CORPORATE SOCIAL PERFORMANCE AND FINANCIAL STABILITY: EVIDENCE FROM ISLAMIC, SOCIAL AND CONVENTIONAL BANKING MODELS

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ABSTRACT

This paper addresses two key issues in Corporate Social Performance (CSP) research. First, it investigates the impact of CSP on Financial Stability (FS), and second, it examines the influence of different banking models on the relationship between CSP and FS. Using a cross-country sample of 117 financial institutions from 36 countries over an 8-year period (2013-2020) and the System Generalized Method of Moments (GMM) estimation method, it finds that banking models significantly affect the CSP-FS relationship. This is attributed to diminishing marginal benefits of economic growth beyond a certain level of financial intermediation, which increases financial risk. The results give new insights into the synergies and divergences between different banking models and the overarching goals of social performance and financial stability. This research contributes novel insights that can inform policymakers, regulators, and industry stakeholders in their quest for a more resilient and sustainable banking sector.

Keywords: Corporate social performance, CSP index, Financial stability, Islamic banking, Social banking, Values-based banking.
JEL classification: G10; G21; G32.

I. INTRODUCTION

In performing the role of financial intermediation, maturity transformation, and liquidity creation, banking institutions manage highly leveraged balance sheets and thus are exposed to financial risks (Claessens & Kose, 2013; Paul, 2020; Mangala & Soni, 2023). Pursuant to the global financial crisis of 2008 (GFC), new regulations have been put into force to govern the banking business to foster a stable and sustainable financial environment (Avrampou et al., 2019). The regulatory measures, such as Basel 3, the United Nations Environment Programme Finance Initiative (UNEP, 2015), Principles for Responsible Investment (PRI), and the Equator Principles (Weber & Acheta, 2014; Weber, 2018; Chiu, 2022), aim at bolstering the stability of the financial system and establishing responsible practices within the banking sector.

Nevertheless, the financial sector continues to face two significant challenges. The first revolves around the delicate equilibrium between advancing sustainable development initiatives and fulfilling financial stability and performance obligations (Pu & Yang, 2022). The second revolves around how the financial sector measures sustainability and integrates it into its core business strategies (PwC, 2019). These gaps are often attributed to the overwhelming focus of the financial sector on profit maximization goals, which can overshadow long-term sustainability considerations (PwC, 2019). Carè (2018) posits that with the growing importance of sustainable development, there is now an urgent need for the financial services sector to shift towards sustainable banking by allocating financial resources to the most impactful sustainable development needs.

Pu & Yang (2022) posit that within emerging markets, the symbiotic relationship between banking institutions and major corporations, particularly those with significant environmental footprints, poses a profound dilemma. Many banking entities rely on maintaining robust credit relationships with these corporations despite the corporations' adverse environmental impacts. Chen et al. (2022) assert that banking institutions require explicit incentives to integrate sustainability principles into their lending practices. While numerous studies (Albitar et al., 2020; Sandberg et al., 2023; Mohamed Sultan et al., 2024) have explored the impact of corporate social responsibility (CSR) activities on corporate financial performance (CFP) within the financial sector, research examining the impact of CSR activities on financial stability (FS) within individual financial institutions remains relatively scarce.

Studies by Gangi et al. (2019), Nguyen & Nguyen (2021), and Ramzan et al. (2021) have primarily focused on commercial banks in specific countries or regions, confirming the risk-reducing effects of CSR. This is supported by Khan (2011) and García & José (2016), who suggest that robust CSP initiatives can enhance a bank's reputation, mitigate risks, and ultimately contribute to long-term financial stability. However, some studies caution against the potential trade-offs and challenges associated with prioritizing social objectives over financial imperatives. Tracey & Sowerbutts (2018) assert that banking institutions that relax their standards of financial intermediation through higher lending ratios increase their vulnerability to future shocks and crises. Ozili & Iorember (2024) argue that the engagement of financial institutions in financing SDG-related activities and projects presents a trade-off because their financial commitment to SDG activities

could pose new risks to financial stability and may lead to losses that threaten the stability of financial institutions.

Given these divergent perspectives, there is a need for a nuanced understanding of how CSP is measured and influences financial stability, particularly within different banking models (Napier et al., 2023; Ben Mimoun, 2021). This is crucial because extant studies have found that the conflicting results in research related to CSP and CSR are due to the use of broad cross-sectional data which obscures industry-specific nuances (Griffin & Mahon; 1997; Margolis et al., 2009; Chatterji et al., 2009; and Fu & Jia, 2012). Hence, without a standardized CSP measure, corporations would easily portray any good deed as socially responsible (Barnett et al., 2020), creating a gap between initiatives and impact indicators, hindering accurate reflection of financial institutions' contribution to sustainability and financial stability (Benitez, 2018). Given the critical importance of FS to sustainable banking (Napier et al., 2023), investigating the distinctive characteristics and operational dynamics of various banking models, such as Islamic banks, social banks, and conventional banks, is pertinent for gaining deeper insights into the CSP-FS relationship.

The theoretical framework of Islamic banking models suggests that their commitment to value-based principles and ethical practices makes them inherently more resilient than conventional banking systems. For example, Islamic banking is based on ethical principles such as risk-sharing among parties, avoidance of exploitation, promotion of socio-economic justice, prohibition of interest-based practices, adherence to fair and just contractual terms, and avoidance of excessive speculative risks. These principles serve as built-in risk mitigations in financial transactions (Cihak & Hesse, 2010; Khan & Bhatti, 2008; El-Hawary & Grais, 2004).

Meanwhile, the theoretical foundation of social banking espouses social development and sustainable practices (Carè, 2018; Benedikter, 2011; Weber & Remer, 2011; De Clerck, 2009). Social banks demonstrate positive social, environmental, or sustainable impacts in all their business dealings. The social banking business model is based on the two principles of achieving a positive impact on society and a sustainable financial return. According to Weber & Remer (2011), social banking aims to positively impact people, the environment, and culture through its products and services.

The only difference, therefore, between Islamic banking and social banking models is that the sources of the jurisprudence governing Islamic banking are founded on theological scriptures and Divine revelations from the Holy Book of the Quran and the traditions of the Prophet Muhammad (pbuh). In contrast, social banking is a human comprehension of ethical financial practices. Empirical evidence, however, supports that Islamic banks and social banks exhibit greater stability than their conventional counterparts, mainly attributed to their resilience to a reduced reliance on risky and speculative activities (Cihak & Hesse, 2010; Farooq & Zaheer, 2015; Benedikter, 2011; Weber, 2011b; and Mykhayliv & Zauner, 2018).

This contrasts with conventional banks that adhere to traditional banking practices with a primary focus on financial profitability and maximization of shareholder returns (Napier et al., 2023; Schoenmaker & Schramade, 2018). Despite these fundamental differences, past studies have largely treated banking models

homogeneously, failing to account for the potential nuances in the relationship between CSP and financial stability across different banking paradigms. Against this backdrop, this study seeks to bridge this gap in the literature by examining the nexus between CSP and financial stability across Islamic banks, social banks, and conventional banks. In doing so, the study employs a novel CSP construct that enables a fair and equitable comparison between financial institutions across countries and regions.

This research presents two significant contributions to the existing literature on the nexus between corporate social performance (CSP) and financial stability (FS). Firstly, it analyses the moderating effects of three distinct banking models: Islamic banking (IB), social banking (SB), and conventional banking (CB) on the relationship between CSP and FS. By examining these diverse banking paradigms, we aim to uncover how their underlying principles and practices influence the link between corporate social performance and financial stability. This comparative analysis stands to contribute novel insights that can inform policymakers, regulators, and industry stakeholders in their quest for a more resilient and sustainable banking sector.

Secondly, it introduces a novel CSP Index as the independent variable in our study. This index is meticulously constructed using six indicators pertaining to financial inclusion and financial intermediation dimensions, serving as proxies for sustainable banking practices. By developing this innovative CSP Index, we aim to provide a comprehensive and standardized metric for assessing corporate social performance within the banking sector and tackle the lack of standardization of CSP measurements that has beset past studies. This novel approach enables us to systematically evaluate the impact of CSP on financial stability across different banking models, thereby advancing our understanding of the dynamics shaping sustainable banking practices.

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature and develops the hypotheses; Section 3 discusses the research methodology and design; Section 4 presents the research data; Section 5 discusses the findings; and Section 6 concludes with policy implications.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT
2.1. Corporate Social Performance (CSP) & Financial Stability (FS)
Corporate Social Performance (CSP) refers to how a company manages its relationships with stakeholders and its impact on society and the environment while achieving the triple bottom line of social, environmental, and financial performance (Aguinis & Glavas, 2012; Hyun et al., 2023). It encompasses various aspects, including ethical practices, social contributions, and stakeholder engagement (Carroll, 1999). Effectively, CSP is a good behavior barometer and is generally recognized as a measure of how corporations treat their broad stakeholders in the fulfilment of social responsibilities (Carroll, 1999; Campbell, 2007; Margolis et al., 2009).

In recent years, the debate on the relationship between social performance activities, measured by the Corporate Social Performance Index (CSP Index), and financial stability within the banking industry has gained significant traction

(Derwall & Verwijmeren, 2007; Di Giulio et al., 2007; Dhaliwal et al., 2011; El Ghoul et al., 2011; Platonova et al., 2018; Ozili, 2020; Ozili & Iorember, 2024). Investigations into this area are rooted in the recognition that banks play a pivotal role not only in the allocation of capital but also in driving social and environmental progress (Levine, 2005; Ang, 2008; Masood & Javaria, 2021).

