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Responsibility as a Comparative Advantage

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Most governments have spent the last 18 months contending with rising borrowing costs, normalizing spending after a pandemic-related surge, conducting trade in a strong-dollar environment, and managing the effects of rising energy and food prices. Geopolitical risk also has returned, complicating an already complex backdrop, necessitating increases in defense spending and foreign aid, and showing no signs of retreat from the global landscape in 2024. The upcoming year will serve as a litmus test on public and private sector appetite to balance multiple objectives, including funding long-term structural changes to address social and environmental challenges. Policy developments, economic opportunities, and fiscal conditions in Brazil and Indonesia serve as examples of how countries can manage ambitious agendas.

Sustainability Issues Create Economic Opportunity

The messaging out of the 28th United Nations Climate Change Conference (COP28) was an effective reminder about the connectivity between environmental, social, economic, and financial conditions. Climate resilience, food security, and energy security are part of overall economic stability. These objectives need not compete, nor should related themes like nature and climate. The momentum behind biodiversity and the Taskforce on Nature-related Disclosures is important because it raises the profile of the agriculture sector. According to the Central Intelligence Agency World Factbook, agriculture accounts for approximately 6% of global gross domestic product (GDP) and up to 25% of GDP for select low- and middle-income countries and provides food and income security for 80% of the world's impoverished population per the World Bank and Macrobond.

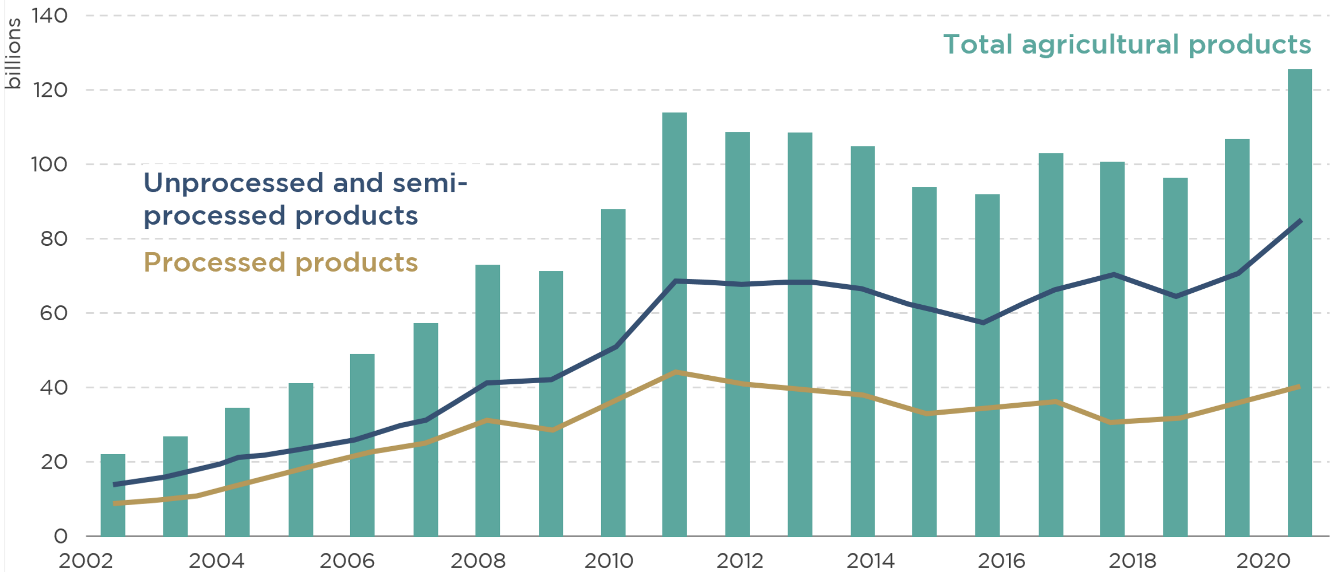
Climate risk, mitigation, and resilience are not confined to the energy sector, as is the case in Brazil. The country's role at COP28 reinforced the importance of the agriculture sector with respect to economic growth, financial security, food security, and climate risk. In a country where around 80% of energy consumed comes from renewable or alternative sources, Brazil's biggest environmental risks emanate from the agriculture sector.[1] It is also the source of the country's greatest economic opportunities.

