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From Market Anomalies to Machine Learning: A Systematic Review of Stock Market Winners, Indices, and Digital Transformation

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Abstract

The study set out to revisit the anatomy of stock market winners by conducting a systematic literature review covering evidence from 1988 to 2023. The review synthesized thirty two peer-reviewed studies drawn from finance, economics, information systems, and behavioral science to assess how traditional anomalies, institutional mechanisms, and artificial intelligence-driven approaches explain superior stock performance. Guided by the PRISMA framework, inclusion criteria focused on journal articles and scholarly books with clear empirical methodologies, while opinion papers and non-financial studies were excluded. Data were extracted into a coding matrix and analyzed thematically. The findings indicate that early anomaly-based studies highlighted financial attributes such as low price-to-book ratios, accelerating earnings, and strong relative strength as enduring predictors of winners, though replication work shows diminishing abnormal returns under modern efficiency conditions. A second thematic stream revealed that institutional and structural mechanisms—including index construction, platform recognition, and data sovereignty—play a decisive role in amplifying visibility and liquidity, often shaping winners independent of fundamentals. A third theme identified artificial intelligence and behavioral dynamics as critical in contemporary markets. While deep reinforcement learning and machine learning models improved prediction and portfolio performance, concerns regarding robustness, reproducibility, and costs persist. In parallel, gamblified investing platforms were found to expose retail investors to systematic underperformance through design features that encourage excessive risk-taking. The review concludes that the anatomy of stock market winners is co-produced by financial attributes, institutional frameworks, and technological plus behavioral dynamics. It recommends that scholars integrate anomaly-based and artificial intelligence approaches, regulators promote transparent index and data governance practices, and financial platforms adopt responsible design principles to protect investors. The study contributes to ongoing debates on market efficiency and provides a multi-dimensional framework for understanding stock market winners in the era of digital transformation.

Keywords: *Stock market winners; Market anomalies; Efficient Market Hypothesis; Index construction; Platform recognition; Artificial intelligence in finance; Machine learning trading; Deep reinforcement learning; Data sovereignty; Gamblification of investing; Systematic literature review; Digital transformation of markets*

1.1 Background to the Study

The history of stock markets can be traced back to the seventeenth century with the establishment of the Amsterdam Stock Exchange in 1602, which was primarily designed to facilitate trade in shares of the Dutch East India Company, marking the first formalized securities exchange (Goetzmann, 2004; Petram, 2011). Over time, stock markets expanded to London and later New York, institutionalizing organized securities trading that enabled investors to raise capital while simultaneously distributing risk (Michie, 2001; Neal, 2015). The regulatory frameworks that followed such as the Securities Act of 1933 and the Securities Exchange Act of 1934 in the United States emerged in response to speculative excesses and financial crises, underscoring the importance of oversight to ensure transparency, accountability, and investor confidence (Markham, 2002; Coffee, 2007).

Stock markets have since become central to global economic growth, functioning as a mechanism for resource allocation, corporate governance, and wealth distribution (Levine & Zervos, 1998; Demirgüç-Kunt & Maksimovic, 2002). In both developed and emerging economies, the efficiency of stock markets is often tied to capital formation, industrial expansion, and macroeconomic stability (Bekaert & Harvey, 2000; Adjasi & Biekpe, 2006). The relevance of stock markets has been further amplified by globalization and the rise of institutional investors, who shape investment flows and amplify both market stability and volatility (Agnew & Szykman, 2011; Davis & Kim, 2015).

At the core of stock markets lie certain inherent components including price discovery, liquidity provision, risk sharing, and information dissemination (Madhavan, 2000; O'Hara, 2003). These elements not only ensure that securities are fairly valued but also influence broader economic indicators such as consumer spending, business investment, and national savings rates (Allen & Gale, 2000; Beck & Levine, 2004). The debates surrounding stock markets, particularly in academic finance, often revolve around whether they reflect fundamentals or speculative anomalies, a discussion anchored in the Efficient Market Hypothesis and subsequent challenges to it (Fama, 1970; Shiller, 2003).

The evolution of stock markets has further been shaped by technological innovation and digital transformation. The transition from open outcry trading floors to electronic trading platforms redefined liquidity and speed of execution, while algorithmic and high frequency trading introduced new dimensions of efficiency and systemic risk (Jones, 2013; Gomber et al., 2018).

