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Foreign Ownership Structure, Sustainable Finance, and Firm Value Nexus: Evidence from the Egyptian Banking Sector

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Abstract: The purpose of this study is to investigate the influence of foreign ownership structure, Sustainable Finance, and firm value Nexus in Egyptian Banks. In developed markets, the relationships among these variables are inconclusive. The current study tries to fill the gap by addressing that nexus in an emerging market.

Research Methodology: The study population includes all banks in the Egyptian environment which consists of 38 banks during the period from 2018 to 2022. Based on the study criteria, the final sample consists of 28 banks presented via 140 years of observations.

The study found four significant conclusive results. First, there is a positive relationship between foreign ownership and sustainable finance and its components. Second, a statistically significant relationship exists between ownership and firm value. Third, sustainable finance has positively affected the firm value. Finally, positive significant relationships exist among sustainable finance in the presence of the moderating role of foreign ownership and firm value.

Keywords: Foreign Ownership Structure, Sustainable Finance, Firm Value, Banking sector, Moderating role, Egypt.

1 Introduction

Currently, sustainable finance (SF) has gained popularity in the financial industry. However, the financial industry's conceptualization, comprehension, and assessment of sustainable finance are debatable [1] . Due to the novelty of the topic and the inconclusive framework, continuous discussions has become a necessity for the finance field [2].

As its financial environment characterized by attracting a voluminous level of cash inflows, Asian financial authorities tried to introduce a framework for sustainable finance that includes environmental -*interalia*-climate-related issues to motivate financial institutions to adopt environmental and social risk management (ESRM) practices and incorporate standards related to the environment, society, and governance (ESG) into their investment and lending decisions [3].

Within the US Context, sustainable investing is becoming more common. For instance, total inflows into ESG funds increased from $5 billion in 2018 to over $50 billion USD in 2020 [4]. By the end of the current century, the US Fourth National Climate Evaluation stated that climate change might destroy up to 10% of the US economy [5]. Thus, sustainable decisions should be made using pertinent managerial and investing techniques [6].

Following the 2015 Paris Agreement, investors directed management's attention to ensure that climate change commitments are accomplished. Power is needed by shareholders during the annual meeting in order to exercise influence. Strong voting power held by institutional ownership directs management to uphold the Paris Agreement's obligations. In the same vein and taking CEO authority as a moderator, a stream of research investigates relationship between sustainable performance and financial performance ([7], [8]).

[9], stated that all parties involved in the financial services business are required to abide by the POJK on sustainable finance, which was released as a regulation pertaining to sustainability reporting, basically, banks. The sustainability reporting, as a proxy of success, drives investors to participate in companies with potential strong performance and value when making investment decisions.

As a result, investors use firm value as a benchmark, with a higher stock price of the company signifying a greater rate of gain to investors. A high stock price also indicates that the firm is highly valued and influences market confidence over the

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firm's current performance. Because of their large capital structure and significant economic contribution to national growth, financial institutions are subject to more regulation from both domestic and international authorities than other industries. Since the state of the economy as a whole depends on their performance, they should therefore optimise their firm value and performance [10].

The importance of current study that sustainable finance has also become a hot topic. However, sustainable finance risk is still a relatively young field with limited experience for the majority of banks Egyptians. The advantages that banks receive from having legitimacy may outweigh the costs of engaging in meaningful sustainable financing operations. The ownership of foreign trust funds may therefore signal negatively to stock market investors in the short run with regard to substantive Sustainable finance operations and investment which affects the value of banks.The remainder of this study is structured as follows: The previous literature is reviewed in Section 2, the development of hypotheses is covered in Section 3, Data and variables are explored in Section 4, Section 5 summarizes the results, and finally, Section 6 offers conclusions.

2 Theoretical Framework & Literature Review

2.1 Foreign Ownership

It has been debated that the qualitative structure describes the types of ownership whereas ownership concentration is referred to as quantitative structure. The former includes public & private ownership, family, foreign, institutional, and management ownership, as well as tradable and non-tradable ones. Differentiating between marketable and non-tradable shares from ownership circulation is crucial because ownership circulation affects performance and shapes the actions of managers and shareholders [11].

According to a stream of research, the ownership structure is a crucial governance mechanism that exercises some crucial controls over a firm's decision-making in sustainability-related matters ([12]; [13]). Foreign investors actively contribute to improvement of a company's governance more than domestic shareholders do [14]. It has been debated that emerging economies are characterized by poor market mechanisms, such as asymmetric information, relaxed legal enforcement, and inadequate corporate governance procedures, [15].

In addition to corporate governance, foreign ownership is viewed as a useful tool for overseeing and monitoring business operations. [16], stated that foreign investors are thought to possess a scrutinizing influence, which can aid businesses in avoiding an over reliance on concentrated ownership.

It has been debated that ownership 25% or more of the voting stocks in a business represents a considerable influence over its operations. This foreign controlling shareholding will enable the foreign controller to direct management to take actions that will be advantageous to her [17]. In the Spanish context, [18], find that foreign ownership encourages Spanish manufacturing companies to behave in terms of the environment. The findings demonstrate how foreign capital increases investment and spending in particular.

Investing in risky industry increases, challenges that hinder the ability of foreign institutional investors to analyze pertinent information quickly and profitably. Foreign institutional investors typically focus on areas where they may harness their experience and learning capabilities in order to address the institutional issues in foreign markets [19] .For example, foreign institutional investors are more likely to favor large enterprises in well-established industries with low volatility than firms with concentrated ownership, as the latter frequently leads to decreased disclosure quality and a lack of transparency [15] .

A vast empirical research has supported the assumption that different foreign institutional investors are a homogeneous group with comparable goals and tendencies. Because different kinds of institutional owners are probably going to have varied expectations of business actions, this assumption could potentially provide inconclusive results. Stated differently, assuming diverse institutional investors to be a homogenous group may obscure significant distinctions among different kinds of institutional investors. [20] Categorized institutional investors into three groups based on their capacity to fend off outside influence on the managerial decisions of investee enterprises and the structure of commercial relationships as follows:

First, "pressure-sensitive" institutions such as banks and insurance firms may continue to do business with the investee enterprises in addition to owning ownership interests in them. Second, "pressure resistance" institutions include foundations, mutual funds, endowments, and state pension funds. As opposed to owning shares, this type of institutional investor usually has business exchange connections with investee enterprises, which reduces the likelihood of a conflict of interest. Consequently, these institutional investors have a greater ability to sway the choices made by investee companies. Third, "pressure-indeterminate institutions" include brokerage residences, company pension plans, financial advising firms, and institutions with small ownership shares in the corporation [20].

[21] investigated the primary conflict of interests, i.e. the agency conflict Type 2. The proclivity of the majority investors to transfer the company's assets for personal gain at the expense of the rights of minority owners. According to PSAK No. 15, the main shareholder is a party that owns 20% or more of the shares or securities. Typically, the majority owners of one

company also hold the majority of shares in other related parties.

2.2 Sustainable Finance

In order to assist financial institutions in implementing the sustainable finance rule, OJK released a technical guideline in 2018. OJK has also established regulations for the issuance of green bonds in an effort to promote the expansion of sustainable finance products. The POJK 51/2017 regulation compels various types of financial institutions to design and submit environmentally friendly finance action plans, as well as publish yearly sustainability reports. This is done to inform investors and the broader public about how financial systems have incorporated and handled challenges of sustainability. The report should detail how to put financial sustainability action plans into effect, such as enhancing risk management and clearly allocating investments and loans to environmentally friendly businesses [22].

Over the past few decades, sustainable finance has changed as a component of the broader scope of corporate sustainability. Sustainable finance can contribute to the development of a broader general finance theory as it offers a foundation for project analysis, portfolio management, business evaluation, shareholder interaction, and public sector policy analysis that takes into account the social and ecological aspects of finance [23] .

