Integrating Fundamentals and Technicals: Investment Attractiveness of Puregold Price Club, Inc.

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Abstract

This study evaluates the investment attractiveness of Puregold Price Club, Inc. using an integrated framework that combines fundamental analysis (FA), technical analysis (TA), and focused event-window tests. The design recognizes that issuer value in an emerging market reflects both intrinsic cash-flow strength and the market's real-time interpretation of information. We analyze publicly available financial statements and disclosures (2014–2025) alongside daily price-volume data (2019–2025), benchmarking Puregold against its own history and listed retail peers. FA is organized into four domains—valuation (P/E, P/B, EV/EBITDA, earnings yield), profitability/quality (ROE, gross and EBITDA margins, asset turnover), financial strength (debtto-equity, current ratio, interest coverage), and capital allocation (dividend payout, yield, free-cash-flow coverage). TA employs moving-average structure (50d/200d), MACD, RSI(14), Bollinger Bands, ATR, and volume confirmation to classify trend, momentum, and volatility regimes. Event-study checks quantify short-window abnormal returns and abnormal volume around material corporate disclosures. Results indicate that Puregold has traded near the low end of its historical earnings multiple while maintaining conservative leverage, ample liquidity, and consistent EPS progression—supporting a "value-withquality" characterization. Dividend distributions have increased over time, with coverage considerations noted to preserve reinvestment flexibility. TA signals are constructive: positive MACD, RSI below overbought thresholds, improving mediumhorizon volume, and a price structure emerging from consolidation toward clearly defined resistance. Event windows show price reactions that are generally informative rather than noise-driven, reinforcing the credibility of TA confirmations. Synthesizing FA-TA evidence through a pre-specified decision matrix yields an Attractive (Buy/Overweight) classification, conditional on two guardrails: (i) sustaining margin durability and free-cash-flow coverage of dividends, and (ii) validating a resistance break on rising volume to reduce the risk of a failed breakout. Methodologically, the paper contributes a transparent, replicable issuer-level template for FA-TA integration in emerging markets and proposes a monitoring checklist (margins, inventory turns/shrink, EPS trajectory, FCF coverage, leverage, and post-event CAR/volume) to maintain alignment between intrinsic performance and market validation.

Keywords: Puregold Price Club; Investment Attractiveness; Fundamental Analysis; Technical Analysis; Event Study; Valuation; Momentum and Trend; Philippine Stock Market (PSE); Retail Sector

1. Introduction

Supermarket retail in the Philippines sits at the intersection of two powerful forces: (i) long-run. consumption-led growth in a developing economy and (ii) a rapid modernization of retail formats, digital channels, and supply-chain capabilities. Within this space, Puregold Price Club, Inc. (PGOLD) has evolved from a late-1990s challenger to a national multi-format operator serving individual consumers, micro-retailers (e.g., sari-sari stores), and value-seeking households. Over the past decade, Puregold's footprint broadened through hypermarkets and neighborhood formats, loyalty programs targeted at resellers, and adjacency moves (e.g., S&R membership stores). As the firm scaled, investors began to ask a deceptively simple question with difficult, interdisciplinary implications: given

the company's operating performance and market behavior, is PGOLD an attractive investment today?

Answering that question credibly for a scholarly audience requires an integrated lens. Fundamental analysis (FA) links firm value to cashflow prospects, growth durability, capital structure, and capital allocation (dividends/buybacks). Technical analysis (TA), in turn, interrogates actual trading behavior-trend persistence, momentum, volatility regimes, and support/resistance dynamics—to infer how information is being incorporated into prices. In emerging markets where frictions (e.g., disclosure lags, coverage gaps, liquidity constraints) can be material, neither lens is sufficient on its own; the blend helps adjudicate whether apparent "value" is a trap (weak quality/weak momentum) or a mispricing (strong quality/strong momentum).

This paper rewrites and extends a prior capstone on Puregold by the same authors by: (1) deepening the theoretical grounding behind FA and TA, (2) tightening measurement choices, (3) situating PGOLD within peer, time-series, and event-study contexts, and (4) articulating transparent gaps and objectives suitable for journal submission. Company facts in this introduction (e.g., footprint, program design, selected valuation snapshots) are drawn from the student's compiled dossier and graphics; details later sections analyze include valuation multiples, profitability/quality indicators (ROE, margins, leverage, liquidity), dividend trajectory, and technical indicators (MACD, RSI, Bollinger width), plus event-timed behavior.

Conceptually, the investment problem posed here is a triangulation problem. On the fundamentals side, low multiples can signal mispricing (Basu effect; value)—or simply risk and deteriorating quality. On the technical side, trend and momentum can reflect underreaction/overreaction dynamics—or noise. The research contribution is to integrate these perspectives around one salient Philippine issuer and to do so with transparent metrics, replicable procedures, and explicit limitations—so that a decision (buy/hold/avoid) is not merely asserted but traced to evidence.

2. Review of Literature

2.1 Decision-making under uncertainty: investors first, markets next

Investment choices are shaped by how humans perceive price histories as much as by how they read financial statements. Nolte et al. (2017) show that people react not only to endpoints but to the shape of price paths—amplitude, smoothness, and visible "trends" create heuristics that bias judgments. This behavioral lens helps explain why certain assets receive flows that exceed what classical risk—return calculations would suggest. In the case of gold, studies document that flows intensify when investors seek psychological safety: loss aversion, safe-haven narratives, and anxiety during equity drawdowns drive allocation as much as hedging logic (Pratama et al., 2023; Menon, 2020; Akbar et al., 2019).

Emotional payoffs can even dominate financial ones in some markets. For football clubs, investment motivations include identity, prestige, and belonging; Huth (2020) and Kirsch et al. (2024) show that "club attachment" produces willingness to accept lower financial returns, while Prigge et al. (2019) argue that conventional valuation misses these non-pecuniary utilities. Together, these works place

investor psychology at the front end of the priceformation pipeline: preferences and perceptions generate the demand that prices then aggregate.

2.2 From behavior to prices: information, signals, and real decisions

Sharpe's (1964) CAPM provides the canonical risk—return equilibrium where prices reflect systematic risk, but modern evidence complicates the route from information to price. Stock prices can contain private information useful to managers: when prices are high and informative, firms invest more (Chen et al., 2007). Yet markets are not always clear; when prices are noisy, firms may under-invest or misallocate capital (Dessaint et al., 2018). Thus, the literature points to a two-way feedback loop: investors' beliefs affect prices; prices feed back into corporate policies—amplifying either efficiency (when signals are informative) or inefficiency (when signals are noisy).

