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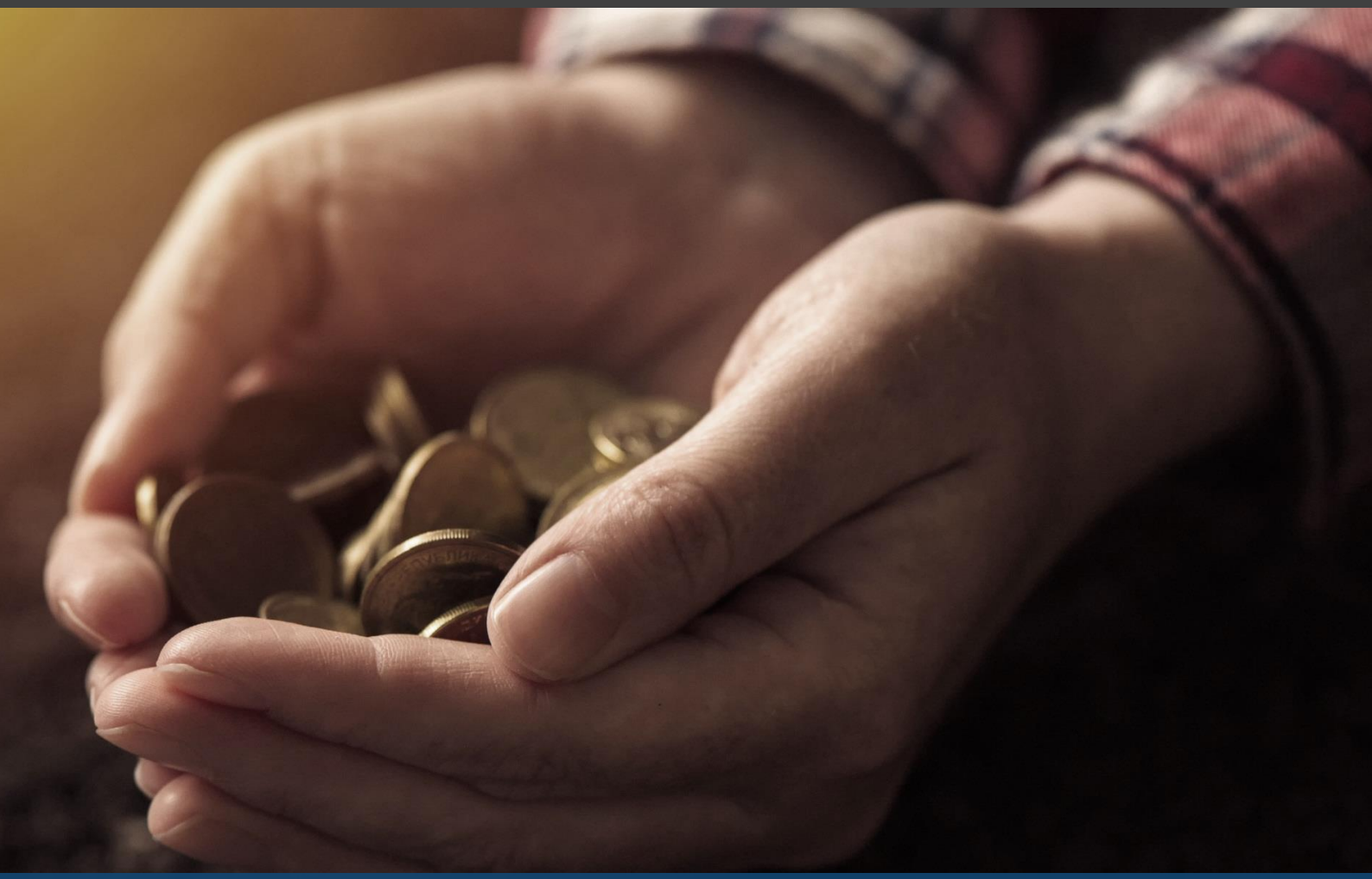
Refinitiv ESG scores and financial performance of Emerging Market Firms



