

What Recent Academic Research Suggests About Insider Signals

Insider transaction data, when captured with sufficient depth, timeliness, and nuance, has generated persistent alpha in the academic literature. But not all signals are equal, not all hold up after regulation, and the edge lives in specific places. Below is an accurate summary of eight peer-reviewed and working papers, with a read on the signal implications of each.

Which insiders are actually informed?

Research on separating signal from noise in the transaction universe

Composite signals outperform any single insider characteristic

A 2025 study analyzed 3.7 million insider transactions across 34 countries and found that combining multiple buy and sell indicators into a composite measure significantly outperforms any individual signal. The composite strategy generated monthly alphas of at least 1% in equal-weighted portfolios, driven primarily by the long leg (purchases) and strongest among small stocks at short holding periods. No single indicator dominated, the signal came from synthesizing role, trade size, clustering, R&D context, and historical profitability together. Predictability decays substantially at 6-12-month horizons, consistent with a short-term informational advantage.

Signal implication: *Single-characteristic filters, role, size, or direction alone, leave substantial alpha on the table. The evidence supports a multi-factor weighting approach, and the decay profile suggests the signal is better suited to shorter rebalancing windows.*

Heckmann, Jacobs & Schwarz (2025), SSRN 4537187

Informed trading is concentrated in a persistent subset of insiders

Using a mixture model applied to the full U.S. insider filing universe, researchers estimated that approximately 30% of insiders make trades that appear information-driven. About 10% of individual purchases and 4% of sales are classified as informed. The fraction of informed insiders is stable over time, though information is impounded into prices more quickly in recent years, consistent with faster discovery by the market.

Signal implication: *The majority of insider activity is uninformative. Classification at the insider level, not just the transaction level, is where the signal lives. That classification is persistent and predictive out-of-sample, which implies value in tracking historical accuracy by insider rather than treating each filing equally.*

Blonien, Crane & Crotty (2023), SSRN 4633070

Insider purchases at R&D-intensive firms carry amplified signal

A 2025 study found that insider purchases, but not sales, are significantly more profitable at firms with R&D expenditure than at non-R&D firms. The effect is stronger at well-governed firms and increased post-Sarbanes-Oxley. Insiders at innovative firms purchase more intensively ahead of positive patent outcomes and better subsequent innovation results. The authors interpret this as boards of innovative firms permitting certain insider purchases as a credible signaling mechanism for opaque R&D pipelines.

Signal implication: *Sector context is a meaningful signal amplifier. A purchase by an insider at a high-R&D firm carries more informational content than the same purchase elsewhere. The asymmetry between buys and sells in this context is also notable. The two directions should not be treated symmetrically in factor construction.*

Guest, Ljungqvist, Zeng & Zuo (2025), Swedish House of Finance WP 2025-01, SSRN 5197872

10b5-1 Plans: What still works after the 2022 reform

The regulatory shift and where the remaining signal lives

The 2022 10b5-1 reform shifted the signal, not eliminated it

The first large-scale quasi-experimental study of the 2022 Rule 10b5-1 amendments tracked 158,000 executive stock sales linked to plan adoption dates. Pre-reform, insiders using single-trade plans or selling shortly after plan adoption generated substantial abnormal returns. The reform eliminated those specific patterns. But overall insider abnormal returns did not decline. Insiders appear to have either self-policed in anticipation of the reform or migrated opportunistic trading toward the margins of the new rules.

Signal implication: *The reform changed the distribution of the signal, not its aggregate level. Strategies that relied on short-gap adoption-to-sale filters need updating, but the underlying informational content of 10b5-1 activity has not disappeared.*

Divakaruni, Hvide & Tveiten (2026), CEPR Discussion Paper 21199

Plan terminations are now among the cleaner post-reform signals

Early large-sample evidence confirms the behavioral shift. The share of 10b5-1 sales occurring within 90 days of plan adoption dropped from 31% pre-reform to under 2% post-reform. Post-amendment plan trades no longer exhibit the negative abnormal return drift that characterized pre-reform opportunistic presales. Two signals persist: plan terminations are still followed by positive abnormal returns, and gift transaction backdating, which had been a detectable pattern, largely disappeared.

