it needed

Neither market produced an edge. The two zeros are not the same zero, though.

On the NSE there was nothing there at all. The momentum family showed genuine stock-picking skill, beating random selections of the same stocks, but its margin over the market (about 4–5% a year) was never large enough to separate from luck over sixteen years. We then had an AI model propose 306 further ideas. None cleared the bar either.

On the SET there was something, and it did not hold up. Buying the stocks closest to their 52-week high beat the average of the 150 most-traded stocks by 5.1% a year from 2006 to mid-2023. That was just short of the bar, and it held up under every robustness check we threw at it. So we opened the locked years once, for that effect alone, with the pass rule written down first. Over 2023–2026 those stocks fell 4.4% while the average fell 15.2%. That sounds like a win, but the margin was erratic quarter to quarter, and statistically it is indistinguishable from luck.

4. Is the edge smaller now?

That is what the result suggests, and the evidence for it is real but thin.

SET, 52-week high: average yearly margin over the 150 most-traded stocks, after costs.

PERIOD	MARGIN PER YEAR	WHAT IT IS
2007–2014	+3.7%	test years
2015–mid-2023	+6.3%	test years
mid-2023–2026	**+2.5%**	**locked years, never seen before the single test**

On years it had never seen, the effect delivered about **40% of its recent strength**. That matches what the academic literature finds. Across 97 published effects, returns are on average 26% lower outside the period the original authors studied and 58% lower once the research is published (McLean and Pontiff, 2016). Effects that are written about get traded, and effects that get traded shrink.

> WHAT WE CAN AND CANNOT SAY
>
> Inside the test years, neither market shows a steady decline: the SET 52-week high and NSE momentum were both *stronger* in the later half than the earlier one. The decline appears only in the one out-of-sample test, and thirteen quarters are too few to tell decay from a run of bad luck. **What we can say is that the effect did not get stronger, and the version of it that would have justified capital did not show up.**

On the obvious question of whether faster, more automated markets have changed the picture: the effects that technology erodes first are the fast ones. On both exchanges trading costs had already ruled those out. Every effect tested here rebalances monthly or quarterly and rests on how people react to news and prices, which erodes more slowly. Slower erosion is still erosion.

5. The weakness the test exposed

Strategies that buy recent strength share a known failure: when a falling market suddenly rebounds, the stocks that fell hardest lead the recovery, and a portfolio of "strong" stocks is left behind (Daniel and Moskowitz, 2016). The SET 52-week-high strategy did exactly that. Its four worst quarters were all sharp rebounds:

QUARTER	STRATEGY	AVERAGE STOCK	SHORTFALL
April–June 2009	+20.8%	+40.9%	-20.0%
April–June 2020	+27.5%	+39.6%	-12.1%
January–March 2013	+19.8%	+31.5%	-11.8%
October–December 2020	+7.4%	+14.4%	-7.0%

The pattern recurred in the locked years, when it trailed the market's rallies of July–September 2025 by 9.1% and of January–June 2026 by a further 9.5%. This is not bad luck in one quarter. It is the way this kind of strategy loses money, and it will happen again at the next sharp recovery.

6. What carries from one market to the next

- **Cheap benchmark tests predict expensive searches.** When ten well-known effects all fail, a broader search finds little. On the NSE, 306 AI-proposed ideas confirmed it. On the SET we did not run the search at all.
- **Costs decide what can be tested.** India's cost is a tax and Thailand's is the minimum price step, two different mechanisms that reach the same conclusion: anything that trades often is dead before the research starts.
- **The same effects lead and lag in both markets.** Momentum-type effects come out on top; buying recent losers comes out at the bottom, losing 6–7% a year against the market on both exchanges.
- **Small markets give weak evidence.** Thailand's 150 liquid stocks and a thirteen-quarter holdout could not have confirmed even a genuine modest effect. A result there needs to be larger, or confirmed by forward trading, before it means much.

PART TWO

The technical record

Data, costs, protocol, results, corrections and boundary conditions. Figures are as measured. Where the two studies differ in design, the difference is stated next to the number it affects.

1. Data

	NSE (INDIA)	SET (THAILAND)
Source	NSE daily bhavcopies (official, free)	Third-party archive of SET end-of-day files (free), one file per trading day since 1975
Survivorship	Every equity that traded, 1995→, delisted included	1,001 common stocks, 139 later delisted; funds, warrants, DRs and index rows removed
Corporate actions	Exchange corporate-action records; reliable from 2006	Persistent steps in raw/second-source close for living names (splits, par changes, rights, stock dividends); volume-confirmed inference for delisted names (82% precision)
Validation	95.2% agreement with an independent source (96.7% from 2006)	98.3% daily-return agreement with an independent source from 2006; ~93% before 2006, hence a 2006 start
Known defects	Pre-2006 adjustments unreliable; some later actions missing	2 missing days; stale opening prices on ex-dates (repaired); 1,976 one-day spike rows removed (impossible under the ±30% daily limit); delisted names carry no dividends

2. Costs

	NSE	SET
Main cost driver	securities transaction tax, 0.10% per side	minimum price step
Fees and taxes per side	≈ 0.10–0.12%	≈ 0.168% (commission 0.15% + exchange fees, with VAT)
Slippage per side, as modelled	flat 0.10%	half of one price step, per stock (median ≈ 0.31%)
Round trip, as modelled	**≈ 0.42%**	**≈ 0.9–1.2% (varies with price levels by year)**
Round trip, like for like (flat 0.10% slippage)	≈ 0.42%	≈ 0.54%

The mechanisms differ in kind. A transaction tax is linear in turnover and unavoidable. A price-step cost depends on the price level: it is cheapest on large, high-priced stocks and worst on cheap ones. That is part of why a slow, large-stock-tilted effect could get close on the SET when nothing came close on the NSE.

