ESG Scores and Financial performance: A Sustainable Analysis

Analysing the impact of ESG Scores on Key Financial Metrics for a Sustainable Future.

Introduction:

In today's world, sustainability is more than just a buzzword, it has become an important aspect of responsible growth. Integrating sustainability with finance has become increasingly significant, bridging the gap between these distinct fields. While finance is usually a quantitative field and Sustainability seemingly qualitative, the advent of ESG (Environmental, Social and Governance) scores has allowed us to relate between these terms, making it possible to analyse its impact on financial performance.

Objective:

This report aims to explore the relationship between ESG factors and financial performance across various countries, allowing us to understand how sustainable practices influence economic outcomes at a national level. By analysing data from 2007-2023, we try to understand how ESG scores correlate with key financial metrics such as ROI, ROE, GDP Growth, Inflation Rate, Market Capitalisation and Political Stability. This cross-country analysis will provide valuable insights for investors, policy makers and companies striving for sustainable development.

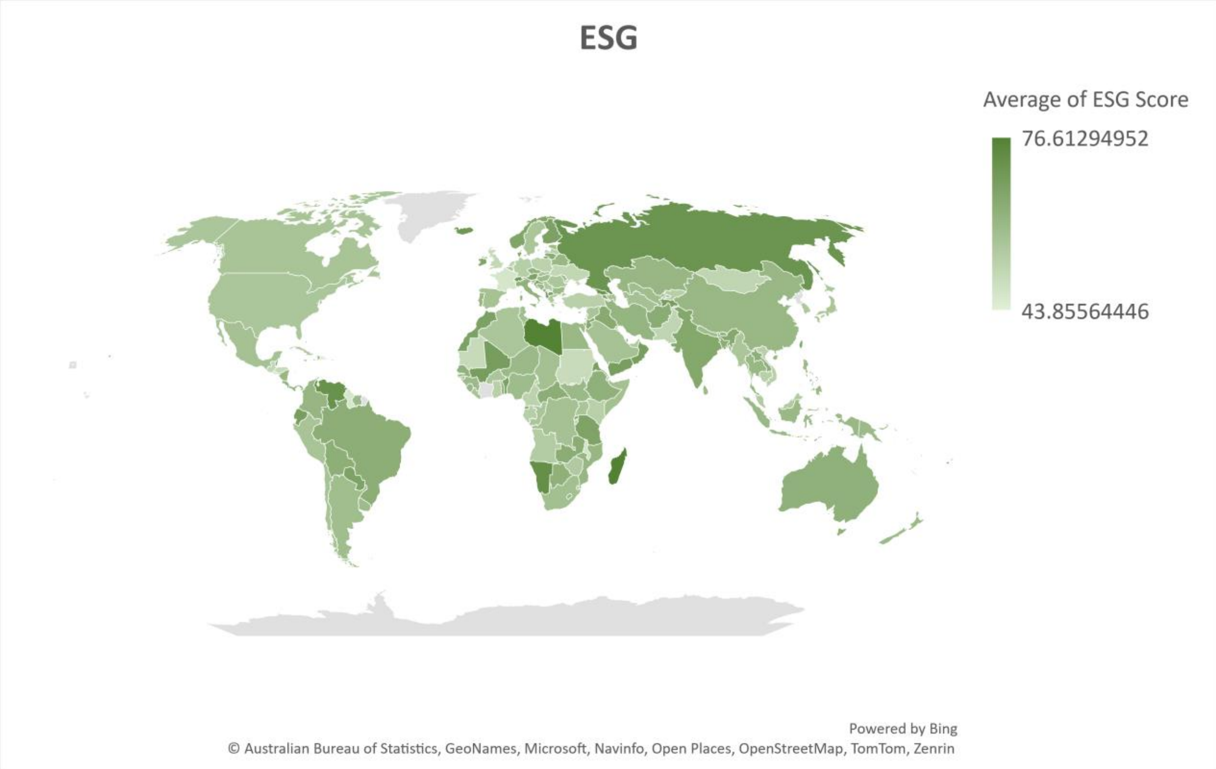
Data Source:

The data utilized in this report is sourced from the Harvard Dataverse, consisting a comprehensive dataset from the years 2007-2023. The dataset includes 3213 rows of data covering various countries across these years featuring ESG Score and financial metrics such as ROI, ROE,GDP Growth, Market Capitalisation(in billions), Inflation rate and Political Stability.

