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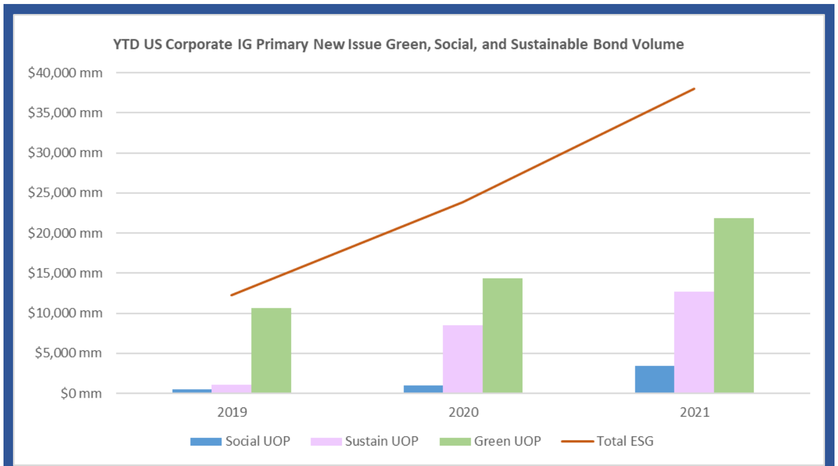
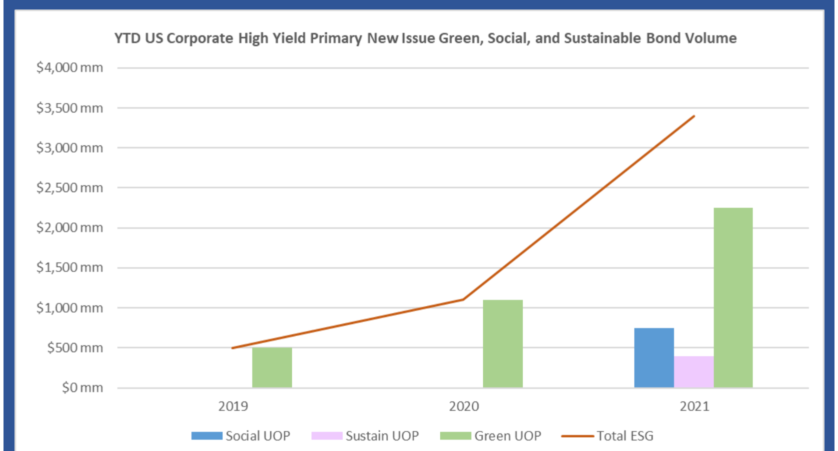
In this report we focus on the recent Intergovernmental Panel on Climate Change AR6 report to find that:

- *The IPCC's AR6 proposed carbon budgets combined with recent [interest taken by the SEC] and other financial regulators on climate disclosures and reporting, could result in an operating landscape that will require both enhanced monitoring and tracking exposure to climate related risks, as well as, accounting for emissions in & out.*
- *There is a very real possibility that both near and long-term costs of capital will increase for issuers that are not aligned or accounting for climate budgets. For instance, Paris Aligned Benchmarking recommends excluding investments based off the percent of revenue associated with fossil fuels, as well as social components.*
- *Regardless of the scenario it is expected that global mean surface temperatures will continue to rise and that many nations around the world will experience concurrent and multiple changes to the Climate Impact Drivers that impact economies, societies, and ecosystems.*



***Investment Grade**: Despite a relatively quiet August, YTD 2021 ESG themed IG primary debt issuance volume continues to exceed 2020. In August PNC Financial issued its first Social Bond, printing $700mm (Academy served as co-manager). In addition to PNC, AEP under Public Service Oklahoma issued its first Green Bond totaling $800mm. Pfizer also came to market, issuing its 2nd Sustainability Bond (Academy served as co-manager). Other notable issuers include Rexford, JP Morgan, Dominion Energy, and San Diego Gas & Electric (SRE).*

***High Yield**: No new offerings to report (below).*



The IPCC AR6 Report: Hyperbole vs Reality

What is immediately noticeable when reading the report (in addition to the heady environmental science) is the authors' use of terms such as *likely, medium agreement, very likely, low confidence, very high confidence,* and *virtually certain, etc.* in how they rate the probability of an event happening. Also important to note is the phrase *low-likelihood, high impact outcomes*. The IPCC uses this to describe the kind of mega-storms and droughts that happen every 100 years or so, but are now likely to occur more often. For some reason, these seem to be the focus of media attention, but less of a focus for the IPCC. They apply these terms accordingly when discussing their multiple CO2/GHG emissions scenarios, making the discussion around CO2 emissions a caveated one depending on the scenario you are using.