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Summary

Over the last decade, numerous studies have been conducted, to investigate whether ESG ratings have an impact on financial performance of publicly traded firms in developed nations. Nevertheless, not much attention has been given to this question for emerging markets, despite that these regions represent approximately 60% of global GDP. This can be attributed to the limited disclosure of reliable and relevant information on ESG ratings in these regions as well as a slow transition towards an alignment with the UN Principles for Responsible Investment (PRI) in emerging economies.

The main objective of this paper is to shed light on this question, i.e., to investigate the relationship between ESG ratings (as given by Refinitiv ESG scores) and financial performance of firms in emerging economies. To that end, we consider over 800 large cap stocks from 14 emerging countries in Asia, Latin-America, Africa and Russia.

Results show no compromise in financial performance when investing in highly rated ESG firms in the 7 regions considered in the study. However, in South-Asia stocks exhibit a negative and significant association between the social pillar (S) and stock returns, while Russia exhibits a similar relationship between the environmental pillar (E) and returns. This is arguably due to the prevalence of labour-intensive industries in South East Asia and polluting energy firms in Russia. The portfolio performance shows an outperformance of the top 10% ESG rated stocks relative to the low 10% and the benchmark after the 2017 period for all 7 regions.

1 Motivation

Sustainable investing and ESG (Environmental, Social and Governance) scoring of firms and investment portfolios are currently the main investment themes. But does investing in more sustainable firms compromise financial performance? No consensus has been reached in answering this question, in either academic or professional literature. A recent large-scale study by Borovkova and Wu (2020) on the relationship between ESG ratings and financial performance of over 2000 large cap firms in four developed regions (EU, US Australia and South-East Asia) over a 9-year period (2010 to 2018) has drawn some interesting conclusions. This research has shown that there is a positive relationship between ESG scores and excess returns for EU and Australian firms, while for US, this relationship is negative, i.e., US investors have to accept lower returns when investing into higher ESG scoring firms. However, no similar large scale study of emerging market stocks has been done yet. This paper is an attempt to fill in this gap.

Despite the growth in the ESG adoption by investors over the last decade, the adoption rate was not homogeneous across market regions. While in Europe socially responsible investments (SRI) are the largest ($13.61 trillion AUM in 2015), in the U.S this number was lower. However, US has experienced the most rapid growth in sustainable investing in the last 5 years (75% year on year growth). Sustainable investing in emerging markets lags on both these measures. There are numerous reasons for this, ranging from regulatory differences in ESG adoption in developed vs emerging markets to ESG disclosure by companies in these markets to social and cultural awareness of sustainability. The dynamics, however, is clear: ESG adoption is accelerating all over the world, and hence, ESG investing in emerging markets deserves due attention.

2 Data and methodology

In this study we include 817 large-cap stocks from 14 emerging countries (all of them are constituents of the major local market indices): 4 countries from Latin America (Brazil, Chile, Colombia, Mexico), 7 countries from Asia (China, Hong Kong, Singapore, Taiwan, India, Indonesia, Thailand), and three countries from Europe, the Middle East, and Africa (Russia, Israel, and South-Africa). We group these stocks into 7 categories: Latin America, South-East Asia (Indonesia, Thailand Singapore and India), China and Hong Kong are considered together

and, finally, Taiwan, Russia, South-Africa, and Israel are considered separately. The 800 stocks are chosen so that they have enough measurements of their ESG performance, to ensure sound statistical analysis (as more ESG data becomes available, the stock universe can be hopefully expanded). The time period considered is 10 years from 2010 to 2019.

