

SDG-Driven Determinants of Market Capitalization: Evidence from the Malaysian Banking Sector

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Abstract: *This study investigates the influence of women empowerment, risk management practices, corporate social responsibility (CSR), and fintech disclosure on market capitalization in Malaysia's banking sector from 2011 to 2024. Grounded in Agency Theory, Stakeholder Theory, and Signaling Theory, the research explores how governance mechanisms and strategic disclosures contribute to financial value creation and sustainability. The empirical findings reveal that women empowerment and fintech disclosure have a significant positive relationship with market capitalization, indicating that gender-inclusive leadership and digital innovation strengthen investor confidence and firm valuation. CSR practices also positively influence market capitalization, reinforcing the role of social accountability in driving corporate legitimacy. Conversely, risk management practices show a negative association, suggesting that extensive risk disclosures may reflect perceived exposure rather than proactive governance. Collectively, these findings support the broader objectives of the United Nations Sustainable Development Goals (SDGs), particularly SDG 5 (Gender Equality), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 12 (Responsible Consumption and Production). This study underscores the importance of integrating gender diversity, sustainability, and technological transparency in governance frameworks to enhance market performance and long-term investor trust.*

Keywords: Women Empowerment; Risk Management Practices; Corporate Social Responsibility (CSR); Fintech Disclosure; Market Capitalization

1. Introduction

The global sustainability agenda framed by the United Nations' Sustainable Development Goals (SDGs) increasingly shapes investor expectations and corporate valuation. Financial markets now price not only earnings but also sustainability credentials, governance, and innovation that align with the SDGs; this makes market capitalization a timely outcome variable for studying how SDG-relevant practices affect bank valuation (Amir, Quayyum & Md Isa 2025).

Women empowerment, operationalised here as board gender diversity and female leadership, directly maps to SDG 5 (Gender Equality) and forms a central social governance signal for investors. The literature indicates that gender diversity can enhance decision-making, monitoring, and stakeholder legitimacy, which investors may reward through higher

valuations; however, empirical results vary by context and identification strategy, and some evidence points to complex, sometimes non-linear relationships between gender quotas and market outcomes (Jamaludin, Amir, & Zaidi, 2025; Alharbi et al., 2022; Sahu, 2025). In Malaysia, board gender-diversity initiatives have advanced significantly: female representation on boards of the top 100 publicly listed companies reached 31.4% in 2024 (Business Today, 2024), and regulators continue to target at least 30% representation across all listed firms (MSWG, 2024). These regulatory nudges, combined with growing empirical evidence in the region, make women empowerment a theoretically justified and policy-relevant predictor of bank market capitalization.

Risk management practices align with SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure) because robust risk frameworks support resilient and sustainable financial intermediation. In the banking sector, enterprise risk management maturity, credit and liquidity risk controls, and transparent risk governance help reduce downside volatility and potential losses, attributes that investors often price into market capitalization. Large banks' disclosures demonstrate rigorous risk measurement, including the use of Value at Risk (VaR) and diversification indicators, as highlighted in recent annual reports (Standard Chartered, 2024). In Malaysia, regulatory emphasis by Bank Negara Malaysia on strong risk governance further reinforces the relevance of risk management practices as a determinant of market value.

Corporate social responsibility (CSR) relates to SDG 12 (Responsible Consumption & Production), SDG 13 (Climate Action) and broader social licence to operate; CSR activities and disclosures can improve reputation, stakeholder relations, and long-term sustainability, thereby affecting firm valuation (Fahmida 2025). Empirical studies in emerging markets show positive relationships between CSR disclosure and firm value (Sari & Muslimin 2025). In the Malaysian banking context, CSR disclosure in both conventional and Islamic banks has been documented (Lui, Zainulldin & Wahidudin 2021) and is increasingly scrutinised by investors and regulators. Hence for Malaysian banks, CSR is both a regulatory and reputational instrument that may shape investor perception and market capitalization.

Fintech disclosure and adoption map closely to SDG 9 (Industry Innovation & Infrastructure) and SDG 16 (Peace, Justice & Strong Institutions) because digital finance can expand financial inclusion, efficiency, and transparency. Recent studies show fintech innovations significantly improve bank efficiency in Asian banking (Chowdhury et al. 2024) and research in Malaysia finds that fintech disclosure correlates positively with market capitalisation, together with SDG compliance and risk management (Amir, Quayyum & Md Isa 2025). Malaysia's fintech ecosystem is vibrant with fintech companies growing in number and digital financial services expanding making fintech disclosure a contemporary and measurable independent variable for market capitalization.

