MILKEN INSTITUTE
ASIA CENTER

ROUNDTABLE SUMMARY

How Technology Can Accelerate Sustainable Finance

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About the Milken Institute

The Milken Institute is a nonprofit, nonpartisan think tank focused on accelerating measurable progress on the path to a meaningful life. With a focus on financial, physical, mental, and environmental health, we bring together the best ideas and innovative resourcing to develop blueprints for tackling some of our most critical global issues through the lens of what's pressing now and what's coming next.

About Asia Center

The Milken Institute Asia Center extends the reach and impact of Milken Institute programs, events, and research to the Asia-Pacific region. We identify opportunities to leverage the Institute's global network to tackle regional challenges, as well as to integrate the region's perspectives into the development of solutions to persistent global challenges.

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Introduction

In a private roundtable at the Milken Institute Asia Summit 2022 in Singapore, the Milken Institute gathered leading technologists, chief sustainability officers, large investors, and financial regulators for off-the-record discussions on environmental, social, and governance (ESG) issues in the Asia Pacific region (APAC). Participants spoke candidly about their hopes for ESG data moving forward, Scope 3 measurements, collaboration, and the need to commit to technological innovation.

The session was moderated by Caitlin MacLean, senior director of innovative finance at the Milken Institute. Through these convenings and research on ESG, the Institute hopes to help smooth and support the catalytic role of finance and technology in shifting businesses, regulators, and societies toward a more sustainable future.

Data and the Future of ESG

Participants first noted with fascination how rapidly the market has adopted ESG efforts. Ninety-two percent of S&P 500 companies published a sustainability report in 2020,[1] nearly tripling proportions from 2019.[2] Sustainable bonds reached $1 trillion in 2021—a 20-fold increase from 2015,[3] when green bonds were virtually impossible to sell, as pioneers present at the roundtable wryly recalled. And today, investors around the world are increasingly proficient and convergent in conversations around carbon emissions, while geospatial data are showing promise in mapping out other risks related to the physical environment. This fuels participants' optimism about the future of ESG goals, whatever their shortcomings today.

> **"We are very fortunate that we're speaking the same language around GHG emissions. No matter where your company is, CO_2 emissions are measured in the same way—one unit of carbon means this much emissions and it has this effect on the world."**

Outstanding Pain Points

But there's no time for complacency. One participant noted that banks remain very much in the early stages of data capture, let alone figuring out the use cases in-house or for customers. Even conceived use cases are not necessarily practicable because of missing data, especially in emerging markets. This results in datasets that are very asymmetric, which sharply degrades the performance of predictive models. The participant thus believed that banks could make a difference by educating their client companies on what data to report and how to report them.

The same can be said for geospatial data, where uneven technological adoption, infrastructural coverage, and data collection worldwide mean that the coordinates of physical assets can still be challenging to track, especially in emerging markets. But even in developed countries such as the US, where data collection is

established, disagreement remains on forecasts of flood maps and so on and, in turn, the risk of damage to physical assets and the appropriate pricing of insurance.

The lack of agreement on data is perhaps most glaring for social issues. Participants remarked that although carbon measurements may be converging worldwide, social metrics remain unstandardized, and many did not believe that the International Sustainability Standards Board (ISSB)—or anyone else—could produce a universal and useful standardization. This is concerning to large asset owners because, with constant media scrutiny but no widely accepted methods, the reputational risk for measuring social metrics is incredibly high.

Data Wish List

With these pain points in mind, participants noted that data and technology are now central to all discussions on ESG, and they were optimistic that in the next five years, all the aforementioned problems could be addressed technologically. What is important is to start deploying technology and collecting data as early as possible.

For instance, one participant noted that climate risks are not always fully embedded into existing datasets, as historical data do not incorporate the exponential increases in deforestation, pollution, urbanization, or emissions observed in recent years. Ironically, data will improve over time as communities experience more natural disasters. In turn, earlier deployment of technology would capture more data and thus make the most of crises.

In parallel, another participant had observed a recent increase in mergers and acquisitions in this space, where large data providers are acquiring smaller firms with specialized know-how. These acquisitions would allow established data vendors to overlay commercial, financial, and physical risk data, conferring greater precision and understanding of how physical risk impacts various sectors. For instance, while a farm, a factory, a data center, and an office may be equally close to a river, damage from flooding will differ from asset to asset. Participants were thus hopeful that through the integration of diverse datasets, geospatial modeling would, in the near future, be able to segment assets and forecast risks with precision.