More recently, artificial intelligence and machine learning approaches such as reinforcement learning models and predictive algorithms have reoriented attention toward how markets generate winners and losers in an increasingly data driven environment (Milana & Ashta, 2021; Wang et al., 2021; Han et al., 2023). Alongside these developments, phenomena such as the gamblification of investing through app based platforms have raised concerns about behavioral distortions and speculative excess among retail investors (Newall & Weiss-Cohen, 2022).

In this context, revisiting the anatomy of stock market winners is not only historically significant but also critical for contemporary scholarship. From traditional valuation metrics such as price to book ratios and earnings growth (Reinganum, 1988) to modern algorithmic and artificial intelligence driven strategies, the criteria that define stock market success continue to evolve in ways that both reflect and challenge established economic theory (Krogdahl & Wibstad, 2021; Duterme, 2023). Understanding these shifts within a systematic framework provides a foundation for analyzing how anomalies, technological advances, and behavioral dynamics collectively shape the trajectory of winners in global stock markets

1.2 Statement of the Problem

Although stock markets have historically been viewed as efficient mechanisms for capital allocation, a growing body of research demonstrates that anomalies, behavioral biases, and technological disruptions continue to challenge the assumptions of market efficiency (Fama, 1970; Shiller, 2003). Early evidence such as Reinganum's (1988) study of stock market winners revealed that firms with distinct characteristics, including favorable valuation metrics and accelerating earnings, consistently outperformed market benchmarks, suggesting that predictable factors drive exceptional returns. More recent scholarship shows that structural shifts such as the engineering of indices, the dominance of institutional actors, and the rise of digital trading platforms have created new winners and losers, raising questions about fairness, access, and sustainability of financial markets (Duterme, 2023; Kokas, 2023). Furthermore, the application of artificial intelligence and machine learning to trading has introduced models capable of exploiting market inefficiencies, but concerns remain about interpretability, systemic risks, and the potential amplification of volatility (Milana & Ashta, 2021; Wang et al., 2021; Olorunnimbe & Viktor, 2023). At the same time, the gamblification of investing through app based platforms and speculative trading environments exposes retail investors to risks that undermine the wealth

distribution role of stock markets (Newall & Weiss-Cohen, 2022). These competing perspectives reveal a central problem: while the anatomy of stock market winners remains a relevant theme, the criteria that defined winners in earlier decades may not fully account for contemporary dynamics shaped by digital transformation, artificial intelligence, and shifting regulatory and behavioral environments, necessitating a systematic review of the evolving evidence.

1.3 Objective of the Study

The objective of this study is to conduct a systematic literature review on the evolution of stock market winners from traditional market anomalies to contemporary developments driven by artificial intelligence, digital transformation, and investor behavior, in order to synthesize historical and current evidence on the determinants of exceptional stock market performance.

2.0 Theoretical Framework

This study is anchored in the Efficient Market Hypothesis (EMH), a foundational theory in modern finance advanced by Eugene Fama in 1970. The EMH posits that stock prices fully and immediately reflect all available information, implying that it is impossible to consistently achieve abnormal returns through fundamental or technical analysis since prices already incorporate relevant data (Fama, 1970). The theory emerged as a natural extension of earlier random walk models of stock prices, notably contributed by Paul Samuelson and Louis Bachelier, who suggested that asset prices follow a stochastic process and are unpredictable in the long run (Lo, 2004; Jarrow & Protter, 2016).

The EMH is structured around three key forms. The weak form asserts that current prices reflect all historical trading information such as past prices and volumes, thereby rendering technical analysis ineffective. The semi strong form maintains that stock prices instantly adjust to all publicly available information, limiting the value of fundamental analysis. The strong form goes further by claiming that even insider information is quickly incorporated into prices, leaving no room for consistent excess returns (Fama, 1991; Malkiel, 2003). Embedded in these tenets is the idea that markets are rational, that information dissemination is rapid, and that arbitrage eliminates mispricings.

The EMH has significant relevance to this study because the very notion of stock market winners directly interrogates the efficiency of financial markets. Reinganum's (1988) findings that firms

with specific valuation and earnings characteristics systematically outperformed the market suggested that anomalies could exist, thereby challenging the semi strong form of EMH. Subsequent studies on market indices, investor behavior, and artificial intelligence driven trading further illustrate that structural inefficiencies, behavioral biases, and technological asymmetries can generate patterns of outperformance inconsistent with strict efficiency (Shiller, 2003; Milana & Ashta, 2021; Duterme, 2023).

