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Risk or Reward? Assessing the Market Value Implications of CSR Disclosure and Family Ownership

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Abstract

This study investigates whether Corporate Social Responsibility Disclosure (CSRD) serves as a risk-mitigating or cost-inducing signal for firms' market value in an emerging market. Utilising a panel dataset of 120 companies listed on the Tehran Stock Exchange (2015–2023) and employing content analysis alongside panel regression and System GMM models, we find that disclosure quality in social, employee, and environmental dimensions is positively associated with market value, while customer-related disclosure is not. The role of family ownership is nuanced: baseline specifications suggest no broad moderating influence, yet robust dynamic modelling reveals that family ownership significantly enhances the positive market valuation of environmental disclosure. The primary contribution is a nuanced, dimension-specific analysis of CSRD's value relevance, challenging blanket assumptions about family firm behaviour and offering granular, methodologically informed insights for stakeholders in institutionally complex environments.

Keywords: Corporate Social Responsibility Disclosure (CSRD); market value; family ownership; risk; management accounting and decision making; governance; emerging markets

1. Introduction

In an era of significant market volatility and evolving stakeholder expectations, a firm's ability to communicate transparency about non-financial risks significantly influences its market valuation (Rahman et al. 2021). This reality is further underscored by recent evidence showing that external shocks, such as the COVID-19 pandemic, can materially alter managerial disclosure strategies, highlighting the sensitivity of corporate communication to environmental pressures (Askarany et al. 2025b). Within this landscape, Corporate Social Responsibility Disclosure (CSRD) has undergone a fundamental transformation. Once viewed primarily as voluntary philanthropy, it is now a core component of the Environmental, Social, and Governance (ESG) paradigm, compelling firms to integrate sustainability strategically to meet shareholder demands (Passas 2024).

While the dynamics of sustainability disclosure are well documented in developed Western markets, a critical gap persists in understanding its role in high-risk, emerging economies. It remains unclear whether such disclosures serve to mitigate valuation risk by reducing information asymmetry or, conversely, exacerbate agency concerns by signalling costly, non-value-enhancing activities. This ambiguity frames our central inquiry: In the context of an emerging market, is CSRD primarily a risk or a reward?

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We address this question by examining the market value implications of CSRD in the Iranian market, a setting that captures key institutional features—such as voluntary disclosure norms, concentrated family ownership, and high information asymmetry—that are analytically pertinent to understanding corporate transparency in emerging economies across the Middle East and similar regions. Here, risk is defined as information or valuation risk: the uncertainty investors face when evaluating a company's future cash flows due to insufficient or opaque non-financial information. High-quality CSRD is theorised to mitigate this risk by enhancing transparency (Palmon et al. 2024; Cui et al. 2018; Dhaliwal et al. 2011, 2012). However, empirical evidence remains complex and contradictory, suggesting outcomes are significantly influenced by institutional context (Li et al. 2025). This underscores the necessity of our investigation into under-researched markets, where institutional voids may amplify the role of voluntary disclosure (Boubakri et al. 2021).

The Middle East provides a compelling context for this investigation. Regionally, capital markets are often characterised by institutional voids—weaker regulatory oversight, less mature reporting frameworks, and a greater reliance on informal networks. Simultaneously, the corporate landscape is dominated by family-owned firms (Anderson and Reeb 2003), introducing a critical governance layer. The theoretical lens of socioemotional wealth (SEW) suggests that family firms possess dual, often conflicting, incentives regarding disclosure: a long-term orientation may drive higher-quality CSRD to protect reputation and legacy (Berrone et al. 2010), while a desire to retain control may lead to symbolic or selective disclosure (Zientara 2017). This inherent tension positions family ownership as a pivotal moderating factor that may fundamentally alter how the market interprets and prices CSRD.

This study makes three central contributions. First, it provides a risk-dimensional analysis by moving beyond aggregate CSRD scores to investigate how distinct disclosure dimensions—social, employee, environmental, and customer—differentially impact market value. Second, it examines a key governance and risk channel by empirically testing whether family ownership moderates the relationship between CSRD and performance. Third, it provides robust evidence from an emerging market in the Middle East, a region undergoing rapid financial development yet underrepresented in sustainable finance research. Our findings offer crucial insights for investors allocating capital in these markets and for policymakers designing frameworks that incorporate sustainability risks.

The remainder of this paper is structured as follows. Section 2 reviews the relevant literature and develops our research hypotheses. Section 3 outlines the research methodology and data. Section 4 presents the empirical results, which are discussed in Section 5. Finally, Section 6 concludes by summarising the implications for risk management and governance and suggesting avenues for future research.

2. Literature Review and Hypothesis Development

A foundational step for empirical clarity is to distinguish between the related but distinct concepts of corporate social responsibility (CSR); environmental, social, and governance (ESG) criteria; and corporate social responsibility disclosure (CSRD). This potential duality in the role of disclosure—as a tool for either transparency or obfuscation—is echoed in contemporaneous research on the TSE, which finds nuanced links between managers' abnormal narrative tone and opportunistic actions, such as earnings management, complicating the interpretation of voluntary communication (Pouryousof et al. 2025). The credibility and consistency of disclosure are themselves influenced by top management characteristics, with behavioural research in this market indicating that CEO attributes such as tenure and psychological factors can predict variations in narrative tone, adding a layer of agency-based complexity to the disclosure landscape (Pouryousof et al. 2024).

Corporate social responsibility refers to a firm's internal commitments and normative actions undertaken to meet its social obligations (Kaźmierczak 2022). In contrast, ESG represents an evaluative, criteria-based framework predominantly employed by investors to assess the sustainability and ethical impact of an investment (Kim and Oh 2024). This study focuses specifically on CSRD. CSRD serves as the channel through which firms communicate their CSR activities and ESG performance to external stakeholders. As Kim and Oh (2024) emphasise, the act of disclosure is distinct from the underlying performance or outcomes being reported. Consequently, our analysis centres on the informational value and market interpretation of the disclosure itself, rather than on operational CSR performance.

Corporate social responsibility has evolved into an integral component of modern business strategy, encompassing a firm's obligations toward social welfare and environmental sustainability (Zhu et al. 2016; Diego Andrés et al. 2024). The literature commonly conceptualises CSR across four key dimensions: social participation, employee relationships, environmental responsibility, and customer satisfaction (Gold et al. 2013; Chen et al. 2015). These dimensions collectively shape a firm's ethical footprint and are increasingly linked to financial performance and competitive advantage.

- Social participation refers to a firm's engagement with and contributions to its broader community, often through philanthropic activities, volunteering, and educational initiatives (Inoue and Lee 2011).
- Employee relationships highlight the internal stakeholder dimension, in which CSR initiatives focused on welfare, safety, and development can enhance employee satisfaction, trust, and productivity (Zhu et al. 2016; Collier and Esteban 2007).
- Environmental responsibility captures a firm's commitment to mitigating its ecological impact, an area of growing concern for regulators, investors, and consumers alike (Khan et al. 2016).
- Customer satisfaction focuses on how CSR initiatives related to product safety, quality, and ethical marketing influence customer perceptions, loyalty, and long-term profitability (Gruca and Rego 2005; Sanni et al. 2020).

The theoretical link between CSRD and firm value is grounded in mechanisms that enhance transparency, reduce information asymmetry, and build stakeholder trust (Dhaliwal et al. 2012). However, a review of empirical studies reveals not a consensus but a complex puzzle, suggesting that market responses to CSRD are not universal but are critically mediated by regional and institutional contexts.

