

Article

Environmental Risk Management Strategies and the Moderating Role of Corporate Social Responsibility in Project Financing Decisions

Muddassar Sarfraz ^{1,*}, Wang Qun ^{1,2}, Li Hui ^{1,2} and Muhammad Ibrahim Abdullah ³

¹ Department of Management and HR, Business School, Hohai University, Nanjing 211100, China; wqun@hhu.edu.cn (W.Q.); lhui@hhu.edu.cn (L.H.)

² Jiangsu Provincial Collaborative Center of World Water Valley and Water Ecological Civilization, Nanjing 211100, China

³ Department of Management Sciences, COMSATS Institute of Information Technology, Lahore 54000, Pakistan; miabdullah@ciitlahore.edu.pk

* Correspondence: muddassar@hhu.edu.cn

Received: 10 May 2018; Accepted: 24 July 2018; Published: 6 August 2018



Abstract: The purpose of this study is to examine the moderating role of corporate social responsibility (CSR) in project financing decisions. CSR has gained growing prominence in today's business era. This study investigates four environmental strategies and the credit risk assessment, stakeholder assessment and corporate social responsibility assessment impact on project financing decision. It explores three main issues related to environmental responsibility (planet), economic responsibility (profit) and social responsibility (people). The study is explanatory and quantitative, and both domestic and foreign banks participated in the data collection process. The sample size for the study is 491 participants. Data was collected through a simple random sampling technique and was analyzed by applying simple linear regression, confirmatory factor analysis (CFA) and structural equation modeling analysis (SEM) through the Statistical Package for the Social Sciences (SPSS). The study shows that the Pakistani banking sector is implementing environmental management policies. Foreign banks are more motivated towards corporate social responsibility practices. Cultural differences can influence a manager's attitude towards implementation of environmental risk-management policies. The result shows that corporate social responsibility has a moderating role in project financing decisions and environmental risk management, stakeholder and credit risk assessment. All hypotheses has significant values.

Keywords: corporate social responsibility; CSR; natural environment management; banking; project financing; Pakistan

1. Introduction

Corporate social responsibility (CSR) has adopted a vital position in the present business period. There is a dearth of research on CSR implications in the developing countries, specifically its relationship with the environmental risk management perspective in the banking sector [1]. Voluntary CSR actions enhance organizational reputation [2]. Government and stakeholder pressure is one of the key reasons behind the adoption of equator principles. It is essential to throw light on the current implementation of natural environment risk management in the Pakistani banking sector. The study will explore organizational characteristics or attributes on the perception of corporate social responsibility and natural environment management. The study has gained more importance due to the implementation of environmental, credit and stakeholder assessment in project financing decisions. The main reason is to understand the social differences between the developed and developing

countries with the policy implementation by a deep understanding of the variables. Credit and stakeholder assessment factors should be defined during the environmental discussion. Previous studies have addressed environment proportions [3,4]. The financial industry contributes indirectly to the environment [5,6]. Banks are associated with internal and external environmental impact. Internal factors are related to the business process, which means that banks are conducting their business activities while external factors are related to their products [7]. The financial institutions are usually neglecting the environmental risk management issues, especially in developing countries. However, environmental concerns may create opportunities and give competitive advantages to financial institutions. Financing mechanisms have an impact on corporate social responsibility, especially project financing, bank credit and equity [8]. Equator principles not only control natural environment risk management but also increase profitability in the banking sector. Companies can gain more financial benefits and sustainability by investing in CSR activities [9]. There is the clear difference between the implementation of CSR policies between newly established organizations and organizations that have a long history [10].

This study includes different social, economic and environmental factors. Elkington introduced the “Triple bottom line” concept in 1997 [11]. It focuses on the planet, profit and people; it is also called environmental responsibility, economic responsibility, and social responsibility. These “Triple P” (planet, profit, and people) ensures profitability with the implementation of corporate social responsibility activities. It aims to measure the financial, social and environmental performance of the corporation over a period. CSR perception has a positive relationship with employees’ outcomes [12].

There is a need to understand the relationship between enterprise and society. Corporate social responsibility has gained absolute importance in the recent century. Companies are focusing on corporate social responsibility policies and their implementation. Financial institutes should consider several factors before financing any project. Environmental risk is one of the critical factors. Mega projects have an impact on the environment [7]. This study will consider three main issues relating to project financing: as environmental, credit, and stakeholder issues [13]. Companies involved in CSR activities have low debt ratio [14]. Several researchers have considered corporate social responsibility as a moderator variable in different seniors of firm performance. Corporate social responsibility has a strong correlation with a firm’s performance. Investors have a higher preference for such companies those have good relations with stakeholders and suppliers [15]. Corporate social responsibility activities and awareness have a decisive role in stakeholder engagement [16]. Listed firms are more responsible towards CSR [17]. The primary objective of this study is to find out the influence of the different variables in the decision-making process of project financing. A moderator variable is a predictor that changes the effect of the independent and dependent variables. Corporate social responsibility as a moderator will help banks in project financing decision making. For example, if one organization has a low credit score but at the time is involved in CSR activities then will it affect financing decisions or not? Results of the study will provide a guideline not only for financial institutions but also provide directions for policymakers.