Descriptive Analysis:

The analysis involved calculating the average ESG scores and financial metrics for each country over the period from 2007 to 2023. Ten countries with highest ESG score and Ten countries with lowest ESG score were selected for further analysis to extract various findings.

Initially the years 2008 and 2020 are removed for a better picture as these years showcase higher deviations in the economy across the globe.

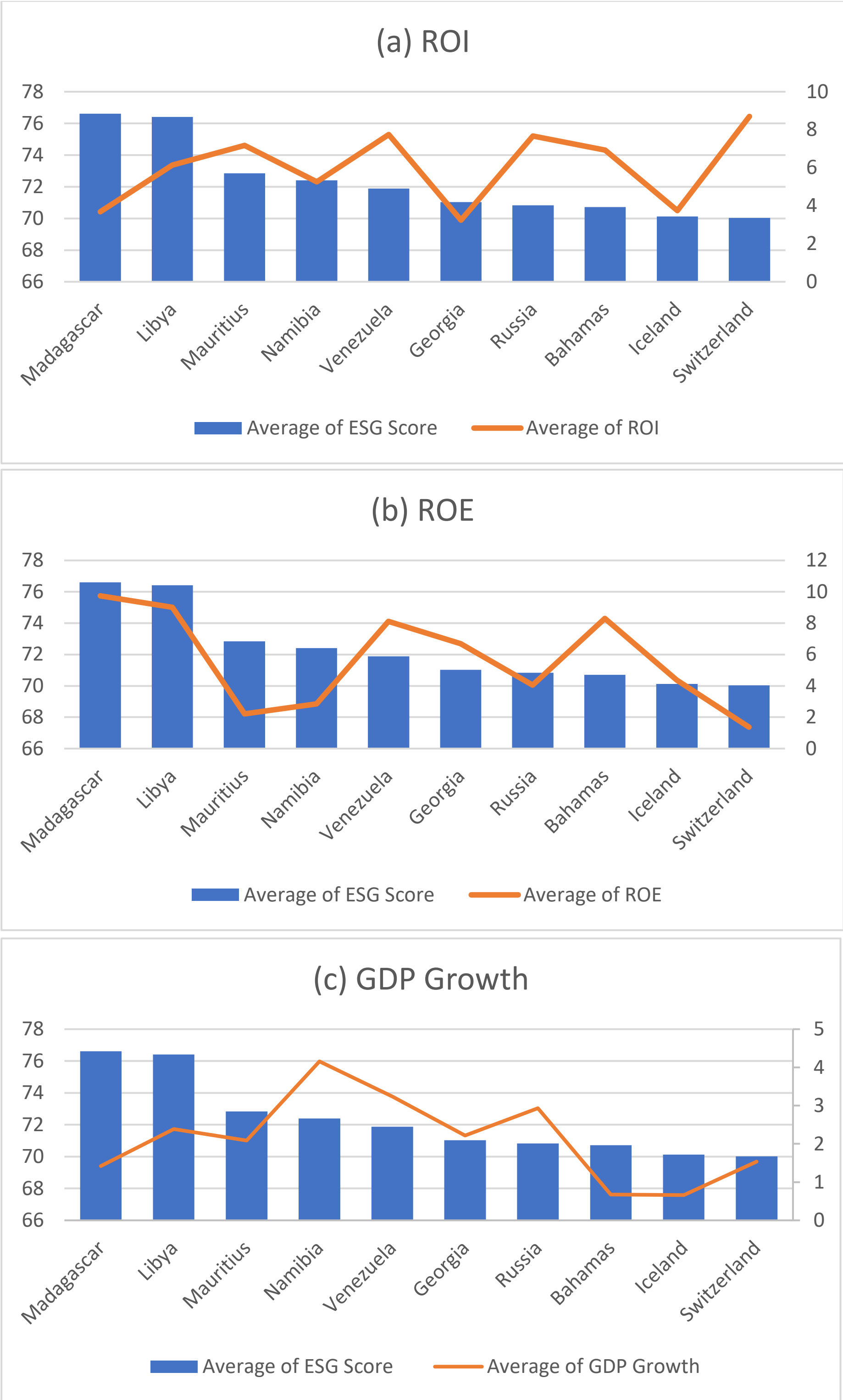


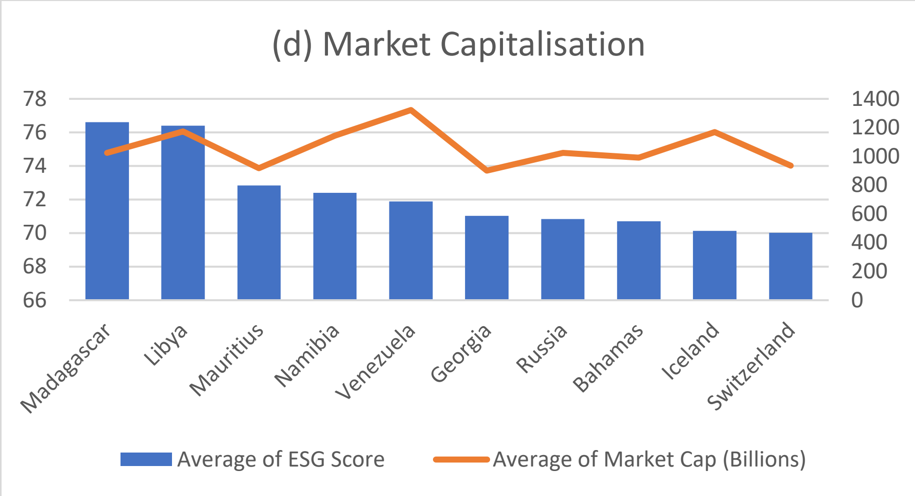
According to the data top 10 countries with higher ESG scores include Madagascar, Libya, Mauritius, Namibia, Venezuela, Georgia, Russia, Bahamas, Iceland