

# The Impact of Financial Indicators on Different Types of Investors

Zhongyu Heng \*

School of Shanghai Lixin University of Accounting and Finance, Shanghai, China

\* Corresponding Author Email: vanessa24jade@ldy.edu.rs

**Abstract.** This article begins by delineating the historical trends in stock prices exhibited by three focal companies. A thorough analysis of these stock price trends ensues, accompanied by an elucidation of various investor profiles. Following this, an evaluation of market responsiveness, debt management efficiency, profitability, and prospective developmental trends is conducted through the computation of diverse financial ratios and indicators. A detailed examination of market responsiveness, debt management efficiency, and profitability enables us to attain a deeper comprehension of the financial robustness of these companies. Concurrently, an exploration of their future development trajectories allows us to prognosticate their prospects within the competitive market landscape. This information is of paramount importance for prospective investors, as it can aid them in making judicious investment choices and formulating personalized investment strategies. Ultimately, drawing upon the comprehensive analysis, tailored recommendations are devised for potential investors. These recommendations are meticulously tailored to the specific characteristics of each company, providing invaluable guidance for the strategic orientation and investment decisions of astute investors.

**Keywords:** Semiconductor industry, investor types, stock price trend, risk analysis, profitability analysis, market ratios.

## 1. Introduction

In 2022, the global semiconductor industry market reached a record high of 580.1 billion US dollars, with a compound annual growth rate of 7.4% over the past decade. Currently, the global semiconductor industry is experiencing a downturn, and it is expected to reach an inflection point in the second half of 2023, marking the beginning of a downward cycle. These three companies are all in the semiconductor industry, which is a part of the electronics information industry and falls under the hardware sector [1].

This article will conduct a classification analysis of the collected financial data and summarize the analysis results. The analysis is divided into three sections:

- (1) Analysis of the stock price data for the past year.
- (2) Risk analysis using market capitalization, Beta, and debt ratio.
- (3) Profitability analysis using TA T/O, PROFIT MARGIN, ROA, and ROE.
- (4) Market ratio analysis using PE, PEG, DCF, FCF, dividend yield, growth rate, rate of return, insider buying, stock buyback, and the 50-day moving average.

## 2. Background information

### 2.1. Main Business and Industry Situation information

#### 2.1.1 Naura Technology Group Co. Ltd.

Naura Technology Group Co. Ltd. is dedicated to the research, development, production, sales, and technical services of semiconductor foundational products. Its main products include electronic process equipment and electronic components. The company is a leading domestic high-end electronic process equipment supplier and a significant high-precision electronic component production base.

### 2.1.2 Uni Group Guoxin Microelectronics Co. Ltd.

Uni Group Guoxin Microelectronics Co. Ltd. is one of the major comprehensive integrated circuit (IC) companies listed in the domestic market. Its main businesses include specialty integrated circuits and intelligent security chips. It also strategically expands into the fields of quartz crystal frequency devices and semiconductor power devices. The company provides chips, system solutions, and terminal products for multiple industries such as mobile communications, finance, government, automotive, industrial, and the Internet of Things (IoT). Its mission is to empower various industries and co-create a smart world.

### 2.1.3 Will Semiconductor Co. Ltd. Shanghai

Will Semiconductor Co. Ltd. Shanghai has been engaged in semiconductor product design and distribution businesses. With the successful completion of recent acquisitions and integrations, the company's semiconductor product design business has formed three core business systems: image sensor solutions, touch and display solutions, and analog solutions. These expansions have been achieved through team expansion and mergers and acquisitions, continuously enriching the company's product portfolio. Meanwhile, as one of the major semiconductor product distributors domestically, the company maintains close cooperation with leading global semiconductor suppliers, major domestic module manufacturers, and end customers, leveraging its mature technical support team and well-established supply chain management system.

## 2.2. Types of investors

### 2.2.1 Value investor

Value investors evaluate a stock by employing a disciplined approach to assess whether the stock is trading at a price lower than its intrinsic value. The goal is to identify companies that are undervalued by the market, providing the investor with a margin of safety and the potential for future capital appreciation, they prefer a stock with  $PE < 10$  or  $PB < 1$  [2].