Study Objectives

This study is unique in the context of Pakistan, and it will primarily focus on Islamic and conventional banks. The current research will assist the understanding of the existing position of natural environmental risk management implementation, credit risk assessment, and stakeholder assessment in the Pakistani banking sector. The study has the following objectives:

- To examine the relationship between different risks assessment aspects in decision making related to project financing.
- Discussing several approaches towards environmental management in mega projects financing. How are financial institutions undertaking environmental management policies in the decision-making process?
- To study environmental risk management strategies and their impacts on financial decision-making.

2. Theoretical Background

2.1. Stakeholder Theory

Stakeholder theory focuses on groups' and individuals' relationships. A stakeholder is defined as a person or group that has, or claims, ownership rights or interest in a corporation [18]. Starik expanded the definition of a stakeholder and included both human and non-human entities [19]. He argued that the non-human natural environment could be integrated into the stakeholder management concept since the natural environment is one of the essential components of the business environment. Clarkson categorized stakeholders into primary and secondary groups. Freeman contended that businesses have a responsibility to all stakeholders. Donaldson and Preston categorized stakeholder theory into descriptive, instrumental, and normative. According to Hart, the environmental impacts associated with business activities have multiplied. The natural environment has a mutually dependent, exchange-based relationship with business organizations. Starik argued that non-human nature should be included as a stakeholder because the natural environment is relevant to many businesses [19]. CSR implementation in the natural environment can have a positive impact on business [20]. Freeman contended that businesses have a responsibility to all stakeholders. The central idea in stakeholder theory is that the success of an organization depends on the extent to which it is capable of managing its relationship with key groups, such as financiers and shareholders, and customers, employees, and even communities or societies. Managing the stakeholder relationship is non-optional: it is morally required. Donaldson and Preston categorized it into descriptive, instrumental, and normative. According to Freeman, stakeholder theory describes how organizations manage or interact with stakeholders, normative stakeholder theory prescribes how organizations ought to treat their stakeholders, and instrumental stakeholder theory explains the relationship between stakeholders and business performance.

2.2. Triple Bottom Line Theory

The triple bottom line was introduced in 1997 which explores three main issues related to our study. Figure 1 represents the environmental responsibility (planet), economic responsibility (profit) and social responsibility (people). Corporate social responsibility ensures that these ideas of people, planet, and profit give a foundation for business. Therefore, a socially responsible country must consider environmental protection and well-being of society which leads to healthy financial performance of the business [11]. One is the traditional measure of corporate profit—the “bottom line” of the profit and loss account. The second is the bottom line of a company's “people account” a measure in some shape or form of how socially responsible an organization has been throughout its operations. The third is the bottom line of the company's “Planet” account—a measure of how environmentally responsible it has been. The triple bottom line (TBL) thus consists of three Ps: profit, people, and the planet. It aims to measure the financial, social and environmental performance of the corporation over a period. Only a company that produces a TBL is taking account of the full cost involved in doing business.

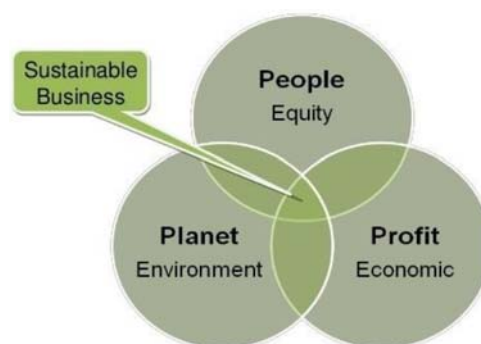


Figure 1. Triple bottom line.

2.3. Environmental Risk Assessment (ERA)

In the academic context, risk management is defined as the steps an organization has to follow to make the future sufficiently specific or the proactive rational process which will allow losses to be contained under expected and acceptable limits. Testing the effectiveness of risk management procedures is mainly concerned with the ability of the undertaken system to protect the achievement of goals within the accepted level of risk and the efficiency by which they are achieved, for example managing to accomplish the goals with the least possible cost. Environmental risk assessment (ERA) is a process of identifying and evaluating the adverse effects on the ecosystems, animals, and people, exposed to the environment, resulting from technological activities. Risk assessment is carried out to identify potential risk and to enable risk management decisions to be made. There are different types of environmental risk management, which includes safety risk assessment, pollution risk assessment, and natural disaster risk assessment. Life cycle tools are used to calculate economic cost caused by a product or service during its entire life cycle. The risk in supply chain management was considered in a discussion in 2003 [21]. According to Mazouni, risk can be measured through several factors [22].