and Switzerland. These ten countries are taken into account for analysing high ESG impact on economy and various correlation graphs are plotted (a , b ,c ,d ,e ,f) which relate average ESG scores with average ROI, ROE,GDP Growth, Market Capitalisation, Inflation Rate and Political stability across the mentioned years. Among these ten when classified into developed, developing and underdeveloped countries, we get**:**

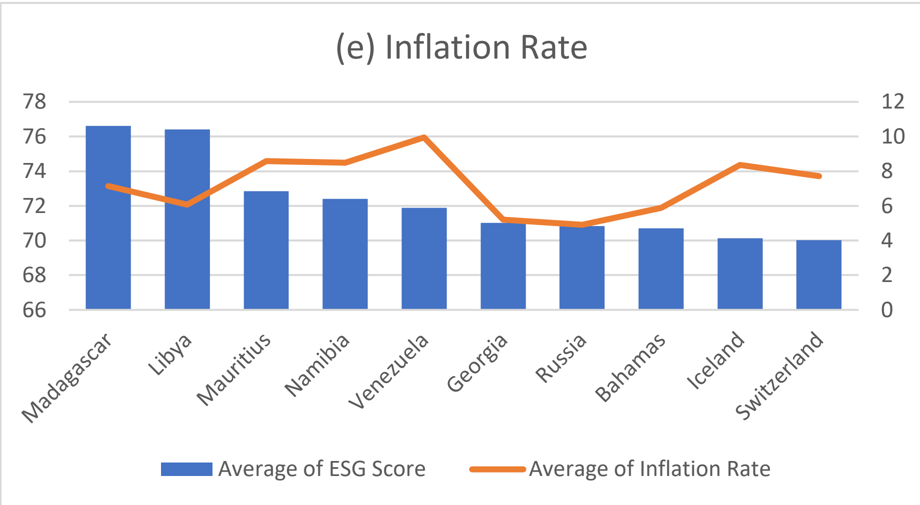
Developed countries: Iceland, Switzerland

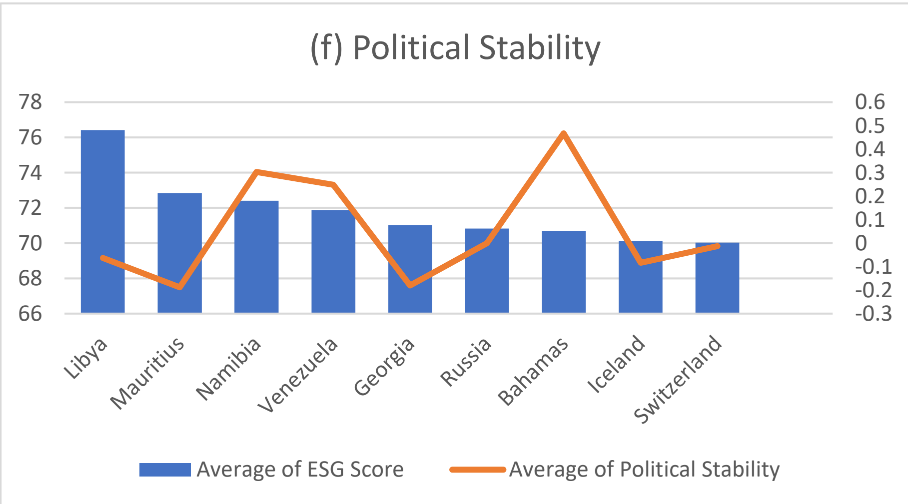
Developing countries: Libya, Mauritius, Namibia, Venezuela, Georgia, Russia, Bahamas