### 2.2.2 Income investor

An income investor is an individual or entity that focuses on generating a steady stream of income from their investment portfolio. This approach to investing prioritizes regular cash flows in the form of dividends, interest, and other income-generating assets, for them a stock with a dividend yield larger than 4% is worth investing.

### 2.2.3 Peg investor

A PEG investor typically refers to an investor who follows the PEG ratio, which stands for Price/Earnings to Growth ratio. A PEG ratio below 1 can be interpreted as a potentially attractive investment opportunity because the stock's growth prospects seem undervalued relative to its current price.

### 2.2.4 Index investor

An index investor is someone who follows an investment strategy centered around purchasing and holding a diversified portfolio of securities that replicate the composition and performance of a specific market index. Stocks in an index are often weighted by market capitalization. Larger-cap stocks tend to have a greater impact on the overall performance of the index.

### 2.2.5 DCF investor

A Discounted Cash Flow (DCF) investor is someone who follows an investment approach that involves valuing a company or asset based on its future cash flows. The DCF method is commonly used in finance and investment to estimate the intrinsic value of an investment opportunity, they prefer companies with  $DCF > FCF$ .

### 2.2.6 Momentum investor

A momentum investor evaluates stocks primarily based on the recent performance and price trends of those stocks. The core idea behind momentum investing is to capitalize on the continuation of existing trends in stock prices. For them, they are likely to invest in a company whose 50-Day Moving Average larger than its 200-Day Moving Average [3].

### 2.2.7 Insider Buying investor.

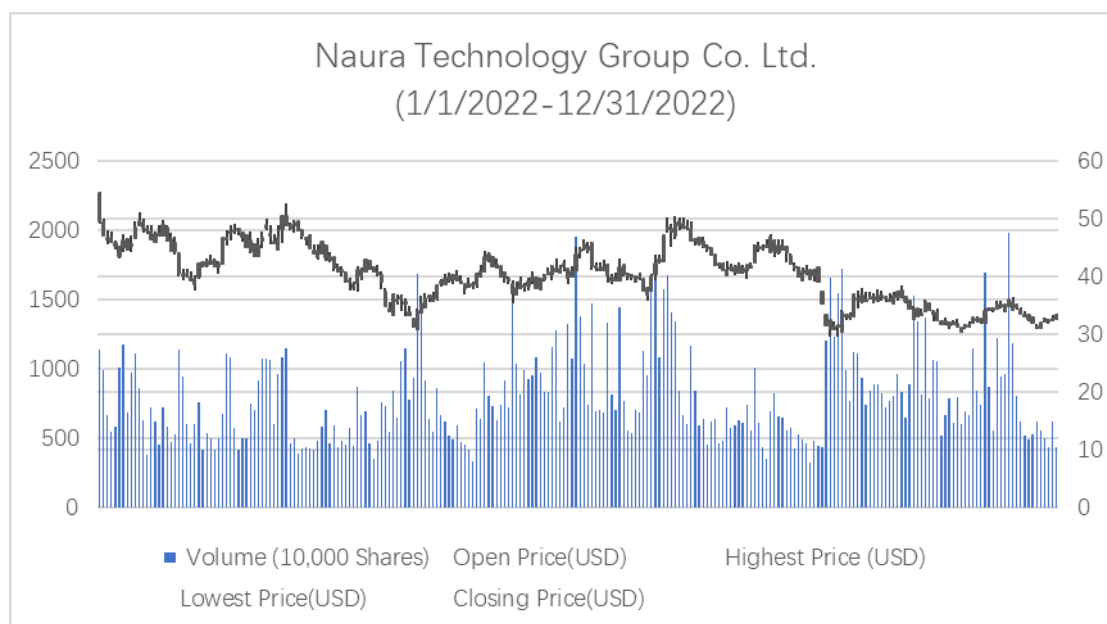
The Insider Buying investor would analyze recent insider transactions, focusing on purchases made by top-level executives or directors. They would consider the timing, frequency, and size of these purchases. An Insider Buying ratio above 4% can be interpreted as a potentially attractive investment opportunity

### 2.2.8 Ratio Analysis investor

Ratio analysis is a fundamental technique used by investors to evaluate the financial performance and health of a company's stock. Different types of ratios provide different insights into a company's financial health. Investors typically look at a combination of ratios to get a comprehensive view [4]. Investors typically compare the company's ratios to competitor ratios, this helps in understanding how the company performs relative to its peers and over time.