Project financing is an old concept, and it is being used in almost every country. Project financing is closely related to natural environmental risk because it usually undertakes massive infrastructure projects. International Finance Corporation (IFC) exposed social and environmental risks through their investors who face direct and indirect risks. The adoption of equator principles is beneficial for the economic development, performance and it is positively associated with banks' performance. Implementation of equator principles has more benefits compared to its cost [23]. Banks adopt equator principles because these policies are helpful in the reduction of reputational risks [24]. Competitive advantage can be gained by adopting equator principles. Decision making for project financing is a challenging issue for financial institutions. During the evaluation and decision-making process, managers consider financial and economic activities.

Banking activities do not have a direct impact on the environment. Banks are not producing a hazardous amount of pollution and chemicals in the air, land, and water. However, banks are indirectly responsible for huge damage to the natural environment through their lending activities [25]. Environmental regulations can affect the cash flows of the company. The financial sector and banks are criticized for the funding of development projects that caused environmental degradation [26].

2.4. Corporate Social Responsibility (CSR) and Project Financing

Corporate social responsibility started in the 1930s and 1940s [3]. Corporate social responsibility is divided into four major dimensions (environmental, social, economic and stakeholders). The corporate sector discusses the environmental aspect for the well-being of society. There is a need for a better contribution to environmental management. Previous studies have addressed environmental proportions [4,5,13,27]. The financial industry has contributed indirectly to the environment [6,7,28,29]. According to Starik, "The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations" [30]. There are also restrictions on business to what extent it should be responsible for sustainable development [31].

Carroll [32] summarized a more pragmatic and managerial term. The CSR firm should strive to make a profit, be ethical, obey the law and be a good corporate citizen. CSR is a broader term than just a single definition and its utmost emphasis is on performance and outcomes. Three-dimensional models were also reformulated [33]. Wood added clarity in the concept of corporate social responsibility. It is defined in organizational performance and outcomes. The second one is the three principles of corporate behaviors and results, which includes legitimacy, managerial discretion and public responsibility. Legitimacy refers to obeying the laws and should follow the rules on how to conduct business activities. Gallardo-Vázquez et al., introduced different aspects of CSR [34]. Organizational culture has a moderating role between CSR and firm performance [35]. CSR activities engaged firms that have higher employee turnover [36], but studies also show that CSR activities have no role in customer retention [37].

Financing mechanisms in the field of project management with an impact of corporate social responsibility was presented earlier [7]. The relationship between the moderating role of corporate social responsibility and natural environmental risk management, credit and stakeholder assessment is unique and somehow similar [7,30,38]. Corporate social responsibility has a positive relationship with decision making in project financing. Corporate social responsibility has an impact on project financing. Banks that have better financial efficiency also maintain higher CSR efficiency [39].

2.5. Stakeholder Assessment

Maon stated that “The stakeholder approach is about groups and individuals who can affect the organization and is about managerial behavior taken in response to those groups and individuals” [40]. A stakeholder theory does not only understand types of stakeholder influence but also measures the intensity of their impact on financial institutions. Stakeholders are known as persons or groups that have, or claim, ownership, rights, or interests in a corporation and its activities, past, present, or future. Such actions may be legal or moral and collective or individual effects on institutions. Stakeholders with similar interests are usually divided into the same groups: shareholders, customers, employees and so on. The environment can be affected in different ways. It can be affected either positively by landscaping projects or negatively like the creation of wastes and pollution. Rupp stated that “The management of a firm takes decisions or actions that have a positive or negative effect on the environment; however, these decisions or actions are motivated, driven, supported, and constructed by many competing stakeholder claims [41]. Firms’ environmentally destructive operations often mobilize stakeholders to protest against these firms; usually, companies somehow react to these stakeholder protests [42].

Researchers find out the positive relationships between environmental protection and economic performance in financial decision-making. Environmental issues can be handled if reacted to proactively and such issues should be adequately monitored [43–45]. Nowadays, business and financial institutions discuss the environmental dimension for the well-being of society and maximize their profits. If the organization has adopted proactive approaches, then it will not only reduce the cost but will also increase the loyalty of stakeholders, which is beneficial for its stable image [43,44]. Reactive strategies are not developing new skills and expertise in managing the new environmental process. Companies are more proactive towards environmental issues. These firms are more stable and sustainable in the long run [43,46]. In reactive firms, none was recognized as important, except media. They found that more proactive firms are entirely different from less environmentally committed firms [3].