Prior studies examining the CSP in the financial industry (Galletta et al., 2021; Esteban-Sanchez et al., 2017; Oikonomou et al., 2012; Orlitzky & Benjamin, 2001) have delved into the relationship between CSP and financial stability within the banking sector, illuminating both the potential synergies and complexities inherent in balancing social responsibility with financial performance (Carè, 2018; Weber, 2011a). However, the studies examining this relationship have yielded mixed findings, with some suggesting a positive impact of social performance activities on financial stability, while others indicate the opposite (Khan, 2011; Gould & Melecky, 2017; Ozili & Iorember, 2024).

On one hand, proponents argue that banks engaging in social initiatives, such as promoting financial inclusion, supporting community development projects, and implementing environmentally sustainable practices, stand to enhance their reputation, mitigate risks, and ultimately bolster their long-term financial stability (Khan, 2011; García & José, 2016). Boutin-Dufresne & Savaria (2004) show that adopting CSR codes of conduct reduces a firm's overall business risk and can positively impact long-term risk-adjusted performance. Orlitzky & Benjamin (2001) find that higher CSR correlates with reduced financial risk. Similarly, the studies by McGuire, Sungren, & Schneeweis (1988), Aupperle & Pham (1989), and Oikonomou et al. (2012) also show a negative relationship between CSP and financial risk, which means that higher CSP activities will potentially lower firm risk.

These social development activities can lead to increased customer loyalty, improved employee morale, and a stronger brand image, all of which contribute to a more resilient and sustainable banking operation (Wang & Choi, 2013; Napier et al., 2023). Moreover, banks that integrate environmental, social, and governance (ESG) criteria into their business strategy may be better equipped to identify and manage risks associated with environmental degradation, social unrest, and regulatory changes, thereby enhancing their overall financial stability (Sroufe & Gopalakrishna-Remani, 2019; Tok & Yesuf, 2022).

On the other hand, skeptics argue that the pursuit of social performance activities could potentially detract from a bank's financial stability by diverting resources away from core banking activities, such as lending and risk management (Ozili & Iorember, 2024). Additionally, there is concern that certain social initiatives may carry inherent financial risks, particularly if they involve lending to underserved or high-risk segments, funding costly community development projects, or implementing environmentally friendly but expensive operational practices (Tracey & Sowerbutts, 2018; Gould & Melecky, 2017).

Furthermore, the impact of social performance activities on a bank's bottom line may not always be immediately apparent, making it challenging to accurately assess their long-term financial implications (García & José, 2016; Gadanecz & Tissot, 2017). As a result, past studies examining the relationship between social performance and financial stability have yielded mixed results, further highlighting

the complexity of this issue. A key challenge for policymakers regarding financial stability in the financial system is the drive towards restoring the financial system to be sustainable without any adverse effects on stability (Orlitzky & Benjamin, 2001). Given that, this study fills this gap and examines the relationship between CSP and financial stability with the following hypothesis:

Hypothesis 1: A significant relationship exists between corporate social performance and financial stability within the banking industry.

2.2. Impact of Banking Models on Financial Stability: Islamic and Social
2.2.1. Banking Models

The Islamic banking industry has emerged as a formidable sub-segment within the global financial system since its conceptual developments in the late 1940s and revival into the modern financial system in the mid-1970s (Vogel & Hayes, 1998; Khan & Bhatti, 2008; Abasimel, 2023; Belkhaoui, 2023). According to the Islamic Financial Services Industry Stability Report 2022 (IFSB, 2023), the global Islamic financial services industry grew by 11.3% year-on-year in 2021 and is estimated at US\$3.06trillion, including banking, capital market, takaful, and asset management industry sub-segments. The Islamic banking segment alone is estimated at US\$ 2.1 trillion in 2021.

Archer & Karim (2002) contend that the Islamic banking and financial services industry provides financial services on a basis that is compliant with the principles and rules of Islamic commercial laws (fiqh al-muámalat), a branch of Shariá laws. The theoretical model of the Islamic financial system, which is based on risk-sharing principles, supports the notion that the Islamic banking model has greater stability and resilience (El-Hawary & Grais, 2004).

At the heart of this financial system that propagates socio-economic justice is prohibiting usurious practices or interest-based transactions and the uncertainties in contractual terms and obligations, commonly referred to as *Riba' and Gharar* in Islamic discourse (Cihak & Hesse, 2010). The Islamic banking system is also against trading in financial risk and excessive speculation, which are seen as a form of gambling, and investing in businesses that are considered sinful (Cihak & Hesse, 2010). According to the 12th-century Maliki jurist Ibn Rushd, *Gharar* in a sale contract causes harm to one of the contracting parties and is itself caused by information asymmetry regarding the essential elements of the contract (Zuhayli et al., 2003). The strong prohibition of *Riba' and Gharar* vindicates that the Islamic banking system is grounded on the principles of morality, fairness and justice.

However, the practical aspects of Islamic finance have resulted in the predominant employment of fixed-obligation debt-based contracts for credit facilities using Shariah contracts (Ali & Izhar, 2015). These fixed obligation contracts dilute the effectiveness of the risk-sharing mechanism. According to Ali and Izhar (2015), the more concerning issue for the stability of the Islamic financial sector is the overwhelming reliance of the Islamic financial institutions in certain jurisdictions on the fixed obligation type of contracts of *Tawarruq*, two-sided *Murabaha, and commodity Murabaha*. These arrangements eliminate any trace of risk sharing and bring the Islamic financial sector synthetically similar to a debt-based loan and credit obligation offered by the conventional banking system (Asutay,

2007; Ali & Izhar, 2015). In that regard, the Islamic banking system is even more prone to instability due to the lack of support infrastructure and legal precedence on defaults that are available to the conventional banking system.

The social banking system is another ethical and value-based financial system that espouses social development and sustainable practices (Carè, 2018; Benedikter, 2011; Weber & Remer, 2011; De Clerck, 2009). Social banks have gained greater prominence, especially post-GFC, because of their positive impact on sustainable banking through financial products and services (Weber, 2018). Weber & Duan (2012) state that social banks deliver financial intermediation solutions to individuals and businesses, demonstrating positive social, environmental, or sustainable impacts. The social banking business model is based on the two principles of achieving a positive impact on society and a sustainable financial return. According to Weber & Remer (2011), social banking aims to positively impact people, the environment, and culture through its products and services.

One recent initiative to formalize the role of social banks was the establishment of the Global Alliance for Banking on Values (GABV, 2022). The GABV is an umbrella organization for value-based financial institutions, founded at the beginning of the global financial crisis in 2009 by 39 financial institutions with a joint mission of using finance to deliver sustainable economic, environmental, and social development (Tok & Yesuf, 2022). Value-based banks have emerged with revolutionary banking models that uniquely positioned them to foster economic sustainability by offering value-based financial services and products necessary to serve a broader spectrum of stakeholders (GABV, 2022).

Weber (2011b) examines 13 member banks of the GABV, analyzing their business and financial indicators. The results suggest that these social banks follow the mission of social finance and prefer social impacts over financial returns without neglecting financial sustainability. However, as social banks focus more on supporting and funding small, innovative firms, the financial risk associated with these smaller firms is often higher than larger, more diversified firms. Hence, this exposes social banks to a portfolio of riskier assets, which may negatively affect the financial stability of the bank and the industry. Mykhayliv & Zauner (2018) also find evidence that social banks are significantly more prone to bank runs due to lower liquidity buffers than larger banking institutions.

This also shows that increasing the social banking system's inclusiveness and diversity of investor base is important for its stability. This would help make the system more resilient and less prone to quick fund shifting due to the behavior of a single type of investor who is indifferent to investing in value-based banking (Weber, 2018). Hence, building on the review above, this study aims to investigate the impact of value-based banking models, specifically Islamic banking and social banking, on the dynamic between CSP and FS. In order to provide a comprehensive analysis, the study will also include an examination of the conventional banking model for comparative purposes. Herein is the hypothesis:

Hypothesis 2: The banking models significantly impact the relationship between corporate social performance and financial stability.

2.3. Lack of Standardization in CSP Index

The measurement of CSP is a challenging issue and has been a subject of critical debate. It is one of the key factors cited for the inconsistencies found in empirical results relating the impacts of CSP (Erol et al., 2021; Fu & Jia, 2012; Orlitzky & Benjamin, 2001; Griffin & Mahon, 1997). According to Griffin & Mahon (1997), most studies on the relationship between CSP to other variables, such as financial performance, analyze broad, cross-sectional data across multiple industries, masking the individual differences and specific contexts of an industry. The CSP measurements of some index providers include a wide variety of CSP activities such as support for local communities or charities, reputation of the organization, social engagement, environmental responsibility, brand perception, proxies representing ethical practices, development of recycling programs, minority, and female representation on the board of directors, product quality, illegal politicking, fair dealings with customers, and sustainability practices (Margolis et al., 2009).

Some of these CSP measurements are challenging to quantify and compare fairly, particularly within specific industries like the financial sector. For example, the CSP measurements, such as environmental policies relating to green building certifications, adopting biodiversity, and reducing building emissions, are not core to banking operations (Fu & Jia, 2012). Additionally, CSP measurements also relate to concepts of an inclusive and diverse workforce as a social performance indicator, which is a challenge for financial institutions operating in countries where most of the population is of a singular race or religion (Waddock & Graves, 1997). Moreover, countries where cultural and religious restrictions remain strong regarding gender-related matters also pose a challenge to having a consistent set of CSP measurements (Wang et al., 2021). Inconsistencies in the CSP measurements have also been due to the sample size and geographic setting of samples, where some samples use a country setting, and others use cross-country settings (Griffin & Mahon, 1997).