2.3 Decoding complex signals: AI as an interpretive layer

As data volumes and trading speeds rise, the interpretation of signals increasingly relies on algorithmic aids. Ferreira et al. (2021) review how AI systems can reduce human bias and enhance predictive accuracy in portfolio tasks. Deep learning models that blend convolutional (pattern extraction) and recurrent/temporal components operationalize this promise for financial series: CNN-LSTM architectures learn spatial-temporal features in returns and volatility to improve forecasts and allocation rules (Wu et al., 2021; Li et al., 2023). The implication for practice is not that algorithms replace theory, but that they operationalize itturning noisy, path-dependent data (of the sort highlighted by Nolte et al., 2017) into probabilistic signals usable for timing, risk control, and selection.

2.4 What makes something "investment-attractive"? A stacked perspective

The literature converges on investment attractiveness as a layered construct:

- Macro (national): Political stability and rule of law encourage cross-border capital (Bailey, 2018). Predictable institutions lower required risk premia and make otherwise similar projects more financeable.
- b. Meso (city/region): Skilled labor and competitive input prices draw firms to specific locations (Snieška et al., 2015). These "ecosystem" endowments raise

- expected productivity and, with it, the appeal of placing capital there.
- Micro (firm/instrument): Attractiveness comes from instrument design and firm attributes. Corporate bonds can be structured to align yield, maturity, and risk with investor preferences (Vasylieva et al., 2021). For high-tech firms, balancing innovation intensity with financial discipline is pivotal to sustaining appeal (Tyutyukina et al., 2020). Financial intermediation also carries signaling power: reputable underwriters command higher because reputation credibly prices communicates quality (Fang, 2005).

These layers interact with the psychology-information channel above: institutional stability dampens fear, lowers the weight of loss-averse behavior, and increases the informativeness of prices; strong meso-level capabilities legitimize growth narratives; credible micro-level signals (governance, reputation, instrument design) help investors parse noise from information.

2.5 Where fundamentals and "technicals" meet

Within this architecture, fundamental analysis (FA) and technical analysis (TA) can be reinterpreted using only the sources above. Fundamentals speak to micro-level attractiveness (cash-flow capacity, balance-sheet resilience, governance signals akin to Fang's reputation effect; instrument design akin to Vasylieva et al.; innovation-discipline balance per Tyutyukina et al.). TA, on the other hand, is an organized way to read how information and psychology are being impounded into prices in real time—precisely the terrain where price informativeness (Chen et al., 2007) or noise (Dessaint et al., 2018) matters, and where path-shape salience (Nolte et al., 2017) can either reflect genuine trend information or behavioral overreaction.

AI models (Ferreira et al., 2021; Wu et al., 2021; Li et al., 2023) sit on top of TA/market-microstructure intuition by learning higher-order features in returns and volumes—attempting to separate signal (informative price movements that managers and investors should heed) from noise (transient swings that should be faded or ignored). In emerging markets, where liquidity frictions can make prices less continuously informative, this interpretive layer may be even more valuable.

2.6 Implications for retail equities (e.g., Puregold)

A retail operator's "investment-attractiveness" blends:

- Micro fundamentals: unit economics (traffic, basket size, shrink), supplychain/scale, working-capital discipline, payout and reinvestment posturefirm-level mirroring the levers et highlighted by Vasylieva al. (instrument structuring analog), Tyutyukina et al. (discipline-innovation balance), and Fang (credibility/reputation signals).
- b. Price discovery quality: whether equity prices are conveying informative signals (Chen et al., 2007) or are degraded by noise (Dessaint et al., 2018).
- c. Behavioral overlays: how investors see the chart—trend persistence, drawdown anxiety, and safe-haven rotations (Nolte et al., 2017; Pratama et al., 2023; Menon, 2020; Akbar et al., 2019).
- d. Macro/meso context: country stability and legal predictability (Bailey, 2018) and operating-environment endowments like talent and cost structures (Snieška et al., 2015).
- e. Interpretive technology: whether human/AI tools can extract reliable signals from market data (Ferreira et al., 2021; Wu et al., 2021; Li et al., 2023).

In practice, an integrated FA–TA stance would (i) assess firm-level durability and capital allocation (micro attractiveness), (ii) interrogate whether the current price path looks more "informative" or "noisy" in light of event flows and liquidity, and (iii) use human + AI tools to reduce misclassification risk. In settings where investor emotion runs high—panic to safety (gold analog) or loyalty-driven overvaluation (football analog)—discipline requires explicitly testing whether price moves are corroborated by fundamentals or explained by psychology.

2.7 Research Gaps

Issuer-level integration templates are thin in emerging markets. The literature details psychology, information, AI methods, and layered attractiveness, but there are few replicable, single-issuer templates that transparently integrate micro fundamentals, chart-based behavior, and AI-assisted signal extraction for a Philippine large-cap retailer.

Measurement pre-commitment and replication. Building on the information/noise distinction (Chen et al., 2007; Dessaint et al., 2018), studies seldom pre-specify decision rules that distinguish informative trend from noisy drift—especially with open code, appendices, and thresholds that other researchers can audit.

Event-timed attribution. We know prices can guide or misguide investment, but issuer-specific event windows (product launches, M&A, governance changes) remain under-tested for short-window abnormal returns and volume reactions in the Philippine context, limiting our ability to label a price swing as "informative" vs. "noise."

Capital-allocation signaling vs. investor perception. The micro-level literature on instrument design and reputation (Vasylieva et al., 2021; Tyutyukina et al., 2020; Fang, 2005) suggests credible signals should lower required returns; whether dividend changes, buybacks, or reinvestment choices in a local retailer are actually read as quality signals—or lost in noisy pricing—remains an open empirical question.

Behavioral overlays on retail equities. Pathshape effects (Nolte et al., 2017) and safe-haven rotations (Pratama et al., 2023; Menon, 2020; Akbar et al., 2019) are well documented in other assets. How much of a Philippine retail stock's momentum/mean-reversion is psychology-driven versus information-driven is understudied.