Where the IPCC is unequivocal is in its conclusion of human-caused climate change and the expectation that global mean surface temperatures will increase under all scenarios. The organization currently expects the globe to exceed its 1.5-2 degrees Celsius threshold during the 21st century as they are "virtually certain" landmasses will continue to warm faster than the oceans, with increased daily precipitation ranging from 0-13% depending on the scenario used. The IPCC makes it clear that both the changes in greenhouse gas emissions (past & future) and the impacts are irreversible and will take millennia for us to see reversions in ocean temperatures, ice sheets, and sea levels. For instance, the IPCC is "virtually certain" sea levels will continue to rise between .28m (best-case) and 1.01m (worst-case) through 2100. For developers and investors near coastal zones, this information will be critical to long-term planning and assessment of risk exposure—a point that has been made ad nauseum.

In addition to guidance on possible climate environments, the IPCC also provides some color on the risk front as they expect every region to experience concurrent and multiple changes to their Climate Impact Drivers, which are the physical climate systems conditions (e.g. means, events, extremes) that affect every element of society/ecosystem. For instance there is high confidence that 35+ regions will experience both increases in extreme heat and coastal flooding as well as erosion. Investors and policy makers all across the world will need to remain vigilant!

Carbon Budgets

Probably most important, given recent interest by the SEC and other regulators in climate disclosures, is the report's discussion on CO2 budgets. The IPCC lays out its scenarios and guidance on carbon budgets. The most aggressive of its decarbonization scenarios calls for a 300 GTCO2 carbon budget, which has an 83% likelihood of limiting global warming to the 1.5 degree Celsius limit. The least aggressive version calls for a 2,300 GTCO2 budget that has only a 17% chance of limiting this rise to 2 degrees. For perspective, we used 35 GTCO2 as our budget in 2020—being generous that we have ~10 years to get to net zero. Investors and funds will need to prepare for this as the SEC and others have already looked into CO2 and climate related disclosure!

This will likely be bifurcated between risk exposure (what percent of assets, i.e. your property, business, or supply chain are in a flood or drought prone area) and accounting (how are you contributing to/mitigating climate change—Scope 1, 2, or 3 emissions). The risk exposure component should be relatively straightforward. Using insurance and geospatial data, one can help determine the location of assets within one's value chain exposed to climate change and de-risk accordingly, i.e. water futures for drought, capex on new efficent technology, or liquidation are possible tactics. Carbon accounting will be a heavier lift as it will require assessing Scope 1, 2, and possibly Scope 3 emissions. Simultaneously investors and accountants will also have to begin measuring not only the emissions they produce, but also those they mitigate/impact, as the IPCC is clear that both net zero and anthropogenic removal of CO2 emissions are needed in order to stabilize the global surface temperature.

In the event a global carbon budget is agreed upon, its effect on markets would be immediate as we would see reactionary shifts to buying in low carbon sectors/businesses as funds look to align themselves with this global carbon budget. GHG intensive industries (in response) would more likely experience near-term increased costs of capital until their disclosures or business strategies are more aligned with investor concerns around climate budgeting. Already under Paris Aligned Benchmarks, there are active exclusions for companies generating revenue greater than 1% from coal, 10% from oil, 50% from natural gas, and electricity producers generating +50% of their revenues with a carbon intensity lifecycle GHG emission of 100gCO2e/kwh+. This rigid interpretation of Climate Alignment (as opposed to transition) opens up opportunities to find hidden gems, i.e. current non-ESG investments that might become ESG investments later.

Bottom Line

- *Regardless of immediate mitigation efforts, climate change is here to stay and oceans and arctic regions will be most impacted. Sea levels will rise and storm surge will continue, placing stress on coastal cities and drive increased spending on adaptation efforts.*
- *Carbon Budget and Climate Planning: Are you Transition Aligned Investing (at least 7% yoy decarbonisation) vs. Paris Aligned (limited oil, gas, & coal) and do you have a carbon accounting policy? What does your natural capital look like?*

Further Resources

IPCC Full Report: *https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf*
IPCC International Atlas: *https://interactive-atlas.ipcc.ch/*
European Space Agency Climate Dashboard: *https://climate.esa.int/en/odp/#/dashboard*

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