

# The investment choices of different investors for energy companies

Yanfei Ren \*

Dulwich College, Singapore, Asia

\* Corresponding Author Email: yanfei.ren24@stu.dulwich.org

**Abstract.** This research delves into the dynamic field of energy investment by investigating how different types of investors make choices regarding energy companies, employing a combination of literature analysis, data collection, and quantitative methods to explore the preferences of distinct investor categories. The central research question revolves around discerning the investment inclinations of diverse investor segments and constructing tailored investment portfolios based on their preferences, using a systematic framework encompassing data collection, data analysis, and interpretation stages. The study's main findings reveal distinct investor preferences within the energy sector, shedding light on the types of enterprises that align with different investor profiles, and thus, enabling the construction of bespoke investment portfolios that cater to these preferences. The conclusions drawn from this research hold significant application value in guiding investors, both individual and institutional, in optimizing their energy investments, fostering sustainable energy practices, and contributing to the continued evolution of the global energy landscape.

**Keywords:** Investor; Energy; Change; Choice.

## 1. Introduction

In an era defined by constant innovation and global interconnectivity, the energy sector stands as an essential pillar supporting economic growth, technological advancement, and the basic fabric of modern society. As the world faces pressing challenges of climate change, resource scarcity, and sustainable development, the investment choices made by various stakeholders within the energy industry have acquired unprecedented significance. This research embarks on a comprehensive exploration of the intricate landscape of investment decisions within the energy sector, aiming to discern the factors shaping these choices and the subsequent implications for global energy dynamics.

Energy is the lifeblood of modern civilization, serving as the driving force behind industries, transportation, and the conveniences of everyday life. Beyond its economic significance, energy plays a pivotal role in environmental stewardship and geopolitical considerations. The literature “Renewable Energy” extensively documents the multifaceted nature of energy's importance [1], emphasizing its pivotal role in achieving sustainable development goals and ensuring a harmonious coexistence with our planet. Cognizant of this, the research will not only consult relevant literature but also integrate empirical data to underscore the undeniable importance of energy as a fundamental driver of societal progress.

Within the vast expanse of the energy sector, certain companies have risen to prominence as trailblazers in energy production, innovation, and investment. Companies like “Tesla” and “General Electric Co” are representative companies that generate clean energy which focus on sustainability. At the same time, patrol and natural gas companies for example “Saudi Aramco” and “Shell plc” are also significant in human society which has an unshakable position in the industry. The paper will draw upon credible sources and data to highlight these industry leaders, allowing for an informed examination of their performance, strategic orientations, and market influence. By doing so, this study will facilitate an insightful analysis of investment targets, evaluating the suitability of these companies for diverse investor profiles.

As investors navigate the intricate energy landscape, their choices are influenced by an array of factors including financial goals, risk tolerance, ethical considerations, and market trends. To unravel these nuanced preferences, the research will formulate targeted research questions aimed at discerning

the investment inclinations of different investor segments. By categorising investors based on characteristics such as individual versus institutional, socially responsible versus profit-driven, and risk-averse versus risk-tolerant, the study will construct a comprehensive framework. This paper will be grounded in existing literature to elucidate the distinct preferences of these investor categories and guide the subsequent construction of bespoke investment portfolios.

At its core, this paper seeks to bridge the gap between investment decisions and the evolving energy sector. Employing a mixed-methods approach, the study will seamlessly integrate qualitative insights from literature reviews with quantitative data analysis. This combination allows for a holistic understanding of investor behavior and its impact on the energy landscape. To carry out this analysis, the research will meticulously collect relevant data from diverse sources, applying statistical tools to uncover patterns and relationships. The paper will encompass data collection, data analysis, and interpretation stages, culminating in actionable insights that align investor preferences with potential investment opportunities.

To summaries, the intricate interplay between investment choices and the energy sector's evolution holds immense significance for global sustainability and economic progress. By emphasizing the pivotal importance of energy, identifying key industry players, formulating tailored research questions, and outlining the research approach, this study sets the stage for a comprehensive exploration. Through this research, valuable insights will be provided which illuminate the dynamic relationship between investors and the energy industry, fostering a deeper understanding of the choices that shape our energy future.

## 2. Methodology

### 2.1. Types of financial ratio

The market capitalization (market cap) represents the aggregate value of a company that is publicly traded. It is derived by multiplying the prevailing stock price of the company by the total count of outstanding shares. The statement offers a concise representation of the company's scale and comprehensive market worth. The Formula of calculating the Market Capitalization is:

$$\text{Market-Cap} = \text{Stock-Price} \times \text{Total-Diluted-Shares-Outstanding} \quad (1)$$

The statistic is extensively employed in the realm of investment decision-making, portfolio formation, and financial analysis to approximate the overall value of a company inside the stock market.

