

Ghana Stock Exchange (GSE) Performance and Risk Assessment Report (2021–2023)

Executive Summary

This report evaluates the investment landscape of the Ghana Stock Exchange (GSE) using trading data from 2021–2023. The purpose is to move beyond simple price tracking and assess true stock quality based on risk-adjusted returns, hidden trading costs (liquidity), and the reliability of price movements (trading conviction).

The analysis involved cleaning highly noisy financial data and calculating three core metrics: the Sharpe Ratio, Average Relative Spread, and Volume-Price Correlation. The key finding is a highly fragmented market where Benso Oil Palm Plantation Plc (BOPP) is the most efficient stock (Sharpe Ratio of +3.06), and Trust Bank Limited (The Gambia) (TBL) offers the best liquidity and most reliable price trends. Conversely, extreme illiquidity, exemplified by Digicut Production & Advertising Limited (DIGICUT) (Spread 113%), renders several stocks functionally untradeable. The core recommendation is to allocate capital to high-efficiency stocks (BOPP, EGL) and for regulators to address the structural illiquidity of the worst-performing shares.

Introduction

Context and Background

The Ghana Stock Exchange (GSE) is a vital component of the Ghanaian financial market. For investors to make informed decisions, performance must be evaluated not just by the return a stock generates, but by the level of risk and cost incurred to achieve that return. A simple high return may be irrelevant if the stock is too volatile or too expensive to buy.

Report Purpose and Objectives

This report serves as a deep dive into the GSE to provide actionable intelligence. The analysis is structured around answering three fundamental questions for any capital allocation decision:

1. Risk-Adjusted Return: Which stocks maximize return while minimizing volatility? (Measured by Sharpe Ratio).
2. Liquidity Profile: Which stocks have the lowest inherent transaction costs? (Measured by Average Relative Spread).
3. Conviction of Price Movements: Which stock price trends are genuine and supported by market participation? (Measured by Volume-Price Correlation).

Findings and Discussion

The analysis was performed using robust financial engineering techniques, including daily return and volume change calculations, annualization factors (root of 252), and specialized statistical methods (like a Python-based correlation calculation) to overcome the significant data sparsity and quality issues inherent in the raw data.

a. Risk-Adjusted Return: The Most Efficient Performers (Sharpe Ratio)

Sharpe ratios are a risk-adjusted measure of investment performance that tell you how you are being rewarded for the risk you take. A ratio above 1.0 is generally considered good performance.

Volatility and Average Annualized Return by Share Code and Share Code



Finding: Benso Oil Palm Plantation Plc (BOPP) and Enterprise Group PLC (EGL) are the most efficiently managed stocks, delivering high returns while effectively controlling volatility.

