PressAcademia
www.pressacademia.org/journals/jefa
JEFA
ISSN 2148-6697
Journal of Economics, Finance and Accounting YEAR 2024 VOLUME 11 ISSUE 2

THE CONTENT ANALYSIS OF THE COMPANY VALUATION REPORTS IN TURKIYE

DOI: 10.17261/Pressacademia.2024.1953
JEFA- V.11-ISS.2-2024(7)-p.146-160

Selahattin Cagatay Ozturk[1], Guven Sayilgan[2]
[1]Turkish Statistical Institute, Ankara, Turkiye.
selahattincagatayozturk@gmail.com, ORCID: 0000-0002-7373-5310
[2]Ankara University, Faculty of Political Sciences, Business Administration, Ankara, Turkiye.
sayilgan@ankara.edu.tr, ORCID: 0000-0002-4214-7321

Date Received: October 15, 2024 **Date Accepted:** December 2, 2024

To cite this document
Ozturk, S.C., Sayilgan, G., (2024). The content analysis of the company valuation reports in Turkiye. Journal of Economics, Finance and Accounting (JEFA), 11(2), 146-160.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2024.1953
Copyright: Published by PressAcademia and limited licensed re-use rights only.

ABSTRACT

Purpose- This study marks a pioneering effort in researching the scope of valuation reports prepared before initial public offerings in Türkiye. There is a scarcity of literature on the extent of analyst reports in the international arena. The primary objective is to address this significant gap in the existing body of literature. It serves as a valuable resource for academic researchers while also offering highly beneficial insights for brokerage firms and investors. Furthermore, the study has yielded crucial findings relating to regulatory authority regulations and the advancement of capital markets.

Methodology- A total of 116 valuation reports prepared prior to 116 initial public offerings in Türkiye from 2013 to 2021 underwent manual text analysis. A Yes/No algorithm was used to calculate scores for 97 variables under the sections CP, CCI, CFA, CSA, and CVA. The cumulative score across all sections represented the VRCI.

Findings- The average IPO valuation report covers 31 out of 97 variables. The CP indicator has consistently increased, particularly after 2019. The average scores generated from the CCI indicator in valuation reports are relatively low. The CSA indicator scores are notably low. The score for the CVA 1 indicator is also low. The average score of the CVA 3 varies each year, while the CVA 4 indicator shows an increase after 2018.

Conclusion- The valuation reports have significant deficiencies in terms of content. The findings indicate that brokerage firms should mitigate information asymmetry by furnishing comprehensive information in valuation reports. The evidence suggests a need for further development in the capital markets. Despite adherence to international valuation standards and widely accepted valuation principles, the limited coverage in valuation reports contributes to investor information asymmetry.

Keywords: Initial public offerings, valuation, valuation report, content analysis
JEL Codes: G14, G24, G28

1. INTRODUCTION

The efficient market hypothesis states that stock prices incorporate all available information and that stocks are always traded at their fair value. Regulatory authorities also aim to enhance market efficiency through regulations. However, these regulations may elevate the cost of accessing information, potentially leading to decreased information efficiency for investors.

During an initial public offering (IPO), investors participating in the public offering have limited access to information about the company. In preparation for the IPO, brokerage firms create reports about the company, which will be offered to the public for the first time. These reports are then published on the Public Disclosure Platform (PDP) in adherence to the principle of public disclosure, thereby contributing to the information available to investors. Before an IPO, three distinct groups are involved: the company owners, the brokerage firms authorized to conduct the IPO, and the investors participating in the IPO. There is substantial evidence in the literature indicating the presence of information asymmetry between these groups before an IPO, given that company owners and brokerage firms possess insider information.

Four essential reports are related to the IPO process: prospectus, company valuation report which called price determination report on PDP (shortly, we use the term “valuation report”), analyst report, and evaluation report. The Capital Markets Board (CMB) has established regulations governing the issuance of these reports. The prospectus is a comprehensive document providing details about the financial status, prospects, and operations of companies offered to the public for the first time. It also outlines the risks faced by potential investors, as well as their rights and obligations (CMB, 2013). Valuation reports determine the value of the company (VII-128.1 Communiqué on Shares, 2013). Analysis

reports review the information, valuation, and share prices presented in the valuation report from other brokerage firms (VII-128.1 Communiqué on Shares, 2013). Evaluation reports are kind of self-assessments prepared by brokerage firms conducting public offerings after the IPO, explaining the realization or non-realization of expectations addressed in the valuation reports (VII-128.1 Communiqué on Shares, 2013). This study conducts content analysis of the valuation reports issued before the IPO to assess the level of information provided for IPO investors. Valuation reports aligning with valuation approaches will help reduce information asymmetry, promote efficient pricing, and contribute to the development of capital markets.

The study provides valuable contributions to the existing literature. Firstly, there is a notable absence of research in the Turkish literature regarding the scope of valuation reports. While a few international studies have demonstrated the impact of the writing tone and content of reports prepared prior to initial public offerings on price performance and post-offering volatility, this study represents a pioneering effort in Türkiye. Secondly, it underscores the crucial role that pre-initial public offering reports play in the decision-making processes of investors participating in such offerings. The limited scope of valuation reports can significantly influence investor behaviour. Finally, reports prepared before initial public offerings play a critical role in the development of capital markets. The study has yielded insightful results that can guide investors, professionals, and regulatory authorities in the capital markets.

The first section of the study provides general information, while the second section presents existing literature. The third section covers the collected data and methodology. The fourth section presents the results, followed by an academic discussion. Lastly, the study evaluates the results and provides recommendations for investors, professionals, and regulatory institutions in the capital markets.

2. RELATED LITERATURE

Determining a company's value (share price) is a crucial step for investors participating in the IPO. In financial markets, the information prioritized by regulatory authorities and the information valued by investors is differs. While the prospectus takes precedence for the regulatory authority, investors place greater importance on factors such as the public offering price, company valuation, and the company's future expectations (Sırma, 2016). Therefore, while the prospectus is prioritized for regulatory authority, investors emphasize the valuation report more. Consequently, the production and interpretation of the valuation report play a significant role in enabling investors to make more informed decisions (Cowan & Salotti, 2020). Critics argue that financial analysts exhibit bias in their forecasts, set unrealistic targets, and fail to track market trends actively. Despite these criticisms, investors' consideration of analyst reports persists (Cervera, 2016). When uncertainty surrounds a company's value, owners and brokerage firms tend to set a conservative share price. High uncertainty leads to more detailed sectoral information in valuation reports, positively impacting the share price set before an IPO and the IPO's demand level. Nevertheless, even if comprehensive company information is included in the valuation report, there is a phenomenon of under-pricing in IPO. This under-pricing serves as an incentive for IPO participants (Crain et al., 2021). Analyst reports facilitate IPO investor predictions, with various factors enhancing or reducing the report's informativeness. These factors include volatility, trading volume, ownership dispersion, growth prospects, company size, and price/earnings ratios, all elevating report's information level. Conversely, increased the number of institutional investors and analysts who prepare the report contribute to the report's decreased quality. Furthermore, the quality of analyst reports for multi-sector companies are lower (Frankel et al., 2006).

