

## Global Markets Analyst

## 2022 EM Sovereign ESG scores — More than one way to invest for impact

- Reflecting increased investor demand, last year EM ESG issuance surged to a record ~\$315bn, exceeding total issuance in the previous four years. In this *Global Markets Analyst* we update our EM sovereign ESG scores (the second annual update since we launched them in 2020), and look at recent trend changes in these scores on both a country and a regional level. We also explore the themes of climate change and gender equality through the lens of our ESG scores and our recently published Womenomics Index.
- Generally, we find that EM sovereign ESG scores continue to trend higher, driven by Governance and Social scores. Here, Asia has seen the largest increase, with infrastructure investment driving most of the improvement across sovereigns.
- Conversely, our Environment score shows no significant improvement over the last three years, despite the increased public interest in climate change. While lagging data and reporting make it difficult for sovereign investors to invest solely based on countries' environmental performance, looking at performance in combination with intent may offer a solution (for example, whether there are targets in place to tackle climate change, such as Net Zero).
- We find that while ~92% of sovereigns in the EMBI have some form of climate target in place, only ~22% report annually on their progress. Within this, the Middle East lags other regions in terms of climate targets, whereas Latin America lags on reporting frequency.
- Investing based on Gender is another way to invest for impact and, as we show through our Womenomics Index, investing based on gender equality can offer some additional protection during drawdowns. Our Womenomics Index shows that, although gender equality has improved across EM, there is still work to be done. The Middle East underperforms on most metrics of our Womenomics Index, with very few women in power or in the labour force, and fewer laws in place to protect women's rights.

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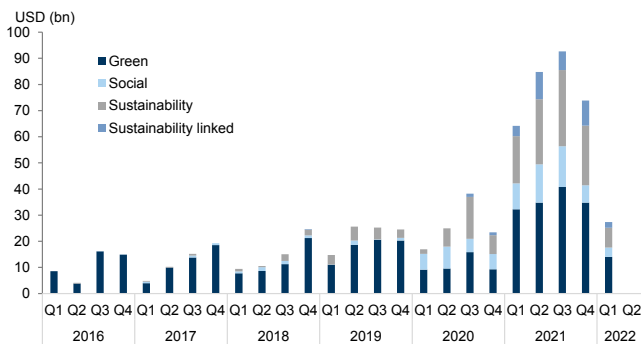
# A growing interest in ESG, with more than one way to invest for impact

In this *Global Markets Analyst* we update our EM sovereign ESG scores, and look at recent trend changes in these scores on both a country-specific and a regional level. We also explore the themes of climate change and gender equality through the lens of our ESG scores and our recently published Womenomics Index.

Generally, we find that EM sovereigns' ESG scores continue to trend higher, driven by improvements in Governance. Conversely, our Environment score shows no significant improvement over the last three years. This is despite the increased focus on Environment among policymakers and investors, as seen during last year's COP26. However, sovereign investing based on Environment alone is complicated by lagged or missing data on countries' climate performance. It may be helpful instead to focus on countries' intent: for example, has the country signed up to Net Zero, and by what year? Here, we find that while only ~8% of countries in the EMBI Global Diversified index are recorded as having set no target to tackle climate change, only ~22% report annually on their targets.

More broadly, we continue to observe an increased investor interest in ESG. The growing interest in sustainable investing in the EM sovereign space can also be seen through EM ESG issuance, which increased to \$315bn last year, exceeding the total amount issued in the previous four years (Exhibit 1). The increase in issuance likely reflects increased investor demand, as seen by the ever-expanding number signatories to Principles for Responsible Investing (PRI) (Exhibit 2), where asset managers and asset owners have committed to taking a responsible investment approach, with at least 50% of their ~\$120 trillion under management, up from just under ~\$90 trillion in 2019.

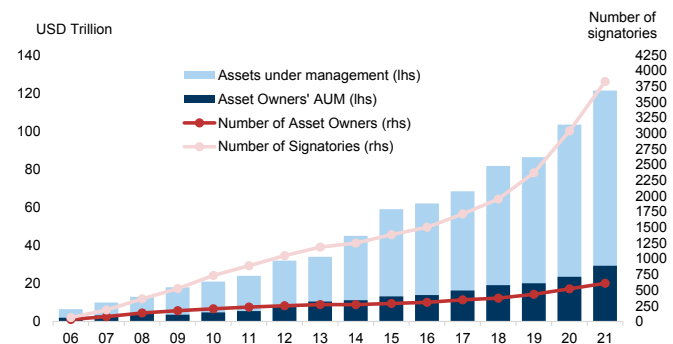
**Exhibit 1: EM ESG issuance picked up substantially in 2021 ...**



Source: Bloomberg, Goldman Sachs Global Investment Research

**Exhibit 2: ... alongside a further increase in AUM going towards ESG**

Number of PRI signatories and their assets under management



PRI stands for Principles for Responsible Investment, and signatories are asset owners, investment managers and service providers who commit to integrating ESG factors into investment decision making.

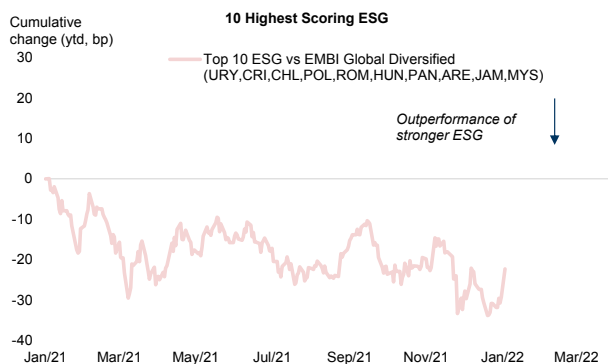
Source: PRI, Goldman Sachs Global Investment Research

Investing based on sovereign ESG has also helped market performance marginally in recent years. Within EM credit, the sovereigns with the highest ESG scores

outperformed the EMBI Global Diversified index last year and into this year ([Exhibit 3](#)). But whether this means that EM sovereign credit pricing now takes into account ESG factors is still too early to tell. For example, their outperformance last year may also reflect the ‘flight-to-quality’ and weaker sentiment within fixed income over the period, given the implicit rating bias found within sovereign ESG scores whereby the highest-scoring sovereigns tend to be investment grade (IG) ([Exhibit 3](#)).

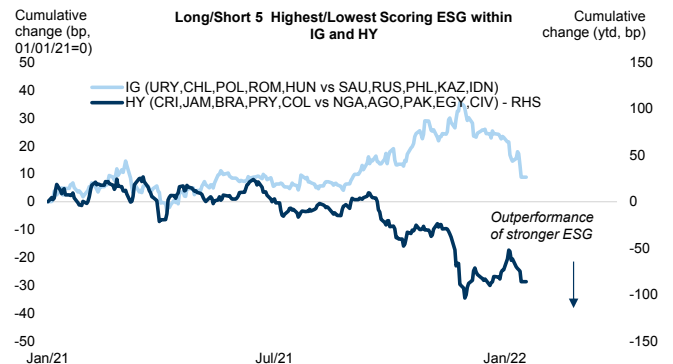
Indeed, if we control for ratings, and look at the relative performance of the top/bottom five ESG scoring sovereigns within IG and high yield (HY), we do not find a significant outperformance of higher-scoring sovereigns within IG ([Exhibit 4](#)). We do find some outperformance within HY (this excludes distressed credits), which may partly reflect that HY is a larger universe than IG, and has a wider spectrum of ‘quality’ within it (more than ~60% of sovereigns in the EMBI index are HY). But if it does reflect some element of ESG pricing, this suggests that investors in the sovereign space are largely taking a ‘best in class’ approach to ESG, which excludes or underweights the lowest-scoring sovereigns, an approach that we (and [the World Bank](#)) have noted may be sub-optimal for a number of reasons.

**Exhibit 3: Within EM credit, the sovereigns with the highest ESG scores outperformed last year**



Source: Bloomberg, Goldman Sachs Global Investment Research

**Exhibit 4: Controlling for ratings, we find no significant outperformance within higher scoring IG sovereigns, but still some outperformance within HY**



Source: Bloomberg, Goldman Sachs Global Investment Research

## Introducing our EM Sovereign ESG Scores for 2022

In January 2020, we published an initial framework for [ESG investing in the EM sovereign credit](#) space. This included curating a set of variables for each of the Environment, Social and Governance criteria, mainly from the World Bank’s ESG database, but selectively complemented with data series from other sources. The Box at the end of this section provides details on our scores, and discusses recent changes to our sovereign ESG scores: we have removed two variables which have been discontinued (or are no longer being updated at an annual frequency), and changed another due to its lagging nature. More details on each of the variables feeding into our score can be found in Appendix.

We have updated our EM sovereign ESG scores with the latest available data and

discuss the recent developments on a country-specific and regional level for countries in the EMBI Index (which tracks the USD bonds of EM sovereigns). Our scores do include EM sovereigns that are not in the EMBI Global Diversified Index, and also extend to DM sovereigns for benchmarking purposes (these can both be found in [Exhibit 30](#) and [Exhibit 31](#) in the Appendix.)

As we discussed in [last year's ESG update](#), the lagging nature of the input into our EM sovereign ESG scores makes it difficult to make meaningful inferences on year-on-year changes, so instead we focus on changes over a 3-year horizon. Overall, we find that EM ESG scores continue to trend higher, driven by improvements in Governance and Social, whereas Environment has stalled.