The Beta Ratio is a measure of the level of volatility shown by a company in comparison to the overall market. A Beta coefficient of 1 shows a positive correlation with the market of the stock demonstrate, whereas the coefficient is more than 1 then implies heightened volatility, and if the coefficient is less than 1, it represents reduced volatility [2]. Beta ratio is determined by doing a regression analysis, compare the historical returns of a particular company to the returns of a market index. This indicator supports investors in evaluating the degree of risk of a specific stock in relation to the broader market.

Profit margin is a financial indicator used to assess the profitability of a firm. The formula for calculating profit margin is:

$$\text{Net-Profit-Margin} = \frac{\text{Revenue}-\text{Cost}}{\text{Revenue}} \quad (2)$$

This index could be used as an indicator of the company's ability to effectively turn its generated revenue into profits. A greater profit margin signifies enhanced profitability, whereas a lower margin implies narrower profit margins or conceivably elevated expenses in relation to revenue [3]. The indicator holds significant importance in evaluating the financial well-being and operational effectiveness of a corporation.

The financial metric known as Return on Assets (ROA) quantifies a company's profitability by determining the proportion of net income generated relative to its total assets [4]. The assessment

measures the effectiveness with which a corporation utilizes its assets to generate revenues. The return on assets (ROA) is calculated by:

$$\text{Return On Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}} \quad (3)$$

A greater return on assets (ROA) signifies that a corporation has enhanced proficiency in earning income from its assets. This statistic holds significant value in assessing operational efficiency.

The Return on Equity (ROE) is a financial metric utilized to assess the profitability of a firm by comparing its net income to the shareholders' equity [5]. The metric assesses the efficiency with which a corporation earns profits in relation to the equity capital contributed by its shareholders. The formula of Return on Equity is calculated by:

$$\text{Return On Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}} \quad (4)$$

The higher the value of return on equity, indicates the greater the performance and serves as a crucial metric for evaluating a company's financial performance and management efficacy.

Price-to-Earnings Growth also known as PEG, is a measure of the company's projected profits growth rate. The PEG ratio calculated by:

$$\text{Price/Earnings to Growth Ratio} = \frac{P/E}{\text{Annual EPS Growth}} \quad (5)$$

This statistic helps investors to evaluating the relative valuation of a firms by considering its potential for earnings growth. If the PEG ratio below 1, then is commonly regarded as advantageous, since it implies that the company might be cheap in comparison to its projected growth rate. Conversely, a ratio above 1 could indicates that the company's potential is over valued [6].

### 3. Data & Analysis

#### 3.1. Basic data status

In the preceding half-decade, Tesla, Shell plc, Saudi Aramco, and General Electric Co have experienced notable fluctuations in their stock prices and market shares, indicative of the dynamic characteristics of the energy industry and investor perception. The primary source of data collection for this study on the fluctuations in stock prices and market shares of various companies during the past five years (2018-2023) will be Yahoo Finance. This period is of particular importance as it coincides with a global transition in demand from natural resources to renewable resources.

#### 3.2. Statistic analysis of data

Tesla has had exceptional performance, with significant expansion in its stock value. The increase in demand can be ascribed to various factors, such as the burgeoning worldwide fascination with electric cars (EVs) and environmentally friendly energy alternatives. The significant impact of Tesla in the electric vehicle (EV) sector, its ground-breaking technological advancements, and its ambitious strategies for growth have all played a crucial role in the remarkable surge of its stock prices. Consequently, Tesla has acquired a growing market presence within the automobile sector and has, to a certain degree, made inroads into the energy storage industry. Furthermore, the elucidation of its remarkable increase in share price can be facilitated by analyzing financial ratios. The robust profitability of the company is evidenced by its impressive profit margin of 19.3%, which signifies the effective transformation of revenue into profits. Additionally, a robust ROE of 26.17% demonstrates the company's effectiveness in generating profits relative to shareholder equity. The high PEG Ratio of 3, 54 suggests that investors anticipate continued growth, justifying the premium on its stock [7]. These ratios affirm Tesla's financial prowess and its appeal to investors seeking both sustainability and profitability.

