

EXPLORING THE FINANCIAL PERFORMANCE OF CORPORATE
SOCIAL RESPONSIBILITY AND SOCIALLY RESPONSIBLE INVESTING

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by

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CERTIFICATE

The thesis entitled, “Exploring the Financial Performance of Corporate Social Responsibility and Socially Responsible Investing”, being submitted by **Ms. Iram Hasan** to the Indian Institute of Technology Delhi, for the award of the degree of **Doctor of Philosophy**, is a record of bonafide research work carried out by her. She has worked under our guidance and supervision, and has fulfilled all the requirements for the submission of this thesis, which has attained the standard required for a Ph.D. degree of this institute. The results presented in this thesis have not been submitted elsewhere for the award of any degree or diploma.

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Iram Hasan

ABSTRACT

Corporate Social Responsibility (CSR) is becoming increasingly important in today's business landscape. CSR focuses on a business model where companies integrate social, environmental, and ethical concerns into their operations and interactions with stakeholders. As environmental and social concerns continue to raise public awareness and stakeholders' expectations, many businesses have begun to incorporate strategic CSR practices. At the same time, governments and regulators require businesses to operate in an environmentally sustainable and socially responsible manner while maintaining high governance standards.

From the perspective of investors, the expansion of CSR has led to the development of sustainable investment practices, resulting in the emergence of Socially Responsible Investing (SRI). SRI emphasizes the integration of environmental, social, and governance (ESG) issues into investment decisions. As investors become increasingly aware of the impacts their investments have on society and the environment, they seek to align their portfolios with broader ethical and sustainability criteria. Essentially, both CSR and SRI approach ESG issues from the perspective of companies, investors, and their stakeholders.

In contrast to developed markets like the USA, UK, and Australia, where CSR and, to some extent, SRI have gained considerable attention, these concepts are still evolving in developing economies such as India. Given their growing importance and relevance, this study aims to explore the financial performance of CSR and SRI within the Indian corporate and investment landscape. India presents a compelling case for exploring CSR and SRI due to the increasing regulations mandating CSR and standardizing ESG reporting, as well as the growing awareness among companies and investors.

The extant literature on the financial performance of CSR and SRI presents mixed findings and lacks conclusiveness. While some studies suggest positive financial outcomes of CSR and SRI,

others provide empirical evidence for negative or neutral relationships. Additionally, most research focuses on American and European firms, with limited studies on developing economies. Moreover, the literature lacks a thorough exploration of the complex CSR-CFP relationship, such as the role of moderators and mediators, and does not provide comprehensive insights into SRI strategies. Given the institutional and regulatory differences, the findings from the existing studies cannot be effectively generalized to the Indian context.

This study seeks to address these research gaps by examining the financial performance of CSR and SRI in a developing country context, specifically India. Four research objectives are formulated based on the identified research gaps. The first three objectives focus on Indian firms, covering the financial years 2014-15 to 2021-22. For the fourth objective, the study adopts a cross-country perspective on SRI, examining major capital markets of India, China, the US, and the UK over the period 2015 to 2022. Secondary data for analysis is sourced from Bloomberg[®], CMIE Prowess[®] databases, and company annual reports.

In its first objective, the study explores the CSR-CFP link for Indian firms from the financial year 2014-15 to 2021-22, employing panel data regression. Focusing primarily on the post-mandatory CSR period, the study incorporates both accounting and market-based financial performance metrics in its analysis. Drawing on key theories like stakeholder theory, good management theory, and slack resources theory, it provides empirical evidence on the CSR-CFP dynamics under ‘prospective’ and ‘retrospective’ approaches. Additionally, the study explores these relationships through disaggregate analyses based on firm size and age for a comprehensive evaluation.

In its second objective, the study extends the exploration of the CSR-CFP relationship by examining the moderators and mediators that influence this relationship for Indian firms. Specifically, it investigates ownership structure as a moderator and intellectual capital as a

mediator governing the CSR-CFP relationship. Four distinct ownership types, family, government, institutional, and foreign, are examined as moderators. The ownership impact is further disaggregated by studying business group firms and stand-alone firms separately. Additionally, the sub-components of intellectual capital, including human, structural, capital employed, and relational capital, are examined as mediators using random effects panel regression.