### ESG scores continued to improve, led by gains in Asia

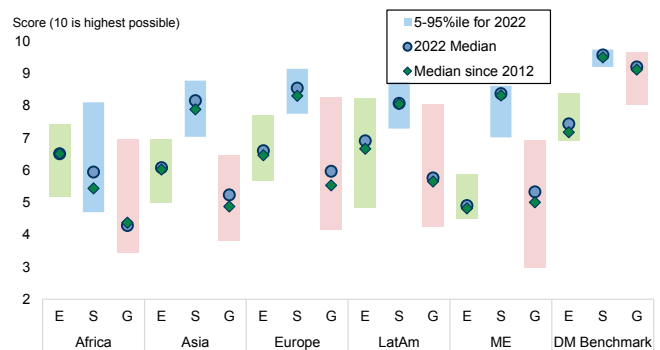
Overall, the median EM sovereign's ESG score has continued to improve across time and currently stands at 6.54, ~2 points below the median score in our DM benchmark ([Exhibit 5](#)). While EM has come from a lower starting point than DM, the latest score represents a larger increase of ~0.46 points in the median EM ESG score over the last 10 years of available data.

Within EM, Asia remains the region with the largest improvement, both over the last three years and on a longer horizon. This is followed by EM Europe, Latin America (LatAm) and Africa, where the level of the score is the lowest, whereas the Middle East (ME) has recorded the least improvement.

**Exhibit 5: Overall, the median EM sovereign's ESG score has continued to improve across time and currently stands at 6.54, ~2 points below the median score in our DM benchmark**  
10 is the highest possible ESG score; Table shows the median ESG score by region

Aggregate	ESG Score			Change (annualized)	
	2012	2019	2022	12-22	19-22
EM	6.08	6.42	6.54	0.05	0.04
DM Benchmark	8.36	8.57	8.68	0.03	0.03
Africa	5.27	5.48	5.60	0.03	0.04
Asia	6.05	6.32	6.55	0.05	0.08
Europe	6.55	6.77	6.93	0.04	0.05
LatAm	6.52	6.83	6.81	0.03	-0.01
Middle East	6.00	6.11	6.05	0.00	-0.02

**Exhibit 6: Within EM, most countries score highest on Social and lowest on Governance**



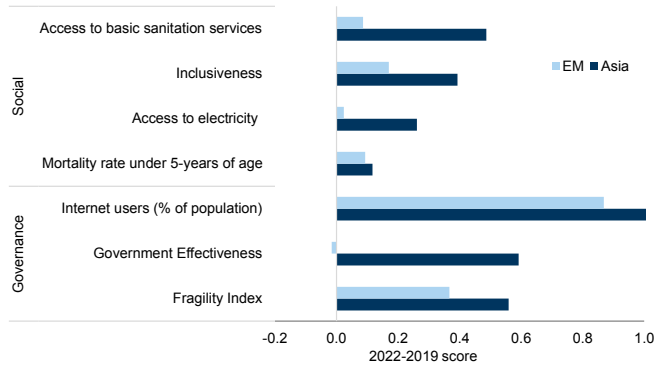
Source: World Bank, SDG Database, Fund for Peace, Freedom House, University of Notre Dame, The Social Progress Imperative, Our World in Data, European Commission, IPU, Haver Analytics, Goldman Sachs Global Investment Research

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The improvements in Asia over the last three years of data were driven by the Governance and Social scores, while the stagnation in the Middle East has been more broad-based. In Asia, rising internet access and government effectiveness and a declining Fragility Index have contributed to a higher Governance score, whereas better access to basic sanitation services and electricity and improvements in inclusiveness have driven the improvement of the Social score compared with the median EM ([Exhibit](#)

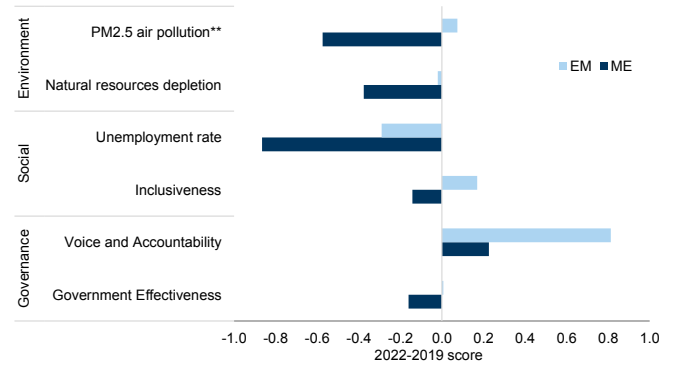
7). Conversely, the variables where the Middle East has lagged other EMs include natural resource depletion and air pollution in Environment, unemployment and inclusiveness in Social, and those related to institutional quality in Governance (Exhibit 8).

**Exhibit 7: Improvements in Asia over the last three years were driven by the Social and Governance scores...**



Source: World Bank, SDG Database, Fund for Peace, The Social Progress Imperative, Haver Analytics, Goldman Sachs Global Investment Research

**Exhibit 8: ... whereas the decline in the Middle East has been more broad-based**



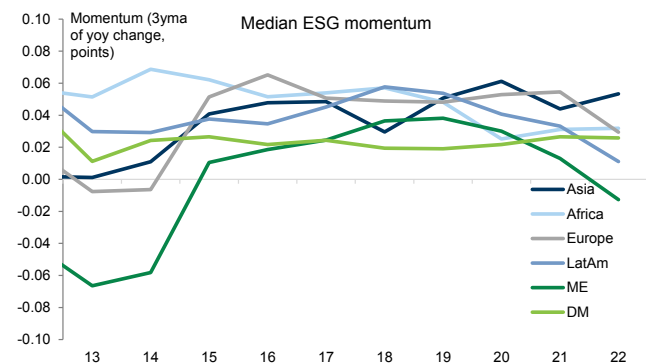
\*\* measured as mean annual exposure, micrograms per cubic metre

Source: World Bank, SDG Database, Fund for Peace, Freedom House, University of Notre Dame, The Social Progress Imperative, Our World in Data, European Commission, IPU, Haver Analytics, Goldman Sachs Global Investment Research

**Momentum remains highest in Governance, and has continued slow in Environment**

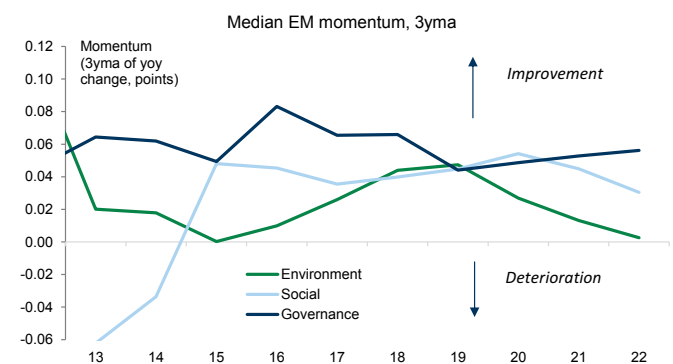
In Exhibit 9, we show the momentum (measured as the 3-year moving average of the year-on-year change) of the median EM sovereign’s ESG scores by region. Asia continued to be the region with the highest momentum across EM sovereigns, followed by Africa where momentum increased over the last year and EM Europe. In contrast, in the Middle East (ME) momentum has slowed after improving prior to 2019 (Exhibit 9).

**Exhibit 9: ESG momentum remains the highest in Asia, whereas in the Middle East, momentum has slowed**



Source: World Bank, SDG Database, Fund for Peace, Freedom House, University of Notre Dame, The Social Progress Imperative, Our World in Data, European Commission, IPU, Haver Analytics, Goldman Sachs Global Investment Research

**Exhibit 10: Momentum remains the highest in Governance and continued to slow in Environment**



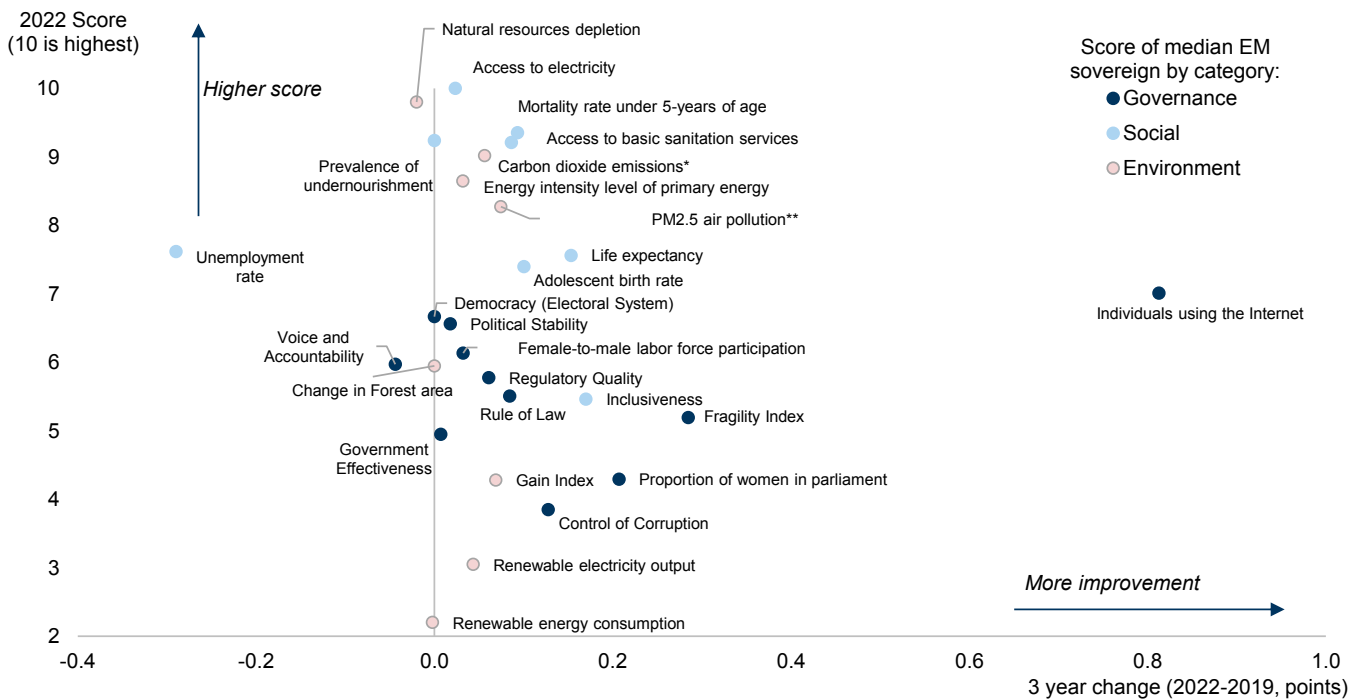
Source: World Bank, SDG Database, Fund for Peace, Freedom House, University of Notre Dame, The Social Progress Imperative, Our World in Data, European Commission, IPU, Haver Analytics, Goldman Sachs Global Investment Research

