

1. Introduction

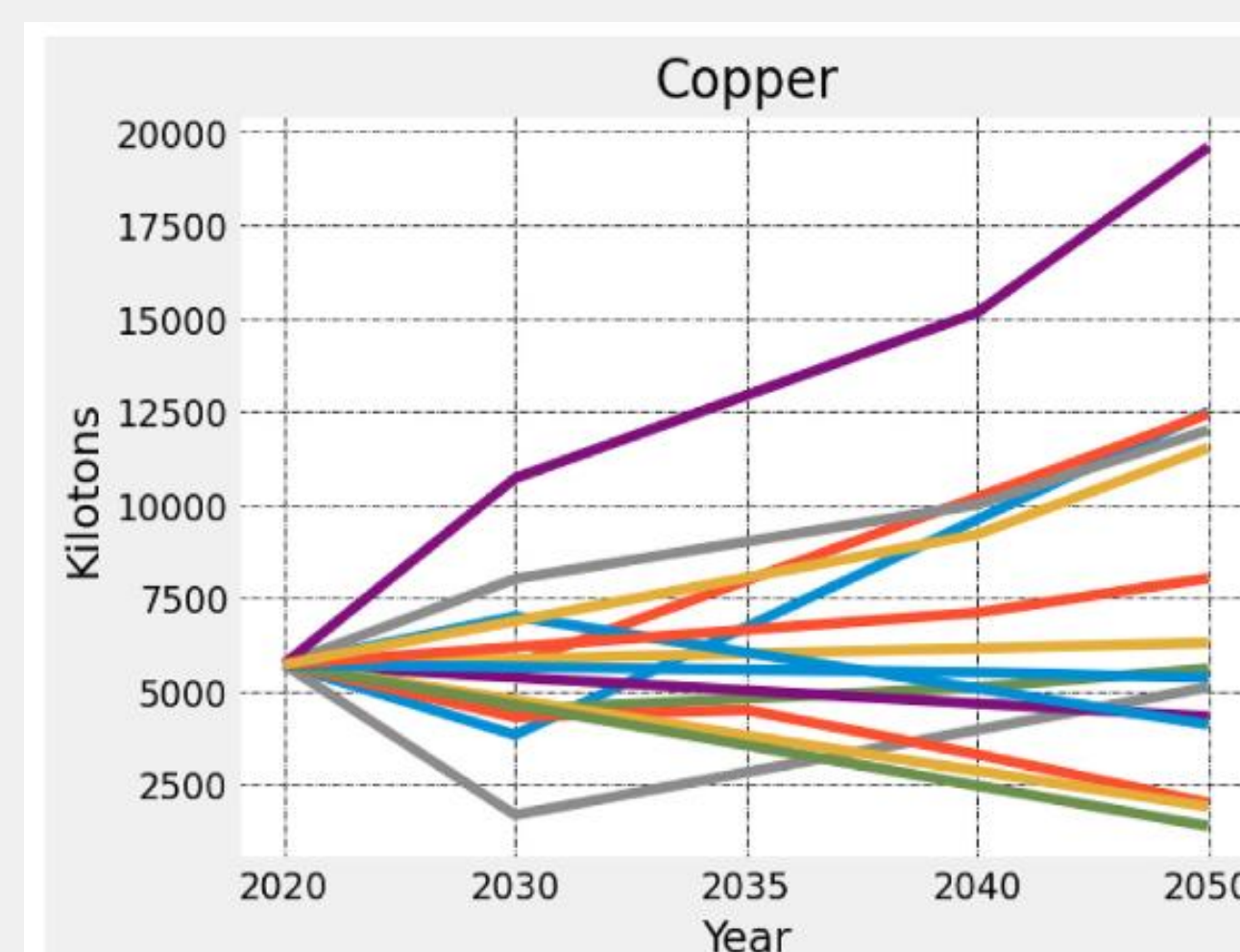
Global demand for critical minerals is accelerating to support the rapid growth of green energy technologies.

Significant opportunities for mining countries as it can enhance tax revenues, provide a competitive advantage for integrating the green value chains, and stimulate local employment.

