



EFFICIENT MARKET THEORY ON TRIAL: THE CASE OF PT SEMEN INDONESIA TBK (PERSERO)

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Abstract

This study seeks to investigate the dynamics within PT Semen Indonesia (Persero) Tbk, particularly examining the paradox of its share price decline during a period of favorable operational and financial performance from November 2022 to May 2023. Employing both interviews with high-level executives and extensive literature review, the research adopts a mixed-method approach. Interview data were meticulously analyzed using clustered coding to draw nuanced insights, while the literature review served to contextualize and bolster the analysis of the empirical data. The findings indicate that despite the robust operational and financial health of PT Semen Indonesia during the specified period, the company experienced a concomitant decline in its stock value, challenging the assumptions of the Efficient Market Theory. The disparity between the company's performance metrics and its stock price behavior suggests a weak application or potential invalidity of the Efficient Market Theory in this instance. This research not only underscores the complexities of stock price determinations within Indonesian state-owned enterprises but also opens avenues for future studies to explore similar phenomena across different firms or industries. The unique insights gained from high-level sources within the company provide a valuable foundation for further scholarly inquiry into market efficiency theories.

Keywords: Cement, Efficient-Market, Price

Abstrak

Penelitian ini bertujuan untuk menyelidiki dinamika di dalam PT Semen Indonesia (Persero) Tbk, khususnya mengkaji paradoks penurunan harga sahamnya selama periode kinerja operasional dan keuangan yang baik dari November 2022 hingga Mei 2023. Dengan menggunakan wawancara dengan para eksekutif tingkat tinggi dan tinjauan literatur yang ekstensif, penelitian ini mengadopsi pendekatan metode campuran. Data wawancara dianalisis dengan cermat menggunakan pengodean terkelompok untuk mendapatkan wawasan yang lebih mendalam, sementara tinjauan literatur berfungsi untuk mengkontekstualisasikan dan memperkuat analisis data empiris. Temuan penelitian menunjukkan bahwa meskipun PT Semen Indonesia memiliki kesehatan operasional dan keuangan yang baik selama periode yang ditentukan, perusahaan mengalami penurunan nilai saham secara bersamaan, yang menantang asumsi Teori Pasar Efisien. Perbedaan antara metrik kinerja perusahaan dan perilaku harga sahamnya menunjukkan lemahnya penerapan atau potensi ketidakabsahan Teori Pasar Efisien dalam kasus ini. Penelitian ini tidak hanya menggarisbawahi kompleksitas penentuan harga saham di perusahaan-perusahaan BUMN di Indonesia, namun juga membuka jalan bagi penelitian-penelitian selanjutnya untuk mengeksplorasi fenomena serupa di berbagai perusahaan atau industri yang berbeda. Wawasan unik yang diperoleh dari sumber-sumber tingkat tinggi di dalam perusahaan memberikan dasar yang berharga untuk penelitian ilmiah lebih lanjut mengenai teori efisiensi pasar.

Kata Kunci: Harga, Pasar-Efisien, Semen

INTRODUCTION

Indonesia is among the leading nations in cement production. The cement industry in Indonesia has witnessed substantial development and advancement in recent years. This sector plays a pivotal role in bolstering economic growth in Indonesia, contributing significantly in terms of added value and serving as a critical support industry for the country's infrastructure development (Budiono et al., 2021). Prominent companies within this sector listed on the Indonesia Stock Exchange include PT Indocement Tungal Prakarsa Tbk, PT Semen Indonesia Tbk, and PT Holcim Indonesia Tbk. Despite its extensive scale, the Indonesian cement industry faces numerous challenges. These challenges encompass issues such as production oversupply, heavy reliance on energy, and the trend of declining stock prices (Devia et al., 2017). A notable entity confronting these challenges is PT Semen Indonesia (Persero) Tbk, a state-owned



enterprise specializing in the production of building materials, particularly cement. Additionally, it is alleged that PT Semen Indonesia encounters several internal issues that affect its business operations.

A prominent theory frequently employed to elucidate stock price phenomena in relation to company information is the Efficient Market Theory. This financial theory posits that stock prices consistently reflect all available information about their fundamental value (Ang et al., 2011a). Over the past decades, the theory has undergone continuous refinement to incorporate market realism, including crucial information about the firm, transaction costs, corporate financing, agency costs, and other pertinent issues. Despite these advancements, a study by Urquhart and McGroarty (2016) demonstrates that stock predictability is inherently variable and that market efficiency is either rare or nonexistent, particularly under conditions where certain market factors yield significant predictability. Additionally, an earlier study by Stein (1989) suggests that market conditions are heavily influenced by managerial perspectives, which can lead to myopic behavior and a propensity for market manipulation. Numerous empirical studies further substantiate that the correlation between stock prices and the fundamental conditions of companies is often minimal. It is purported that this phenomenon is also occurring at PT Semen Indonesia.

The corpus of literature on Efficient Market Theory extensively supports the assertion that there is minimal correlation between the fundamental conditions of a company and its stock price. Research consistently shows that stock prices are more significantly influenced by external factors than by the intrinsic conditions of the company itself, as highlighted by Antono et al. (2019), Aroni (2011), and Gupta and Arora (2019). This study aims to explore the internal and external dynamics affecting PT Semen Indonesia (Persero) Tbk, with a focus on identifying the causes behind the noted decline in its share price within a delineated time frame. Additionally, a comprehensive study conducted by Prastyawan et al. (2022) evaluated the intrinsic value of PT Indofood Sukses Makmur Tbk, a firm listed on the Indonesian Stock Exchange. Undertaken in 2021, this analysis utilized a sophisticated seven-step framework based on the Chartered Financial Analyst principles. The findings from this study revealed that the intrinsic value of PT Indofood Sukses Makmur Tbk slightly exceeded its average market price during the same year. Meanwhile, findings by Saputro and Qadri (2024) reveal that several stocks in Indonesia were undervalued during the post-Covid 19 era, including stock of PT Sido Muncul Tbk. They adopted the price multiple analysis to evaluate the firm intrinsic value.