## 3. Analysis of Stock Price Trend

### 3.1. Naura Technology Group Co. Ltd.



**Fig. 1** Naura Technology Group Co.Ltd

#### 3.1.1 Initial Drop and Recovery (Jan - Feb)

The stock starts the year at around \$54.28 but experiences a steep decline in the first few weeks, reaching a low of \$43.13 on January 11th. This decline could be due to various factors, such as market sentiment, economic indicators, or company-specific news. However, the stock gradually started to recover and saw a significant rebound by the end of February, reaching a high of around \$49.82 (Figure 1).

#### 3.1.2 Volatility and Fluctuations (Feb - Mar)

Throughout February and March, the stock's price exhibits higher volatility with frequent fluctuations. It experiences several ups and downs, indicating uncertainty in the market. While it reaches highs around \$50, it also experiences lows around \$40 during this period.

### 3.1.3 Steady Climb (Mar-May)

From March to May, the stock demonstrates a more stable uptrend, gradually climbing in value. It experiences some minor dips but generally maintains an upward trajectory, reaching a peak of approximately \$52.64 in mid-March.

### 3.1.4 Correction and Rebound (May-Jun)

The stock sees a correction in late May, where the price drops from its recent highs. However, it quickly bounced back and resumed its upward movement, reaching around \$46.59 by late June.

### 3.1.5 Consolidation and Sideways Movement (Jul - Aug)

During July and August, the stock's price remains relatively stable, fluctuating within a range. This period of consolidation might indicate a lack of significant market-moving news or events related to the company.

### 3.1.6 Volatility and Decline (Sep-Oct)

Starting in September, the stock experienced increased volatility again. It reaches a peak of around \$35.83 in early September but then undergoes a significant decline, reaching lows around \$31.48 in mid-October. This period of decline could be influenced by macroeconomic factors, industry trends, or company-specific developments.

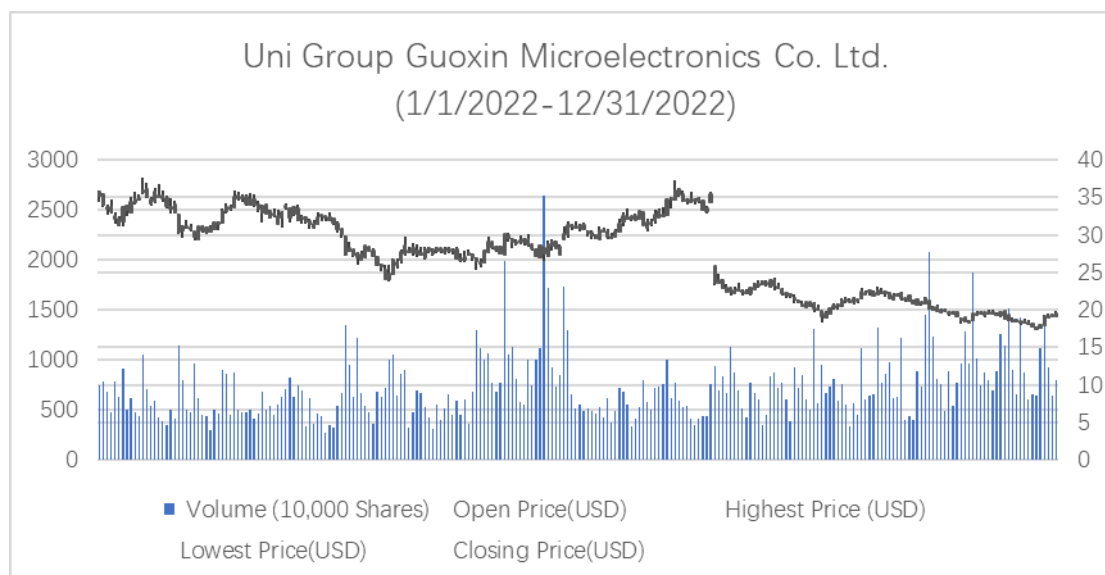
### 3.1.7 Partial Recovery (Oct-Dec)

The stock starts recovering from its October lows and manages to regain some lost ground by the end of the year. However, the recovery is partial, and the stock's price continues to fluctuate.