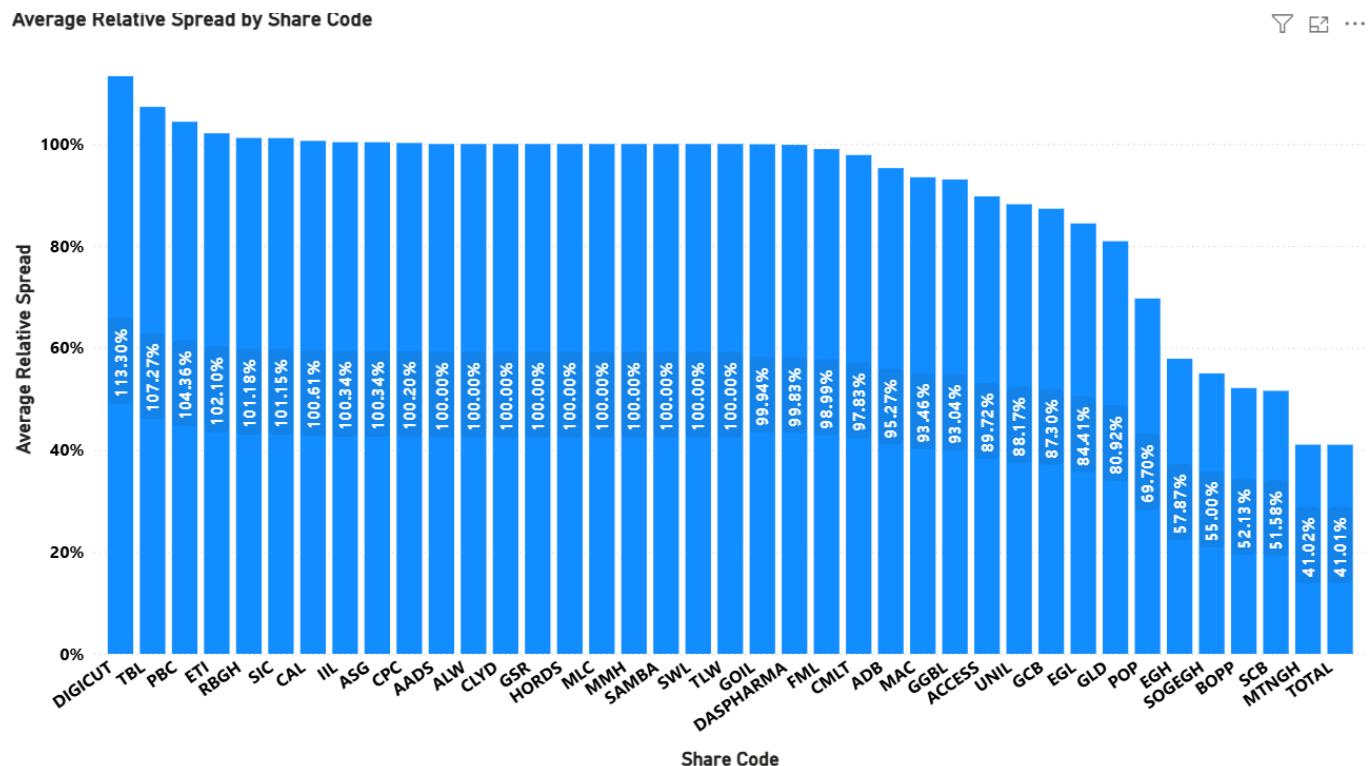
Rank	Company Name	Sharpe Ratio	Interpretation
1 (Top)	Benso Oil Palm Plantation Plc (BOPP)	+3.06	Superior Risk Management: Best stock for return generated per unit of risk taken.
2	Enterprise Group PLC (EGL)	+2.69	Highly efficient and stable performance.

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Bottom	Unilever Ghana PLC (UNIL)	-1.45	Value Erosion: High risk coupled with negative net returns over the period.

b. Liquidity Profile: Hidden Costs of Trading (Average Relative Spread)

The Average Relative Spread measures the hidden cost paid when a transaction happens instantaneously. A spread above 100% means the cost is greater than the share's price.

