A Study of the Influence of Six Capitals Disclosure in Integrated Reporting on Firm Valuation in India: with references to Nifty 50

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Abstract:

This study investigates the relationship between the disclosure of the Six Capitals in Integrated Reporting (IR) and firm valuation in India, focusing on key financial metrics such as Return on Assets (ROA) and Return on Equity (ROE). The research employs a sample of firms listed in the NSE 50, analyzing data from 2018-19 to 2022-23. The findings reveal a significant positive relationship between Six Capital disclosure and ROA, indicating that firms with comprehensive integrated reporting practices enhance their financial performance. However, the relationship between Six Capital disclosure and ROE was statistically insignificant, suggesting potential short-term trade-offs in financial outcomes. This research contributes to the understanding of integrated reporting's impact on firm valuation, emphasizing the importance of transparent communication regarding non-financial capital in fostering investor confidence and long-term sustainability. The results underscore the necessity for firms to adopt robust integrated reporting strategies to align their financial performance with sustainable development goals.

Introduction:

Integrated reporting (IR) has emerged as a pivotal framework for enhancing corporate transparency and accountability, particularly in the context of sustainable business practices. In India, the adoption of IR is gaining momentum as organizations increasingly recognize the importance of demonstrating their value-creation processes to stakeholders. This study explores the relationship between integrated reporting and firm valuation, with a special focus on the six capital frameworks: Financial, Manufactured, Intellectual, Human, Social, and Natural Capital. Each of these capitals plays a critical role in a firm's ability to generate long-term value, and IR serves as a vital tool for communicating their interconnections and impacts on overall performance. By examining how effective integrated reporting practices influence firm valuation metrics, this research aims to shed light on the significance of transparency and sustainability in enhancing stakeholder trust and investment decisions. Furthermore, this study seeks to contribute to the growing body of literature on integrated reporting in India, highlighting best practices and offering insights for organizations striving to align their strategic goals with sustainable development objectives. Ultimately, understanding this relationship can guide firms in leveraging integrated reporting to enhance their valuation and foster a culture of responsible business practices.

Review of Literature

Liu, Y., & Zhang, L. (2024) conducted a study exploring how the disclosure of Six Capitals in Integrated Reporting (IR) influences firm performance, using Tobin's Q as a measure of firm

valuation. They discovered that high-quality disclosure of these capitals can significantly improve a firm's valuation by offering investors better insights into non-financial assets. This comprehensive disclosure provides a clearer picture of a firm's long-term value, which positively impacts investment decisions and market performance. Their research emphasizes the importance of transparency in reporting the Six Capitals for driving better firm valuation outcomes.

Gupta, S., & Patel, N. (2023) examined the link between the disclosure of Six Capitals in Integrated Reporting (IR) and firm valuation in the Indian context. Found that firms providing detailed disclosure of the Six Capitals—financial, manufactured, intellectual, human, social, and relationship, and natural—were able to enhance their transparency, leading to improved investor confidence and higher firm valuation. The study also indicated that the disclosure of intellectual and natural capital played a particularly significant role in shaping market perceptions of long-term sustainability and profitability.

Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2023) explored how the quality of Six Capitals disclosure in Integrated Reporting impacts firm valuation. The study was conducted using a sample of firms from multiple emerging markets, with a specific focus on India. The authors found that firms providing more transparent and detailed reporting on the Six Capitals tend to experience enhanced market valuation, driven by improved investor perceptions of risk management and future sustainability. Intellectual and social capital were identified as the most significant contributors to this positive relationship, reflecting a growing emphasis on intangible assets.

Vitolla et al. (2020) analysed how integrated reporting (IR) influences firm valuation, particularly focusing on the role of intellectual capital. The study highlights that the quality of IR, especially the disclosure of the six capitals, is linked to increased transparency and stakeholder engagement, which subsequently boosts market confidence and firm value. Revealed that intellectual capital and human capital disclosures are especially critical in driving these benefits, as they provide insights into the long-term value creation potential of firms.

Salvi et al. (2020) explored the impact of integrated reporting (IR) on companies' financial performance and valuation, emphasizing how the disclosure of the six capitals enhances corporate transparency and decision-making. The study finds that firms using high-quality IR, particularly when detailing the six capitals, experience improvements in financial performance and market valuation due to better stakeholder trust and reduced information asymmetry. The study emphasizes that IR's role in communicating long-term value creation significantly influences firm valuation.