### 3.1.8 Overall trend

The stock's price trend shows periods of both growth and decline, with notable moments of volatility.

## 3.2. Uni Group Guoxin Microelectronics Co. Ltd.



**Fig. 2** Uni Group Guoxin Microelectronics Co. Ltd.

### 3.2.1 Initial Upswing (January - February)

The stock started the year with a relatively stable opening price, and then it experienced an upward trend in the first few weeks. The closing price generally increased, with a few minor pullbacks (Figure 2).

### 3.2.2 Volatility and Correction (February - April)

In mid-February, the stock reached a peak with the highest price recorded during the observed period. However, after that, the stock experienced a notable downward trend, reaching a low point in late April. This period was marked by increased volatility and larger price swings.

### 3.2.3 Recovery and Stability (May - June)

From late April to early June, the stock started to recover and stabilize. The price showed more consistency, with less pronounced fluctuations compared to the previous months.

### 3.2.4 Increased Volatility and Decline (June - August)

The stock's price then experienced another period of heightened volatility and a downward trend. It reached a trough in late August, with the lowest prices recorded during the year.

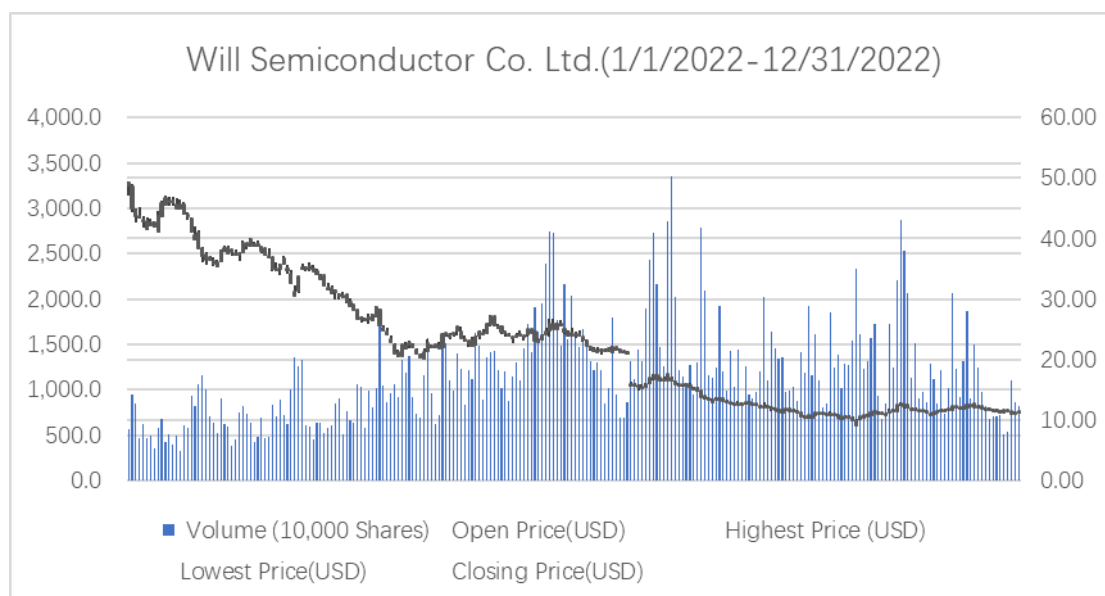
### 3.2.5 Rebound and Fluctuations (August - September)

Following the August low, the stock saw a rebound in September, although the price remained relatively unstable. The stock experienced some back-and-forth price movements during this time.

### 3.2.6 Overall Trend

While the stock displayed periods of both upward and downward movement, there doesn't appear to be a clear sustained trend throughout the year. Instead, it went through cycles of volatility, correction, and recovery.

## 3.3. Will Semiconductor Co. Ltd. Shanghai



**Fig. 3** Will Semiconductor Co. Ltd. Shanghai

### 3.3.1 Initial Volatility (January)

The stock started the year at a price of \$48.72. In the first few days of January, it experienced significant volatility, with daily fluctuations in both directions. The highest price during this period was \$49.40, and the lowest was \$41.87. This initial phase showcased uncertainty and indecision among investors (Figure 3).