Some of these dimensions of social performance may limit the ability of certain banking institutions to score well. For instance, cultural differences regarding religion and social settings may affect the ability of Islamic banks to score well in the CSP Index, even though Islamic banks are centered on principles of ethics, fairness, and justice. The lack of data on some of the dimensions of social performance measurement indices may also result in the scores not genuinely reflecting the true nature of the banking activities towards sustainability causes.

Given the arguments regarding the issues of past CSP Indices, especially on the lack of transparency or biases of data points, this research constructs a novel CSP Index customized to be associated with key dimensions of financial inclusion and financial intermediation that relate directly to successful stakeholder management for the financial sector. To achieve this goal, the CSP Index in this study employs six indicators as proxies, as shown in Table 1. These indicators are selected for their consistency and comparability to financial datasets of global financial institutions, focusing on omnipresent measures of financial inclusion and financial intermediation.

This study attempts to design a novel CSP Index that tackles the weaknesses of previous CSP proxies of past studies. Firstly, it is designed using data points taken from the financial statements of the sample banking institutions, hence

establishing credibility, verifiability, and comparability to the dataset. Secondly, the CSP Index in this study is a multidimensional construct using variables relating to the SDGs relating to financial inclusion and financial intermediation, critical elements of socio-economic development. Finally, the study avoids biases of subjective social performance criteria or elements that may result in an uneven playing field for the sample financial institutions, including religious-based and ideology-based business models. Herein lies the unique contribution of this study to this body of knowledge.

III. RESEARCH METHODOLOGY AND DESIGN
3.1. Construction of the CSP Index

This study tackles the issue regarding the non-standardization of CSP measurements by constructing a novel CSP index using six proposed proxies to provide a more nuanced and comprehensive assessment of the social responsibility practices within the financial sector. These proxies, meticulously selected to align with crucial dimensions of financial inclusion and financial intermediation, offer a robust framework for evaluating the societal impact of financial institutions.

In that regard, financial inclusion refers to the efforts to ensure all individuals and businesses, regardless of their socioeconomic status, have access to useful and affordable financial products and services, including bank accounts, credit facilities, insurance, and payment systems (Vo et al., 2021). Financial intermediation, meanwhile, refers to the process by which financial institutions, such as banks and credit unions, act as intermediaries between savers and borrowers to undertake key financial intermediation activities. These include lending, offering liquidity facilities, offering risk management and mitigation through diversification of investments and pooling of financial resources, and transforming assets from short-term obligations to long-term assets (Çetin et al., 2023).

Each proxy used in the construction of the CSP Index captures distinct facets of the relationship between financial institutions and the communities they serve, thereby contributing to a more holistic understanding of corporate social responsibility within the sector. Practically, the CSP Index of this research, constructed to measure the social performance of the sample banking institutions, is designed to be a comparable and verifiable index using data available in the financial reports of all banking institutions. Herein lies a significant difference between the CSP Index of this study when compared against other widely used social performance indices, which use subjective, biased, and non-verifiable data points. The components of the CSP Index are shown in Table 1.

Table 1.
CSP Index Indicators

Dimensions/Indicators	Description
Financial Inclusion Dimensions	
1. Deposit Sustainability (DS)	Year-on-Year growth of Savings Accounts and Demand Deposit Accounts.
2. Loan to GDP Ratio (LGD)	Total Gross Loans to Customers divided by GDP.
3. Deposit to GDP Ratio (DR)	Total Deposits divided by GDP.
Financial Intermediation Dimensions	
4. Net Loan Ratio (LR)	Net Loans and Advances to Customers divided by Total Assets.
5. Loan Growth (LG)	Year-on-Year growth of Total Loans.
6. Deposit Growth (DG)	Year-on-Year growth of Total Deposits.

Firstly, the loan-to-GDP ratio (LGD) is a critical indicator of a financial institution's contribution to economic development and growth. A high LGD signifies substantial lending activity and financial deepening, which can stimulate investment, entrepreneurship, and job creation, thereby fostering inclusive economic growth (Khera et al., 2022; Vo, Nguyen & Van, 2021). By incorporating this proxy into the CSP index, we can gauge the extent to which financial institutions facilitate access to credit and support economic empowerment within their communities.

Secondly, loan growth (LG) and deposit growth (DG) metrics provide insights into the expansion and diversification of financial services offered by institutions. A robust LG rate indicates increased access to credit for individuals and businesses, promoting financial inclusion and entrepreneurship (Khera et al., 2022). The productive allocation of financial resources is a vital cog of financial intermediation that helps further economic growth and social development (Demirgüç-Kunt & Huizinga, 2010). Meanwhile, DG reflects consumer confidence and trust in the banking system, which is essential for fostering stability and resilience within the financial sector (Galletta et al., 2021). Khera et al. (2022) assert that the growth of deposits is an essential indicator of financial intermediation towards achieving social performance. It offers households access to savings instruments for managing consumption and setting aside funds in case of unforeseen shocks. By including these proxies in the CSP index, we can assess financial institutions' effectiveness in meeting their customers' evolving needs while ensuring the sustainability of their operations.

Thirdly, the net loan ratio (LR) is calculated as net loans and customer advances divided by total assets. It offers valuable insights into financial institutions' quality and risk management practices in undertaking their financial intermediation function. A prudent LR ratio indicates a balanced portfolio with adequate provisions for credit risk, safeguarding the stability and integrity of the banking system (Demirgüç-Kunt & Huizinga, 2010). By monitoring this proxy, we can evaluate the extent to which financial institutions are performing their roles as credit intermediaries while managing risks responsibly and fulfilling their fiduciary duties to depositors and investors.

Fourthly, deposit sustainability ratio (DS) is measured by the year-on-year growth of savings accounts and demand deposits. Imam & Kpodar (2016) state that a developed financial sector helps mobilize savings and facilitates capital allocation where productive growth is needed most. Lack of access to savings and deposit products will deprive parts of the population of being involved in the formal sector of the economy and will lead to inefficient and sub-optimal financial intermediation (Imam & Kpodar, 2016). Therefore, savings and current account growth metrics reflect the accessibility and affordability of banking services for individuals and households. A rise in savings and current account growth signifies increased financial inclusion and literacy, empowering individuals to save, invest, and plan for the future. By incorporating these proxies into the CSP index, we can assess the efforts of financial institutions in promoting savings mobilization and empowering underserved communities to participate in the formal financial system.

Finally, the deposit to GDP ratio (DR) provides insights into the depth and penetration of the banking sector within the economy (Khera et al., 2022; Galletta et al., 2021). A higher DR suggests greater financial intermediation and resource mobilization, facilitating capital formation and investment. By including this proxy in the CSP index, we can evaluate the role of financial institutions in mobilizing savings, channeling funds to productive sectors, and fostering economic resilience and development.

Therefore, in this paper, the CSP Index will rank financial institutions higher based on their financial intermediation and inclusion scores, emphasizing social responsibility over profit maximization. Davis & Kim (2015) assert that the focus on profit maximization led to a broad shift by financial institutions during the GFC, where capital was intermediated through opaque financial instruments and neglected the primary lending production process (Lopez Rafaschieri, C. A., & Lopez Rafaschieri, J. A, 2009).

The construction of a novel CSP index using the six proposed proxies, as explained in the preceding paragraphs, offers a robust framework for assessing the social responsibility practices of financial institutions. By incorporating key dimensions of financial inclusion and intermediation, this index provides a more comprehensive and nuanced understanding of the societal impact of the financial sector, thereby facilitating informed decision-making by stakeholders and policymakers towards promoting inclusive and sustainable development.

3.2. Data and Estimation Models
In testing the hypotheses, the study uses secondary data from 117 financial institutions comprising 40 Islamic banks, 40 conventional banks, and 37 social banks. The sample financial institutions originate from 36 countries globally, including Asia Pacific, Europe, the Middle East, North America, and South America. The panel data consists of data for eight years between 2013 and 2020. This study's bank-level data are from the BankFocus database. The remaining country-level data are from the World Bank Open Database, accessible at https://databank.worldbank.org/.

The selection of sample financial institutions is grounded in the proportional representation of banking models relative to their larger population. Social banks in this study are chosen to represent over 62.5% of the total assets under management of members of the Global Alliance for Banking on Values (GABV). Similarly, Islamic banks constitute approximately 70% of the total assets within the Islamic banking industry. To ensure comparability, conventional banks are selected based on asset sizes similar to Islamic banks and are drawn from comparable geographic locations to match the distribution of Islamic banks and social banks. This approach aligns with previous research, notably the methodology employed by Fu & Jia (2012).

3.2.1. Independent Variable

The CSP Index is the key independent variable comprising financial intermediation and inclusion dimensions. The six proxies used for the CSP Index are: a) Net Loan Ratio (LR); b) Deposit Sustainability (DS); c) Loan Growth (LG); d) Deposit Growth (DG); e) Deposit to GDP Ratio (DR); and f) Loan to GDP Ratio (LGD). The following equation will express the CSP Index (CSP_{jit}):

$$CSP_{jit} = LR_{jit} + DS_{jit} + LG_{jit} + DG_{jit} + DR_{jit} + LGD_{jit} \qquad (1)$$

where j,i and t stand for bank, country and time, respectively.