ESG data (the so-called *combined ESG scores*) come from Refinitiv, which currently offers one of the most comprehensive ESG databases, with great market cap coverage and over 400 ESG metrics. The CESG scores take sustainability-related controversies scores into consideration, and to some extent correct the size bias in the ESG scores. The CESG scores are typically reported on the scale of 0-100, with higher scores indicating better sustainability performance. Table 1 shows a dynamics of emerging markets' ESG total scores and the scores for the underlying 3 pillars (E, S and G), between 2010 and 2019 (where we divided the scores by 100). It shows that, for all regions, the combined as well as disaggregated scores have significantly improved over the last decade.

Table 1: Average CESG Scores

Pillars	Year	LATAM	South-Asia	China	Taiwan	Russia	Africa	Israel
CESG	2010	0.518	0.242	0.333	0.365	0.356	0.362	0.331
	2019	0.548	0.490	0.360	0.541	0.515	0.500	0.400
Environmental	2010	0.454	0.175	0.251	0.312	0.285	0.312	0.271
	2019	0.554	0.414	0.302	0.534	0.460	0.472	0.296
Social	2010	0.572	0.250	0.263	0.293	0.320	0.395	0.324
	2019	0.646	0.578	0.295	0.576	0.549	0.580	0.515
Governance	2010	0.553	0.281	0.521	0.525	0.473	0.412	0.410
	2019	0.571	0.501	0.502	0.515	0.520	0.514	0.439

The cumulative excess returns for stocks are calculated by subtracting the risk-free rate proxies from cumulative stock returns. Here we use the government bond yield (of 1 or 2 year maturity, and 10 years for South Africa) of each country as the proxies for risk-free rate.. As Borovkova and Wu (2020), we incorporate other financial variables which affect stock return as the control variables, namely size, cash flow-to-price ratio, book-to-price ratio, and volatility.

Following the methods of Borovkova and Wu (2020), we test the impact of the CESG scores and disaggregated pillars on the financial performance of firms in emerging countries, and for that we use panel regression. We use three versions of regression: the pooled OLS (1), fixed effects (2) and random effects (3) regressions. For detail on these models, we refer the reader to the accompanying materials, available upon request. Generally speaking, we fit three versions of the following model:

$$ER_{it} = a(i,t) + \beta_1 MV_{it} + \beta_2 CP_{it} + \beta_3 BP_{it} + \beta_4 VOL_{it} + \beta_5 ESG_{it-1} + \varepsilon_{it},$$

where the difference between these versions lies in the specification of the free term $a(i,t)$. In the above formula, ER_{it} is the cumulative excess return of stock i at year t, the control variables are CP_{it} , BP_{it} , VOL_{it} , and MV_{it} (cash flow-to-price ratio, book-to-price ratio, volatility and size (i.e., market cap) of the stock i at year t. The ESG_{it-1} refers to either the combined lagged ESG score $CESG_{it-1}$ or disaggregated pillars E_{it-1} , S_{it-1} or G_{it-1}.

A secondary objective of this paper is to construct portfolios that are superior to the benchmark with respect to sustainability criteria and to test whether such portfolios out- or underperform comparable portfolios that are on the lower end of sustainability ratings. Our portfolio construction steps are similar to the steps typically used in factor investing:

1) Calculate the average ESG ratings for all stocks over a lookback period of three years
2) Rank stocks based on ESG scores over the lookback period
3) Create two portfolios based on top and bottom 10% ESG-rated stocks
4) Calculate excess returns of these portfolios in next year
5) Repeat steps one through four for every year and region

Then we compare performance of high and low ESG portfolios across regions. Three-year lookback period was chosen to smooth out fluctuations in ESG ratings and "reward" stocks with a consistent ESG performance.

4 Results and discussion

The correlations between the ESG and financial performance metrics are shown in Table 2. The most important correlations are those in circled in red. As for developed markets (see Borovkova and Wu (2020)), ESG scores are positively correlated to firm's size, indicating that larger firms have, on average, higher ESG scores. Negative correlation between ESG scores

and volatility indicate that higher ESG scoring firms are, on average, less risky. We cannot comment yet on the negative correlation between ESG scores and returns – we will investigate this issue in more detail by means of panel regression, which takes into account other return determinants.