2.6. Credit Risk Assessment

The Pakistani banking sector is facing several types of risks in the competitive market (credit risk, liquidity risk, operational risk, market risk, legal risk). Credit risk arises when a counterparty fails to meet its obligations and default of any required payments. Credit risk occurs when counterparty credit standing is going to be increased [47]. Default risk means that one party has failed to pay back and now the case will enter legal procedures. If any company has credit from the bank, but the bank is not sure about its future recovery payments, then such a type of risk is called recovery risk. Exposure risk means uncertainty over future. There are five kinds of risks: (1) credit risk is the unexpected changes in the value of credit quality; this risk means borrower will fail to repay principal or interest on debt at the time; (2) legal risk is the risk of changes in regulations, tax codes and lack of flexibility; (3) operational risk is the internal organizational risks means fraud, trading errors and system failures; (4) liquidity risk is the risk due to the increase in the adjusting financial costs, or a company will lose access to finance; (5) market risks are the unexpected changes in prices [48]. The relationship between corporate social responsibility and risk exposure identifies and find out that the firms with proper corporate social responsibility engagement enjoyed more profitability and reduced the risk exposures [49].

There are some other vital factors that need to be considered before granting any credit to the organization [47,50,51]. These key factors are called five Cs: (1) character; (2) capital; (3) capacity;

(4) collateral; and (5) condition. The firm with stronger corporate social responsibility ratings, particularly in the environmental concerns, has higher debt financing as compared to firms with lower corporate social responsibility ratings. Therefore, corporate social responsibility improves the investment decisions and social communication, and better corporate social responsibility performance reduces risk exposure.

3. Conceptual Framework and Hypotheses Development

Figure 2 represents the conceptual framework of the study. Environmental risk management, credit risk assessment, and stakeholder risk management are independent variables. Bank origin is (BO) is a categorical variable. The project financing decision is described as PFD. The study also tests the moderating role of CSR with environmental risk management strategies (ERMS-x-CSR), credit risk assessment (CRA-x-CSR), stakeholder risk assessment (SA-x-CSR). The CSR moderating role is also analyzed with bank origin, which is a categorical variable. This study is primarily concerned to examine the effects of natural environmental risk management strategies on project financing. The moderating effects of CSR on the internal corporate social responsibility practices are also investigated [52]. Corporate social responsibility will be tested as a moderator with environmental risk management strategies, credit risk assessment, and stakeholder risk assessment. Thomas [53] stated that population sampling through the survey is a crucial challenge. The Magnain and Ferrel scale for stakeholder issues in environmental risk management is adopted. Corporate social responsibility assessment is based on Carroll's model [30,32].

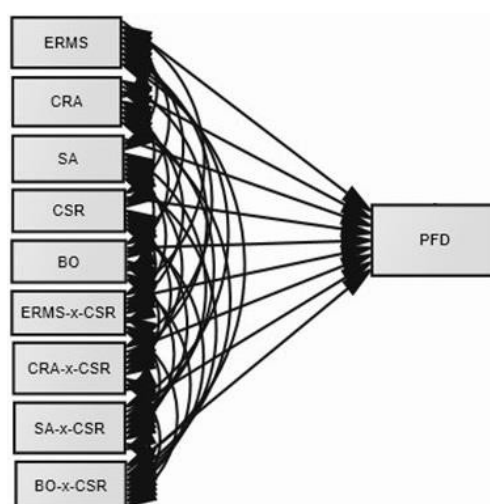


Figure 2. Conceptual framework.

The natural environmental risk management strategy variable is also used in previous research. Different researchers have adopted this variable to analyze project financing [7,54,55]. The credit risk assessment and stakeholder assessment is used by one researcher [7]. Henriques and Sadorsky classified environmental commitment into four profiles known as reactive, defensive, accommodative, and proactive [54]. This variable has been used to measure environmental risks and project financing decisions in Malaysia [7].

3.1. Hypothesis Development

3.1.1. Environmental Assessment

This study mainly investigates the natural environment risk management strategies in project financing decisions. The environmental risk management strategies are used to identify and monitor

the risk in the project financing activities at an early stage. These activities are divided into four approaches: (1) reactive (2) defensive (3) accommodative (4) proactive.

Hypothesis 1 (H1). *There is a significant relationship between environmental risk management strategies and project financing decision-making.*

3.1.2. Credit Risk Assessment

Credit risk assessment involves different factors. It identifies how banks in Pakistan can analyze credit risks in project financing decisions. These risks are (1) credit risk; (2) customer risk; (3) financial risk; (4) regulatory risk; (5) operational risk; (6) liquidity risk. Several types of hazards such as financial and management risk need to be considered by banks in project financing. This study also tries to investigate whether banks consider examining environmental risk management strategies during credit risk assessment or not. There are two hypotheses suggested for credit risk assessment. The first hypothesis will test environment risk management strategies and the second hypothesis is related to bank origin.

Hypothesis 2 (H2). *There is a significant relationship between credit risk assessment and project financing decision-making.*

3.1.3. Stakeholder Assessment

The purpose of stakeholder assessment is to analyze how stakeholder's effect on project financing decisions in banking sectors. The investigation comprises the following groups: (1) government; (2) customers; (3) employees; (4) investors; (5) environmental groups; (6) environment policies. Different stakeholder groups influence project financing. The hypothesis was developed to identify different managers' perceptions towards stakeholder risk assessment. In this study, key stakeholders such as government, customers, employees, international and global community, media and investors are considered.