3. Protocol

	NSE	SET
Universe	top 500 by trailing traded value, re-ranked twice a year	top 150, re-ranked quarterly, price ≥ 1 baht
Rebalance	monthly (one effect weekly)	quarterly, with a rank buffer to cut turnover
Test period	Feb 2007 → Jun 2023	Dec 2006 → Jun 2023 (65 quarters)
Locked holdout	Jul 2023 → Oct 2026, *never opened*	Jul 2023 → Oct 2026, opened once for one pre-named effect
Pass bar	Excess return over an equal-weight universe book, Newey–West t ≥ 2.0; hedged Sharpe > 0; t ≥ 1.5 at double slippage; positive with delistings marked to zero. SET adds data stresses.	
Deflation	Deflated Sharpe ratio ≥ 0.95 for anything banked (Bailey and López de Prado, 2014). Noise floor: each strategy's own selections, with returns permuted across eligible stocks.	

The studies differ in rebalance frequency and universe size, so the side-by-side numbers below compare verdicts and rankings, not magnitudes.

4. Results, net of costs

Excess return per year over the equal-weight universe book, with its t-statistic.

EFFECT	NSE / YR	T	SET / YR	T
Momentum, 12 months less the last	+5.2%	1.56	-0.1%	-0.04
Momentum, 6 months less the last	+4.4%	1.53	+5.3%	1.41
Near the 52-week high	**+3.9%**	**1.09**	**+5.1%**	**1.97**
Low volatility	+0.9%	0.26	+1.6%	0.50
Low beta	+0.5%	0.14	-0.4%	-0.11
Reversal, short horizon*	-15.0%	-7.63	-7.5%	-2.73
Reversal, one month	-7.2%	-3.27	-6.1%	-2.31
Illiquidity	-1.3%	-0.68	-3.7%	-1.23
Lowest recent maximum	-2.2%	-1.03	-2.4%	-0.88
Long-term trend filter	+2.7%	0.72	+5.0%	1.03

* NSE: five-day reversal, rebalanced weekly. SET: three-month reversal, rebalanced quarterly. The SET column uses the 2006 start; on the 2002 start first registered, the 52-week high scored +8.1% a year at t 3.01.

On the NSE, 306 further ideas were proposed by a language model and scored on the same backtest. 63 were rejected for using information not yet available (the most instructive being price levels already adjusted for later share splits), and none cleared the deflated bar. With 192 distinct ideas tested over 197 months, that bar requires an excess Sharpe ratio of about 1.09. The best clean idea, built on India's published delivery percentage, reached 0.72.

5. SET: the 52-week high under stress

TEST	EXCESS T
As first registered (2002 start; the five rows below use the same basis)	3.01
Double slippage	2.95
Returns across unverifiable jumps and suspensions set to zero	3.02
Delisted names given an assumed 3.6% yearly dividend	3.00
Delisted names removed from both strategy and benchmark	2.50
2010 onward only	2.24
2006 start (the primary reading)	**1.97**

The excess Sharpe ratio was 0.48 on the 2006 basis and 0.66 on the 2002 basis. The deflated-Sharpe bar for ten tested effects is 0.80 over 65 quarters (0.72 over 80). The effect never reached it in any reading.

6. SET: the single holdout test

The pass rule was fixed and fingerprinted before the locked data was opened. All four conditions were required.

CONDITION (13 QUARTERS, JUL 2023 → OCT 2026)	RESULT	
Cumulative excess over the equal-weight book > 0	-4.4% vs -15.2%	pass
Mean quarterly excess / standard error ≥ 1.0	0.46	fail
Cumulative excess > 0 at double slippage	+10.3%	pass
Cumulative return hedged with the SET50 index > 0	-20.2%	fail

Mean excess was +2.5% a year against +6.4% in the 2010–2023 test years. Its standard error is about 5% a year, so the two are not statistically distinguishable. The holdout is consistent with decay, and it is also consistent with no change and an unlucky draw. It is not consistent with an effect strong enough to fund. The effect is closed on the SET. A pass would only have sent it to forward paper trading, never straight to capital.

7. Corrections made during review

An external review of the SET result before the holdout was opened changed four things, all in the conservative direction:

- The data meets its 95% agreement bar only from 2006, so 2006 became the primary start. This moved the 52-week high from a pass (3.01) to a near-miss (1.97).
- A second effect's apparent pass, 6-month momentum at 2.034 against a noise threshold of 2.0335, was a rounding artefact. It also failed two of the new stresses. Removed.
- The headline cost comparison had mixed two slippage models. Like for like, Thai costs are about 0.54% against India's 0.42%, not double.
- A per-strategy noise-floor probability was distorted by two quarters of forced cash in one benchmark. Per-strategy probabilities are not quoted; only the pooled threshold is used.

A request to start the test after 2008, to drop the crisis years, was declined. Choosing the window after seeing which years hurt is the error the whole protocol exists to prevent, and the damage in question (April–June 2009) turned out to be the strategy's characteristic way of losing.

8. What is not closed

- **NSE delivery percentage.** A real but weak effect (excess Sharpe 0.72 against 1.09 required). The NSE holdout is still sealed and available for a single, newly registered test.

- **SET investor flows.** Foreign and NVDR buying per stock is Thailand's nearest equivalent to India's delivery data, and it is untested. It is not in the free data, and the exchange's own service holds five years of it, enough for a dedicated study but not for this one.

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