In application, this framework provides a conceptual lens for analyzing whether modern determinants of stock market winners, such as machine learning algorithms, gamblification platforms, or data sovereignty regimes, align with or contradict the assumptions of EMH. By situating the systematic review within the EMH tradition, the study evaluates how historical anomalies, evolving technologies, and behavioral factors continue to reshape our understanding of efficiency and performance in global stock markets.

2.1 Empirical Literature Review

Early evidence on extraordinary stock performance comes from the classic analysis of firms that at least doubled within a year, which documented shared traits such as improving profitability, accelerating earnings, and rising relative strength, and showed that composite screening rules beat the broad market in backtests for 1970 to 1983 (Reinganum, 1988). A recent replication extended the approach to the period 2000 to 2019 and reported that the four-screen strategy still outperformed the S&P 500 on cumulative holding-period returns, while the nine-screen variant was operationally infeasible due to very small qualifying sets (Krogdahl & Wibstad, 2021). Once standard risk factors were included, abnormal returns were not consistent, although equal-weighted portfolios produced significant alphas in the earlier sub period, which suggests time variation in winner characteristics across regimes (Krogdahl & Wibstad, 2021; Reinganum, 1988). These studies collectively motivate a search for structural mechanisms that shape who becomes a winner and when such outperformance survives risk adjustment in modern markets.

An important structural channel is the design of market indices that decide which firms become visible benchmarks for capital allocation and media attention (Duterme, 2023). Through a qualitative socio-economic inquiry, index construction is presented as an arena in which methodological choices arbitrate among actors and implicitly crown winners while relegating others to invisibility, a process that can reshape flows and status without any change in firm

fundamentals (Duterme, 2023). The paper urges scholars to denaturalize index shapes and to treat selection, weighting, and maintenance rules as socio-technical devices that encode preferences and power relations inside financial representation. This perspective broadens the definition of a stock market winner beyond raw performance screens to include institutional selection processes that channel attention and liquidity.

Recognition mechanisms outside traditional indices also create winner dynamics, especially in digital platform ecosystems where status signals alter strategy and competition among complementors (Foerderer, Lueker, & Heinzl, 2021). Using a quasi-experimental difference-in-differences design on the Google Play Awards, the study finds that awards shift recipients toward improving existing complements, increase multihoming, and stimulate new releases in the same niche by other developers, which reflects both desirable and undesirable outcomes for the platform owner. The findings illustrate how symbolic recognition can propagate real allocation effects through attention, imitation, and ecosystem entry, which parallels index inclusion effects in securities markets. Taken together, recognition and inclusion act as amplifiers that help define winners beyond firm fundamentals alone.

A second stream of modern evidence studies artificial intelligence-driven trading systems that search for patterns beyond linear factor models and static screens. A notable approach embeds market conditions into deep reinforcement learning to balance risk and return, proposing a policy network that adapts allocations as states evolve across regimes, with backtests reported on multiple markets and stress periods (Wang, Huang, Tu, Zhang, & Xu, 2021). The method formalizes a state-aware portfolio rule and frames outperformance as a function of dynamic policy learning rather than fixed anomaly exposure, a reorientation that speaks directly to the time variation seen in winner studies. These contributions shift the search for winners from static characteristics toward learned policies that respond to context, which is consistent with regime-dependent evidence in recent replication work (Krogdahl & Wibstad, 2021; Wang et al., 2021).

Machine learning classifiers have also been advanced to improve trading labels and signal quality in supervised systems. An XGBoost framework with N-period Min-Max labeling marks only decisive turning points in prices to reduce noise and address class imbalance, and the authors report improved trading performance relative to conventional daily labels in extensive experiments (Han, Kim, & Enke, 2023). Label engineering is presented as central to downstream accuracy and risk

control, and the paper documents sensitivity reductions to small price moves that commonly degrade classifier stability. The approach shows how methodological refinement in data labeling can materially alter measured alpha and drawdowns, which matters for any attempt to codify the anatomy of winners with modern tools.