Human-AI complementarity. While AI models (Ferreira et al., 2021; Wu et al., 2021; Li et al., 2023) show forecast gains, issuer-level studies rarely evaluate whether AI-filtered "signals" are more aligned with fundamentals (informative) or just better at tracking noise. A head-to-head comparison with human-rule TA would advance the field.

3. Research Objectives

3.1 Primary Objective

To evaluate the investment viability of Puregold Price Club, Inc. by integrating fundamental and technical analyses into a coherent, replicable framework that yields an evidence-based recommendation (buy/hold/avoid) suitable for scholarly scrutiny.

3.2 Specific Objectives

- a) Profile the issuer and sector context. Summarize Puregold's multi-format model, target segments, and strategic levers (loyalty, private label, logistics, digital/omnichannel), as compiled in the dossier, to ground subsequent metrics.
- b) Quantify valuation relative to history and peers. Compute and interpret P/E, P/B, EV/EBITDA, and earnings yield vs. (a) Puregold's own 5–10-year history and (b) a defined PSE retail peer

- set; assess whether current multiples are in statistically "cheap," "fair," or "rich" zones.
- c) Assess profitability/quality and balance-sheet strength. Track ROE, ROIC (if estimable), gross/EBITDA margins, inventory days, leverage (D/E), and liquidity (current ratio) to evaluate durability of economic profits and resilience to shocks.
- d) Evaluate capital-allocation and dividend sustainability. Analyze dividend policy (growth, payout ratio, coverage by free cash flow where available) and discuss trade-offs with reinvestment needs; relate dividend yield to valuation and macro-rate context.
- e) Characterize price behavior and momentum. Apply a consistent TA suite—trend/momentum (12–1 return, MACD), RSI state, Bollinger bandwidth (volatility regime), moving-average slopes and crossovers, and support/resistance levels—and pre-specify decision rules (e.g., require non-negative 6–12-month momentum to validate value).
- f) Conduct focused event-window checks. Around identifiable corporate announcements in the dossier (e.g., acquisitions, product/format launches), estimate abnormal returns and volume vs. matched windows to probe market reaction and information assimilation.
- g) Synthesize into a decision matrix. Combine FA signals (valuation, quality, balance-sheet, payout) with TA confirmations (trend state, volatility regime) to classify the issuer into quadrants (e.g., Value+Quality+ Momentum; Value+Quality-Momentum; etc.) and derive the indicated action.
- b) Document limitations and replication assets. State data constraints (e.g., reliance on public filings and third-party platforms, survivorship bias, liquidity limits), robustness checks (winsorization, alternative lookbacks), and provide appendices/code to enable replication.

Scope and Delimitations

This study focuses on publicly available data and the student-compiled PGOLD dossier; it does not incorporate non-public channel checks (e.g., store-level audits), detailed supplier terms, or granular customer cohort analyses. Technical indicators use daily data with pre-specified parameters; alternative specifications are explored as robustness checks rather than tuned ex post. Findings are issuer-specific and do not claim sectorwide generalization without further sampling.

Expected Contributions

Scholarly: a documented, replicable FA-TA integration template for a Philippine large-cap retailer that can be extended to a multi-issuer panel

Practical: a decision matrix that clarifies when Puregold's fundamentals and market behavior align (or conflict), aiding disciplined portfolio decisions and avoiding narrative-only calls.

4. Methodology

4.1 Research Design

This investigation employs a descriptiveanalytical case study design to evaluate the investment attractiveness of Puregold Price Club, Inc. (PGOLD) through the integration of fundamental analysis (FA) and technical analysis (TA). The methodological approach is anchored in the premise that corporate fundamentals and market behavior represent complementary dimensions of firm value: while FA captures intrinsic financial strength and sustainability, TA reflects the interpretive responses of market participants to information flows and price dynamics. The combination of these lenses provides a more comprehensive framework for investment evaluation, particularly in emerging market contexts where frictions, noise, and behavioral biases may distort price discovery.

The study proceeds in three stages: (1) fundamental analysis of Puregold's financial performance and valuation, (2) technical analysis of price momentum and volatility, and (3) event-study analysis to assess the informational efficiency of firm-specific disclosures. These stages culminate in a synthesis using a decision matrix that integrates FA and TA indicators into actionable investment classifications.

4.2 Data Sources

The study relies exclusively on secondary data from publicly accessible sources to ensure replicability:

- 1. Financial Statements and Disclosures: Annual and quarterly reports from Puregold Price Club, Inc., retrieved from the Philippine Stock Exchange (PSE) EDGE portal.
- 2. Market Data: Daily stock price and volume data for PGOLD and the PSEi index, obtained from official PSE records and reputable financial databases.
- 3. Corporate Announcements: Dividend declarations, acquisitions, and other strategic disclosures sourced from PSE filings and verified business press.

4. Peer Benchmarking: Financial and market data for comparable Philippine retailers (e.g., Robinsons Retail Holdings, SM Investments) for relative valuation.

The temporal scope is defined as 2014–2025 for fundamental trends and 2019–2025 for daily TA and event-study analysis.

4.3 Analytical Framework

The methodological framework of this study is anchored on three complementary dimensions: fundamental analysis, technical analysis, and event-study analysis. Each dimension is guided by established theories in finance and investment research, ensuring that the evaluation of Puregold Price Club, Inc. (PGOLD) is both comprehensive and academically rigorous.

A. Fundamental Analysis

Fundamental analysis seeks to evaluate a firm's intrinsic value by examining its financial statements, profitability, balance sheet strength, and dividend policy. The purpose is to determine whether current market prices reflect the company's true economic worth or diverge due to mispricing. This study structures FA into four domains: valuation, profitability/quality, financial strength, and capital allocation.

Valuation Ratios

Valuation ratios provide a lens through which the market's perception of Puregold's future earnings potential can be compared to historical norms, peer firms, and the broader market. Key indicators include:

- 1. Price-to-Earnings (P/E): Measures how much investors are willing to pay for each peso of earnings, serving as a barometer of market expectations.
- 2. Price-to-Book (P/B): Compares market value to book equity, useful for judging whether the firm is priced above or below its asset base.
- 3. EV/EBITDA: Standardizes valuation relative to operating cash flows, adjusting for differences in capital structure.
- 4. Earnings Yield (inverse of P/E): Provides a direct measure of the income return relative to price.