Within the framework of SRI, the third objective of the study explores and compares the financial performance of socially responsible stocks and irresponsible stocks relative to the market benchmark using factor models, including the Capital Asset Pricing Model (CAPM), the Fama-French three-factor model, and the Carhart four-factor model in the Indian stock market. Disaggregate analyses, such as sub-period analysis and crisis-period analysis are conducted to comprehensively examine the performance of both categories of stocks.

As part of the last objective, the study presents a cross-country perspective on SRI. To that end, the study evaluates the financial performance of socially responsible indices of India, China, the US, and the UK using various risk-adjusted measures such as Sharpe ratio, Jensen alpha, Treynor ratio, Information ratio, Modified Sharpe ratio, Sortino ratio, and Omega ratio. Under disaggregate analyses, various sub-period analyses, including a crisis period analysis, to assess the impact of the COVID-19 market downturn on the performance of sample indices are also performed.

For each objective, the study conducts necessary statistical diagnostics and robustness checks to strengthen the reliability of its findings. The research hypotheses are framed based on dominant positions in the literature after a thorough review, and the selection of variables and methodology is guided by well-informed theoretical frameworks.

The findings of the study demonstrate a positive impact of current CSR on subsequent financial performance, aligning with stakeholder theory and good management theory for Indian firms. However, the results do not support slack resources theory or the influence of prior financial performance on subsequent CSR. This comprehensive analysis provides explanations for the heterogeneous findings reported in the literature. The empirical results also indicate positive moderation by family and government ownership in the CSR-CFP relationship. Additionally, the results confirm the partial positive mediation of intellectual capital in the CSR-CFP relationship, with further partial mediation by human capital efficiency and capital employed efficiency in select cases.

Within the SRI framework, the study provides evidence that responsible stocks outperform the market benchmark, while irresponsible stocks underperform. During the crisis period analysis, responsible stocks outperformed, whereas irresponsible stocks underperformed the market benchmark. When exploring a cross-country perspective on SRI, the findings suggest that there is no homogeneous or universal outcome; results vary by geographic region, study period, market conditions, and the extent of SRI adoption. SRI can also serve as a hedge against market volatility, as observed during the COVID-19 crisis.

The study has important implications for academia, corporations, investors, and policymakers. It contributes to the growing discourse on corporate sustainability and sustainable finance, advocating for CSR and SRI practices among corporations and investors. For policymakers, it highlights the increasing importance of CSR and SRI in fostering sustainable business practices among companies and enhancing investor confidence.

सार

कॉर्पोरेट सामाजिक उत्तरदायित्व (सीएसआर) आज के कारोबारी परिदृश्य में तेजी से महत्वपूर्ण होता जा रहा है। सीएसआर एक ऐसे कारोबारी मॉडल पर केंद्रित है, जहाँ कंपनियाँ अपने संचालन और हितधारकों के साथ बातचीत में सामाजिक, पर्यावरणीय और नैतिक चिंताओं को एकीकृत करती हैं। चूँकि पर्यावरणीय और सामाजिक चिंताएँ सार्वजनिक जागरूकता और हितधारकों की अपेक्षाओं को बढ़ाती रहती हैं, इसलिए कई व्यवसायों ने रणनीतिक सीएसआर प्रथाओं को शामिल करना शुरू कर दिया है। साथ ही, सरकारें और विनियामक व्यवसायों से उच्च शासन मानकों को बनाए रखते हुए पर्यावरण की दृष्टि से संधारणीय और सामाजिक रूप से जिम्मेदार तरीके से संचालन करने की अपेक्षा करते हैं।

