
PRELIMINARY REPORT

Corporate News Disclosure and Competitive Advantage: What Factors Influence S&P 500 Companies' Competitive Advantage During 2022 Economic Crisis?

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ABSTRACT

This paper aims to explore corporate news related to the topic of the competitive advantage of S&P 500 companies in the period of the economic crisis in 2022. The observed companies are the biggest US companies listed on the New York Stock Exchange (NYSE). The computerized qualitative analyses were done on 200 corporate news from January 2022 until November 2022, with 13,361 pages and 5,294,836 words. The research results prove that the US biggest companies disclosure intensively in public about their competitive advantage with 90.29% including text samples from initial corpus text. The companies disclosure about 4 main topics (factors) during this year's crisis: (1) profitability; (2) financial market performance; (3) products and services; (4) top management leadership. The research article contributes to the current literature on competitive advantage narratives, how the biggest companies tend to achieve competitive advantage during the economic crisis and address messages to their stakeholders. These messages could be of the highest importance mostly because of existing uncertainties and high levels of risks.

Keywords: *corporate news disclosure, competitive advantage, S&P 500 companies, economic crisis*

JEL Classification: M14, L25, H12

INTRODUCTION

The main company's goal is to gain a long-term competitive advantage. In such a dynamic, global, and competitive market as it is at the moment, gaining a competitive advantage is not an easy task. In the last three decades, the market has changed dramatically. To better adapt to the continuously evolving global market, companies used their flexibility and efficiency in combination with advanced technology. This includes all different types of the latest technology that will result in better performance (Li et al., 2020), and further sustainable competitive advantage (Sakas et al., 2014). The focus completely changed, from supply-based, where the focus was on producers, to demand-based and complete concentration on customers. Even though we are witnessing radical changes, quantitative and financial factors of success remained the same (Petković et al., 2020). Because of that, companies are looking for more advanced tools that will not only focus on financial factors, but on non-financial perspectives as well (Jackson et al., 2020; Tsai et al., 2016).

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The studies published by Bodnaruk et al. (2015) and Campbell et al. (2014) proved the influence of qualitative data in the full-text corporate filings (10-K form) and corporate news on companies' final performance. The authors talked about the usefulness of such qualitative data in reducing risks coming from the external environment. Public news disclosure influence significantly on investors' attention and perception. Unlike newspaper media, corporate news is written by the company's management to communicate the company's performance as well as potential plans. Odders-White & Ready (2008) talked about the influence of qualitative information on a company's performance, precisely on asset value and stock prices. Such corporate news and information can improve an existing company's performance, lead to competitive advantage and reduce risk, especially in crisis moments.

The main research objective is to explore corporate news disclosure in the S&P 500 biggest companies related to the topic of competitive advantage. Corporate news disclosure will lead us to the main factors (independent variables) that influence competitive advantage during the 2022 economic crisis. International Monetary Fund (2022), in its latest annual report, talks about rising economic risks coming from the previous pandemic crisis, current economic challenges and high levels of uncertainties linked with higher inflation and interest rates, a drop in employment and investments, and higher levels of risk across different industries. The research results can, even more, motivate top managers and decision-makers to focus on the selected factors and to invest in them, which will result in constant and long-term competitive advantage. Until now, the main focus was on immediate and short-term results such as profits, sales, and share prices, and not so much on long-term constant and stable economic benefits. The study is focused on S&P 500 companies listed on New York Stock Exchange (NYSE) because it is a sample of the most profitable companies (Uygur, 2019), but also the most successful (Wang et al., 2022) in the world.

The research has three main contributions to the literature. First, we contribute to the literature by proposing the factors that impact on company's competitive advantage. The research paper results proved to us that four main factors create a company's competitive advantage in crisis moments. Second, we document that factors related to competitive advantage are very intensive and cover almost all corporate communication. Without high frequency, it is difficult to expect the impact of the selected four factors on final performance. Finally, we highlight indicators and precise narratives of each factor, which is explained in cluster text formations. It is of the highest importance to take into consideration precise indicators of each factor in order to gain long-term competitive advantage. Companies' decision-makers should focus on these indicators, invest and monitor their performance over time.