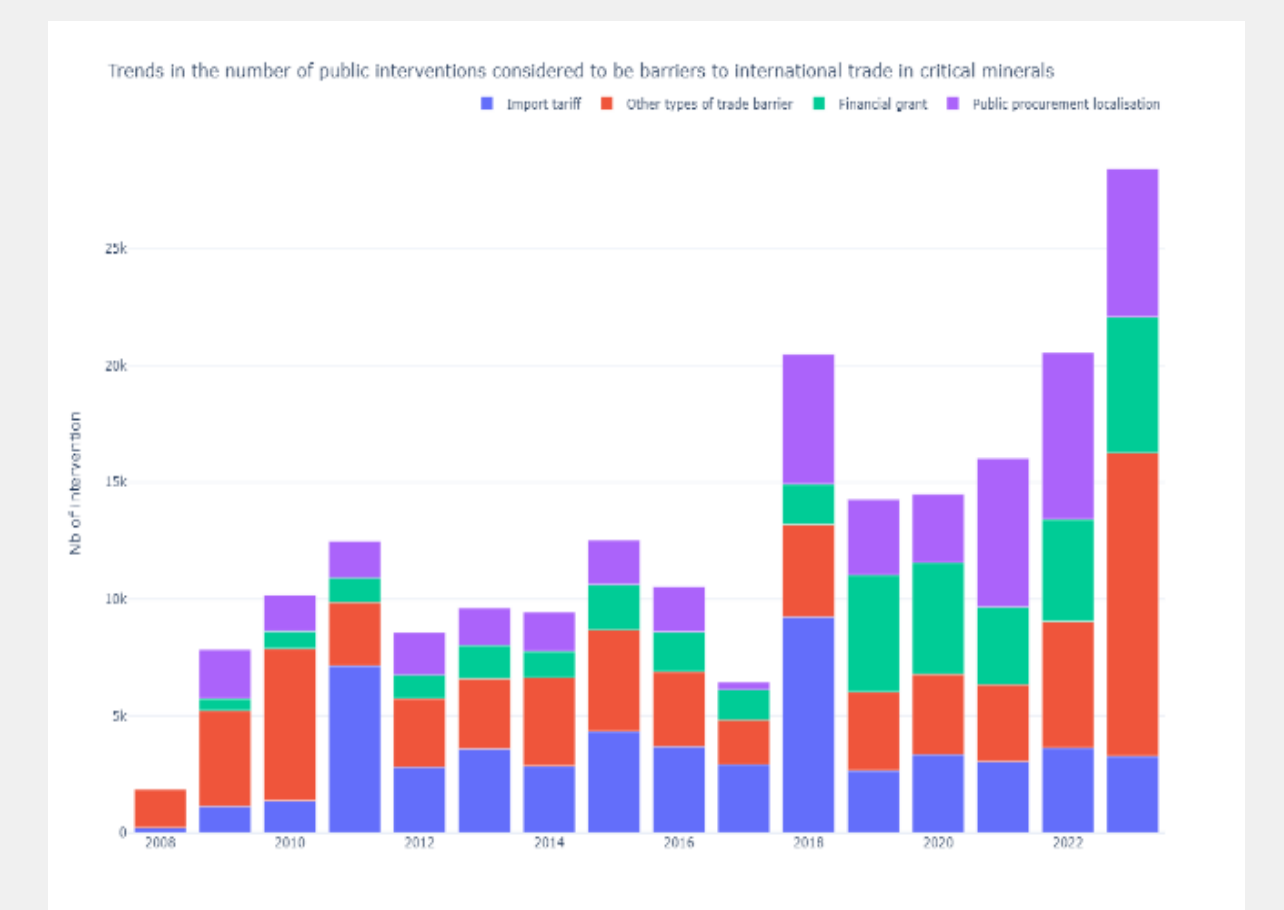
However, capitalizing on this boom could be challenging due to several uncertainties. These include the uneven pace of green technology development, technological change, the intensifying geo-economic fragmentation, and the possible escalation of social and environmental impacts.