3.2.2. Dependent Variable

The Dependent Variable is financial stability represented by the z-score. It is a commonly used indicator of financial stability following the research by Beck et al. (2013), and Cihak & Hesse (2010). The z-score measures the distance to default, which measures the value of a banking institution's equity and reserves against business risks, liabilities, and volatility (Strobel, 2011). Following Cihak & Hesse (2010), the z-score is computed as $z \equiv (k+\mu)/\sigma$, where k is the ratio of equity capital and reserves over total assets, μ is the measure of profitability using the average return of assets (ROAA), and σ is the standard deviation of average return on assets (ROAA) as a proxy for return volatility.

3.2.3. Control Variables

Incorporating control variables in this research study enhances the robustness and validity of the research findings by accounting for potential confounding factors and contextual variations. In the context of this study, the utilization of both bank-level and country-level control variables is essential for providing a comprehensive understanding of the relationship between CSP and FS. Following previous studies on the CSP, this research will control for bank-level differences in size, capital adequacy ratio (CAR), and cost-to-income ratio (Cavaco & Crifo, 2014; Buchanan et al., 2018). Size is expressed by the natural logarithm of total assets in U.S. dollars billion (TA), and CAR is derived by dividing total equity by total

assets (TE/TA) (Finger et al., 2018). The cost-to-income ratio (COI) is an efficiency ratio used to measure a banking institution's ability to control operating costs to its operating income (Dao & Nguyen, 2020). A higher COI value would denote greater inefficiency (Rajhi & Hassairi, 2013).

Meanwhile, to verify the dependence of bank performance on the economic conditions of the country, we use the natural logarithm of GDP (GDP) and inflation rate (IF) following the study by Hossain & Oon (2022). The study also controls for sustainability practices of the countries by using the CO_2 emissions measured by metric tons per capita (CO_2). CO_2 is a principal greenhouse gas that affects the Earth's radiative balance and is the reference gas against which other greenhouse gases are measured for sustainability and climate-related studies (The World Bank, 2022). By including these country-level variables, the paper can account for variations in economic conditions, regulatory environments, and environmental contexts across countries, providing a more nuanced analysis of the CSP-FS relationship. In summary, the inclusion of both bank-level and country-level control variables in the study enhances the comprehensiveness and robustness of the analysis by accounting for internal operational factors and external contextual factors that may influence the CSP-FS relationship. By controlling for these variables, the study can provide more accurate and reliable insights into the complex dynamics between corporate social responsibility and financial performance in the banking sector.

3.2.4. Moderating Variables

Moderators or moderating variables are a set of variables introduced in the models, which affects the relationship between the independent and dependent variables (Saunders et al., 2015). As the core theme of this research is the role of business models in the nexus between CSP and FS, the moderating variables consisting of the sample of IBs, SBs, and CBs will be used.

To examine the relationship between the variables, the study uses the GMM as the regression estimator, following the study by Ibrahim & Rizvi (2018), Imam & Kpodar (2016), and others. Table 2 shows the complete set of variables used for this study.

Table 2.
Variables

Variables	Description
Dependent Variables	
z-score	(ROA + Equity Ratio) / Standard Deviation of ROA
ROAA	Return an Average Asset
ROAE	Return on Average Equity
Independent Variables	
CSP	Corporate Social Performance Index measured from 6 ratios adopted form the financial statements of the sample 117 banks.
ESG Score	The ESG Score of Refinitiv Eikon which is calculated from over 630 company-level ESG measures from 10 categories that formulate the three pillars of environmental, social and corporate governance.

Table 2.
Variables (Continued)

Variables	Description
Bank-level Controls	
CAR	Total Equity to Total Assets
TA	The natural log on Total Assets
COI	Cost to Income Ratio
Country-level Controls	
GDP	The natural log of GDP
IF	Inflation as measured by the consumer price index
CO2	CO2 emissions measured by metric tons per capita (CO2)
Moderating Variables	
IB	A sample of 40 Islamic Banking financial institutions
SB	A sample of 37 Social Banking financial institutions
CB	A sample of 40 Conventional Banking financial institutions
Interaction Variables	
IBCSP	CSP scores for individual Islamic banks
SBCSP	CSP scores for individual Social banks
CBCSP	CSP scores for individual Conventional banks

3.2.5. Panel Data Model and Regression Models

This research utilizes panel data structures, known for their efficiency in econometric estimations and testing complex behavioral hypotheses (Das, 2019; Jha & Rangarajan, 2020). Panel data can employ static or dynamic regression models. However, static panel data may suffer from biases and inconsistencies due to endogeneity issues such as reverse causality (Hauk Jr., 2017; Ullah et al., 2018). To address endogeneity, the generalized method of moments (GMM), particularly the system GMM estimator, are recommended (Ullah et al., 2018; Das, 2019). The efficiency of GMM models when using panel data is achieved by using dynamic panel data estimation models that use lags of the dependent variables as regressors or explanatory variables (Ullah et al., 2018). Arellano & Bond (1991) and Blundell & Bond (1998) develop the generalized method of moments estimation methods, which can be used for dynamic panel data. In dynamic panel data, the cause-and-effect relationship for underlying phenomena is generally dynamic over time. The GMM model provides consistent results in the presence of different sources of endogeneity: "unobserved heterogeneity, simultaneity, and dynamic endogeneity" (Wintoki et al., 2012, p. 588).

Traditionally, researchers (Schultz et al., 2010; Wintoki et al., 2012) have used two lags of the dependent variables, arguing that two lags are sufficient to capture the persistence of the dependent variable. The GMM model removes endogeneity by an internal transformation of data. Transformation refers to a statistical process where a variable's past value is subtracted from its present value (Roodman, 2009). In this way, the number of observations is reduced, and as such, this internal transformation process enhances the efficiency of the GMM model (Wooldridge, 2012).

Additionally, two transformation methods can be used as GMM estimators: the first-difference transformation, also known as one-step GMM, and the second-order transformation, also known as two-step GMM. However, the one-step GMM has some limitations. For example, suppose a particular variable's value is missing for the current period. In that case, Roodman (2009) argues that, the first difference transformation will result in missing values when the past value of the variable is deducted from the current value. This will result in the loss of too many observations.

To avoid potential data loss from the internal transformation problem of the one-step GMM, Arellano & Bover (1995) recommend using a second-order transformation, the two-step GMM estimator. The two-step GMM estimator applies forward orthogonal deviations, which means that instead of subtracting the previous observations of a variable from its current value, the two-step GMM model subtracts the average of all future available observations of a particular variable (Roodman, 2009). Using a two-step GMM model, researchers can prevent unnecessary data loss. Therefore, in the case of this study that uses a balanced panel dataset, employing the one-step and two-step GMM model provides more efficient and consistent estimates for the involved coefficients (Arellano & Bover, 1995).

To test Hypothesis 1, the following equation will be employed:

$$z\text{-}score_{jit} = \alpha_0 + z\text{-}score_{jit\text{-}1} + \beta_1 CSP_{jit} + \beta_2 TA_{jit} + \beta_3 CAR_{jit} + \beta_4 COI_{jit} + \beta_5 GDP_{it} + \beta_6 CO2_{it} + \beta_7 IF_{it} + \mu_{jit} \qquad (2)$$

For Hypothesis 2, the study explores the moderating impact of three banking models on the relationship between CSP and FS through the incorporation of interaction terms. This methodological approach is substantiated by the findings of Brambor et al. (2006), who advocate for the inclusion of interaction terms in the presence of conditional hypotheses. A conditional hypothesis arises when the association between two or more variables is contingent upon the values of one or more additional variables (Brambor et al., 2006). Therefore, in testing Hypothesis 2, where the sample comprises IB, SB, and CB as moderating variables along with the interaction variables of IBCSP, SBCSP and CBCSP, the respective model equations are as follows:

$$z\text{-}score_{jit} = \alpha_0 + z\text{-}score_{jit\text{-}1} + \beta_1 CSP_{jit} + \beta_2 TA_{jit} + \beta_3 CAR_{jit} + \beta_4 COI_{jit} + \beta_5 GDP_{it} + \beta_6 CO2_{it} + \beta_7 IF_{it} + \beta_8 IB_{jit} + \beta_9 IBCSP_{jit} + \mu_{jit} \qquad (3)$$

$$z\text{-}score_{jit} = \alpha_0 + z\text{-}score_{jit\text{-}1} + \beta_1 CSP_{jit} + \beta_2 TA_{jit} + \beta_3 CAR_{jit} + \beta_4 COI_{jit} + \beta_5 GDP_{it} + \beta_6 CO2_{it} + \beta_7 IF_{it} + \beta_8 SB_{jit} + \beta_9 SBCSP_{jit} + \mu_{jit} \qquad (4)$$

$$z\text{-}score_{jit} = \alpha_0 + z\text{-}score_{jit\text{-}1} + \beta_1 CSP_{jit} + \beta_2 TA_{jit} + \beta_3 CAR_{jit} + \beta_4 COI_{jit} + \beta_5 GDP_{it} + \beta_6 CO2_{it} + \beta_7 IF_{it} + \beta_8 CB_{jit} + \beta_9 CBCSP_{jit} + \mu_{jit} \qquad (5)$$

Where *j,i,t* stand for bank, country and time respectively.