The majority of Brazil's greenhouse gas (GHG) emissions come from land use, specifically from the practice of both legal and illegal deforestation to support agricultural production. President Luiz Inácio Lula da Silva (Lula) understands the economic risks associated with environmental degradation, and the opportunities tied to biodiversity preservation and land regeneration. He presented plans for both land preservation and regeneration at COP28, which are both important to the food and agriculture sector.

According to a study conducted by the U.S. Department of Agriculture, the value of Brazil's agricultural exports has increased 10% annualized for most of the 21st century (see Exhibit 1).[2]

1 Brazil's value of agricultural exports has expanded around 10% since 2002

Exports, USD, billions, As of 12/31/2021



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census (© 2023)

Brazil is a top five global producer of more than 30 commodities, and the agricultural industry accounts for nearly 30% of GDP and employs 15% of the domestic labor force.[2] The country has plans to increase its global market share as a producer and exporter of agricultural and food products. Producing crops and raising livestock in a responsible way should be accretive to the sector and broader Brazilian economy, and potentially serve as a differentiator as the country forges trade relationships. Creating an innovative agricultural value chain that is transparent, traceable, supportive of local and indigenous populations, preserves biodiversity, and promotes regenerative land use is a playbook that could be used by other industries, particularly metals and mining.

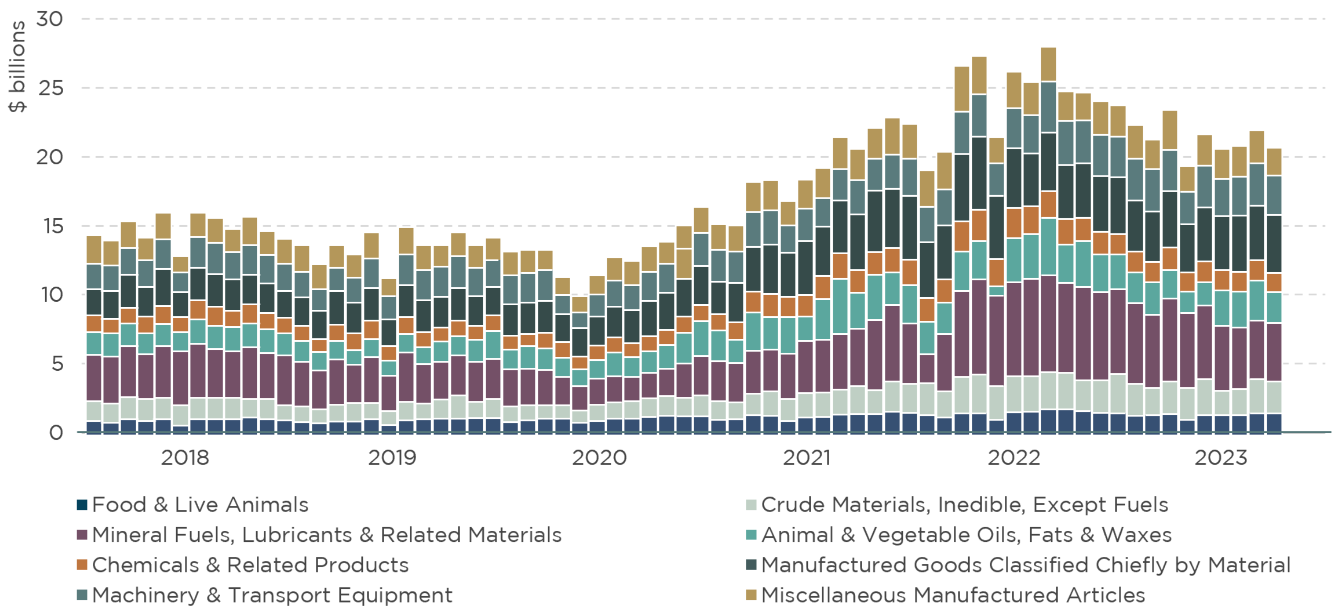
Themes Converge

Much like Brazil, Indonesia's environmental risks are associated with land use, related GHG emissions, and the practice of deforestation. President Joko Widodo (Jokowi) and the Indonesian delegation to COP28 also made notable pledges at prior COPs, including a commitment to eradicate the practice of deforestation by 2030 at COP26. Deforestation also has been used in Indonesia's agriculture sector to harvest and export palm oil; the value of these exports is captured under "Animal and Vegetable Oils, Fats and Waxes" (see Exhibit 2).