Barth et al. (2017) explored the economic consequences of integrated reporting (IR) on firm value. The study investigates how the disclosure of six capitals—financial, manufactured, intellectual, human, social, and natural—impacts investor decisions and firm performance. They find that companies practicing IR tend to have better firm valuation, largely due to improved transparency and stakeholder engagement. IR facilitates better decision-making by providing a more comprehensive view of value creation over time, positively affecting financial performance.

Lee and Yeo (2016) examined the relationship between integrated reporting (IR) and firm valuation, arguing that IR enhances transparency and long-term decision-making, which positively influences firm value. Their study highlights that integrated reports allow investors to better assess a company's future performance by offering a holistic view of both financial and non-financial information, especially concerning social and intellectual capital. As a result, companies practicing IR tend to achieve higher market valuation.

Objectives

- To assess the association between integrated reporting and ROA of the selected Indian companies.
- To assess the association between integrated reporting and ROE of the selected Indian companies.

Research Methodology

Sample Design and Data

The study is limited to companies that uploaded their integrated report at least last year and are listed as NSE 50 and top in their sector based on market cap. If the above condition is satisfied, an available sample has been selected for the study. Data was obtained from annual reports that various companies have published. The study period was 2018-19 to 2022-23, and the selected samples are below.

Table 1: Selected Samples Lists

Companies Name	Sector	Companies Name	Sector
Reliance	Energy	ITC	Consumer staples
ONGC	Energy	HUL	Consumer staples
TCS	Information Technology	Maruti Suzuki	Consumer Discretionary
Infosys	Information Technology	Tata Motors	Consumer Discretionary
HDFC Bank	Financials	Ultra Tech	Materials

Companies Name	Sector	Companies Name	Sector
ICICI Bank	Financials	Asian Paints	Materials

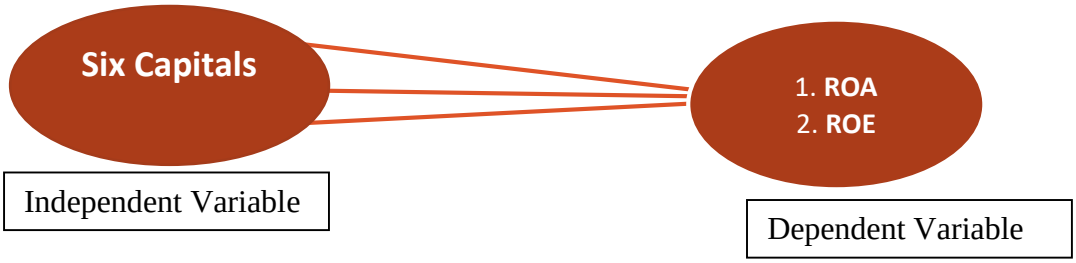

Figure 1: Variables for the Study

The Independent variable is the Six Capital Disclosure Index, measured using a weighted disclosure quality index and scoring method through content analysis. The integrated reporting framework 2021 is adhered to by the IR Index, which is based on capitals (6 capitals and a Total of 24 aspects shown in Table 2), and Table 3 is used as the scoring technique. The dependent variables are Return on Assets (ROA) and Return on Equity (ROE)

Table 2: Disclosure Six Capital Index

Capitals	Aspects
Financial Capital	4
Manufactured Capital	4
Intellectual Capital	4
Human Capital	4
Social and Relationship Capital	4
Natural Capital	4

Table 3: Weighted Disclosure Index

Disclosures categories	Score Assigned
When an item is described in qualitative and quantitative terms. (i.e., specific)	4
When an item is described in qualitative and quantitative terms. (i.e., non-specific or in general terms)	3
When an item is described in qualitative or Quantitative terms (i.e., specific)	2
When an item is described in qualitative or quantitative (i.e., non-specific or in general terms)	1
When an item is not disclosed	0