Average Relative Spread by Share Code



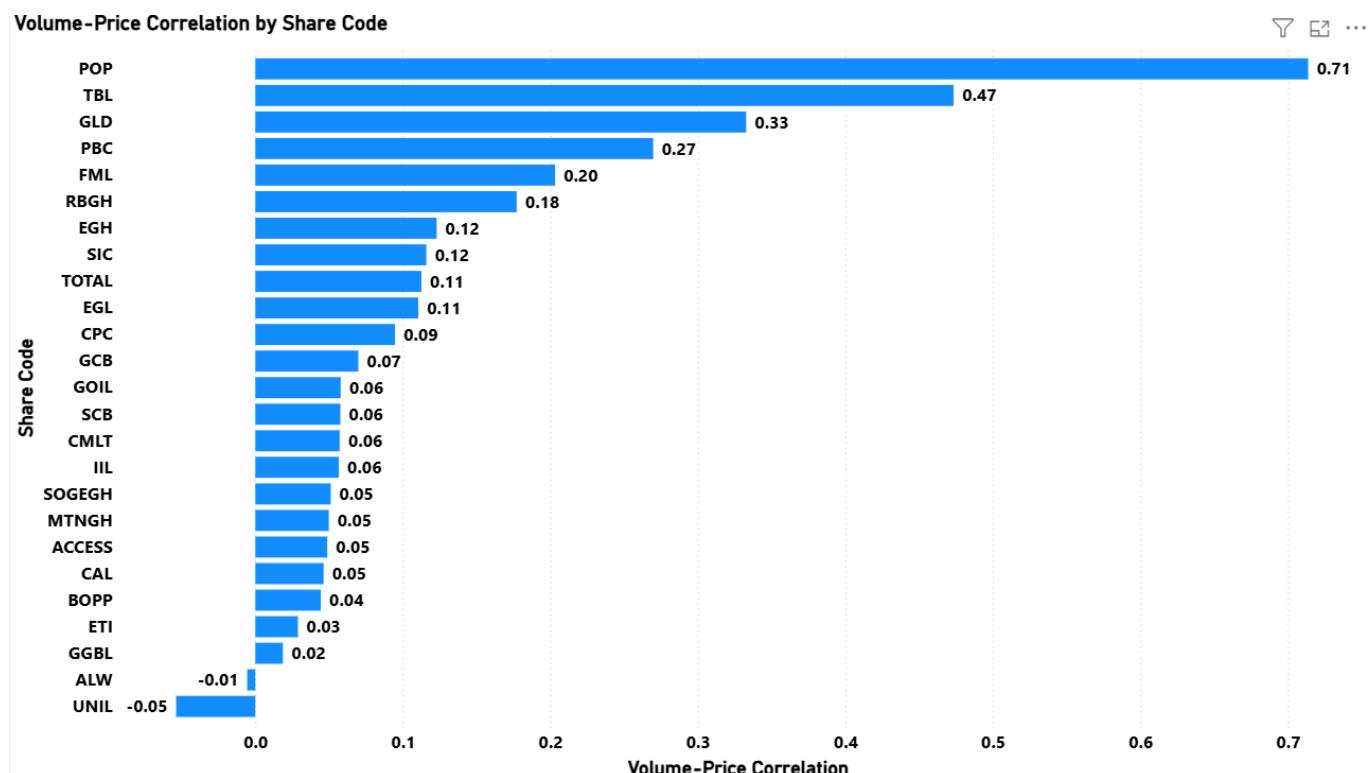
Finding: Liquidity is polarized. While Trust Bank Limited (The Gambia) (TBL) offers excellent tradability, several stocks suffer from debilitating illiquidity.

Rank	Company Name	Avg. Relative Spread	Interpretation
1 (Most Liquid)	Trust Bank Limited (The Gambia) (TBL)	6.03%	Excellent Liquidity: Cheapest stock to trade; minimal friction for large orders.

2	MTN Ghana PB (MTNGH)	21.93%	Good liquidity, reflecting high market interest.
...			
Bottom (Worst)	Digicut Production & Advertising Limited (DIGICUT)	113.30%	Extreme Trading Barrier: Functionally untradeable. The cost is higher than the asset's value.

c. Trading Conviction: Reliability of Price Trends (Volume-Price Correlation)

Correlation indicates whether price movements are being confirmed by actual trading activity. A high positive correlation +1.0 means high conviction.



Finding: Trust Bank Limited (The Gambia) (TBL) has the most reliable price signals, while several other stocks exhibit random, noise-driven price changes.

Rank	Company Name	Correlation	Interpretation
1 (Highest Conviction)	Trust Bank Limited (The Gambia) (TBL)	+0.96	Highly Reliable Trends: Price moves are strongly confirmed by volume, suggesting genuine, fundamental changes are driving the stock.

