Green finance: listing on ESG-EGX index and firm performance

Mariam Elghisha(Management Technology: Finance& Accounting) and Dr.Mona Elbannan (Associate Professor of Finance): The German university in Cairo



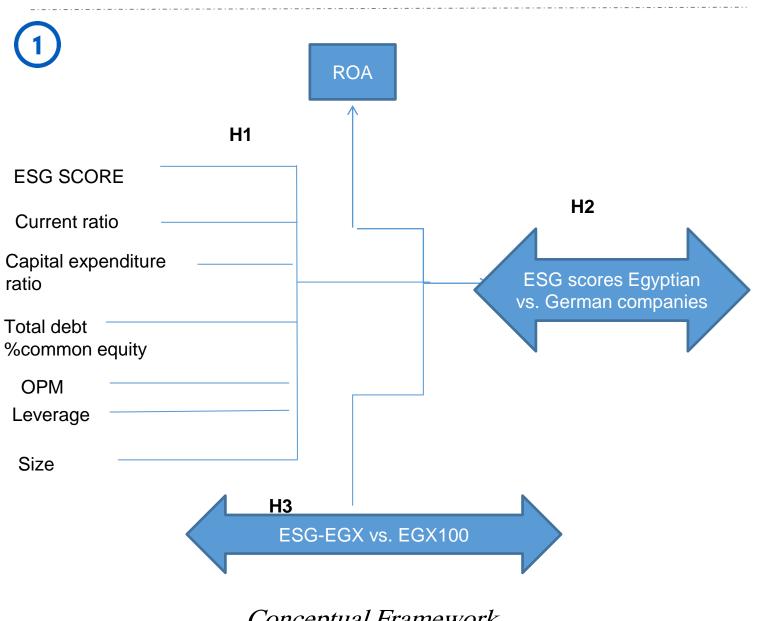
mariam.elghisha@student.guc.edu.eg. mona.elbannan@guc.edu.eg

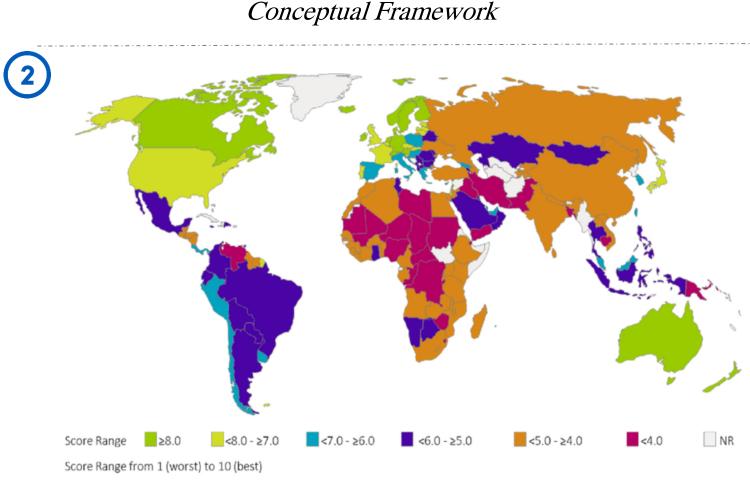


In fact, as a result of increasing environmental protection awareness and severe ecological disasters the concept of sustainable development has appeared in the twentieth century particularly the second half of it (Munitlak-Ivanovic, Zubović, & Mitić, 2017). Therefore, green finance, sustainable finance and climate finance could help in achieving the goals of making the economy being transferred to be green, low carbon economy, one that considers the usage of resources in an efficient way, has sustainable development, and one that seeks combating climate change (Ryszawska, 2016). Therefore, the aim of thesis is discoving the effect of ESG scores on firm performance.

Literature Review

the directions of sustainability Obviously, framework and developments that are made in the financial industry are regulated recently by the initiatives of sustainable development goals and Paris Agreement. Moreover, achieving the goal of creating a society that is sustainable could be attained by affording the financial resources that are necessary for that goal through the sustainable finance that has been developed by the patterns of policy and society. Therefore, when the decision of financing a certain investment is linked to taking into account the concern of sustainability of the environment, this is what constitutes the concept of sustainable finance (Migliorelli, 2021). Therefore, pollution in the environment, issues of climate and development of the economy could be addressed by applying and conducting green finance activities (Zhang and Wang, 2021).