Analysts' reports have two significant impacts from a practical standpoint. The analysts showcasing considerable content competence. However, there is room for improvement concerning their awareness of language use and target audience. On average, the reports contain 7 unexplained abbreviations and 12 unexplained expert terms, leading to issues with comprehensibility. While communication levels are generally satisfactory, some reports need more depth in critical areas such as market position, management, sectoral development, and trends (Whitehouse-Furrer & Perrin, 2015).

Valuations in Türkiye must adhere to International Valuation Standards (IVS) (III-62.1 Communiqué on Valuation Standards in Capital Markets, 2017). These standards have been established to ensure transparent and consistent valuation practices aligned with generally accepted concepts and principles. Adherence to the standards by the valuer implies compliance with all standards (IVS, 2017). Before an IPO, Borsa Istanbul (BIST) and CMB assess various aspects of the company, including its legal status, service/production activities, raw material supply, production process and facilities, sales, ongoing and planned investments, organizational status, relationships with group companies, subsidiaries, and affiliates, as well as positive/negative information about the company such as ongoing litigation processes. They also review license information, know-how agreements, general company, and sector information, permits to be obtained, patents, real estate information, and the company's financials (Borsa Istanbul, 2024). While there is no legal regulation stipulating the form and content of the valuation report, a comprehensive report is expected to comprise five sections: Principles, Company Information, Sector Analysis, Financial Analysis, and Valuation.

The valuation reports necessitate those evaluating and reviewing the reports in an unbiased and competent manner, with sufficient knowledge, qualifications, ability, and experience. The individuals or entities performing the valuation must also be appropriately licensed (IVS, 2017). Analysts are held responsible for confirming the information acquired by investors (Cervera, 2016), especially in the context of brokerage firm analyst recommendations, which are taken into consideration by individual investors (Malmendier & Shanthikumar, 2014). Studies have indicated the significant role played by analysts in researching and disseminating information (Frankel et al., 2006; Dambra et al., 2018). Furthermore, evidence supports the positive correlation between analysts' professional experience and forecast accuracy, the influence of brokerage firms and company owners on analyst behaviour, and the positive effect of regulatory rules on analyst forecast accuracy (Ramnath et al., 2008).

It is important to note that each company's valuation should be determined based on its life cycle and specific fields of activity (Damodaran, 2021). With young companies, uncertainties about future expectations and limited operating history can diminish the quality of reports prepared prior to the IPO (Jin et al., 2024). The process of company review should encompass various factors, such as ownership structure, assets, relationship of facilities and equipment with company activities, past and future cash flows, financial situation, past and possible future events, stocks, production/service facilities, legal form, nature of activities, nature of R&D activities, location of facilities, the nature of sales, the currency of sales, information about suppliers, applicable tax legislation, and other legal regulations, all of which are crucial in terms of valuation (IVS, 2017).

The Financials section includes essential financial statements such as income statement, balance sheet, and cash flow statement, along with details about the company's sales, profitability, income, expenses, and debts. Assessing the company's value on a specific date can provide insight into its prospects. Additionally, analysing the company's historical financial data can help make future predictions. Therefore, it is crucial to consider the company's previous financial performance during valuation (IVS, 2017). Financial information empowers investors participating in an IPO to conduct a subjective valuation based on their predictions. The regulatory authority imposes restrictions related to financial information, including paid-up capital, total assets, sales, receivables, and legal reserves, in the context of an IPO (CMB, 2013). Before the IPO, a thorough examination of the company's financial statements, footnotes, and critical ratios is undertaken (Borsa Istanbul, 2024).

When assessing a company's value, it is crucial to consider historical data, current information, and future industry expectations. Regulatory authorities scrutinize the depth of industry knowledge during their investigations (Borsa Istanbul, 2024). Analysts must be well-versed in industry-specific trends for accurate valuation. Macroeconomic and political factors can impact sectors differently. Sector-specific knowledge is crucial when selecting comparable companies in relative valuation and making predictions using the income approach (IVS, 2017). Collaborative efforts between company management and analysts when determining sector forecasts enhance report accuracy (Dambra et al., 2018). Furthermore, the post-public offering price performance of IPOs varies by sector (Ünlü & Ersoy, 2008). Thus, failure to address sector developments and trends in reports should be seen as incomplete coverage (Whitehouse-Furrer & Perrin, 2015).

The valuation section is the primary focus of valuation reports. More than just mathematical calculations are required to arrive at a valuation, which aims to determine the closest value to the company's true worth (Sayılgan, 2024). The total value is calculated using the company's assets and resources. Although various approaches are used for company valuation, they can generally be categorized into three main approaches: cost approach, market approach, and income approach (IVS, 2017). The cost approach is based on the principle that investors will not pay more for a company than they would for another company that would provide similar benefits (IVS, 2017). The income approach links the company's value to four fundamental factors: the ability to generate cash flows, the expected growth rate of cash flows, the time needed to achieve stable growth, and the cost of capital (Damodaran, 2014). The market approach involves determining an approximate value for the company by analysing how similar companies are valued (IVS, 2017). Analysts may use one or more valuation approaches for company valuation (IVS, 2017).

3. METHODOLOGY AND DATA

In this study, we examine the scope of valuation reports prepared before an IPO. Each valuation report for 116 IPO activities between 2013 and 2021 was obtained from the PDP website. A unique valuation report was prepared for each IPO during this period, and these reports varied in their preparation based on the brokerage firms, analysts, companies, sectors, and valuation approach. Due to the absence of specific standards, the scope of the valuation reports was determined through content analysis.

Valuation reports typically follow a structure that includes principles, company information, financial analysis, sector analysis, and valuation. This study conducted content analysis on 97 variables (Annex) across these headings, guided by

relevant literature, international valuation standards, and related legislation. Each variable was coded as either 1 or 0 using a "Yes/No" algorithm. The principles section comprises 4 variables, company analysis comprises 21 variables, financial analysis comprises 9 variables, sector analysis comprises 9 variables, and valuation comprises 54 variables. Valuation analysis differs from the other sections, with some companies using one valuation approach while others use multiple approaches simultaneously. Therefore, valuation analysis is further broken down into four sub-headings such as information that should be included in all valuation reports, cost approach, market approach, and income approach. Consequently, content analyses were conducted for principles (CP), company information (CCI), financial analysis (CFA), sector analysis (CSA), and valuation analysis (CVA: CVA 1, CVA 2, CVA 3, CVA 4). The total score across all sections comprises the Valuation Report Content Indicator (VRCI).