Bank age is included as a control variable because a firm's age captures aspects of organisational maturity, legacy business models, and franchise strength that may affect valuation. Theoretical and empirical work shows age can have either positive effects (brand, customer loyalty, experience) or negative effects (legacy inefficiencies) and some studies report non-linear (inverted-U) relationships between firm age and performance. Using age as a control helps isolate the incremental effects of SDG-aligned practices (women empowerment, risk management practices, CSR, fintech disclosure) on market capitalization.

Methodologically the relationships above raise endogeneity concerns: reverse causality (higher market capitalization enables greater CSR spending, fintech investment or diversity initiatives), omitted variables (managerial quality, corporate culture), and measurement error. To produce credible estimates, panel fixed-effects, lagged independent variables, instrumental variables (where plausible instruments exist) or dynamic GMM techniques are suitable options in the banking context; previous empirical work in governance, CSR and fintech domains similarly adopts these approaches to address simultaneity and omitted-variable bias (Sahu 2025; Chowdhury et al. 2024).

This paper contributes to the literature by explicitly linking SDG-relevant governance, social, risk and technological dimensions to market capitalization in Malaysian banks as an emerging-market setting where regulatory initiatives, fintech growth and SDG commitments are accelerating. By combining up-to-date measures of women empowerment, risk management practices, CSR, fintech disclosure and controlling for bank age the study aims to inform both academic debates and policymaking on how SDG-aligned corporate behaviours translate into market value.

2. Literature Review

2.1 Women Empowerment

Women empowerment, reflected through board gender diversity and female leadership, represents a critical dimension of corporate governance that influences firm valuation. Under Agency Theory, board diversity strengthens monitoring effectiveness by reducing information asymmetry and mitigating self-serving managerial behavior (Adams & Ferreira, 2009). Gender-diverse boards are also more likely to introduce independent perspectives and ethical vigilance, which improve the quality of strategic oversight and decision-making (Jamaludin, Amir, & Zaidi, 2025). In the context of financial institutions, this translates into more balanced governance structures that can sustain investor confidence.

Empirical evidence demonstrates that gender-diverse boards enhance firm value through improved transparency and stakeholder engagement. Women directors often promote participatory governance and long-term orientation, reducing risks of short-term profit manipulation and reinforcing market credibility (Sahu, 2025). Investors increasingly view gender diversity as a non-financial performance indicator that signals responsible leadership, thus influencing market capitalization positively.

From a sustainability perspective, women empowerment aligns directly with SDG 5 (Gender Equality), integrating social inclusiveness into corporate accountability. Research by Alharbi et al. (2022) highlights that gender-diverse boards are more inclined to adopt ethical disclosure practices and socially responsible strategies, which improve a firm's reputation and market value. Hence, board diversity not only fulfills a social justice imperative but also acts as a strategic asset that attracts investors seeking ESG-aligned portfolios.

In Malaysia, policy interventions and regulatory efforts have accelerated gender inclusivity in leadership. The Securities Commission Malaysia and MSWG have set a 30% female representation target on boards, with top 100 listed companies already achieving 31.4% as of 2024 (Business Today, 2024). This institutional commitment aligns Malaysia's corporate sector with international governance standards, reflecting maturity in gender policy implementation and aligning investor expectations with sustainability objectives.

Therefore, women empowerment is not merely a social consideration but an essential governance mechanism that reduces agency costs, enhances accountability, and reinforces stakeholder trust. By embedding gender diversity within board structures, Malaysian banks can signal responsible governance and long-term value creation as factors that investors reward through higher market capitalization. Thus, it is hypothesized that:

H1: There is a significant relationship between women empowerment and market capitalization in the Malaysian banking sector.

2.2 Risk Management Practices

Risk management is fundamental to firm stability and valuation, especially in financial institutions where exposure to credit, liquidity, and operational risks can directly affect investor confidence. Guided by Agency Theory, effective risk management mechanisms are designed to mitigate conflicts of interest between shareholders (principals) and managers (agents), ensuring that managerial actions align with the firm's risk appetite and long-term value creation (Jensen & Meckling, 1976; Beasley et al., 2020). By establishing structured oversight and accountability systems, banks can reduce moral hazard and promote prudent decision-making that supports market stability.

Empirical studies consistently show that comprehensive Enterprise Risk Management (ERM) systems improve firm performance and resilience. Rahman and Yusof (2024) found that Malaysian banks with advanced ERM implementation exhibit stronger return stability and lower earnings volatility, reflecting investor confidence in risk governance. Similarly, Alshammari and Alhabshi (2023) observed that risk management maturity is positively associated with firm value in the context of Islamic and conventional banks, suggesting that transparent and proactive risk strategies enhance market capitalization.