Hypothesis 3 (H3). *There is a significant relationship between stakeholder risk assessment and project financing decision-making.*

3.1.4. CSR Assessment

In this study, corporate social responsibility is the moderating variable. It is used to check the effects of corporate social responsibility on the project financing decisions in the banking sector. Carroll described corporate social responsibility as pyramidal in 1979. It is divided into four main categories: (1) economic responsibility; (2) legal responsibility; (3) ethical responsibility; and (4) philanthropic responsibility. The study sought to investigate whether economic responsibility was placed higher than the other three categories as in Carroll's CSR pyramid and how CSR orientations influenced project-financing decision.

Hypothesis 4 (H4). *The CSR activities performed by the financial institution's moderate risk assessment on project financing decision-making.*

4. Research Methodology

This study is based on natural environmental risk management strategies, credit risk assessment, stakeholder assessment, moderating effects of CSR and its relationship with project financing decisions in Pakistan. This research is explanatory research and variables are taken from previous studies [55]. In this research, the researcher finds out "why" the problems occur in project financing decisions and provides evidence to support or refute an explanation or prediction. Research has been conducted through a combination of theoretical application, empirical study, and quantitative analysis. An SPSS

statistical tool (Statistical Product and Service Solutions) is used in this study. Simple linear regression and multivariate techniques have been applied in addition to data interpretation and analysis. The general aim of the exploratory research is to gain insights before the more rigorous investigation of a questionnaire. Corporate social responsibility measurement items are based on developed countries rather than developing countries. Existing corporate social responsibility measurement items were adopted in the current study. It was used to identify measurement items for corporate social responsibility awareness, corporate ability (CA) beliefs and CSR beliefs. It employed the qualitative techniques of focus groups to ensure speed, ease, and coverage in data collection [55]. Interviews with 10 managers were also conducted in this study. A quantitative survey is useful in determining relationships between variables. This methodology provides the researcher with the opportunity of testing the conceptual framework. Data from the quantitative research is based on variables and numbers [56]. The quantitative research is widely used in the deductive approach of the theories and hypotheses. This study aims to test the formulated hypotheses. It is deductive research in nature. The data is collected from the different banks by using a simple random sampling technique. In this study, the ideal sampling frame is employees (who are involved in the financing decisions in their operations), managers and executives who are directly involved in the environmental, credit and stakeholder assessment and project financing decisions. CSR is a moderating variable which is consistent with previous studies [35]. There are more than 70 banks in Pakistan, but we distribute the questionnaire to the key public, and private banks. Reliability and validity of the data were checked to ensure the soundness of the data. Reliability measures the uniformity of data in different situations. A scale shows high reliability when its response is similar to the identical data [57]. According to several researchers, the “Cronbach Alpha” value closer to 1 is considered a more reliable instrument of measure but the reliability value greater than 0.60 is also regarded as excellent [58,59]. Correlation and simple linear regression have been applied to check the intensity of the relationship between the environmental risk management strategies, credit risk assessment, stakeholder assessment, and project financing decisions. Hierarchical regression is applied to check the moderation impacts of corporate social responsibility.

5. Results and Discussion

A total number of 575 questionnaires were distributed among the respondents. Out of 575 questionnaires, 491 surveys were returned and verified. Participants were from different areas, educational background, gender, age, income group, and occupation. This study is widely used in previous research that involves the investigation of perception and attitudinal issues [60]. An understanding of the respondents’ profiles may give more insight towards the manager perception about project financing decision-making activities.

The first section of the questionnaire contains personal profiles of each respondent and their employer bank. Three questions include the personal details of the respondents and one question is about the bank’s location.

5.1. Description

Table 1 shows respondents’ gender, age and work position profiles. In this study, 320 respondents were male, and 171 respondents were female. It shows that male respondents gave their response more eagerly than females. All these respondents were chosen from employees those are working in banks located in different cities of Pakistan. These employees influence project financing or decision-making process of the financial sector of Pakistan. The second question focused on age. This question was important because it indirectly indicated respondents’ number of years of work experience.

In this study, 245 respondents are working as managers, which is 49.89% of total respondents; 45 respondents belong to other categories, which 9.16% of total respondents; 52 are member board of directors which is 10.59% of total respondents; 70 are executives which is 14.256% of total respondents;

75 are a senior manager; 15.27% of total respondents and only 4 chief executive officers (CEOs) were willing to give a response, 0.81% of total respondents.

Table 1. Respondents' profiles.