The data obtained from the VRCI underwent internal consistency testing. In any research involving measurement, it is essential to test the reliability of the measurement. The reliability coefficient indicates whether the variables measured by the researcher, who designed the model with specific items, are interpretable (Cronbach, 1951). Cronbach's Alpha and Kuder-Richardson 20 tests are the most commonly used methods for reliability testing. Using a specific equation, Kuder and Richardson calculated the reliability coefficient of the data obtained from a single trial (1/0 statements such as true/false or yes/no). The equation

$$KR20 = \frac{K}{K-1}\left(1 - \sum \frac{p_i q_i}{\sigma_t^2}\right) \quad (1)$$

is used to calculate the reliability coefficient, where K represents the number of variables, p_i represents the probability of success, q_i represents the probability of failure and σ_t^2 represents the variance of the total scores. However, this equation has limitations and should be used as a more general formula. A more general calculation formula is proposed as

$$\alpha = \frac{K}{K-1}\left(1 - \sum \frac{\sigma_i^2}{\sigma_t^2}\right) \quad (2)$$

where K represents the number of variables, σ_i^2 represents the variance of the scores for each variable, and σ_t^2 represents the variance of the total scores. This new equation gives the same result as Kuder-Richardson's equation in calculating the reliability coefficient of the data obtained from a single trial (Cronbach, 1951).

According to Cronbach (1951), both Kruder-Richardson's KR20 and Cronbach's Alpha tests produce equivalent results when calculating the reliability coefficient of collected data. Consequently, the KR20 test was employed to assess the data's reliability. The calculations yielded a K value of 97, a $p_i q_i$ value of 13.48, and an σ_t^2 value of 90.01. Consequently, the KR20 was computed as follows:

$$KR20 = \frac{97}{96}\left(1 - \sum \frac{13.48}{90.01}\right) = 85.9 \quad (3)$$

Literature suggests that the reliability coefficient obtained using the KR20 equation should exceed 80 (70 in some studies). Thus, the measurement demonstrates internal consistency.

In the relevant section, each variable carries equal weight. However, companies utilize the cost approach, market approach, income approach, or a combination of these for company valuation in their reports. Including variables from all approaches in the CVA section for companies that do not use all approaches can introduce bias in the analyses. Thus, in the CVA section, companies are assigned different weights based on the valuation approach used in their reports. For instance, in valuations using only the cost approach, the variables created within this approach and the expected number of variables across all valuation reports are the denominators in calculating the valuation analysis indicator. Likewise, if multiple valuation approaches are used, the total number of sub-variables across the approaches constitutes the denominator in the valuation analysis indicator.

In the process of assigning weights, the variables such as CP, CCI, CFA, CSA, and variables that should be included in all valuation reports (CVA 1) are all given a weight of 1. Regarding the weighting process related to the approaches used, the number of variables generated for each approach is weighted based on the total number of variables created for all approaches. As a result of this weighting process, each company is assigned a VRCI score out of a total of 100 points.

Following all the processes, 6 indicators were established, which comprise the principles indicator (CP), company information indicator (CCI), financial analysis indicator (CFA), sector analysis indicator (CSA), valuation analysis indicator (CVA), and valuation report content indicator (VRCI). The "VRCI" is then calculated for each company, with a maximum

value of 100 and a minimum value of 0 per the model described above. The following equation represents a company's Valuation Report Content Indicator

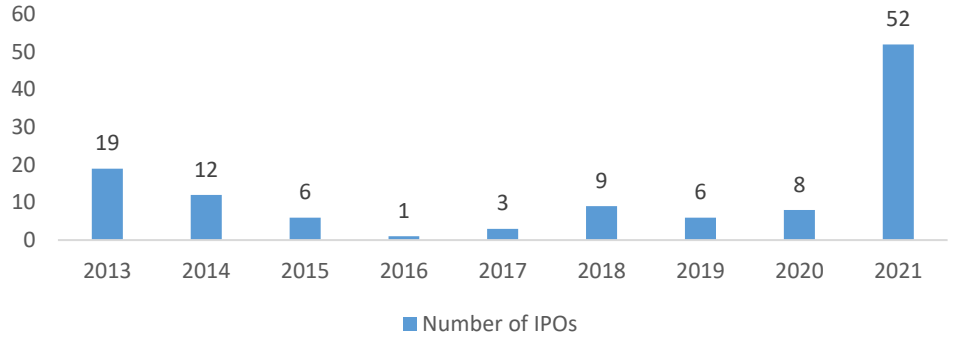
$$VRCI = CP + CCI + CFA + CSA + CVA \quad (4)$$

After calculating the VRCI for each company, the values were normalized to an average of 50. Subsequently, each valuation report was categorized into 4 groups based on the indicator value: 0-25 as low-scoring (Group 1), 25-50 as mid-low-scoring (Group 2), 50-75 as mid-high-scoring (Group 3), and 75-100 as high-scoring (Group 4) in terms of content.

4. EMPIRICAL RESULTS

Between 2013 and 2021, 116 valuation reports were conducted in Türkiye. Figure 1 illustrates the number of IPOs by year.

Figure 1 The Number of IPOs Between 2013 and 2021



Regarding the sectoral distribution of the IPOs, the manufacturing, financial institutions, electricity, gas and water, and technology sectors saw the highest number of IPOs. The sectors of the IPOs are outlined in Table 1.

Table 1: The Sectors of the IPO's

Year	Information and Communication	Education, Health, Sports and Entertainment	Electricity Gas and Water	Administrative and Support Service	Manufacturing	Construction	Paper and Paper Products	Financial Institutions	Professional, Scientific and Technical Activities	Agriculture, Forestry and Fishing	Technology	Textile	Wholesale and Retail Trade	Transportation and Storage
2013		1	1		6	2	1	5		1			1	1
2014			1		6			3				1	1	
2015				1	3			2						
2016					1									
2017								1			1		1	
2018		1	1		2			2			1		1	1
2019			1	1	1			1			2			
2020			1		4				1		1		1	
2021	1	1	8	1	17	2		9	2		8		2	1
Total	1	3	13	3	40	4	1	23	3	1	13	1	7	3