Underdeveloped countries: Madagascar


(a) ROI
78
76
74
72
70
68
66
10
8
6
4
2
0
Madagascar
Libya
Mauritius
Namibia
Venezuela
Georgia
Russia
Bahamas
Iceland
Switzerland
Average of ESG Score
Average of ROI
(b) ROE
78
76
74
72
70
68
66
12
10
8
6
4
2
0
Madagascar
Libya
Mauritius
Namibia
Venezuela
Georgia
Russia
Bahamas
Iceland
Switzerland
Average of ESG Score
Average of ROE
(c) GDP Growth
78
76
74
72
70
68
66
5
4
3
2
1
0
Madagascar
Libya
Mauritius
Namibia
Venezuela
Georgia
Russia
Bahamas
Iceland
Switzerland
Average of ESG Score
Average of GDP Growth







All the ten countries listed have relatively higher ESG score when compared with all the other countries.

- Graph (a) gives us the relation between average ESG score and average ROI.

  Ideal ROI ranges between 5-10% for developed countries, 8-15% for developing countries, 15-25% for underdeveloped countries.

This graph shows the trend that usually countries with higher average ESG score are developing and developed ones with moderate ROI, where Madagascar(even with the highest average ESG score is an underdeveloped country with low ROI) contrastingly Iceland is a developed country with high ESG Score and lower ROI.

We conclude that ESG won't directly affect the average ROI which doesn't lead us to a direct relation between average ESG score and average ROI. Usually countries with higher ESG score have moderate ROIs.

- Graph (b) gives us the relation between average ESG Score and average ROE.
  Ideal ROE is around 10-15% or higher for developed countries, 8-12% for developing countries, 5-10% for underdeveloped countries.
  Developed countries Iceland and Switzerland even with high ESG have very poor ROI, developing countries here have poor to moderate ROI, Madagascar an underdeveloped country has an ideal ROI.

This helps us understand that there exists an inverse relationship between average ESG score and average ROI in most cases.

- Graph (c) gives us the relation between average ESG score and average GDP Growth.
  Ideal GDP Growth Rate is around 2-3% per year
  It is evident that these developing countries with higher average ESG scores have moderate to high average GDP Growth, where as developed and underdeveloped countries have relatively poor average GDP growth inspite of having higher average ESG scores.
  Higher ESG scores are ideal for a developing economies GDP growth but not for developed or underdeveloped countries.

- From graph (d) it is clear that higher ESG scores yield in higher market capitalisation value.

- Graph (e), Target inflation rate is usually 2%, Inflation rate around it is generally acceptable.
  Countries with higher average ESG scores generally have moderate to higher Inflation rate.

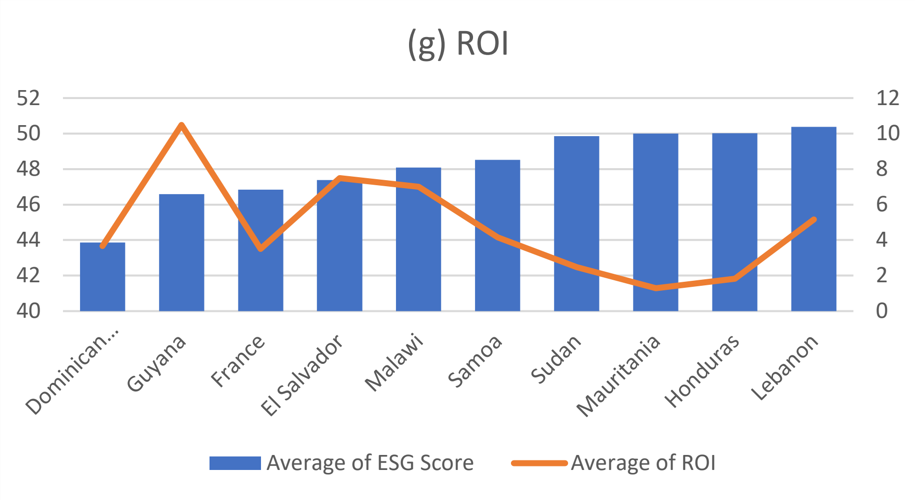
- Graph (f), Political stability usually higher is better -2.5(weak) to 2.5(strong)
  Countries with higher ESG scores have average political stability to be weaker to moderate. These countries lie in between weak political stability and strong political stabilitly.