Within EM, as in previous years, momentum continues to be the highest in Governance (Exhibit 10) and has increased slightly over the last year. Looking across the variables in Exhibit 11, we show that this has mostly been driven by improvements related to

infrastructure (captured through the share of the population with internet access), followed by political fragility (captured through the Fragility Index), and the proportion of women in parliament. More specifically, we find that, over the last three years of available data, the share of individuals using the internet has increased from ~59% to ~70% of the population for the median EM sovereign (compared with ~91% for DM). Additionally, momentum remains positive in the Social score for the median EM as most variables in this aggregate (light blue dots in Exhibit 11) have improved, led by inclusiveness and life expectancy. However, the unemployment rate, for which the latest datapoint is 2020, has deteriorated, reflecting the Covid-19 recession.

In contrast, momentum has been slowing in Environment and is now near zero. We look into this in more detail in the section below, but Exhibit 11 shows that the stagnation is broad-based, with only 5 out of 8 variables (the Gain Index, renewable electricity output, air pollution, energy intensity level of primary energy, and carbon dioxide emissions) showing a small improvement over the last three years where data was collected.

**Exhibit 11: Governance has improved the most, followed by Social, whereas Environment-related variables have lagged**



\* measured per \$1000 GDP (Tonnes); \*\* measured as mean annual exposure, micrograms per cubic metre

Source: World Bank, SDG Database, Fund for Peace, Freedom House, University of Notre Dame, The Social Progress Imperative, Our World in Data, European Commission, IPU, Haver Analytics, Goldman Sachs Global Investment Research

Finally, in Exhibit 12 we look at the overall momentum of EM sovereigns and how it compares to the most recent ESG score. We continue to find a positive correlation between sovereigns' ESG scores and the momentum of their scores: the highest-scoring sovereigns – Uruguay, Costa Rica, Latvia and Lithuania – also have positive momentum in recent years.

Turning to particular sovereigns, **the countries with the highest momentum for 2022**

**include** countries in EM Europe (Armenia, Ukraine, Uzbekistan) and in Asia (Indonesia, India and China). In EM Europe, the improvements were especially driven by Governance, such as an increase in the proportion of women in parliament in Armenia and Ukraine, alongside overall improvements in institutional quality and infrastructure. In Asia, the improvements were slightly more diverse across the three categories, but often related to infrastructure. For example, Indonesia saw a decline in its rate of deforestation (measured by the 3-year moving average of the change in forest land area), alongside general improvements in infrastructure, especially access to the internet. In India, infrastructure improvements have been the main driver of its higher ESG score in recent years, with more people gaining access to the internet, basic sanitation services and electricity. Finally, the improvement in China's ESG score has been more broad-based, with a significant improvement in the Gain Index over recent years (i.e., a reduction in the exposure to climate change), and the general population's access to the internet.

Conversely, **a number of sovereigns have seen a decline in their ESG scores in recent years**. In particular, Nigeria saw the largest decline, due in part to a lower democracy score and a more broad-based decline in its Environment score. **A higher unemployment rate contributed to a lower Social score across the board, but Governance was the largest contributing factor for the countries that have seen a decline in their ESG scores** over the last three years: lower institutional quality (as measured by the Worldwide Governance Indicators) drove the decline in Chile, Jordan, Argentina and Lebanon. Similarly, weaker governance drove the decline in Azerbaijan and Trinidad and Tobago, alongside weaker Environment scores, driven in part by higher natural resource depletion. Natural resource depletion also drove a large part of the decline in oil exporters, such as Qatar, Saudi Arabia, Oman and Cameroon. Finally, Colombia stands out because most of the decline to its ESG score stems from the Social category, in particular with regard to the inclusion of minorities and women as contributing members of society, which is measured through the Inclusiveness Index by the Social Progress Imperative.

**Exhibit 12: We find a positive correlation between countries' current ESG scores and the momentum of their ESG scores in recent years**

Countries highlighted in red experienced debt events (i.e., defaults/restructurings) in 2019-2021



Source: World Bank, SDG Database, Fund for Peace, Freedom House, University of Notre Dame, The Social Progress Imperative, Our World in Data, European Commission, IPU, Haver Analytics, Goldman Sachs Global Investment Research

**Changes and updates to our methodology:**

**Our ESG scores:**

Our ESG scores span 76 EM sovereigns and are based off 27 variables. We constructed the scores using variables which cover a wide range of aspects across the three categories:

- We currently have 8 variables for our **Environment score**, which cover current levels of resource use, pollution and energy consumption, as well as environmental risks related mainly to climate change.
- Our **Social score** spans 8 variables, and relates to inequality in terms of employment and access to basic resources, as well as the health and nutrition levels of the population.
- We have 11 variables in our **Governance score**, which mostly relate to policy and effectiveness of policy, such as the country's infrastructure, rule of law, control of corruption and female participation both in the workforce and in government.

As we discussed in more detail in our [initial publication](#), we constructed our ESG scores in three steps, starting by drawing from the [World Bank database](#) of ESG indicators and complementing this with variables from a number of other sources, which we grouped into the Environment, Social and Governance categories. Afterwards, we standardised the data from 0 to 10 (where 10 is the highest) based on the distribution of each variable over the last 10 years across all countries, such that we obtained a ranking for each variable relative to its historical and cross-sectional distributions (i.e., these scores are not absolute rankings). Here, we assumed that the current lag of the data has been persistent over time, such that if,



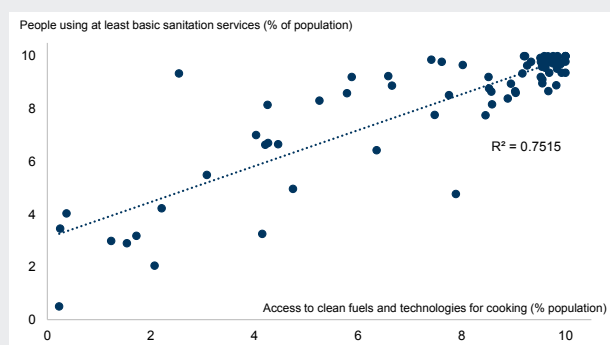
for a given variable, we are using the 2020 data for the 2022 score, the 2021 score would use the 2019 data and so on. Finally, we average across all the component series in the Environment category to arrive at an average score for each country in each year; and analogously for the Social and Governance categories, with the ESG score as an equally-weighted average of these three categories.

### Removing and modifying variables:

We have made adjustments to two variables in this update and removed two variables from the score, thus going from 29 variables to 27 variables.

- Tweaks to the measurement of deforestation:** In terms of adjustments, in the Environment score, we have tweaked our calculation for the change in forest area (% land area) after adding more historical data points, such that our sample now starts from 2004 (versus 2010 previously). Instead of taking a year-on-year percentage change, we now calculate the 3-year moving average of the year-on-year difference in forest area (% land area) in order to smooth out one-off forest area reductions and to not overestimate the impact of changes in sovereigns with very small forest areas.
- Replaced access variable within Social score for more data:** In the Social score, we also changed one of our inequality metrics due to data availability. We have replaced “Access to clean fuels and technologies for cooking (% population)” where the latest data point was for 2016 with “People using at least basic sanitation services (% of population)”, which has data available up to 2020. As [Exhibit 13](#) shows, the scores resulting from the two variables are positively correlated. Looking across regions, we find that Africa lags the other regions ([Exhibit 14](#)), a trend we see across the Social score.

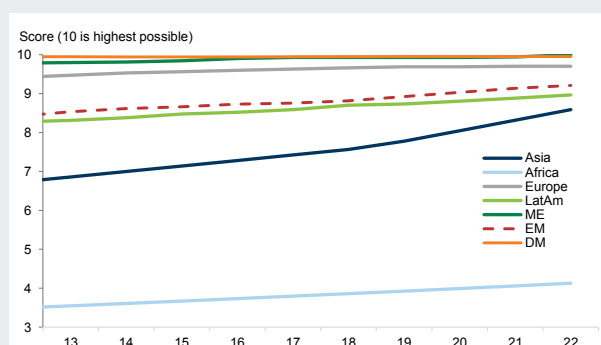
**Exhibit 13: Our new and old measures of access to basic standards of living are strongly correlated**



Source: World Bank, Haver Analytics, Goldman Sachs Global Investment Research

**Exhibit 14: Africa lags other regions on access to basic sanitation services**

The underlying data lag by 2 years such that the 2022 score uses the 2020 data, and so on



Source: World Bank, Haver Analytics, Goldman Sachs Global Investment Research

- Excluded ‘prevalence of overweight’ in Social score:** We removed the prevalence of overweight in the population in the Social score as the latest data point is for 2016 and this has not been updated since 2019. Here, we did not find a good substitute that also fulfilled the criteria of sufficient data availability across countries and over time.
- Excluded ‘ease of doing business’ in Governance score:** We also removed the World Bank’s ‘Ease of Doing Business’ category from our Governance score, after the World Bank announced in [September 2021](#) that it would discontinue the scores. Alternatives to this measure include (i) the Global

Competitiveness Index (GCI) by the World Economics Forum, and (ii) the Fraser Institute's Economic Freedom index, particularly the Business Regulations sub-section. However, on the GCI, a change in 2018 methodology meant that we were unable to incorporate this index into our ESG scores consistently over time. As for the Fraser Institute's index, this also leveraged the ease of doing business index as a data input, among other inputs. As such, we have decided to remove this indicator for now and reassess further data sources for our update next year.