By interpreting these ratios against Puregold's 5–10-year historical averages, peer retailers, and the PSE index, the analysis captures both absolute and relative valuation attractiveness.

Profitability and Quality Metrics

Profitability ratios reflect the firm's efficiency in generating earnings from sales and equity capital. Sustained profitability signals resilience and quality, while volatile margins may indicate structural weakness. Indicators include:

- 1. Return on Equity (ROE): Assesses the firm's ability to generate returns for shareholders, often viewed as a proxy for management efficiency.
- 2. Gross Margin and EBITDA Margin: Measure the retention of value at different stages of the income statement, providing insight into cost control and pricing power.
- 3. Asset Turnover: Captures operational efficiency in utilizing assets to generate revenue.

These metrics are examined for both trend stability (consistency over time) and relative strength (comparison with sector peers).

Financial Strength and Liquidity

Financial structure affects the firm's capacity to withstand shocks. Leverage ratios indicate solvency, while liquidity ratios measure near-term resilience. This study employs:

- 1. Debt-to-Equity Ratio: Evaluates the proportion of debt relative to equity, with implications for risk and cost of capital.
- 2. Current Ratio: Tests short-term liquidity adequacy.
- 3. Interest Coverage Ratio: Gauges the firm's ability to service debt obligations, a critical measure during economic downturns.

These indicators contextualize the firm's capital structure and vulnerability to macroeconomic volatility.

Dividend Policy and Capital Allocation

Dividend behavior provides signals regarding management confidence, firm maturity, and capital allocation discipline. Key metrics include:

- 1. Dividend Payout Ratio: Reflects the proportion of earnings distributed to shareholders.
- 2. Dividend Yield: Indicates the return to investors in cash relative to share price.
- 3. Free Cash Flow Coverage: Tests whether dividends are sustainably financed by free cash flows rather than debt.

The analysis examines whether Puregold's payout policy demonstrates sustainability and whether it operates as a signal of financial health (information content theory) or as a neutral event (dividend irrelevance hypothesis).

B. Technical Analysis

While fundamental analysis captures intrinsic worth, technical analysis investigates how information is translated into price patterns and

market sentiment. TA assumes that prices incorporate collective investor psychology, and therefore observable trends and momentum can provide actionable signals. For this study, TA is structured into momentum/trend indicators and volatility/confirmation measures.

Momentum and Trend Measures

Moving Averages (50-day and 200-day): Widely used to assess the direction of price trends. A "golden cross" (short-term MA rising above long-term MA) may signal bullishness, while a "death cross" suggests bearishness.

Moving Average Convergence Divergence (MACD): Evaluates the strength and direction of momentum through the interaction of fast and slow moving averages.

Relative Strength Index (RSI): A bounded oscillator that identifies overbought (>70) or oversold (<30) conditions, reflecting potential reversals.

These indicators assess whether market participants interpret Puregold positively or negatively, independent of fundamentals.

Volatility and Confirmation Indicators

Bollinger Bands: Capture volatility regimes, with narrow bands indicating consolidation and possible breakouts, and wide bands reflecting turbulence.

Average True Range (ATR): Measures average daily price movement, providing a gauge of risk and volatility.

Volume Analysis: Price breakouts validated by volume increases are considered stronger and less likely to represent false signals.

Collectively, these measures test whether observed price patterns reflect informed trading (consistent with fundamentals) or noise-driven movements (contradicting fundamentals).

C. Event-Study Analysis

Beyond continuous ratios and trend signals, the study employs event-study methodology to capture the informational efficiency of the market in response to corporate disclosures.

Event Definition

Material events such as dividend declarations, mergers and acquisitions, format expansions, or governance changes are identified as test cases.

Two windows are employed:

- 1. Short window (-3, +3 days): Designed to isolate immediate price reactions.
- 2. Extended window (-10, +10 days): Captures delayed reactions or information leakage.
- 3. Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR):

Abnormal returns are computed as:

$$AR_{it} = R_{it} - R_{mt}$$

where *Rit* is the actual return of PGOLD and *Rmt* is the return of the PSEi as benchmark.

CAR aggregates AR across the event window to determine overall investor response.

Volume Analysis

Abnormal trading volumes are compared to rolling 30-day averages to identify whether investor attention intensified during the event.

This framework enables a distinction between informative signals, where price changes reflect fundamental relevance, and noise-induced volatility, where price shifts are disconnected from intrinsic drivers.

5. Results

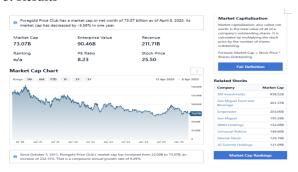


Figure 1: Market Capitalization and Stock Performance of Puregold Price Club, Inc.
as of April 8, 2025

Figure 1. Market Capitalization and Stock Performance

Puregold's market capitalization increased from \$\mathbb{P}22.00\$ billion in 2011 to \$\mathbb{P}73.07\$ billion by April 2025, representing a compound annual growth rate of 9.29%. This indicates long-term value creation and resilience despite market fluctuations, suggesting investor confidence in the company's capacity to expand and sustain profitability.

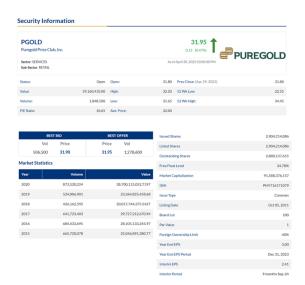


Figure 2: Security Information and Market Statistics of Puregold Price Club, Inc. as of April 30, 2025

Figure 2. Security Information and Market Statistics

As of April 30, 2025, PGOLD closed at ₱31.95, with a market capitalization of ₱91.59 billion and a free float of 34.78%. A P/E ratio of 10.65 suggests moderate valuation. Trading volume at 1.85 million shares underscores continued liquidity, reflecting Puregold's strong positioning in the Philippine retail sector.



Figure 3: Executive Officers of Puregold Price Club, Inc. as of April 30, 2025

Figure 3. Executive Officers

Leadership under President Ferdinand Vincent P. Co highlights continuity and stability in management. Governance quality, signaled by experienced leadership, contributes to investor perceptions of reliability.



Figure 4: Contact Information of Puregold Price Club, Inc. as of April 30, 2025

Figure 4. Contact Information

Corporate transparency and accessibility via published contact channels enhances investor trust, though it provides no direct financial signal .