Hypothesis Development

Hypothesis development for the Dependent Variable ROA

Independent Variable	Hypothesis	Expected Sign
Six Capital	H_1	+
Financial Capital	H_{1a}	+
Manufactured Capital	H_{1b}	+
Intellectual Capital	H_{1c}	+
Human Capital	H_{1d}	+
Social and Relationship Capital	H_{1e}	+
Natural Capital	H_{1f}	+

Hypothesis development for the Dependent Variable ROE

Independent Variable	Hypothesis	Expected Sign
Six Capital	H_2	+
Financial Capital	H_{2a}	+
Manufactured Capital	H_{2b}	+
Intellectual Capital	H_{2c}	+
Human Capital	H_{2d}	+
Social and Relationship Capital	H_{2e}	+
Natural Capital	H_{2f}	+

Findings

Descriptive Statistics

Table 4 show the mean, standard deviation, minimum and maximum values, and measures of skewness and kurtosis for the numerical variables for companies adopting Integrated Reporting in India.

Table 4: Descriptive Statistics

	N	Min.	Max.	Mean	S.D.	Skew.	Kurtosis
Six capitals	60	.43	.98	.77	.15	-.52	-.61
Financial Capital	60	.50	1.00	.89	.11	-.86	.80
Manufactured Capital	60	.06	1.00	.73	.35	-.79	-1.06
Intellectual Capital	60	.38	1.00	.73	.23	-.39	-1.17

	N	Min.	Max.	Mean	S.D.	Skew.	Kurtosis
Human Capital	60	.63	1.00	.87	.15	-.44	-1.56
Social and Relationship Capital	60	.25	1.00	.67	.19	.33	-.56
Natural Capital	60	.13	1.00	.73	.25	-.81	-.01
ROA	60	-11.64	34.37	11.44	10.53	.53	-.34
ROE	60	-39.64	83.89	18.86	18.24	.95	4.85

The descriptive statistics in Table 4 provide an overview of the performance of firms across the six capitals and financial indicators such as ROA and ROE. On average, firms exhibit strong performance in Financial Capital (mean = 0.89) and Human Capital (mean = 0.87), while Social and Relationship Capital show relatively lower values (mean = 0.67). The negative skewness in Financial, Manufactured, and Natural Capital suggests that a few firms perform lower than the mean in these areas. Kurtosis values indicate that most variables have flatter or less peaked distributions, except for ROE, which shows high kurtosis (4.85), suggesting a concentration of values around the mean but with some extreme outliers. ROA and ROE show positive skewness, indicating that a few firms report significantly higher returns than the average, with ROE displaying substantial variability (SD = 18.24). These findings reflect a diverse range of firm performance across capital and financial returns, highlighting variability in the extent of integrated reporting practices.

Correlation matrix

Table 5 presents the Pearson correlation matrix between the dependent and independent variables.

Table 5: Pearson correlation matrix

		Sixcapital	FC	MC	IC	HC	SC	NC	ROA	ROE
Sixcapital	Pearson Correlation	1.00	0.04	0.824**	0.655**	0.630**	0.720**	0.872**	-0.377**	-0.350**
	Sig. (2-tailed)		0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.01
FC	Pearson Correlation	0.04	1.00	-0.11	-0.09	0.299*	-0.11	-0.10	0.14	0.294*
	Sig. (2-tailed)	0.78		0.40	0.47	0.02	0.40	0.43	0.30	0.02
MC	Pearson Correlation	0.824**	-0.11	1.00	0.339**	0.429**	0.462**	0.656**	-0.20	-0.308*