The markets will also need to act when a broader finance theory evaluates sustainability and penalizes for pollution. [24] Stated that the conventional finance paradigm is insufficient and inconsistent when compared to the rapid developments in economics, particularly those pertaining to the growing threat of social and environmental concerns.

Ecological finance is becoming more vital of how to include environmental, social, and governance ("ESG") considerations into financial choices. Sustainability is now a CEO-level concern that is essential to the company's core business, not just an incidental concern reserved for corporate social responsibility departments [25] .

Addressing the environmental, social, and governance (ESG) effects of financial services is a common components of sustainable finance. It has been argued that, regardless the form of the organization, finance should be used sustainably to create economic activity without reducing the potential for future economic activity and productivity. In this sense, Sustainable finance and corporate social responsibility (CSR) share certain commonalities [26].

They offer a single definition for Sustainable finance and corporate social responsibility. The provision of financial capital and risk management for goods and services in ways that support economic success, the environment, and community well-being is known as corporate social responsibility, or sustainable finance.

The following table compiles the typology of sustainable financing.

Table (1): Typology of Sustainable Finance

Type of Sustainable Finance	**Definition**
Green finance (includes climate finance)	Funds allocated to initiatives and projects for sustainable growth, eco-friendly goods, as well as measures that promote the development of an economy that is more sustainable.
Green finance (used interchangeably with green investment)	The operating costs of green investments that fall outside the purview of the term "green investment" are included. Costs like project planning and land acquisition would undoubtedly be included; these are not only significant expenses, but they might also provide unique financial challenges.
Green finance (a key element sustainable investment and banking)	Included are all loan and investment programmes that increase environmental sustainability and take into account the impact on the environment. In order to ensure environmental sustainability, green investments and banking are essential parts of green finance. Investment and lending choices are made using environment examination and risk assessment.
Green finance	Through the processes of loan decision-making, ex-post monitoring, and risk management methods, financial services and products are offered to encourage sustainable investments and low-carbon technology projects, industries, and businesses. Described as any kind of loan or investment that aims to increase

	environmental sustainability and takes into account the influence on the environment. Internalizing environmental externalities and lowering risk perceptions are the two main duties of green finance, which aim to promote environmentally friendly investment.
Green finance (relation between finance and business)	The advantages of the natural environment are emphasized more, and environmental protection is given more consideration. It's a phenomenon that combines business and economics with eco-friendly conduct. It serves as a platform for a wide variety of participants, such as manufacturers, investors, finance lenders, and individual and business clients.
Environmental finance	Almost every aspect of the market is impacted by environmental finance, including public funding, corporate models, legislation, and infrastructure development. It consists of power networks, urban infrastructure, and systems for waste, water, and energy. Environmental finance includes, for example, carbon and green finance.
Development finance	Green finance is more environmentally focused than development finance, which is related to public funding and deals with the financial aspects of economic development. The term "development financing" describes loans or grants given by governments, formal government assistance institutions, and intergovernmental organisations (IGOs) with the main objective of advancing the expansion and prosperity of developing nations' economies (broadly defined).
Responsible finance	Responsible finance and development finance are two of the foundations of sustainable development. From this angle, ethical investing, corporate social responsibility (CSR) initiatives, and the establishment of strict regulations on financial providers are all made possible by responsible finance. Two elements comprise responsible finance: socially responsible investment and responsible investment. Investors can provide more funds or funds at a reduced cost to businesses that strive to operate in an ecologically conscious or responsible manner by investing in firms that are not harmful to the environment or others, have improved systems in place to achieve environmental and social objectives, or exhibit particular type of ethical behaviour.
Microfinance	Any activity that involves giving low-income individuals who are just above the federal poverty line and poor individuals who are below it financial products and services, such as credit, savings accounts, and insurance, with the intention of generating social value.

Adapted from: ([27]; [3]; [26])

Regulatory frameworks for sustainable finance have been established, financial institutions are being required to submit reports and action plans in this area, risk management practices are being improved to include social and environmental factors, and a borrowing structure for priority industries have all been proposed as ways to carry out the sustainable finance plan [28] ; [29] . The first phase of the strategy, which ran from 2014 to 2019, aimed to ensure that financial institutions were ready to integrate sustainable finance into their operations and to create the regulatory structures necessary to oversee it. During the first phase, OJK ran programs for financial institutions to increase their capabilities. Subsequently, the OJK regulation on sustainable finance (POJK 51/2017) was released, containing directives aimed at boosting green lending and

fortifying the resilience and competitiveness of financial institutions [22] .

2.3. Firm value

The primary purpose of establishing a corporation is to maximise the wealth of its shareholders [30] . Firm value can be used as a proxy for the shareholders'' wealth ([31]; [32]). Firm value is, by turn, proxied by the market price of the company as it can provide investors gains, partially, if the share price rises [33] .

According to [34], a rise in a company's share price enhances the welfare of its shareholders because it can be seen as an indicator of the market worth of the business, which can benefit the shareholder. According to this viewpoint, the company's main objective is to maximise shareholder prosperity, which makes maximising corporate value essential.

Raising Capital is a significant indicator of corporate success and by turn increasing corporate value, particularly in the banking sector. Banking regulators use the Capital Adequacy Ratio (CAR) to maintain an acceptable level and monitor the stability of the financial industry against possible losses in bank management [8].

Previous research examined the factors that influence business value using various hypotheses. The principles of the agency theory and resource dependency theory were used to analyse the effects of governance factors on firm value, namely board size, independence of the board, diversity on the board, ownership concentration, and CEO ownership [10].

[35] state that variations in firm size, leverage, and ROA cause differences in firm value amongst enterprises. Based on stakeholder theory, it has been postulated that variations in a firm's ROA will be connected with corresponding swings in its value as well as in the quantity and kind of related party transactions [36] .

According to agency theory, there is a unique relationship that is defined by a complicated dynamic between managers acting as agents and shareholders acting as principals. Nonetheless, there might be significant conflicts between managers and shareholders who take advantage of opportunities to further their own interests, which would raise the firms' agency costs [37] . According to the agency theory, a larger board also has more influence on senior management and allows directors to carefully monitor management responsibilities and performance, which raises the company's value. Consequently, a positive correlation between board size and business valuation. In a similar vein, [38] claimed that in the banking industry, board size has a positive and significant relationship with business value.

Board members often exercise external links and become involved in groups that could contribute to the firm's development process and long-term potentialities, according to resource dependence theory. As a result, the deployment of resources to maximise output resulting from the integration of corporate governance structures would ultimately lead to an appreciation of company value ([39]; [37]).

The agency and resource dependency models, according to [37], demonstrate the positive impact independent directors have on company value. There is disagreement on whether having more independent board members indicates to shareholders and investors that businesses are being effectively managed, which raises the firm's worth [40] .

3 Development of Hypotheses

3.1 Foreign Ownership & Sustainable Finance

[11] Feng et al., (2018) state that while foreign-owned businesses are positively driven by CSR, the relationship between CSR and different ownership structures, such as government-owned, family-owned, supervisory, and centralised ownership, i.e., other than foreign ownership, has a negative impact on CSR.

Prior research has identified the following financial functions: 1) Gather information about potential investments and deploy funds ahead of time; 2) Monitor investments and put corporate governance in place after funding; 3) Make trading, diversification, and risk management easier; 4) Encourage and pool savings; and 5) Facilitate the exchange of commodities and services [41] . The first three functions, according to [42] , are very crucial for sustainable financing. The current study support that the primary goal of the financial system is to give cash to the most productive use, and finance can assist in making strategic decisions connected to the achievement of sustainable development goals.