Transparent risk disclosures further act as assurance mechanisms that reduce information asymmetry between management and external stakeholders. Firms that publicly communicate their risk management structures, including stress testing, diversification, and Value at Risk (VaR) measures, demonstrate accountability that the market rewards with higher valuation multiples (Standard Chartered, 2024; Beasley et al., 2020). Such transparency not only fulfills regulatory expectations but also signals effective internal control systems to investors.

In Malaysia, Bank Negara Malaysia (BNM) has prioritized risk governance under initiatives such as the Risk Management in Technology (RMiT) policy and Basel III compliance framework. These initiatives aim to strengthen banks' operational resilience, technological safeguards, and capital adequacy, aligning directly with SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure). By embedding risk-aware culture and digital risk management into the regulatory ecosystem, BNM reinforces investor trust in the Malaysian banking sector.

Hence, effective risk management practices are not only governance tools but also strategic assets that promote financial sustainability and market confidence. From an Agency Theory perspective, they minimize agency costs and align managerial actions with shareholder interests. Consequently, well-governed risk management frameworks contribute positively to market capitalization by enhancing transparency, reducing perceived uncertainty, and signalling resilience to investors.

H2: There is a significant relationship between risk management practices and market capitalization in the Malaysian banking sector.

2.3 Corporate Social Responsibility (CSR)

Corporate Social Responsibility (CSR) plays a critical role in enhancing corporate legitimacy, stakeholder trust, and long-term firm value. Grounded in Stakeholder Theory (Freeman, 1984), CSR reflects a firm's recognition that its success depends on the well-being and support of multiple stakeholders including shareholders, employees, customers, regulators, and society. The theory posits that by balancing diverse stakeholder interests, firms can achieve sustainable profitability while mitigating social and reputational risks. In the context of banking, this translates into responsible lending, equitable employment practices, and community engagement initiatives that strengthen brand credibility and investor confidence.

CSR has been shown to directly influence firm valuation by building reputational capital and improving market perceptions. Firms with consistent CSR efforts often experience reduced cost of equity and improved access to capital markets, as socially responsible behavior signals lower risk and ethical management (Choi & Moon, 2023). Empirical studies such as Lee, Tan, and Abdullah (2022) demonstrate that Malaysian banks integrating CSR into their core strategy experience higher market capitalization and better investor retention, especially during periods of economic uncertainty. This relationship underscores the market's preference for companies perceived as socially and environmentally responsible.

Moreover, CSR activities create long-term intangible assets such as trust, loyalty, and legitimacy, which are essential for sustaining competitive advantage. CSR disclosure acts as a communication channel that reduces information asymmetry between management and investors. For instance, transparent sustainability reporting under recognized frameworks such as the Global Reporting Initiative (GRI) or Task Force on Climate-related Financial Disclosures (TCFD) enhances investors' ability to evaluate non-financial risks (Abdullah et al., 2022). These disclosures reinforce confidence in corporate governance, leading to higher valuation multiples and improved market performance.

CSR also aligns closely with global sustainability goals, particularly SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action). Banks engaging in green financing, renewable energy investments, and financial inclusion programs contribute to national sustainability agendas and strengthen institutional reputation. According to Rahman and Yusof (2024), Malaysian banks that adopt environmental and social governance (ESG) principles show improved financial performance and risk-adjusted returns. Such initiatives not only attract ethical investors but also align with Bank Negara Malaysia's vision of sustainable finance, further boosting market credibility.

Therefore, CSR serves as a strategic bridge between social responsibility and financial performance. Through the lens of Stakeholder Theory, CSR activities enhance firm legitimacy, reduce agency conflicts, and build enduring trust with both financial and non-financial stakeholders. In the Malaysian banking sector, where investor sentiment is increasingly influenced by ESG considerations, strong CSR performance signals ethical governance and operational transparency, ultimately driving higher market capitalization and long-term value creation.

H3: There is a significant relationship between corporate social responsibility and market capitalization in the Malaysian banking sector.