Figure 5: Stock Chart of Puregold Price Club, Inc. from Tradingview as of April 30, 2025

Figure 5: Stock Chart of PGOLD as of April 30, 2025

The stock chart (TradingView, April 2025) shows sideways-to-upward price movement with intermittent volatility. This reflects periods of consolidation followed by renewed momentum, consistent with investor re-entry during favorable earnings news.



Figure 6: Stock Overview of Puregold Price Club, Inc. from Simply Wall St as of April 30,

Figure 6. Stock Overview (Simply WallSt)

The Simply Wall St. overview positions PGOLD as modestly valued relative to earnings and book value, underscoring possible undervaluation opportunities .



Figure~7: Price~history~in~3~years~&~Performance~of~Puregold~Price~Club~Inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~Wall~St~as~of~4/30/25~inc.~from~Simply~

Figure 7. Price History in 3 Years

Between 2022 and 2025, PGOLD traded between ₱22.80 and ₱36.20, closing at ₱31.95 in April 2025. Event markers such as dividends and

corporate initiatives show that announcements influence short-term price spikes, reinforcing the relevance of event-driven analysis.



Figure 8: Historical Financial Performance of Puregold Price Club Inc. from Investagrams as of April 30, 2025

Figure 8. Historical Financial Performance

Revenue increased steadily across quarters, but net income remained flat, indicating cost pressures. Profit margins dipped mid-year before recovering in Q4, highlighting the need for stronger cost management despite strong sales growth.



Figure 9: Historical P/E Ratio and Valuation Metrics of Puregold from Investagrams as of April 30, 2025

Figure 9. Historical P/E Ratio and Valuation Metrics

Between June 2022 and October 2024, PGOLD's P/E ratio fluctuated between 7 and 12, dropping near 7 in early 2024. The current P/E of 8.83 places it in the "low" category, suggesting undervaluation if earnings stability is maintained.



Figure 10: P/E Ratio Sensitivity of Puregold Price Club Inc. from Investagrams as of April 30, 2025

Figure 10. P/E Ratio Sensitivity

At ₱31.95, PGOLD's P/E stands at 8.83. Sensitivity analysis shows significant valuation swings with price changes: a 50% increase raises the P/E to 13.24 (potentially overvalued), while a 50% drop lowers it to 4.41 (deep value). This underscores valuation's dependence on earnings sustainability.



Figure 11: Balance Sheet and Liquidity Metrics of Puregold from Investagrams as of April 30, 2025

Figure 11. Balance Sheet and Liquidity Metrics

Assets grew from ₱100 billion in 2020 to ₱180 billion in 2024, while liabilities rose moderately. A debt-to-equity ratio of 0.94 reflects balanced leverage. A high current ratio of 2.95 suggests strong liquidity, though possible underutilization of assets.

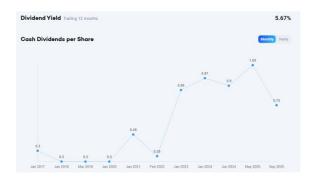


Figure 12: Dividends Yield of Puregold Price Club Inc. from Investagrams as of April 30, 2025

Figure 12. Dividend Yield

Dividend per share rose from ₱0.20 in 2017 to ₱1.09 in May 2025, before easing to ₱0.72. The trailing yield of 5.67% remains attractive, signaling profitability and rewarding shareholders despite fluctuations.



Figure 13: Market Performance and Trading Metrics of Puregold from Investagrams as of April 30, 2025

Figure 13. Market Performance and Trading Metrics

Bollinger Bands show bullish trends with the stock riding the upper band in 2024–2025. MACD lines confirmed positive momentum, though brief consolidations reflected market indecision. Strong uptrends suggest investor optimism.



Figure 14: Trend Snapshot of Puregold Price Club Inc. from Investagrams as of April 30, 2025

Figure 14. Trend Snapshot

Short-term (20-day) and medium-term (50-day) trends rose 14.11% and 26.53%, respectively, while the 100-day trend remained nearly flat at 3.40%. This suggests near-term opportunities, though long-term investors may require stronger confirmation.



Figure 15: Support and Resistance Levels, and Moving Average Distance of PGOLD as of April 30, 2025

Figure 15. Support and Resistance Levels

Current price at ₱31.95 sits between support (₱31.13, ₱25.35) and resistance (₱33.40, ₱34.45). Price levels show tight consolidation, implying limited downside risk but strong upside only if resistance is breached



Figure 16: Volume Tracker of Puregold Price Club Inc. from Investagrams as of April 30, 2025

Figure 16. Volume Tracker

Short-term volumes declined sharply (-21% to -25% over 3–7 days), but long-term volumes rose by 18-24% over 50-100 days, indicating renewed investor interest and strengthening participation .



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Figure 17: Momentum Indicators of Puregold Price Club Inc. from Investagrams as of April 30, 2025

Figure 17. Momentum Indicators

RSI at 65.5 signals bullish but not yet overbought conditions. ADX at 30.6 confirms a strong trend, while MACD shows upward momentum. Collectively, these indicators point to a strengthening bullish phase.



Figure 18: Volatility Metrics of Puregold Price Club Inc. from Investagrams as of April 30, 2025

Figure 18. Volatility Metrics

The Average True Range (ATR) of 1.11 (2.31%) reflects moderate daily volatility, while a Bollinger Band Width of 0.31% signals volatility compression (a squeeze). Such low width levels often precede larger directional moves once volatility expands. Together, these indicators suggest PGOLD is in a compressed regime with potential for sharp movement upon breakout, cautioning investors about timing even amid constructive momentum.

6. Discussion

6.1 What the valuation is really telling us (and what would change it)

Over 2011–2025, Puregold's market value compounded at ~9.3% annually, a long arc of value creation that anchors the investment case in durable growth rather than transient reratings. That steady compounding—despite multiple cycles—signals franchise resilience and repeated reinvestment capacity, not just one-off events.

On contemporaneous multiples, two pictures emerge. First, the historical P/E range oscillated roughly 7–12 during 2022–2024, with a trough near 7 in early 2024 (classic "cheap on earnings" territory). Second, as of late-April 2025, the spot P/E

prints in the "low" zone around ~8.8–10.7 depending on the snapshot, implying investors pay relatively little for each peso of earnings versus recent history. Both point to potential undervaluation—if earnings quality is intact.