Survey evidence maps the breadth of artificial intelligence across finance and stock prediction, drawing attention to opportunities and limitations that condition claims about consistent outperformance. A broad review catalogs techniques and domains, from credit scoring and robo-advisory to market making and price prediction, and emphasizes that integration choices and governance shape outcomes as much as algorithms (Milana & Ashta, 2021). A systematic survey of deep learning in the stock market focuses on studies with explicit backtesting, synthesizing architectures, data modalities, and evaluation pitfalls, and notes persistent challenges in reproducibility, risk calibration, and leakage control (Olorunnimbe & Viktor, 2023). These surveys collectively caution that measurement design, benchmark choice, and protocol rigor often drive reported success more than any single model class, which complicates inferences about stable rules for picking winners.

Evidence that tempers optimism about artificial intelligence beating markets comes from mixed-method evaluations that combine technical signals with text sentiment and then benchmark against realistic costs. One study reports median performance across machine learning approaches and concludes that it is premature to claim systematic dominance over markets, especially once costs and non-stationarity are considered (Mokhtari, Yen, & Liu, 2021). This aligns with factor-adjusted results in replication work, where raw outperformance weakens after exposures are priced, suggesting that part of apparent alpha reflects timed risk premia rather than pure information advantage (Krogdahl & Wibstad, 2021; Mokhtari et al., 2021). Such findings reinforce the need for careful protocol design and for humility about generalization when identifying winners with learned models.

A third stream centers on data governance and its role in creating information asymmetries that may define winners across jurisdictions. Work on digital sovereignty documents how state policy, platform strategy, and capital market expectations interact to shape who controls data and how data circulates, with implications for analytics advantages and surveillance capitalism (Kokas, 2023). The book argues that regulatory mismatch and market incentives enable large-scale data

extraction that consolidates informational power, which can translate into persistent advantages for firms embedded in supportive data regimes. For financial research this raises the prospect that access to privileged data sources becomes a determinant of winner status in an information-driven market environment.

Behavioral dynamics in retail channels further shape modern winner and loser patterns through design features that encourage frequent trading and lottery-like exposure. A review of gamblified investing defines products that borrow design from gambling, such as high-frequency trading interfaces and high-risk derivatives, and documents that typical users underperform and face elevated harm risk, which challenges the idea that retail enthusiasm reliably identifies winners (Newall & Weiss-Cohen, 2022). The authors argue that product design, friction removal, and reward salience alter behavior in ways that generate losses for most participants, which implies that platform design can manufacture loser outcomes even in the presence of abundant information. These observations complement structural accounts of index engineering by showing how micro-design and user experience influence who benefits from market participation.

Synthesizing across streams, contemporary evidence suggests that the anatomy of winners is co-produced by three forces that interact over time. First, measurable firm attributes and momentum still matter, although their payoffs vary across regimes and shrink after controlling for risk factors in recent decades (Reinganum, 1988; Krogdahl & Wibstad, 2021). Second, institutional and platform selection mechanisms channel attention and liquidity, magnifying recognition effects from index inclusion and platform awards into real performance outcomes that extend beyond fundamentals (Duterme, 2023; Foerderer et al., 2021). Third, artificial intelligence introduces state-dependent search for patterns, but its realized edge depends on data access, label design, evaluation rigor, and governance, with mixed evidence on persistent abnormal returns after costs and risk adjustment (Wang et al., 2021; Han et al., 2023; Olorunnimbe & Viktor, 2023; Mokhtari et al., 2021). This synthesis frames winners as products of attributes, institutions, and algorithms under evolving market conditions, which sets the stage for the systematic review that follows.

3.0 Research Methodology

This study employed a systematic literature review (SLR) approach to synthesize evidence on stock market winners, market anomalies, and the evolving role of artificial intelligence and digital transformation. The SLR design was chosen to provide a transparent and replicable process of

identifying, screening, and analyzing relevant studies in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, which emphasizes methodological rigor and comprehensiveness (Moher et al., 2009; Snyder, 2019). Data were drawn from scholarly databases including Scopus, Web of Science, JSTOR, ScienceDirect, and IEEE Xplore, ensuring coverage across finance, economics, information systems, and behavioral studies.

The search strategy combined keywords such as *stock market winners*, *market anomalies*, *index construction*, *machine learning in finance*, *deep learning prediction*, and *gamblification of investing*, with Boolean operators adapted to different databases. The initial search yielded approximately 280 articles. Screening was then conducted in two stages. Titles and abstracts were first reviewed to assess relevance, followed by a full-text assessment. The inclusion criteria required studies published in English between 1988 and 2023, peer-reviewed articles, books, or major conference proceedings with clear empirical or analytical methodologies. The exclusion criteria ruled out opinion pieces, non-scholarly reports, and studies unrelated to determinants of stock market performance. After applying these filters, 32 studies were retained for in-depth analysis.

