Green + Sustainability Bonds and Environmental Performance

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Introduction

Background

Green, Social, and Sustainability Bonds

- Financial securities issued by organizations to raise funding for a portfolio of projects...
- ...that are expected to generate "green" or "social" (or both!) benefits
- Borrowers are expected to provide allocation and impact reports

EPI (Environmental Performance Index)

- Provided by Yale and Columbia Univ.
- "summary of the state of sustainability around the world. Using 58 performance indicators across 11 issue categories, the EPI ranks 180 countries on climate change performance, environmental health, and ecosystem vitality."
- Nice measurement to catch the broader investments and their influence as a whole!

Datasets

Data 1: Bond issuances

- Green and Sustainability bond issuance volumes (USD millions)
- Total local currency bond issuance volumes (USD millions)
- Broken down per issuer (Government and Corporate) and bond label (Green and Sustainability)
- Limited to ASEAN+3 economies
- Taken from the Asian Development Bank's AsianBondsOnline portal.

Data 2: EPI 1/2

- Need to comprehensively cover a wide range of environmental issues, not just a single or limited issues (such as gas emission)
- Though our focus is on ASEAN+3, global coverage is desirable to see the performance in the area from world standard objectively

Data 2: EPI 2/2

- Caveat:

Findings

Bond statistics

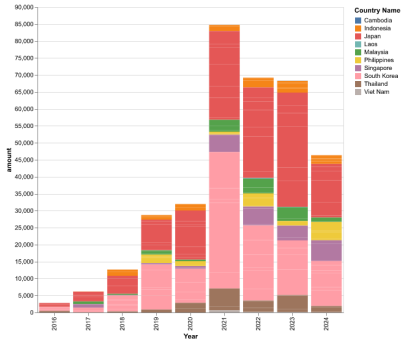

Figure 2: Consolidated issuance volume, 2016 - 2024YTD

In nominal terms, bond issuance volumes have been trending upwards for the past decade. + Paris commitments + Energy crisis due to geopolitical conflicts + Growth of ESG market segment + More generally, higher deficits due to the pandemic

Conclusion

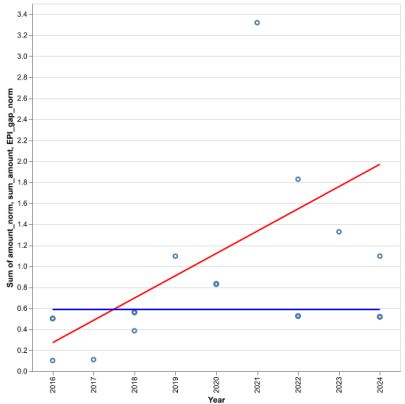

Figure 5: Comparison of trend lines - South Korea

We ran a linear regression on our time series data to draw trend lines of the two datasets. Since their scales are massively different (bonds are expressed in USD millions while the highest EPI score is 75.7), we normalized our data to make a more

Conclusion/Recommendation/Further Research

- Lower scores observed despite higher issuance volumes
- Possible that EPI scores would have decreased even more if not for these investments as they were already downtrending
- Could be a signal of "greenwashing"

For further research: - Use of project-level data or more specific categorization of use of proceeds - Other potential determinants of EPI scores (e.g. GDP, specific investment into renewable energy, etc.) - Other "peer" comparisons aside from region