An area of concern to participants was that climate action has mostly been undertaken by listed companies only. One participant stated that the next ESG frontier in developed markets lies in helping privately owned companies and small and medium-sized enterprises (SMEs) rapidly adopt and scale up ESG technologies. In fact, ESG data can be directly and immediately useful to businesses themselves. One participant noted that emissions offer a valuable proxy for operational efficiency, and thus it would be helpful for companies to understand their resource consumption relative to their competitors. Another raised the possibility of using data to bridge the informational needs of asset owners, financial institutions, and insurers, thereby lowering SMEs' costs of financing and insurance alike.

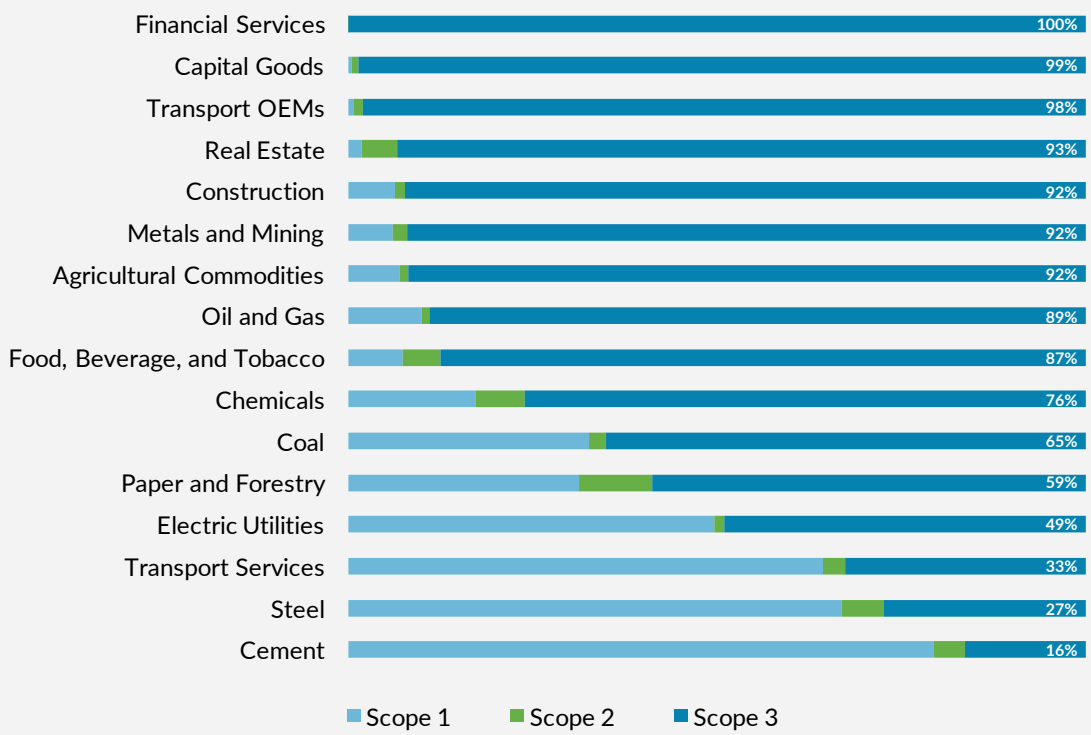
System Change

Integral to participants' hopes for the future is the urgent need for greater collaboration among individual players in the ecosystem, along with the role technology could play.

Scope 3

Participants noted that although measuring Scope 1 and 2 emissions is relatively easy, no good solution has yet emerged for measuring Scope 3 emissions, let alone transitioning various business lines towards net zero. The upstream and downstream emissions of a business tend to be much larger than its immediate emissions; thus, unilateral actions on a company's part will have little overall effect. This is particularly true for "asset-light" models, be it ride-sharing, home-sharing, or e-commerce, where nearly all the emissions are indirect and accrue to their value chains.

Figure 1: Scope 3 Emissions Largest for Most Sectors



Source: Milken Institute (2022), adapted from CDP (2022)

Reducing Scope 3 emissions will require much more concerted and comprehensive efforts across all industries. Banks will need to assist each client in transitioning towards net zero or risk failing in their own pledges. Real estate developers have to educate their tenants on efficient power consumption. Listed companies must enforce and assist with targets for the private companies and SMEs embedded throughout their supply chains. And if the energy sector cannot be transitioned at scale, all industries will inevitably hit a Scope 3 bottleneck.