The P/E sensitivity framing clarifies upside/downside mechanics: holding earnings fixed, a +50% price swing lifts P/E to the low-teens (needing growth to justify), while a -50% shock compresses it to deep-value levels ~4-5× (but usually for a reason). This underscores that earnings sustainability—not just the multiple—drives investment merit.

Decision implication. On valuation alone, PGOLD screens as "attractive value." What changes the call? A credible deterioration in margin structure or cash conversion (see below) would convert "undervaluation" into a value trap; conversely, proof of cost discipline sustaining EPS growth would catalyze multiple mean-reversion.

6.2 Fundamentals: growth is real, margins do the heavy lifting

Top line vs. bottom line. Quarterly revenues trend up across the year, but net income stays comparatively flat—i.e., sales productivity did not fully flow to profit during mid-year, and the margin line dipped before recovering in Q4. This is the single most important caveat to the value case: operating leverage was not consistently realized across the year.

Five-year profitability quality. From 2020 to 2024, ROE trended down before a modest rebound, even as EPS stepped higher each year. That pairing—rising EPS with earlier ROE compression—suggests earnings growth was achieved, but capital intensity and/or mix effects diluted equity returns, at least until the recent stabilization. The EPS trajectory is an important ballast for the low P/E narrative.

Balance sheet and liquidity. Assets climbed from ~₱100B to >₱180B (2020→2024) while liabilities increased much more slowly and the debt-to-assets share edged down—i.e., scaling with conservative leverage. Liquidity is strong (current ratio ~2.95), and leverage moderate (D/E ~0.94), which lowers solvency risk and gives management room to absorb shocks or invest counter-cyclically. The trade-off: high liquidity can also signal idle working capital if not deployed productively.

Capital returns to shareholders. The dividend path inflects meaningfully post-2021, peaking at ₱1.09/share (May 2025) before easing to ₱0.72 (Sept 2025), with a trailing yield ~5.7%—unusually generous for a scaled retailer. The step-up is consistent with maturing cash generation, though the

late pullback invites a closer look at coverage/cycle timing. For dividend-oriented investors, the income yield materially enhances total return while one waits for multiple normalization.

Synthesis. Fundamentals describe a qualitytilted value setup: balance sheet strength + rising EPS + elevated yield—but with a watch-item on margins/ROE dynamics. The medium-term research question becomes whether Q4's margin recovery is repeatable.

6.3 Market behavior: is price action informative or noisy?

Trend state. The multi-horizon trend snapshot shows a strong short/medium-term upswing (+14% over 20 days; +27% over 50 days) against a mostly sideways 100-day profile (+3.4%). That pattern typically characterizes a new up-leg emerging from consolidation—supportive for tactical entries, but long-term confirmation still forming.

Momentum and breadth. In April–May 2025, MACD flipped bullish again with histogram expansion, and RSI pushed up to mid-60s (strong but not yet overbought). Together with prior consolidations, this argues for constructive momentum, not chasing late-stage exuberance.

Levels that matter. Price sits near \$\mathbb{P}31.95\$ with immediate support \$\simes \mathbb{P}31.13\$ (first) and \$\mathbb{P}25.35\$ (second); resistance \$\simes \mathbb{P}33.40 / \mathbb{P}34.45\$ caps the next leg higher. The distance above MAs (10–50d) remains positive, consistent with "rally above base" behavior; a clean break and hold above \$\simes \mathbb{P}34\$ would validate the new trend regime.

Participation. Volume trends weakened sharply over 3–7 days but improved over 50–100 days (+18% to +24%), a classic microstructure signature of accumulation: fast money trims on spikes, slower money builds exposure over weeks. That longer-horizon breadth increases the probability that breakouts hold.

Volatility regime. Reported ATR ~2.3% indicates moderate daily movement. The document also lists Bollinger Band Width ~0.31% but labels it "extreme volatility." Typically, such low width implies a volatility squeeze (i.e., compressed volatility) rather than "extreme" dispersion—often a precursor to larger directional moves once released. Either way, the takeaway is regime shift risk: momentum is positive, but excursions can be sharp around resistance breaks.

Synthesis. Prices appear informative (not noisy) at present: positive momentum, constructive breadth, defined levels, and improving participation. That strengthens the case for using TA as a confirmation overlay on the value thesis rather than a contrarian warning.

6.4 Pulling FA + TA together: where the thesis stands now

Value: Low-to-mid single-digit to sub-teens P/E context, with spot readings in the "low" zone; sensitivity shows room for rerating if margins stabilize.

Quality: Asset growth with moderated leverage; liquidity ample; EPS rising even as ROE only recently stabilized—quality skew with a profitability watch-item.

Income: Dividend trajectory + trailing ~5.7% yield meaningfully supports total return and signals managerial confidence.

Momentum: RSI~65, positive MACD, short/medium-term uptrends versus a still-forming long-term base; resistance nearby.

Putting those together in the study's decision matrix: Fundamentals = strong/credible; Momentum = positive; classification = Attractive (Buy/Overweight)—with explicit risk controls at the resistance band (~\P33.4-\P34.5) and a fundamental guardrail around margin trajectory.

6.5 Key tensions, falsifiers, and scenario map

Tension—sales vs. profits. If rising revenues continue to under-translate into net income (mid-year pattern), the market may be correct to withhold multiple expansion. Watch quarterly gross/EBITDA margin cadence for confirmation that Q4's rebound sticks.

Falsifier—failed breakout with volume. A failed attempt above ~₱34.5 on rising volume would re-classify momentum as "exhaustion," pushing the name back into a Value + Negative Momentum quadrant (Hold/Avoid adding).

Positive scenario—earnings confirmation. Any evidence of cost discipline (inventory turns, opex control) that safeguards EPS while the stock clears resistance likely pulls P/E back toward the mid-teens (per sensitivity map), unlocking double-digit total returns when combined with yield.

Liquidity/cost of capital shock. While the balance sheet buffers shocks, a sustained deterioration in coverage or a step-change in borrowing costs would challenge the "quality" leg; current ratios suggest room, but idle liquidity should be productively deployed.

6.6 Investor fit

Income/value investors benefit from the \sim 5.7% trailing yield and low multiple, provided they accept the margin-execution watch-item.

Momentum/trend investors have a constructive setup—tight resistance above, positive MACD/RSI, improving long-horizon volume—well-suited to risk-defined entries and fast reassessment on failed breaks.