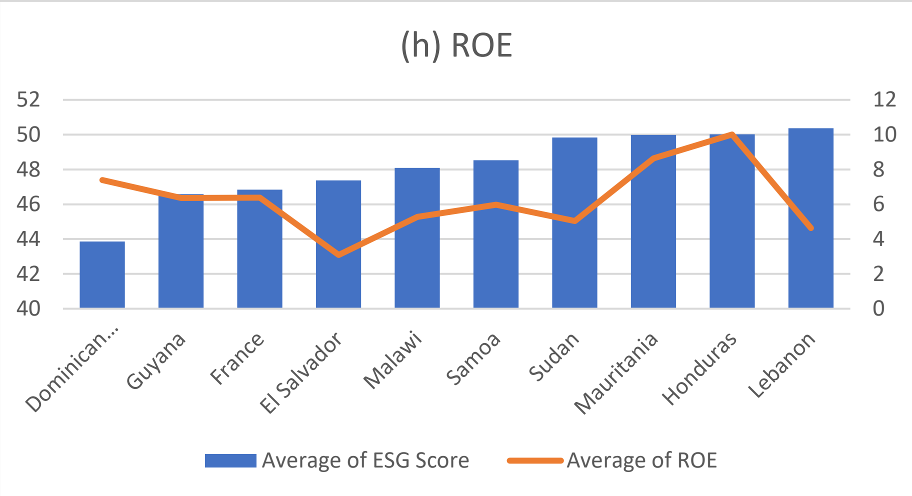
According to the data bottom 10 countries with lower ESG scores include Dominican Republic, Guyana, France, El Salvador, Malawi, Samoa, Sudan, Mauritania, Honduras, Lebanon. These ten countries are taken into account for analysing low ESG scores impact on economy and various correlation graphs are plotted (g , h ,i ,j ,k ,l) which relate average ESG scores with average ROI, ROE,GDP Growth, Market Capitalisation, Inflation Rate and Political stability across the mentioned years. Among these ten when classified into developed, developing and underdeveloped countries, we get**:**