It has been debated that the larger the foreign ownership, the greater the company's supervisory job on opportunistic behavior, including tunneling one. In the Indonesian context, the average percentage of foreign ownership was 27.39% via period from 2014 to 2018. A high proportion of foreign ownership can benefit corporate governance. Furthermore, it will reduce the majority stockholders' opportunistic behavior [43] .

[11] proposed the social contribution value per share (SCV) index as an independent variable to explain CSR in the context of China. The Shanghai Stock Exchange (SSE) published this official index in 2008, and all Chinese listed companies have access to it. It improves access to CSR data for all parties involved and helps them comprehend the actual value that the business creates. The terms concentration and circulation were used to characterise the ownership structure. Complete

circulation is usually not realised in China's undeveloped stock markets, and listed companies usually have a very concentrated structure of ownership. The most representative measures are circulation and ownership concentration.

The presumptive beneficial association between voluntary reporting on sustainability and stock market performance may be wrecked for two reasons by foreign trust funds and corporations' sustainable development practises and openness, given their likely interests in expanding emerging economies:

First, emerging economy companies have to modify their business operational practises to adhere to global sustainability standards since foreign institutions actively participate in the managerial decisions made by investee enterprises. Second, in order to influence their investee enterprises on social and environmental issues, some institutional investors use the Principles for Responsible Investment (PRI) of the United Nations Global Compact as a guide ([42]; [11]; [41]; [43]). Based on the above mention discussion, the current study formulates the first hypothesis as follow:

H1: statistically significant relationship exists between the foreign ownership and sustainable finance.

3.2 Foreign Ownership & Firm Value

According to [36] , managerial ownership has a strong correlation with firm value and supports the function of leadership stock ownership in balancing managers' and shareholders' interests by influencing decisions that maximise firm value by maximising shareholders' wealth. [44] Looked into how dividend policy affected firm value in the banking industry of an emerging nation. The study examined the effects of dividend policy reduction and the moderating role of IFRS adoption.

There is a claim that big investors have more power to control managers' behaviour and oversee their assets than do small owners. Thus, ownership concentration might lessen agency disputes between shareholders and managers. However, ownership concentration can result in issues with principal/principal agency theory when large shareholders profit privately from control at the expense of smaller ones [45] .

According to [46] , there is a positive correlation between ownership concentration and firm value. The fact that there is a positive association between concentrated ownership and managers who align with shareholders' purpose of maximising the value of their shares shows that there is a larger potential for control by significant shareholders. [47] stated that Vietnam has moved from a centralised to a market economy. The new economic framework promotes competition, private sector development, and international integration. Consistent to existing legislation, the foreign ownership percentage for commercial banks in Vietnam cannot exceed 30% of charter capital. This restriction makes it difficult for financial institutions to raise cash from overseas investors in order to expand lending operations. According to [48] the average value of foreign ownership in Vietnamese commercial financial institutions is 10%, which is substantially lower than in other nations. For example, the average foreign ownership of commercial banks in China is 20.41%. Furthermore, ownership restrictions limit foreign institutions' participation in company decisions.

Foreign investors play an important role in improving performance. It is assumed that foreign investors typically invest in rewarding companies because they conduct extensive due diligence before to acquisition. As a result, when foreign ownership increases, company value is likely to rise ([49]; [50]).

It has been argued that foreign investors may be able to scrutinize enterprises more effectively than local investors do as they are outside the local social networks that create organisational standards' behaviour, and they, assumed, are more likely to push for well-managed and transparent operations. Furthermore, foreign investors possess the knowledge and experience necessary to build higher global standards and practises ([49]; [50]; [44];[51])

In this sense, the current study formulates the second hypothesis as follow:

H2: statistically significant relationship exists between the foreign ownership and firm value.

3.3 Sustainable Finance & Firm Value

Sustainable finance is a financial tool that incorporates environmental, social, and governance aspects into investment decisions [52] . This strategy emphasises long-term goals and directs funds and investment towards projects and activities that promote sustainability.

For enterprises that are normally featured in sustainability reports, sustainable finance is an essential component of ESG activities. According to the study of [53] , sustainability reporting provides a modern perspective on building future value related to corporate strategies. In the same vein, [54] observed a high association between ESG performance and company value in the Asian context. This meant that companies with superior ESG tended to have higher corporate value.

Sustainability raises questions about philanthropy, a company's social duty, and the main financial activities of management, goods, and processes. Banks and other financial intermediaries are realising the benefits of sustainable policies for their operations: these policies can lower expenses, boost revenue, lower risks, foster the development of human capital, enhance

capital availability, and boost firm value [41] .

In response to funding challenges in the financial sector and for sustainable development, sustainable finance creates concepts and tailored solutions ([24]; [55]). According to [23], using money to accomplish social goals can divert the economy off its current course and lead to a more sustainable society. As such, money should go hand in hand with successful sustainable development .

Based on the aforementioned discussion, the current study concludes that finance can play a key role in allocating investment for sustainable firms, projects, and accelerating the transition to a circular economy. Sustainable finance investigates the interactions of sources of finance with economic, social, and environmental challenges. Finance can assist in making strategic judgements concerning long-term goals. Investors can influence the companies, in which they invest, directing them towards more sustainable business practises. Finance evaluates price risk and can assist in resolving ambiguities associated with environmental issues. Finance and sustainability are concerned with the future.

Traditional financial systems rely on linear production and consumption cycles, as well as fixed government budgets for specific sectors that strive to create financial value. While the goal of sustainable finance is to create long-term benefit ([23]; [52]; [55]; [41]).

In this sense, the current study formulates the third hypothesis as follow:

H3: statistically significant relationship exists between the sustainable finance and firm value.

3.4 *Sustainable Finance & the Moderating role of Foreign Ownership and Firm Value*

Even though institutional ownership can enhance firm performance by scrutinising management decisions, it can also have negative effects due to incentive myopia, especially when it comes to ESG business performance [56] (Jia et al., 2022). Diverse conclusions have been drawn from earlier studies that used agency theory to investigate the relationship between corporate ownership and ESG or performance that is sustainable. Investigating whether institutional ownership improves finance and other sustainable components, such as capital structure, is essential, especially for the banking sector [56] .

According to [8], institutional ownership has a high level of information processing ability and efficiently controls corporate governance, influencing decision-making through members' resources and expertise. [57] Look on the connection between market competitiveness and foreign ownership, as proxied by bank market power, and how it affects credit growth in 32 Vietnamese commercial banks from 2010 to 2020. The results of the study were conclusive and they support sustainable credit expansion.

[58] Investigate the Investment Opportunity Set's role in moderating the impact of sustainability reporting and foreign ownership on company value. The findings revealed that the Investment Opportunity Set does not moderate the influence of sustainability reporting on firm value. However, Investment Opportunity Set reduces the impact of foreign ownership on business value.