6.7 Bottom line

The integrated read is Value + Quality + Positive Momentum, tempered by a profitability-execution caveat. The evidence is internally consistent across figures: multi-year value creation; low current valuation; conservative balance sheet; a stepped-up dividend policy; and a re-accelerating trend with supportive participation. The path to outsized returns runs through margin durability and a decisive resistance break; failure on either front likely stalls rerating, but the income support limits downside while that thesis is tested.

7. Conclusion and Recommendations

7.1 Conclusions

1. Puregold's investment profile is "value-with-quality," validated by price action.

PGOLD trades at a low earnings multiple relative to its own history and peers while maintaining a generally conservative balance sheet and rising EPS. Short- and medium-term momentum has turned positive with improving participation, suggesting that recent price behavior is more informative than noisy. Together, these elements point to an Attractive (Buy/Overweight) classification under the integrated FA-TA matrix—conditional on execution.

2. Revenue growth is evident, but margin durability is the fulcrum.

Top-line expansion has not translated linearly into profits during parts of the year; margin compression mid-cycle, followed by Q4 recovery, indicates that operating leverage is present but uneven. The thesis relies on management's ability to sustain gross and EBITDA margins through procurement discipline, mix management (private label, membership/reseller programs), and working-capital control.

3. Balance-sheet resilience lowers downside risk and supports capital allocation.

Moderate leverage, ample liquidity, and stable interest coverage provide shock absorbers against macro and competitive pressures. This financial flexibility allows Puregold to keep investing in logistics/format adjacencies while maintaining shareholder distributions without compromising solvency.

4. A stepped-up dividend policy strengthens total-return math—but requires coverage vigilance.

The higher trailing yield is a meaningful component of expected returns and signals managerial confidence. That said, the late-period adjustment in cash dividends underscores the need to monitor free-cash-flow coverage so that payouts remain a signal of strength rather than a constraint on reinvestment.

5. Market structure and price discovery currently favor confirmation, not contrarianism.

Momentum (MACD/RSI), trend breadth, and longer-horizon volume accumulation indicate that the market is beginning to recognize the fundamental story. A decisive break and hold above near-term resistance would likely catalyze multiple mean reversion; conversely, a high-volume failure at resistance would suggest trend exhaustion and warrants caution.

6. Key risks are operational execution and volatility around inflection points.

If cost pressures (fuel/FX, shrink, wage inflation) persist or pass-through remains incomplete, margins could slip and validate a lower steady-state multiple (the classic value trap). Additionally, a volatility squeeze implies sharper moves around breakout/failed-break zones, elevating timing risk despite constructive medium-term signals.

7. Methodologically, the integrated FA-TA + event perspective adds decision clarity.

By triangulating valuation/quality, market behavior, and event-timed reactions, the study reduces single-lens bias and provides a replicable template for issuer-level evaluation in emerging markets. This approach clarifies when to lean into value (with momentum confirmation) and when to defer action (value without confirmation).

Puregold presently aligns as a Value + Quality + Positive Momentum issuer with income support. The upside path runs through sustained margin execution and a clean technical confirmation; downside is cushioned by balance-sheet strength and dividends, though not immune to profit-cycle missteps. On net, the evidence supports a constructive stance, monitored by explicit fundamental and technical guardrails.

7.2 Recommendations

- A. For PGOLD Management (Firm-Level Actions)
- 1. Lock in margin durability as the lead indicator.

Prioritize procurement discipline and mix management (private label penetration, targeted promotions) to stabilize gross and EBITDA margins through quarters, not just at year-end. Set a quarterly margin floor (internal target) and link store-level incentives to shrink reduction and inventory turns.

2. Tighten working-capital velocity.

Institute SKU-level days-inventory-outstanding (DIO) dashboards and vendor-managed inventory pilots in fast-moving categories. Aim for a measurable DIO reduction (e.g., -3 to -5 days over 12 months) without stockout penalties.

3. Codify a dividend policy with FCF coverage guardrails.

Publish a payout range (e.g., 30-50% of normalized earnings) and a minimum free-cash-flow coverage ratio (e.g., $\geq 1.2\times$) to reinforce that distributions will not crowd out high-IRR reinvestments.

4. Communicate an ROIC/ROE restoration path.

Alongside store expansion, disclose hurdle rates and post-opening performance curves. A transparent ROIC bridge (price/mix, opex productivity, logistics) will support a multiple rerating.

5. Exploit logistics and data scale.

Expand cross-docking and regional consolidation centers to lower inbound freight/fuel sensitivity. Use loyalty and reseller program data to optimize planograms and micro-market pricing, emphasizing elasticity-based markdowns over blanket promos.

Clarify capital allocation between growth and returns.

Publish a rolling 3-year capital plan (growth capex vs. maintenance capex vs. returns). If excess cash persists beyond the dividend framework and high-IRR projects, consider opportunistic buybacks tied to valuation bands.

B. For Investors / Portfolio Managers (Positioning & Risk Controls)

 Classification: Attractive (Buy/Overweight), conditional.

Enter/add with momentum confirmation (weekly close above the identified resistance band). Size positions assuming value + income as the core, momentum as the catalyst.

2. Define technical guardrails ex-ante.

Entry: Break-and-hold above resistance with rising weekly volume.

Invalidation: Weekly close back below the breakout level on expanding volume (de-risk to core).

Stops/Alerts: Use ATR-based levels (e.g., 1.5–2.0× ATR) to control gap risk around earnings/events.

3. Fundamental monitoring checklist (quarterly cadence).

Track: (i) gross and EBITDA margin trajectory vs. guidance; (ii) inventory turns and shrink; (iii) EPS growth vs. consensus; (iv) FCF coverage of dividends; (v) net leverage and interest coverage. Escalate if two or more deviate negatively for two consecutive quarters.

- 4. Scenario playbook.
- Bull case: Margin floor holds; ROIC improves; breakout sustains → allow multiple expansion; add on pullbacks towards new support
- Base case: Gradual margin stabilization; rangebound price → harvest dividend, write covered calls selectively.
- Bear case: Margin relapse + failed breakout → shift to Hold/Underweight; revisit at lower valuation or on evidence of cost discipline.
- C. For Future Issuer Disclosures (to aid price informativeness)
 - 1. Enhance event transparency and cadence.