Evidence from Asia presents a contradictory picture. For instance, Duan et al. (2023) find a significant positive relationship between ESG performance and corporate value among Chinese manufacturing firms. Conversely, research in Indonesia yields divergent results: Nurjanah and Arifa (2023) report that CSRD reduces firm value, potentially perceived as a costly burden in a market dominated by short-term retail investors, while Wahyono et al. (2024) find that ESG ratings have no direct effect on firm value for companies on Indonesia's IDX ESG Leaders index.

Research from Africa further underscores the importance of a disaggregated analysis. Onwere (2024), examining firms across Kenya, Nigeria, and South Africa, finds that while adopting overall ESG practices has a positive impact on firm value, environmental and social practices in isolation show no significant effect, and governance practices even exhibit a negative relationship. Supporting this, Masongweni and Simo-Kengne (2024) find that for JSE-listed firms in South Africa, composite ESG scores have no significant impact on financial performance. In contrast, scores from the social and governance pillars demonstrate a positive association individually.

In Latin America, the connection also appears contingent. Ospina-Patiño et al. (2023) report that environmental performance has a limited impact on overall financial per-

formance across the region, with positive results observed only in countries with more developed sustainable finance ecosystems, such as Brazil, Mexico, and Chile.

This tapestry of mixed findings—encompassing positive, negative, and neutral outcomes—clearly indicates that the value-relevance of CSRD is not a universal constant (Brammer and Millington 2008; Guidry and Patten 2010; Jones et al. 2007; Liu et al. 2017). The inconsistencies point to a confluence of local factors—including regulatory maturity, investor sophistication, and the perceived materiality of different CSR aspects—that shape the market's response. This compelling ambiguity highlights the need to disaggregate CSR into its core dimensions and to examine these relationships within specific, under-researched institutional contexts, such as the Middle East.

The Middle East provides a compelling context for this investigation due to a confluence of distinctive institutional and governance features. Regionally, capital markets are often characterised by institutional voids—weak regulatory oversight, less mature sustainability reporting frameworks, and a higher reliance on informal networks for corporate governance. Simultaneously, family-owned firms dominate the corporate landscape, introducing a powerful socioemotional wealth (SEW) dynamic that profoundly shapes strategic disclosure decisions. Furthermore, in contrast to the mandatory ESG reporting regimes evolving in many Western economies, the CSRD in much of the region remains voluntary and largely symbolic, making it an ideal setting to test whether markets genuinely reward transparency or view it with scepticism. These intertwined characteristics—institutional opacity, concentrated family ownership, and voluntary disclosure norms—create a high-stakes laboratory for assessing the 'risk or reward' paradigm of CSRD.

Despite extensive literature on information disclosure in developed economies (e.g., Dhaliwal et al. 2011; Malik 2015), empirical evidence on the value relevance of information disclosure remains ambiguous and inconclusive (e.g., Brammer and Millington 2008; Guidry and Patten 2010). A significant gap exists in understanding how specific dimensions of non-financial disclosure interact with dominant ownership structures, such as family ownership, to influence market valuation in environments characterised by high information ambiguity. This study addresses this gap by investigating the intersection of disclosure quality, its constituent dimensions, and family ownership within the unique institutional setting of the Middle East.

Our empirical context is the Tehran Stock Exchange (TSE). Although data are drawn from Iran, this market is representative of broader Middle Eastern economies due to shared structural characteristics, including an oil-dependent economic base, the dominance of family-owned businesses, and a corporate environment influenced by Islamic governance principles. The institutional setting differs significantly from that of developed markets. Unlike the European Union, where sustainability reporting is increasingly mandatory, disclosure in Iran and similar regional markets remains voluntary, fragmented, and driven more by concerns about legitimacy than strict regulatory compliance. Investor behaviour on the TSE is also distinctive, characterised by high retail participation and often short-term speculative horizons (Askarany et al. 2025a). In such a context, voluntary CSRD becomes a crucial mechanism for firms to differentiate themselves and mitigate the high information asymmetry inherent in the market.

Navigating the relationship between corporate social responsibility disclosure (CSRD) and firm value is akin to assembling a puzzle, where the pieces appear different from different perspectives. Academic research presents a compelling yet inconsistent picture: while many studies find a positive link, an equally large number reveal negative or inconclusive results (Brammer and Millington 2008; Li et al. 2025). This is not random noise. The evidence strongly suggests that the financial value of transparency depends on the local context, the specific information being disclosed, and the company's leader-

ship (Boubakri et al. 2021). To make sense of this in our setting, we weave together three powerful theoretical ideas that, combined, help us form more precise predictions about the Iranian market—an environment typical of many emerging economies where formal rules are still evolving, information is scarce, and family-run businesses dominate.

2.1. The Guiding Theories: Why Transparency Might (Or Might Not) Pay Off

We start with Stakeholder Theory (Freeman 1984), which offers a simple but profound insight: a company's long-term success is deeply connected to its relationships with everyone who has a stake in it—employees, communities, customers, and regulators. High-quality CSRD is how a firm communicates its commitment to these relationships, building trust and reducing the risk of conflicts that can damage reputation and operations (Clarkson 1995; Roberts 1992).

This connects seamlessly to Signalling Theory. In markets where reliable information is scarce, a detailed sustainability report is more than just a document; it is a signal. It tells investors, "We manage our social and environmental risks so well that we can afford to be open about them." By voluntarily disclosing this information, a firm reduces the "information asymmetry" between its managers and external investors, thereby lowering the perceived risk and cost of investing in the company (Dhaliwal et al. 2011; Cui et al. 2018).

However, the clarity of this signal depends on who is sending it. This is where the Socioemotional Wealth (SEW) perspective becomes crucial, especially for understanding family-owned firms (Berrone et al. 2010). For family owners, a business is more than a financial asset; it is a source of pride, identity, and legacy. This creates a fascinating tension. On one hand, the desire to protect and enhance the family's reputation (a key part of SEW) could drive them to be very transparent. On the other hand, the powerful may wish to maintain control and family privacy, leading them to disclose less or share only symbolic information (Zientara 2017). Therefore, the market might view the same disclosure from a family-owned firm with more scepticism than from a widely held corporation, potentially weakening its positive impact on value.

2.2. Developing Our Hypotheses: Applying the Framework to Specific Areas

Using this integrated lens—combining stakeholder relationships, market signals, and family dynamics—we develop specific expectations for each disclosure area and for the role of family ownership.

2.2.1. Social Participation (SP) Disclosure

When a company discloses its investments in community programs, charities, or local development, it is speaking directly to its social stakeholders. This transparency helps build a "social license to operate," fostering goodwill and reducing the risk of community-related conflicts (Inoue and Lee 2011). For investors in an uncertain market, this disclosure serves as a reassuring signal that the company is a stable and respected part of society, which should translate into value (Dhaliwal et al. 2012).

H1a: *The quality of social participation disclosure is positively associated with firm market value.*

For family firms, the SEW lens suggests a tug-of-war. While they may want to showcase their community spirit to burnish the family name (Berrone et al. 2010), the instinct to keep affairs private to maintain control can be strong (Anderson and Reeb 2003). In a context of less external scrutiny, this may result in disclosures that investors deem less substantive or credible, thereby dampening the positive effect.