2	Guinness Ghana Breweries Plc (GGBL)	+0.15	Weak positive relationship.
...			
Bottom	Cocoa Processing Company Limited (CPC)	-0.22	Noise-Driven Market: Negative or near-zero correlation suggests price moves are random and not supported by market participation.

Data Quality Warning

A crucial analytical outcome was the identification of severe data quality failures: one stock produced a mathematically impossible return (-6115%) and another an impossible correlation (+17.48). These figures are not errors in calculation but are direct results of extreme data sparsity (too many zero trades, missing days) that cause the robust formulas to fail. This highlights an underlying structural problem for investors relying on automated data feeds for illiquid stocks.

Conclusion

The GSE market is segmented. A small group of stocks, led by Benso Oil Palm Plantation Plc (BOPP) and Trust Bank Limited (The Gambia) (TBL), demonstrate high capital efficiency, strong liquidity, and reliable trading signals. Conversely, a significant portion of the market is plagued by debilitating illiquidity (Spreads over 100%) and data unreliability, effectively making these stocks unsuitable for institutional investment.

Recommendations

For Investment Managers

1. Allocate Capital: Investors should prioritize stocks in the top tiers of the Sharpe Ratio (BOPP, EGL) and Liquidity (TBL, MTNGH) for balanced, efficient portfolio construction.
2. Verify Trends: Use the Volume-Price Correlation metric to validate investment decisions, favoring stocks with correlations above +0.15 for higher confidence in price trends.

3. Exit Illiquid Positions: Immediately review any holdings with an Average Relative Spread above 50%, as the cost to exit these positions may erode all capital gains.

For Regulators and Market Data Providers

1. Data Integrity Audit: Initiate an audit to identify the cause of the extreme data outliers (-6115%). These integrity failures severely undermine trust in automated trading systems.
2. Structural Review: Address the severe illiquidity of stocks like DIGICUT and ASG. The GSE should consider moving these stocks to a different trading tier or proposing policies for mandatory delisting when spreads consistently exceed 100%, thereby cleaning the main exchange for serious investors.

Company Full Name Directory

Share Code, Full Company Name:

AADS, AngloGold Ashanti Depository Shares

ACCESS, Access Bank Ghana Plc

ADB, Agricultural Development Bank

AGA, AngloGold Ashanti Plc

ALW, Aluworks Limited

ASG, Asante Gold Corporation

BOPP, Benso Oil Palm Plantation Plc

CAL, CalBank PLC

CLYD, Clydestone (Ghana) Limited

CMLT, Camelot Ghana Ltd

CPC, Cocoa Processing Company Limited

DASPHARMA, Dannex Ayrton Starwin Plc

DIGICUT, Digicut Production & Advertising Limited

EGH, Ecobank Ghana PLC

EGL, Enterprise Group PLC

ETI, Ecobank Transnational Incorporated
FML, Fan Milk PLC
GCB, GCB Bank Limited
GGBL, Guinness Ghana Breweries Plc
GLD, NewGold Issuer Ltd (Exchange Traded Fund - ETF)
GOIL, GOIL PLC (formerly Ghana Oil Company Limited)
GSR, Golden Star Resources (Delisted)
HORDSH, Hords Limited
IIL, Intravenous Infusions PLC
MAC, Mega African Capital Limited
MLC, Mechanical Lloyd Co. Ltd (Delisted)
MTNGH, MTN Ghana PB
PBC, Produce Buying Company Limited
POPP, Pesewa One PLC
RBGH, Republic Bank (Ghana) PLC
SAMBA, Samba Foods Ltd
SCB, Standard Chartered Bank Ghana PLC
SIC, SIC Insurance Company Limited
SOGEGH, Societe Generale Ghana Limited
SWL, Sam-Woode Limited
TBL, Trust Bank Limited (The Gambia)
TLW, Tullow Oil Plc
UNIL, Unilever Ghana PLC