The research paper is composed of five main sections. Section 2 presents the literature review. Section 3 works on the research methodology, whereas Section 4 explains the final results. Finally, section 5 concludes the paper.

LITERATURE REVIEW

Corporate News Communication and Disclosure

Corporate communication is seen as a powerful tool in investment decision as they provide information about a firm's plans, strategies, business models and further development. Very often, corporate and qualitative news is followed by quantitative information presented in the company's accounts (Albertini et al., 2021). Corporate communication is especially important in improving and growing a company's reputation, brand and corporate image. It can be seen as a tool for market expansion only if a company shares positive and mixed information (Heinberg et al., 2018). Public communication is very important because it injects the necessary information into the market and facilitates the investors' decision maker processes. It can also significantly influence the predictability of certain financial performances (Ozik & Sadka, 2013). Campbell et al. (2014) highlighted the benefits of the possibility for companies to publish and disclose the information freely provided by top management. The free-text risk factor significantly reduces

potential risks for all current and future investors. Kravet & Muslu (2013) confirmed the previous statement and expanded with the justification that changings in companies' text disclosure influence future investments in that company. Attention paid to the 10-K filings has to be the highest because it shapes the company's future growth.

News in corporate publications is a very important tool for communication with its key stakeholders. This corporate communication can clarify different confusion in the market, reduce risk, limit uncertainty for the market participants, and improve performance. Companies communicate variables that they want to improve (Aman & Moriyasu, 2022). One of the most important stakeholders of every organization is the customer. Transparency of corporate disclosure sends an important signal to customers (Higgins et al., 2020). It also brings the sincerity of a company's motives. It is very important what the factors present in their corporate disclosure are (Liu et al., 2022; Peschel & Aschemann-Witzel, 2020).

The link between Corporate Disclosure and Competitive Advantage

Authors Kim et al. (2022) worked on the relationship between corporate managerial disclosure and investors' attention on Twitter. 715 unique companies with 86,891 tweets were included in the study. The findings showed that companies with highly positive earnings use this platform to publish even more posts related to earnings information, which resulted in even higher earnings improvement. On the other side, companies with bad earnings publish posts mostly related to non-earnings-related information on Twitter. It is also very important that companies strategically decide the format of tweets (whether qualitative or quantitative information) and the tone of earnings tweets (whether positive or negative). Continuous and sustainable strategic publications led these companies to long-term advantages compared to their competition.

Authors Aman & Moriyasu (2022) proved that corporate news communication impact significantly company's competitive advantage. Moreover, a company's returns and liquidity increase more when news is disseminated by corporate disclosure rather than mass media. A study published by Liu et al. (2022) proved that transparent corporate disclosure brings higher customer confidence and improves competitive advantage. Studies published by Bodnaruk et al. (2015), Campbell et al. (2014), Loughran & McDonald (2011), Tetlock (2007), and Tetlock et al. (2008) justified the relationship between the value and impact of qualitative information on stock market performance. Studies proved that full-text corporate filings shed light on the usefulness of this information. Kravet & Muslu (2013) confirmed that changings in corporate news disclosure influence stock market prices, trading volume, and stock return volatility. Corporate news disclosure increases or decreases risks that are further associated with financial market performance and, finally, with the company's competitive advantage. Einwiller & Carroll (2020) confirmed that negative corporate communication significantly influences final success.