ESG Scores around the world

Source: RobecoSAM, Data as of April 2020

Methodology

The first sample is one of 92 firm-years from 11 Egyptians companies and banks that have available ESG scores and some of them is listed on EGX ESG index pooled over the period from 2010-2021. The second sample is one of 205 firm-years from 43 German companies and banks that have available ESG score pooled over the period from 2017-2021. The third hypothesis is tested using a sample that contains the daily data for the returns of EGX-ESG and EGX100 indices over the period from 2010-2021 and it will be tested using t-tests. In this thesis, multiple regressions will be used and the econometric model will be as follows:

German companies sample econometric model:

ROA= $\beta 0 + \beta 1$ ESG score + $\beta 2$ current ratio + $\beta 3$ operating profit margin + $\beta 4$ leverage + $\beta 5$ total debt % common equity+ $\beta 6$ capital expenditure ratio+ $\beta 7$ size + u

Egyptian companies sample econometric model:

ROA= β 0 + β 1 ESG score + β 2 current ratio + β 3 leverage + β 4 total debt % common equity + β 5 capital expenditure ratio+ β 6 size + u

Results

Dependent V.	ROA		
Explanatory V.	PREDICTED sign	Model 1	Model 2
		(Egyptian sample)	(Germany sample)
ESG score	+	0.003997	0.01177
Control variables			
		(0.0898)	(0.7133)
Current ratio	+	1.46	1.4000
		(0.9029)	(2.707)
Operating profit margin			0.1240
			(4.3212)
Leverage	I	-10.22	-4.8533
		(-2.9677)	(-1.435)
Total debt % ommon equity	+	0.0004	-0.0057
		(0.4736)	(-1.9177)
Capital expenditure ratio	+	28.35	31.22
		(1.8)	(2.0443)
Size	ı	-4.5710	-2.1846
		(-2.1077)	(-3.4538)
Observations N F-stat R ²		92	205
		4.46008	17.7020
		0.239	0.386
Adj. R ²		0.1858	0.364
	Mean VIF		

t-Test: Two-Sample Assuming Unequal Variances		
	ESG SCORE Germany	ESG SCORE Egypt
Mean	44.47317073	23.659891
Variance	559.2603061	290.731801
Observations	205	9
Hypothesized Mean Difference	0	
df	237	
t Stat	8.5772532	
P(T<=t) one-tail	6.41264E-16	
t Critical one-tail	1.651308391	
P(T<=t) two-tail	1.28253E-15	
t Critical two-tail	1.97002401	

t-Test: Two-Sample Assuming Unequal Variances		
	EGX-ESG	EGX100
Mean	1521.200774	1145.957275
Variance	328511.7229	160550.1557
Observations	2492	2492
Hypothesized Mean Difference	0	
df	4456	
t Stat	26.78584123	
P(T<=t) one-tail	5.577E-147	
t Critical one-tail	1.645195657	
P(T<=t) two-tail	1.1154E-146	
t Critical two-tail	1.960496504	

Conclusion

The importance of this thesis lies in discovering if ESG practices and green finance as part of environmental component of ESG practices will enhance the performance of firms and their stock returns. Although the results showed that the ESG scores do not have significant effect on firm performance as measured by return on assets (ROA) in both Egyptian companies' sample and German companies' sample. The hypothesis that states that EGX-ESG index outperforms EGX100 was supported by the results of t-test because they show a p-value less than 0.05 which is significant. So this thesis adds to literature by showing the effect of ESG scores and their effect on the performance of firms along with comparing the ESG scores between Egypt and Germany, and comparing the performance of ESS-EGX index with EGX100 to discovers which one outperforms the other. So found that there is a need for increasing the awareness about the importance of green bonds in Egypt to encourage more private and state owned banks to take initiatives for issuing green bonds.

References

- 1- Munitlak-Ivanovic, O., Zubović, J., & Mitić, P. (2017). RELATIONSHIP BETWEEN SUSTAINABLE DEVELOPMENT AND GREEN ECONOMY EMPHASIS ON GREEN FINANCE AND BANKING. Економика пољопривреде, 64(4), 1467-1482.
- 2- Ryszawska, B. (2016). Sustainability transition needs sustainable finance. Copernican Journal of Finance & Accounting, 5(1), 185-194.
- 3-Migliorelli, M. (2021). What Do We Mean by Sustainable Finance? Assessing Existing Frameworks and Policy Risks. Sustainability, 13(2), 1-17.
- 4- Zhang, B., & Wang, Y. (2021). The effect of green finance on energy sustainable development: a case study in China. Emerging Markets Finance and Trade, 57(12), 3435-3454.
- 5- Schieler, M. (2020a) COVID-19 Demonstrates The Benefits of ESG Analysis [online]

https://www.researchgate.net/publication/343125
714_COVID19_demonstrates_the_benefits_of_
ESG_analysis/citations (used in map presented in this poster)