2.4 Fintech Disclosure

Fintech disclosure represents a bank's level of transparency in communicating its adoption, integration, and governance of financial technologies. It reflects how effectively a financial institution embraces innovation while maintaining trust, accountability, and stability within the financial system. Rooted in Signaling Theory (Spence, 1973), such disclosures serve as strategic communication tools, signals of a firm's innovation capability, adaptability, and commitment to digital transformation. In an environment of rapid technological change, where investors often face uncertainty about a bank's digital readiness, transparent fintech disclosure helps differentiate technologically progressive banks from laggards. This reduces information asymmetry between management and external stakeholders, thereby increasing investor confidence and perceived firm value (Amir, Quayyum, & Isa, 2025).

Fintech-related information covers a wide spectrum of initiatives, including digital banking platforms, blockchain applications, artificial intelligence (AI)-driven credit scoring, robo-advisory services, and process automation. By publicly disclosing these advancements, banks project an image of innovation and resilience in the face of digital disruption (Rahman et al., 2024). Investors interpret these disclosures as credible signals of long-term competitiveness and efficiency gains, which are subsequently priced into market capitalization. This mechanism mirrors the core logic of Signaling Theory, where firms with superior capabilities voluntarily disclose value-relevant information to distinguish themselves from competitors. Hence, fintech disclosure not only enhances transparency but also operates as a reputation-building mechanism that amplifies investor trust and market appeal.

Empirical evidence underscores this relationship between fintech transparency and firm performance. Studies have shown that banks reporting detailed fintech strategies tend to experience improved market valuation, cost efficiency, and customer retention (Othman & Yusoff, 2023; Zhang & Wang, 2022). Fintech integration improves operational agility, risk management precision, and product innovation, which collectively strengthen market positioning. Moreover, fintech disclosure is often perceived as an indicator of strong corporate governance, as it demonstrates that management is not merely adopting technology for competitive advantage but also ensuring responsible innovation aligned with regulatory standards. Such proactive communication fosters institutional trust, particularly among investors, regulators, and rating agencies.

From a sustainability standpoint, fintech disclosure supports several Sustainable Development Goals (SDGs), notably SDG 9 (Industry, Innovation, and Infrastructure) and SDG 10 (Reduced Inequalities). Through digital financial inclusion, banks help underserved populations access affordable financial services, contributing to equitable economic growth. Fintech initiatives such as mobile banking, e-wallets, and micro-lending platforms empower marginalized communities, fostering a more inclusive financial ecosystem (World Bank, 2024). Furthermore, by aligning fintech adoption with environmental and governance disclosures, banks contribute to SDG 8 (Decent Work and Economic Growth) through enhanced productivity and responsible innovation. Transparent fintech reporting thus bridges technological progress and sustainable development, elevating a bank's social legitimacy and investor attractiveness.

In Malaysia, fintech transformation is accelerating under Bank Negara Malaysia's Financial Sector Blueprint 2022–2026, which emphasizes digitalization, innovation governance, and resilience within the banking system. The blueprint encourages banks to disclose their fintech roadmaps, cybersecurity frameworks, and partnerships with digital service providers.

Empirical insights show that Malaysian banks proactively reporting their fintech strategies tend to attract greater institutional investment and enjoy enhanced market capitalization (Amir, Quayyum, & Isa, 2025; Othman & Yusoff, 2023). These disclosures are particularly valued in an emerging market context, where investors often rely on transparency signals to evaluate managerial competence and innovation orientation.

Therefore, fintech disclosure functions as a strategic signaling mechanism that conveys managerial competence, technological leadership, and governance quality. It strengthens the relational capital between banks and investors, reduces uncertainty in digital transformation outcomes, and positions the institution as a forward-looking market leader. By integrating fintech transparency into corporate reporting, banks not only advance sustainable innovation but also enhance their long-term market capitalization. In Malaysia's dynamic banking sector, fintech disclosure has thus evolved beyond a compliance tool; it is a core driver of investor confidence, competitive differentiation, and sustainable value creation.

H4: There is a significant relationship between fintech disclosure and market capitalization in the Malaysian banking sector.

3. Methodology

This study adopts a quantitative research design using secondary data extracted from the annual reports of ten major Malaysian banks over a fourteen-year period (2011–2024). The longitudinal dataset offers a robust basis for examining trends and determinants of market capitalization in relation to SDG-aligned corporate practices. Following Borg and Gall (1979) and Cohen et al. (2000), a sample exceeding 30 observations is sufficient for statistical analysis; thus, with 140 firm-year observations, this study meets the adequacy threshold for regression analysis.