The research presented in this literature review introduces a novel methodological approach, which significantly enhances its contribution to the existing body of knowledge on Efficient Market Theory and stock valuation. The uniqueness of this study lies in its data collection process, primarily conducted through interviews, a method not commonly employed in financial studies that typically depend on quantitative data. This qualitative approach allows for a deeper exploration of nuanced factors influencing stock prices, which are often overlooked by traditional methods. Furthermore, our study is distinguished by its access to high-level sources within PT Semen Indonesia (Persero) Tbk. This rare and valuable access enables the collection of first-hand insights directly from top decision-makers, providing a clearer understanding of the strategic decisions and financial disclosures of the company. Additionally, the inclusion of sources who are directly involved in the cement industry in Indonesia enriches the research, offering a comprehensive view from various stakeholders within the industry ecosystem. This diverse stakeholder engagement, combined with the unique data collection method, positions the study to potentially uncover novel insights into the internal and external dynamics affecting the company's stock prices. These insights might reveal unpublished information or new perspectives that have not previously been considered in the public domain. The combination of high-level access and direct industry involvement also enhances the



objectivity and validity of the research findings, addressing common challenges associated with reliance on publicly available data.

The foundation of this investigation into PT Semen Indonesia (Persero) Tbk is rooted in the interpretative paradigm. This paradigm is employed in research to comprehend the meanings inherent in social phenomena, placing a premium on the interpretation and subjective understanding of the data collected. This approach enables researchers to grasp how individuals interpret their experiences, as outlined by Saunders et al. (2019). The central research question seeks to ascertain how information pertaining to PT Semen Indonesia (Persero) Tbk influences its stock price. The objective of this study is to explore in greater depth and detail the various phenomena and issues occurring within PT Semen Indonesia and the broader Indonesian cement industry, and to examine their correlation with stock price fluctuations. This research contributes to previously undisclosed insights into the operations of PT Semen Indonesia (Persero) Tbk. Moreover, it seeks to provide relevant considerations for investors, particularly the shareholders of PT Semen Indonesia (Persero) Tbk, thereby enhancing their decision-making processes in relation to their investment strategies.

LITERATURE REVIEW

The Efficient Market Theory (EMT) serves as a cornerstone in understanding the dynamics of capital markets. This theory posits that stock prices invariably reflect all available information about their intrinsic value. This premise, which is central to financial theory, suggests that it is not feasible to consistently generate returns that exceed the average market performance, given that all pertinent information is already factored into asset prices (Ang et al., 2011a). Hull and McGroarty (2014) further elaborate on this concept, positing that financial markets inherently display efficiency, with asset prices reflecting all accessible information. The EMH provides a framework for understanding market behaviors and is critical in the analysis of investment strategies and financial decision-making.

The Efficient Market Theory (EMT) traditionally presupposes a robust correlation between the fundamental conditions of a company and its stock price. However, empirical evidence frequently demonstrates that this relationship is not invariably linear. Instances abound where stock prices decline despite strong company performance or rise even in the absence of solid fundamental underpinnings, as explained by Hwang (2022), Prastuti and Setianingrum (2019), Rachman et al. (2020), Ramdany and Manurung (2022), Sukesti et al., (2021). Such anomalies, as described by Crotty (2011), suggest that stock prices are more significantly influenced by the collective decisions of investors, which are often subject to cognitive biases and emotional influences, leading to irrational decision-making processes.

Moreover, the theory, according to Ang et al. (2011b), faces challenges from phenomena such as asymmetric information, where a subset of market participants with privileged access to critical information can disproportionately influence stock prices. Market manipulation also presents a formidable challenge to the EMT, as activities by insiders, bookmakers, and other entities can distort price signals and undermine market efficiency (Jovanovic, 2016). Daily observations in capital markets reveal that stock price movements are frequently driven by factors extrinsic to a company's fundamental and financial conditions. Consequently, this study employs qualitative interviews to delve deeper into the specific case of PT Semen Indonesia (Persero) Tbk, investigating the dynamics during a period of stock price decline and examining the extent to which the company's fundamental information correlates with its stock price. This research aims to elucidate the complex interplay of factors influencing stock prices, challenging the traditional assumptions of the Efficient Market Theory.



METHODS

The theoretical framework guiding this study is anchored in the interpretive paradigm. The interpretive, also known as constructivism or social constructivism, posits that reality is subjectively constructed through the meanings and interpretations individuals ascribe to their experiences (Saunders et al., 2019). This paradigm suggests that understanding the subjective reality of participants is crucial, as it acknowledges the complexity and variability of human experience. Interpretivist researchers predominantly employ qualitative methodologies to probe the social and cultural contexts within which phenomena manifest. In this study, the primary data collection methods include interviews and literature reviews. The use of interviews is particularly pertinent as it facilitates a profound comprehension of the participants' experiences, perspectives, and the meanings they attribute to social phenomena. These interviews are designed to elicit rich, nuanced data, providing insights that are as contextually deep as they are methodologically rigorous. This research is qualitative in nature, leveraging the strengths of interpretive methods to explore underlying themes and patterns that might remain obscured in more quantitative approaches. The focus on interviews and literature reviews not only enriches the data gathered but also enhances the interpretative depth of the analysis, aligning with the constructivist aim of understanding the lived experiences of individuals within their specific socio-cultural milieus.