निवेशकों के दृष्टिकोण से, सीएसआर के विस्तार ने संधारणीय निवेश प्रथाओं के विकास को जन्म दिया है, जिसके परिणामस्वरूप सामाजिक रूप से जिम्मेदार निवेश (एसआरआई) का उदय हुआ है। एसआरआई निवेश निर्णयों में पर्यावरणीय, सामाजिक और शासन (ईएसजी) मुद्दों के एकीकरण पर जोर देता है। जैसे-जैसे निवेशक अपने निवेशों के समाज और पर्यावरण पर पड़ने वाले प्रभावों के बारे में अधिक जागरूक होते जाते हैं, वे अपने पोर्टफोलियो को व्यापक नैतिक और संधारणीयता मानदंडों के साथ संरेखित करना चाहते हैं। अनिवार्य रूप से, सीएसआर और एसआरआई दोनों ही कंपनियों, निवेशकों और उनके हितधारकों के दृष्टिकोण से ईएसजी मुद्दों पर विचार करते हैं। अमेरिका, ब्रिटेन और ऑस्ट्रेलिया जैसे विकसित बाजारों के विपरीत, जहाँ सीएसआर और कुछ हद तक एसआरआई ने काफी ध्यान आकर्षित किया है, ये अवधारणाएँ अभी भी भारत जैसी विकासशील अर्थव्यवस्थाओं में विकसित हो रही हैं। उनके बढ़ते महत्व और प्रासंगिकता को देखते हुए, इस अध्ययन का उद्देश्य भारतीय कॉर्पोरेट और निवेश परिदृश्य के भीतर सीएसआर और एसआरआई के वित्तीय प्रदर्शन का पता लगाना है। सीएसआर को अनिवार्य करने वाले बढ़ते नियमों और ईएसजी रिपोर्टिंग के मानकीकरण के साथ-साथ

कंपनियों और निवेशकों के बीच बढ़ती जागरूकता के कारण भारत सीएसआर और एसआरआई की खोज के लिए एक सम्मोहक मामला प्रस्तुत करता है।

सीएसआर और एसआरआई के वित्तीय प्रदर्शन पर मौजूदा साहित्य मिश्रित निष्कर्ष प्रस्तुत करता है और इसमें निष्कर्ष नहीं है। जबकि कुछ अध्ययन सीएसआर और एसआरआई के सकारात्मक वित्तीय परिणामों का सुझाव देते हैं, अन्य नकारात्मक या तटस्थ संबंधों के लिए अनुभवजन्य साक्ष्य प्रदान करते हैं। इसके अतिरिक्त, अधिकांश शोध अमेरिकी और यूरोपीय फर्मों पर केंद्रित हैं, जबकि विकासशील अर्थव्यवस्थाओं पर सीमित अध्ययन हैं। इसके अलावा, साहित्य में जटिल सीएसआर-सीएफपी संबंधों, जैसे कि मॉडरेटर और मध्यस्थों की भूमिका, की गहन खोज का अभाव है और एसआरआई रणनीतियों में व्यापक अंतर्दृष्टि प्रदान नहीं करता है। संस्थागत और विनियामक अंतरों को देखते हुए, मौजूदा अध्ययनों के निष्कर्षों को भारतीय संदर्भ में प्रभावी रूप से सामान्यीकृत नहीं किया जा सकता है।

यह अध्ययन विकासशील देश के संदर्भ में, विशेष रूप से भारत में सीएसआर और एसआरआई के वित्तीय प्रदर्शन की जांच करके इन शोध अंतरालों को संबोधित करने का प्रयास करता है। पहचाने गए शोध अंतरालों के आधार पर चार शोध उद्देश्य तैयार किए गए हैं। पहले तीन उद्देश्य भारतीय फर्मों पर केंद्रित हैं, जिनमें वित्तीय वर्ष 2014-15 से 2021-22 तक शामिल हैं। चौथे उद्देश्य के लिए, अध्ययन 2015 से 2022 की अवधि के दौरान भारत, चीन, अमेरिका और यूके के प्रमुख पूंजी बाजारों की जांच करते हुए एसआरआई पर एक क्रॉस-कंट्री परिप्रेक्ष्य को अपनाता है। विश्लेषण के लिए माध्यमिक डेटा ब्लूमबर्ग®, सीएमआईआई प्रोवेस® डेटाबेस, और कंपनी की वार्षिक रिपोर्ट से प्राप्त किया गया है।