The study period spans from 2011 to 2024, aligning with the global acceleration of Industrial Revolution 4.0 (IR4.0) technologies and the progressive implementation of the United Nations Sustainable Development Goals (SDGs). This timeframe captures major structural and policy shifts in Malaysia's financial system, including the adoption of digital transformation strategies in banking, the emergence of fintech innovation post-2016, and the integration of sustainability reporting frameworks following the introduction of the SDGs in 2015. Hence, this period provides an appropriate and comprehensive window to examine how SDG-driven and technology-aligned practices influence market capitalization within Malaysia's banking sector. The selection of the ten banks is based on market significance, asset size, and consistent disclosure practices, ensuring representativeness of Malaysia's financial landscape. These include both conventional and Islamic banks listed on Bursa Malaysia. By focusing on these key institutions, the research achieves analytical depth while reflecting the diversity of banking models in Malaysia. Similar methodological approaches were employed by Amir, Quayyum, and Md Isa (2025) and Hazrin, Amir, and Radzi (2022), who examined determinants of financial performance and fintech disclosure within Malaysia's top 100 listed firms.

The data collection process involves manual extraction and content analysis of annual reports, sustainability reports, and integrated reports to quantify non-financial disclosures, particularly those related to women empowerment, risk management practices, corporate social responsibility (CSR), and fintech disclosure. Financial data such as market capitalization and bank age were obtained from Thomson Reuters Eikon and verified through Bursa Malaysia's database.

To ensure consistency and objectivity, disclosure scores were computed using a binary and frequency-based index. Each SDG-aligned disclosure (e.g., gender diversity, CSR activity, fintech reporting, and risk management framework) was awarded a score of “1” if disclosed and “0” if not, following the approach of Amir et al. (2024) and Rojas Molina et al. (2023). The cumulative scores were then normalized to produce standardized disclosure indices.

The dependent variable (DV) is Market Capitalization (MARCAP), measured as the total market value of a bank’s outstanding shares in Malaysian Ringgit (RM), consistent with prior research (Isa, 2003; Amir et al., 2024). The independent variables (IVs) include Women Empowerment (WEMP), Risk Management Practices (RMPRAC), Corporate Social Responsibility (CSR), and Fintech Disclosure (FINTDISC). Bank Age (AGE) serves as the control variable, capturing organizational maturity.

Table 1: The dependent variable

Acronym	Variable Name	Measurement	Source
MARCAP	Market Capitalization	Market value of outstanding shares (RM)	Isa (2003); Amir et al. (2024)
WEMP	Women Empowerment	Proportion of female board members (%)	Jamaludin, Amir & Zaidi (2025); MSWG (2024)
RMPRAC	Risk Management Practices	Risk Management Effectiveness Index (Sum of risk disclosures / total practices)	Beasley et al. (2020); Aven (2016)
CSR	Corporate Social Responsibility	CSR Disclosure Index (based on GRI and SDG-related items)	Abdullah et al. (2022); Choi & Moon (2023); Amir et al. (2024)
FINTDISC	Fintech Disclosure	Fintech-related disclosure frequency (keywords: digital banking, AI, blockchain, ESG integration)	Amir, Quayyum & Md Isa (2025); Chowdhury et al. (2024)
AGE	Bank Age	Number of years since incorporation	Ho, Tai & Goh (2014)

The study employs simple regression analysis using STATA to examine the relationship between each independent variable and market capitalization. Descriptive statistics and diagnostic tests (normality, multicollinearity, and heteroscedasticity) are conducted to ensure model validity and robustness.

The econometric model is specified as follows:

$$\text{MARCAP} = \alpha + \beta_1\text{WEMP} + \beta_2\text{RMPRAC} + \beta_3\text{CSR} + \beta_4\text{FINTDISC} + \beta_5\text{AGE} + \epsilon$$

This model aims to evaluate how SDG-aligned corporate dimensions such as women empowerment (SDG 5), risk management (SDGs 8 and 9), CSR (SDGs 12 and 13), and fintech disclosure (SDGs 9 and 16) that influence market capitalization in Malaysian banks. By applying rigorous statistical techniques, this study aligns with the empirical traditions of Amir et al. (2025) and Azman et al. (2024), ensuring methodological soundness and policy relevance in examining how sustainability-driven governance factors affect firm valuation.

4. Findings and Analysis

The results of the empirical analysis conducted using the research methods outlined in Section 3 are presented in this chapter. This chapter discusses and evaluates the findings of the model assessing the impact of corporate governance and technological determinants specifically women empowerment, risk management practices, corporate social responsibility (CSR),

fintech disclosure, and bank age on market capitalization among Malaysian listed banks. The results include descriptive statistics, correlation analysis, and multiple regression outcomes, providing insights into how these factors collectively explain variations in market valuation within the banking sector. The findings also offer empirical evidence on how Malaysian banks align with sustainability objectives, the United Nations Sustainable Development Goals (SDGs), ESG principles, and digital transformation initiatives.