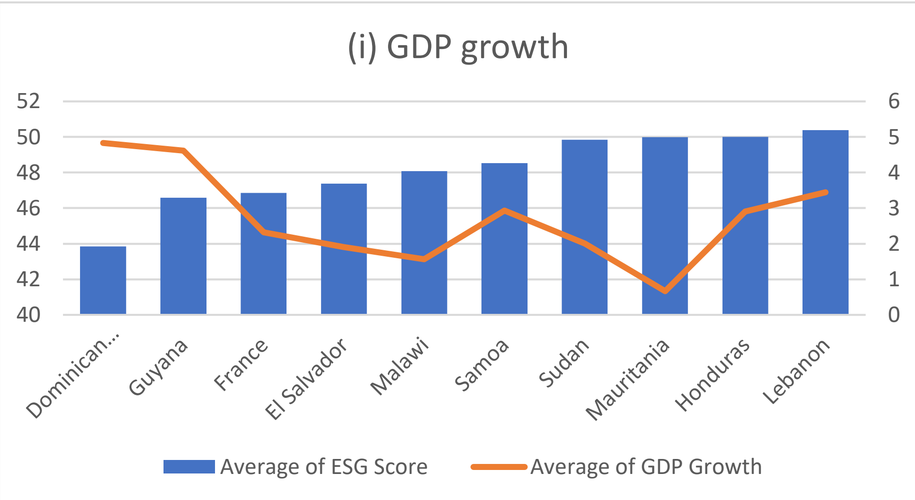
Developed Country: France

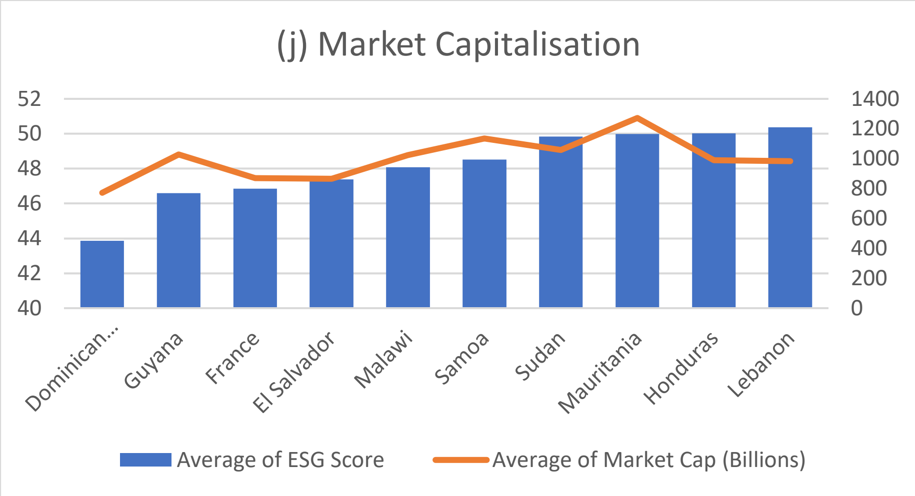
Developing Countries: Dominican Republic, Guyana, El Salvador, Mauritania, Honduras, Lebanon

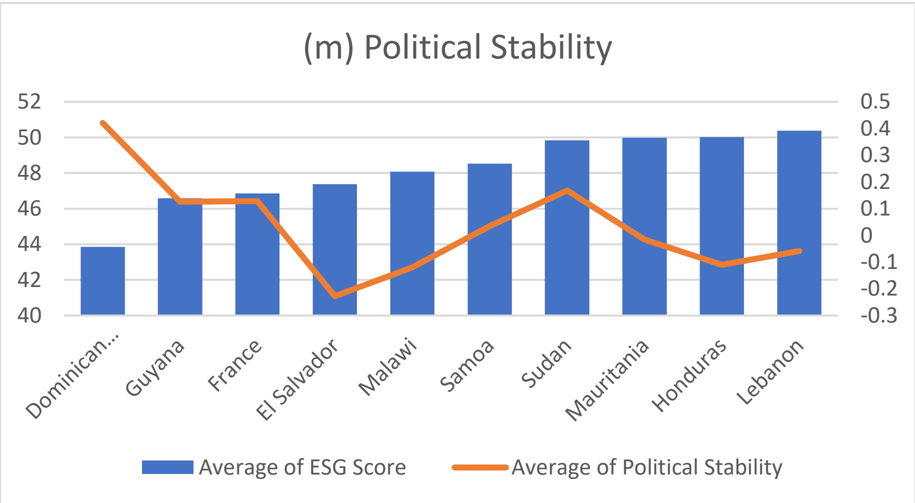
Underdeveloped Countries: Malawi, Samoa, Sudan

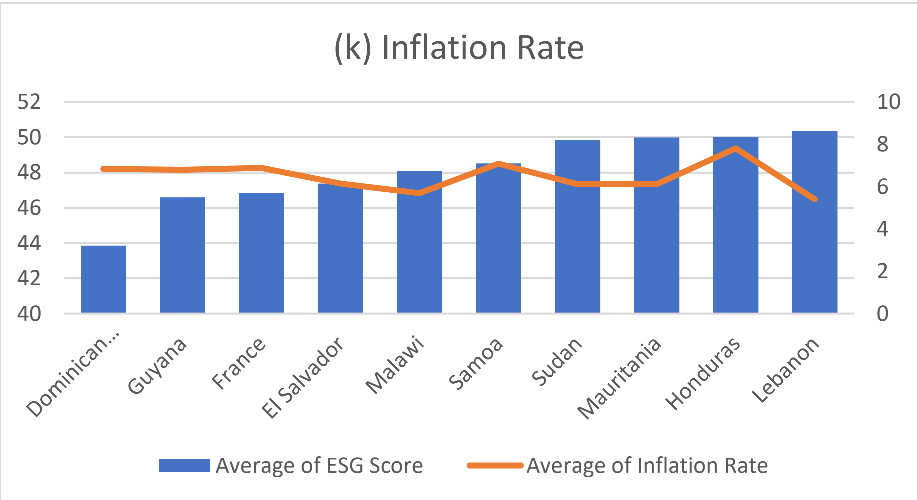

(g) ROI
52
50
48
46
44
42
40
12
10
8
6
4
2
0
Dominican…
Guyana
France
El Salvador
Malawi
Samoa
Sudan
Mauritania
Honduras
Lebanon
Average of ESG Score
Average of ROI