अपने पहले उद्देश्य में, अध्ययन पैनल डेटा प्रतिगमन का उपयोग करते हुए वित्तीय वर्ष 2014-15 से 2021-22 तक भारतीय फर्मों के लिए सीएसआर-सीएफपी संबंधों की द्वि-दिशात्मकता और ताकत की जांच करता है। मुख्य रूप से अनिवार्य सीएसआर युग के बाद पर ध्यान केंद्रित करते हुए, अध्ययन अपने विश्लेषण में लेखांकन और बाजार-आधारित वित्तीय प्रदर्शन मीट्रिक दोनों को शामिल करता है।

हितधारक सिद्धांत, अच्छे प्रबंधन सिद्धांत और सुस्त संसाधन सिद्धांत जैसे प्रमुख सिद्धांतों पर आधारित, यह सीएसआर-सीएफपी गतिशीलता पर अनुभवजन्य साक्ष्य प्रदान करता है। इसके अतिरिक्त, अध्ययन एक व्यापक मूल्यांकन के लिए फर्म के आकार और आयु के आधार पर अलग-अलग विश्लेषणों के माध्यम से इन संबंधों का पता लगाता है।

अपने दूसरे उद्देश्य में, अध्ययन भारतीय फर्मों के लिए इस संबंध को प्रभावित करने वाले मध्यस्थों और मध्यस्थों की जांच करके सीएसआर-सीएफपी संबंध की खोज को आगे बढ़ाता है। विशेष रूप से, यह एक मध्यस्थ के रूप में स्वामित्व संरचना और सीएसआर-सीएफपी संबंध को नियंत्रित करने वाले मध्यस्थ के रूप में बौद्धिक पूंजी की जांच करता है। चार अलग-अलग स्वामित्व प्रकारों, परिवार, सरकार, संस्थागत और विदेशी, की मध्यस्थों के रूप में जांच की जाती है। व्यवसाय समूह फर्मों और स्टैंड-अलोन फर्मों का अलग-अलग अध्ययन करके स्वामित्व प्रभाव को और अधिक विघटित किया जाता है। इसके अतिरिक्त, बौद्धिक पूंजी के उप-घटकों, जिसमें मानव पूंजी दक्षता, संरचनात्मक पूंजी दक्षता, पूंजी नियोजित दक्षता और संबंधपरक पूंजी दक्षता शामिल हैं, को यादृच्छिक प्रभाव पैनेल प्रतिगमन का उपयोग करके मध्यस्थों के रूप में जांचा जाता है।

एसआरआई के ढांचे के भीतर, अध्ययन का तीसरा उद्देश्य भारतीय शेयर बाजार में पूंजी परिसंपत्ति मूल्य निर्धारण मॉडल (सीएपीएम), फामा-फ्रेंच तीन-कारक मॉडल और कारहार्ट चार-कारक मॉडल सहित कारक मॉडल का उपयोग करके बाजार बेंचमार्क के सापेक्ष सामाजिक रूप से जिम्मेदार शेयरों और गैर-जिम्मेदार शेयरों के वित्तीय प्रदर्शन की खोज और तुलना करता है। दोनों श्रेणियों के स्टॉकों के प्रदर्शन की व्यापक जांच करने के लिए उप-अवधि विश्लेषण और संकट-अवधि विश्लेषण जैसे पृथक विश्लेषण किए जाते हैं। अंतिम उद्देश्य के हिस्से के रूप में, अध्ययन एसआरआई पर एक क्रॉस-कंट्री परिप्रेक्ष्य प्रस्तुत करता है। इस उद्देश्य के लिए, अध्ययन शार्प अनुपात, जेन्सन अल्फा, ट्रेयनोर अनुपात, सूचना अनुपात, संशोधित शार्प अनुपात, सॉर्टिनो अनुपात और ओमेगा अनुपात जैसे विभिन्न जोखिम-समायोजित उपायों