4.1 Descriptive Statistics

Table 2: Descriptive Statistics

Variable	Mean	Min	Max	Skewness	Kurtosis
MARCAP	32.654	2.36	123.56	0.94	2.65
WEMP	0.821	0	1	-1.68	3.82
RMPRAC	28.800	13.19	43.85	-0.14	2.41
CSR	21.371	0.42	75.75	1.40	4.32
FINTDISC	58.335	26.72	84.90	-0.05	2.14
Age	49.500	11	120	1.23	4.47

Note: n=140. MARCAP is Market Capitalization; WEMP is Women Empowerment; RMPRAC is Risk Management Practices; CSR is Corporate Social Responsibility; FINTDISC is Fintech Disclosure; AGE is Bank Age.

Table 2 presents the descriptive statistics for all variables used in the analysis. The results show that market capitalization (MARCAP) has a mean value of 32.65 with a standard deviation of 32.12, indicating considerable variation in firm size among Malaysian banks. The minimum market capitalization is 2.36, while the maximum reaches 123.56, suggesting that the dataset covers both small and large banking institutions, reflecting market heterogeneity in Malaysia's financial sector.

Women empowerment (WEMP) records a mean score of 0.82, implying that approximately 82% of banks have female representation on their boards. This demonstrates growing gender diversity in leadership positions, consistent with national policy goals and SDG 5 (Gender Equality). The variable's low standard deviation (0.38) suggests moderate variation in women's participation across the sampled banks.

Risk management practices (RMPRAC) have a mean of 28.80 and standard deviation of 6.79, showing consistent implementation of risk frameworks across banks, though with some variation due to differences in governance maturity. The minimum score (13.18) and maximum (43.85) reflect differing levels of enterprise risk management sophistication.

Corporate Social Responsibility (CSR) exhibits a mean of 21.37 and standard deviation of 20.52, showing high dispersion among banks' CSR activities and disclosures. Some banks are highly active in sustainability and community initiatives, while others disclose minimal CSR engagement. This supports prior findings by Abdullah et al. (2022) that CSR intensity varies widely in Malaysian banking institutions.

Fintech disclosure (FINTDISC) shows a mean of 58.33 and standard deviation of 14.42, indicating that fintech integration and reporting have become more common, though adoption levels differ between conventional and Islamic banks. The distribution is relatively symmetric (skewness = -0.045), reflecting a balanced representation of digital transformation levels.

Lastly, bank age (AGE) records a mean of 49.5 years, indicating that most sampled banks are mature institutions with long-standing market presence. The high standard deviation (25.66) shows the coexistence of both long-established and relatively new entrants in Malaysia's financial ecosystem.

4.2 Correlation Analysis

Table 3: Correlation Matrix

Variables	MARCAP	WEMP	RMPRAC	CSR	FINTDISC	Age
MARCAP	1.000					
WEMP	0.323***	1.000				
RMPRAC	-0.258***	0.024	1.000			
CSR	-0.203**	-0.683***	0.081	1.000		
FINTDIS	0.603***	0.388***	-0.022	-0.399***	1.000	
Age	0.332***	0.093	0.025	-0.061	-0.101	1.000

Note: $n=140$. MARCAP is Market Capitalization; WEMP is Women Empowerment; RMPRAC is Risk Management Practices; CSR is Corporate Social Responsibility; FINTDIS is Fintech Disclosure; AGE is Bank Age. *** $p < 0.01$, ** $p < 0.05$

Table 3 reports the Pearson correlation coefficients among the study variables. Market capitalization (MARCAP) shows a positive and significant correlation with women empowerment ($r = 0.3227$, $p < 0.01$), fintech disclosure ($r = 0.6028$, $p < 0.01$), and bank age ($r = 0.3320$, $p < 0.01$). This suggests that banks with stronger gender representation, greater technological transparency, and longer operational history tend to achieve higher market valuations.

Conversely, risk management practices ($r = -0.2577$, $p < 0.01$) and CSR ($r = -0.2029$, $p < 0.05$) exhibit negative correlations with market capitalization. While this may seem counterintuitive, it indicates that higher risk management disclosures might reflect regulatory compliance in response to greater exposure, rather than proactive governance efficiency. Similarly, CSR spending and disclosure could involve higher immediate costs, temporarily affecting profitability and market value in the short term.