The literature review component of this study entailed a systematic collection and analysis of data from a diverse array of sources, including academic journals, articles, books, and other relevant literature, with the aim of substantiating the findings derived from the interviews. Initially, the research commenced with the formulation of a broad overarching research question, which was subsequently dissected into more specific inquiries. These inquiries guided the semi-structured interviews conducted with selected participants, the transcripts of which were meticulously analyzed. The analytical process involved a detailed coding of the interview transcripts, enabling the categorization and clustering of data for in-depth analysis. This methodological approach facilitates the identification and extraction of pertinent themes and patterns relevant to the research objectives. Concurrently, the literature review served not only to corroborate the interview data but also to locate the study within the existing body of theoretical and empirical knowledge. This integration of interview data with literature analysis is critical, as it allows for a comprehensive synthesis of insights, enhancing the validity and reliability of the findings. Ultimately, the dual analysis of interview results and literature review equips researchers with a robust framework to address and answer the posed research questions effectively.

Table 1. The Categorization of Interview Transcript through Coding

Categorization	Sub- Categorization	Coding
Industry Conditions & External Issues	Industry Conditions & External Issues	<ul style="list-style-type: none"> • Good contribution to economy through Gross Domestic Product (GDP) • Largest market cap & market share • Market leader • Semi oligopolistic industry • Cement industry is a value creation raw material for construction
	Government Aspect	<ul style="list-style-type: none"> • Lack of price intervention & supply regulation • Investment licenses for the cement industry were stopped



Categorization	Sub- Categorization	Coding
Business Operations		<ul style="list-style-type: none"> • Catalyzing construction and government projects (National Strategic Project, Ibu Kota Nusantara, etc.) • Dividend set by the government
	Company Operations	<ul style="list-style-type: none"> • High cost (transport, fuel, electricity) • When COVID demand is high, but after COVID demand drops • The coal price rises • Overcapacity
	Company Strategy	<ul style="list-style-type: none"> • Efficiency, management, and leadership cost • Sales distribution and micromarket • Cement development as needed and maintaining market share • Environment, Social, and Governance (ESG) and sustainability • Roadmap comparing plant capacity and market uptake • Branding market share • Focus on debt repayment and ratio improvement; hence, no buybacks.
	Company Financials	<ul style="list-style-type: none"> • Terdapat improvement secara year on year • There was year on year improvement • Maintaining Earning Before Interest, Taxes, Depreciation, and Amortization (EBITDA) • Operating expense efficiency • Windfall tax relaxation
	Liability & Equity Aspect	<ul style="list-style-type: none"> • Balancing with reinvestment • WACC reduction with dividend payment & debt repayment
All about Investment	Investor Aspect	<ul style="list-style-type: none"> • Many short-term retail and return expectations • Sensitive to information • Tracking cement demand • Profitability growth • Maintain the share price • High Return on Investment (ROI) • ESG and sustainability • All company information is disclosed, and investors know about the company's fundamental information • Undervalued stock and growth
	Stock Price & KPI (Key Performance Indicator)	<ul style="list-style-type: none"> • Indonesia's stock market cap too small • Investors still look at macroeconomics before cement sectorials



Categorization	Sub- Categorization	Coding
		<ul style="list-style-type: none"> The share price cannot be fully controlled

RESULTS AND DISCUSSION

The company's operations are sophisticated. The company's principal business is one of the aspects that influences its level of complexity. Furthermore, industry conditions and partnerships with other parties increase the company's complexity. Looking at the overall picture alone does not imply that the firm's situation is directly tied to the parameters that are thought to reflect the company, in this case, the company's shares. There are numerous events that occur that indicate little or no correlation between a company's stock price and its condition. One hypothesis, market efficient theory, is rapidly being questioned and challenged for its empirical validity.

This study examined the state of a firm by analysing these phenomena and providing answers to research questions on the impact of company information on stock prices. The state-owned company PT Semen Indonesia (Tbk) Persero, which manufactures building materials, is the research object. In order to evaluate the efficacy of the efficient market hypothesis, this study aims to gather the best available facts and data on the business conditions and fundamentals of the company. Two resource individuals, who are practitioners with extensive knowledge of the state of the Indonesian cement business, were interviewed. The interview results can be divided into four main themes that will be addressed in detail in a methodical manner: (1) market, industry, and external factors; (2) business operations; (3) company finances; and (4) investment in the company.

The state of the Indonesian cement sector eight years ago is very different from the current state of affairs. The cement sector faced undersupply in 2015, as demand outpaces supply. Since there were only seven companies in the industry at the time supporting the industry's demand, there was a demand that exceeded supply. In an effort to meet the demand, every cement company was in competition with one another. This situation is distinct from the oversupply problem the cement sector is currently facing, which is when the quantity of ready-to-sell items exceeds demand from the market. In 2020, the country's cement consumption was only 62.7 tons, compared to the 115.3 million tons of production capacity, leaving 52.6 million tons of spare capacity. The development of new companies from both within and outside the country in 2020 caused the number of companies to double to 14, which was the catalyst for the oversupply condition.