का उपयोग करके भारत, चीन, अमेरिका और यूके के सामाजिक रूप से जिम्मेदार सूचकांकों के वित्तीय प्रदर्शन का मूल्यांकन करता है। अलग-अलग विश्लेषणों के तहत, नमूना सूचकांकों के प्रदर्शन पर कोविड-19 बाजार में गिरावट के प्रभाव का आकलन करने के लिए संकट अवधि विश्लेषण सहित विभिन्न उप-अवधि विश्लेषण भी किए जाते हैं।

प्रत्येक उद्देश्य के लिए, अध्ययन अपने निष्कर्षों की विश्वसनीयता को मजबूत करने के लिए आवश्यक सांख्यिकीय निदान और मजबूती जांच करता है। शोध परिकल्पनाओं को गहन समीक्षा के बाद साहित्य में प्रमुख पदों के आधार पर तैयार किया जाता है, और चर और कार्यप्रणाली का चयन अच्छी तरह से सूचित सैद्धांतिक रूपरेखाओं द्वारा निर्देशित होता है।

अध्ययन के निष्कर्ष भविष्य के वित्तीय प्रदर्शन पर वर्तमान सीएसआर के सकारात्मक प्रभाव को प्रदर्शित करते हैं, जो भारतीय फर्मों के लिए हितधारक सिद्धांत और अच्छे प्रबंधन सिद्धांत के साथ संरेखित होते हैं। हालाँकि परिणाम सीएसआर और सीएफपी के बीच द्वि-दिशात्मकता का समर्थन नहीं करते हैं, लेकिन व्यापक विश्लेषण साहित्य में बताए गए विषम निष्कर्षों के लिए स्पष्टीकरण प्रदान करता है। अनुभवजन्य परिणाम सीएसआर-सीएफपी संबंध में परिवार और सरकारी स्वामित्व द्वारा सकारात्मक मॉडरेशन का भी संकेत देते हैं। इसके अतिरिक्त, परिणाम सीएसआर-सीएफपी संबंध में बौद्धिक पूंजी की आंशिक सकारात्मक मध्यस्थता की पुष्टि करते हैं, साथ ही चुनिंदा मामलों में मानव पूंजी दक्षता और पूंजी नियोजित दक्षता द्वारा आंशिक मध्यस्थता की पुष्टि करते हैं।

एसआरआई ढांचे के भीतर, अध्ययन इस बात का सबूत देता है कि जिम्मेदार स्टॉक बाजार बेंचमार्क से बेहतर प्रदर्शन करते हैं, जबकि गैर-जिम्मेदार स्टॉक कम प्रदर्शन करते हैं। संकट अवधि के विश्लेषण के दौरान, जिम्मेदार स्टॉक ने बेहतर प्रदर्शन किया, जबकि गैर-जिम्मेदार स्टॉक ने बाजार बेंचमार्क से कम प्रदर्शन किया। एसआरआई पर क्रॉस-कंट्री परिप्रेक्ष्य की खोज करते समय, निष्कर्ष बताते हैं कि कोई समरूप या सार्वभौमिक परिणाम नहीं है; परिणाम भौगोलिक क्षेत्र, अध्ययन अवधि, बाजार की स्थितियों

और एसआरआई अपनाने की सीमा के अनुसार भिन्न होते हैं। एसआरआई बाजार की अस्थिरता के खिलाफ बचाव के रूप में भी काम कर सकता है, जैसा कि कोविड-19 संकट के दौरान देखा गया था। इन निष्कर्षों की पुष्टि मजबूती जांच के माध्यम से की जाती है। इस अध्ययन के अकादमिक जगत, निगमों, निवेशकों और नीति निर्माताओं के लिए महत्वपूर्ण निहितार्थ हैं। यह कॉर्पोरेट स्थिरता और संधारणीय वित्त पर बढ़ते विमर्श में योगदान देता है, निगमों और निवेशकों के बीच सीएसआर और एसआरआई प्रथाओं की वकालत करता है। नीति निर्माताओं के लिए, यह कंपनियों के बीच संधारणीय व्यावसायिक प्रथाओं को बढ़ावा देने और निवेशकों का विश्वास बढ़ाने में सीएसआर और एसआरआई के बढ़ते महत्व पर प्रकाश डालता है।