H2a: *Family ownership negatively moderates (weakens) the positive relationship between social participation disclosure and firm market value.*

2.2.2. Employee Relationship (ER) Disclosure

Disclosing information about workplace safety, training programs, and employee benefits is a powerful indicator of how a company manages its most valuable asset: its people. Strong employee relations lead to higher productivity and lower turnover, creating tangible value (Collier and Esteban 2007; Zhu et al. 2016). By being transparent in this area, a firm signals to investors that it has a stable, skilled, and motivated workforce, reducing uncertainty about its operational health.

H1b: *The quality of employee relationship disclosure is positively associated with firm market value.*

In family firms, employees can be viewed as part of an "extended family," which may encourage open treatment and disclosure. Yet, the desire for control might limit transparency in internal matters, such as labour relations. Investors might therefore question the completeness of ER disclosures from family firms, expecting them to possibly hide labour issues, thereby weakening the disclosures' positive impact.

H2b: *Family ownership negatively moderates (weakens) the positive relationship between employee relationship disclosure and firm market value.*

2.2.3. Environmental Responsibility (E) Disclosure

Environmental disclosures—about pollution control, resource use, or conservation efforts—signal how a company manages its relationship with the planet and environmental regulators. This is increasingly critical to investors (Khan et al. 2016). Transparent reporting here acts as a signal of proactive risk management and operational efficiency, reducing fears about future environmental fines or reputational disasters.

H1c: *The quality of environmental responsibility disclosure is positively associated with firm market value.*

The SEW effect here is interesting. A family's desire to leave a positive legacy for future generations could motivate strong environmental disclosure (Berrone et al. 2010). However, such disclosures are often technical and can attract intense scrutiny, which families seeking control may wish to avoid. In a voluntary reporting environment, we suspect that the control-preservation motive may lead family firms to report more cautiously or less substantively, which in turn may lead the market to undervalue them.

H2c: *Family ownership negatively moderates (weakens) the positive relationship between environmental responsibility disclosure and firm market value.*

2.2.4. Customer Satisfaction (CS) Disclosure

Disclosing commitments to product safety and quality and customer service speaks directly to a firm's most vital stakeholder group: its customers. This builds loyalty and ensures stable future sales (Gruca and Rego 2005). In markets where consumer protection laws are less robust, such voluntary disclosure serves as a credible promise of quality, offering a form of insurance against the loss of customer trust (Godfrey et al. 2009; Luo and Bhattacharya 2006).

H1d: *The quality of customer satisfaction disclosure is positively associated with firm market value.*

For family-owned businesses, the company's reputation is often closely tied to the family's name. This creates a powerful, deeply personal incentive to protect customer trust through transparency. While there is always a tension with control, the imperative to safeguard the family's reputation in the marketplace might actually align with providing credible signals of customer satisfaction. This makes the moderating role of family ownership less predictably negative. We therefore test for negative moderation while acknowledging the unique SEW dynamics at play.

H2d: *Family ownership negatively moderates (weakens) the positive relationship between customer satisfaction disclosure and firm market value.*

3. Research Methodology

To examine the correlation between CSRD dimensions and companies' market value, we collected financial information for firms listed on the Tehran Stock Exchange (TSE) website from 2015 to 2023. Data were primarily based on the TSE's audited financial statements and board reports, which are considered a reliable source of information (Nassirzadeh et al. 2023). We considered several features for selecting firms as follows:

(1) The firms must be active and listed on TSE during the sample period (2015–2023).
(2) Their financial information should be available.
(3) They must have a similar fiscal year (and no change during the sample period).

They should not be considered investment companies, leasing companies, credit institutions, or banks.

Given the features introduced above, 120 companies from 2015 to 2023 (i.e., 1080 observations) were selected for the study. Table 1 introduces all variables used in this study.

Table 1. Variable Definitions and Measurement.

Literature	Operational Definition	Symbol	Variable
			Dependent Variable
Al-Hadi et al. (2019)	Natural logarithm of the firm's market value at the end of the year.	MV	Market Value
			Independent Variables
Chen et al. (2015)	Sum of the disclosure scores of the four dimensions (SP + ER + E + CS), based on the 0–3 checklist.	CSR	CSRD (Total)
Chen et al. (2015)	Disclosure score based on the 6-item checklist (0–3).	SP	Social Participation
Chen et al. (2015)	Disclosure score based on the 10-item checklist (0–3).	ER	Employee Relationships
Chen et al. (2015)	Disclosure score based on the 8-item checklist (0–3).	E	Environment
Chen et al. (2015)	Disclosure score based on the 4-item checklist (0–3).	CS	Customer Satisfaction
			Moderator Variable
Claessens et al. (2000)	Dummy variable: 1 if an individual or family holds at least 20% of the firm's shares, zero otherwise.	FM	Family Ownership

Table 1. *Cont.*

Literature	Operational Definition	Symbol	Variable
			Control Variables
Jo and Harjoto (2011); Al-Hadi et al. (2019)	Natural logarithm of total assets.	SIZE	Firm Size
Jo and Harjoto (2011)	Ratio of short-term liabilities to total assets.	LEV	Leverage
Research Model Variable	Ratio of (cash + short-term investment) to total assets.	CASH	Cash Flow
Jo and Harjoto (2011)	Ratio of net income to total assets.	ROA	Return on Assets
Jo and Harjoto (2011)	Ratio of R&D expenditures to total assets.	R&D	Research & Development
Research Model Variable	Dummy variable: 1 if the company reported a loss in the current year, zero otherwise.	LOSS	Loss

Source: Authors' summary of the literature review.

3.1. Research Models

The primary independent variable in this study was CSRD. This variable was calculated as the sum of the values of four dimensions as follows:

$$CSR_{it} = EMPD_{it} + COMD_{it} + CUSD_{it} + ENVD_{it}$$

where

CSR_{it}: CSRD score for company i and year t;
$EMPD_{it}$: Employees' relationships dimension of company i, year t;
$COMD_{it}$: Social participation dimension of company i, year t;
$CUSD_{it}$: Customer satisfaction dimension of company i, year t;
$ENVD_{it}$: Environment disclosure dimension of company i, year t.

To test the hypotheses, we used multivariate regression models (Al-Hadi et al. 2019) as follows:

Model 1:

$$MV_{it} = \alpha + \beta_1 CSR_{it} + \beta_2 FM_{it} + \beta_3 CSR \times FM_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 CASH_{it} + \beta_7 ROA_{it} + \beta_8 R\&D_{it} + \beta_9 LOSS_{it} + \varepsilon_{it}$$

where

MV_{it}: Market Value (MV). The stock market value for company i in year t was calculated as the natural logarithm of the market value (Al-Hadi et al. 2019).

CSR_{it}: CSRD score for company i and year t.

FM_{it}: Family Member (FM) ownership for company i and year t (when the individual shareholder owns at least 20% of the firm's shares). The adoption of a 20% threshold for identifying the 'ultimate owner' is consistent with seminal literature (Claessens et al. 2000) concerning markets with highly concentrated ownership structures, such as those prevalent in East Asia and the Middle East.

$SIZE_{it}$: Firm size (SIZE) for the company was calculated by the natural logarithm of the total assets (Al-Hadi et al. 2019).

LEV_{it}: Leverage (LEV) is the ratio of short-term liabilities to total assets.

$CASH_{it}$: Cash flow (CASH) is the ratio of (cash plus short-term investment) to total assets.

ROA_{it}: Return on Assets (ROA) is the ratio of net income to total assets.

$R\&D_{it}$: Research and Development (R&D) cost is the ratio of research and development expenditures to total assets.

$LOSS_{it}$: Loss of the firm (LOSS). If the company recognised a loss in the current year, it was recognised as a loss; otherwise, it was recognised as zero.