(h) ROE
52
50
48
46
44
42
40
12
10
8
6
4
2
0
Dominican…
Guyana
France
El Salvador
Malawi
Samoa
Sudan
Mauritania
Honduras
Lebanon
Average of ESG Score
Average of ROE


(i) GDP growth
52
50
48
46
44
42
40
6
5
4
3
2
1
0
Dominican…
Guyana
France
El Salvador
Malawi
Samoa
Sudan
Mauritania
Honduras
Lebanon
Average of ESG Score
Average of GDP Growth







All the ten countries listed have relatively lower ESG score when compared with all the other countries.

- Graph (g) gives us the relation between average ESG score and average ROI.

Ideal ROI ranges between 5-10% for developed countries, 8-15% for developing countries, 15-25% for underdeveloped countries.
Guyana and El Salvador have negative ESG impact on ROI i.e despite of having lower ESG scores these countries have a good ROI value, others show that lower ESG scores lead to poor ROI of a country.
We conclude that ESG scores directly affect the average ROI

- Graph (h) gives us the relation between average ESG Score and average ROE.
  Ideal ROE is around 10-15% or higher for developed countries, 8-12% for developing countries, 5-10% for underdeveloped countries.
  Lower ESG scores result in ideal ROE value for underdeveloped countries along with Mauritania and Honduras from developing countries category. Other developing countries with lower ESG scores have moderate-poor ROE.
  Lower ESG scores doesn’t show a greater impact on ROE for underdeveloped countries whereas developed and developing countries with lower ESG scores have lower ROE.

- Graph (i) gives us the relation between average ESG score and average GDP Growth.
  Ideal GDP Growth Rate is around 2-3% per year
  Developed country France has a moderate GDP growth, along with an underdeveloped country Samoa and Honduras. Developing countries like Dominician Republic, Guyana,Lebanon have strong GDP growth rate.
  Other countries have very low to lower GDP growth rate.
  We can conclude there is a nuanced complex relationship between lower ESG scores and GDP growth rate.

- From graph (j) it is clear that lower ESG scores do not impact the market capitalisation value. These countries despite of having lower ESG score have moderate to high Market capitalisation values.

- Graph (k),Target inflation rate is usually 2%, Inflation rate around it is generally acceptable.
  Countries with lower average ESG scores generally have moderate to higher Inflation rate.

- Graph (l) Political stability usually higher is better -2.5(weak) to 2.5(strong)
  From this graph it is evident that countries with lower ESG scores are more towards unstable government.

Conclusion:
Impact of average ESG score on various financial metrics:

- **ROI:** Higher ESG scores usually yield moderate ROI, Lower ESG scores can still yield good ROI in some cases, indicating a complex relationship.
- **ROE:** Higher ESG scores correlate with lower ROE (Inverse relationship) whereas lower ESG scores do not significantly impact ROE.
- **GDP Growth:** Higher ESG scores benefit GDP growth in developing economies, lower ESG scores can even coincide with strong GDP growth. Thus, leading to a complex relationship.
- **Market Capitalisation:** Higher ESG scores positively impact market capitalisation whereas lower ESG scores do not adversely affect market capitalisation.
- **Inflation Rate:** Higher and lower ESG scores correlate with acceptable inflation rates yielding no inference.
- **Political Stability:** Higher ESG scores have mixed impact on political stability, Lower ESG scores correlate with weaker political stability.

The relationship between ESG scores and financial metrics is complex and varies across different economic development stages.

- **Developed Countries:** Higher ESG scores do not necessarily lead to higher financial performance but may correlate with higher market capitalisation.
- **Developing Countries:** Benefit the most in terms of GDP growth and market capitalisation from higher ESG scores.
- **Underdeveloped Countries:** Show mixed results with higher ESG scores, suggesting that other factors may be significant.

This analysis provides valuable insights for guiding future policies and investment strategies.