The need for life-cycle analysis to understand and address the whole value chain of emissions inherently mandates collaboration and coordination across the supply chain, and participants believed technology will play a major enabling role. Many noted that more solutions are needed in Scope 3 and expressed the hope that technology could help companies small and large ramp up quickly in this area. For instance, platforms could allow multiple companies to be financed together or enable companies of all sizes to contribute and collaborate.

Collective Action

With companies in different stages of their ESG journey, some participants believed that governments need to be much more involved for greater convergence. Although European governments are substantially becoming involved in ESG, one participant felt this has not been the case in APAC, where ESG action has mostly been left to the private sector.

Many also noted that although carbon measurements are standardized, their solutions are not. One participant stated, for instance, that carbon credits have many different values depending on their origin. Exacerbating matters, banks have vastly different internal systems, and every bank considers its data as in-house know-how or intellectual property—to be hoarded and not shared. Consequently, all banks are moving forward in ESG but in small, disparate ways.

> **"We'd better start sharing our data because it's the same thing. If we honestly believe we know something different, then I think we're all mistaken."**

Given the sheer scale of the ESG challenge, participants believed the only way to make a real impact was through cooperation. Some felt that data should be centralized; all thought a mindset change was needed. One participant pointed out that centralization and cooperation were entirely possible: In Singapore, many aspects of mortgage data are centralized and accessible by every bank. As such, political will is needed for replication in other areas.

Another participant raised the example of data platforms used in Singapore's real estate industry to measure electricity and water usage reductions, which can be obtained from government agencies. These data can then be used in the issuance of sustainability-linked loans and to pressure laggards to accelerate their improvements. The participant stated that, ideally, these data would be shared with all banks and, in the future, expanded to other industries and even other countries in Asia.

Most reliant on cooperation is the movement towards net zero, which demands a systemic transformation of businesses, economies, and societies alike. Participants stated outright that the cost of such a transition would be insurmountable should businesses try to go it alone. To be practicable, the impact of ESG initiatives needs to be far greater than the sum of their individual inputs. And for businesses to double down on the technological investments enabling *en masse* transformations, participants turned to the precariousness of the trust and momentum ESG efforts existentially rely on.

Standing by Innovation

Observing the proliferation of ESG efforts in recent years, it is easy to be lulled into a false sense of security. Decades of environmental campaigning have mostly fallen on deaf ears; however, with the market formula increasingly being proved across various business contexts, ESG issues today bask in an unprecedented spotlight, funding, and expectations. But as with the internet before the dot-com crash, climate technology in the early 2010s, or globalization more recently, markets alone will neither get everything perfect nor sustain momentum forever.

Perfectionism—Our Worst Enemy

Participants noted with concern that ESG efforts are starting to face pushback from some quarters and politicization in some countries.[4] For sure, some pushback is valid. Multiple participants argued that as long as ESG disclosures continue to focus on negative risk instead of positive impact, investors will always be incentivized to divest (i.e., give up) instead of committing to truly creative solutions, which need years of support to have any chance of success. This has at times caused innovators to become jaded because they feel that the focus of ESG metrics on risk assessment can hinder real progress.

For instance, a participant believed that the wind and solar industries are successful today only thanks to years of state support and massive industrial subsidies by China and Germany. Had the spotlight back at the beginning focused excessively on the negatives of mining raw materials, emissions from manufacturing, or the need to spend taxes on some other prevailing issue, there would probably be fewer alternatives to fossil fuels today.

In a similar vein, public scrutiny is by far the cheapest, most scalable way to tackle concerns of greenwashing—if the technical know-how is available. But social media discourse that calls for any owner of polluting assets to be "canceled," without a proper understanding of the longer-term transition plan, can easily do more harm than good. More than one participant raised concerns about the reputational risks of undertaking ESG initiatives. One even prioritized winning third-party ESG awards for projects, just to cover the bases.

Participants had many responses to such challenges, though none were confident that they would work universally. Some suggested having (trusted) governments endorse certain groups of technological solutions; others argued that, like it or not, businesses have no choice but to double down on marketing. A pessimistic view advised minimizing the incurrence of risk by prioritizing only game-changing solutions, rather than firing on all cylinders. Conversely, an optimist recommended just getting started as early as possible and staying the course regardless of vicissitudes, taking an iterative approach for improvement.

The upshot is that ESG efforts today are riddled with flaws, complexities, and risks but also represent by far the most progress humanity has made. In turn, it would be more productive to harness current awareness and momentum while it lasts and reorient it towards solutions and impact. Abandoning these hard-won gains with no workable alternatives, simply because reality falls short of expectations, is a treatment worse than the disease.