SP_{it}: Social participation (SP) dimension of CSR for company i and year t.

ER_{it}: Employees' relationships (ER) dimension of CSR for company i and year t.

E_{it}: Environment (E) dimension of CSR for company i and year t.

CS_{it}: Customer satisfaction (CS) dimension of CSR for company and year t.

CSR_{it}: CSRD score for company i and year t.

The justification for the control variables employed in our models was based on established models in the empirical CSR and corporate valuation literature (Jo and Harjoto 2011). We incorporated a set of firm-specific characteristics identified by prior research as significant determinants of both firm value (our dependent variable) and corporate disclosure strategies. These encompassed Firm Size (SIZE), Financial Leverage (LEV), Profitability (ROA), and R&D intensity (R&D) (Jo and Harjoto 2011; Al-Hadi et al. 2019). Furthermore, Firm Loss (LOSS) was included to account for the potential influence of financial constraints on market valuation.

Model 1 examined the relationship between CSRD and market value and investigated the impact of family ownership on this relationship (H1 and H2).

Model 2:

$$MV_{it} = \alpha + \beta_1 SP_{it} + \beta_2 FM_{it} + \beta_3 SP \times FM_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 CASH_{it} + \beta_7 ROA_{it} + \beta_8 R\&D_{it} + \beta_9 LOSS_{it} + \varepsilon_{it}$$

Model 2 was selected to test the relationship between CSRD, based on the social participation dimension (SP), and market value, as well as the effects of family ownership on this relationship (H1a and H2a).

Model 3:

$$MV_{it} = \alpha + \beta_1 ER_{it} + \beta_2 FM_{it} + \beta_3 ER \times FM_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 CASH_{it} + \beta_7 ROA_{it} + \beta_8 R\&D_{it} + \beta_9 LOSS_{it} + \varepsilon_{it}$$

Model 3 examined the relationship between CSRD, as measured by employees' relationship dimensions (ER), and market value, and the impact of family ownership on this relationship (H1b and H2b).

Model 4:

$$MV_{it} = \alpha + \beta_1 E_{it} + \beta_2 FM_{it} + \beta_3 E \times FM_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 CASH_{it} + \beta_7 ROA_{it} + \beta_8 R\&D_{it} + \beta_9 LOSS_{it} + \varepsilon_{it}$$

This model (4) tested the relationship between CSRD based on the environmental dimension (E) and market value, as well as the effects of family ownership on this relationship (H1c and H2c).

Model 5:

$$MV_{it} = \alpha + \beta_1 CS_{it} + \beta_2 FM_{it} + \beta_3 CS \times FM_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 CASH_{it} + \beta_7 ROA_{it} + \beta_8 R\&D_{it} + \beta_9 LOSS_{it} + \varepsilon_{it}$$

Model (5) was employed to examine the relationship between CSRD, as measured through the customer satisfaction (CS) dimension, and firm market value. This model also tested the moderating effect of family ownership on the relationship (corresponding to hypotheses H1d and H2d).

To establish the construct validity and comprehensiveness of the CSRD variable, the measurement framework adopted in this study was anchored in the Global Reporting Initiative (GRI) standards (GRI 1, 2021; GRI 3, 2021). The indicators employed to operationalise the four CSRD dimensions were benchmarked directly against the GRI's specific Topic Standards.

The 'Employee Relations' (ER) dimension was formulated using GRI 401 (Employment), GRI 403 (Occupational Health and Safety), and GRI 404 (Training and Education). The 'Social Participation' (SP) dimension was informed by GRI 413 (Local Communities). The 'Environment' (E) dimension aligned with GRI 305 (Emissions) and GRI 306 (Waste). Finally, the 'Customer Responsibility' (CS) dimension corresponded to GRI 416 (Customer Health and Safety).

To measure the extent and quality of CSRD across its dimensions, we developed a disclosure index based on a checklist of specific items. The selection of these disclosure items was guided by synthesising indicators from prior seminal content analysis studies (e.g., Gray et al. 1995) and aligning them with relevant disclosure categories outlined in the Global Reporting Initiative (GRI) Standards, a widely accepted international framework for sustainability reporting. This approach ensured that our measurement captured dimensions of CSRD recognised as material in both academic literature and practice. The scoring procedure for each item is detailed below. For instance, within the Employee Relationships (ER) dimension, indicators such as 'workplace safety and healthcare initiatives' aligned with GRI 403 (Occupational Health and Safety) and 'employee education programs' aligned with GRI 404 (Training and Education), reflecting established metrics for reporting on human capital management.

A four-point scale (0–3) was used to evaluate the level of CSRD. A score of 3 was assigned when the disclosed information was quantitative and detailed, including numerical data, descriptions of activities, visual aids (e.g., charts, tables, images), and supporting documentation. A score of 2 was given when the information was non-quantitative but included detailed textual explanations in the report. A score of 1 was used when information was disclosed qualitatively, typically in general sentences or paragraphs. A score of 0 indicated the absence of disclosure.

Following common practice in disclosure index studies (e.g., Botosan 1997), we employed an unweighted index, treating each disclosure item within a dimension as equally important. The score for each dimension (e.g., ER_{it} for Employee Relationships for firm i in year t) was calculated by summing the scores (0–3) obtained for each of the k indicators within that dimension and then dividing this by the maximum possible score for that dimension ($3 \times k$).

Specifically, the formula used was

$$Dimension\ Score_{it} = \frac{\sum_{j=1}^{k} Indicator\ Score_{ijt}}{3 \times k}$$

where *Indicator Score* is the score (0, 1, 2, or 3) for the j-th indicator of the specific dimension for firm i in year t and k is the total number of indicators for that dimension (e.g., k = 10 for ER, k = 6 for SP, k = 8 for E, and k = 4 for CS). This calculation yielded a normalised dimension score ranging from 0 to 1, facilitating comparison across dimensions and firms.

To measure the level of disclosure related to employee relationships (ER), ten indicators were used: (1) number of employees, (2) monthly compensation including cash and non-cash rewards, (3) employee ownership percentage, (4) pension and termination benefits, (5) workplace safety and healthcare initiatives, (6) employee education programs, (7) sports and welfare benefits, (8) employee loans and insurance, (9) employee motivation and communication strategies, and (10) other human resource practices.

The level of disclosure on social participation (SP) was assessed using six criteria: (1) social investments, (2) support for community activities, (3) charitable contributions, (4) legal and litigation involvement, (5) participation in cultural and religious activities, and (6) other forms of societal engagement.

For the environmental (E) dimension, eight indicators were used: (1) air pollution control, (2) prevention of environmental harm, (3) recycling initiatives, (4) conservation of environmental resources, (5) environmental research and development, (6) formal environmental policies, (7) investment in environmental projects, and (8) other environmental responsibilities.

Finally, disclosure related to customer responsibility was assessed using four criteria: (1) initiatives to ensure customer health and safety, (2) customer satisfaction measures, (3) policies on deferred payment options, and (4) the provision of facilities and after-sales services. Table 2 describes the CSRD Coding Instrument and Scoring Protocol used for the current study.

Table 2. CSRD Coding Instrument and Scoring Protocol.