IV. DATA
4.1. Descriptive Statistics

Table 3.
Descriptive Statistics

Variable	OVERALL			ISLAMIC BANKING			SOCIAL BANKING			CONVENTIONAL BANKING		
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	N	Mean	Std. Dev.	N	Mean	Std. Dev.
zscore	936	53.25	72.01	320	45.08	31.87	296	51.49	52.05	320	60.22	105.3
LADR	936	0.29	0.146	320	0.321	0.192	296	0.259	0.148	320	0.298	0.153
CSP	936	1.167	0.577	320	1.251	0.674	296	1.114	0.506	320	1.142	0.626
TA	936	22.49	2.09	320	22.87	1.632	296	20.96	2.001	320	23.47	1.96
CAR	936	10.62	4.156	320	11.05	4.125	296	10.02	3.086	320	10.67	4.946
COI	936	59.33	20.36	320	53.41	19.85	296	72.89	14.56	320	52.69	19.36
IF	936	3.107	7.202	320	5.023	11.76	296	2.075	1.981	320	2.145	2.14
CO2	936	10.74	8.639	320	14.06	9.963	296	8.151	5.896	320	9.823	8.318
GDP	936	26.70	2.161	320	25.79	1.32	296	27.55	2.343	320	26.84	2.314

Table 3. presents the descriptive statistics of the variables used in the main estimation for the sample of all banks and a breakdown of the respective Islamic (IBs), social (SBs) and conventional banks (CBs) for the period 2013 to 2020. All bank-level variables are winsorized at the 1st and 99th percentiles to remove the impact of outliers.

The findings show that the mean of the z-score is 53.25%, with CBs recording a higher mean z-score at 60.22% compared to SB and IB. The z-score measures the number of standard deviations a company's income has to fall to deplete equity and is, therefore, inversely related to the probability of insolvency (Strobel, 2011). As such, a higher z-score indicates that CBs operate their business activities at lower levels of risk.

The CSP Index has an overall mean of 116.7%, with IBs scoring a higher mean at 125.1% against 114.2% for CBs and 111.4% for SBs. The CSP Index comprises the six positive indicators related to financial inclusion and intermediation. Therefore, a higher score on the CSP Index indicates that IBs demonstrate better social performance compared to SBs and CBs. The TA of the overall sample set is US\$ 22.49 billion, with CBs showing a higher mean TA at US\$ 23.47 billion. The mean CAR of the sample banks is 10.62%, with IBs recording the highest CAR with a mean of 11.05%, implying that IBs have better capital buffers against risk weighted assets.

The cost-to-income ratio (COI), an efficiency ratio used to measure a banking institution's ability to control operating costs to its operating income (Dao & Nguyen, 2020), has a mean of 59.07%. CBs record the lowest COI at 52.19%, indicating that CBs are more efficiently managed compared to IBs and SBs. The correlation coefficients between the independent variables are provided in Table 4. They also show all the independent variables with a correlation coefficient value of less than 0.7, hence avoiding any problem of multicollinearity (Dwumfour, 2017; Kennedy, 2008).

Table 4.
Pearson Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) zscore	1.000							
(2) CSP	-0.062	1.000						
	(0.059)							
(3) TA	-0.059	0.109*	1.000					
	(0.072)	(0.001)						
(4) CAR	0.023	-0.004	-0.130*	1.000				
	(0.477)	(0.911)	(0.000)					
(5) COI	0.067	-0.138*	-0.382*	-0.282*	1.000			
	(0.041)	(0.000)	(0.000)	(0.000)				
(6) IF	-0.167*	0.112*	0.008	-0.108*	-0.001	1.000		
	(0.000)	(0.001)	(0.800)	(0.001)	(0.980)			
(7) CO2	-0.033	0.088*	0.319*	0.409*	-0.290*	-0.258*	1.000	
	(0.314)	(0.007)	(0.000)	(0.000)	(0.000)	(0.000)		
(8) GDP	0.047	0.002	0.352*	-0.183*	0.190*	-0.171*	0.199*	1.000
	(0.155)	(0.956)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	

V. RESULTS AND ANALYSIS
5.1. Regression Analysis: CSP-FS Relationship

Table 5. displays the baseline results using the System GMM regression estimation, assessing the relationship between CSP and FS. Column 1 shows the results of the one-step System GMM estimation and column 2 shows the results of the two-step System GMM estimation. According to Arellano & Bover (1995) the two-step GMM estimator prevents unnecessary data loss (Roodman, 2009), hence provides more efficient and consistent estimates.

The analysis reveals a robust and significant negative association between CSP and FS across both regression models, indicating that increased social activities among banks overall adversely affect financial stability. This impact is not just statistically significant but also economically meaningful; a one standard deviation rise in CSP (0.577) elevates financial risk by 1.30% (2.255% * 0.577), taking the results of 1-Step System GMM as a case in point. In essence, heightened engagement in social activities by financial institutions amplifies the likelihood of defaulting on their obligations.

Table 5.
CSP-FS Relationship Using System GMM

VARIABLES	(1) 1-Step System GMM	(2) 2-Step System GMM
z-score (*lagged*)	1.001***	0.996***
	(0.0119)	(0.0141)
CSP	-2.255***	-1.707***
	(0.631)	(0.608)
TA	0.0921	0.0768
	(0.955)	(0.896)
CAR	1.506***	1.592***
	(0.258)	(0.232)
COI	-0.0967***	-0.0721***
	(0.0301)	(0.0236)
IF	0.131	0.0754
	(0.103)	(0.0983)
CO2	-0.369	-0.386**
	(0.251)	(0.181)
GDP	1.516**	1.457**
	(0.700)	(0.687)
Constant	-46.98*	-46.92***
	(25.16)	(17.52)
Observations	819	819
Number of Banks	117	117
Arellano-Bond test AR(1) (*p-value*)	0.000	0.000
Arellano-Bond test AR(2) (*p-value*)	0.291	0.299
Sargan Test (*Chi2, p-value*)	0.000	0.000
Hansen Test (*Chi2, p-value*)	0.391	0.391

These findings underscore that greater involvement in social performance initiatives within the banking sector correlates with diminished financial stability. This phenomenon suggests that as institutions allocate more resources towards social initiatives, such as community outreach programs or sustainability efforts, they may inadvertently expose themselves to greater financial instability. The diversion of funds and attention away from core financial activities could weaken their financial health and resilience, potentially leading to challenges in meeting their financial obligations. Given that, the study confirms Hypothesis 1 and concludes that there is a significant and negative relationship between CSP and financial stability within the banking industry.

These conclusions echo earlier studies by Saha & Dutta (2021) and Ozili & Iorember (2024), suggesting that while financial inclusion and intermediation foster economic growth, they also bring about adverse effects such as deteriorating credit quality and heightened financial risk, especially beyond a certain threshold of financial expansion. Given that as a baseline, the study further explores the impact of banking models in the relationship between CSP and FS.

5.2. Impact of Banking Models on the CSP-FS Relationship

To undertake the regression of the banking models, we specify a dummy variable for each banking model that takes either 1 or 0 to represent the attribute of the variable (Das, 2019). Each is then interacted with CSP, denoted as IBCSP, SBCSP, and CBCSP. The results of the GMM methods on the CSP-FS relationship by banking models are shown in Table 6.

The results show that all three banking models under the GMM estimation models do not significantly impact the CSP-FS relationship. Despite the insignificant findings, the IBCSP and SBCSP interaction variables as shown in column 1-4, indicate positive signs. Meanwhile, the CBCSP interaction variable as shown in column 5-6, indicate negative signs.

Table 6.
CSP-FS Relationship: Moderating Effects of Banking Models Using *z-score*

VARIABLES	ISLAMIC BANKING		SOCIAL BANKING		CONVENTIONAL BANKING	
	1-STEP GMM (1)	2-STEP GMM (2)	1-STEP GMM (3)	2-STEP GMM (4)	1-STEP GMM (5)	2-STEP GMM (6)
z-score (*lagged*)	0.990***	0.989***	1.005***	1.003***	0.996***	0.996***
	(0.0157)	(0.0161)	(0.0105)	(0.0106)	(0.0121)	(0.0123)
CSP	-2.228***	-2.015**	-2.497***	-2.414***	-1.751***	-1.412**
	(0.842)	(0.806)	(0.757)	(0.766)	(0.620)	(0.628)
IBCSP/SBCSP/CBCSP	0.248	0.141	0.390	0.241	-1.113	-1.579
	(1.234)	(1.186)	(1.311)	(1.309)	(1.263)	(1.391)
IB/SB/CB	-9.845**	-9.332*	4.578	3.336	3.324	3.964*
	(4.875)	(5.007)	(3.417)	(3.071)	(2.504)	(2.162)
Size	0.776	0.489	0.743	0.478	-0.0931	-0.126
	(0.852)	(0.918)	(0.985)	(0.949)	(0.734)	(0.753)
CAR	1.400***	1.400***	1.428***	1.490***	1.247***	1.351***
	(0.249)	(0.267)	(0.270)	(0.281)	(0.226)	(0.214)
COI	-0.0841***	-0.0838***	-0.0778**	-0.0740**	-0.0943***	-0.0866***
	(0.0296)	(0.0274)	(0.0311)	(0.0299)	(0.0291)	(0.0296)
IF	0.181*	0.179*	0.134	0.125	0.150	0.169*
	(0.0950)	(0.100)	(0.0953)	(0.104)	(0.0928)	(0.101)
CO2	0.0417	0.0705	-0.262	-0.282	-0.417*	-0.369**
	(0.312)	(0.333)	(0.211)	(0.205)	(0.242)	(0.185)
GDP	0.0960	0.240	0.758	0.846	0.798	0.821
	(0.717)	(0.705)	(0.745)	(0.769)	(0.630)	(0.623)
Linear Combination (CSP+IBCSP/SBCSP/CBCSP)	-1.9807***	-1.8737***	-2.1067***	-2.1735***	-2.8637***	-2.991***
	(0.8049)	(0.8013)	(1.0228)	(1.0307)	(1.0694)	(1.162)
Constant	-24.78	-22.74	-44.33**	-40.38**	-21.61	-23.84
	(22.26)	(22.88)	(20.95)	(19.78)	(18.15)	(16.11)