Variable	Category	Frequency	Percent
Gender	Male	320	65.17
	Female	171	34.82
Respondents Age	21–30	129	26.27
	31–40	151	30.75
	41–50	110	22.45
	51 years or above	101	20.57
	Executives	70	14.256
Respondents' Work Profiles	Chief Executive Officer (CEO)	4	0.814
	Managers	245	49.89
	Board of Directors	52	10.59
	Senior Manager	75	15.27
	Others	45	9.164

Descriptive statistics of the variables have been shown in Table 2. This table shows the mean values, standard deviation, skewness and kurtosis results. The Table 2 shows that all the variables of skewness and kurtosis lie within the range because the range of skewness is -1 to $+3$ and for kurtosis is $+1$ to -1 . The result shows that the data is typically distributed. Stakeholder risk assessment has the highest mean value. The following are means values of the variables (environment risk management strategies 3.19, credit risk assessment 3.81, stakeholder risk assessment 3.56, corporate social responsibility 3.95 and project financing decision 4.14).

Table 2. Descriptive statistics of variables.

	N-Statistics	Maximum Statistics	Mean Values	Skewness
Environment Risk Management Strategies	491	5	3.19	−8.41
Credit Risk Assessment	491	5	3.81	−8.17
Stakeholder Risk Assessment	491	5	3.56	−9.05
Corporate Social Responsibility	491	5	3.95	−8.78
Project Financing Decision	491	5	4.14	−7.12
Valid N	491	5		

5.2. Preliminary Analysis: Reliability Test

The preliminary analysis must be carried out to confirm that data is free from error before any statistical technique is applied and then it must generate consistent results. To check the reliability of data, one of the most common techniques is the “reliability test”. Reliability of the measure refers to the particular method repeatedly applied to the same object yielding the same results each time [1]. The reliability test is used to measure the internal consistency of the questionnaire and homogeneity. The most popular technique is used to measure the reliability of the questionnaire is Cronbach's alpha coefficient. Cronbach's alpha coefficient is used to measure the inter-correlations among the items. The Cronbach's alpha zero value depicts no correlation between the items of the questionnaire. While value one indicates perfect correlation. The 0.6 value is fewer shows unsatisfactory and shows poor internal reliability. The Cronbach's alpha greater than 0.7 produce the satisfactory results of internal reliability [1,32]. If the value of alpha is great than 0.7, the correlation between the variables in strong but less than 0.7 shows a weak correlation. An alpha value of 0.6 is considered acceptable in some cases but not preferred in research.

The value of Cronbach's alpha coefficients for different sets of items is depicted in Table 3. It is approximately more than the 0.7 and 0.9. Pallant recommend a minimum value 0.6 [61].

Table 3. Reliability statistics.

Variables	Number of Items	Cronbach's Alpha
Environmental risk management	9	0.881
Credit Risk assessment	9	0.896
Stakeholder risk assessment	9	0.850
Project finance decision	9	0.908
CSR assessment	15	0.781

5.3. Exploratory Factor Analysis

Factor analysis is a statistical technique that is applied to a single set of variables. It discovers which variables in the set are relatively independent of one another [62]. Factors are thought to reflect the underlying processes that create correlations among variables. One of the most critical objectives of factor analysis deemed appropriate for this study was to reduce the large number of observed variables into a smaller number of factors. Factor analysis was used to minimize data relating to credit, stakeholder, and CSR assessments.

Table 4 displays the Kaiser–Meyer–Walking statistics and Bartlett's test results to check the essentiality assumption. The table shows the Kaiser-Meyer-Olkin measure of sampling adequacy for the variables.

The composite reliability (CR) of all items lie in the range of 0.811 to 0.920 which indicates a good sign for scale reliability. The Average Variance Extracted (AVE) of all items is higher than the benchmark value of 0.5 whereas the AVE of SRA is also nearly equal to 0.5. The Goodness of Fit Index (GFI) of CFA model after item deletion is 0.75, which shows that the data is the excellent fit for the respective variables.

Table 4. KMO and bartlett's test.

Kaiser–Meyer–Olkin Measure of Sampling Adequacy		0.869
Bartlett's Test of Sphericity	Approx. Chi-Square	1987.676
	df	10
	Sig.	0.000

5.4. Hypothesis Testing

Hypothesis 5 (H5). *There is a significant relationship between environmental risk management strategies and project financing decision making.*

In Table 5, R is multiple correlation coefficients between all the predictors in the model and the dependent variable. The analysis shows that 75% of the variability in the independent variable (project financing) can be determined by using ERMS whereas the rest of the variability is due to all other factors that were not taken account of this relationship. The value of adjusted R^2 is 0.563, and the value of the standard error estimate is 0.59. R^2 is the simple square of R. Table 6 shows analysis of variance results.

Table 5. Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.750 ^a	0.563	0.562	0.593

^a. Predictors: (Constant), ERMS.**Table 6.** Analysis of variance (ANOVA).

Model	Sum of Squares	Mean Square	F	Sig.
1	Regression	221.780	221.780271	630.05
	Residual	172.12	0.352001	0.000
	Total	393.909		

Dependent Variable: PFD; Predictors: (Constant), ERMS.