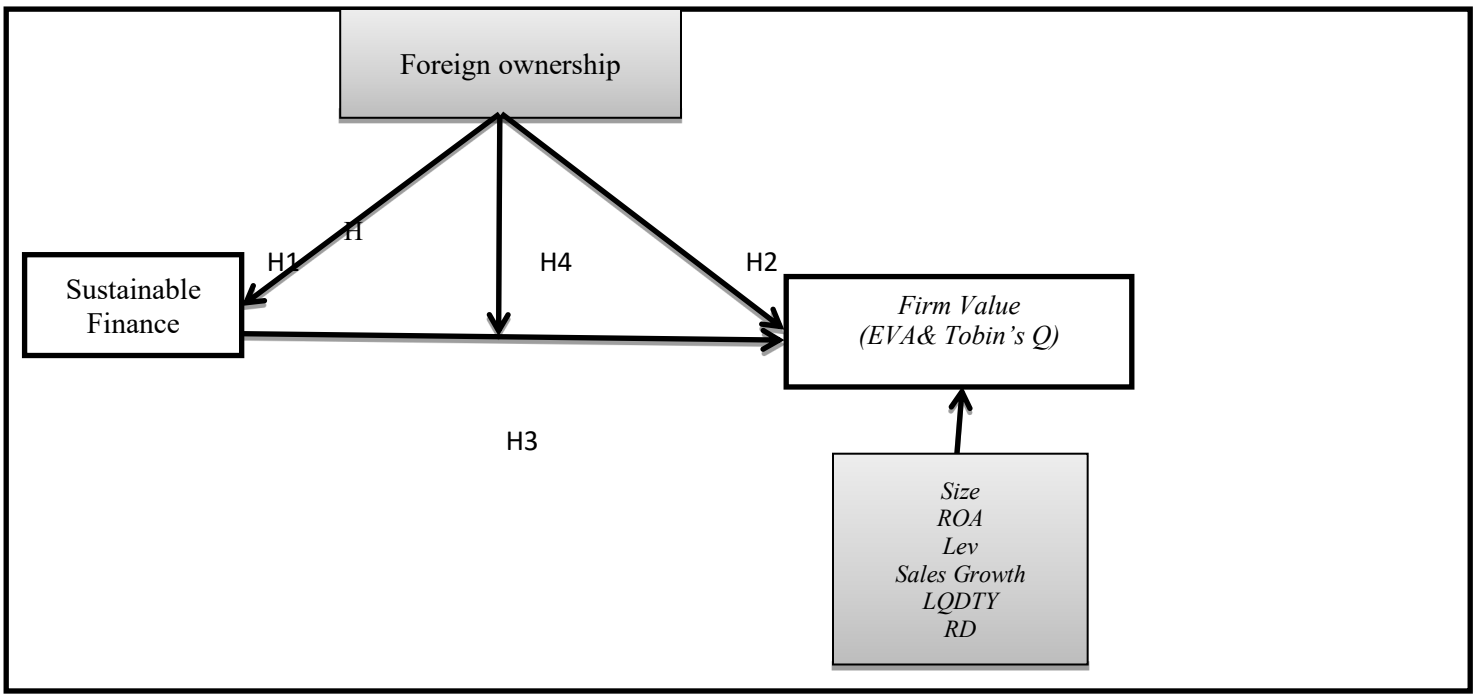
A vast stream of prior research indicates that foreign institutional investors are active and effective in enhancing the governance of emerging market enterprises ([14]; [59]). Improvements in investee organisations' corporate governance can boost investor confidence and simplify capital accessibility. Foreign ownership, on the other hand, may press emerging economy enterprises to adopt foreign sustainability practises, which may jeopardise profits produced by investee firms [20]

According to [41], financing must be handled responsibly in order to generate economic activity that doesn't reduce potential for future economic activity and industrial capacity. The report notes that there are challenges because the idea of the financial sector and sustainability is still in its infancy and lacks examples, guidelines, or a clear approach. According to [60] , the reason traditional finance is inadequate for achieving sustainable development goals is that it does not consider the issues of governance, the environment, and society from a three-dimensional perspective.

Investors will be attracted to invest in a company with a high value ([61]. [62] argue that a company's value is determined by its success over a single period. The improvement of the company's performance attracts opportunities of the sources of finance to the firm. In other words, firm value influences investors' perceptions of a business's achievement rate, which appears in the stock price. Firm value is also a component of achieving reasonably consistent firm success ([61]; [62]; [36]; [10])

Considering the aforementioned discussion, the current study formulates the fourth hypothesis as follow:

H4: statistically significant relationships exist among the sustainable finance in the presence of moderating role of foreign ownership and firm value.



4 Data and variables

4.1 Data

The study population includes all Egyptian banks whether a bank is listed or not, i.e. 38 banks . The sample of the current study covers the time period from 2018 to 2022. The study started one year after enacting the continuous legislations about the sustainable finance. The study sample is a non-probability as a result of implementing the following criteria. The opted bank should have a significant proportion of sustainable finance; the bank has a foreign ownership structure; the bank should present and disclose about the green finance in its activities; finally, the bank implements the Egyptian sustainability index in the Egyptian environment.

Based on the above criteria, the final sample excluded 10 banks which missed one or more of the required criteria and 140 years observations from 28 banks are used in testing the study hypotheses.

4.2 Variables

Independent Variable, i.e. foreign ownership is the percentage of outstanding shares of the company that are owned by foreign institutional investors. . missing data is set to zero ([63] Ferreira & Matos, 2008; [64] Aggarwal et al., 2011).

Mediator variable, sustainable finance is any kind of financial service that takes environmental, social, and governance (ESG) factors into account when making business or investment decisions for the long-term benefit of both its clients and society as a whole. As a result, the current study measures sustainable finance by looking at the percentage of funds allocated to financial services that are related to the environment, society, and governance [8].

Dependent Variable, i.e. firm Value, [65] stated that firm value can be measured by two ways; the first proxy is Tobin's Q index which is calculated by market capitalization plus long-term debt plus short-term debt divided by the total assets. The second measure is via the economic value added which is calculated by the cost of capital subtracted from net profit after tax. The current study controlled for variables that assumed to influence the relation among variables of different models used to test the study hypotheses [66] . Consequently, current study follows [65] and control some banks characteristics such as: size, leverage, return on assets, sales growth, liquidity, and research and development expenditures. The following table shows the measurement of the study variables.

Table (2): List of Variables

Type	Variables	Code	Definition	Data Source	Citation
Independent variable	Foreign Ownership	For. Own.	the percentage of the firm's shares outstanding held by foreign institutional investors	Governance Reports	[63] [64]
Mediator Variable	Environmental Finance	Env. Finan.	the percentage of funds allocated for the environmental services	Financial Statements	[8]
	Social Finance	Soc. Finan.	the percentage of funds allocated for the Social services		
	Governance Finance	Gov. Finan.	the percentage of funds allocated for the Governance services		
	Total Sustainable Finance	Sus. Finan.	the percentage of funds allocated for the total sustainable services		
Dependent Variable	Firm Value	Tobin's Q	market capitalization plus long-term debt plus short-term debt divided by the total assets	Stock Market & Financial Statements	[65]
		EVA	Natural log of the cost of capital subtracted from net profit after tax		
Control Variables	Firm Size	Size	Natural log of total assets	Financial Statements	[65]
	Return on Assets	ROA	Net income divided by total asset		
	Leverage	Lev	Total debt divided by total equity		
	Sales Growth	Growth	Change in revenue scaled by Revenue for the previous year		
	Liquidity Ratio	LQDTY	Quick asset divided by current liability		
	Research & Development Expenditure	RD	Total research expenditure divided by sales		

4.3 Model Specification

4.3.1: Regression specification for testing H1:

To investigate the effect of foreign ownership on the sustainable finance, current study estimate the following regression models as follow:

$$\text{Env. Finan.} = \alpha + \beta1\ \text{For. Own.} + \beta2\ \text{Size} + \beta3\ \text{Lev} + \beta4\ \text{ROA} + \beta5\ \text{Growth} + \beta6\ \text{LQDTY} + \beta7\ \text{RD} + \varepsilon. \quad (1\text{-}1)$$

$$\text{Soc. Finan.} = \alpha + \beta1\ \text{For. Own.} + \beta2\ \text{Size} + \beta3\ \text{Lev} + \beta4\ \text{ROA} + \beta5\ \text{Growth} + \beta6\ \text{LQDTY} + \beta7\ \text{RD} + \varepsilon. \quad (1\text{-}2)$$

$$\text{Gov. Finan.} = \alpha + \beta1\ \text{For. Own.} + \beta2\ \text{Size} + \beta3\ \text{Lev} + \beta4\ \text{ROA} + \beta5\ \text{Growth} + \beta6\ \text{LQDTY} + \beta7\ \text{RD} + \varepsilon. \quad (1\text{-}3)$$

$$\text{Sus. Finan.} = \alpha + \beta1\ \text{For. Own.} + \beta2\ \text{Size} + \beta3\ \text{Lev} + \beta4\ \text{ROA} + \beta5\ \text{Growth} + \beta6\ \text{LQDTY} + \beta7\ \text{RD} + \varepsilon. \quad (1\text{-}4)$$