Data extraction was conducted using a structured matrix that captured author, year, methodology, sample, and findings. The retained studies were analyzed through thematic synthesis, which involved identifying patterns across research and clustering them into themes. This process yielded three dominant areas: anomaly-based explanations of winners, institutional and structural mechanisms, and artificial intelligence and behavioral dynamics. The methodological diversity across studies included archival regression and backtesting in finance, qualitative and quasi-experimental methods in index and platform studies, and simulation and predictive modeling in artificial intelligence research. This triangulation of methods enhanced the robustness of the review by showing how different approaches converge or diverge in explaining stock market winners.

4.0 Findings

The systematic review of thirty two studies revealed three dominant themes that explain the anatomy of stock market winners in both historical and contemporary contexts. These themes include anomaly-based explanations, institutional and structural mechanisms, and the integration

of artificial intelligence and behavioral dynamics. Each theme reflects not only empirical findings but also methodological innovations and shifting paradigms in how stock markets are understood.

4.1 Anomaly-Based Explanations of Stock Market Winners

The earliest empirical work on market winners emphasized anomalies embedded in firm-level financial attributes. Reinganum (1988) examined 222 firms whose stock prices at least doubled in a year between 1970 and 1983 and documented that these firms shared common characteristics such as low price-to-book ratios, accelerating quarterly earnings, and high relative strength. On average, these firms produced cumulative price appreciation of 349 percent during their growth episodes, far outpacing the broader market. Importantly, when Reinganum applied nine investment screens, the selected firms generated holding-period returns of 30.6 percent after one year and 65.4 percent after two years, compared to 6.9 percent and 14.7 percent respectively for the S&P 500. These results provided early statistical evidence that anomalies could generate abnormal returns that traditional market efficiency theory struggled to explain.

Replication work has extended these insights to more recent decades. Krogdahl and Wibstad (2021) revisited the anatomy of winners using data from 2000 to 2019. Their study found that while the four-screen model—focused on price-to-book ratios, accelerating earnings, relative strength, and limited shares outstanding—continued to generate significant raw returns, the alpha dissipated once risk factors from models such as Fama-French were included. Equal-weighted portfolios of winners, however, still showed statistically significant abnormal returns in the earlier part of the sample. This suggests that anomalies are regime-dependent and may weaken in periods of high information efficiency but re-emerge when structural or behavioral frictions distort pricing. Taken together, these studies confirm that anomaly-based explanations remain relevant but are not sufficient in isolation to explain the persistence of stock market winners.

4.2 Institutional and Structural Mechanisms

The second theme broadens the understanding of winners to include institutional and structural processes that determine visibility, liquidity, and competitive positioning. Duterme (2023) argues that index construction plays a decisive role in shaping winners and losers by determining which firms gain inclusion and, therefore, access to capital flows. For instance, firms added to major indices such as the S&P 500 typically experience price increases of between 3 and 8 percent in the days following inclusion, a well-documented “index effect” that arises not from changes in

fundamentals but from index fund rebalancing and investor attention. Duterme's qualitative analysis shows that such methodological rules not only crown winners but also reflect socio-technical choices that institutionalize power relations within finance.

Parallel evidence from platform ecosystems demonstrates how symbolic recognition mechanisms amplify attention and outcomes. Foerderer, Lueker, and Heinzl (2021), in their quasi-experimental study of Google Play Awards, found that recognized apps significantly increased investment in updates, experienced higher user acquisition, and prompted competitive responses from rivals. This institutional recognition mirrors how index inclusion elevates visibility in capital markets. Beyond platforms and indices, Kokas (2023) highlights how data sovereignty and regulatory environments influence who controls data flows and analytics advantages. For example, China's digital governance regime enables domestic firms to capture massive data resources, creating durable competitive advantages that translate into stronger market positioning. Collectively, these findings suggest that winners are actively constructed by institutional rules, platform recognition, and policy environments, often independent of intrinsic firm fundamentals.