Hypothesis 6 (H6). *There is a significant relationship between credit risk assessment and project financing decision making.*

In Table 7, R is multiple correlation coefficients between all the predictors in the model and the dependent variable. The standard error of the estimate is also called the root means square error. The analysis shows that 79.3% of the variability in the independent variable (credit risk assessment) can be determined by using dependent variable project finance whereas the rest of the variability is due to all other factors of this relationship that were not taken into account. The value of adjusted R² is 0.628, and the value of the standard error estimate is 0.54.

Table 8 represents ANOVA results. The sig value is 0.0 which is less than 0.05. It indicates that the model is a good fit for measuring or testing this particular hypothesis. The mean square value of regression is 247.834288.

Table 7. Model summary.

Model	R	R Square	Adjusted R Square	Std. The Error of the Estimate
1	0.793 ^a	0.629	0.628	0.546

^a Predictors: (Constant), CRA.**Table 8.** ANOVA.

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	247.834288	1	247.834288	829.653164
	Residual	146.074254	489	0.298720	0.000
	Total	393.908541	490		

Dependent Variable: PFD; Predictors: (Constant), CRA.

Hypothesis 7 (H7). *There is a significant relationship between stakeholder risk assessment and project financing decision making.*

Table 9 shows hypothesis 3 model summary. The overall model is a good fit with the adjusted R² value 43% (0.43). It is significant with a *p*-value of 0.000. The findings differ from the different studies and found a contrary relationship [63,64]. This research further contributes to McWilliams and Siegal, and CSR decisions are solely based on the managers' perceptions as they treat all investment decisions [65].

Table 9. Model summary.

Model	R	R Square	Adjusted R Square	Std. The Error of the Estimate	Sig.
1	0.660	0.435	0.43	0.674467	0.000

Hypothesis 8 (H8). *CSR activities performed by the financial institution's moderates risk assessment on project financing decision making.*

The overall model is a good fit, and the adjusted R2 value is 32% (0.32) which is shown in Table 10. The intensity of the relationship between CSR and project finance (PF) is shown in Table 11. The association is significant at p -value 0.000 and R-value 57.5% (0.575) explains that there is a positive and direct relationship between CSR and PF.

Table 10. Model summary.

Model	R	R Square	Adjusted R Square	Std. The Error of the Estimate
1	0.575 ^a	0.330	0.329	0.734

^a Predictors: (Constant), CSR.

Table 11. ANOVA.

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	130.076807	1	130.076807	241.09138	0.000 ^b
Residual	263.831734	489	0.539533		
Total	393.908541	490			

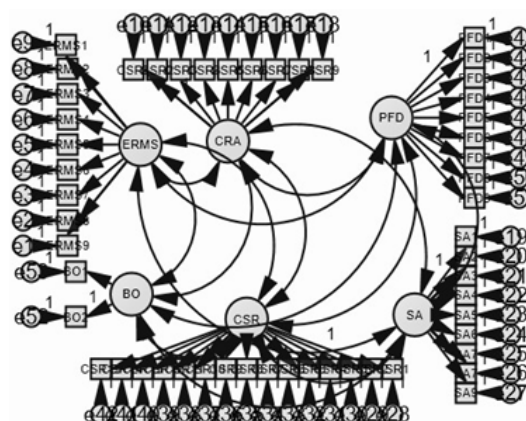
^b indicate significance at $** p < 0.05$.

5.5. Structural Equation Model (SEM)

Table 12 represents the ratios of the structural equation model (SEM). It shows that the GFI, RMR, CFI, NFI, TFI, and RMSEA is in the range prescribed by Hair et al., (2010). Figure 3 shows confirmatory factor analysis model. Structural model is a good fit to conduct path analysis.

Table 12. Structural equation model.

SEM	GFI	RMR	CFI	NFI	TFI	RMSEA
	1.00	0.00	1.00	1.00	1.00	0.15

**Figure 3.** Confirmatory factor analysis (CFA) model.

5.6. Structural Equation Model (Path Analysis)

Path analysis is the statistical technique used to examine causal relationships between two or more variables. It is based on a linear equation system. In the 1930s, Sewall Wright developed it for phylogenetic studies.

Path analysis is a particular case of SEM. Path analysis contains only observed variables and each variable has one indicator. Path analysis has a more restrictive set of assumptions than SEM (e.g., no correlation between the error terms). Most of the models in the literature are SEM rather than path analyses. Path analysis is the application of structural equation modeling without latent variables. One of the advantages of path analysis is the inclusion of relationships among variables that serve as predictors in one single model. One specific and typical example is a mediation model.