Cement is not a basic commodity, so there is no government intervention regarding prices. Cement prices are shaped and driven by the policies of each of the 14 companies. The power of one company to set prices greatly affects the sales it gets. As a market leader in the cement industry, the quality and price of cement owned by PT Semen Indonesia (Persero) Tbk are used as a reference by its competitors. Of the total available national cement capacity, 92% is fulfilled by four companies, namely Semen Indonesia, Semen Tiga Roda, Conch, and Merah Putih. According to sources, the dominance of these four companies forms a semi-oligopolistic market. This semi-oligopolistic market condition makes the cement industry in Indonesia not fragmented. This is much different from the condition of the cement industry in Vietnam, where there are currently more than 40 players, so that the market share in the industry becomes fragmented. This leads to a perfectly competitive market where no firm is truly the leader.

Cement is an important product in the national economy, as represented by the gross domestic product. There is a strong link between the cement industry and government development projects. The government has made a list of development priorities that need to be implemented in the National Strategic Projects (PSN). This infrastructure development



certainly requires cement raw materials. This has led to an increase in demand for cement in the industry by 2023. The work of cement as one of the raw materials for development certainly results in value creation. The value created will later affect the value proposition to customers, which describes the benefits that a product or service will provide to its customers and how it is different from its competitors (Mahajan, 2019). Value propositions support company management in providing products according to consumer needs, for example, when there are customers who need environmentally friendly cement for their projects, fast-drying cement for road construction so as not to cause congestion, or cement containing high sulphate used for ocean breakers.

The relevance of the cement industry in supporting government projects as well as the problem of oversupply prompted the Indonesian Cement Association (ASI) to submit a regulatory proposal to the government, in this case the Ministry of Investment and Investment Coordinating Board. The proposal contains restrictions on new companies that want to enter the cement industry until the industry's utility from its capacity reaches more than 80% (healthy category). This was done due to concerns about oversupply and overcapacity conditions in the industry, although no decision has been passed regarding this proposal until 2023. On the other hand, the government has actually known the condition of the cement industry through the coordination of the moratorium proposal meeting and the preliminary audit of cement conditions by the Ministry of Investment (BKPM). From the aspect of share ownership, the relationship between PT Semen Indonesia (Persero) Tbk and the government can be said to be more special because its shares are 51% owned by the Government of the Republic of Indonesia, whose representatives and management are carried out by the Ministry of SOEs. The Ministry of SOEs gives several targets to Semen Indonesia, including profit growth and an increase in dividend payments to the state over market share targets. This orientation toward profitability encourages PT Semen Indonesia to be able to carry out operations to maximize profits. The government also provides facilities in the form of tax relaxation during COVID-19. This greatly helped PT Semen Indonesia (Persero) Tbk and other cement companies to survive the COVID-19 pandemic situation. The government also gives special attention to the cement industry related to ESG aspects in the context of a joint commitment to support net zero carbon emissions by 2050. In this regard, the government will also issue a carbon tax to companies that produce more CO₂ than the predetermined capacity (Bahtiar & Qadri, 2024; Rizqo & Qadri, 2024).

The operational aspect is the key to how a company does its main business. In the midst of the oversupply issue that hit the cement industry, PT Semen Indonesia became the market leader. PT Semen Indonesia (Persero) Tbk has the largest market share capacity in Indonesia, which is around 54.2 million tons of the total capacity in Indonesia of 119 million tons. The position of PT Semen Indonesia (Persero) as the market leader is strengthened by the dominance of market share throughout the country, which reaches 51%. Therefore, management needs to be aware of the price competition set by other companies in the industry. Apart from market share, demand and supply conditions also deserve the company's attention. In the last three years, during the COVID-19 pandemic, there has been a contraction in cement demand at PT Semen Indonesia (Persero) Tbk. In 2020, cement demand at the beginning of the year grew by around 3-5% before experiencing a sharp decline until the end of 2020. The decline in demand at PT Semen Indonesia (Persero) Tbk was projected by management to continue to touch 20%, but in reality, it only fell 10% in total for both retail and bulk cement sales. This resistance is due to the large number of households doing renovations. On the other hand, the COVID-19 pandemic that caused the cessation of many government development projects also had a negative effect on the cement industry. The diversion of the allocation of development funds to the health sector has stalled many projects, indirectly making cement demand contract



significantly considering that the Indonesian government dominates bulk demand at PT Semen Indonesia (Persero) Tbk, which is as much as 30–40%. In the midst of this, Semen Indonesia (Persero) Tbk continues to adapt to government policies so that in the second semester of 2021, demand shows a positive value compared to 2020. Furthermore, conditions in 2022 experienced changes in the retail sector, where conditions were relatively more stable than in 2020–2021. The majority of households have completed renovations, so spending on renovations is reallocated to other expenses. This reallocation led to a decline in demand for retail cement products. At the same time, demand in the bulk sector for development has increased due to the allocation of funds previously allocated for health by the government for development, so the demand for bulk cement has also increased. Nonetheless, overall demand in 2022 will still decline.

After successfully acquiring Holcim in 2019 and Semen Baturaja at the end of 2022, PT Semen Indonesia (Persero) Tbk has a 51% market share in the domestic market. However, the position of Semen Indonesia as a market share leader does not necessarily make PT Semen Indonesia free from challenges. Various challenges and issues faced by PT Semen Indonesia include fluctuations in coal prices, the implementation of domestic market obligations on the use of coal, limited room for maneuver to control operating expenses during COVID-19, price competition and fluctuations in cement demand, and high cement debt when making the Holcim acquisition. The debts incurred in 2019 made the management of PT Semen Indonesia (Persero) Tbk focus on maintaining cash to pay debts instead of conducting share buybacks as done by its largest competitor, Indocement Tunggal Prakarsa Tbk. Facing these problems, there are four major strategies carried out by PT Semen Indonesia (Persero) Tbk, including: (1) maximize profitability; (2) develop products; (3) manage costs; and (4) consider sustainability aspects.