### 3.3.2 Gradual Decline (Late January to Early March)

From late January to early March, the stock's price gradually declined. It touched its lowest point of around \$32.23 in mid-March. This decline was accompanied by a consistent decrease in daily closing prices and moderate trading volumes.

### 3.3.3 Recovery and Consolidation (Mid-March to Early April)

After hitting the low in mid-March, the stock began to recover. It went through a period of consolidation, with fluctuations between \$32 and \$38. The trading volumes remained relatively moderate during this period.

### 3.3.4 Volatility and Peaks (Mid-April to Early June)

In mid-April, the stock experienced increased volatility, with several notable price peaks and troughs. It reached a high of around \$28.71 and then went through a swift decline, hitting a low of \$20.54 in late April. This period was marked by rapid price movements and relatively higher trading volumes.

### 3.3.5 Gradual Recovery (Late June to Late July)

From late June to late July, the stock showed a gradual recovery from the previous decline. The price slowly climbed back to around \$24, with some fluctuations along the way.

### 3.3.6 Sharp Decline and Sideways Movement (August to September)

In August, the stock's price saw a significant drop, reaching a low of \$10.53. This decline was followed by a period of sideways movement, with the price ranging between \$10 and \$12. The trading volumes remained relatively high during the sharp decline.

### 3.3.7 Recovery and Stability (October to December)

The stock started to recover from its August lows in October, and it continued to exhibit a relatively stable trend through November. The price gradually increased, reaching around \$11.67 by early December. During this phase, trading volumes appeared to be less volatile compared to earlier months.

### 3.3.8 Overall Trend

The stock exhibited a mix of volatility, decline, recovery, and stability. It started with significant volatility and experienced notable declines, particularly in the first quarter of the year and again in August. However, the stock managed to recover from these declines to some extent.

## 4. Analysis

### 4.1. Risk analysis

**Table 1.** Three Ratios comparing

Item	Unigroup Guoxin Microelectronics Co	NAURA Technology Group Co	Will Semiconductor Co
Market Cap	13.29B (USD)	20.59B (USD)	16.94B (USD)
Beta	0.65	0.42	1.15
Debt ratio	36.23%	53.04%	48.56%

Uni Group Guoxin Microelectronics Co. Ltd: With a market capitalization of USD 13.29 billion, Uni Group Guoxin Microelectronics Co. Ltd is a significant player in the semiconductor industry. The company boasts a low beta of 0.65, indicating relatively lower volatility compared to the market (Table 1). It maintains a debt ratio of 36.23%, implying moderate leverage [5].

Naura Technology Group Co. Ltd: Naura Technology Group holds a market capitalization of USD 20.59 billion and exhibits a lower beta of 0.42, indicating even lower market sensitivity. The company has a higher debt ratio of 53.04%, which could raise concerns about its debt management.

Will Semiconductor Co. Ltd. Shanghai: Will Semiconductor, valued at USD 16.94 billion, stands out with a higher beta of 1.15, making it relatively more responsive to market fluctuations. The company's debt ratio is 48.56%, which lies between the other two companies.

Summary:

Beta Risk: Will Semi > Unigroup Micro > NAURA Tech  
 Debt Ratio: NAURA Tech > Will Semi > Unigroup Micro  
 Size risk: NAURA Tech = Will Semi > Unigroup Micro

#### 4.2. Profitability analysis

**Table 2.** Four Ratios comparing

Item	Unigroup Guoxin Microelectronics Co	NAURA Technology Group Co	Will Semiconductor Co
TA T/O	0.53	0.4	0.6
Profit Margin	36.69%	25.84%	1.55%
ROA	11.91%	6.90%	0.51%
ROE	29.54%	10.67%	1.49%

In general, higher profit margins typically lead to higher Return on Assets (ROA) [6]. This is because a high-profit margin indicates that a company performs well in terms of sales and cost control, resulting in increased net profits. Subsequently, these higher net profits, when compared to relatively stable total assets, result in a higher ROA (Table 2).