- **Extending the index to other EMs:** Finally, we have also extended our scores to four additional sovereigns: the Czech Republic, South Korea, Thailand and Uzbekistan.

## Environment: A slowdown in momentum

As described above, Environment was the main score that appears to have stagnated in recent years. This is despite the climate being on top of everyone's minds last year in relation to COP26. Our Environment index is designed to capture a host of different elements, such as the current levels of resource use, pollution and renewable energy consumption and output, as well as environmental risks related mainly to climate change.

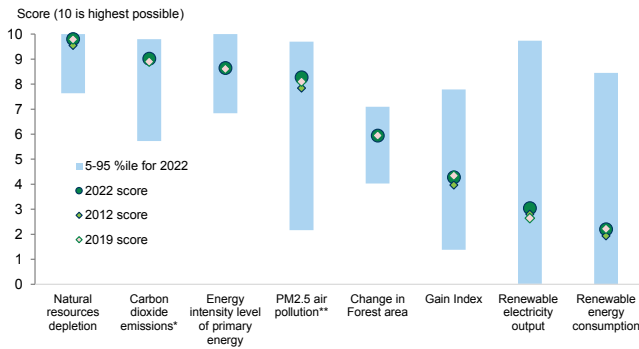
### **The stagnation in Environment was broad-based across variables, with a decline in the Middle East**

A general challenge with sovereign ESG data, which extends to the Environment category, is the lagging nature of the variables. For the input into our Environment scores, 3 out of 8 variables were updated for 2020, two were updated for 2019, and the rest reflect data with a greater lag. As such, measuring genuine progress in recent years is difficult, but looking at trend changes over time should nevertheless give us some indication of the overall direction of travel for EM sovereigns.

With these data limitations in mind, the latest available data for the Environment variables across EM show that the stagnation has been broad-based across the different variables ([Exhibit 15](#)). Generally, the median EM sovereign scores the lowest in the variables related to renewable energy followed by the Gain Index, which captures countries' vulnerability to climate change ([Exhibit 15](#)). Conversely, the median EM country tends to score higher in the variables related to resource use and pollution.

Looking across regions, however, there is a significant dispersion among regions' overall Environment scores, and in their progress over the last three years ([Exhibit 16](#)). The Middle East (ME) has the lowest score at 4.9, as well as a declining score over the last three years. Conversely, EM Europe and Latin America, which score higher, showed a slight improvement over the period.

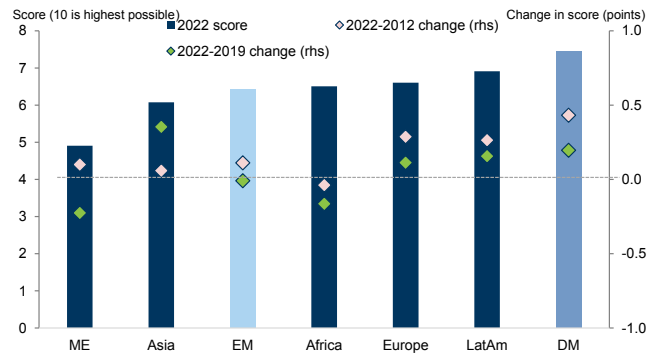
**Exhibit 15: In Environment, the median EM sovereign tends to score lowest on renewable energy consumption and output**



\* measured per \$1000 GDP (Tonnes); \*\* measured as mean annual exposure, micrograms per cubic metre

Source: World Bank, SDG Database, University of Notre Dame, Our World in Data, European Commission, Haver Analytics, Goldman Sachs Global Investment Research

**Exhibit 16: The Middle East scores the lowest on Environment whereas Latin America and EM Europe score highest and have been improving**

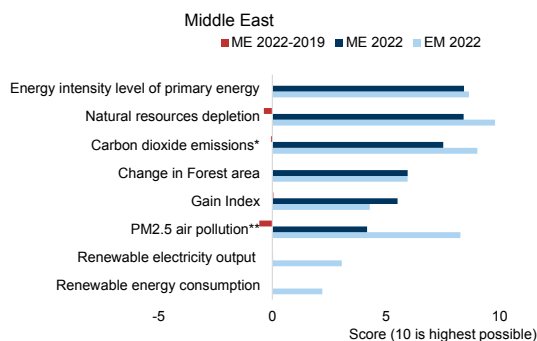


Source: World Bank, SDG Database, University of Notre Dame, Our World in Data, European Commission, Haver Analytics, Goldman Sachs Global Investment Research

Looking specifically at the Middle East’s Environment score, it is especially impacted by its 0% renewable energy consumption and output (Exhibit 17). Moreover, the median Middle East sovereign’s score is lower than the median EM score in terms of pollution, CO2 emissions and natural resource depletion. It was a deterioration in the latter, alongside higher air pollution, that drove the decline in the score over the last three years.

Conversely, Latin America scores highly in the variables related to natural resource depletion and pollution (Exhibit 18) and stands out versus the median EM sovereign when it comes to renewable energy consumption and output (as Exhibit 19 also shows). Nevertheless, Latin America lags other EMs when it comes to deforestation, showing no significant change since 2019 for the median sovereign in the region. Here, the improvement in the Environment score was driven by better air quality, and higher renewable electricity output.

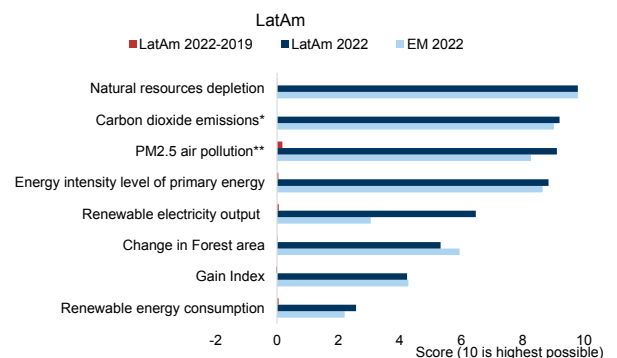
**Exhibit 17: The Middle East underperforms other regions on most variables within Environment, except for the Gain Index ...**



\* measured per \$1000 GDP (Tonnes); \*\* measured as mean annual exposure, micrograms per cubic metre

Source: World Bank, SDG Database, University of Notre Dame, Our World in Data, European Commission, Haver Analytics, Goldman Sachs Global Investment Research

**Exhibit 18: ... whereas LatAm outperforms on most variables, except for deforestation and the Gain index**

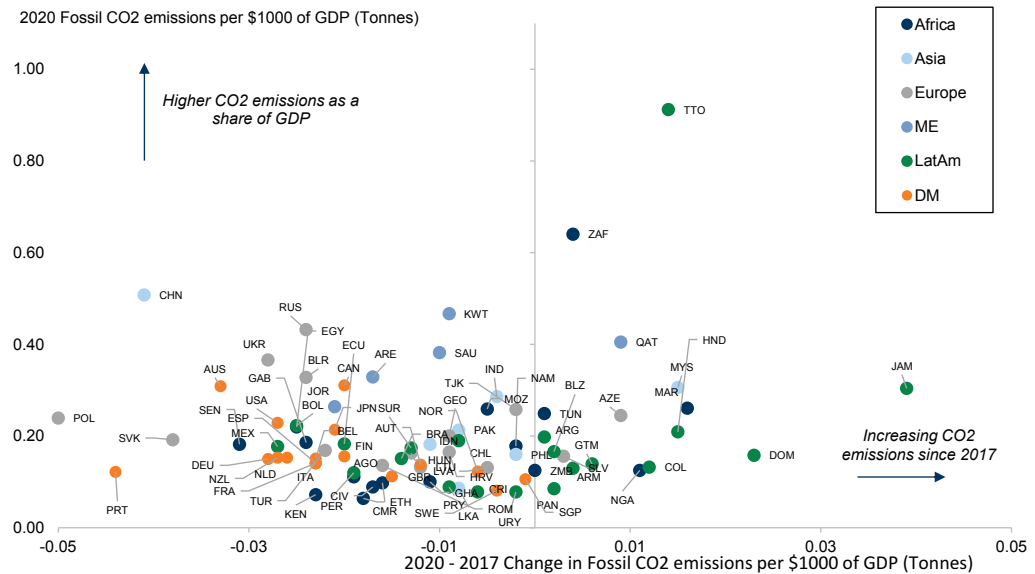


\* measured per \$1000 GDP (Tonnes); \*\* measured as mean annual exposure, micrograms per cubic metre

Source: World Bank, SDG Database, University of Notre Dame, Our World in Data, European Commission, Haver Analytics, Goldman Sachs Global Investment Research

Looking in more detail at one of the variables that dominate the climate debate, and where data frequency is better, in [Exhibit 19](#) we plot the latest measure of carbon emissions for 2019-2020, and look at the change since 2017. Generally, it shows that oil and commodity exporters tend to have the highest CO2 emissions as a share of their GDP, though many have reduced their emissions over the period.