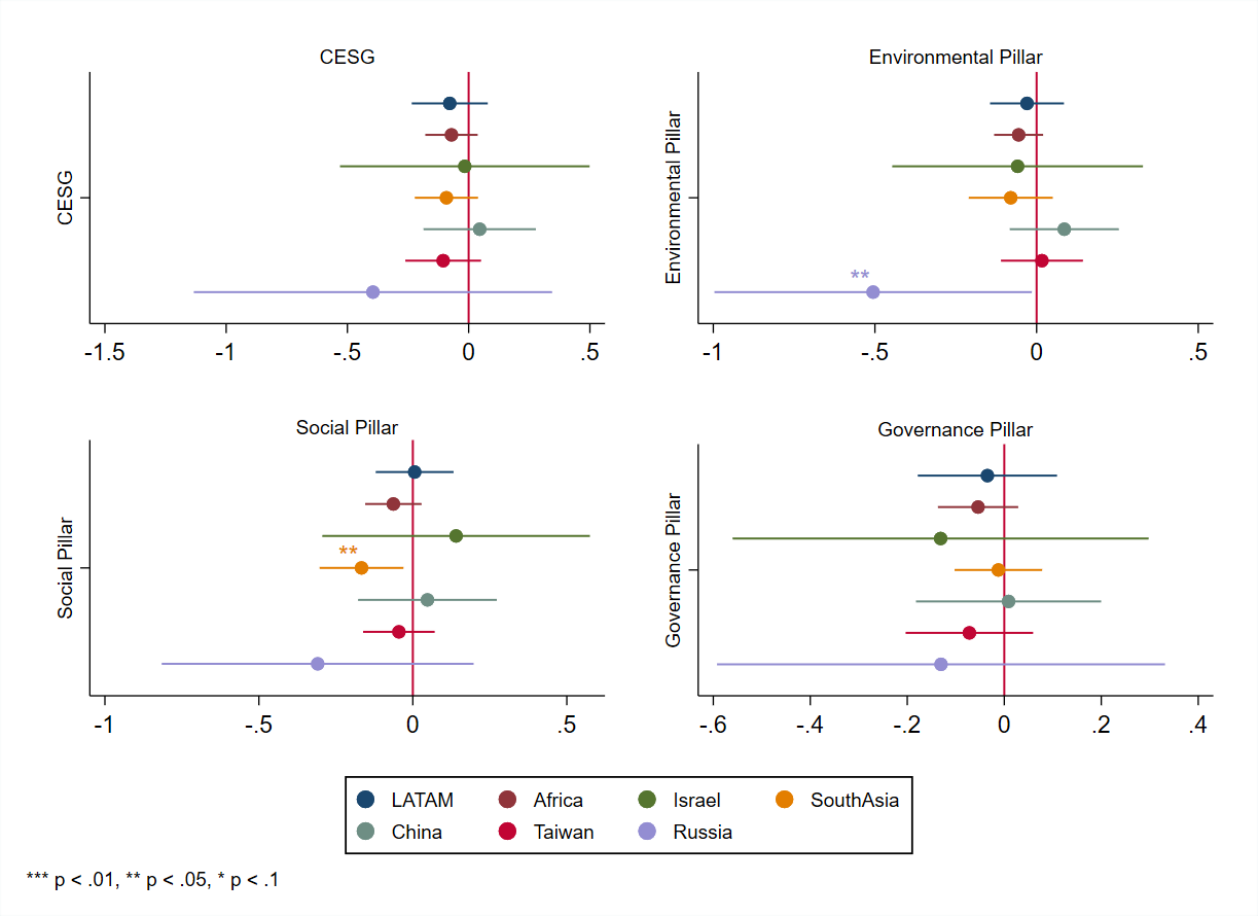
Table 2: Correlation Matrix This matrix is based on the data for all regions.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) ESG Score	1.000								
(2) Environmental Score	0.813	1.000							
(3) Governance Score	0.732	0.470	1.000						
(4) Social Score	0.887	0.752	0.521	1.000					
(5) Bookt-to-Price	0.045	0.139	-0.001	0.043	1.000				
(6) Cash flow-to-Price	0.055	0.072	0.046	0.046	0.479	1.000			
(7) Size	0.203	0.144	0.184	0.204	-0.031	-0.002	1.000		
(8) Cumulatice Excess Return	-0.069	-0.077	-0.052	-0.080	0.013	0.028	-0.010	1.000	
(9) Volatility	-0.076	-0.034	-0.058	-0.055	0.156	0.100	-0.088	0.155	1.000