Signal implication: *Plan termination is now among the cleaner signals in the 10b5-1 universe. An insider canceling a sell plan is forgoing scheduled sales, and the subsequent return pattern reflects that. This is a signal that requires plan-level tracking, not just transaction-level data.*

Kim, Kim & Rajgopal (2025), SSRN 5362431

The transactions most factors miss

3-code dispositions and non-standard Form 4 activity

J-coded transactions contain systematically overlooked informed activity

A Harvard Business Law Review study analyzed all Form 4 transactions coded as 'J' (Other) since 1992, a category that receives far less scrutiny than standard 'S' (sale) transactions. More than \$1.5 trillion has been transacted under the J-code during the sample period. Abnormal profits on J-coded trades are higher for larger transactions and for trades reported with longer delays, up to 20% on average. The authors find evidence that insiders exploit the obscurity of the J-code to dispose of shares on adverse information while avoiding the attention that standard sale disclosures attract.

Signal implication: *Factors constructed only from P and S transaction codes are missing a material portion of informed disposition activity. J-coded transactions are proportionally more likely to be information-driven and are harder to extract correctly from raw EDGAR. Data quality here is a meaningful differentiator.*

Avci, Schipani, Seyhun & Verstein (2025), Harvard Business Law Review, Vol. 15 No. 1, SSRN 4899359

Timing, disclosure lags, and regulatory context

What the structure of the disclosure regime implies for signal construction

Faster disclosure increased insider profits through coordination

Sarbanes-Oxley accelerated Form 4 filing requirements from 10 days to two business days. Contrary to the regulatory intent, a 2025 study found that faster disclosure increased insider trading profits. The mechanism runs through coordination: the shortened reporting window enables insiders to observe each other's trades and act on that information more quickly. The reform created a more efficient coordination mechanism among informed insiders rather than deterring information-based trading.

Signal implication: *The two-day window makes coordinated insider activity visible in near real-time. Clustering and coordination patterns around disclosure dates are more actionable now than in the pre-SOX regime, and the data history spanning both periods is relevant for factor calibration.*

Jiang, Martin & Yin (2025), Working Paper

SEC monitoring concentrates insider selling among the most informed

Researchers used de-identified smartphone geolocation data to track SEC-associated devices visiting company headquarters, providing the first large-scale observational data on informal monitoring activity outside formal investigations. Firms with prior enforcement history are visited more frequently. Stock prices react to visits even absent subsequent formal action. The key insider trading finding insiders are significantly less likely to sell around SEC visits, but those who do sell during a visit period avoid substantial losses, suggesting that insiders who continue trading under visible regulatory scrutiny are the most informed.

Signal implication: *Regulatory attention functions as a natural filter: most insiders stand down, and the ones who don't are disproportionately informed. This implies that conditioning on regulatory context, not just transaction characteristics, could improve signal precision.*

Gerken, Irlbeck, Painter & Zhang (2024), University of Chicago Stigler Center WP 349

About VerityData

VerityData provides institutional investors with structured, analyst-validated insider transaction data sourced from SEC filings. Coverage includes open-market purchases and sales, 10b5-1 plan disclosures and terminations, J-code and gift transactions, unusual event flags, and 20+ years of point-in-time history. Data is available via SFTP, API, MCP, and Snowflake.

To learn more or request a data sample, contact us at sales@verityplatform.com or visit verityplatform.com.

Full Citations

Avci, S.B., Schipani, C.A., Seyhun, H.N., & Verstein, A. (2025). Insider Trading by Other Means. Harvard Business Law Review, 15(1). SSRN 4899359.

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