**Exhibit 19: When controlling for the size of GDP, commodity exporters' CO2 emissions are disproportionately higher than other EMs**



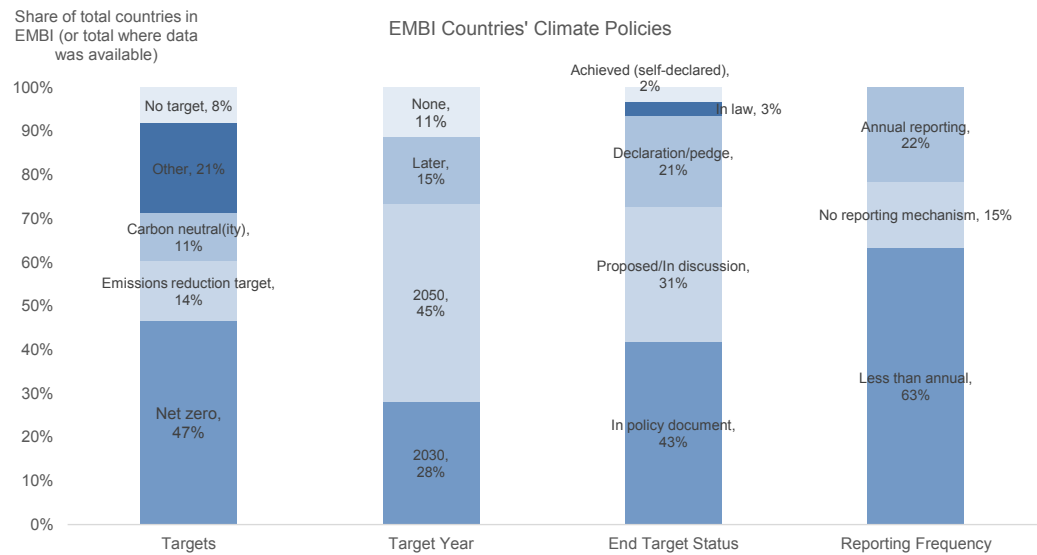
Source: World Bank, SDG Database, University of Notre Dame, Our World in Data, European Commission, Haver Analytics, Goldman Sachs Global Investment Research

**Investing based on policy or countries' intent with respect to climate change also comes with its challenges**

As investing based on sovereigns' performance on environment is complicated by poor data quality, one potential solution could be to look at a government's intent with respect to the environment, such as taking into account its climate pledges. However, this approach may not be that straightforward. For example, data compiled by [Net ZeroTracker](#) shows that, while only 8% of countries in the EMBI appear to have no target in place to tackle climate change, only 22% report annually on their progress with regards approaching their climate targets ([Exhibit 20](#)).

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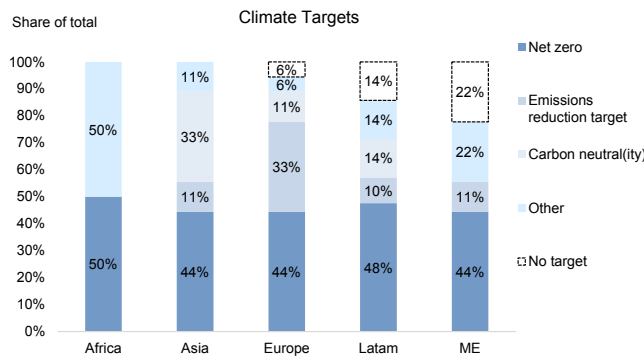
**Exhibit 20: Most countries in EM have some form of target related to limiting the impact of climate change, though only ~22% report annually on their progress**



Source: Net Zero Tracker, Goldman Sachs Global Investment Research

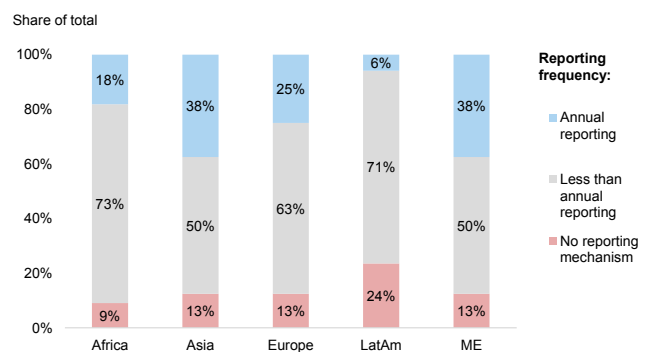
On a regional level, in the Middle East 22% of sovereigns have set no target for tackling climate change, whereas all of the sovereigns in Africa and Asia that are part of the EMBI appear to have a target in place, although some are less 'strict' than net zero. Nevertheless, when it comes to reporting, the Middle East scores similarly or better than other regions, with ~38% of sovereigns reporting annually on their targets. Latin America falls behind, with only 6% of sovereigns reporting annually.

**Exhibit 21: The Middle East has the lowest share of sovereigns with a climate target ...**



Source: Net Zero Tracker, Goldman Sachs Global Investment Research

**Exhibit 22: ... whereas LatAm has a relatively low share of sovereigns which report annually on their targets**



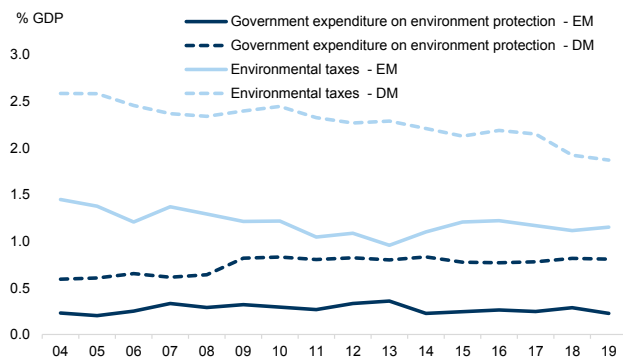
Source: Net Zero Tracker, Goldman Sachs Global Investment Research

While not a perfect measure, another indicator may be government expenditure on environment protection, or environmental taxes. Once controlling for the size of countries' GDP, we find only a small increase in government expenditure across the developed world, and a decline in taxes across both EM and DM (Exhibit 23), though DM both spends more and has higher taxes than EM.

That DM performs better on both metrics is perhaps testament to DM having been the

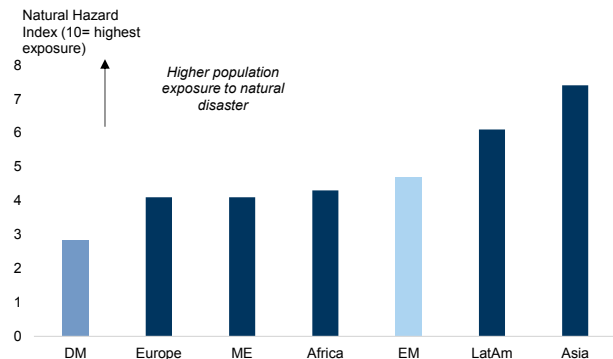
highest emitter, whereas EM is likely to bear most of the cost. Indeed, the Natural Hazard index by INFORM, which scores countries based on the annual average exposure of their population to natural disasters (this is measured based on Earthquakes, Tsunamis, Floods, Tropical Cyclones and Droughts), shows that the median EM is almost twice as exposed as the median DM, with populations in Asia bearing the highest cost (Exhibit 24).

**Exhibit 23: DM tends to spend more on environmental protection and has higher environmental taxes than EM, though the latter has been declining as a share of GDP**



Source: Haver Analytics, Goldman Sachs Global Investment Research

**Exhibit 24: Populations in EM are significantly more exposed to natural disasters than DM**



Source: INFORM, Goldman Sachs Global Investment Research

## Womenomics: Another way to invest for impact

Another way to invest for impact is by focusing on gender equality. Here, the literature argues that women’s role in society can impact both the level of economic outcomes and potentially the riskiness of those outcomes, which should matter to investors. In other words, the impact on both the mean and the volatility of any income or revenue distribution makes Womenomics a relevant consideration for investors who need to assess the riskiness of credits over long horizons.

Last year, we delved into the topic of gender equality by looking at five different factors (education, labour, agency, women in power and health), and noted that while gender equality has improved across the world, women still lag men on all fronts. We also showed that investing for gender equality within EM credit can lead to some outperformance over time, led mostly by additional protection during drawdowns (see the *Global Markets Analyst: Investing in EM Womenomics, from November 29, 2021*).

### Our Womenomics Index has improved over time, led by Education, Agency and Women in Power

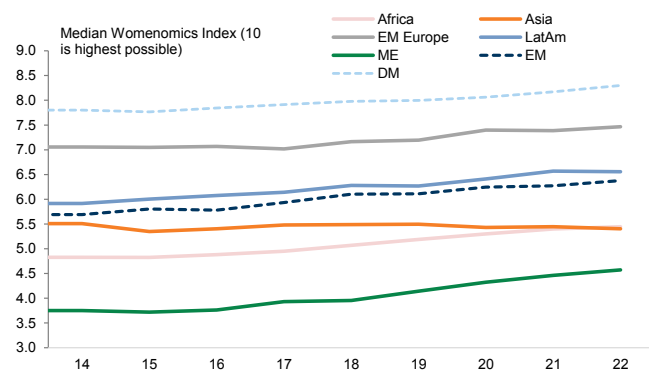
Similar to our ESG scores, our Womenomics Index is constructed to range from 0 to 10, with 10 being the highest possible score. Exhibit 25 shows our median EM sovereign Womenomics Index by region since 2014. The median EM sovereign scores 6.38 out of 10 and this has improved by ~0.7 points since 2014. This is ~2 points lower than the median DM sovereign, which has shown an improvement of ~0.5 points over the same period. Looking at the regional medians, we find that the Middle East (ME) has

improved the most, though it still lags behind other regions. Conversely, the median country in EM Europe scores the highest among EM, but has only improved slightly, with a score of ~7 throughout the sample.