Unwilling or Unempowered?

Evident across all ESG sessions at the Asia Summit was that the technological solutions to many ESG problems already exist. What's needed is the will to apply a technology and then improve it iteratively. A subtle and often-missed implication is that there is actually no shortage of innovation. One survey even found that more than three out of four youth in APAC aspire to work in the green economy in the next decade.[5] The missing element is the leadership to defend and support the innovators amid the crescendo of populism, recession, and uncertainty.

> **"The technology is there. It's more the will to use it, the investment required, the focus of organizations to set up teams and embed it within their structure."**

One participant believed that the way to obtain buy-in from leadership, secure external partnerships, or win the cooperation of clients is to demonstrate that technological solutions have a measurable impact, again reaffirming the importance and benefits of focusing on outcomes over risks.

> **"Unless we prove that we bring value to our depositors and to our portfolio companies, this ESG discussion will become more and more difficult."**

For instance, one participant is partnering with the FinTech venture Util, which measures impact by assessing the final product, rather than the energy efficiency of operational processes. This orients investors towards considering the environmental utility of the products a business produces, giving a better overall view of the company's sustainability profile. After all, a polluting product, no matter how efficiently produced, is still polluting.

Another brought up separate collaborations between the technology company Infosys with the nonprofit Tech for Good and the UK's Open University. In particular, the latter initiative predicts absenteeism by monitoring students' progress, rate of response, attendance, and submission of coursework, and pairing it with human interventions to reduce dropout. Moreover, the potential user base for such technologies is rising as schools move towards hybrid classrooms.

Context and Sincerity

The need to pair technologies with human intervention for maximum impact illustrates that technology should not be expected to solve all problems end-to-end before being considered viable. One participant highlighted the importance of context in data collection, giving the example of palm oil plantations in Southeast Asia. It is common for school children on vacation to help their parents in the plantations, but auditors unfamiliar with local practices have mistaken this for unlawful child labor, resulting in unnecessary suspensions of certifications.

Another spoke of the need to ensure that data are acted upon and beneficial to those who have given their time during collection. For instance, while the garment industry has conducted surveys of millions of workers for at least five years, the lack of follow-through for their grievances has eroded trust, in turn eroding the quality of the data. Similarly, others have voiced complaints that the multitude of ESG-related surveys they have to answer, most of which ask for information irrelevant to their businesses, extract a heavy toll on staff.

Participants acknowledged that for social issues in particular, not everything that counts can be counted. Hence, while internet-of-things devices would be very helpful in ensuring compliance with the International Labor Standards and other codes of conduct, a holistic and sincere approach to ESG may still require a human touch.

> **"Ultimately, it comes down to going into those places and seeing what the conditions are really like regardless of what your model tells you the conditions should be."**

Endnotes

1. "92% of S&P 500® Companies and 70% of Russell 1000® Companies Published Sustainability Reports in 2020, G&A Institute Research Shows," GlobeNewswire, November 16, 2021, https://www.globenewswire.com/news-release/2021/11/16/2335435/0/en/92-of-S-P-500-Companies-and-70-of-Russell-1000-Companies-Published-Sustainability-Reports-in-2020-G-A-Institute-Research-Shows.html.

2. "S&P 500 and ESG Reporting," Center for Audit Quality, August 9, 2021, https://www.thecaq.org/sp-500-and-esg-reporting/.

3. Matthew Toole, "Sustainable Finance Continues Surge in 2021," Refinitiv, February 2, 2022, https://www.refinitiv.com/perspectives/market-insights/sustainable-finance-continues-surge-in-2021/.

4. Tim Mullaney, "Why the ESG Vs. GOP War Over Energy and Climate Change Is Going Nowhere," CNBC, October 6, 2022, https://www.cnbc.com/2022/10/05/why-the-esg-vs-gop-war-over-climate-change-is-going-nowhere.html.

5. "Companies Must Step Up as Youth Seek Out 'Green' Jobs: Accenture," Accenture, April 20, 2022, https://newsroom.accenture.sg/asia-pacific/news/youthquake.htm.

About the Author

Quintus Lim is a senior associate of policy and programs at the Milken Institute Asia Center. He focuses on policy areas such as R&D financing and technological adoption across domains such as health, food, and agriculture, as well as issues of ecosystem building. Lim holds a bachelor's degree in government and economics from the London School of Economics and is pursuing a master's degree in analytics at the Georgia Institute of Technology.

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