Table 6.
CSP-FS Relationship: Moderating Effects of Banking Models Using *z-score*
(Continued)

VARIABLES	ISLAMIC BANKING		SOCIAL BANKING		CONVENTIONAL BANKING	
	1-STEP GMM (1)	2-STEP GMM (2)	1-STEP GMM (3)	2-STEP GMM (4)	1-STEP GMM (5)	2-STEP GMM (6)
Observations	819	819	819	819	819	819
Number of Banks	117	117	117	117	117	117
Arellano-Bond test AR(1) (*p-value*)	0.000	0.000	0.000	0.000	0.000	0.000
Arellano-Bond test AR(2) (*p-value*)	0.306	0.299	0.315	0.309	0.276	0.270
Sargan Test (Chi2, *p-value*)	0.000	0.000	0.000	0.000	0.000	0.000
Hansen Test (Chi2, *p-value*)	0.252	0.252	0.285	0.285	0.557	0.557

As per Kingsley et al. (2017), it is possible to encounter cases where the estimated coefficient on an interaction term is statistically insignificant, while the effect of a change in the primary explanatory variable differs significantly from zero across some range of the moderating variable. Failing to address this dichotomy may lead to misinterpretation of empirical support for the conditional hypothesis. Therefore, the study tests the linear combinations of CSP and the interaction term coefficients for statistical significance for all banking models. The results of this analysis across all three banking models as presented in Table 6 under the item "Linear Combination" show that they are negative and significant. This is consistent with the findings of Hypothesis 1 and confirms Hypothesis 2 that the banking models significantly impact the relationship between CSP and financial stability.

The findings here are consistent with McLean & Nocera's (2010) and Ozili & Iorember (2024), indicating that extensive expansion of financial inclusion and intermediation for socio-economic growth can increase financial risk. Additionally, Saha & Dutta (2021) argue that smaller banks face higher financial risk due to vulnerabilities in loan extension without robust credit assessment and customer diversification. More importantly, the findings highlight another important reality regarding Islamic banking and social banking models: these so-called values-based banking models operate very similarly to the conventional banking model.

VI. CONCLUSION AND RECOMMENDATION

Our study explores the connection between CSP and financial stability (FS), evaluating how value-based banking models influence this relationship. This focus comes in response to the growing demand for sustainable alternatives in the banking sector. By adopting a comparative approach, the study aims to shed light on how each banking model's distinct values, principles, and practices influence the relationship between CSP and financial stability. Drawing on empirical evidence from a diverse sample of banks operating within each model, we seek to

offer insights into banks' unique challenges and opportunities as they navigate the intersection of social responsibility and financial stability. Through this analysis, the study contributes to a deeper understanding of the sustainability performance of Islamic, social, and conventional banks, ultimately informing strategies for promoting financial stability while advancing social and environmental objectives within the banking industry.

The study uncovers an adverse effect of the CSP on FS for all three banking models, namely, Islamic banking, social banking, and conventional banking models. This implies that heightened social performance activities in the respective banks might exacerbate financial instability. This underscores the critical need to strike a careful balance between social development initiatives and the imperative of upholding financial soundness within the banking sector. The findings also highlight the critical need for strict governance and supervision of maturity transformation and liquidity creation activities to mitigate the adverse impacts of financial deepening.

The results of the Islamic banking and social banking models require a rethink of the real contribution of these so-called ethical and value-based banking models to financial stability. The results suggest that the Islamic banking and social banking models do not differ from the operational practices of conventional banks. Such concerns have been raised regarding the Islamic banking model in extant studies. Asutay (2007) contends that the Islamic banking industry has relegated its social roles to the periphery and given greater focus on profitability motives. In a similar vein, Sairally (2007) notes that Islamic banking practices gyrate closer to mirror conventional banking products, such as the adoption of interest-like fixed return instruments and heavy reliance on credit intermediation as opposed to investment intermediation. These insights emphasize the complexity of adopting the true value-based banking models in relation to its contribution to social performance and financial stability.

Additionally, this research marks a significant milestone in the field of sustainability measurement, presenting a pivotal contribution to the field. Introducing an enhanced measurement tool not only refines existing methodologies but also delves into the intricate dynamics of corporate social responsibility (CSR), specifically within financial institutions. At its core, the CSP Index represents a methodological leap forward, addressing longstanding financial sustainability challenges. By integrating multiple dimensions of CSR—such as inclusivity and responsible intermediation—the index offers a comprehensive framework to determine the adoption of sustainability practices into the business strategies of banking institutions. This holistic approach not only enhances transparency but also empowers stakeholders to make informed decisions about corporate governance and ethical investments.

This study offers a few policy recommendations that outline strategic approaches for central banks to manage financial institutions in balancing social development initiatives with financial stability measures. Firstly, central banks should implement robust regulatory frameworks that mandate financial institutions to adequately assess and manage the risks associated with their social performance activities. This involves integrating social risk assessments into existing risk management frameworks, ensuring that banks evaluate the

potential impact of their social initiatives on their financial stability. By requiring comprehensive risk assessments, central banks can mitigate the possibility of adverse financial impacts stemming from socially oriented activities.

Moreover, policymakers can incentivize banks to prioritize sustainable banking practices that align with both social development goals and financial stability objectives (Yip & Bocken, 2018). This can be achieved through a combination of regulatory measures and market incentives. For instance, central banks may consider offering preferential capital treatment or reduced regulatory burdens for banks that demonstrate strong commitment to sustainable finance. By aligning regulatory incentives with societal objectives, central banks can encourage financial institutions to integrate social responsibility into their core business strategies.

Furthermore, central bankers should explore innovative financial instruments and incentives tailored to promote social development without compromising financial stability. This may include developing a differentiated capital charge framework where banks receive lower capital requirements for investments in socially beneficial projects or activities, which may be measured using a standardized CSP Index. Such measures not only encourage banks to allocate resources towards socially impactful endeavors but also enhance the resilience of the financial system by diversifying risk exposures. Additionally, central banks should foster collaboration among financial institutions, regulators, and stakeholders to exchange best practices and promote knowledge-sharing on sustainable finance initiatives. This collaborative approach can facilitate the development of industry standards and guidelines that enhance transparency and accountability in social performance reporting.

Furthermore, future research in this area could delve deeper into understanding the specific mechanisms through which social performance activities impact financial stability across different banking models. Longitudinal studies could provide insights into the dynamic nature of this relationship over time, while qualitative research approaches may offer a deeper understanding of the underlying drivers and motivations behind banks' social performance initiatives. Additionally, comparative studies across countries and regions could elucidate the influence of regulatory environments and cultural factors on the relationship between CSP and financial stability.

Despite its contributions, this study has certain limitations. Firstly, the lack of a commonly adopted sustainability reporting standard across global financial institutions affects the scale and scope of datapoints in constructing a more comprehensive and robust CSP Index for this study. Moreover, the study's selection of social banks from the members of GABV may have limited the generalizability of the results to broader group of social banks. Furthermore, the study's quantitative approach may have overlooked qualitative nuances and contextual factors that could influence the relationship between CSP, banking models, and financial stability. Future research could address these limitations by employing a mixed-methods approach, incorporating qualitative data and longitudinal analyses to provide a more comprehensive understanding of these dynamics. In essence, by addressing these research gaps and adopting evidence-based policy interventions, stakeholders can foster a banking sector that contributes to social development and maintains the resilience and stability necessary for sustainable economic growth.

REFERENCES

Abasimel, N. A. (2023). Islamic banking and economics: Concepts and instruments, features, advantages, differences from conventional banks, and contributions to economic growth. *Journal of the Knowledge Economy, 14*(2), 1923–1950.

Aguinis, H., & Glavas, A. (2012). What we know and do not know about corporate social responsibility: A review and research agenda. *Journal of Management, 38*(4), 932-968.

Albitar, K., Hussainey, K., Kolade, N., & Gerged, A. M. (2020). ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms. *International Journal of Accounting & Information Management, 28*(3), 429-444.

Ali, S. S., & Izhar, H. (2015). Financial stability and risk management in Islamic finance: An introduction to the issues and papers. *Financial Stability and Risk Management in Islamic Financial Institutions.*

Ang, J. B. (2008). What are the mechanisms linking financial development and economic growth in Malaysia?. *Economic modeling, 25*(1), 38–53.

Archer, S., & Karim, R. A. A. (Eds.). (2002). *Introduction to Islamic Finance. Islamic finance: innovation and growth.* Euromoney books.

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies, 58*(2), 277-297.

Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics, 68*(1), 29-51.

Asutay, M. (2007). Conceptualisation of the Second Best Solution in Overcoming the Social Failure of Islamic Finance: Examining the Overpowering of Homoislamicus By Homoeconomicus. *IIUM Journal in Economics and Management, 15*(2), 167195.

Aupperle, K. E., & Van Pham, D. (1989). An expanded investigation into the relationship of corporate social responsibility and financial performance. *Employee Responsibilities and Rights Journal, 2,* 263-274

Avrampou, A., Skouloudis, A., Iliopoulos, G., & Khan, N. (2019). Advancing the sustainable development goals: Evidence from leading European banks. *Sustainable Development, 27*(4), 743-757.