Figure 1 shows the regression coefficients for the combined ESG score and its pillars for each region, and hence, indicates the direction (and magnitude) of the relationship between ESG scores and stock returns. (The most appropriate panel regression model was chosen for each region; the details of the models can be found in accompanying technical materials).

The top left graph in Figure 1 shows that, in all seven regions, there is no evidence that high ESG ratings significantly compromise returns. In other words, return performance ought to be very similar for portfolios that have a focus on sustainability versus the ones that do not incorporate ESG criteria. It suggests that, although ESG ratings seem to have a slight negative effect on stock returns in 6 out of 7 regions, it is statistically insignificant.

Figure 1: *Estimated CESG coefficients per region per pillar. Based on the tables included in Appendix C. The statistical significance of each factor is indicated with *, ** and *** at the 10%, 5% and 1% significance levels, respectively*



By decomposing ESG into the 3 pillars, we examine whether the effect of individual pillars is different from what we see for the combined ESG scores. The other three graphs in Figure 1 show the regression coefficients of individual ESG pillars on the excess stock returns. Results show that 3 pillars indeed play different roles in different regions.

For Environmental pillar, for six out of 7 regions there is no significant relationship between excess returns and E scores. This is not the case for Russia: Russian companies with higher E scores have significantly lower returns than those with lower E scores. This is not surprising, as the level of environmental and social regulation and enforcement in this country has so far been low. Furthermore, the most profitable firms in Russia are those in heavy, polluting industries, such as oil & gas and mining. Nevertheless, contingent on a gradual progress towards sustainable production and investment in cleaner exploration and mining techniques,

this negative relationship between environmental scores and returns might change in the near future.

For the Social pillar (S score in ESG), again there is no significant relationship between returns and the scores for six out of 7 regions. The exception is South East Asian firms, for which this relationship is significantly negative. Again, as for Russia and E score, this is not surprising. Textile and other labour intensive industries dominate South Asian economies, and working conditions as well as other social indicators (workplace diversity and inclusion, stress and anxiety experienced by employees, management style) are vastly inferior there compared to the rest of the world.

The Governance score for all seven regions shows no significant relationship to the returns.