The correlation between fintech disclosure and women empowerment ($r = 0.3884$, $p < 0.01$) implies that banks embracing gender diversity also tend to be more technologically progressive and transparent, consistent with Signaling Theory (Spence, 1973), where firms communicate their innovation and inclusivity to gain investor confidence. Overall, the correlations remain moderate, indicating minimal multicollinearity and supporting suitability for regression analysis.

4.3 Regression Analysis

Table 4: Regression Analysis

Variable	Expected Sign	Coefficient	t-value	p-value
WEMP	+/-	17.197	2.74	0.007***
RMPRAC	+/-	-1.316	-5.15	0.000***
CSR	+/-	0.386	3.27	0.001***
FINTDIS	+/-	1.460	10.94	0.000***
Age	+/-	0.502	7.38	0.000***
Adjusted R ²	60.20%			

Note: $n=140$. MARCAP is Market Capitalization; WEMP is Women Empowerment; RMPRAC is Risk Management Practices; CSR is Corporate Social Responsibility; FINTDIS is Fintech Disclosure; AGE is Bank Age. *** $p < 0.01$, ** $p < 0.05$

Table 4 presents the results of the multiple regression analysis examining the influence of women empowerment, risk management practices, corporate social responsibility (CSR), fintech disclosure, and bank age on market capitalization. The model is statistically significant, indicating that approximately 60.2% of the variation in market capitalization is explained by the independent variables ($\text{Adj. } R^2 = 0.602$). This demonstrates strong explanatory power with minimal overfitting, confirming that the predictors collectively provide a robust explanation of banks' market performance in Malaysia.

The analysis reveals that women empowerment has a positive and statistically significant effect on market capitalization ($p = 0.007$). This suggests that banks with greater female representation at the board level tend to experience higher investor confidence and valuation. The result supports Agency Theory (Jensen & Meckling, 1976), which posits that diverse boards enhance monitoring effectiveness, mitigate agency conflicts, and improve decision-making quality. The finding is also consistent with prior studies by Adams and Ferreira (2009) and Jamaludin et al. (2025), who found that gender diversity contributes to better governance outcomes and corporate performance. Moreover, it aligns with Sustainable Development Goal (SDG) 5, which promotes gender equality as a driver of inclusive growth and institutional integrity. Hence, empowering women in leadership not only strengthens governance structures but also enhances firm reputation and investor trust.

In contrast, risk management practices exhibit a significant negative effect on market capitalization ($p = 0.000$). This inverse relationship indicates that increased risk-related disclosures may be perceived by investors as a reactive measure to heightened financial or operational threats rather than a signal of proactive governance. The result supports Aven (2016), who argued that greater disclosure intensity often reflects risk acknowledgment rather than control effectiveness. Similarly, Linsley and Shrives (2006) observed that when firms emphasize risk reporting, it can inadvertently amplify perceptions of uncertainty among investors. Therefore, in the Malaysian banking context, extensive risk disclosures might be interpreted as cautionary signals, leading to reduced investor confidence and lower market valuation.

The results further demonstrate that corporate social responsibility (CSR) positively and significantly influences market capitalization ($p = 0.001$). This finding reinforces Stakeholder Theory (Freeman, 1984), which asserts that organizations engaging in socially responsible practices generate long-term value by fostering positive relationships with stakeholders such as customers, employees, and communities. The result is consistent with the findings of Amir et al. (2024) and Hassan and Harun (2016), who emphasized that firms with strong CSR commitments tend to enjoy reputational advantages and improved investor perception. In addition, CSR activities correspond with SDG 12 (Responsible Consumption and Production), as they embody ethical business behavior and sustainable resource utilization that enhance market confidence and firm valuation.

Moreover, fintech disclosure exhibits the strongest positive association with market capitalization ($p = 0.000$), underscoring the strategic importance of technological transparency in the financial sector. This finding supports Signaling Theory (Spence, 1973), which explains that firms communicate information to reduce information asymmetry and signal competence to the market. By disclosing fintech-related initiatives such as digital banking, blockchain adoption, and artificial intelligence integration, banks demonstrate innovation capability and adaptability, which attract investors seeking technologically progressive institutions. This result aligns with Amir, Quayyum, and Md Isa (2025), who found that fintech transparency

enhances investor trust and competitiveness in Malaysia's banking sector. It also supports SDG 9 (Industry, Innovation, and Infrastructure), highlighting the role of innovation in driving sustainable market growth and institutional resilience.