Barnett, M. L., Henriques, I., & Husted, B. W. (2020). Beyond good intentions: Designing CSR initiatives for greater social impact. *Journal of Management, 46*(6), 937-964.

Beck, T., Demirgüç-Kunt, A., & Merrouche, O. (2013). Islamic vs. conventional banking: Business model, efficiency and stability. *Journal of Banking & Finance, 37*(2), 433-447.

Belkhaoui, S. (2023). Banking system and economic growth linkages in MENA region: Complementarity and substitutability between Islamic and conventional banking. *Journal of Islamic Accounting and Business Research, 14* (2), 267–288.

Benedikter, R. (2011). *Social banking and social finance. In Social banking and social finance* (pp. 1-128). New York, NY: Springer.

Benitez B. (2018). *Corporate Sustainability self-assessment: Implementing a potential transition methodology towards a Sustainable Business Model*. Harvard University Extension School Graduate Capstone Research.

Ben Mimoun, M. (2021). Stability of conventional and Islamic banks, externalities and resilience to crises: Evidences from comprehensive Saudi banks' time-series data. *Economics Bulletin*, *41*(3), 1165–1179.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics, 87*(1), 115-143.

Boutin-Dufresne, F. & Savaria, P. (2004). Corporate social responsibility and financial risk. *The Journal of Investing, 13*(1), 57-66.

Brambor, T., Clark, W. R., & Golder, M. (2006). Understanding interaction models: Improving empirical analyses. *Political Analysis, 14*(1), 63-82.

Buchanan, B., Cao, C.X. & Chen, C. (2018). Corporate social responsibility, firm value, and influential ownership. *Journal of Corporate Finance*, *52*, 73–95.

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review, 32*(3), 946-967.

Carè, R. (2018). *Sustainable banking: Issues and challenges*. Cham: Springer. https://doi.org/10.1007/978-3-319-73389-0

Carroll, A. B. (1999). Corporate social responsibility: Evolution of a definitional construct. *Business and Society, 38*(3), 268–295.

Cavaco, S., & Crifo, P. (2014). CSR and financial performance: Complementarity between environmental, social and business behaviours. *Applied Economics, 46*(27), 3323-3338.

Çetin, M., Sarıgül, S. S., Işık, C., Avcı, P., Ahmad, M., & Alvarado, R. (2023). The impact of natural resources, economic growth, savings, and current account balance on financial sector development: Theory and empirical evidence. *Resources Policy, 81*, 103300.

Chatterji, A. K., Levine, D. I., & Toffel, M. W. (2009). How well do social ratings actually measure corporate social responsibility? *Journal of Economics & Management Strategy, 18*(1), 125-169.

Chen, Z., Mirza, N., Huang, L., & Umar, M. (2022). Green banking—can financial institutions support green recovery? *Economic Analysis and Policy*, *75*, 389-395.

Chiu, I. H. (2022). The EU sustainable finance agenda: developing governance for double materiality in sustainability metrics. *European Business Organization Law Review, 23*(1), 87–123.

Cihak, M. & Hesse, H. (2010). Islamic banks and financial stability: An empirical analysis. *Journal of Financial Services Research*, *38*(2), 95-113.

Claessens, M.S. & Kose, M.A. (2013). *Financial crises explanations, types, and implications. IMF Working Papers*, *2013(028), A001.*

Dao, B. T. T., & Nguyen, K. A. (2020). Bank capital adequacy ratio and bank performance in Vietnam: A simultaneous equations framework. *The Journal of Asian Finance, Economics and Business (JAFEB), 7*(6), 39-46.

Das, P. (2019). *Econometrics in theory and practice*. Springer, 465–468.

Davis, G. F., & Kim, S. (2015). Financialization of the economy. *Annual Review of Sociology*, *41*(1), 203-221.

De Clerck, F. (2009). Ethical banking. In *Ethical Prospects: Economy, society, and environment (pp. 209-227).* Dordrecht: Springer Netherlands.

Demirgüç-Kunt, A. & Huizinga, H. (2010). Bank activity and funding strategies: The impact on risk and returns. *Journal of Financial Economics, 98*(3), 626–650.

Derwall, J., & Verwijmeren, P. (2007). *Corporate social responsibility and the implied cost of equity capital*. Working paper, RSM Erasmus University, Rotterdam.

Dhaliwal, D.S., Li, O.Z., Tsang, A., & Yang, Y.G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review, 86*(1), 59-100.

Di Giulio, A., Migliavacca, P.O., & Tencati, A. (2007). What relationship between corporate social performance and the cost of capital. *Paper presented to the Academy of Management 2007 Annual Meeting, Philadelphia, PA,* August 3-8.

Dwumfour, R. A. (2017). Explaining banking stability in sub-Saharan Africa. *Research in International Business and Finance, 41,* 260–279, available at: https://doi.org/10.1016/j.ribaf.2017.04.027.

El Ghoul, S., Guedhami, O., Kwok, C.C. & Mishra, D.R. (2011). Does corporate social responsibility affect the cost of capital? *Journal of Banking & Finance, 35* (9), 2388-2406

El-Hawary, D., & Grais, W. (2004). *Regulating Islamic financial institutions: The nature of the regulated (Vol. 3227).* World Bank Publications.

Erol, I., Unal, U., & Coskun, Y. (2021). ESG investing and the financial performance: A panel data analysis of developed REIT markets (No. 23-2021). *MAGKS Joint Discussion Paper Series in Economics.*

Esteban-Sanchez, P., de la Cuesta-Gonzalez, M., & Paredes-Gazquez, J. D. (2017). Corporate social performance and its relation with corporate financial performance: International evidence in the banking industry. *Journal of Cleaner Production, 162,* 1102-1110.

Farooq, M., & Zaheer, S. (2015). Are Islamic banks more resilient during financial panics?. *Pacific Economic Review, 20*(1), 101-124.

Finger, M., Gavious, I., & Manos, R. (2018). Environmental risk management and financial performance in the banking industry: A cross country comparison. *Journal of International Financial Markets Institutions and Money, 52,* 240–261.

Fu, G., & Jia, M. (2012). On the reasons for the vexing CSP-CFP relationship: Methodology, control variables, stakeholder groups, and measures: The review of 63 studies from 1990s. *International Journal of Business and Management, 7*(12), 130-137.

GABV (2022). *Banking on Values*. Retrieved on 10 May 2024 from https://www.gabv.org/

Gadanecz, B., & Tissot, B. (2017). Measures of financial inclusion–a central bank perspective. *Statistics Department, Bank of Indonesia,* 190-196.

Galletta, S., Mazzù, S., Naciti, V., & Vermiglio, C. (2021). Sustainable development and financial institutions: Do banks' environmental policies influence customer deposits?. *Business Strategy and the Environment, 30*(1), 643–656.

Gangi, F., Meles, A., D'Angelo, E., & Daniele, L. M. (2019). Sustainable development and corporate governance in the financial system: Are environmentally friendly banks less risky?. *Corporate Social Responsibility and Environmental Management, 26*(3), 529-547.

García, M. J. R., & José, M. (2016). Can financial inclusion and financial stability go hand in hand. *Economic Issues*, 21(2), 81-103.

Gould, D. M., & Melecky, M. (2017). *Risks and returns: Managing financial trade-offs for inclusive growth in Europe and Central Asia*. World Bank Publications, DOI: https://doi.org/10.1596/978-1-4648-0967-5

Griffin, J. J., & Mahon, J. F. (1997). The corporate social performance and corporate financial performance debate: Twenty-five years of incomparable research. *Business & Society, 36*(1), 5-31.

Hauk Jr, W. R. (2017). Endogeneity bias and growth regressions. *Journal of Macroeconomics, 51*, 143-161.

Hossain, M. A., & Oon, E. Y. N. (2022). Board leadership, board meeting frequency and firm performance in two-tier boards. *Managerial and Decision Economics*, 43(3), 862-879.

Hyun, S., Kim, J. M., & Liu, Y. (2023). Equal gains and pains? Analyzing corporate financial performance for industrial, corporate social performance leaders and laggards. *Journal of Business Research, 155*, 113414.

Ibrahim, M. H., & Rizvi, S. A. R. (2018). Bank lending, deposits and risk-taking in times of crisis: A panel analysis of Islamic and conventional banks. *Emerging Markets Review*, 35, 31-47.

Imam, P., & Kpodar, K. (2016). Islamic banking: good for growth?. *Economic Modelling*, 59, 387-401.

Jha, M. K., & Rangarajan, K. (2020). The approach of Indian corporates towards sustainable development: An exploration using sustainable development goals based model. *Sustainable Development*, 28(5), 1019-1032.

Kennedy, P. (2008). *A guide to econometrics*. Cambridge, MA: John Wiley & Sons.

Khan, M. M., & Bhatti, M. I. (2008). Islamic banking and finance: on its way to globalization. *Managerial Finance*, 34(10), 708-725.

Khan, H. R. (2011). Financial inclusion and financial stability: Are they two sides of the same coin? *Address at BANCON 2011, Organized by the Indian Bankers Association and Indian Overseas Bank, Chennai 4 November 2011.* Available online: https://www.bis.org/review/r111229f.pdf (accessed on 13 May 2023)

Khera, P., Ng, S., Ogawa, S., & Sahay, R. (2022). Measuring digital financial inclusion in emerging market and developing economies: A new index. *Asian Economic Policy Review*, 17(2), 213-230.