5 Portfolio performance

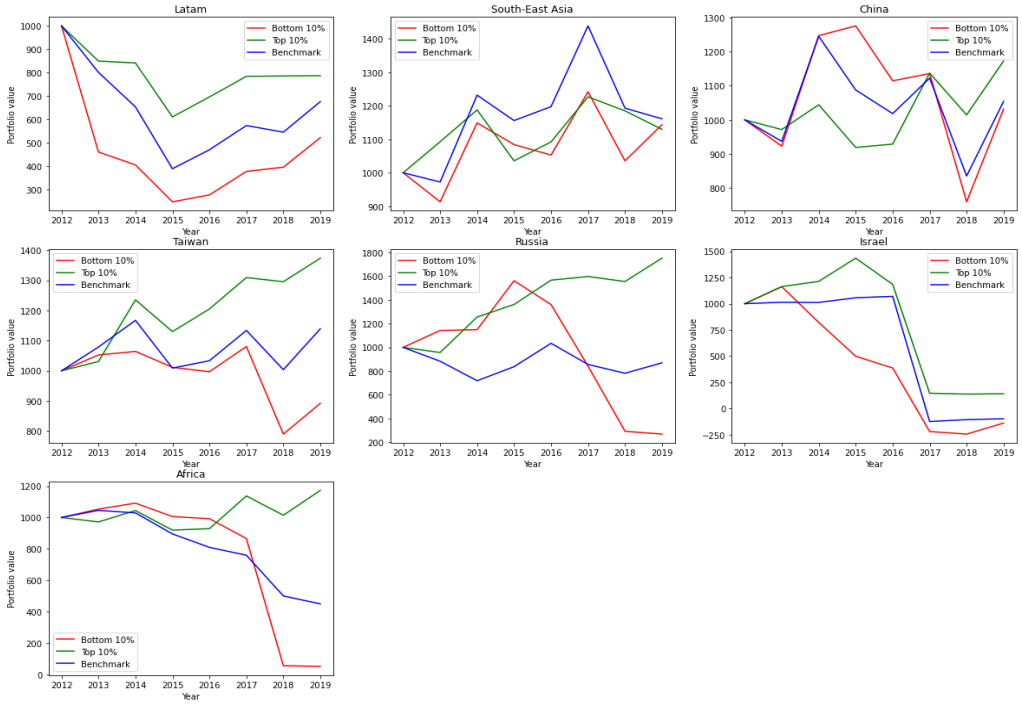
Finally, we evaluate the high and low ESG portfolios performance for each region. We invest $1000 in each portfolio in 2012. The portfolios are rebalanced each year. The results are shown in Figure 2.

Particularly interesting results are for the high and low ESG portfolios in the Lat.in America. Throughout the entire 2012-2019 period, there is a clear superior performance of high ESG rated portfolios compared to both the benchmark and the low ESG portfolio. The same can be observed for Taiwan and Israel.

In South-East Asia, the results are mixed, as neither high nor low ESG portfolios outperform the benchmark. For China, during 2012-2016, the high-ESG portfolio exhibited negative market premia in the China region. Nevertheless, during the next three years, the high ESG portfolio consistently outperformed the low ESG portfolio. Similar picture is observed for portfolio composed of African companies.

For Russia, the overall picture shows a steady increase in both high and low ESG portfolios until 2016. From that point on, the high ESG portfolio continues to increase while the low ESG portfolio drastically drops in 2018-2019. Although this might give an optimistic outlook for ESG investing in Russia, this outcome must be taken with a grain of salt, given that overall ESG scores in Russia do not reach the 70 mark on average. In other words, what is considered high-ESG rated companies within Russia, is considered average in other regions.

***Figure 2**: Portfolio values of 7 regions. The portfolio values are computed using an initial investment of $1000 in 2012 and multiplied with the portfolio return for 2013,and subsequent years.*



6 Concluding remarks

Our analysis of ESG investing in emerging markets has shown that well-performing (in terms of ESG) large companies in these regions do not sacrifice their returns, when compared to their lower ESG rated peers. This is not the case for environmental pillar and Russian companies and for social pillar and South East Asian companies. There, shareholder engagement should focus on those corresponding issues to achieve the highest gains. Portfolio analysis has confirmed our findings. So asset managers who wish to diversify their portfolios by investing in emerging markets, should continue to seek sustainable companies also in these regions.

References

Borovkova, S. and Wu, Y. (2020). ESG vs financial performance of large cap firms. Available at: ESG Score VS Financial Performance | Refinitiv

Refinitiv. (2020). Refinitiv ESG Score [Fact Sheet]. Available at: https://www.refinitiv.com/content/dam/marketing/en_us /documents/fact-sheets/esg-scores-fact-sheet.pdf