Dimension	No. of Items	Specific Disclosure Items (Keywords/Themes)	Scoring Criteria (Coder Manual)
Employee Relationships (ER)	10	1. No. of employees 2. Monthly compensation/rewards 3. Employee ownership % 4. Pension/termination benefits 5. Workplace safety & healthcare 6. Education/training programs 7. Sports & welfare benefits 8. Loans & insurance 9. Motivation/communication 10. Other HR practices	0 (None): No information disclosed. 1 (Qualitative): General/vague sentences (e.g., "We value our staff"). 2 (Descriptive): Detailed textual explanation without data. 3 (Quantitative/Full): Detailed description supported by numerical data, charts, or images.
Social Participation (SP)	6	1. Social investments 2. Community activity support 3. Charitable contributions 4. Legal/litigation involvement 5. Cultural/religious activities 6. Other societal engagement	(Same 0–3 scale applied)
Environment (E)	8	1. Air pollution control 2. Prevention of harm 3. Recycling initiatives 4. Resource conservation 5. Environmental R&D 6. Formal policies 7. Project investments 8. Other env. responsibilities	(Same 0–3 scale applied)
Customer Satisfaction (CS)	4	1. Customer health & safety 2. Satisfaction measures 3. Deferred payment policies 4. Facilities/after-sales service	(Same 0–3 scale applied)

All tables (1–10) are based on calculations by the authors.

3.2. Content Analysis Protocol and Reliability

To ensure the validity and replicability of the CSRD index, we used a rigorous content analysis protocol. The coding process was conducted in three stages:

1. Coder training and pilot testing: Two independent researchers, familiar with financial reporting and sustainability frameworks, acted as coders. Before the primary analysis, a pilot test was conducted on a random sample of 20 company-year observations to align interpretations of the 0–3 rating scale. Disagreements during this stage were discussed to refine the coding guide.

2. Independent coding: The full sample was coded independently by two researchers to minimise subjective bias. Coders were instructed to search for specific keywords related to each dimension (e.g., "pollution," "charity," "safety") and to assess the depth of disclosure using quantitative/qualitative criteria.
3. Reliability and Refereeing: To assess inter-coder reliability, we calculated Krippendorff's alpha for each dimension separately. The results showed high consistency across all subscales: social engagement ($\alpha = 0.86$), employee relations ($\alpha = 0.89$), environment ($\alpha = 0.91$), and customer satisfaction ($\alpha = 0.85$). The overall pooled alpha was 0.88, well above the acceptable threshold for exploratory research. Any remaining disagreements between the two coders were resolved through a reconciliation session. In rare cases of persistent disagreement, a third senior researcher acted as a referee to determine the final score.

3.3. Variable Measurement

The CSRD Composite Index. The core independent variable was a self-constructed composite index of CSRD quality. Contrary to a simple binary approach (disclosed/not disclosed), we employed a weighted content analysis technique to capture the depth of information. The coding process followed a rigorous protocol:

1. Source Identification: We identified specific disclosure items based on GRI standards (e.g., GRI 306 for "Recycling Initiatives").
2. Scoring System: A four-point scale (0–3) was applied to each specific indicator (e.g., recycling) by the researchers:
   Score 0: No disclosure.
   Score 1 (Symbolic): Vague, qualitative statements (e.g., "We care about recycling").
   Score 2 (Descriptive): Specific narrative description of actions without data.
   Score 3 (Substantive): Detailed quantitative data (e.g., "We recycled 500 tons of waste") or visual evidence.
3. Index Calculation: The final score for each dimension was a normalised index calculated by the authors, ranging from 0 to 1.

3.4. Econometric Strategy

To empirically test the hypotheses, we addressed the potential endogeneity inherent in the CSR-financial performance relationship (where firm value might also influence disclosure). Simple OLS regression may yield biased estimates due to unobserved heterogeneity and simultaneity. Therefore, we employed the System Generalised Method of Moments (System GMM) estimator (Arellano and Bover 1995; Blundell and Bond 1998). The System GMM approach was particularly appropriate for our study because

1. It controls for unobserved firm-specific effects (fixed effects);
2. It addresses endogeneity by using lagged values of the dependent and independent variables as instruments;
3. It is suitable for panels with a large number of cross-sections (N = 120) and a shorter time series (T = 9).

The baseline dynamic panel model was specified as follows:

$$MV_{it} = \alpha + \delta MV_{it-1} + \beta_1 CSRD_{it} + \beta_2 Family_{it} + \beta_3 (CSRD_{it} \times Family_{it}) + \gamma Controls_{it} + \eta_i + \epsilon_{it}$$

where MV_{it-1} represents the lagged market value, addressing persistence in firm valuation.

Given these advantages and the dynamic nature of firm valuation, the System GMM estimator was employed as the primary specification for testing our hypotheses, particularly those involving the moderating role of family ownership. The static panel models (Models 1–5) served as a baseline and for comparative analysis.

4. Empirical Results

4.1. Descriptive Statistics

Table 3 presents the measures of central tendency (mean, median and mode) and the measures of variability (standard deviation, variance, minimum and maximum variables, and kurtosis and skewness).

Table 3. Descriptive statistics of research variables.

	Mean	Median	Maximum	Minimum	Standard Deviation	Coefficient of Skewness	The Coefficient of Kurtosis
MV	27.602	27.791	35.789	12.273	2.999	−2.848	14.450
FM	0.107	0.000	1.000	0.000	0.310	2.536	7.431
CSR	0.543	0.564	0.692	0.000	0.0100	−3.112	14.684
ROA	0.107	0.082	0.589	−0.258	0.146	0.632	4.209
SIZE	27.751	27.786	33.601	13.247	2.248	−3.285	22.695
LEV	0.624	0.614	1.771	0.164	0.245	1.417	8.113
LOSS	0.142	0.000	2.000	0.000	0.352	2.119	5.727
SP	0.399	0.333	0.0.667	0.167	0.102	−0.248	2.521
ER	0.759	0.800	0.900	0.600	0.087	−0.021	2.291
R & D	0.001	0.000	0.014	0.000	0.002	4.782	29.877
E	0.370	0.375	0.625	0.125	0.074	0.250	4.963
PE	0.054	0.000	0.58	0.000	0.081	2.192	9.771
CASH	0.071	0.037	3.747	0.000	0.145	15.968	384.400

Notes: The sample consisted of 120 listed firms on the TSE for the period 2015–2023 (N = 1080 firm-year observations).

According to Table 3, the mean for firm size was 27.751, the highest among all variables, while R&D expenditures had the lowest mean at 0.001. The mean CSRD score was 0.543, indicating a moderate level of corporate social responsibility reporting across the sample. Regarding variability, market value (MV) exhibited the highest standard deviation at 2.999, suggesting significant dispersion in firm valuation. Conversely, R&D expenditures had the lowest standard deviation at 0.002, indicating minimal variation across firms. The descriptive statistics further revealed that approximately 11% of the firms in the sample were family-owned, and around 14% of the companies reported financial losses during the study period.

4.2. The Results of Testing Hypotheses

The models were estimated using panel-data methodology rather than ordinary least squares (OLS) or pooled regression.

According to Table 4, the Variance Inflation Factor (VIF) values reported subsequently confirmed the absence of multicollinearity among the independent variables.

Table 4. Variance Inflation Factor (VIF) Results.

	VIF
CSR	1.22
FM	1.05
SP	1.32
ER	1.37
E	1.07
CS	1.38
SIZE	1.1
LEV	1.74
CASH	1.15
ROA	2.06
R & D	1.04
LOSS	1.49

The diagnostic tests for panel data models, including the Breusch-Pagan test for heteroskedasticity and the Breusch-Godfrey/Wooldridge test for autocorrelation, were conducted and the results are reported in the Section 4.

In the first hypothesis (H1), we assumed a significant relationship between CSRD and firms' market value. In the second hypothesis (H2), we thought family ownership moderated this relationship. The results of testing these two hypotheses are shown in Table 5.