Looking across the categories, we find that the median country scores the highest in the Health category, followed by Agency, with the median country’s score increasing from 7 to 8 over the sample horizon ([Exhibit 26](#)). The Labour Index has improved only marginally (~0.05 points) between 2013 and 2021 and while Education has seen significant improvement over the period, the median score remains relatively low (4.93). Similarly, the median Women in Power Index has improved the most, by ~1.05 points, yet the level remains relatively low in 2021 (4.15).

**Exhibit 25: The Middle East (ME) has improved the most, but still lags other regions**

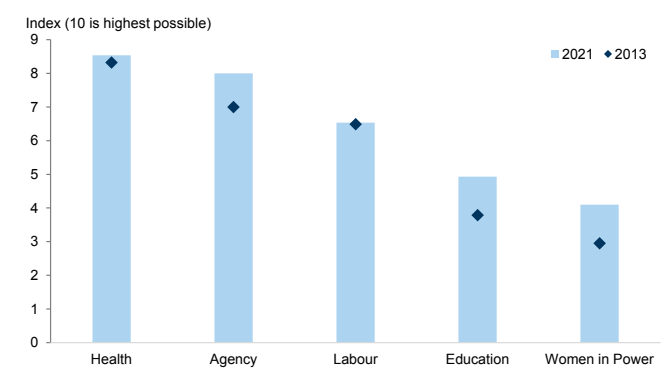
Exhibit shows the median Womenomics Index by region



Source: Haver Analytics, World Bank, UN Sustainable Development Goals, Goldman Sachs Global Investment Research

**Exhibit 26: EM countries score the highest in the Health category followed by Agency**

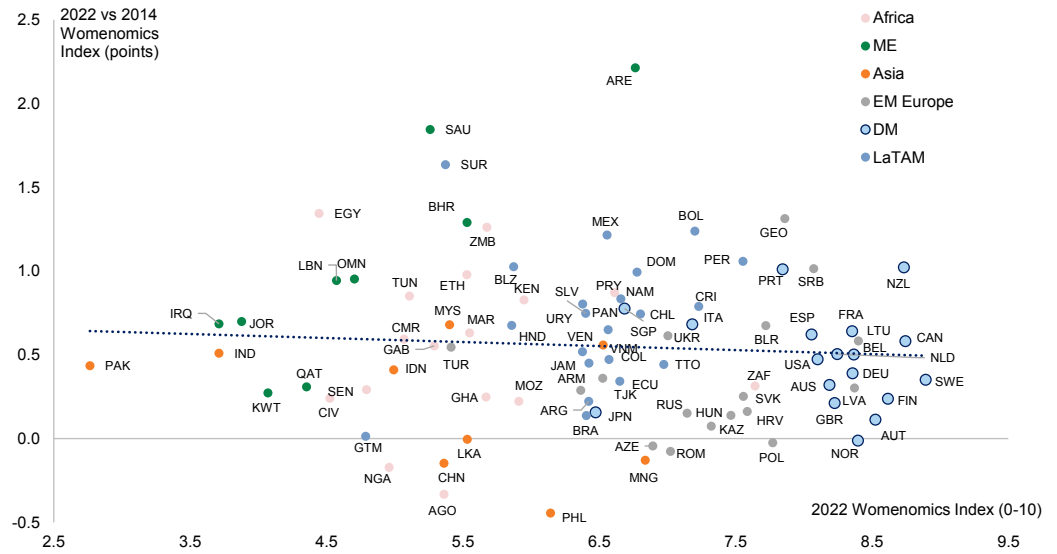
Exhibit shows the median index across the five factors



Source: Haver Analytics, World Bank, UN Sustainable Development Goals, Goldman Sachs Global Investment Research

To better assess the cross-country development over time, [Exhibit 27](#) displays the latest Womenomics Index on the x-axis and the change since 2014 on the y-axis. Here, besides DM, countries in EM Europe score the highest, such as Georgia, Lithuania, Latvia, Serbia, Poland and Belarus, but with a large dispersion in development, showing a significant improvement in Georgia and a small decline in Poland. Conversely, we find countries in the Middle East, Africa and Asia often score the lowest, but again with a significant dispersion both in the overall score and their development since 2014.

**Exhibit 27: There is a high dispersion in the development of the Womenomics Index across regions**



Source: Haver Analytics, World Bank, UN Sustainable Development Goals, Goldman Sachs Global Investment Research

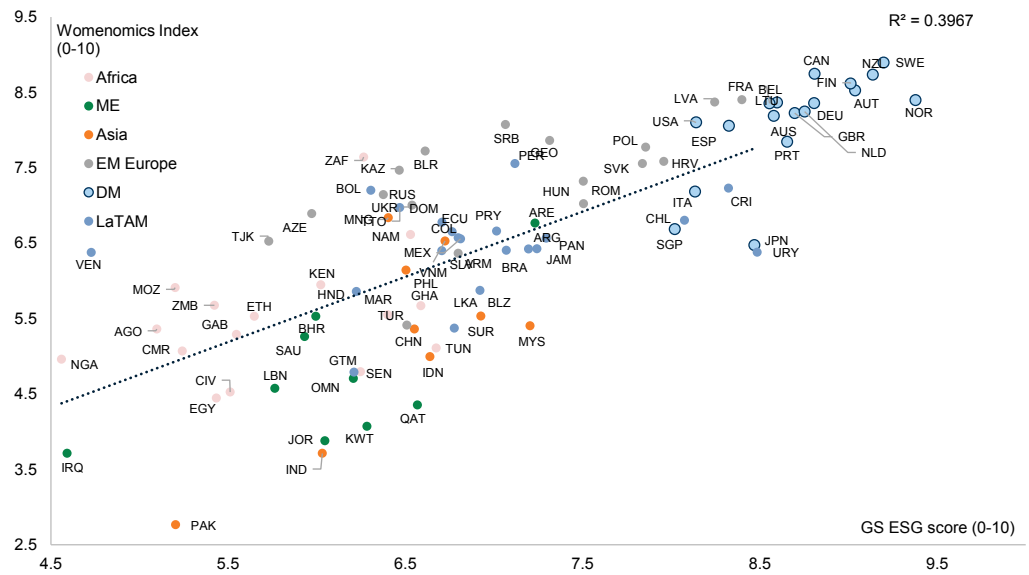
**More broadly, gender equality is correlated with ESG**

It is worth noting that our EM Sovereign ESG Scores also incorporate a subset of the variables used to construct the EM Womenomics Index, namely the female-to-male labour force participation, women in parliament and the adolescent fertility rate. As such, 3 out of the 11 variables in our Womenomics Index feature in our ESG scores, which in turn has 27 variables (i.e., ~27% of the variables in our Womenomics Index make up ~11% of our ESG Index).<sup>1</sup> Although the overlap is relatively small, we find a strong relationship between our Womenomics index and ESG scores, suggesting Womenomics may be correlated with a broader set of variables, as the literature suggests (Exhibit 28).

<sup>1</sup> Within the Womenomics Index we count Agency as one variable (which is made up of 10 underlying data series) and labour force participation controlling for education as one variable (which is made up of 3 underlying data series).



**Exhibit 28: There is a strong positive correlation between our Womenomics Index and ESG scores**



Source: World Bank, SDG Database, Fund for Peace, Freedom House, University of Notre Dame, The Social Progress Imperative, Doing Business, Our World in Data, European Commission, Haver Analytics, UN Sustainable Development Goals, Goldman Sachs Global Investment Research

**Investing based on Womenomics would have led to some outperformance over time**

To assess how investing based on Womenomics might impact investor returns over time, we take three different approaches. The first is a long/short strategy based on the entire universe of EM sovereigns. Here, we go long the 8 highest-scoring countries at the beginning of the year, and short the 8 bottom-scoring countries. The other two strategies follow a similar approach, but within IG and HY respectively, to control for a potential rating and spread bias in the womenomics scores.

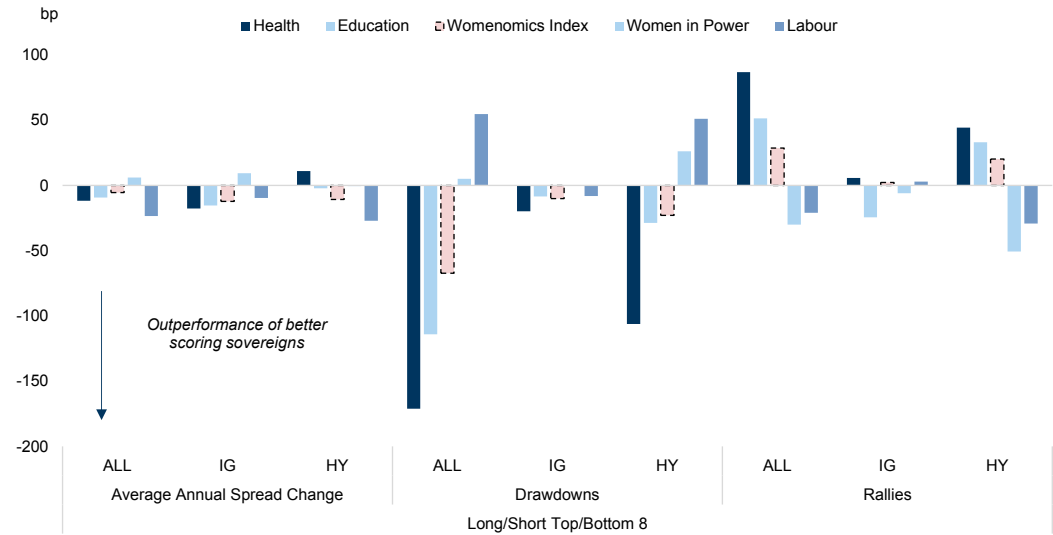
Exhibit 29 shows the spread performance of the three investment baskets since 2014 (negative values means higher Womenomics scoring sovereigns have outperformed), as well as if it had been implemented across the five factors. We also show how the relative performance would have performed during risk-off and risk-on episodes.