5.7. Moderation

Moderation is the process of eliminating or lessening extremes. It is used to ensure normality throughout the medium on which it is being conducted. Moderation is tested in different ways. One of the ways is a hierarchical regression, which aims to investigate the moderating effect of corporate social responsibility between the relationships of environmental risk management, credit risk assessment, stakeholder assessment, and project financing decisions. Hierarchical regression analysis is used to test the relationship between environmental performances [64]. J. Kemper used hierarchical regression analysis to test the relationship between the CSR moderating role and firm performance [38].

Table 13 indicates the overall model relationship among all variables. All variables were analyzed along with the moderator variable (CSR). There is a positive and significant relationship among all variables. Corporate social responsibility is playing a moderating role in all variables. Results show that CSR act as a moderator between ERMS and PFD (p -value = 0.04).

The empirical results of this study have proved many useful findings. CSR is becoming a progressively more critical aspect of financial institutes in Pakistan. Extensive research can be found on the relationship between CSR and organizational performance from the last few decades. Several studies found a positive correlation between CSR and financial performance [54,66].

CSR is divided into four categories such as economic, legal, ethical and philanthropic responsibilities. The study shows that economic responsibilities are more critical because the profit maximization is the primary motive of financial institutions. The results are consistent with the studies of Carroll and Basah [7,30]. However, few studies found the explanation of the CSR mechanisms. It is revealed that there is significant positive direct impact of environmental, credit and stakeholder assessment along with the moderating effect of CSR on project financing decision activities. In this study, financing mechanisms especially project financing, bank credit, and equity have been explained [8]. This research indicates that bank lending potentially has more impact on CSR than equity financing. Therefore, the present study has contributed to the literature by mainly examining how CSR influences and acts to moderate the financing decisions.

The moderation effect of CSR is significantly consistent with the previous research [67]. In this view, it suggests that financial institutes can achieve their objectives of competitive advantage by investing in CSR along with reducing the environmental, credit and stakeholder risks. Environment-friendly firms are more goal-oriented in the current business world as compared to non-environment friendly firms. Such organizations can gain high market share.

Table 13. Regression weights: (group number 1—default model).

			Estimate	S.E.	C.R.	P
PFD	<—	ERMS	0.16	0.06	3.27	***
PFD	<—	CRA	0.28	0.05	4.43	***
PFD	<—	SRA	0.15	0.04	3.39	***
PFD	<—	CSR	0.22	0.03	6.09	***
PFD	<—	ERMS_x_CSR	0.17	0.07	2.19	0.04
PFD	<—	CRA_x_CSR	0.11	0.07	1.20	0.12
PFD	<—	SRA_x_CSR	0.04	0.05	0.69	0.44
PFD	<—	BO	0.02	0.05	0.27	0.72

*** indicate significance.

6. Conclusions

The study has sought to investigate the social differences and perception of banking managers towards environmental, credit risk, stakeholder assessment, and CSR issues as they relate to project finance decision-making. The study has examined how banks can use corporate social responsibility as a tool to enhance their role in natural environmental management. This study is unique due to several factors. Economic development and sustainability are two major pillars of any country. The study shows that stakeholders in Pakistan give less preference to corporate social responsibility and environmental management. Banks have adopted a reactive environmental strategy in Pakistan. Results indicate that corporate social responsibility is playing a moderating role in the project decision making. Companies involved in CSR activities have more value as compared to other companies. The results illustrate that maintaining a sound corporate and social reputation are of additional importance to a financial institution rather than merely considering risk assessments. Foreign banks are more involved in CSR activities rather than domestic banks. There is a positive relationship between all variables. The conclusions presented in this study set out a distinctive and simplified view of environmental, credit and stakeholder concerns.

Implications for Policy Markers

This research focuses on different risk assessments in project financing decision-making. It has produced empirical findings and theoretical justification with practical implications. The study outcomes can be beneficial for banks, the government, organizations, and policymakers. This study focuses on the emerging economy which is part of “One Belt One Road” mega project. Research indicates that projecting finance activities result in harmful negative impacts on the natural environment in Pakistan. This study shows that developing countries lag behind in implementing environmental and CSR activities as compared to foreign counterparts. Policymakers and government play an essential role in the implementation of environmental risk management, credit risk assessment and stakeholder assessment in project financing in Pakistan. The State bank of Pakistan (SBP) can establish proactive environmental and credit financing guidelines to stimulate the implementation of the proactive strategy. The government should provide incentives and rewards to the banks for the implementation of a protective environmental management strategy. The government must also set aside special funds to develop national CSR policies, guidelines, and programs, to ensure that rigorous best-practice policies and guidelines are put in place. Policymakers should design a particular policy of project financing for those involved in CSR activities (e.g., tax reduction).

Author Contributions: All authors contributed equally to this research.

Funding: This study was supported by the National Social Science Fund of China (No-18BGL129).

Acknowledgments: The author is grateful to the editor of the special edition and two anonymous reviewers for their constructive and helpful comments and suggestions.

Conflicts of Interest: The authors declare no conflict of interest.

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