Maximizing profitability strategy was implemented in response to fluctuations in demand for both bagged and bulk cement end products in each period. The strategy applied in one region is different for other regions. This is related to the conditions of each region, including the characteristics of the existing competition. In relation to profit maximization, a tailor-made strategy is carried out to optimize revenue by setting the selling price so that the selling price of both bulk and retail bagged cement is not uniform throughout Indonesia. The determination of selling prices and market competition maps is supported by the improvement of digitized marketing information systems to see specific micro markets in the form of demand growth trends, competitor price differences, promotions, and consumer responses to produce fast strategies in accordance with market conditions to maximize profits for the company.

The development of a product strategy is carried out to implement a value proposition where the company strives to meet the needs of its consumers, for example, by providing cement with low carbon emissions to meet the demand for environmentally friendly cement, including the preparation of derivative products such as readymix to meet the demand for fast-term construction such as road repairs. PT Semen Indonesia (Persero) Tbk continues to carry out research and empower subsidiaries that process derivative products to suit consumer needs so that it will maintain consumer expectations to ensure consumer loyalty to PT Semen Indonesia (Persero) Tbk products. This will provide value to the company and allow it to remain a going concern.

Cost management strategies are implemented to keep costs as efficient as possible so as to maximize company profits. There are three main costs in the cement industry, namely coal fuel, electricity costs, and transportation costs. Fuel costs are costs that are influenced by the price of coal. At the end of 2021, there was a supply-demand imbalance in coal, where the supply that was stopped during COVID could not meet demand when the market began to improve. The company was affected by the increase in coal prices. However, this can still be controlled because not all coal mining companies have implemented the domestic market



obligation. PT Semen Indonesia is saved from this condition in 2022 because management has a good long-term relationship supported by the use of coal in operations of large size. Increasing coal prices will put pressure on profits, so management needs to raise prices to stabilize profits. On the other hand, the choice to raise prices will result in reduced market demand as consumers opt for cheaper cement products.

To keep fuel costs from jumping significantly, management tried to switch to using alternative fuel and raw materials (AFR). Related to the cost of electricity and the increasing need for electricity, the management of PT Semen Indonesia (Persero) Tbk is trying to switch to using solar panels by utilizing the vast ex-mining land. This solar panel will be built and developed on an offtake contract basis to obtain a lower tariff compared to the existing coal-fired power plant. Transportation costs for the domestic market are high due to Indonesia's archipelago, and cement is a heavy but low-value material that is costly to transport. There are currently 3000 routes, with the help of 10,000 trucks and 30 ships for distribution. Basically, there is already a logistics ecosystem in these distribution routes, so cost-efficiency strategies can be carried out by sharing existing distribution capacity with companies that have the same interests in logistics.

Regarding strategies related to sustainability aspects, it should be noted that the cement industry is very sensitive to environmental issues. This is because this industry contributes to large carbon emissions. The mission of all companies, including PT Semen Indonesia (Persero) Tbk, is to reduce carbon emissions to net zero emissions. The strategy is to implement a fuel replacement program, reduce the clinker factor (reduce coal consumption), and develop solar panels. Apart from the operational aspects of the company's business and sustainability, an overview of the condition of PT Semen Indonesia (Persero) Tbk can also be seen from the financial aspect. As with the discussion on the operational aspects of the company's business, costs are also still a major concern when viewed from a financial perspective. Coal, as the main fuel for the cement industry, contributes as much as 25% to the total COGS of PT Semen Indonesia (Persero) Tbk. The decline in coal prices from the second semester of 2022 to the first semester of 2023 resulted in a significant reduction in the operational costs of PT Semen Indonesia (Persero) Tbk. Cost efficiency helps PT Semen Indonesia (Persero) Tbk boost the company's bottom-line profit.

Figure 1. Financial Ratio of PT Semen Indonesia (Persero) Tbk

Rasio-rasio keuangan						Financial Ratios
Margin laba bruto (%)	29,35	31,95	33,62	31,50	30,40	Gross profit margin (%)
Margin laba usaha (%)	12,71	14,19	16,06	15,32	15,90	Profit margin (%)
Margin laba bersih (%)	6,50	5,58	7,94	5,93	10,03	Net profit margin (%)
Margin EBITDA (%)	21,88	23,55	25,80	21,55	21,43	EBITDA Margin (%)
Rasio EBITDA terhadap bunga (x)	5,57	4,78	3,91	2,71	6,86	EBITDA to interest expense (x)
Rasio laba terhadap ekuitas (%) ^{b)}	5,53	5,31	8,17	7,41	9,87	Return on Equity (%) ^{b)}
Rasio laba terhadap total aset (%)	2,85	2,50	3,58	3,00	6,06	Return on Asset (%)
Rasio lancar (%)	144,54	110,62	131,92	136,10	196,72	Current ratio (%)

Source: Annual Report 2022 of PT Semen Indonesia (Persero) Tbk

Apart from coal prices, PT Semen Indonesia (Persero) Tbk also continues to strive for efficiency in terms of operating expenses, especially by postponing certain expenses or work. The efficiency of expenses and postponement of some work have also enabled PT Semen Indonesia (Persero) Tbk to pay off its debts in the past. Apart from cost efficiency, PT Semen



Indonesia (Persero) Tbk also received windfalls from tax relaxation policies during the pandemic, which further boosted the company's productivity and had an impact on the economy. PT Semen Indonesia (Persero) Tbk is very oriented towards profitability instead of other financial indicators, so that all types of company strategies are prioritized to make a profit. As a result, PT Semen Indonesia (Persero) Tbk has always been able to maintain the company's bottom line, one of which is shown by the EBITDA margin, which is still in the range of 22% for 2022. Even the company's EBITDA margin has been consistently positive and stable above 20% since 2018.