4.3 Artificial Intelligence and Behavioral Dynamics

The third theme highlights how artificial intelligence, machine learning, and behavioral finance jointly redefine modern stock market winners. Advanced models such as DeepTrader, a deep reinforcement learning framework, embed market conditions to balance risk and return. Wang, Huang, Tu, Zhang, and Xu (2021) demonstrated through backtests on multiple international markets that their model achieved higher Sharpe ratios than traditional strategies, particularly during volatile conditions. Similarly, Han, Kim, and Enke (2023) introduced an XGBoost-based trading system with novel labeling methods, reporting statistically significant improvements in predictive accuracy and profitability over conventional models. Surveys of artificial intelligence applications confirm widespread adoption but caution that many reported gains are in-sample and not always reproducible out-of-sample, raising concerns about robustness and overfitting (Milana & Ashta, 2021; Olorunnimbe & Viktor, 2023).

Counter-evidence tempers optimism about machine learning consistently outperforming markets. Mokhtari, Yen, and Liu (2021) show that while machine learning approaches improve short-term prediction accuracy, once transaction costs and market non-stationarity are accounted for, abnormal returns diminish significantly. This suggests that artificial intelligence may offer tactical

advantages but not structural dominance. Alongside these technological dynamics, behavioral research highlights the risks of gamblification in modern investing. Newall and Weiss-Cohen (2022) argue that app-based trading platforms encourage excessive risk-taking and frequent trading through design features that resemble gambling products. Their study documents that retail investors engaging in such platforms often underperform benchmarks, effectively manufacturing losers rather than winners. Together, these findings illustrate a paradox: artificial intelligence expands the toolkit for identifying winners, but platform design and behavioral distortions can simultaneously erode the capacity of retail investors to benefit.

5.0 Conclusion

This review set out to examine the anatomy of stock market winners by systematically analyzing evidence from anomaly-based research, institutional mechanisms, and artificial intelligence coupled with behavioral dynamics. The findings confirm that early anomaly studies established measurable attributes such as low price-to-book ratios, accelerating earnings, and high relative strength as enduring markers of superior performance, though their predictive power has weakened under modern efficiency conditions (Reinganum, 1988; Krogdahl & Wibstad, 2021). Beyond anomalies, institutional and structural arrangements—including index construction, platform recognition, and data sovereignty—were found to play decisive roles in amplifying visibility, liquidity, and long-term competitive advantage, often independent of firm fundamentals (Duterme, 2023; Foerderer et al., 2021; Kokas, 2023). The review also highlighted the transformative influence of artificial intelligence, with machine learning and deep reinforcement learning models delivering tactical predictive gains, though concerns remain about reproducibility, robustness, and transaction costs (Wang et al., 2021; Han et al., 2023; Olorunnimbe & Viktor, 2023). Finally, behavioral dynamics illustrate that gamblified investing platforms expose retail participants to systematic underperformance, raising questions about fairness and the distributional outcomes of digital finance (Newall & Weiss-Cohen, 2022).

Overall, the anatomy of stock market winners in the contemporary era is co-produced by three forces: measurable financial attributes, institutional and structural selection processes, and technological plus behavioral innovations. No single framework fully captures their interaction. Instead, winners emerge through the convergence of traditional anomalies, institutional rules, and advanced data-driven tools, with outcomes conditioned by behavioral design and governance. This

synthesis underscores the need to revisit long-standing theories of market efficiency in light of new technological and institutional realities.

6.0 Recommendations

Based on the review findings, several recommendations can be advanced for scholarship, practice, and policy. First, future research should integrate anomaly-based models with artificial intelligence frameworks to test whether hybrid approaches can capture regime-dependent effects and improve out-of-sample robustness. Longitudinal and cross-market studies would help determine the persistence of winning characteristics across different economic and regulatory contexts.

Second, policy makers and regulators should recognize the significant role of institutional and structural mechanisms in shaping winners. Transparent index construction, fair recognition practices, and balanced data governance frameworks are necessary to prevent systemic biases that privilege certain firms while sidelining others. Given the growing power of data sovereignty regimes, global cooperation in financial data standards is critical to avoid asymmetries that distort competitive outcomes.

Third, financial platforms and market designers should address the risks of gamblified investing. Introducing stronger investor protection measures, embedding responsible design principles, and improving investor education can mitigate behavioral harms. Regulators may also need to re-evaluate the framing of retail trading products that function more as gambling devices than investment tools.

In sum, the anatomy of stock market winners cannot be understood solely through financial anomalies; it requires a multi-dimensional lens that considers institutions, technology, and behavior. Scholars, practitioners, and regulators alike must adapt their approaches to ensure that future winners are identified in ways that enhance not only market efficiency but also fairness and resilience in global financial systems.

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