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ABBREVIATIONS

ADF	Augmented Dickey-Fuller
ANOVA	Analysis of Variance
BIC	Bayesian Information Criterion
BRR	Business Responsibility Report
BRSR	Business Responsibility and Sustainability Reporting
BSE	Bombay Stock Exchange
CAGR	Compound Annual Growth Rate
CAPM	Capital Asset Pricing Model
CEE	Capital employed efficiency
CFP	Corporate Financial Performance
CMIE	Centre for Monitoring Indian Economy
COVID-19	Coronavirus Disease 2019
CSI	China Securities Index
CSR	Corporate Social Responsibility
DJSI	Dow Jones Sustainability Index
DV	Dependent Variable
EPS	Earnings Per Share
ESG	Environmental, Social, and Governance
EVA	Economic Value Added
FAM	Family ownership
FORG	Foreign ownership
FY	Financial Year
GARCH	Generalized Autoregressive Conditional Heteroskedasticity
GICS	Global Industry Classification Standard
GOI	Government of India

GOV	Government ownership
GRI	Global Reporting Initiative
GSIA	Global Sustainable Investment Alliance
HCE	Human Capital Efficiency
HML	High Minus Low
IC	Intellectual Capital
ICE	Intellectual capital efficiency
IDE	Integrated Development Environment
INCC	Investor Network on Climate Change
INST	Institutional ownership
IR	Information Ratio
IRRESP	Irresponsible stocks' portfolio
IUCN	International Union for Conservation of Nature
IV	Independent Variable
LM	Lagrange Multiplier
LODR	Listing Obligations and Disclosure Requirements
LOF	Liability of Foreignness
MCA	Ministry of Corporate Affairs
MCAP	Market Capitalization
MCSD	Marginal Conditional Stochastic Dominance;
MGARCH	Multivariate Generalized Autoregressive Conditional Heteroskedasticity
MKT	Market portfolio
MPS	Market Price per Share
MS	Markov Switching
MSCI	Morgan Stanley Capital International
mSCVPS	Modified Social Contribution Value per Share
MSR	Modified Sharpe Ratio

MVAIC TM	Modified Value Added Intellectual Coefficient
NPM	Net Profit Margin
NSE	National Stock Exchange
OLS	Ordinary Least Squares
P/E	Price-to-Earnings Ratio
PCSE	Panel Corrected Standard Errors
PP	Phillips-Perron (PP)
PSM DID	Propensity Score Matched Difference in Difference
RBV	Resource-Based View
RCE	Relational Capital Efficiency
RESP	Responsible stocks' portfolio
R _f	Risk-free rate
ROA	Return on Assets
ROE	Return on Equity
S&P	Standard & Poor's
SASB	Sustainability Accounting Standards Board
SCE	Structural capital efficiency
SCVPS	Social Contribution Value per Share
SDG	Sustainable Development Goals
SEBI	Securities and Exchange Board of India
SEC	Securities and Exchange Commission
SMB	Small Minus Big
SOES	State-Owned Enterprises
SoR	Sortino Ratio
SR	Sharpe Ratio
SRI	Socially Responsible Investing
SSE	Shanghai Stock Exchange

TCFD	Task Force on Climate-related Financial Disclosures
TGARCH	Threshold Generalized Auto-Regressive Conditional Heteroskedasticity
TQ	Tobin's Q
TR	Treynor Ratio
UK	United Kingdom
UNEP-FI	United Nations Environment Programme Finance Initiative
UNFCCC	United Nations Framework Convention on Climate Change
UNPRI	United Nations Principles for Responsible Investment
US	United States
VA	Value Added
VAIC™	Value Added Intellectual Coefficient
VAR	Value at risk
WCED	World Commission on Environment and Development
WML	Winners Minus Losers