Overall, we find that investing based on higher scoring Womenomics countries would have outperformed over time, but that most of this outperformance would have come during drawdowns, thereby exhibiting a ‘flight-to-quality’. While this may be indicative of a rating bias (indeed, higher scoring sovereigns also have higher ratings), we find a similar pattern even when controlling for ratings (i.e., within IG and HY), though the magnitude of the outperformance during drawdowns is smaller.

Across the factors, we find that Health and Education exhibit the strongest ‘flight-to-quality’, whereby most of the outperformance comes from protection during drawdowns. Conversely, we find that Women in Power and Labour tend to be higher beta in nature, especially within HY, where they lead to outperformance in rallies and underperformance during drawdowns. This suggests that focusing on various aspects of gender equality within the sovereign investment space can offer some diversification of risks within the portfolio as well.

**Exhibit 29: Investing based on Womenomics in EM would have resulted in some outperformance over time, led mostly by additional protection during drawdowns**

Exhibit shows the average returns of a long/short strategy of the top/bottom 8 sovereigns within each factor since 2014



Source: Bloomberg, Goldman Sachs Global Investment Research

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# Appendix

## 1) Summary of latest ESG scores and momentum

### Exhibit 30: Latest EM scores and momentum

Momentum is in bp

ISO Code	Country	ESG 2022		Environment 2022		Social 2022		Government 2022	
		Score	Momentum	Score	Momentum	Score	Momentum	Score	Momentum
URY	Uruguay	8.49	0.84	8.40	-2.36	8.73	-8.28	8.33	13.16
LTU	Lithuania	8.40	2.64	7.68	-5.38	9.10	4.06	8.42	9.23
CRI	Costa Rica	8.32	0.92	8.24	1.01	8.69	-9.41	8.04	11.17
LVA	Latvia	8.25	1.43	7.76	-2.68	8.75	2.52	8.22	4.45
CZE	Czech Republic	8.11	1.10	6.71	1.59	9.45	2.79	8.16	-1.09
KOR	South Korea	8.09	5.13	6.33	3.91	9.61	1.20	8.35	10.27
CHL	Chile	8.07	-2.79	7.32	2.29	8.86	-5.36	8.04	-5.29
HRV	Croatia	7.96	6.62	7.46	2.08	9.01	8.60	7.40	9.19
POL	Poland	7.86	0.50	6.63	1.78	9.34	4.86	7.59	-5.15
SVK	Slovakia	7.84	4.96	6.67	0.26	8.99	8.98	7.84	5.63
ROM	Romania	7.51	3.32	7.08	-0.98	8.60	4.67	6.84	6.27
HUN	Hungary	7.50	0.11	6.58	0.89	9.00	-0.11	6.94	-0.45
GEO	Georgia	7.31	2.35	7.49	1.03	7.96	4.81	6.49	1.21
PAN	Panama	7.29	1.11	7.45	4.52	7.93	-4.17	6.50	2.97
JAM	Jamaica	7.24	6.16	6.35	-1.65	8.53	9.76	6.85	10.39
ARE	United Arab Emirates	7.23	5.78	5.75	1.27	8.62	-2.17	7.32	18.26
MYS	Malaysia	7.20	5.33	6.15	-0.96	8.84	3.04	6.62	13.91
ARG	Argentina	7.19	-1.51	6.36	0.89	8.63	-0.88	6.60	-4.55
PER	Peru	7.12	4.44	6.96	5.58	8.11	-1.52	6.28	9.25
BRA	Brazil	7.07	0.55	7.49	5.35	8.07	-0.20	5.65	-3.51
SRB	Serbia	7.06	3.99	6.42	5.68	8.65	9.04	6.13	-2.77
PRY	Paraguay	7.02	5.21	7.58	2.39	7.91	0.20	5.56	13.04
LKA	Sri Lanka	6.93	7.35	7.31	9.64	8.63	3.53	4.84	8.89
BLZ	Belize	6.92	3.10	6.91	1.68	8.31	6.69	5.54	6.92
MEX	Mexico	6.81	3.38	6.17	3.51	8.50	6.19	5.76	0.46
ARM	Armenia	6.80	10.97	6.52	2.84	8.07	5.81	5.81	24.25
COL	Colombia	6.80	-5.53	7.05	-6.38	7.66	-12.72	5.68	2.50
SUR	Suriname	6.78	4.19	6.59	14.96	7.92	-1.87	5.81	-0.51
ECU	Ecuador	6.76	2.80	6.76	2.78	8.17	-2.40	5.36	8.03
THA	Thailand	6.73	10.49	6.29	5.79	8.79	5.21	5.12	20.47
VNM	Vietnam	6.72	1.61	6.26	-13.61	8.68	8.09	5.23	10.36
DOM	Dominican Republic	6.71	3.01	6.46	-0.09	7.73	-0.18	5.93	9.29
SLV	El Salvador	6.71	1.56	6.72	0.21	7.91	2.26	5.49	2.21
TUN	Suriname	6.67	3.22	5.85	-1.08	8.42	0.15	5.75	10.61
IDN	Indonesia	6.64	11.75	6.08	16.38	8.03	5.90	5.81	12.97
BLR	Belarus	6.61	0.70	6.17	1.48	8.96	3.11	4.71	-2.47
GHA	Ghana	6.59	3.16	6.76	-6.29	6.70	7.46	6.30	8.31
QAT	Qatar	6.57	-2.65	4.91	-8.00	8.45	-5.06	6.35	5.11
CHN	China	6.55	9.02	5.94	11.88	8.60	4.54	5.12	10.65
UKR	Ukraine	6.54	9.94	5.86	4.91	8.50	8.59	5.25	16.33
NAM	Namibia	6.53	4.87	7.23	2.11	5.41	6.88	6.94	5.62
TUR	Turkey	6.51	2.80	6.69	8.65	8.16	-2.47	4.67	2.23
PHL	Philippines	6.50	2.19	6.42	-0.70	7.84	6.23	5.25	1.04
TTO	Trinidad & Tobago	6.47	-2.46	4.17	-2.35	8.58	-2.37	6.66	-2.67
KAZ	Kazakhstan	6.47	1.54	5.75	-2.35	8.29	-0.40	5.36	7.37
MNG	Mongolia	6.40	2.93	4.82	-16.30	8.16	12.27	6.24	12.82
MAR	Morocco	6.40	4.57	6.17	1.09	8.00	1.87	5.03	10.77
RUS	Russia	6.38	3.09	6.41	0.29	8.30	3.69	4.42	5.29
BOL	Bolivia	6.30	2.84	5.85	6.81	7.68	4.71	5.38	-2.99
KWT	Kuwait	6.28	0.72	4.77	-3.45	8.60	-5.78	5.47	11.38
ZAF	South Africa	6.26	2.81	5.29	-0.65	6.53	0.79	6.97	8.29
SEN	Senegal	6.25	4.83	5.93	-0.74	6.90	9.01	5.91	6.21
UZB	Uzbekistan	6.23	10.92	5.40	2.95	8.38	3.50	4.92	26.31
HND	Honduras	6.22	0.33	6.94	6.12	7.48	-2.38	4.25	-2.75
GTM	Guatemala	6.21	-0.42	7.11	-2.08	7.29	0.37	4.23	0.44
OMN	Oman	6.21	-1.26	4.60	-8.06	8.57	-2.29	5.45	6.56
JOR	Jordan	6.05	-1.99	5.95	4.58	7.60	-5.67	4.59	-4.87
IND	India	6.03	7.32	5.26	3.49	7.65	9.68	5.18	8.78
KEN	Kenya	6.02	7.99	7.48	8.50	6.12	12.64	4.47	2.84
BHR	Bahrain	6.00	-0.88	4.64	-4.82	8.02	-5.25	5.33	7.41
AZE	Azerbaijan	5.97	-2.72	5.72	-4.69	7.84	0.61	4.35	-4.07
SAU	Saudi Arabia	5.93	-2.58	4.94	-6.50	8.07	-3.87	4.79	2.62
LBN	Lebanon	5.76	-4.69	5.56	-3.71	8.37	-4.11	3.36	-6.25
TJK	Tajikistan	5.73	3.44	6.93	-3.74	7.21	4.93	3.04	9.15
ETH	Ethiopia	5.65	9.06	7.40	5.66	5.52	6.99	4.03	14.54
GAB	Gabon	5.55	2.73	6.52	-3.09	6.12	7.66	4.00	3.63
CIV	Ivory Coast	5.51	0.85	6.98	-0.53	5.35	2.96	4.20	0.11
EGY	Egypt	5.43	4.52	4.84	-5.01	7.77	5.76	3.69	12.80
ZMB	Zambia	5.42	0.45	7.21	-1.36	4.70	9.85	4.36	-7.13
CMR	Cameroon	5.24	-2.84	6.50	-7.85	5.77	5.46	3.46	-6.13
PAK	Pakistan	5.20	3.22	5.83	3.64	6.62	4.64	3.16	1.38
MOZ	Mozambique	5.20	0.97	6.71	-1.66	4.71	10.68	4.19	-6.10
AGO	Angola	5.10	4.24	6.31	-1.67	4.92	6.44	4.05	7.94
VEN	Venezuela	4.73	-12.85	4.84	0.78	7.29	-17.45	2.06	-21.89
IRQ	Iraq	4.59	-0.63	4.41	-7.55	6.62	5.50	2.74	0.17
NGA	Nigeria	4.56	-9.17	5.67	-16.36	4.70	-1.23	3.31	-9.92