Kingsley, A. F., Noordewier, T. G., & Bergh, R. G. V. (2017). Overstating and understating interaction results in international business research. *Journal of World Business*, 52(2), 286-295.

Levine, R. (2005). Finance and growth: Theory, mechanisms, and evidence, in *Aghion, P. and Durlauf, S.N. (eds.). Handbook of economic growth*. Elsevier.

Lopez Rafaschieri, C. A., & Lopez Rafaschieri, J. A. (2009, May). *The 2008-2009 Global Economic Crisis: Criticism of Financial Hypertrophy Theory*. Retrieved August 17, 2009, from http://www.morochos.net/2009/05/2008-2009-global-economic-crisis.html

Mangala, D., & Soni, L. (2023). A systematic literature review on frauds in banking sector. *Journal of Financial Crime*, 30(1), 285-301.

Margolis, J. D., Elfenbein, H. A., & Walsh, J. P. (March 1, 2009). Does it pay to be good...and does it matter? a meta-analysis of the relationship between corporate social and financial performance. Available at SSRN: https://ssrn.com/abstract=1866371 or http://dx.doi.org/10.2139/ssrn.1866371

Masood, O., & Javaria, K. (2021). Testing the procyclicality and financial stability of Islamic banking industry. *Journal of Islamic Financial Studies*, *7*(1), 41. 10.12785/jifs/070103.

McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of Management Journal*, *31*(4), 854-872.

McLean, B. & Nocera, J. (2010). *All the devils are here: The hidden history of the financial crisis.* Portfolio/Penguin, ISBN 978159184363.

Mohamed Sultan, S. A., Wan Ahmad, W. M., Ismath Bacha, O., & Ramlee, R. (2024). Impact of corporate social performance on financial performance: Evidence from Islamic banks, conventional banks and social banks. *ISRA International Journal of Islamic Finance, 16*(2). https://doi.org/10.55188/ijif.v16i2.697

Mykhayliv, D., & Zauner, K. G. (2018). The financial and economic performance of social banks. *Applied Economics, 50*(34-35), 3833-3839.

Napier, E., Knight, G., Luo, Y., & Delios, A. (2023). Corporate social performance in international business. *Journal of International Business Studies, 54*(1), 61–77.

Nguyen, L. T., & Nguyen, K. V. (2021). The impact of corporate social responsibility on the risk of commercial banks with different levels of financial constraint. *Asia-Pacific Journal of Business Administration*, *13*(1), 98-116.

Oikonomou, I., Brooks, C., & Pavelin, S. (2012). The impact of corporate social performance on financial risk and utility: A longitudinal analysis. *Financial Management*, *41*(2), 483-515.

Orlitzky, M., & Benjamin, J. D. (2001). Corporate social performance and firm risk: A meta-analytic review. *Business & Society*, *40*(4), 369-396.

Ozili, P. K. (2020). Financial stability: Does social activism matter?. *Journal of Financial Regulation and Compliance*, *28*(2), 183-214.

Ozili, P. K., & Iorember, P. T. (2024). Financial stability and sustainable development. *International Journal of Finance & Economics*, *29*(3), 2620-2646.

Paul, P. (2020). Banks, maturity transformation, and monetary policy. *Working Paper (2020-07), Federal Reserve Bank of San Francisco*, January, available at https://doi.org/10.24148/wp2020-07

Platonova, E., Asutay, M., Dixon, R., & Mohammad, S. (2018). The impact of corporate social responsibility disclosure on financial performance: Evidence from the GCC Islamic banking sector. *Journal of Business Ethics*, *151*, 451-471.

Pu, Z., & Yang, M. (2022). The impact of city commercial banks' expansion on China's regional energy efficiency. *Economic Analysis and Policy*, *73*, 10-28.

Rajhi, W., & Hassairi, S. A. (2013). Islamic banks and financial stability: A comparative empirical analysis between MENA and southeast Asian countries. *Région et Développement*, *37*(3), 149-179.

Ramzan, M., Amin, M., & Abbas, M. (2021). How does corporate social responsibility affect financial performance, financial stability, and financial inclusion in the banking sector? Evidence from Pakistan. *Research in International Business and Finance*, *55*, 101314.

Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *The Stata Journal*, 9(1), 86-136.

Saha, M., & Dutta, K. D. (2021). Nexus of financial inclusion, competition, concentration and financial stability: Cross-country empirical evidence. *Competitiveness Review: An International Business Journal*, *31*(4), 669-692.

Sairally, S. (2007). Community development financial institutions: Lessons in social banking for the Islamic financial industry. *Kyoto Bulletin of Islamic Area Studies*, *1*(2), 19-37.

Sandberg, H., Alnoor, A., & Tiberius, V. (2023). Environmental, social, and governance ratings and financial performance: Evidence from the European food industry. *Business Strategy and the Environment*, *32*(4), 2471-2489.

Saunders, M. N., Gray, D. E., Tosey, P., & Sadler-Smith, E. (2015). *A guide to professional doctorates in business and management* (35-56). SAGE Publication.

Schoenmaker, D., & Schramade, W. (2018). *Principles of sustainable finance*. Oxford University Press.

Schultz, E. L., Tan, D. T., & Walsh, K. D. (2010). Endogeneity and the corporate governance-performance relation. *Australian Journal of Management*, *35*(2), 145-163.

Sroufe, R., & Gopalakrishna-Remani, V. (2019). Management, social sustainability, reputation, and financial performance relationships: An empirical examination of US firms. *Organization & Environment*, *32*(3), 331-362.

Strobel, F. (2011). Bank insolvency risk and Z-score measures with unimodal returns. *Applied Economics Letters*, *18*(17), 1683-1685.

The World Bank ESG Databank (2022). Retrieved on August 8,2022 from https://databank.worldbank.org/source/environment-social-and-governance-(ESG)-data

The World Bank. (2020). *Financial Stability*, available at: https://www.worldbank.org/en/publication/gfdr/gfdr2016/background/financial-stability (accessed 22 December 2021)

Tok, E., & Yesuf, A. J. (2022). Embedding value-based principles in the culture of Islamic banks to enhance their sustainability, resilience, and social impact. *Sustainability*, *14*(2), 916.

Tracey, B., & Sowerbutts, R. (October 9, 2018). Bank capital and risk-taking: evidence from misconduct provisions. *Bank of England Working Paper No. 671*, Available at SSRN: https://ssrn.com/abstract=3023280 or http://dx.doi.org/10.2139/ssrn.3023280

Ullah, S., Akhtar, P., & Zaefarian, G. (2018). Dealing with endogeneity bias: The generalized method of moments (GMM) for panel data. *Industrial Marketing Management*, *71*, 69-78.

UN Environment (UNEP). (2015). Values-Based Banking: Bringing the Voice of the Citizen into Finance. Inquiry Working Paper. 2015. Available online: https://wedocs.unep.org/bitstream/handle/20.500.11822/9673/-Values_Based_Banking_Bringing_the_Voice_of_the_Citizen_into_Finance-2015Values_Based_Banking_-_Bringing_the_Voice_of_the_Citizen_into_Finance.pdf.pdf?sequence=3&amp%3BisAllowed= (accessed on 16 March 2024).

Vo, D. H., Nguyen, N. T., & Van, L. T. H. (2021). Financial inclusion and stability in the Asian region using bank-level data. *Borsa Istanbul Review*, *21*(1), 36-43.

Vogel, F. E., & Hayes, S. L. (1998). *Islamic law and finance: Religion, risk, and return*. The Hague, Netherlands: Kluwer Law International.

Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. *Strategic Management Journal*, *18*(4), 303-319.

Wang, C., Deng, X., Álvarez-Otero, S., Sial, M. S., Comite, U., Cherian, J., & Oláh, J. (2021). Impact of women and independent directors on corporate social responsibility and financial performance: Empirical evidence from an emerging economy. *Sustainability*, 13(11), 6053.

Wang, H., & Choi, J. (2013). A new look at the corporate social–financial performance relationship: The moderating roles of temporal and interdomain consistency in corporate social performance. *Journal of Management*, *39*(2), 416-441.

Weber, O. (2018). The Financial sector and the SDGs: Interconnections and future directions. *CIGI Papers No. 201*.

Weber, O. (2011a). Products and services. In *Social banks and the future of sustainable finance* (pp. 136–195). Routledge. https://doi.org/10.4324/9780203827871

Weber, O. (2011b). Mission and profitability of social banks. *Available at SSRN 1957637*

Weber, O., & Acheta, E. (2014). The equator principles: Ten teenage years of implementation and a search for outcome. *CIGI Paper No 24, January 2014.*

Weber, O., & Duan, Y. (2012). Social finance and banking. In H. Kent Baker, John R. Nofsinger (Eds.), *Socially responsible finance and investing: Financial institutions, corporations, investors, and activists*. https://doi.org/10.1002/9781118524015.ch9

Weber, O., & Feltmate, B. (2016). *Sustainable banking: Managing the social and environmental impact of financial institutions*. Toronto: University of Toronto Press.

Weber, O., & Remer, S. (Eds). (2011). *Social banks and the future of sustainable finance*. London: Routledge.

Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, *105*(3), 581-606.

Wooldridge, J. M. (2012). *Introductory econometrics: A modern approach*. Boston: Cengage Learning

Yip, A. W., & Bocken, N. M. (2018). Sustainable business model archetypes for the banking industry. *Journal of Cleaner Production*, *174*, 150-169.

Zuhayli, W., Gamal, M. A., & Eissa, M. S. (2003). *Financial transactions in Islamic Jurisprudence*. Dar al-Fikr.

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