4.3.2: Regression specification for testing H2:

To investigate the effect of foreign ownership on the firm Value, current study can estimate the following regression models as follow:

$$\text{EVA} = \alpha + \beta1\ \text{For. Own.} + \beta2\ \text{Size} + \beta3\ \text{Lev} + \beta4\ \text{ROA} + \beta5\ \text{Growth} + \beta6\ \text{LQDTY} + \beta7\ \text{RD} + \varepsilon. \quad (2\text{-}1)$$

$$\text{Tobin's Q} = \alpha + \beta1\ \text{For. Own.} + \beta2\ \text{Size} + \beta3\ \text{Lev} + \beta4\ \text{ROA} + \beta5\ \text{Growth} + \beta6\ \text{LQDTY} + \beta7\ \text{RD} + \varepsilon. \quad (2\text{-}2)$$

4.3.3: Regression specification for testing H3:

To investigate the effect of sustainable finance on the firm Value, current study can estimate the following regression models as follow:

EVA = α + β1 Env. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-1)

EVA = α + β1 Soc. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-2)

EVA = α + β1 Gov. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-3)

EVA = α + β1 Sus. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-4)

EVA = α + β1 Env. Finan. + β1 Soc. Finan. + β1 Gov. Finan. + β1 Sus. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-5)

Tobin's Q = α + β1 Env. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-6)

Tobin's Q = α + β1 Soc. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-7)

Tobin's Q = α + β1 Gov. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-8)

Tobin's Q = α + β1 Sus. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-9)

Tobin's Q = α + β1 Env. Finan. + β1 Soc. Finan. + β1 Gov. Finan. + β1 Sus. Finan. + β2 Size + β3 Lev + β4 ROA + β5 Growth + β6 LQDTY+ β7 RD + ε. (3-10)

5 Analysis results

5.1 Descriptive Statistics:

The current study investigated the nexus among foreign ownership structure, sustainable finance and firm value in the Egyptian banking sector. In this sense, the empirical analysis introduced descriptive statistics of these variables and the decompositions of sustainable finance and the control variables used in the study as shown in Table (3) as follow:

Table (3): Descriptive Statistics

	N	Mean	Std. Dev.	Min.	Max.
For. Own.	140	0.230	0.052	0.115	0.378
Env. Finan.	140	0.195	0.043	0.052	0.223
Soc. Finan.	140	0.112	0.047	0.069	0.157
Gov. Finan.	140	0.079	0.036	0.044	0.136
Sus. Finan.	140	0.189	0.041	0.113	0.259
EVA	140	3.256	0.526	1.415	7.824
Tobin's Q	140	2.675	0.557	0.537	6.371
Size	140	7.412	0.671	1.961	9.871
ROA	140	0.337	0.057	0.059	0.448
Lev	140	0.664	0.087	0.419	0.785

Sales Growth	140	0.239	0.066	0.047	0.359
LQDTY	140	1.115	0.638	0.355	3.911
RD	140	0.067	0.027	0.012	0.093

[a] refers to Table (2) for variables' definitions.

According to the table (3), it is obvious that sustainable finance ranged between 7.9% to 19.5%, where the governance finance is the lowest value which is equal 7.9% and the highest value is the environmental finance which is related to the green services. In the other side, the foreign ownership mean equal to 23% from the ownership structure of the banks and this is a good indicator for the foreign ownership to total ownership structure. Moreover, the both measures of firm value is mediating the minimum and maximum values where the economic value added equal to 3.256 ranged between 1.415 and 7.824, and the Tobin's Q equal to 2.675 ranged between 0.537 and 6.371.

Table (4): Correlation Matrix

	For. Own.	Env. Finan.	Soc. Finan.	Gov. Finan.	Sus. Finan.	EVA	Tobin's Q	Size	ROA	Lev	Sales Growth	LQDTY	RD
For. Own.	1												
Env. Finan.	0.132	1											
Soc. Finan.	0.316	0.203	1										
Gov. Finan.	0.320	0.141	0.179	1									
Sus. Finan.	0.256	0.299	0.256	0.289	1								
EVA	0.258	0.109	0.208	0.184	0.294	1							
Tobin's Q	0.139	0.191	0.168	0.102	0.281	0.126	1						
Size	0.091	0.038	0.048	0.021	0.106	0.024	0.057	1					
ROA	0.050	0.027	0.097	0.083	0.070	0.038	0.030	0.031	1				
Lev	0.093	0.060	0.047	0.022	0.099	0.031	0.022	0.068	0.089	1			
Sales Growth	0.039	0.018	0.024	0.087	0.027	0.047	0.012	0.014	0.067	0.023	1		
LQDTY	0.075	0.087	0.020	0.096	0.062	0.081	0.023	0.033	0.008	0.007	0.046	1	
RD	0.037	0.070	0.030	0.078	0.025	0.010	0.075	0.023	0.054	0.047	0.030	0.030	1

[b] refers to Table (2) for variables' definitions

*Correlation is significant at the 0.05 level

Based on the presented results on table (4), which initially refer to the validity of the statistical hypotheses; It can be clearly seen that there is no significant relation among explanatory variables that could lead to multicollinearity. proposed that any correlation coefficient greater than (0.7) reveals the existence of problem multicollinearity. Furthermore, there is a positive correlation between foreign ownership and the environmental, social, and governance aspects of sustainable finance. There is a claim that stronger governance is encouraged by foreign investors in developing nations. In addition to encouraging transparency, the presence of foreign investors puts pressure on the government to provide protection for minority shareholders. Reducing information asymmetry is necessary for transparency, which inhibits opportunistic behaviour. In a similar vein, increased government protection for minority owners' forces businesses to engage in ways that do not harm these shareholders [43].

The impact of board involvement and ownership structure on the value of a business is not new, except from the two methodologies that show a positive association between foreign ownership and the value of the company. There is a growing trend in business and legal literature that ties the board's composition and structure of ownership to a firm's worth. The majority of these studies have concentrated in developed countries [51]. More emphasis has recently been dedicated to the impact of board composition, ownership structure, and business value in the less developed markets [67] .

Lastly, there is a positive correlation using two approaches between the company value and the three sustainable finance dimensions environmental, social, and governance. According to [68], a company's market success as determined by Tobin Q was positively impacted by sustainable performance. They found that sustainable performance and its subcomponents, i.e. Social, environmental, and governance aspects, improved the value of the company via positive effect on firm value.

5.2 Regression analysis results:

To test the study hypotheses, regression analysis had been employed. The regression was based on a data set covering 140-year observations of 28 Egyptian banks over the period 2018–2022. The first hypothesis tests the relationship between the foreign ownership and the sustainable finance Table (5) presents the results of testing the hypothesis 1 presented in equations (1-1), (1-2), (1-3), and (1-4), respectively. The results show that R^2 for the models equal 33.10%, 32.80%, 30.50% and 34.80% respectively, which means that the independent variables of foreign ownership & the other control variables explain 33.10%, 32.80%, 30.50% and 34.80% from the change of sustainable finance. In addition, there is no multicollinearity problems in the first regression model where (VIF (MAX) = 1.211, 1.513, 1.361 and 1.524) respectively. i.e. below 10. It means that the models do not contain the well-known problem of multicollinearity [69] .