Profit margins provide insights into a company's efficiency in converting revenue into profit. Uni Group Guoxin Microelectronics Co boasts a healthy profit margin of 36.69%, along with impressive ROA and ROE figures of 11.91% and 29.54%, respectively. These indicators reflect its efficient utilization of assets and strong profitability. The firm's turnover efficiency, measured by the Total Assets Turnover (TA T/O) ratio, is 0.53, suggesting effective asset utilization.

Naura Technology Group Co has a lower profit margin compared to Uni Group, but its ROA and ROE figures of 6.90% and 10.67% indicate decent asset management and moderate returns for shareholders. Its TA T/O ratio is 0.4, indicating room for optimizing asset utilization.

Will Semiconductor Co faces profitability challenges, evident in its slim profit margin, low ROA of 0.51%, and ROE of 1.49%. These figures suggest a need for improved efficiency and returns on investments. With a TA T/O ratio of 0.6, the company demonstrates effective asset management.

#### 4.3. Market Ratios analysis

**Table 3.** Thirteen Ratios comparing

Item	Unigroup Guoxin Microelectronics Co	NAURA Technology Group Co	Will Semiconductor Co
PE	28.24	53.42	38.31
PB	7.5	7.17	6.59
Dividend yield	0.36%	0.16%	0.08%
PEG	0.46	1.23	0.4
Growth Rate	1.075	2.617	0.321
DCF	2.22	-3.03	-1.7
FCF	1.67	-4.04	-3.61
Rate of Return	2.79%	0.40%	0.80%
Insider Buying	26.86%	43.17%	45.17%
Stock Buyback	NA	NA	NA
Stock Price 7/28/2023	89.25	273.83	101.73
50-Day Moving Average	91.49	297.95	100.41

NAURA Technology Group has the highest PE ratio, suggesting that investors are willing to pay a premium for its earnings (Table 3). This might be due to high growth expectations or positive market sentiment. NAURA Technology Group also exhibits the highest growth rate and PEG ratio, implying that the market expects significant future growth from the company [7].

Unigroup Guoxin Microelectronics has the lowest PE ratio, indicating that its stock is relatively more affordable compared to its earnings. At the same time, Unigroup Guoxin Microelectronics demonstrates a positive growth rate and a low PEG ratio, indicating a potential undervaluation relative to its growth prospects.

Will Semiconductor Ltd. has a PE ratio within the range of the other two companies, showing moderate valuation, furthermore company has the lowest growth rate and PEG ratio, signaling comparatively modest growth expectations [8].

Unigroup Guoxin Microelectronics has a positive Free Cash Flow (FCF) and a relatively high insider buying percentage, reflecting strong cash generation and confidence from company insiders. NAURA Technology Group's negative FCF suggests it might be investing heavily in growth opportunities or facing cash flow challenges. Will Semiconductor Ltd. also shows negative FCF, raising concerns about its cash flow management [9].

Unigroup Guoxin Microelectronics' stock price of \$89.25 is below its 50-day and 200-day moving averages, indicating possible downward momentum. In contrast, NAURA Technology Group's stock price of \$273.83 is above its moving averages, suggesting positive momentum. Will Semiconductor Ltd's stock price of \$101.73 is also above its moving averages (Table 4).

Higher levels of insider buying in NAURA Technology Group and Will Semiconductor Ltd indicate positive sentiment within the companies. Unigroup Guoxin Microelectronics also sees significant insider buying.

Unigroup Guoxin Microelectronics demonstrates strong profitability and operational efficiency, making it an attractive investment option. NAURA Technology Group's higher debt ratio and lower profitability raise concerns, while positive momentum in stock price and high insider buying may offset these. Will Semiconductor Ltd faces challenges with low profitability and negative cash flows. Investors should carefully consider these factors before making investment decisions [10].

**Table 4.** Four Ratios comparing

Name of the company	Types of investors willing to invest in the company
Unigroup Guoxin Microelectronics	Ratio Analysis investor, PEG investor, Momentum investor, DCF investor, Insider Buying investor
NAURA Technology Group	Index Investor, Momentum investor, DCF investor, Insider Buying investor
Will Semiconductor	Index Investor, PEG investor, Momentum investor, DCF investor, Insider Buying investor
Name of the company	Types of investors willing to invest in the company