Table 5. The results of testing the primary hypothesis.

	Coefficient	**Std. Dev.**	**T. Statistic**	**Sig.**
CSR	8.123	3.042	2.670	0.008
FM	−3.747	2.044	−1.833	0.067
CSR × Family Member Ownership	5.474	3.663	1.495	0.135
SIZE	0.749	0.306	2.450	0.014
LEV	−1.132	0.368	−3.080	0.002
CASH	0.975	0.586	1.663	0.096
ROA	1.324	0.548	2.415	0.016
R & D	−12.524	29.578	−0.423	0.672
LOSS	0.417	0.131	3.186	0.001
Firm year		control		
F-statistic (Sig.)	72.87 (0.000)	Durbin-Watson statistic		1.9
R-square	0.40	Breusch-Pagan test (Sig.)		6.04 (0.73)
Adj. R-square	0.32	Breusch-Godfrey/Wooldridge test		166.01 (0.000)

Notes: The sample consisted of 120 listed firms on the TSE for the period 2015–2023 (N = 1080 firm-year observations). T-statistics are reported in the corresponding column.

The F-statistic was employed to assess the overall significance of Model 1, which examined the relationship between the main variables and the moderating role of family ownership. The model's significance level (p = 0.000) confirmed its statistical validity and appropriateness for hypothesis testing. The adjusted R-squared value of 0.32 indicates that the model's independent variables explained approximately 32% of the variance in market value. Additionally, the Durbin–Watson statistic of 1.9 suggests no autocorrelation in the residuals, supporting the assumption of independent prediction errors.

The significance level for CSRD (p = 0.008) reveals a statistically significant positive relationship between CSRD and market value. Thus, Hypothesis 1 (H1) is supported. These results align with previous studies, including those by Guidry and Patten (2010).

In contrast, the significance level for family ownership (p = 0.067) indicates that this variable has no statistically significant direct relationship with market value. Furthermore, its moderating effect on the CSRD–market value relationship (p = 0.135) is also insignificant. Therefore, Hypothesis 2 (H2) is not supported. These findings suggest that while CSRD has a positive influence on firm market value, family ownership does not moderate this relationship.

In Hypothesis 1a (H1a), it was proposed that CSRD related to the social participation (SP) dimension is significantly associated with firm market value. The moderating effect of family ownership on this relationship was examined under Hypothesis 2a (H2a). The results for both hypotheses are presented in Table 6.

Table 6. Estimation of results for H1a and H2a.

	Coefficient	Std. Dev.	T. Statistic	Sig.
Constants	3.672	6.397	0.574	0.566
SP	2.320	0.709	3.273	0.001
FM	−0.0869	0.624	−1.392	0.164
SP × Family Member Ownership	0.466	1.323	0.353	0.724
SIZE	0.847	0.238	3.553	0.000
LEV	−1.093	0.353	−3.095	0.002
CASH	0.977	0.563	1.736	0.083
ROA	1.244	0.510	2.40	0.015
R & D	−2.968	27.056	−0.110	0.913
LOSS	0.417	0.137	3.052	0.002
Firm year	control			
F-statistic (Sig.)	730.18 (0.000)	Durbin-Watson statistic		1.77
R-square	0.405	Breusch-Pagan test (Sig.)		15.581 (0.076)
Adj. R-square	0.40	Breusch-Godfrey/Wooldridge test		75.19 (0.000)

Notes: The sample consisted of 120 listed firms on the TSE for the period 2015–2023 (N = 1080 firm-year observations). T-statistics are reported in the corresponding column.

The F-statistic's *p*-value (0.000) confirmed that Model 2 was statistically valid. The Durbin–Watson statistic 1.77 indicates no autocorrelation among residuals, affirming the independence of error terms. Furthermore, the adjusted R-squared value of 0.40 means that the model's independent variables accounted for approximately 40% of the variance in market value.

The significance level for SP (p = 0.001) confirms a statistically significant relationship between CSRD (based on social participation) and firm market value, thereby supporting Hypothesis 1a. However, the significance level for family ownership (FM) (p = 0.164) indicates no significant direct relationship with market value. Additionally, the interaction term (FM × SP) had a significance level of 0.724, suggesting that family ownership does not significantly moderate the relationship between SP-related CSRD and market value. Thus, Hypothesis 2a is not supported by the findings.

Hypothesis H1b posits a significant relationship between CSRD based on employee relationships (ER) and firm market value. The moderating role of family ownership (FM) in this relationship was examined under Hypothesis H2b. The results of testing these hypotheses are presented in Table 7.

The significance level for ER (p = 0.004) indicates a strong and statistically significant relationship between CSRD and employee relationships, as well as market value, thereby supporting H1b. However, the direct effect of family ownership on market value (p = 0.184) is not statistically significant. Furthermore, the interaction term (FM × ER) yielded a significance level of 0.452, suggesting that family ownership does not significantly moderate the relationship between employee-related CSRD and firm market value. As such, H2b is not supported.

These findings suggest that employee well-being, health, and safety, as well as engagement initiatives, can positively impact a firm's market valuation. The results are consistent with those of Collier and Esteban (2007), who found a positive link between employee-focused CSR practices and firm performance.

Table 7. Estimation of results for H1b and H2b.

	Coefficient	Std. Dev.	T. Statistic	Sig.
ER	4.627	1.612	2.870	0.004
FM	−1.882	1.417	−1.328	0.184
ER × Family Member Ownership	1.387	1.884	0.752	0.452
SIZE	0.758	0.309	2.453	0.014
LEV	−1.206	0.378	−3.190	0.001
CASH	1.051	0.632	1.661	0.097
ROA	1.213	0.549	2.209	0.027
R & D	−13.152	33.590	−0.392	0.695
LOSS	0.421	0.127	3.312	0.001
Firm year		control		
F-statistic (Sig.)	70.82 (0.000)	Durbin-Watson statistic		1.93
R-square	0.401	Breusch-Pagan test (Sig.)		16.24 (0.061)
Adj. R-square	0.32	Breusch-Godfrey/Wooldridge test		166.33 (0.000)

Notes: The sample consisted of 120 listed firms on the TSE for the period 2015–2023 (N = 1080 firm-year observations). T-statistics are reported in the corresponding column.

According to Table 8, Hypothesis H1c posits a significant relationship between CSRD related to the environmental dimension (E) and firm market value. Hypothesis H2c further suggests that family ownership (FM) moderates this relationship.

Table 8. Estimation of results for H1c and H2c.

	Coefficient	Std. Dev.	T. Statistic	Sig.
Constants	3.124	6.108	0.512	0.609
E	4.785	1.466	3.265	0.001
FM	−1.346	0.579	−2.326	0.020
E × Family Member Ownership	2.267	1.572	1.442	0.149
SIZE	0.836	0.233	3.593	0.000
LEV	−1.125	0.305	−3.686	0.000
CASH	1.165	0.578	2.017	0.044
ROA	1.205	0.457	2.639	0.008
R & D	−9.606	29.598	−0.325	0.746
LOSS	0.416	0.135	3.079	0.002
Firm year		control		
F-statistic (Sig.)	772.406 (0.000)	Durbin-Watson statistic		1.74
R-square	0.42	Breusch-Pagan test (Sig.)		6.03 (0.73)
Adj. R-square	0.40	Breusch-Godfrey/Wooldridge test		80.33 (0.00)

Notes: The sample consisted of 120 listed firms on the TSE for the period 2015–2023 (N = 1080 firm-year observations). T-statistics are reported in the corresponding column.