From Panel (A), it is obvious that the foreign ownership positively affects the environmental finance as one dimension of sustainable finance where, the For. Own. As an independent variable is significant and positive ($\beta = 0.284$; Sig. < 0.05), this result mean that increasing the level of foreign ownership is improving the level of environmental finance as one dimension of sustainable finance. In addition, the control variables related to size and growth are significant and positive, so increasing size and growth lead to increasing the level of environmental finance. Panel (B) results revealed that the foreign ownership has a positive impact on the social finance as a component of sustainable finance where, as ($\beta = 0.355$; Sig. < 0.05).

The results of Panel (C) showed that the foreign ownership has a significant positive relation with the governance finance, ($\beta = 0.316$; Sig. < 0.05). Finally, Panel (D) ensured the positive significant effect of foreign ownership on the total sustainable finance where, ($\beta = 0.278$; Sig. < 0.05). all panels that test the first hypothesis illustrate significant influence of size of the bank on the sustainable finance and its components

Based on the results of panels (A, B, C, D), the current study accepts the first hypothesis on the alternative form as follow: ***statistically significant relationship exists between the foreign ownership and sustainable finance.***

Table (5): The effect of foreign ownership on the sustainable finance

	Panel A : Env. Finan.			Panel B: Soc. Finan.			Panel C: Gov. Finan.			Panel D: Sus. Finan.		
	Coef.	T	Sig.	Coef.	T	Sig.	Coef.	T	Sig.	Coef.	T	Sig.
Cons.	0.027	0.034	0.356	0.040	0.051	0.283	0.041	0.028	0.214	0.030	0.044	0.156
For. Own.	0.284	3.452	0.017	0.355	2.814	0.014	0.316	2.812	0.028	0.278	2.345	0.020
Size	0.213	2.791	0.015	0.224	3.276	0.021	0.212	3.210	0.043	0.213	2.883	0.029
ROA	0.014	0.020	0.399	0.010	0.049	0.144	0.054	0.011	0.332	0.015	0.052	0.457
Lev	0.049	0.029	0.295	0.023	0.024	0.495	0.050	0.022	0.258	0.049	0.048	0.291
Growth	0.352	3.125	0.025	0.323	2.303	0.010	0.216	2.709	0.031	0.290	2.605	0.040
LQDTY	0.022	0.025	0.367	0.034	0.049	0.296	0.037	0.010	0.267	0.053	0.022	0.192
RD	0.017	0.047	0.325	0.013	0.029	0.389	0.040	0.025	0.525	0.039	0.044	0.522
N	140			140			140			140		
F-value	215.411			236.157			218.412			241.457		

VIF (MAX)	1.211	1.513	1.361	1.524
R^2	33.10%	32.80%	30.50%	34.80%

[c] refers to Table (2) for variables' definitions.
$P < 0.05$
The second hypothesis tested the relationship between the foreign ownership and the firm value based on the model (2), i.e. equation (2-1) and (2-2). Table (6) presents the results that show that R^2 for the models equal 33.70% and 32.60% respectively, which means that the independent variables of foreign ownership & the other control variables explain 33.70% and 32.60% respectively of the change of firm value either measured by economic value added (EVA) and Tobin's Q. In addition, there is no multicollinearity problems in the second regression model where (VIF (MAX) = 1.622 and 1.758) respectively.

Table (6): The effect of foreign ownership on the firm value

	Panel A : EVA			Panel B : Tobin's Q		
	Coef.	T	Sig.	Coef.	T	Sig.
Cons.	0.022	0.040	0.502	0.035	0.031	0.299
For. Own.	0.317	2.796	0.013	0.229	2.815	0.012
Size	0.220	3.224	0.031	0.285	2.782	0.019
ROA	0.051	0.046	0.134	0.050	0.025	0.442
Lev	0.039	0.047	0.472	0.015	0.028	0.240
Sales Growth	0.287	3.216	0.025	0.278	2.319	0.022
LQDTY	0.040	0.029	0.239	0.031	0.041	0.459
RD	0.046	0.028	0.370	0.031	0.040	0.219
N		140			140	
F-value		221.781			247.815	
VIF (MAX)		1.622			1.758	
R^2		33.70%			32.60%	

[d] refers to Table (2) for variables' definitions.
$P < 0.05$
Panel (A) of table (6), refers to significant positive effect of foreign ownership on the firm value measured Economic value added (EVA) by where ($\beta = 0.317$; Sig. < 0.05), In this sense, the current study accepts the first sub hypothesis in the alternative form as follow: ***Statistically significant relationship exists between the foreign ownership and firm value measured by Economic value added (EVA).*** Results of Panel (B) of table (6) reveals that the foreign ownership has significant direct impact on the firm value measured by Tobin's Q where, ($\beta = 0.229$; Sig. < 0.05). Therefore, the null hypothesis is rejected the second sub hypothesis is accepted in the alternative form as follow: ***statistically significant relationship exists between the foreign ownership and firm value measured by Tobin's Q.*** In addition, the control variables related to size and growth are significant and positive, so increasing size and growth lead to increase of the level of frim value measured by Economic value added (EVA) and ***Tobin's Q***. Based on the results of panels (A & B), current study can accept the second hypothesis of this study on the alternative form as follow: ***H2, statistically significant relationship exists between the foreign ownership and firm value.***
The third hypothesis tests the relationship between the sustainable finance and the firm value based on the model (3) and results are shown in table (7) and (8) respectively. The results in table (7) illustrated that R^2 for the models, equations (3-1) to (3-5) are 31.50%, 33.70%, 32.40%, 31.90% and 35.60% respectively, which means that the independent variables of sustainable finance & the other control variables can explain 31.50%, 33.70%, 32.40%, 31.90% and 35.60% of the change

of firm value measured by economic value added (EVA). Moreover, Table (8), presented that explanatory variables in, equations (3-6) to (3-10) explain 37.10%, 39.80%, 38.20%, 37.60% and 42.00% of the change of firm value measured by Tobin's Q. In addition, there is no multicollinearity problems in the third regression model where (VIF (MAX) = 1.611, 1.732, 1.825. 1.321 and 1.794) respectively for all Models used to test the third hypothesis. The results of table (7), indicate that sustainable finance and its components, i.e. environmental, social, and governance, have significant positive impacts on the firm value measured by Economic value added (EVA) with coefficients, equations (3-1) to (3-4) (0.042, 0.037, 0.015, 0.015 < 0.05) and in equation (3-5), (0.040, 0.023, 0.017, 0.036 < 0.05) respectively. Whereas, the results of table (8), indicate that sustainable finance and its components, i.e. environmental, social, and governance, have significant positive impacts on the firm value measured by Tobin's Q with coefficients, equations (3-6) to (3-9) (0.035, 0.016, 0.023, 0.030 < 0.05) and in equation (3-10), (0.045, 0.042, 0.035, 0.035 < 0.05) respectively. All control variables lost their significance to influence the firm value measured by both Economic value added (EVA) and Tobin's Q. Therefore, the current study accepts the third main and sub hypotheses of this study on the alternative form as follow: ***H3, statistically significant relationship exists between the sustainable finance and firm value.***

Table (7): The effect of sustainable finance on the firm value measured by economic value added (EVA)