## 5. Conclusion

This study aims to analyze pivotal indicators of three semiconductor enterprises, namely Unigroup Guoxin Microelectronics Co. Ltd, NAURA Technology Group Co. Ltd, and Will Semiconductor Co. Ltd. Shanghai, across domains encompassing risk assessment, profitability evaluation, and market valuation. The semiconductor industry remains a cornerstone within the technology sector, bearing substantial ramifications for the global economy. Given the persistent evolution of technology and intensifying market competition, stakeholders and decision-makers necessitate a profound comprehension of these firms' fiscal robustness and market performance to facilitate judicious investment choices and management strategies. Consequently, by undertaking an exhaustive comparative examination of these three semiconductor entities, we endeavor to proffer invaluable insights and data-backed recommendations for the benefit of investors and the industry at large.

The results reveal that Unigroup Guoxin Microelectronics Co. Ltd. exhibits a lower beta coefficient and a comparatively reduced debt ratio, whereas NAURA Technology Group Co. Ltd. displays a higher beta coefficient and increased debt leverage. Will Semiconductor Co. Ltd. Shanghai falls between these two extremes. Regarding profitability analysis, we scrutinized metrics such as total asset turnover, profit margin, return on assets, and return on equity for these three companies. Unigroup Guoxin Microelectronics Co. Ltd demonstrated superior performance on these indicators, whereas Will Semiconductor Co. Ltd. Shanghai grapples with profitability challenges. Lastly, in the market valuation analysis, we evaluated metrics such as the price-to-earnings ratio, price-to-book ratio, dividend yield, PEG ratio, and growth rate for these three enterprises. The outcomes highlight NAURA Technology Group's elevated price-to-earnings ratio, indicative of heightened market expectations for its future growth prospects. In sum, these research findings furnish investors with profound insights into these three semiconductor companies, empowering them to make more discerning investment choices.

Despite furnishing pivotal financial and market insights into these three semiconductor enterprises, this study is not without limitations. Primarily, the data herein is grounded in financial reports at specific points in time, and the evolving landscape of markets and corporate conditions necessitates periodic data updates to uphold accuracy. Secondly, this study overlooks the competitive milieu and technological trends within the industry, factors that wield substantial influence over a company's long-term performance. Future research endeavors can delve deeper into these facets and integrate them into comprehensive analyses. Moreover, a more extensive array of financial and non-financial metrics warrants consideration to facilitate a more holistic evaluation.

Prospective research initiatives encompass periodic updates of corporate financial data to trace developmental dynamics while intensifying research into industry trends and technological advancements. Furthermore, broadening the study's scope to encompass additional semiconductor enterprises promises more extensive market insights. Ultimately, deeper exploration of investment strategies and risk mitigation techniques can enable investors to derive enhanced utility from research findings when making decisions. These steps are poised to enhance the precision and applicability of research, offering more robust support and counsel to investors and decision-makers.

## References

- [1] H Gao, M Ren, TY Shih. *International Business Review*. Elsevier, 2023.
- [2] R Petkova, L Zhang. *Is value riskier than growth?* *Journal of Financial Economics*. Elsevier, 2005
- [3] Antoniou C, Doukas JA, Subrahmanyam A. *Cognitive dissonance, sentiment, and momentum*. *J Financ Quant Anal*, 2013, 48:245–275.
- [4] Asiri, Batool K. *Journal of Business Studies Quarterly*. 2015, Antioch Vol. 6, Iss. 3: 1-12.
- [5] A Dias. *Journal of Banking & Finance*. Volume 37, 2013, Issue 12: 5248-5260.
- [6] Al Maani A, Alawad A.S, Karaki B.S.A. *Impact of liquidity and profitability ratios on the stock market value of Jordan insurance companies*. *Academy of Accounting and Financial Studies Journal*, 2021.
- [7] PD Easton. *PE Ratios, PEG Ratios, and Estimating the Implied Expected Rate of Return on Equity Capital*. *The Accounting Review*, 2004, 79 (1): 73–95.
- [8] Ding Weiwei. *Research on the Stock Selection Effectiveness of PEG Indicator in the A-share Market*. Fudan University, 2013.
- [9] S Richardson. *Over-investment of free cash flow*. *Review of accounting studies*, 2006.
- [10] Xianrong Zheng. *Investment Decisions and Risk Management in Corporate Financial Management*. *Accounting Studies*, 2023.