Finally, bank age shows a positive and significant relationship with market capitalization ($p = 0.000$), indicating that older banks, characterized by established reputations, extensive networks, and stable governance frameworks, tend to achieve higher market valuation. This finding is consistent with Ho, Tai, and Goh (2014), who noted that organizational maturity often enhances investor perception of stability and reliability, translating into greater market confidence. Collectively, these results suggest that SDG-aligned governance factors particularly gender diversity, CSR commitment, and fintech disclosure which serve as crucial drivers of firm value in Malaysia's evolving financial landscape.

The empirical findings reveal that SDG-aligned corporate practices significantly influence market capitalization in Malaysian banks. Fintech disclosure and women empowerment emerge as strong positive drivers, reflecting investor preference for innovation and inclusivity. CSR contributes positively, while risk management practices show a negative relationship, possibly due to signaling of higher perceived risk. These results reinforce the importance of integrating sustainability, governance, and technological transparency to enhance firm value in Malaysia's evolving financial landscape.

5. Conclusion

This study set out to examine the relationship between women empowerment measured through board gender diversity and female leadership and market capitalization in Malaysia's banking sector. Rooted in Signaling Theory, the analysis suggests that gender-inclusive governance structures send positive signals to investors about a firm's strategic orientation, ethical conduct, and long-term sustainability. The presence of women in leadership positions reflects not only inclusivity but also decision-making diversity, which enhances market perceptions of organizational stability and adaptability. Thus, women empowerment emerges as both a social and financial catalyst that strengthens corporate value in the evolving Malaysian financial landscape.

The findings further reinforce the notion that gender diversity serves as a credible indicator of strong corporate governance and innovation readiness. In the era of Industrial Revolution 4.0 (IR4.0), investors increasingly interpret gender-diverse boards as forward-looking and responsive to global sustainability trends. As a result, financial institutions that prioritize women empowerment often exhibit improved market capitalization, signaling to the market their ability to manage complexity, risk, and stakeholder expectations effectively. This relationship highlights the intersection between gender equality and financial performance in an increasingly transparent and socially conscious economy.

The period between 2011 and 2024 has been particularly significant, as the rise of IR4.0 and the global adoption of the Sustainable Development Goals (SDGs) have reshaped investor sentiment. SDG 5 emphasizes gender equality as a foundation for sustainable growth, while SDG 8 and SDG 9 encourage inclusive economic participation and innovation-driven performance. Within this context, banks that integrate women empowerment initiatives demonstrate stronger alignment with global development priorities, which in turn enhances their reputation, stakeholder trust, and market positioning. Therefore, women empowerment is not only a moral imperative but also a strategic driver of corporate competitiveness.

Despite these valuable insights, this study acknowledges several limitations. First, the analysis is limited to the Malaysian banking sector, which may not fully represent gender dynamics across other industries. Second, the use of secondary data such as annual reports and market indicators may not capture the deeper qualitative dimensions of empowerment, such as leadership style, organizational culture, or mentorship practices. Third, the study does not account for potential moderating variables such as corporate social responsibility (CSR) disclosure or digital innovation, which might influence the strength of the observed relationship.

Another limitation concerns the temporal scope and data availability. Although the 2011–2024 timeframe provides a solid foundation for observing post-IR4.0 and SDG-related developments, the relatively short window may overlook earlier institutional reforms or cultural shifts that shaped gender inclusion. Additionally, the reliance on quantitative proxies for women empowerment (e.g., percentage of female directors) may oversimplify complex social realities. Future studies could employ mixed methods to integrate quantitative analysis with interviews or case studies, offering a more holistic understanding of empowerment dynamics within financial institutions.

From a practical standpoint, the findings suggest that policymakers and regulators should continue promoting gender diversity policies within Malaysia's financial system. The Malaysian Code on Corporate Governance (MCCG) and initiatives by Bank Negara Malaysia could further emphasize measurable diversity targets and leadership development programs for women. Financial institutions, meanwhile, should view gender inclusion not as a compliance requirement but as a long-term investment in organizational resilience and innovation capacity. Embedding diversity metrics into corporate strategy and performance evaluation could strengthen both governance quality and investor confidence.

Future research should expand the scope beyond the banking industry to include other sectors such as insurance, fintech, and manufacturing, where gender representation may differ. Scholars could also explore mediating factors such as board independence, audit quality, or ESG performance that influence how women empowerment impacts market capitalization. Moreover, comparative cross-country studies across ASEAN could illuminate cultural or regulatory influences on gender governance outcomes. Such extensions would contribute to a richer and more comprehensive understanding of how women empowerment drives financial and social sustainability in emerging economies.

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Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this study.

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