The good financial fundamentals of PT Semen Indonesia (Persero) Tbk, as depicted in Figure 1, can also be seen from the company's dividend policy. PT Semen Indonesia (Persero) Tbk strongly prioritizes company growth, which is balanced with dividends distributed to shareholders. The dividend payout ratio value of PT Semen Indonesia (Persero) Tbk, which exceeds 65%, is considered appropriate so that it still allows the company to reinvest through capital expenditure in the context of company expansion. In addition, the company's dividend policy also takes into account the WACC, or weighted average cost of capital. A decrease in the company's debt level in the past has lowered the company's WACC. In the future, PT Semen Indonesia (Persero) Tbk will be more aggressive in reducing the equity portion through a large dividend policy, so that it will further reduce WACC.

Apart from the financial aspect, another crucial factor that shows that the company's operations are in good condition is the success of PT Semen Indonesia (Persero) Tbk in obtaining coal fulfillment through the DMO (Domestic Market Obligation) mechanism. PT Semen Indonesia (Persero) Tbk is the only business actor in the country's cement industry that obtains coal supply through the DMO mechanism; in other words, PT Semen Indonesia (Persero) Tbk is a priority in obtaining supplies from domestic coal companies. The existence of DMO also encourages PT Semen Indonesia (Persero) Tbk to buy coal based on the reference price set by the Ministerial Regulation. This clearly has a boosting effect on the productivity of PT Semen Indonesia (Persero) Tbk, in addition to producing fuel cost efficiency impacts. The results of interviews and secondary data provide the fact that PT Semen Indonesia (Persero) Tbk is in good and complete condition from the second semester of 2022 to the first semester of 2023.

The overview of PT Semen Indonesia (Persero) Tbk in terms of industry, operations, and finance boils down to one important aspect, namely, investment in the issuer of PT Semen Indonesia (Persero) Tbk. As many as 30% of SMGR's public investors are retail investors, and 70% are foreign investors. The majority of retail investors who make purchases on this issuer always have a short-term view with the expectation of a fast return. Typical of these investors are those who are very sensitive to any information about PT Semen Indonesia (Persero) Tbk. This type of investor is even allegedly very diligent in monitoring the condition of cement demand in Indonesia because it has the assumption that demand is directly correlated to company fundamentals, which will ultimately drive the share price. Retail investors also generally expect consistent profitability growth from PT Semen Indonesia (Persero) Tbk, which will encourage an increase in share prices and returns. In addition to return on investment, there are other things that also become aspects of investors when deciding to invest in PT Semen Indonesia (Persero) Tbk, namely ESG aspects and corporate sustainability because the cement industry itself includes business activities that discharge emissions into the air, so PT Semen Indonesia (Persero) Tbk has a vision to be net zero carbon.

Until now, the share price has not been able to become a component of the company's KPI. The main reason is the relevance of the share price to the control of the company, considering that unlike in European and American countries, which have a large market cap because many people invest in stocks, in Indonesia there are still relatively few people who



invest in stocks. In addition, investors in Indonesia still prioritize macroeconomic factors instead of industry-specific ones, thus further reducing the relevance of the share price to the company's KPIs. PT Semen Indonesia (Persero) Tbk admitted that it cannot control the issuer's stock price in the capital market, so it can be concluded that the ups and downs of stock prices are not directly related to the company's operational activities. Complementing the interview data that has been obtained, additional analysis is needed of secondary data on events that occurred within a linear period of time with the phenomena seen. The data includes capital market conditions in the period from November 2022 to May 2023.

Figure 2. Time and Price Range for SMGR



Source: Tradingview 2023

Figure 3. ICE Newcastle Coal Chart



Source: www.investing.com in 2023

The technical aspects of Semen Indonesia, or SMGR shares, showed a sharp decline of 32.61% in a period of 182 days from November 4, 2022, to May 5, 2023 (see Figure 2). This decline did not occur continuously but was interspersed with pullbacks several times before continuing the decline. The price rebound only occurred on Monday, May 8, 2023. The phenomenon of fluctuations in price increases and decreases does seem normal, but the



condition of the company PT Semen Indonesia (Tbk) Persero in the time span of the price decline actually shows a good condition with supporting fundamentals. This result can be seen from the previously analyzed interviews, where there are several indicators that show the good condition of the cement industry and the fundamentals of PT Semen Indonesia (Tbk). Another condition, as revealed by the interviewee, is the drastic decline in coal prices in the second semester of 2022, as shown in Figure 3.