	Panel A : EVA			Panel B : EVA			Panel C : EVA			Panel D : EVA			Panel E : EVA		
	Coef.	T	Sig.	Coef.	T	Sig.	Coef.	T	Sig.	Coef.	T	Sig.	Coef.	T	Sig.
Cons.	0.050	0.027	0.196	0.021	0.023	0.400	0.016	0.029	0.408	0.012	0.050	0.497	0.038	0.032	0.324
Env. Finan.	0.250	3.475	0.037	---	---	---	---	---	---	---	---	---	0.321	3.508	0.023
Soc. Finan.	---	---	---	0.286	3.363	0.015	---	---	---	---	---	---	0.280	2.805	0.017
Gov. Finan.	---	---	---	---	---	---	0.280	2.940	0.015	---	---	---	0.223	2.476	0.036
Sus. Finan.	---	---	---	---	---	---	---	---	---	0.330	3.521	0.042	0.318	2.996	0.040
Size	0.036	0.040	0.151	0.027	0.010	0.174	0.042	0.035	0.360	0.047	0.013	0.467	0.049	0.053	0.234
ROA	0.041	0.045	0.214	0.050	0.044	0.177	0.014	0.021	0.317	0.043	0.022	0.383	0.031	0.019	0.309
Lev	0.033	0.045	0.316	0.039	0.041	0.219	0.012	0.016	0.535	0.022	0.039	0.322	0.021	0.035	0.147
Sales Growth	0.037	0.046	0.537	0.014	0.034	0.537	0.040	0.013	0.168	0.055	0.036	0.121	0.053	0.052	0.269
LQDTY	0.021	0.028	0.463	0.013	0.038	0.234	0.012	0.051	0.488	0.048	0.032	0.364	0.032	0.045	0.246
RD	0.053	0.030	0.150	0.016	0.046	0.277	0.032	0.039	0.493	0.018	0.049	0.122	0.048	0.034	0.503
N	140			140			140			140			140		
F-value	257.311			281.915			276.481			266.527			293.436		
VIF (MAX)	1.611			1.732			1.825			1.321			1.794		
R^2	31.50%			33.70%			32.40%			31.90%			35.60%		

[e] refers to Table (2) for variables' definitions.
$P < 0.05$

Table (8): The effect of sustainable finance on the firm value measured by Tobin's Q

	Panel A : Tobin's Q			Panel B : Tobin's Q			Panel C : Tobin's Q			Panel D : Tobin's Q			Panel E : Tobin's Q		
	Coef.	T	Sig.	Coef.	T	Sig.	Coef.	T	Sig.	Coef.	T	Sig.	Coef.	T	Sig.
Cons.	0.037	0.055	0.193	0.021	0.035	0.300	0.021	0.054	0.144	0.032	0.032	0.449	0.045	0.012	0.148
Env. Finan.	0.290	3.432	0.016	---	---	---	---	---	---	---	---	---	0.258	3.293	0.042
Soc. Finan.	---	---	---	0.303	2.824	0.023	---	---	---	---	---	---	0.274	3.446	0.035
Gov. Finan.	---	---	---	---	---	---	0.232	2.718	0.030	---	---	---	0.314	2.271	0.035

Sus. Finan.	---	---	---	---	---	---	---	---	---	0.320	2.980	0.035	0.268	2.228	0.045
Size	0.016	0.027	0.406	0.052	0.046	0.488	0.020	0.055	0.128	0.043	0.043	0.216	0.041	0.023	0.303
ROA	0.042	0.024	0.184	0.031	0.027	0.447	0.037	0.048	0.367	0.027	0.022	0.179	0.012	0.012	0.520
Lev	0.054	0.048	0.238	0.037	0.010	0.330	0.041	0.026	0.154	0.024	0.033	0.379	0.052	0.043	0.372
Sales Growth	0.049	0.014	0.343	0.030	0.046	0.141	0.030	0.022	0.307	0.048	0.045	0.151	0.046	0.036	0.314
LQDTY	0.023	0.021	0.391	0.024	0.039	0.132	0.051	0.050	0.119	0.030	0.014	0.463	0.015	0.019	0.363
RD	0.026	0.040	0.206	0.026	0.046	0.452	0.050	0.049	0.299	0.015	0.031	0.385	0.032	0.053	0.435
N	140			140			140			140			140		
F-value	303.627			332.660			326.248			314.502			346.254		
VIF (MAX)	1.611			1.732			1.825			1.321			1.794		
R^2	37.10%			39.80%			38.20%			37.60%			42.00%		

[f] refers to Table (2) for variables' definitions.

$P < 0.05$

The current study rejects the null hypotheses form for the aforementioned three hypotheses. In this sense, Sobel test is used to examine the mediating role of sustainable finance in the relationship between foreign ownership and firm value measured by economic value added and Tobin's Q. The mediating role coefficient of sustainable finance between foreign ownership and firm value measured by economic value added (EVA) is equal to 0.090 (0.317 ×0.284), 0.113 (0.317 ×0.355), 0.100 (0.317 ×0.316) & 0.088 (0.317 ×0.278) based on the environmental, social, governance and total sustainable finance respectively and the level of significance in the Sobel test are 0.018, 0.025, 0.031 & 0.017 and less than 0.05. These results indicate that sustainable finance can increase the positive effect of foreign ownership on firm value measured by economic value added (EVA) by 9%, 11.30%, 10% & 8.8% for the environmental, social, governance, and total sustainable finance respectively.

Table (9): The indirect effect of sustainable finance on the relationship between the foreign ownership and firm value measured by EVA and Tobin's Q

Independent	Mediator	Dependent	Direct	Indirect	Total
Foreign Ownership	Env. Finan.	Firm Value by EVA	0.317	0.090	0.407
	Soc. Finan.		0.317	0.113	0.430
	Gov. Finan.		0.317	0.100	0.417
	Sus. Finan.		0.317	0.088	0.405
Foreign Ownership	Env. Finan.	Firm Value by Tobin's Q	0.229	0.065	0.294
	Soc. Finan.		0.229	0.081	0.310
	Gov. Finan.		0.229	0.072	0.301
	Sus. Finan.		0.229	0.064	0.293

[g] refers to Table (2) for variables' definitions.

$P < 0.05$

In the same vein, The mediating role coefficient of sustainable finance between foreign ownership and firm value measured by Tobin's Q is equal to 0.065 (0.229 ×0.284), 0.081 (0.229 ×0.355), 0.072 (0.229 ×0.316) & 0.064 (0.229 ×0.278) based on the environmental, social, governance and total sustainable finance respectively and the level of significance in the Sobel test are 0.015, 0.027, 0.033 & 0.029 and level of 95% confidence. These results indicate that sustainable finance can increase the positive effect of foreign ownership on firm value measured by Tobin's Q by 6.5%, 8.10%, 7.2% & 6.4% for the environmental, social, governance, and total sustainable finance respectively. In this sense; the current study accepts the alternative form of hypothesis (4) as follow: ***statistically significant relationships exist among the sustainable finance in the presence of moderating role of foreign ownership and firm value.***

It has been argued that the Sobel test is used for conducting the indirect effect of sustainable finance on the relationship between the foreign ownership and firm value whether measured by economic value added (EVA) or Tobin's Q ([70]; [71]; [72]) . Additionally, the current study uses path analysis after excluding the control variables for ensuring the above results and building the model according to the figure (2) as follow:

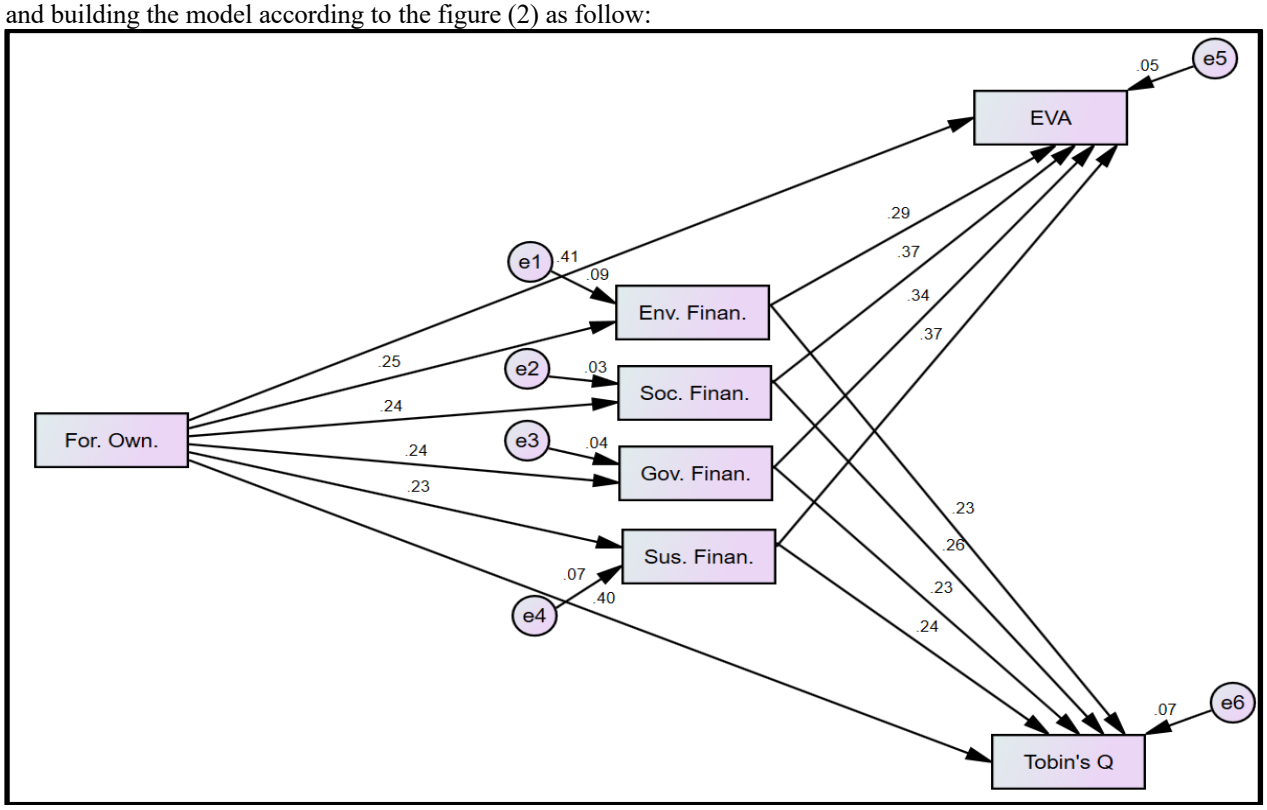


Fig. No.2: Model According to Path analysis

After conducting the path analysis for revealing the indirect effect after excluding the control variables, the results can be presented as follow:

Table (10): The indirect effect of sustainable finance on the relationship between the foreign ownership and firm value measured by EVA and Tobin's Q according to Path analysis

Independent	Mediator	Dependent	Direct	Indirect	Total
Foreign Ownership	Env. Finan.	Firm Value by EVA	0.412	0.103	0.515
	Soc. Finan.		0.412	0.098	0.510
	Gov. Finan.		0.412	0.100	0.512
	Sus. Finan.		0.412	0.093	0.505

Foreign Ownership	Env. Finan.	Firm Value by Tobin's Q	0.398	0.100	0.498
	Soc. Finan.		0.398	0.094	0.492
	Gov. Finan.		0.398	0.096	0.494
	Sus. Finan.		0.398	0.090	0.488

[h] refers to Table (2) for variables' definitions.

$P < 0.05$

According to Table (10), the mediating role coefficient of sustainable finance between foreign ownership and firm value measured by economic value added (EVA) is equal to 0.103, 0.098, 0.100 and 0.093 based on the environmental, social, governance and total sustainable finance respectively and the level of significance are 0.001, 0.011, 0.005 & 0.007 and at level of 95% confidence. These results indicate that sustainable finance can increase the positive effect of foreign ownership on firm value measured by economic value added (EVA) by 10.3%, 9.80%, 10% & 9.3% for the environmental, social, governance, and total sustainable finance respectively. AS Tobin's Q is used as a proxy for the firm value, the mediator role coefficient of sustainable finance between foreign ownership and firm value measured by is equal to 0.100, 0.094, 0.096 and 0.090 based on the environmental, social, governance and total sustainable finance respectively and the level of significance are 0.005, 0.016, 0.009 & 0.010 and less significance level of 0.05,. These results indicate that sustainable finance can increase the positive effect of foreign ownership on firm value measured by Tobin's Q by 10%, 9.4%, 9.6% & 9% for the environmental, social, governance, and total sustainable finance respectively. The aforementioned analysis confirmed acceptance of the study's fourth hypothesis**.**

6 Conclusions and Future Research

This study has assessed the extent of the influence foreign ownership structure, sustainable finance, and firm value Nexus in the Egyptian Banks context. Data were analyzed for 28 banks from 2018 to 2022 to test four hypotheses and the following findings revealed.

First: sustainable performance improved the value of the organization as well as the subcomponents of sustainable finance, i.e. social, environmental, and governance aspects, have the same significant positive effect on firm value .Statistical results ensured that the foreign ownership positively effect on the total sustainable finance where, ($\beta = 0.278$; Sig. < 0.05), this result confirms the significant positive impact of the level of foreign ownership on the level of total sustainable finance and its components in the Egyptian banking sector. Second: the current study confirmed a significant positive impact of foreign ownership and firm value measured by Economic value added (EVA) and Tobin's Q. as the former proxy used to measure the firm value, result reveals that ($\beta = 0.317$; Sig. < 0.05). whereas the later used to measure the firm value, the result shows ($\beta = 0.229$; Sig. < 0.05),The aforementioned results confirmed significant positive impact of on the frim value measured by Economic value added (EVA) and Tobin's Q Respectively.

Third, Statistical results ensured that the total sustainable finance positively affect the firm value measured by Economic value added (EVA) and Tobin's Q where, ($\beta = 0.330$; Sig. < 0.05), as Economic value added (EVA) is used to measure the firm value. Regarding the sub-components of sustainable finance, statistical results revealed that the environmental, social, governance and total sustainable finance have positively effect on the firm value measured by Tobin's Q where, ($\beta = 0.258$, 0.274, 0.314 & 0.268; Sig. < 0.05). Fourth: The results indicate that sustainable finance can increase the positive effect of foreign ownership on firm value measured by Tobin's Q by 10%, 9.4%, 9.6% & 9% for the environmental, social, governance, and total sustainable finance respectively. So, statistically significant relationships exist among the sustainable finance in the presence of Moderating role of Foreign Ownership and Firm Value.

In this sense; the financial institutions should be encouraged to adopt environmental and social risk management practices and incorporate environmental, social, and governance (ESG) standards in lending and investment, sustainable finance has also become a hot topic. However, as sustainable finance risk is a relatively immature field with limited experience for the majority of Egyptian banks, it is one of the responsibilities of regulators to set a framework, policies and procedures that can give a hand to firms to deal with the like new topics. For banks to meet the required criteria, they may need to devote more time, money, and effort to CSR projects. Foreign investors may, in essence, have a long-term perspective on stock market performance and be willing to forgo short-term gains in exchange for careful monitoring that encourages emerging economy firms to adopt sustainable practices, limits cost-cutting measures, and enhances corporate governance transparency .It is important that emerging economy firms, in essence, have a long-term perspective on stock market performance and be willing to forgo short-term gains in exchange for careful monitoring that encourages firms to adopt sustainable practices. Banks may need to invest more time, resources, and energy into sustainable finance projects in order to satisfy the necessary standards.

For opportunities future research, the current study proposes further analysis of the relationship between foreign ownership and tax avoidance, analysis of the relationship between foreign ownership and dividend policies on stock prices as an indicator of company value, and the impact of foreign ownership diversification on accounting quality.

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