2

Indonesia Foreign Trade Exports by Classification

Classification SITC, Total, USD billions

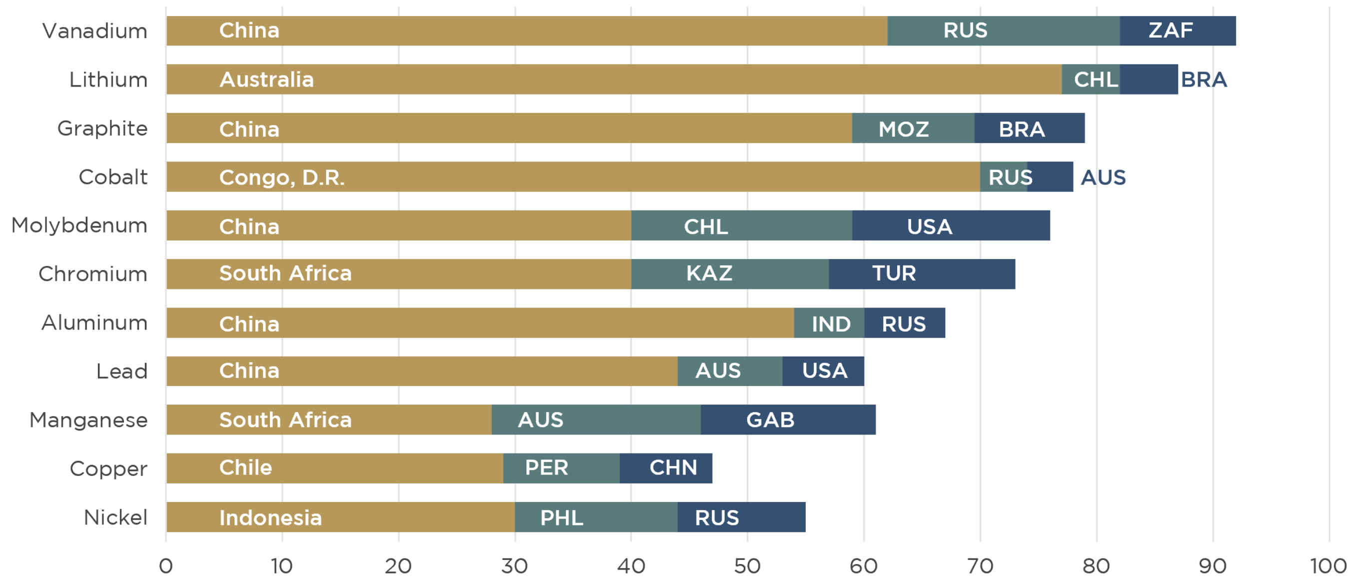


Source: Macrobond (© 2023)

Exhibit 2 suggests that Indonesia's palm oil exports have remained stagnant over the last five years, whereas manufactured goods, mineral fuels, and crude materials comprise a larger opportunity set. These export segments reflect the metals extracted through Indonesia's local mining industry. Exhibit 3 shows the critical metals opportunities available to the Indonesian economy through the energy transition.

3 **Biggest Producers of Metals Crucial to Green Energy Transition**

Percent of market, 12/8/2021



Note: AUS=Australia; BRA=Brazil; CHL=Chile; CHN=China; COD=Congo, D.R.; GAB=Gabon; IDN=Indonesia; IND=India; KAZ=Kazakhstan; MOZ=Mozambique; PER=Peru; PHL=Philippines; RUS=Russia; TUR=Turkey; USA=United States; ZAF=South Africa

Source: US Geological Survey - Mineral Commodity Summaries 2021; IMF staff calculations (© 2023)

Chart taken from Nico Valckx, Martin Stuermer, Dulani Seneviratne, and Prasad Ananthakrishnan, "IMF Blog: Metals Demand from Energy Transition May Top Current Global Supply", International Monetary Fund, Washington, DC, December 8, 2021.