Being Competitive in Crisis Moments

Authors Petković et al. (2020) discussed the importance of gaining a company's competitive advantage. Gaining a competitive advantage is not an easy, short-term task. It comes from a long-term period of investments, both financial and non-financial. Each company is part of a vast global market. Unfortunately, companies' performance and competitive advantage do not depend on themselves only. Companies' performance and competitive advantage depend on major industry, macro and global events (Baker et al., 2020). The recent crisis showed us that each company has to adapt to new circumstances in order to stay competitive in the market. These new crisis circumstances brought a high level of risk and uncertainties, oscillations of values in resources, higher interest rates, and inflations (Ding et al., 2021). Burdekin & Tao (2021) stated that crisis moments caused significant fluctuations in global markets, starting with energy, cryptocurrencies, and capital resources.

According to Uddin et al. (2022) company's competitive advantage allows corporate resilience and the possibility to better and faster overcome difficulties during crisis moments. This position is possible to achieve only with managerial abilities, investor sentiment, and customer loyalty. Customer loyalty creates additional value and provides a sustainable competitive advantage as well as financial benefits during crisis moments. Customer loyalty reduces systematic corporate risk (Dou et al., 2021). In his study, Petković (2022) focused on public disclosure of the biggest US banks during the period of crisis. It was qualitatively proven that financial institutions disclose intensive topics that they want to improve, such as profitability, economic growth, utilization of resources, and environmental activities. Literature suggests that companies have to focus on organizational systems, processes, management practices, leadership styles, and corporate communication to provide sustainable, productive, and effective results (Hasan & Cheung, 2018). Given that those segments give results, their role, even more, becomes important during shocks, crises, or restructurations (Boubaker et al., 2022; Nemlioglu & Mallick, 2020).

DATA AND METHODOLOGY

Data Sample Explanation

The research paper focuses on corporate news related to corporate performance in the period of the economic crisis in 2022. The period of observation was from the 1st of January 2022 until the 22nd of November 2022 (when data was exported). Corporate news is publicly available news. The sample includes the 500 biggest US companies that belong to the S&P 500 indexed companies. The companies are listed on the New York Stock Exchange (NYSE).

Qualitative Analysis by Statistical Software

To proceed with lexical qualitative analysis of the selected sample of corporate news, using 'Bibliometrix package' from the R software made it possible to characterize the sample. For the study, a protocol for performing textual analysis was created by IRaMuTeQ software developed on Python language (Interface de R pour les Analyses Multidimensionnelles et de Questionnaires) (Ratinaud, P., 2014). The software gives a rigorous textual data analysis in the field of management sciences (Goulart et al., 2020). This method is used to link the word to its natural context because meaning depends on the position of the word in some semantic space. Two rules have to be considered: First, words are considered important according to their frequency in the corpus text; Second, words are linked to the lemma they belong. Both singular and plural words belong to the same lemma (Albertini et al., 2021). Within the corpus text, each article is known as the Initial Context Unit (ICU). Each text segment that forms each class is defined as Elementary Context Unit (ECU). Qualitative data analysis allows us to identify the association between text segments and their retrieval (Souza et al., 2018).

For the purpose of our study, Reinert's method and Word cloud analyses were used for clustering and analyzing the corpus text. Reinert's method reveals the main topics of companies' disclosure (Aversa et al., 2022). The Word Cloud analysis identifies the lexicographical formations of words with the highest representativeness within the corpus text (Lee, 2020). The research study sample was composed of 200 articles of full text, 5,294,836 words, and 26,373 forms. A computerized lexical content analysis method allowed us to identify the strategic intentions of the topic expressed in the companies' official corporate news.

Preparing the Text Corpus

The research paper corpus text was composed of 200 articles in 2022. The corporate news was obtained from the Clarivate database ProQuest. The corpus text was created by copying the body of the text of each article into a text document. The corpus text was composed of 13,361 pages of

pure text. After the whole text was copied into the text document, it was applied to the IRaMuTeQ software. The IRaMuTeQ software possesses the English dictionary related to managerial topics. The software's dictionary will allow the whole corpus text to lemmatize into different categories or clusters. Lemmatization of texts conserves singular forms of nouns and infinitive forms of verbs in order to be grouped into semantic categories or clusters.