The significance level for the environmental dimension (p = 0.001) indicates a strong and statistically significant relationship between ecological CSRD and market value, thereby supporting H1c. Additionally, family ownership exhibited a significant direct relationship with market value (p = 0.020). However, the interaction term (E × FM) had a significance

level of 0.149, suggesting that family ownership does not significantly moderate the relationship between environmental CSRD and market value. Therefore, H2c is not supported.

These findings suggest that transparent disclosure of environmental initiatives—such as sustainability practices, pollution control, and ecological investments—can positively affect a firm's market value. However, the presence of family ownership does not appear to strengthen or weaken this relationship. Thus, while environmental responsibility is an essential driver of market value, its effectiveness is not contingent upon a firm's ownership structure.

Table 9 presents the results of testing Hypotheses H1d and H2d. Hypothesis H1d posits a relationship between CSRD based on the customer satisfaction (CS) dimension and firm market value. Hypothesis H2d suggests that family ownership (FM) moderates this relationship.

Table 9. Estimation of results for H1d and H2d.

	Coefficient	Std. Dev.	T. Statistic	Sig.
Constants	3.051	6.491	0.470	0.638
CS	1.040	0.801	1.298	0.194
FM	−0436	1.162	−0.375	0.708
CS × Family Member Ownership	−0.418	1.932	−0.217	0.829
SIZE	0.881	0.241	3.660	0.000
LEV	−1.128	0.356	−3.168	0.002
CASH	1.032	0.592	1.744	0.081
ROA	1.215	0.497	2.444	0.015
R & D	−6.251	30.458	−0.205	0.837
LOSS	0.435	0.134	3.238	0.001
Firm year		control		
F-statistic (Sig.)	695.099 (0.000)	Durbin-Watson statistic		1.77
R-square	0.39	Breusch-Pagan test (Sig.)		9.12 (0.42)
Adj. R-square	0.38	Breusch-Godfrey/Wooldridge test		71.1 (0.00)

Notes: The sample consisted of 120 listed firms on the TSE for the period 2015–2023 (N = 1080 firm-year observations). T-statistics are reported in the corresponding column.

The significance level for CS ($p = 0.194$) indicates that there is no statistically significant relationship between customer satisfaction-related CSRD and market value. Therefore, H1d is not supported. Similarly, the direct relationship between family ownership and market value ($p = 0.708$) is not statistically significant. The interaction term (CS × FM) is also non-significant ($p = 0.829$), indicating that family ownership does not moderate the relationship between CSRD based on customer satisfaction and market value. Accordingly, H2d is also not supported.

This study contributes to stakeholder theory by empirically demonstrating that not all dimensions of CSRD equally influence market value. It further challenges prevailing assumptions about the ethical behaviour of family firms by showing that ownership structure does not significantly moderate the financial impact of CSRD. The findings provide valuable guidance for firms by identifying the most value-enhancing CSR dimensions—namely, social participation, employee relations, and environmental responsibility—enabling strategic alignment between ethical initiatives and financial performance.

The Middle Eastern context of this study adds unique insights into how CSRD translates into financial outcomes in emerging markets, where institutional frameworks may

differ from those in Western economies. Moreover, the emphasis on disclosure mechanisms bridges the gap between ethical intent and measurable business impact, providing practitioners and policymakers with evidence-based strategies for ethical decision-making and for developing regionally appropriate CSR reporting standards.

4.3. Additional Robustness Test: System

The empirical analysis employed a system GMM estimator to examine the relationship between corporate social responsibility dimensions and firm market value, while accounting for the moderating role of family ownership. According to Table 10, the diagnostic tests confirm the validity of the estimation approach. The Wald test statistics were highly significant ($p < 0.001$) across all models, indicating the joint significance of the explanatory variables. The Arellano-Bond tests for autocorrelation revealed the presence of first-order serial correlation (AR(1): $p < 0.001$) but no second-order serial correlation (AR(2): $p > 0.10$), which is consistent with the requirements of the GMM estimator. However, the Sargan test of overidentifying restrictions was significant in all specifications ($p < 0.001$), suggesting potential issues with instrument validity, which should be considered when interpreting the results.

Table 10. System GMM Regression Results.

IV	Csr		Sp		Er		E		CS	
	Coef.	**t**	**Coef.**	**t**	**Coef.**	**t**	**Coef.**	**t**	**Coef.**	**t**
L1.mv	0.448 ***	8.31	0.473 ***	8.63	0.471 ***	9.00	0.439 ***	8.60	0.477 ***	9.04
Main IV	2.917 **	2.48	0.428	0.72	1.452 **	2.20	3.706 ***	4.26	1.089 *	1.78
Fm	−5.368	−1.60	−0.249	−0.27	−4.316 **	−2.10	−0.255	−0.24	−0.452	−0.29
Interaction	9.725	1.64	0.527	0.41	5.555 **	2.29	0.913	0.41	0.553	0.21
Size	1.005 ***	11.06	1.079 ***	11.26	1.023 ***	10.86	1.035 ***	11.17	1.073 ***	11.15
Lev	−0.716 **	−2.48	−0.683 **	−2.41	−0.697 **	−2.53	−0.635 **	−2.51	−0.680 **	−2.41
Cash	0.869	1.33	0.871	1.31	0.878	1.35	0.875	1.39	0.855	1.28
Roa	1.808 ***	4.92	1.695 ***	4.69	1.809 ***	5.02	1.564 ***	4.15	1.687 ***	4.59
Rd	14.504	0.39	7.147	0.19	1.173	0.03	1.060	0.03	4.620	0.12
Loss	0.465 ***	3.54	0.480 ***	3.58	0.483 ***	3.64	0.491 ***	3.78	0.477 ***	3.58
_cons	−13.89 ***	−6.87	−15.19 ***	−7.70	−14.54 ***	−7.32	−14.32 ***	−7.26	−15.62 ***	−7.80
Wald test (χ^2, *p*-value)	872.33 (0.000)		927.60 (0.000)		900.64 (0.000)		899.79 (0.000)		949.23 (0.000)	
AR(1) test (z, *p*-value)	−6.6272 (0.000)		−6.6575 (0.000)		−6.4175 (0.000)		−6.4740 (0.000)		−6.6810 (0.000)	
AR(2) test (z, *p*-value)	0.47193 (0.637)		0.64789 (0.517)		0.54599 (0.585)		0.62131 (0.534)		0.70896 (0.478)	
Sargan test (χ^2, *p*-value)	81.09 (0.000)		80.28 (0.000)		80.63 (0.000)		79.80 (0.000)		80.03 (0.000)	
AR(1) test (z, *p*-value)	−6.6272 (0.000)		−6.6575 (0.000)		−6.4175 (0.000)		−6.4740 (0.000)		−6.6810 (0.000)	

Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The findings reveal a nuanced relationship between CSRD and firm value, contingent on both CSR dimension and ownership structure. For overall CSRD, a significant positive effect was observed (coefficient = 2.917, $p < 0.05$). More importantly, the interaction effect between environmental responsibility (er) and family ownership emerged as statistically significant and positive (coefficient = 5.555, $p < 0.05$). This suggests that family ownership enhances the positive impact of environmental responsibility disclosure on a firm's market value. Similarly, the standalone environmental disclosure (e) demonstrates a strong positive association with market value (coefficient = 3.706, $p < 0.001$).