According to the International Monetary Fund (IMF), Indonesia is the world's largest producer of nickel, and the second largest—albeit a distant one—for aluminum. Similar to Brazil, Indonesia has the opportunity to create a responsible value chain for agriculture, which can then be repurposed and serve as a blueprint for the metals and mining industry, where the risk for deforestation will remain high to support the extraction of high-value, in-demand commodities.

Beyond Labeled Bonds

At COP28, President Jokowi and the Indonesian delegation presented a roadmap for the country's state-owned utility to transition its power generation mix to 75% renewables and 25% gas by 2040. The plan also requires climate financing from developed markets. The rationale for funding is logical for several reasons:

- **The Paris Agreement calls upon advanced economies to fund climate mitigation and resilience for low- and middle-income countries.**
- **Building a robust, innovative, and resilient energy grid should support economic development.**
- **To ensure value chains are truly responsible, energy production should come from renewable and alternative sources.**

Financing instruments do exist, such as the Amazon Fund, Special Climate Change Fund, and Green Climate Fund, and are currently subsidized by sovereign nations. However, trillions of dollars are required over a multi-decade period to build climate-resilient infrastructure, create jobs, and promote economic growth.

Both Indonesia and Brazil launched labeled bond frameworks in 2021 and 2023, respectively. Under the

leadership of Jokowi, Indonesia has recognized the physical climate risks and transition risks facing the country, and the Ministry of Finance developed a Sustainable Development Goal bond framework and has continually issued labeled bonds to meet its objectives. The National Treasury of Brazil debuted its sustainable bond framework during Lula's first year in office. Both frameworks address environmental and social issues that are material to each country. If investors expect countries like Brazil and Indonesia to continue issuing labeled debt under these frameworks, then we must make a few acknowledgements:

- Debt ratios and fiscal balances must be kept in check.
- Increasing GDP growth, particularly investment, exports, and broadening the tax revenue base, will help.
- Fiscal prudence can provide benefit, but budgets still need to be funded. Foreign capital flows in the form of aid and investment may help insulate environmental and social projects from budget cuts.

Indonesia and Brazil are currently government debt and budget hawks, much to the delight of investors. Indonesia's gross government debt as a percentage of GDP stands at 39%, according to Bloomberg and IMF data, its current account is close to being balanced, and its fiscal deficit has improved post-pandemic. Although Brazil's debt percentage is around 87%, its current account and budget are close to balanced, according to IMF and Bloomberg data.

Although these countries are well positioned to continue issuing labeled bonds, Brazil and Indonesia should attract additional capital flows in the form of private fixed capital investment, private lending, and project financing from multilateral development banks (MDBs).

MDBs to the Rescue?

The world has big plans for MDBs. They are expected to serve as an important source of climate and nature funding for low- and middle-income countries. The World Bank announced a substantial 2024 budget increase to address widespread financing needs. Banks, asset managers, and MDBs are looking to scale innovative blended finance solutions. Yet, there is one problem that needs to be addressed: the U.S. remains the largest donor country for many development banks and climate funds. With a looming budget showdown in Congress, government debt as a percent of GDP at 123%[3], persistent twin deficits, and a wildcard of an election, it remains to be seen whether funds earmarked for foreign development and aid will survive proposed cuts. The Office of Management and Budget addresses these expenditures as "Marshalling American Leadership to Tackle Global Challenges" to promote global stability. It is an appropriate way of noting the complementarity among environmental, social, economic, and financial forces, and an effort to coalesce around—rather than compete for—solutions.

[1] International Trade Administration: Brazil – Country Commercial Guide

[2] USDA Economic Research Service, "Brazil's Momentum as a Global Agricultural Supplier Faces Headwinds," Constanza Valdes, September 27, 2022

[3] Fiscal Data, U.S. Treasury, "What is the national debt?", As of September 30, 2023

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