		Sixcapital	FC	MC	IC	HC	SC	NC	ROA	ROE
	Sig. (2-tailed)	0.00	0.40		0.01	0.00	0.00	0.00	0.13	0.02
IC	Pearson Correlation	0.655**	-0.09	0.339**	1.00	0.25	0.406**	0.574**	-0.539**	-0.470**
	Sig. (2-tailed)	0.00	0.47	0.01		0.06	0.00	0.00	0.00	0.00
HC	Pearson Correlation	0.630**	0.299*	0.429**	0.25	1.00	0.432**	0.419**	-0.02	0.02
	Sig. (2-tailed)	0.00	0.02	0.00	0.06		0.00	0.00	0.88	0.87
SC	Pearson Correlation	0.720**	-0.11	0.462**	0.406**	0.432**	1.00	0.573**	-0.22	-0.16
	Sig. (2-tailed)	0.00	0.40	0.00	0.00	0.00		0.00	0.09	0.21
NC	Pearson Correlation	0.872**	-0.10	0.656**	0.574**	0.419**	0.573**	1.00	-0.516**	-0.422**
	Sig. (2-tailed)	0.00	0.43	0.00	0.00	0.00	0.00		0.00	0.00
ROA	Pearson Correlation	-0.377**	0.14	-0.20	-0.539**	-0.02	-0.22	-0.516**	1.00	0.780**
	Sig. (2-tailed)	0.00	0.30	0.13	0.00	0.88	0.09	0.00		0.00
ROE	Pearson Correlation	-0.350**	0.294*	-0.308*	-0.470**	0.02	-0.16	-0.422**	0.780**	1.00
	Sig. (2-tailed)	.006	.023	.017	.000	.867	.208	.001	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The correlation analysis highlights strong positive relationships between six capital and key non-financial capitals, including Natural Capital (r = 0.872), Manufactured Capital (r = 0.824), and Social and Relationship Capital (r = 0.720), indicating the interconnectedness of these capitals in integrated reporting. Intellectual Capital (r = 0.655) and Human Capital (r = 0.630) also show significant positive correlations with SIXCAPITAL. Interestingly, SIXCAPITAL has significant negative correlations with both ROA (r = -0.377) and ROE (r = -0.350), suggesting that firms focusing on integrated reporting might experience lower short-term financial performance. Financial Capital shows weaker or non-significant correlations with other capitals, reflecting its distinct nature. Notably, ROA and ROE are positively correlated

(r = 0.780), as expected. Overall, the findings suggest that a focus on broader non-financial capital in integrated reporting could result in trade-offs with financial outcomes, particularly in the short term.

Regression results

Tables 6 & 7 provide the results of the multivariate regression models.

1. Six Capital Disclosure and ROA

Table 6: Linear Regression Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.515	10.065		1.144	.258
	FC	-53.748	19.541	-.569	-2.750	.008
	MC	-56.121	18.832	-1.864	-2.980	.004
	Sixcapital	363.474	109.580	5.153	3.317	.002
	IC	-71.047	17.296	-1.554	-4.108	.000
	HC	-39.717	18.051	-.570	-2.200	.032
	SC	-58.412	20.146	-1.042	-2.899	.005
	NC	-88.266	20.893	-2.117	-4.225	.000
Dependent Variable: ROA						

The results also indicate that, as hypothesized (H1), Company Six Capital has a positive and statistically significant relationship (p = 0.002) with the adoption of IR. Similarly, in support of other hypotheses, the regression results show a significant positive relationship between ROA and Six Capital Disclosure in Integrated Reporting.

2. Six Capital Disclosure and ROE

Table 7 : Linear Regression Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.421	20.036		-.071	.944
	Sixcapital	259.410	218.122	2.123	1.189	.240
	FC	-8.914	38.897	-.054	-.229	.820
	MC	-50.195	37.486	-.962	-1.339	.186
	IC	-66.944	34.428	-.845	-1.944	.057

	HC	-18.515	35.930	-.153	-.515	.609
	SC	-31.094	40.101	-.320	-.775	.442
	NC	-66.070	41.588	-.915	-1.589	.118
Dependent Variable: ROE						

The results also indicate that, as hypothesized (H2), company Six Capital has a positive and statistically Insignificant relationship (p = 0.240) with the adoption of IR. Similarly, in support of other hypotheses, the regression results show an Insignificant negative relationship between ROA and Six Capitals Disclosure in Integrated Reporting.

Conclusions

The investigation used a sample of firms in the Indian selected sector to assess the causal relationship between the Six Capitals in integrated reporting and the Firm valuation. The first hypothesis is supported by the study's outcomes. The second hypothesis is not supported by the study's outcomes. There are several limitations to our study such as the sample being limited also the statistical tool being limited. further research is required to fully comprehend the implications of our particular research topics. Starting with, other Firm valuations, such as Earning per share, market capitalization, and the Tobin'Q model. The fact that the empirical findings are based on longitudinal, research further study will be based on the cross-sectional study.

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