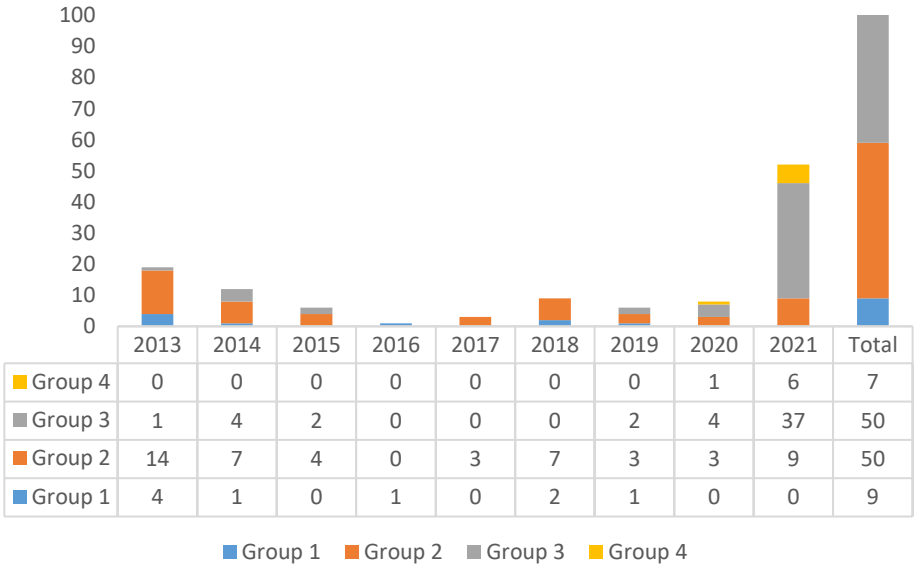
The year 2021 initial public offerings (IPOs) saw a peak, with notable activity in the electricity, gas and water, and technology sectors. Meanwhile, the information and communication, paper and paper products, agriculture, forestry, fishing, and textile sectors each had only one IPO during this period. The content information of the valuation reports is outlined in Table 2.

Table 2: The Valuation Report Content Index (VRCI) of Valuation Reports

Year	VRCI (Avg) (N)	VRCI (Avg) (W)	VRCI (Max) (N)	VRCI (Max) (W)	VRCI (Min) (N)	VRCI (Min) (W)
2013	36.1	22.7	67.0	42.1	17.1	10.7
2014	42.6	26.7	55.7	35.0	21.6	13.6
2015	43.6	27.4	63.6	40.0	25.4	15.9
2016	24.7	15.5	24.7	15.5	24.7	15.5
2017	42.2	26.5	45.8	28.8	35.6	22.4
2018	34.4	21.6	42.7	26.8	20.2	12.7
2019	47.7	29.9	73.4	46.1	24.7	15.5
2020	56.6	35.5	78.0	49.0	32.7	20.6
2021	60.4	38.0	94.4	59.3	30.0	18.8
Total	**50.0**	**31.4**	**94.4**	**59.3**	**17.1**	**10.7**

The average IPO valuation report covers 31 out of 97 variables. Weighted scores (W) and also normalized scores (N) have generally increased over the years, reaching 60.4 (Normalized: 38.0) in 2021. While VRCI scores vary by valuation report, the overall content of valuation reports prepared for IPO in Türkiye is usually limited. The findings indicate a high information asymmetry between brokerage firms/company owners and investors before the IPO. Figure 2 illustrates the scores obtained by different groups.

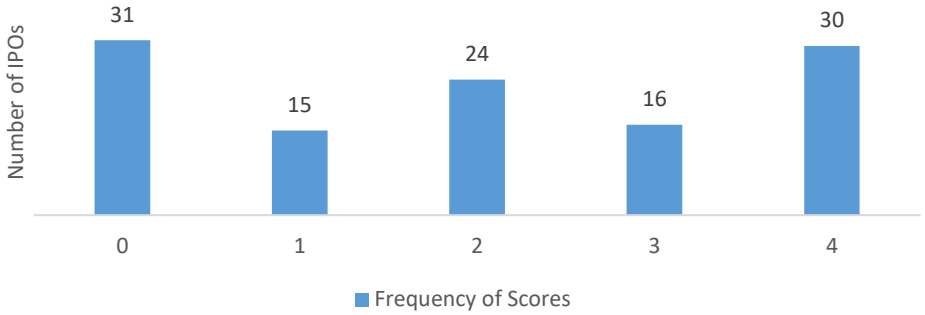
Figure 2: Distribution of VRCI Scores by Groups



Out of 116 valuation reports, 9 received low scores (Group 1), 50 received mid-low scores (Group 2), 50 received mid-high scores (Group 3), and 7 received high scores (Group 4). The content of valuation reports prepared before 2019 is generally insufficient. Only 7 out of 50 valuation reports prepared before 2019 were considered above average in content. All valuation reports with high information levels were prepared in 2020 and 2021, with no low-scoring reports.

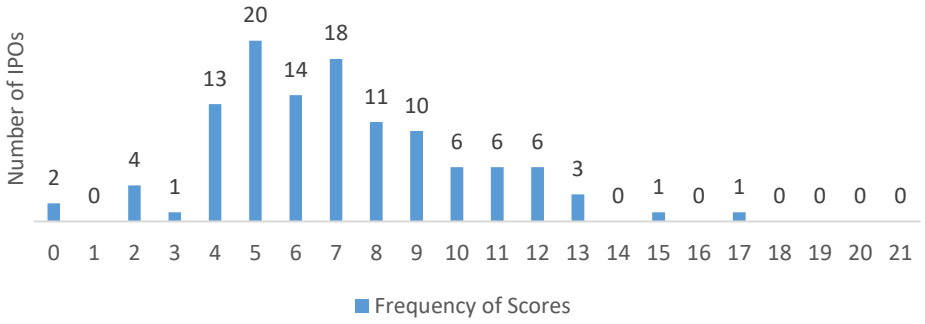
The figures below represent the scores obtained from the CP (Figure 3), CCI (Figure 4), CFA (Figure 5), and CSA (Figure 6). Each section of the CVA, including information that should be included in all valuation reports (CVA 1) (Figure 7), cost approach (CVA 2) (Figure 8), market approach (CVA 3) (Figure 9), and income approach (CVA 4) (Figure 10) variables, is depicted in separate figures. The horizontal axis represents the scores obtained from each variable, while the vertical axis represents the number of valuation reports that received scores from the variables.

Figure 3: Scores of CP Indicator



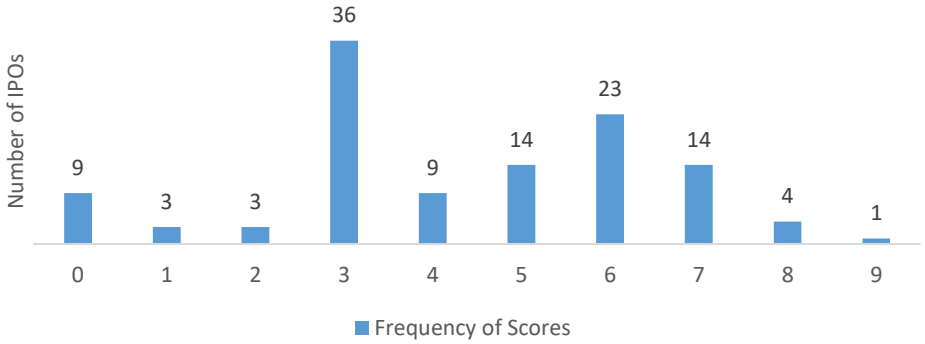
Concerning the CP indicator, 31 valuation reports lack information on the four variables. In comparison, 15 reports provide information on just one variable, 24 contain information on two variables, 16 have information on three variables, and 30 cover all variables.