Shell plc, a traditional oil and gas company, has been navigating a complex transition towards cleaner energy sources. While its share price hasn't seen the same meteoric rise as Tesla's, Shell's

commitment to renewable energy, electric vehicle charging infrastructure, and carbon offset initiatives has resonated with investors. This strategic shift has allowed Shell to maintain its market share in the oil and gas sector while gradually expanding into the renewable energy space. In its transition toward cleaner energy, Shell might not have seen the same share price surge as Tesla, but its financial ratios show a commitment to this shift. A relatively strong Profit Margin 7.94% signifies its ability to maintain profitability while diversifying into renewables. An ROE of 15.22% is competitive in the industry underscoring effective profit generation. While Shell's PEG Ratio may not match Tesla's which is only 1.43 [8], it signifies investor confidence in its long-term sustainability initiatives. These ratios reflect Shell's resilience and strategic approach.

Saudi Aramco, one of the world's largest oil and gas companies, has faced the challenge of fluctuating oil prices and increasing global interest in sustainable energy alternatives. Consequently, its share price has shown volatility, reflecting market uncertainties. Despite these challenges, Saudi Aramco remains a dominant force in the oil industry, consistently ranking as one of the world's most valuable companies by market capitalization. To further analyze the company, its substantial Market Cap \$2.19 trillion indicates its size and importance in the oil and gas sector. The Beta Ratio of 0.2 may reflect higher market sensitivity due to oil price dependency, contributing to share price fluctuations. Although the Profit Margin is influenced by oil prices, its strong ROE which is 35.88% reveals efficient profit generation. The PEG Ratio of 15.0 [9] suggests that investors consider its earnings growth potential. These ratios underscore Saudi Aramco's significance in the energy market.

General Electric Co (GE) has been striving to adapt to changing market dynamics. Its share price has experienced fluctuations due to challenges in its traditional power and aviation businesses. However, GE has been focusing on renewable energy solutions and technological innovations. Its market share in the renewable energy and industrial sectors has seen modest growth, reflecting its efforts to stay competitive in a rapidly evolving industry. Since GE is adapting to market changes, it showcases fluctuating share prices. Its Market Cap of \$124.83 billion illustrates its substantial presence [10], while a Beta Ratio above 1 indicates higher market volatility. The Profit Margin of 4.37% reflects challenges in traditional sectors. With a PEG Ratio below 1 [11], GE's stock is potentially undervalued, indicating investor optimism regarding its transition toward renewable energy. These ratios highlight GE's transformative journey and potential as it navigates evolving markets.

#### 4. Conclusion

The exploration of investment choices within the energy sector, focusing on Tesla, Shell plc, Saudi Aramco, and General Electric Co, has provided valuable insights into the intricate dynamics at play in the global energy landscape over the past five years. This paper aimed to address the research problem by investigating how different investors approach these companies and by examining the fluctuations in their share prices and market shares.

The primary research ideas encompassed a comprehensive analysis of investor preferences and the financial performance of the selected companies. We identified and categorized investors into different groups, including retail, institutional, and socially responsible investors, to better understand their unique investment criteria. Additionally, the study considered the broader market context and industry trends influencing these companies. The research integrated quantitative and qualitative approaches, using data from Yahoo Finance and insights from relevant literature.

The paper revealed that investors exhibit varying preferences and strategies when it comes to energy companies. Tesla garnered significant attention from socially responsible and growth-oriented investors due to its pioneering role in sustainable transportation and energy storage. Shell's strategic shift towards renewables resonated with investors seeking a diversified energy portfolio. Saudi Aramco remained a stronghold for traditional investors interested in the oil and gas sector, while General Electric's commitment to technological innovation attracted a blend of investors.

Share price fluctuations mirrored the evolving energy landscape. Tesla experienced substantial growth, reflecting the growing interest in electric vehicles and renewable energy. Shell and General Electric, while not achieving Tesla's meteoric rise, demonstrated resilience by diversifying into renewables. Saudi Aramco faced volatility due to global oil price fluctuations, highlighting the ongoing challenges in the oil and gas industry.

Two notable deficiencies in existing research deserve attention. Firstly, there's a need for further objectivity in assessing the influence of investor sentiment on share prices. For future research, employing advanced sentiment analysis techniques to quantify and analyse the impact of investor sentiment on stock prices could be involved. Secondly, enhancing the comparative aspect of the study by including a broader spectrum of energy companies would provide a more comprehensive understanding of the sector's dynamics. Expanding the research to encompass additional companies would offer a holistic view of investor behaviour and market trends.

To summarize, this paper provides a valuable foundation for understanding investor behaviour and the performance of key energy companies in the context of an evolving energy landscape. The findings highlight the diverse preferences of investors and the dynamic nature of the energy sector. Addressing existing research deficiencies and refining our methodologies will further advance our comprehension of the intricate relationship between investors and the energy industry, offering critical insights for both investors and energy companies in shaping a sustainable and prosperous future.

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