Figure 4. Income Statement 2022 of PT. Semen Indonesia (Tbk) Persero

PT SEMEN INDONESIA (PERSERO) Tbk DAN ENTITAS ANAK/AND ITS SUBSIDIARIES				
LAPORAN LABA RUGI DAN PENGHASILAN KOMPREHENSIF LAIN KONSOLIDASIAN UNTUK TAHUN – TAHUN YANG BERAKHIR 31 DESEMBER 2022 DAN 2021 (Dinyatakan dalam jutaan Rupiah, kecuali dinyatakan lain)			CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021 (Expressed in millions of Rupiah, unless otherwise stated)	
	Catatan/ Notes	2022	2021 *)	
PENDAPATAN	24,32	36.378.597	36.702.301	REVENUES
BEBAN POKOK PENDAPATAN	25,32	(25.700.993)	(24.975.639)	COST OF REVENUES
LABA KOTOR		10.677.604	11.726.662	GROSS PROFIT
Beban penjualan	26a	(2.954.272)	(3.296.981)	Selling expenses
Beban umum dan administrasi	26b	(3.154.186)	(3.193.532)	General and administration expenses
Penghasilan keuangan	32	98.583	170.728	Finance income
Beban keuangan	27,32	(1.427.618)	(1.808.086)	Finance costs
Bagian atas hasil bersih entitas asosiasi dan ventura bersama		2.396	(32.746)	Share of result of associates and joint venture
Pendapatan (beban) operasi lainnya - bersih	28	56.328	(28.341)	Other operating revenues (expenses) - net
LABA SEBELUM PAJAK PENGHASILAN		3.298.835	3.537.704	PROFIT BEFORE INCOME TAX EXPENSE
Beban pajak penghasilan	9d	(799.752)	(1.420.468)	Income tax expense
LABA TAHUN BERJALAN		2.499.083	2.117.236	PROFIT FOR THE YEAR

Source: Annual Report of SMGR 2022

Figure 5. Income Statement 2022 PT. Indocement Tunggul Prakarsa (Tbk) Persero

PT INDOCEMENT TUNGGAL PRAKARSA Tbk DAN ENTITAS ANAK/AND SUBSIDIARIES				
Halaman 4 Page				
LAPORAN LABA RUGI DAN PENGHASILAN KOMPREHENSIF LAIN KONSOLIDASIAN UNTUK TAHUN-TAHUN YANG BERAKHIR 31 DESEMBER 2022 DAN 2021 (Dinyatakan dalam jutaan Rupiah, kecuali laba per saham dasar)			CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE YEARS ENDED 31 DECEMBER 2022 AND 2021 (Expressed in millions of Rupiah, except basic earnings per share)	
	2022	Catatan/ Notes	2021	
PENDAPATAN NETO	16.328.278	20	14.771.906	NET REVENUES
BEBAN POKOK PENDAPATAN	(11.185.120)	21	(9.645.624)	COST OF REVENUES
LABA BRUTO	5.143.158		5.126.282	GROSS PROFIT
Beban usaha	(3.334.297)	22	(3.218.741)	Operating expenses
Penghasilan lain - neto	417.621		163.325	Other income - net
Pendapatan keuangan	104.414		213.650	Finance income
Biaya keuangan	(42.914)		(31.636)	Finance costs
Bagian atas laba bersih entitas asosiasi - neto	22.843		24.191	Share of net profit of associates - net
Pajak final	(21.516)		(43.069)	Final tax
LABA SEBELUM BEBAN PAJAK PENGHASILAN	2.289.309		2.234.002	PROFIT BEFORE INCOME TAX EXPENSE
BEBAN PAJAK PENGHASILAN - NETO	(446.875)	11c	(445.506)	INCOME TAX EXPENSE - NET
LABA TAHUN BERJALAN	1.842.434		1.788.496	PROFIT FOR THE YEAR

Source: Annual Report of SMGR 2022

Coal is the main fuel cost for the cement industry because coal is used to burn raw meal into clinker. The interview results show that coal represents 25% of the total cost of goods sold (COGS), so a significant decline in coal prices will greatly contribute to cost efficiency, which can drive an increase in profits for the company (see Figure 4). In addition to operational costs, the interviewee also said that PT Semen Indonesia also recorded good achievements in terms



of corporate finance, namely a decrease in interest expense and a positive total profit for the years 2022 and Q1 of 2023. PT Semen Indonesia's financial performance recorded positive results, as portrayed in Figure 5, even much better than other construction sector State Owned Enterprises -SOE- (Hutama Karya, Wijaya Karya, Waskita Karya, Adhi Karya, and Pembangunan Perumahan). PT Semen Indonesia's net profit is even ahead of its main competitor, PT Indocement Tungal Prakarsa (Tbk).

Research and analysis conducted on PT Semen Indonesia (Tbk) Persero shows that the company had good conditions and performance during the period from semester 2 of 2022 to semester 1 of 2023, specifically from November 2022 to May 2023. The company's good condition is also reinforced through interviews with sources directly involved in the cement industry and secondary data that displays the performance of PT Semen Indonesia (Tbk) Persero. In accordance with efficient market theory, according to Godfrey et al. (2010), security prices reflect all available information about their fundamental value. The theory suggests that markets are efficient in incorporating publicly disclosed accounting information, and investors who buy or sell securities in efficient markets rely on this information. In simple terms, it can be said that a good and rising stock price indicates that the company is in good condition, and a low or falling stock price indicates that the company is not in good condition. Based on this grand theory, in the period from November 2022 to May 2023, when the condition and performance of PT Semen Indonesia (Tbk) Persero were in good condition, it should have been followed by an increase in share price, but the opposite happened. The price of the SMGR issuer experienced a rapid decline of up to 32.61% within 182 days (about 6 months). This is certainly an anomaly when the condition of PT Semen Indonesia (Tbk) Persero shows good parameters both in operational and financial terms. Several studies have been conducted and produced empirical findings that challenge the validity of efficient market theory today.