Figure 4: Scores of CCI Indicator



For the CCI indicator, 2 valuation reports do not include any information on the company being valued. Additionally, 4 reports contain information on only two variables. Among the 21 variables created for company information analysis, data ranges from 4 to 12 variables. Two reports provide information on 14 or more variables (one with 15 and the other with 17 variables).

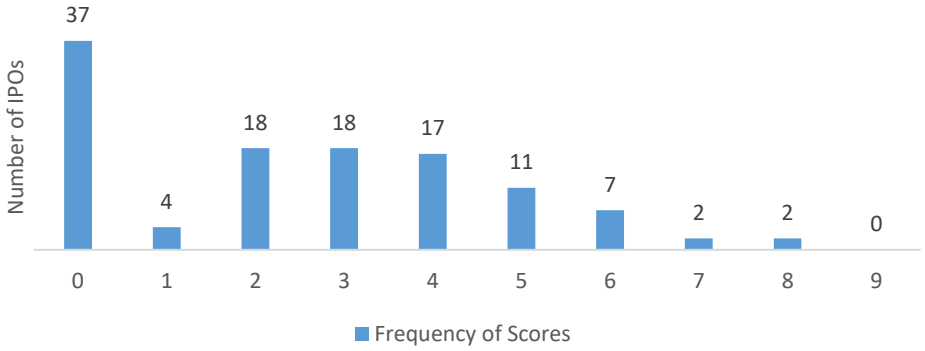
Figure 5: Scores of CFA Indicator



During the examination of the CFA, it was evident that brokerage firms commonly include financial statements in valuation reports, leading to a high number of reports receiving 3 points. It is noteworthy that 9 reports lack any financial information, while 9 reports provide information on 4 variables, 14 reports contain information on five variables, 23 reports include information on six variables, 14 reports cover seven variables, 4 reports contain information on eight

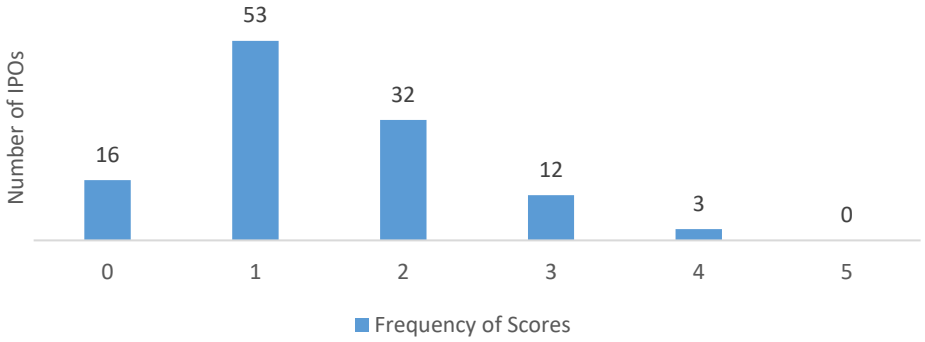
variables, and 1 report has all variables. Excluding reports that lack information, there is a strong tendency to include financial analysis information in valuation reports.

Figure 6: Scores of CSA Indicator



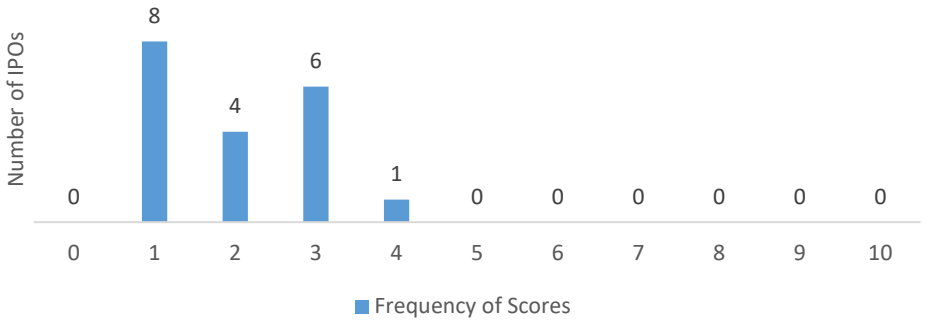
Varied opinions from brokerage firms are evident in the sectoral information provided in their valuation reports. The sectoral analysis is absent in all 37 valuation reports. Upon excluding these reports, it becomes apparent that information about sectoral analysis is mainly present in 2 to 6 out of the nine variables. Notably, only a few reports encompass information on all variables.

Figure 7: Scores of Information That Should Be Included in All Valuation Reports (CVA 1)



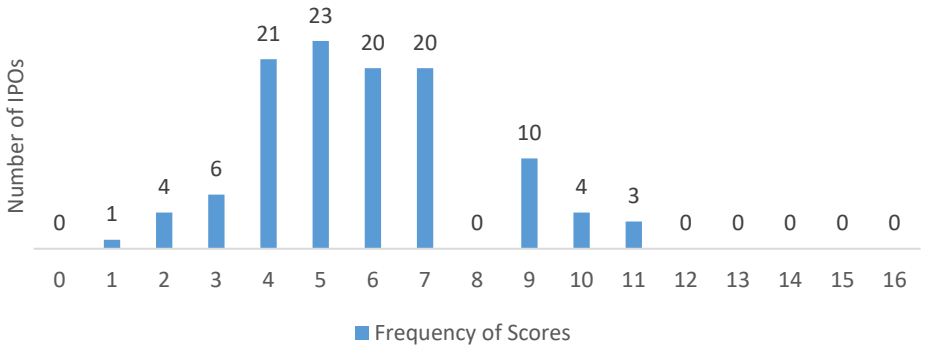
The distribution of information levels related to the CVA 1 indicator closely resembles a normal distribution. Out of 116 valuation reports, 16 do not include any information on the CVA 1 indicator. Of the remaining reports, 53 provide information on one variable, 32 provide information on two variables, 12 provide information on three, and 3 provide information on four variables. None of the reports provide information on all variables. Typically, brokerage firms specify the valuation date and share value range. However, only a few valuation reports include details about sensitivity analysis and discount rates.