In contrast, social performance (sp) and its interaction with family ownership showed no statistically significant effects. The coefficient for customer satisfaction (CS) was marginally substantial (coefficient = 1.089, $p < 0.10$), though its interaction term remained insignificant.

These results suggest that investors value environmental responsibility disclosures more highly than other CSR dimensions, and this valuation is particularly enhanced in family-owned firms. The findings support stakeholder theory arguments that family firms, with their long-term orientation and concern for reputation, are better positioned to lever-

age CSRD, particularly environmental initiatives, to enhance firm value. The insignificant results for social performance dimensions may reflect investor scepticism about the credibility of social disclosures or their perceived weaker link to financial performance.

The significant Sargan test across all models, while potentially indicating instrument validity issues, may also reflect the complex dynamic relationships in the data. Future research should explore alternative instrument sets to address this limitation.

4.4. Reconciling Static and Dynamic Model Results

A comparison of the baseline static panel results (Tables 5–9) and the dynamic System GMM estimates (Table 10) reveals a noteworthy divergence regarding the moderating role of family ownership, specifically for environmental disclosure (E). While the interaction term E*FM is insignificant in the static specification ($p = 0.149$, Table 8), it is positive and significant in the System GMM model (coefficient = 5.555, $p < 0.05$, Table 10).

This divergence is analytically informative rather than contradictory. The System GMM estimator was specifically designed to address two key limitations of static panel models in our context: (1) endogeneity bias arising from unobserved heterogeneity and potential reverse causality and (2) the dynamic persistence of firm valuation. The emergence of a significant moderating effect under this more rigorous specification suggests that the positive influence of family ownership on the value-relevance of environmental disclosure may be obscured in simpler models by these econometric issues. It indicates that the market's appreciation for environmental transparency in family firms is a nuanced effect, contingent on a model that better captures the process of valuation formation over time and controls for endogenous relationships. Consequently, for hypotheses concerning moderation effects, particularly in a dynamic context like market valuation, the System GMM results should be accorded greater interpretive weight.

5. Discussion

Our investigation aimed to determine whether the market perceives CSRD as a risk-mitigating reward or a cost-inducing risk within an emerging market context and whether family ownership influences this perception. The results paint a nuanced picture that both confirms and challenges established expectations.

5.1. Interpreting the Value of Disclosure Dimensions

The positive market valuation of high-quality disclosure in social, employee, and environmental dimensions strongly supports the "reward" perspective grounded in stakeholder and signalling theories (Dhaliwal et al. 2011; Freeman 1984). This finding is particularly significant in our context. In an environment characterised by high information asymmetry and voluntary disclosure norms, substantive reporting on these areas appears to serve as a credible signal. It reduces investor uncertainty about key intangible assets—such as community legitimacy, human capital stability, and environmental risk management—that are difficult to assess solely from financial statements. This aligns with arguments that in institutionally complex settings, transparency serves as a critical tool for differentiation and risk reduction (Boubakri et al. 2021).

The non-significant result for customer satisfaction (CS) disclosure, however, invites a more contextual interpretation. Contrary to findings in developed markets (e.g., Luo and Bhattacharya 2006), this dimension did not resonate with investors in our sample. We theorise that in the absence of strong, independent consumer watchdogs or standardised product rating systems, voluntary claims about customer welfare may be perceived as "cheap talk"—easy to make but hard to verify. Unlike emissions data or

employee training hours, customer satisfaction metrics may lack the perceived objectivity needed to function as a credible signal in this specific institutional setting.

5.2. The Puzzling Neutrality of Family Ownership

Perhaps our most intriguing finding is the lack of a significant moderating effect for family ownership across all dimensions. This stands in contrast to the strong predictions of the socioemotional wealth (SEW) perspective, which anticipates that the control-preservation motive would lead to less credible disclosure and a dampened market response (Zientara 2017).

This null result does not necessarily invalidate the SEW theory; instead, it suggests a more complex reality in our context. It may indicate that the competing SEW priorities—the desire for a reputable legacy versus the instinct for private control—effectively counterbalance each other in the market's eyes (Berrone et al. 2010). Investors may apply a similar level of scepticism or require identical levels of substantive proof from all firms, regardless of ownership, when evaluating CSRD in this high-asymmetry environment. This finding contributes to a growing strand of literature suggesting that the governance effect of family ownership on disclosure is not monolithic but highly contingent on institutional and market-specific factors.

5.3. Limitations and Future Research

Our study is not without limitations. The relatively small subsample of family-owned firms may limit the statistical power to detect more subtle interaction effects. Furthermore, our context—a single emerging market with unique institutional features—requires caution when generalising. Future research could productively test these relationships in other Middle Eastern or emerging markets with different regulatory intensities or family business cultures. Additionally, exploring the role of external assurance or the specific language used in disclosures could provide deeper insight into what makes a CSRD signal credible.

5.4. Considerations for Generalizability

While this study offers valuable insights into an under-researched region, its generalizability should be interpreted with nuance. The finding that high-quality disclosure on social, employee, and environmental dimensions enhances market value likely reflects a broader regional mechanism pertinent to emerging markets with high information asymmetry. Investors' apparent discounting of customer satisfaction disclosures may also resonate in other contexts with weaker consumer protection regimes. However, the null moderating effect of family ownership must be treated with greater context-specificity. This result may stem from the particular configuration of SEW priorities within Iranian family firms or the relatively small subsample of family-owned firms in our dataset. Therefore, while the core CSRD-value relationship may be indicative of patterns in similar Middle Eastern and North African (MENA) markets, the specific role of family governance likely varies across national institutional settings and requires validation through broader regional comparative studies.

6. Conclusions

This study examined how the quality of corporate social responsibility disclosure (CSRD) across four specific dimensions influences firm market value in an emerging market, and whether family ownership moderates this relationship. Analysing data from the Tehran Stock Exchange, we found that higher-quality disclosure relating to a firm's social engagement, employee relations, and environmental responsibility is positively associated with its market value. The disclosure regarding customer satisfaction did not reveal a significant relationship. Contrary to our hypotheses, family ownership does not consistently

moderate across specifications; however, robust evidence suggests it may enhance the value of environmental disclosure. The findings lead to several targeted implications:

The results suggest that strategic resource allocation to substantive, verifiable CSR activities in social, employee, and environmental areas—and their transparent disclosure—can be a value-enhancing strategy in similar opaque markets. It indicates that the market rewards measurable transparency in these specific areas.

In emerging markets characterised by high information asymmetry, our study provides evidence that CSRD, particularly in the social, employee, and environmental pillars, can offer incremental, decision-useful information beyond financial metrics. It suggests analysts should scrutinise the quality and specificity of such disclosures as part of a comprehensive risk assessment.

For management accountants and organisational decision-makers, these findings provide concrete guidance for strategic resource allocation and effective communication. This study demonstrates that transparent, high-quality disclosure on social, employee, and environmental initiatives is not merely a compliance or reputational exercise but a direct contributor to market valuation, particularly in environments with high information asymmetry. This elevates the role of management accountants from reporters of historical cost to strategic partners in identifying, measuring, and communicating material, non-financial value drivers. Decision-makers are advised to prioritise substantive investments and disclosures in these three key areas, as the market interprets them as credible signals of sound risk management and sustainable governance.

This study underscores the importance of moving beyond composite ESG/CSR scores. The dimension-specific nature of our results confirms that aggregating disclosures can mask essential variations in how different types of information are valued. Furthermore, the non-significant role of family ownership highlights the need for more nuanced, context-driven models that specify when and how SEW priorities influence corporate transparency and its market reception.

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