For material actions (M&A, format launches, loyalty redesigns), pre-announce windows and publish KPIs post-event (traffic uplift, basket size, churn). This improves market signal quality and reduces noise-driven volatility.

2. Adopt a quarterly "operating scorecard."

Standardize a brief annex: margin bridge, inventory/turns, shrink, wage/fuel/FX sensitivities, and capex returns vs. plan. Consistency across quarters will anchor

- expectations and lower the discount for uncertainty.
- D. For Research & Replicability (methodological follow-through)
 - 1. Run formal short-window event studies prospectively.

Pre-register event windows (-3,+3; -10,+10), compute AR/CAR and abnormal volume, and append results to disclosures. This allows independent validation of price informativeness.

2. Publish a minimal reproducibility package.

Release code/notebooks (ratios, TA indicators, event windows) and a data dictionary. Transparency will strengthen credibility and facilitate peer extension to a retail-sector panel.

8. References

- Akbar, M., Khan, M. A., & Usman, M. (2019). Bayesian analysis of dynamic linkages among gold price, stock prices, exchange rate and interest rate in Pakistan. Resources Policy, 62, 154–164.
- Bailey, N. (2018). Exploring the relationship between institutional factors and FDI attractiveness: A meta-analytic review. International Business Review, 27(1), 139–148.
- Barber, B. M., & Odean, T. (2000). Too many cooks spoil the profits: Investment club performance. Financial Analysts Journal, 56(1), 17–25.
- Basu, S. (1977). Investment performance of common stocks in relation to their price earnings ratios: A test of the efficient market hypothesis. The journal of Finance, 32(3), 663-682.
- Brock, W., Lakonishok, J., & LeBaron, B. (1992). Simple technical trading rules and the stochastic properties of stock returns. The Journal of finance, 47(5), 1731-1764.
- Campbell, J. Y., & Shiller, R. J. (1988). The dividend-price ratio and expectations of future dividends and discount factors. The review of financial studies, 1(3), 195-228.
- Chen, Q., Goldstein, I., & Jiang, W. (2007). Price informativeness and investment sensitivity to stock price. The Review of Financial Studies, 20(3), 619–650.

- Cochrane, J. H. (2011). Presidential address: Discount rates. The Journal of finance, 66(4), 1047-1108.
- Dessaint, O., Olivier, J., & Otto, C. A. (2018). Noisy stock prices and corporate investment. Review of Financial Studies, 31(7), 2625–2672.
- Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. the Journal of Finance, 47(2), 427-465.
- Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. Journal of financial economics, 33(1), 3-56.
- Fama, E. F., & French, K. R. (2015). A five-factor asset pricing model. Journal of financial economics, 116(1), 1-22.
- Fang, L. H. (2005). Investment bank reputation and the price and quality of underwriting services. The Journal of Finance, 60(6), 2729–2761.
- Ferreira, F. G. D. C., & de A. Gorgulho, A. (2021). Artificial intelligence applied to stock market trading: A review. IEEE Access, 9, 130874–130894.
- Griffin, J. M., Ji, X., & Martin, J. S. (2003). Momentum investing and business cycle risk: Evidence from pole to pole. The Journal of finance, 58(6), 2515-2547.
- Hou, K., Xue, C., & Zhang, L. (2015). Digesting anomalies: An investment approach. The Review of Financial Studies, 28(3), 650-705.
- Huth, C. (2020). Who invests in financial instruments of sport clubs? An empirical analysis of actual and potential individual investors of professional European football clubs. European Sport Management Quarterly, 20(1), 92–112.
- Jegadeesh, N., & Titman, S. (1993). Returns to buying winners and selling losers: Implications for stock market efficiency. The Journal of finance, 48(1), 65-91.
- Keohane, N., & Victor, D. G. (2017). Toward a club of carbon markets. Climatic Change, 144(1), 81–95.
- Kirsch, B., & von der Heyden, M. (2024).

 Decrypting the specifics of professional football club investments: Why? What? How? An integrative review. Sport, Business and Management: An International Journal, 14(1), 22–43
- Li, Y.-M., & Lai, C.-Y. (2023). A collective portfolio selection approach for investment

- clubs. Information & Management, 60(4), 103782.
- Menon, A. (2020). Investor perception towards gold as an investment option in different market conditions. International Journal of Scientific & Technology Research, 9(3), 4394–4397.
- Moskowitz, T. J., Ooi, Y. H., & Pedersen, L. H. (2012). Time series momentum. Journal of financial economics, 104(2), 228-250.
- Nolte, S., & Vogt, B. (2017). How price path characteristics shape investment behavior. Journal of Behavioral and Experimental Economics, 70, 66–79.
- Papadamou, S., Fassas, A. P., Kenourgios, D., & Dimitriou, D. (2021). Herding behaviour and price convergence clubs in cryptocurrencies during bull and bear markets. Journal of Behavioral and Experimental Finance, 30, 100469.
- Park, C. H., & Irwin, S. H. (2007). What do we know about the profitability of technical analysis?. Journal of Economic surveys, 21(4), 786-826.
- Piotroski, J. D. (2000). Value investing: The use of historical financial statement information to separate winners from losers. Journal of accounting research, 1-41.
- Pratama, A. W., & Sari, D. A. (2023). A narrative review of people's interests in gold investment. 3rd International Conference of Business, Accounting, and Economics (ICBAE 2023).
- Prigge, S., & Thiele, S. (2019). Market valuation and risk profile of listed European football clubs. Sport, Business and Management: An International Journal, 9(5), 461–478.
- Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. The Journal of Finance, 19(3), 425–442.
- Snieška, V., & Bruneckienė, J. (2015). City attractiveness for investment: Characteristics and underlying factors. *Procedia Social and Behavioral Sciences, 213*, 48–54.
- Tyutyukina, E. B., & Karanina, E. V. (2020). Assessment of investment attractiveness of high-tech companies. Vestnik Universiteta, (1), 79–86.
- Vasylieva, D., & Lopa, L. (2021). Ensuring the issuance of investment-attractive corporate bonds. E3S Web of Conferences, 234, 00021.
- Wu, J., Liu, J., Zhao, Y., & Zheng, Z. (2021). A graph-based CNN-LSTM stock price prediction

algorithm with leading indicators. Multimedia Systems, 27(5), 989–1000.