RESULTS AND DISCUSSION

Reinert's Method Results

This first level of the analysis showed us that the corpus was made of 5,294,836 words, with 26,373 different forms. This phase covered 90.29% words of the whole starting corpus text, 151,074 text segments, 30,348 forms, 26,373 lemmas, 19,957 active forms, and 6,416 supplementary forms. Such a high-level percentage means that the companies communicated about the same topics during the observed period. The elements previously presented are grouped into 4 main clusters or categories (Figure 1).

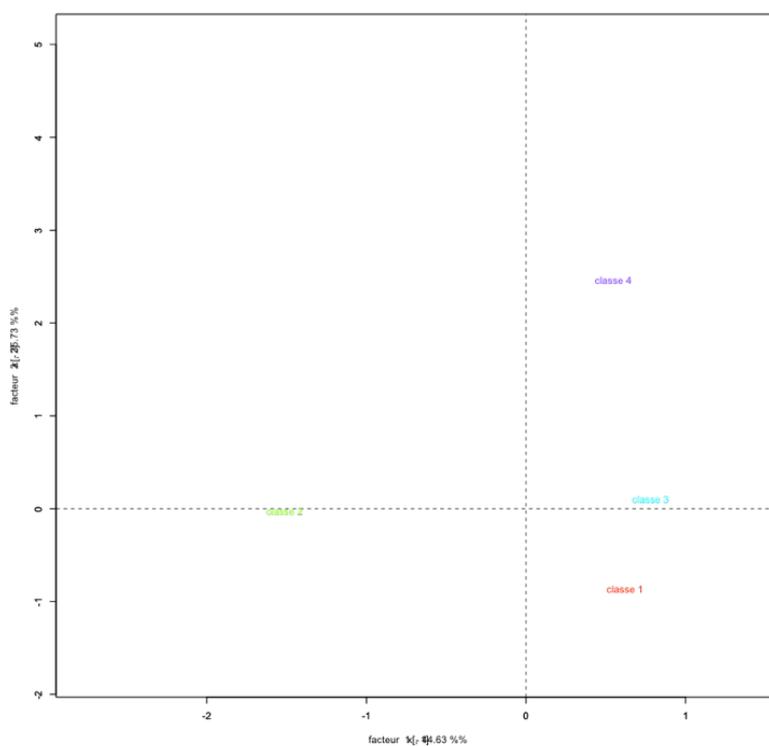


Figure 1. A factorial representation of 4 semantic clouds

Source: Author's calculation

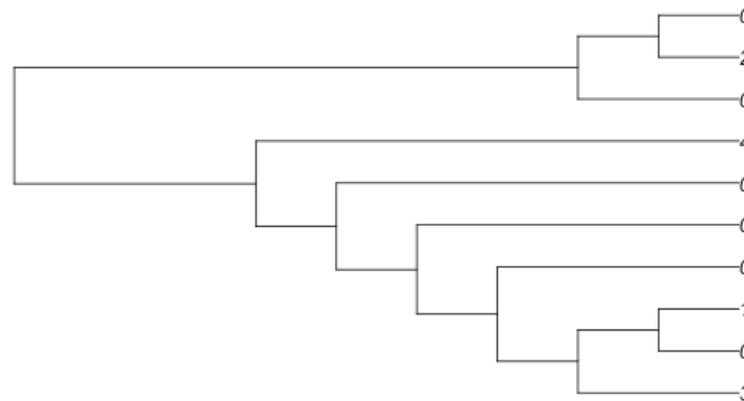


Figure 2. Dendrogram of 4 main clusters of corpus text

Source: Author's calculation

Table 1. Categories revealed in phase 1

Category	Name	% of forms analyzed
Category 1	Profitability	34.79%
Category 2	Market Performance	34.70%
Category 3	Products and Services	19.16%
Category 4	Leadership	11.35%