Figure 8: Scores of Cost Approach (CVA 2)



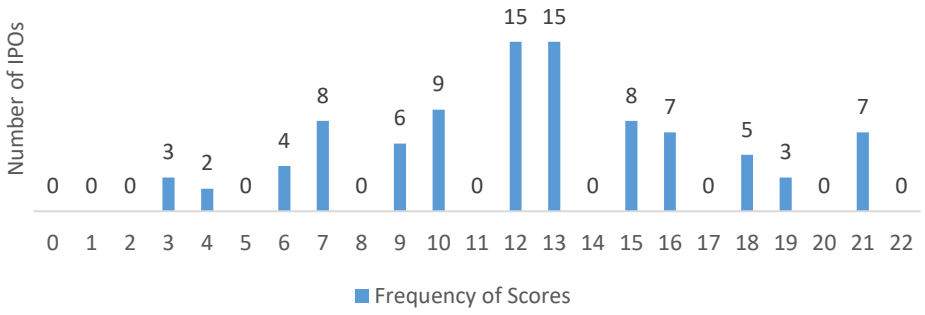
The prevalence of including information in valuation reports using the cost approach is relatively low. International valuation standards generally discourage using the cost approach in company valuation, except in specific cases. Valuation reports utilizing the cost approach typically express the liabilities or the book value as the company's worth without providing information about other variables. Such valuations usually cover a maximum of 4 out of 10 variables.

Figure 9: Scores of Market Approach (CVA 3)



The inclination to include information in valuation reports using the market approach is moderate. When employing the market approach, brokerage firms tend to avoid complex mathematical operations such as similarity tests, ratios, and data corrections. While non-calculated variables receive a high information disclosure level, the disclosure level for calculated variables is minimal. However, information is typically provided about one or more commonly used ratios, such as Price to Earnings (P/E), Enterprise Value to Sales (EV/S), Enterprise Value to EBITDA (EV/EBITDA), Price to Book (P/B), and Price to Net Asset Value (P/NAV), in valuations using the market approach. These valuations primarily present information about 2 to 11 out of 16 variables.

Figure 10: Scores of Income Approach (CVA 4)



The valuation reports utilizing the income approach show a strong tendency to include information related to this method. Seven of the examined reports included data on 21 variables. Almost all reports provided details on all the necessary variables to compute cash flows. However, more information on variables about dividend policy needs to be provided. Additionally, most brokerage firms refrained from calculating the beta coefficient, often assuming it to be 1, implying that share prices will sync with the market following the IPO. Table 3 represents the average scores of the content indicators by the year.

Table 3: Average Scores of the Content Indicators by The Year

Year	CP (Avg) (W)	CCI (Avg) (W)	CFA (Avg) (W)	CSA (Avg) (W)	CVA 1 (Avg) (W)	CVA 2 (Avg) (W)	CVA 3 (Avg) (W)	CVA 4 (Avg) (W)	VRCI (Avg) (W)
2013	0.3	6.3	2.4	0.8	1.2	1.6	4.7	7.1	22.7
2014	1.0	7.3	3.1	2.9	1.8	2.9	3.9	9.0	26.7
2015	1.3	7.2	4.3	4.0	1.3	0.9	3.6	10.7	27.4
2016	0.0	5.0	3.0	0.0	1.0	2.0	6.5	8.3	15.5
2017	0.3	6.3	3.0	2.7	2.7	2.3	3.7	8.5	26.5
2018	0.4	5.3	2.7	2.0	1.7	1.5	5.5	10.3	21.6
2019	2.3	6.2	5.0	1.3	0.7	1.8	5.9	12.3	29.9
2020	2.6	7.9	4.5	2.5	1.0	1.8	5.9	12.7	35.5
2021	3.2	7.7	5.6	3.1	1.5	1.6	5.8	10.8	38.0
Total	2.0	7.1	4.3	2.5	1.4	2.9	5.3	7.1	31.4
Number of Variable	4	21	9	9	5	10	16	22	97

The table displays the weighted average scores for each indicator by year. The CVA 1 column presents the indicator score that represents the variables to be included in all valuation reports. The CVA 2 column shows the score of valuation reports using the cost approach, the CVA 3 column shows the score of valuation reports using the market approach, and the CVA 3 column shows the score of valuation reports using the income approach. The CP indicator has consistently increased, particularly after 2019, because the CMB decided to prepare valuation reports in accordance with international valuation standards, in 2019. Notably, brokerage firms issuing valuation reports with low scores tend to omit analyst information. The average scores generated from the CCI indicator in valuation reports are generally relatively low. In 2013, several brokerage firms omitted company-related information from their valuation reports. The CCI indicator has an average score of 30% annually. Until 2019, the CFA indicator scores only reached an average of 30%. When considering the total indicator scores, they average at 50%. It's concerning that financial statements of IPOs are omitted in valuation reports for some years.

Furthermore, 37 IPO's valuation report needs more sector analysis. The CSA indicator scores, totalling 27%, are notably low. The score for the CVA 1 indicator, amounting to 28%, is also low. Of the 19 valuation reports utilizing the cost approach, 4 used the book value method, while 15 used the net asset value method. Astonishingly, almost none of this approach's valuation reports performed debt, receivables, or stock valuations. In some reports, only the total book or liabilities value was stated as the company value. The average score in valuation reports using the market approach falls below 50%. The average score of the CVA 3 varies each year, while the CVA 4 indicator shows an increase after 2018.

5. CONCLUSION

Studies conducted across various markets and time periods have proved the phenomenon of under-pricing in initial public offerings (IPOs). While the exact reasons for under-pricing remain a topic of debate, recent research suggests that factors such as the level of information provided to investors, its accuracy and reliability, and the behaviour of IPO participants can significantly impact post-IPO price performance and volatility.

Valuation reports should align with the principle of public disclosure and provide relevant information without leading to noise trading. Brokerage firms are responsible for furnishing comprehensive information about the IPO to investors, who, armed with this knowledge, should carefully weigh the potential benefits and risks before making investment decisions. While regulatory rules and market practices may vary across countries, company valuation aligns with universally accepted principles and International Valuation Standards (IVS) worldwide. Preparing valuation reports that possess strong informational content, adhere to valuation principles, and uphold principles of public disclosure can help mitigate information asymmetry between IPO issuers and investors, thus promoting the formation of effective prices.

The valuation reports have significant deficiencies in terms of content. Brokerage firms tend to prepare valuation reports with a narrower scope, as they were not exposed to negative reactions from the market and regulatory authorities. The

content of valuation reports, especially those prepared before 2019, is insufficient. Most valuation reports do not include any information about the brokerage firm and analyst, which is a significant limitation according to IVS (2017). The competence, knowledge, and experience of the analyst performing the evaluation are crucial aspects emphasized in numerous articles. Additionally, demonstrating the competence of analysts in the capital markets through licenses and documents further underscores the importance of the analyst and brokerage firm. Therefore, it is crucial to include information about the analyst and brokerage firm in each valuation report.

It is essential to have comprehensive company information for accurate valuation. However, many valuation reports need more essential details about the company, such as past significant events and future expectations, which can directly impact its value. Two valuation reports reviewed did not provide public information about the company. Brokerage firms typically omit details about the company's investment policies, research, and development (R&D) policies, foreign trade, and exchange rate risk. Studies have shown that company information significantly influences pricing, investor behaviour, and investor communication (Hanley & Hoberg, 2010; Whitehouse-Furrer & Perrin, 2015; Frankel et al., 2006; Cervera, 2016; Damodaran, 2021; Jin et al., 2024). The valuation report's absence of crucial information, such as establishment date, ownership structure, company activities, capacity, planned and ongoing investments, and foreign trade activities, are crucial deficiencies in terms of content.