Source: World Bank, SDG Database, Fund for Peace, Freedom House, University of Notre Dame, The Social Progress Imperative, Our World in Data, European Commission, IPU, Haver Analytics, Goldman Sachs Global Investment Research

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**Exhibit 31: Latest scores and momentum of DMs used for benchmark purposes**

Momentum is in bp

ISO Code	Country	ESG 2022		Environment 2022		Social 2022		Government 2022	
		Score	Momentum	Score	Momentum	Score	Momentum	Score	Momentum
AUS	Australia	8.58	1.71	6.95	3.03	9.56	0.61	9.23	1.49
AUT	Austria	9.04	2.62	8.22	2.10	9.57	4.48	9.32	1.27
BEL	Belgium	8.60	3.32	6.97	4.02	9.64	1.24	9.18	4.68
CAN	Canada	8.81	-0.25	7.56	-0.18	9.49	-3.96	9.38	3.38
DEU	Germany	8.81	3.27	7.52	7.19	9.68	-0.72	9.22	3.34
ESP	Spain	8.33	4.50	7.35	5.89	9.20	2.70	8.42	4.92
FIN	Finland	9.01	2.07	7.86	1.70	9.59	1.71	9.58	2.80
FRA	France	8.55	2.42	7.33	5.84	9.48	3.54	8.85	-2.12
GBR	United Kingdom	8.70	2.79	7.51	7.18	9.47	2.04	9.10	-0.86
ITA	Italy	8.13	4.06	7.21	2.54	9.58	4.71	7.61	4.93
JPN	Japan	8.47	2.56	7.06	4.34	9.66	2.37	8.69	0.98
NLD	Netherlands	8.75	3.24	7.12	6.80	9.74	1.64	9.41	1.28
NOR	Norway	9.38	1.05	8.71	0.53	9.75	-0.02	9.68	2.63
NZL	New Zealand	9.14	3.26	8.17	2.33	9.57	0.63	9.67	6.82
PRT	Portugal	8.65	4.53	7.72	9.20	9.52	3.81	8.72	0.59
SGP	Singapore	8.02	1.02	6.68	0.13	9.27	2.03	8.11	0.92
SWE	Sweden	9.20	1.22	8.33	4.02	9.60	-1.71	9.66	1.34
USA	United States	8.14	-3.22	6.95	3.03	9.19	-2.40	8.29	-10.30

Source: World Bank, SDG Database, Fund for Peace, Freedoms House, University of Notre Dame, The Social Progress Imperative, Our World in Data, European Commission, IPU, Haver Analytics, Goldman Sachs Global Investment Research

**2) List of variables****Exhibit 32: Environment**

Variable	Description	Source	Frequency	Period used	Mean	Variance
<b>Environment</b>						
Adjusted savings: natural resources depletion (% of GNI)	Natural resource depletion is the sum of net forest depletion, energy depletion, and mineral depletion. Net forest depletion is unit resource rents times the excess of roundwood harvest over natural growth. Energy depletion is the ratio of the value of the stock of energy resources to the remaining reserve lifetime. Mineral depletion is the ratio of the value of the stock of mineral resources to the remaining reserve lifetime.	World Bank	Annual level	2004-2019	4.67	44.12
Fossil CO2 emissions per \$1,000 of GDP (Tonnes)	Fossil CO2 emissions include sources from fossil fuel use (combustion, flaring), industrial processes (cement, steel, chemicals and urea) and product use. Measured in tonnes per \$1000 of GDP	European Commission, Haver Analytics	Annual level	2004-2020	0.27	0.04
PM2.5 air pollution, mean annual exposure (micrograms per cubic meter)	The average level of exposure of a nation's population to concentrations of suspended particles measuring less than 2.5 microns in aerodynamic diameter, which are capable of penetrating deep into the respiratory tract and causing severe health damage.	World Bank, Haver Analytics	Annual level	2005, 2010-2017	32.29	364.45
Energy intensity level of primary energy (MJ/\$2011 PPP GDP)	The ratio between energy supply and gross domestic product measured at purchasing power parity. Energy intensity is an indication of how much energy is used to produce one unit of economic output. Lower ratio indicates that less energy is used to produce one unit of output.	SDGs Database	Annual level	2004-2018	4.81	11.18
Renewable energy consumption (% of total final energy consumption)	The share of renewables energy in total final energy consumption.	World Bank, Haver Analytics	Annual level	2004-2018	28.53	686.8
Renewable electricity output (% of total electricity output)	The share of electricity generated by renewable power plants in total electricity generated by all types of plants.	Our World in Data	Annual level	2004-2020	37.9	1084.65
Change in Forest area (% of land area)	The annual change in land under natural or planted stands of trees of at least 5 meters in situ, whether productive or not, and excludes tree stands in agricultural production systems and trees in urban parks and gardens.	World Bank, Haver Analytics	Annual change	2004-2020	-0.04	0.04
Gain Index	The ND-GAIN Country Index is composed of two key dimensions of adaptation: vulnerability and readiness. ND-GAIN measures overall vulnerability by considering six life-supporting sectors – food, water, health, ecosystem service, human habitat, and infrastructure. D-GAIN measures overall readiness by considering three components – economic readiness, governance readiness and social readiness.	University of Notre Dame, Haver Analytics	Annual level	2004-2019	48.27	46.92

Source: World Bank, SDG Database, University of Notre Dame, Our World in Data, European Commission, Haver Analytics, Goldman Sachs Global Investment Research

## Exhibit 33: Social

Variable	Description	Source	Frequency	Period used	Mean	Variance
<b>Social</b>						
People using at least basic sanitation services (% of population)	The percentage of people using at least basic sanitation services, that is, improved sanitation facilities that are not shared with other households	World Bank, Haver Analytics	Annual level	2004-2020	77.15	585.28
Access to electricity (% of population)	The percentage of population with access to electricity. Electrification data are collected from industry, national surveys and international sources.	World Bank	Annual level	2004-2019	87.92	420.25
Unemployment, total (% of total labor force) (modeled ILO estimate)	The share of the labor force that is without work but available for and seeking employment. This number is based on an ILO estimate so it is likely to change for the 2020 datapoint	World Bank	Annual level	2004-2020	7.51	26.39
Life expectancy at birth, total (years)	The number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.	World Bank, Haver Analytics	Annual level	2004-2019	70.72	47.74
Adolescent birth rate (per 1,000 women aged 15-19 years)	Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group	World Bank, Haver Analytics	Annual level	2004-2019	54.49	1387.98
Mortality rate, under-5 (per 1,000 live births)	The probability per 1,000 that a newborn baby will die before reaching age five, if subject to age-specific mortality rates of the specified year.	World Bank, Haver Analytics	Annual level	2004-2019	30.67	921.98
Prevalence of undernourishment (% of population)	Population below minimum level of dietary energy consumption (also referred to as prevalence of undernourishment) shows the percentage of the population whose food intake is insufficient to meet dietary energy requirements continuously.	World Bank, Haver Analytics	Annual level	2004-2019	9.34	64.99
Inclusiveness	The Inclusiveness Index is part of the Opportunity category of the Social Progress Index. It answers the question 'Is no one excluded from the opportunity to be a contributing member of society?' through the aggregation of five different variables: The acceptance of gays and lesbians, discrimination and violence against minorities, and equality of political power by gender, by socioeconomic position and by social group.	The Social Progress Imperative, Haver Analytics	Annual level	2010-2020	42.36	171.01

Source: World Bank, The Social Progress Imperative, Haver Analytics, Goldman Sachs Global Investment Research

## Exhibit 34: Governance

Variable	Description	Source	Frequency	Period used	Mean	Variance
<b>Governance</b>						
Individuals using the Internet (% of population)	Internet users are individuals who have used the Internet (from any location) in the last 3 months.	World Bank, Haver Analytics	Annual level	2004-2020	37.55	693.73
Regulatory Quality: Estimate	The perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Bank, Haver Analytics	Annual level	2004-2020	-0.09	0.41
Government Effectiveness: Estimate	The perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Bank, Haver Analytics	Annual level	2004-2020	-0.14	0.35
Control of Corruption: Estimate	The perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Bank, Haver Analytics	Annual level	2004-2020	-0.31	0.37
Political Stability and Absence of Violence/Terrorism: Estimate	The perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Bank, Haver Analytics	Annual level	2004-2020	-0.31	0.67
Rule of Law: Estimate	The perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Bank, Haver Analytics	Annual level	2004-2020	-0.29	0.41
Ratio of female to male labor force participation rate (%) (modeled ILO estimate)	Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period. Ratio of female to male labor force participation rate is calculated by dividing female labor force participation rate by male labor force participation rate and multiplying by 100.	World Bank	Annual level	2004-2019	64.9	375.57
Proportion of seats held by women in national parliaments (%)	Women in parliaments are the percentage of parliamentary seats in a single or lower chamber held by women.	World Bank, Inter-Parliamentary Union, Haver Analytics	Annual level	2004-2021	18.84	120.49
Voice and Accountability: Estimate	The perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Bank, Haver Analytics	Annual level	2004-2020	-0.23	0.59
Fragility Index	Measures pressures that push states towards failure, supporting political risk assessment and early warning of conflict.	Fund for Peace	Annual level	2008-2021	71.37	261.91
Electoral Process Score - Freedom in the World	0-12 score based on answer to 3 questions: (i) Was the current head of government/other chief national authority elected through free and fair elections. (ii) Were the current national legislative representatives elected through free and fair elections? (iii) Are the electoral laws and framework fair, and are they implemented impartially by the relevant election management bodies?	Freedom House	Annual level	2013-2021	7.3	17.77

Source: World Bank, Fund for Peace, Freedom House, IPU, Haver Analytics, Goldman Sachs Global Investment Research

# Disclosure Appendix

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