Source: Author's calculation

Figures 1 and 2 allowed us to understand more dynamically the most important relationships between the categories (variables) in a factor plan. To be considered in the clustering analysis, each word must be repeated a minimum of ten times in the corpus text. As we can see, all four categories are independent and homogeneous from each other, and we do not have overlapping. This means that the selected companies were communicating very precisely and very intensively about these four topics. Category 1 consists of vocabulary related to profitability (*cash, income, payment, revenue, net income, profit, finance, money, etc.*). Category 2 talks about the market performance of the company (*share, price, market, eps, dividend, index, yield, stock, value, etc.*). Category 3 covers words related to the company's products and services (*product, service, goods, price, production, demand, supply, etc.*). Finally, category 4 communicates vocabulary related to top management and leadership (*leader, president, management, director, executive, chairman, etc.*).

From the relationships between categories in Figures 1 and 2, we can state that Category 2 – Market Performance correlates towards Category 4 – Leadership, Category 4 – Leadership towards Category 1 – Profitability, and Category 3 – Products and Services. We can conclude that performance in the financial market depends on the performance of the leader of the company, whereas the company's top management performance depends on profitability and products and services.

This level of analysis proved to us that Categories 1 and 3 shared notions and appeared to be very close to each other on the figures. Both categories were communicated dominantly with 34.79% and 34.70%, respectively, during the 2022 economic crisis. Most companies' public disclosure is spent on communicating their profitability and product offerings. On the other side, Category 4 and Category 2 were separated. The percentage of communication in these categories was 19.16% and 11.35%.

Four main variables or categories are presented in the factor plan. The factorial analysis produces distances of words and proximity from the initial corpus text. This analysis includes the calculation of chi-square correlation values for each variable, frequencies, and contingency table

that crosses the active forms and the variables. X-axis (or factor 1) refers to the distribution and distance from variables. Y-axis (or factor 2) indicates a tangibility of the relationship between variables. The position of the variable is very important and shows us how these four variables are distributed. The factor plan has abscissa with the value of factor 1 (positive and negative abscissa) and ordinates with the value factor 2 (positive and negative ordinate). Class 2 was found in an area of negative abscissa and ordinate. Classes 3 and 4 were found in an area of positive abscissa and ordinate. Class 1 was found in an area of positive abscissa and negative ordinate. From the above mentioned, we can conclude that Classes 1 and 3 are close distance with a strong tangible relationship.

Similar research focused on the importance of voluntary disclosure in a company's letters to shareholders on final performance. On a European sample of companies, Albertini (2021) proved that lexical analysis of top management disclosures on continuous innovations, managerial competencies, and stakeholder values significantly improves competitive advantage. Nevertheless, authors Albuquerque et al. (2020), Berman et al. (2019) and Huang et al. (2021) expand and state that stakeholders' loyalty reduces risks and keeps firms' value stable during uncertain times. (Petković, 2022) proved intensive corporate news disclosure on factors that positively influence the biggest US banks' performance.

Word Cloud Analysis Results

The Word Cloud analysis showed us the most frequent words related to the main 4 factors in the corpus text. In Table 2 and Figure 3 below, the results are presented:

Table 2. First 10 Most Frequent Active Forms

Form	Frequency	POS
Year	30,894	Nom
Share	27,033	Nom
Net	23,500	Nom
Million	22,400	Nom
Company	20,648	Nom
Price	20,040	Verb
Asset	19,385	Nom
Value	19,282	Verb
Total	16,232	Nom
Revenue	16,184	Nom

Source: Author's calculation

The Word Cloud analysis allowed us to visualize better the lexicography of the most representative and most frequent words investigated in the corpus text. Given that the words *year*, *share*, *net*, *million*, *company*, *price*, *asset*, *value*, *total*, *revenue*, and *others* were investigated for the specific sample of companies, we found it relevant. The result shows us that the research sample is emblematic of the investigation of the corpus text.

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