Financial statements and financial analysis form the foundation of the valuation process (Mariani et al., 2023). Alongside the financial statements, a comprehensive valuation report should encompass financial analysis, footnotes, and financial ratios (IVS, 2017). It is common for brokerage firms to incorporate financial statements into their valuation reports, often demonstrating a high level of expertise in financial analysis. Profound financial analysis knowledge empowers investors to conduct their subjective valuations and compute a unique company value. This approach reduces the potential criticism of analysts' overly optimistic forecasts. The integration of financials and valuation signifies that investors with strong financial knowledge can be just as successful as analysts in interpreting information. However, it is concerning that 9 out of the valuation reports do not contain any financial information, leading to a significant gap in coverage.

The tendency to provide of sectoral information in valuation reports varies across to brokerage firms. While 37 reports omit sectoral analysis, those that do provide sectoral information typically offer a substantial level of detail. It is also common for brokerage firms to provide a high level of sectoral information or none. Reports tend to avoid discussing future expectations for the foreign sector and the company's market share in the domestic sector. These findings align with the observations of Whitehouse-Furrer & Perrin (2015), who view the absence of sectoral trends in valuation reports as a shortcoming in coverage. Similarly, they are consistent with the research of Crain et al. (2021), who highlight that brokerage firms are more inclined to provide sectoral information when there is high uncertainty in company value. They note a positive correlation between the level of sectoral information and the demand for initial public offerings.

Brokerage firms typically provide limited information about valuation analysis. Regardless of the valuation approach used, only a few required variables for the valuation process are disclosed. Brokerage firms generally refrain from providing information about variables that involve mathematical calculations. Specifically, valuations using the cost approach tend only to present the company's book value or net asset value. The International Valuation Standards (IVS, 2017) recommends using the cost approach under certain conditions. While some essential variables, such as the valuation date and share value range, are usually disclosed, the absence of sensitivity analysis and discount rate information is a notable gap. When it comes to valuations using the market approach, there is a tendency to share information other than the variables that involve mathematical calculations. In contrast, valuations using the income approach generally provide more information than other approaches. Regardless of the valuation approach, brokerage firms avoid calculating the beta coefficient, often assuming a value of 1 under the assumption that the company will move with the market after the IPO. However, this assumption does not align with market realities.

Valuation reports prepared prior to IPOs in Türkiye exhibit notable shortcomings in content. The findings indicate that brokerage firms should mitigate information asymmetry by furnishing comprehensive information in valuation reports. The evidence suggests a need for further development in the capital markets. Despite adherence to international valuation standards and widely accepted valuation principles, the limited coverage in valuation reports contributes to investor information asymmetry.

This study which does not require ethics committee approval and/or legal/specific permission complies with the research and publication ethics. There are no potential conflicts of interest in this study. This article, based on a portion of the doctoral thesis (Öztürk, 2024) of the corresponding author.

REFERENCES

Borsa Istanbul. (2024). Equity Market Directive. https://www.borsaistanbul.com/files/equity-market-directive.pdf

Capital Markets Board of Türkiye. (2013). Bulletin edition 2013/05. https://spk.gov.tr/data/61e0b4991b41c613a0d633d1/2013_5.pdf

Cervera, I. (2016). Analyst Consensus in The Eurozone Stock Markets. The Spanish Review of Financial Economics, 14(2), 66-79. https://doi.org/ 10.1016/j.srfe.2016.07.001

Cowan, A. R. & Salotti, V. (2020). Anti-Selective Disclosure Regulation and Analyst Forecast Accuracy and Usefulness. Journal of Corporate Finance, 64. doi.org/10.1016/j.jcorpfin.2020.101669.

Crain, N., Parrino, R. & Srinivasan, R. (2021). Uncertainty, Prospectus Content, and the Pricing of Initial Public Offerings. Journal of Empirical Finance, 64, 160-182. doi.org/10.1016/j.jempfin.2021.08.007

Cronbach, L.J. (1951). Coefficient Alpha and the Internal Structure of Tests. Psychometrika, 16, 297-334. doi.org/10.1007/BF02310555

Dambra, M., Field, L. C., Gustafson, M. T. & Pisciotta, K. (2018). The Consequences to Analyst Involvement in the IPO Process: Evidence Surrounding the JOBS Act. Journal of Accounting and Economics, 65(2–3), 302-330. doi.org/10.1016/j.jacceco.2017.12.001

Damodaran, A. (2014). Applied Corporate Finance. John Wiley & Sons, Inc., ISBN: 978-1-119-08187-6

Damodaran, A. (2021). The Little Book of Valuation. John Wiley & Sons, Inc., ISBN: 978-1-394-24506-2

Frankel, R., Kothari, S.P. & Weber, J. (2006). Determinants of the Informativeness of Analyst Research. Journal of Accounting and Economics, 41(1-2), 29-54. doi.org/10.1016/j.jacceco.2005.10.004

Hanley, K. W. & Hoberg, G. (2010). The Information Content of IPO Prospectuses. The Review of Financial Studies, 23(7), 2821-2864. doi.org/10.1093/rfs/hhq024

III-62.1 Communiqué on Valuation Standards in Capital Markets. (2017). Official Gazette (29966, 01. February 2017).

Jin, S., Kimbrough, M. D. & Wang, I. Y. (2024). Privileged Information Access, Analyst Consensus Building, and Stock Return Volatility: Evidence from The JOBS Act. Advances in Accounting, 64. doi.org/10.1016/j.adiac.2023.100729

Malmendier, U. & Shanthikumar, D. (2014). Do Security Analysts Speak in Two Tongues? The Review of Financial Studies, 27(5), 1287-1322. doi.org/10.1093/rfs/hhu009

Mariani, M., Cardi, M., D'Ercole, F., Raimo, N. & Vitolla, F. (2023). Make It Easy: The Effect of Prospectus Readability on IPO Performance. Journal of Accounting Literature, Accepted Date: 15 September 2023. https://doi.org/10.1108/JAL-07-2023-0115

Öztürk, S.Ç. (2024). Content Analysis of Valuation Reports Prepared for Initial Public Offerings at Borsa Istanbul Between 2013 And 2021. Unpublished doctoral dissertation. Ankara University Graduate School of Social Sciences, Ankara.