The condition of PT Semen Indonesia (Tbk) Persero, which is not in accordance with efficient market theory, is also similar to research conducted by Kiky et al. (2018), which states that the capital market in Indonesia is inefficient. The research is evidenced by the lack of effect of information reporting on price volatility and the existence of stocks with high performance that actually have a small sensitivity to price changes. The study emphasizes the efficient market shown by the high volatility of stock prices on any existing company information. Other research also conducted by Urquhart and McGroarty (2016b) shows that efficient market conditions are not limited to yes and no because the predictability of linear and nonlinear stock returns varies over time, so it is not limited to depending on the information provided by the company. Another study conducted by Khoa and Huynh (2021) found that market conditions generally have weak efficiency, so abnormal returns can be sought in various ways. Inefficient or weak-efficiency markets can be an opportunity for trading. Another study conducted by Caporale et al. (2019) on various financial markets found that there are always anomalies in every market that can be a source of profit, and that is not consistent with efficient market theory.

Efficient market theory has been continuously refined over the past few decades to reflect market realism, including costly information, transaction costs, financing, agency costs, etc. (Ang et al., 2011b). The implication of this theory for investors is that speculative trading is expensive, and investors cannot generate consistent returns with active strategies in the long run. Scientifically, efficient market theory has played an important role in the evolution of accounting research. It has also been used in market-based accounting research (MBAR) to evaluate the relationship between publicly disclosed accounting information and the consequences of its use by investors (Woolley & Fellow, 2014). The theory is closely related to the capital asset pricing model (CAPM), which proposes that markets are efficient in incorporating publicly disclosed accounting information, and investors who buy or sell



securities in efficient markets rely on this information (Margotta & Donald, 2015). The whole context suggests that the efficient market, which is utopian in academia, is also assumed to occur in real life in the capital market, that investors rely heavily on information about a company, and that the price of a stock is formed by the collective action of investors who know information about the company. In reality, this is difficult to do. Research with interviews and literature studies of secondary data on PT Semen Indonesia (Tbk) clearly shows that the share price continues to fall dramatically in the same period when the company's operational and financial performance is good. This also shows that the stock market price is much more influenced by other factors outside of information about the company's condition.

Phenomena that occur in the capital market more often show that the movement of a stock price is not always determined by the condition and performance of the company (Daariy et al., 2023; Deka et al., 2020; Harinuridin, 2022; Hwang, 2022; Maria Yessy Christy, 2016; Salim & Prasetya, 2022). These phenomena include foreign net sell when macroeconomic conditions are bad (Daariy et al., 2023) or the existence of market makers in the capital market who control or hold the price of a stock (Wahal, 1997; Xiong & Cont, 2021). Another phenomenon is the purchase of a large number of shares by a small number of people, which raises the price of the shares. Another most common phenomenon is insider traders who get abnormal returns from access to capital market insiders (Biggerstaff et al., 2020; Davidson & Pirinsky, 2021; Steinberg, 2021). At this time, financial information and company conditions become meaningless and even tend to be ignored by investors in making decisions regarding a stock when other methods or methods have more potential to provide profit, and this in the long run collectively certainly greatly affects market movements to be inefficient (Kukreti et al., 2023; McMillan et al., 2020; Sixpence et al., 2020).

CONCLUSION

The objective of this research was to investigate the applicability of the Efficient Market Hypothesis (EMH) to PT Semen Indonesia (Persero) Tbk, specifically examining whether stock price movements accurately reflect the underlying operational and financial conditions of the company. Through a combination of interviews and literature reviews, the study sought to discern the correlation between the company's publicly reported condition and its stock market performance. The findings of this research indicate that the EMH does not fully apply, or at least applies only weakly, to PT Semen Indonesia (Persero) Tbk. Despite the company exhibiting operational and financial improvements from November 2022 to May 2023, the stock prices during the same period showed a downward trend. This outcome is inconsistent with the EMH, which posits that stock prices should vary in direct response to all accessible information about a company's state, theoretically making stock prices a perfect representation of the company's condition at any given time. The discrepancy observed in the case of PT Semen Indonesia (Persero) Tbk, where stock prices did not mirror the company's improving condition, underscores the potential influence of external factors or market inefficiencies. This divergence from the expectations of the EMH suggests that other dynamics, possibly including investor sentiment, market perceptions, or external economic factors, play a significant role in shaping stock price movements, beyond the immediate financial and operational metrics of the company.

This research derives its novelty primarily from its unique data sources, particularly through interviews conducted with high-level executives in the Indonesian cement industry, including a Senior Vice President at PT Semen Indonesia and a former manager at Semen Baturaja. These interviews not only contribute to the discussion on the limitations or inapplicability of the Efficient Market Hypothesis but also provide granular insights into the operational realities of the cement industry and PT Semen Indonesia (Persero) Tbk. Significant



new insights were unearthed from these discussions, with one of the most critical revelations pertaining to the strategic maneuvers of the company. This knowledge enriches the existing literature by introducing previously undisclosed details about strategic decision-making processes within PT Semen Indonesia, thereby offering a deeper understanding of its market behavior.

Looking forward, this research opens several avenues for further investigation. Future studies could benefit from a more detailed comparative analysis between PT Semen Indonesia (Persero) Tbk and other state-owned enterprises in the construction sector, as well as its competitors. Moreover, the strategies employed by the company present a rich topic for deeper exploration in subsequent research endeavors. Despite its contributions, this study acknowledges certain limitations, particularly the constraints associated with the use of qualitative interviews as the primary method of data collection. The reliance on a limited number of interviews, while insightful, restricts the breadth of data available and may not fully capture the complexity of the industry dynamics. Furthermore, the lack of additional data sources for triangulation could affect the robustness of the conclusions drawn. The identified gaps and limitations of this research are intended to serve as a foundation for future studies, encouraging further scholarly inquiry into this sector and potentially leading to a more comprehensive understanding of the market forces at play. This progression is crucial for advancing academic discourse and practical applications in the field of market economics and business strategy.

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