Ramnath, S., Rock, S., & Shane, P. (2008). The Financial Analyst Forecasting Literature: A Taxonomy with Suggestions for Further Research. International Journal of Forecasting, 24(1), 34–75. doi.org/10.1016/j.ijforecast.2007.12.006

Sayılgan, G. (2024). Soru ve Yanıtlarıyla İşletme Finansmanı. Siyasal Kitabevi. ISBN: 978-605-9221-45-0

Sırma, İ. (2016). The Impact of Prospectus Information to The Investor Demand During the Public Offerings of the Capital Market Instruments. International Journal of Management Economics and Business. 12(29), 163-179. https://doi.org/10.17130/ijmeb.20162922028

The International Valuation Standards Council. (2017). International Valuation Standards. IVSC. London.

Ünlü, U. & Ersoy, E. (2016). The Determinants of Under-pricing and Short-Run Perform of Initial Public Offerings: Evidence from ISE for 1995-2008. Dokuz Eylül University Faculty of Economics and Administrative Sciences Journal, 23(2), 243-258. https://ssrn.com/abstract=2715574

VII-128.1 Communiqué on Shares. (2013). Official Gazette (28685, 22. June.2013).

Whitehouse-Furrer, M. & Perrin, D. (2015). Comprehensibility and Comprehensiveness of Financial Analysts' Reports. Studies in Communication Sciences, 15(1), 111-119. doi.org/10.1016/j.scoms.2015.03.007

APPENDICES

CP Sub-Variables

Name	Type
Restrictions on IPO	Yes/No
Information About the Brokerage Firms	Yes/No
Information About the Analyst	Yes/No
Ethical Principles	Yes/No

CCI Sub-Variables

Name	Type
Foundation Date	Yes/No
Partnership Structure	Yes/No
Important Events from Foundation to IPO	Yes/No
Information About Company Activities	Yes/No
Production/Service Facilities Capacity Information	Yes/No
Production/Service Facilities Ongoing Investment Information	Yes/No
Production/Service Facilities Ongoing Investment Contracts Information	Yes/No
Production/Service Facilities Ongoing Investment Completion Date Information	Yes/No
Production/Service Facilities Planned Investment Information	Yes/No
Production/Service Facilities Planned Investment Contracts Information	Yes/No
Production/Service Facilities Planned Investment Start/End Date Information	Yes/No
Information on Raw Material Supply Processes	Yes/No
Information on Raw Material Supply Prices	Yes/No
Ongoing R&D Investment Information	Yes/No
Planned R&D Investment Information	Yes/No
Information About Documents Received (Patent etc.)	Yes/No
Information About Documents Planned to be Received (Patent etc.)	Yes/No
Important Information That Will Affect the Value of the Company (Possible Penalty, etc.)	Yes/No
Information About Exchange Rate Risk	Yes/No
Import Activity Information	Yes/No
Export Activity Information	Yes/No

CFA Sub-Variables

Name	Type
Financial Statements for Previous Periods	Yes/No
Income Statement	Yes/No
Income Statement Analysis	Yes/No
Balance Sheet	Yes/No
Balance Sheet Analysis	Yes/No
Cash Flow Statement	Yes/No
Cash Flow Statement Analysis	Yes/No
Ratio Analysis	Yes/No
Borrowing Cost Analysis	Yes/No

CSA Sub-Variables

Name	Type
Market Share of the Company in the Sector	Yes/No
Market Share of the Domestic Sector in the International Sector	Yes/No
Expected Future Market Share Within the Sector	Yes/No
Domestic Sector Growth Rate	Yes/No
SWOT Analysis of the Domestic Sector	Yes/No
Future Growth Expectation of the Domestic Sector	Yes/No
International Sector Growth Rate	Yes/No

SWOT Analysis for the International Sector	Yes/No
Future Growth Expectation of the International Sector	Yes/No

CVA Sub-Variables

Variables That Should Be Included in All Valuation Reports – CVA 1	
Name	**Type**
Valuation Date	Yes/No
Whether Sensitivity Analysis Has Been Performed	Yes/No
Information on Weighting of Values Reached by Different Methods	Yes/No
Whether the Share Value Reached is a Single Value or an Interval of Values	Single:1 Interval:0
Information About Discount Rate	Yes/No
Cost Approach Variables – CVA 2	
Name	**Type**
Book Value Method	Yes/No
Net Asset Value Method	Yes/No
Information About Valuation Approach	Yes/No
Whether Receivable Valuation Has Been Done	Yes/No
Whether Debt Valuation Has Been Done	Yes/No
Whether Stock Valuation Has Been Done	Yes/No
Whether Fixed Asset Valuation Has Been Done	Yes/No
Whether Fixed Asset Valuation is Made by Persons Approved by CMB	Yes/No
Whether Intangible Asset Valuation Has Been Done	Yes/No
Whether Intangible Asset Valuation is Made by Persons Approved by CMB	Yes/No
Market Approach Variables – CVA 3	
Name	**Type**
Comparison of Domestic Similar Companies	Yes/No
Comparison of Foreign Similar Companies	Yes/No
Mixed (Domestic + Foreign) Comparison of Similar Companies	Yes/No
Information About Valuation Approach	Yes/No
Information About Selection of Domestic Similar Companies	Yes/No
Information About Selection of Foreign Similar Company	Yes/No
Whether Similarity Testing Has Been Performed	Yes/No
Whether a Correction Has Been Made in the Selected Similar Company Data	Yes/No
Information About the Ratios Used	Yes/No
Price Earnings (P/E) Ratio	Yes/No
Firm Value Sales (FV/S) Ratio	Yes/No
Company Value EBITDA (FV/EBITDA) Ratio	Yes/No
Market Value Book Value (MV/BV) Ratio	Yes/No
Market Value Net Asset Value (MV/NAV) Ratio	Yes/No
Other Ratio	Yes/No
Choosing the Ratios Used with Equal/Different Weights	Equal:1 Different:0
Income Approach Variables – CVA 4	
Name	**Type**
Discounted Cash Flows Method	Yes/No
Discounted Dividends Method	Yes/No
Information About Valuation Approach	Yes/No
Macroeconomic Expectations	Yes/No
Tax Rate	Yes/No
How is the WACC Rate Determined	Yes/No
WACC Rate Same/Different for Year by Year	Same:1 Different:0
Is There an Additional Risk Premium in the WACC	Yes/No

By Which Method Was the Additional Risk Premium Calculated	Yes/No
Information About the Beta Used	Yes/No
By Which Method Is Beta Calculated	Yes/No
Information About Sales Growth Rate	Yes/No
Information About EBITDA Growth Rate	Yes/No
Information About Net Working Capital Growth Rate	Yes/No
Information About Risk-Free Interest Rate	Yes/No
Information About Terminal Sales Growth Rate	Yes/No
Information About Terminal EBITDA Growth Rate	Yes/No
Information About Terminal Growth Rate	Yes/No
Information About Dividend Distribution	Yes/No
Information About Previous Dividend Distribution Policy	Yes/No
Information About Future Dividend Distribution Policy	Yes/No
Information About Dividend Discount Rate	Yes/No
Other Methods	Yes/No