2. Key figures

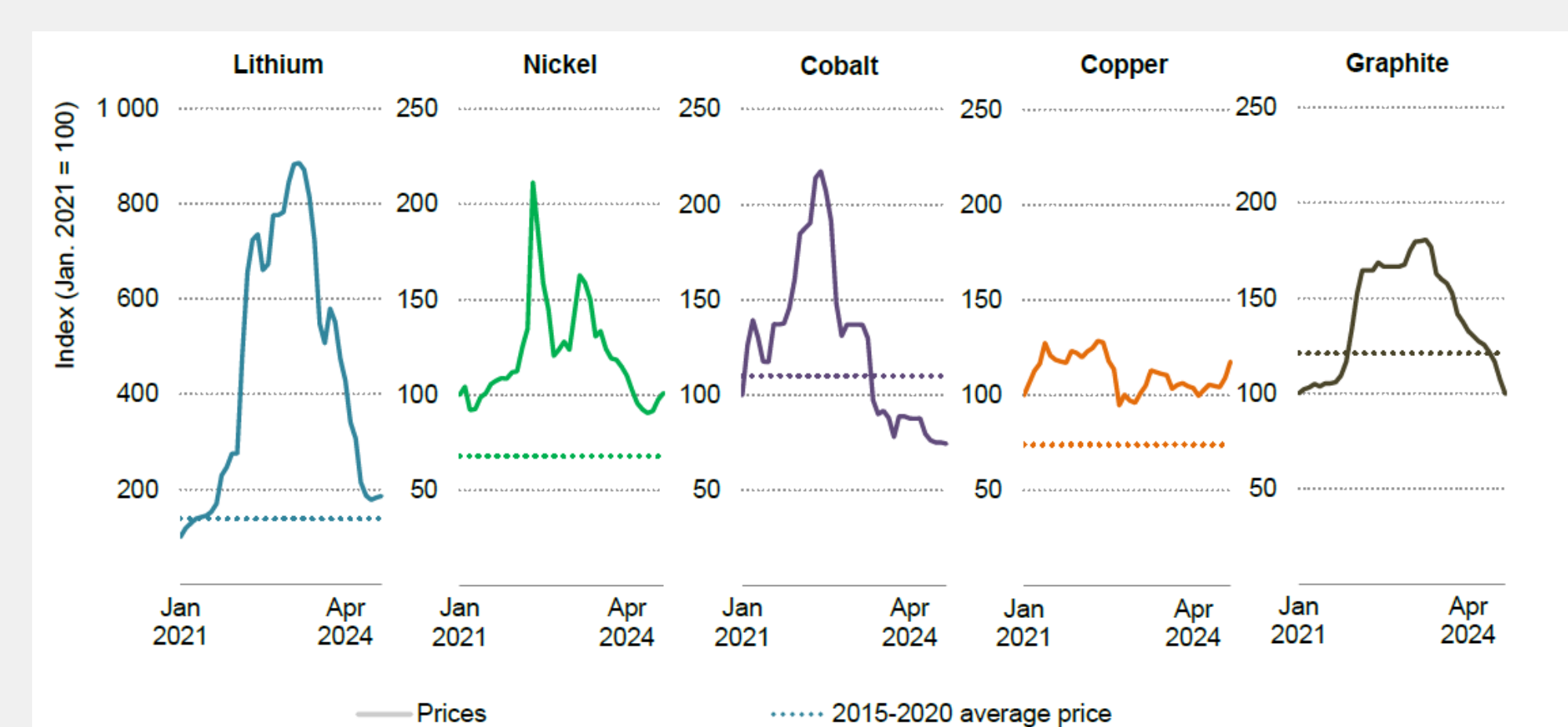
A) Uncertainty over demand forecasts



B) Number of trade barriers targeting critical minerals

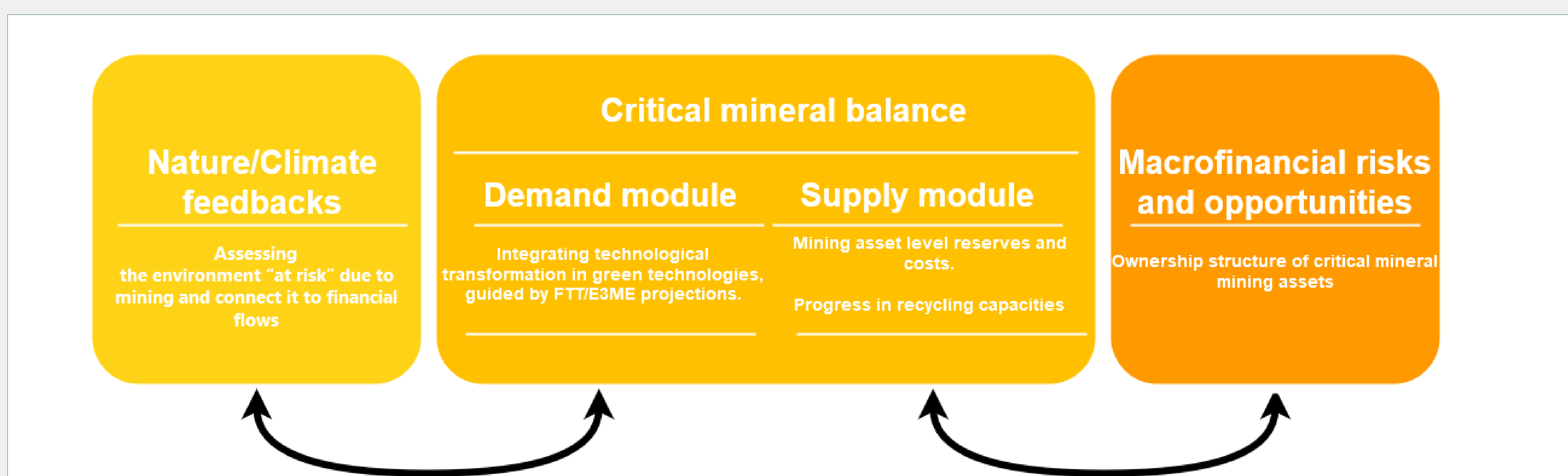


C) High price volatility of critical minerals



Sources: Calderon et al. (2024), IEA (2024), Lapeyronie et al. (2024)

3. An new modeling framework (ongoing work)



4. Disentangling the ownership of mining assets

We analyzed market concentration in critical minerals production, focusing on the **ownership structures of mining assets**.

The study reveals that while production of critical minerals is geographically concentrated in groups of countries that vary with each mineral, **direct and especially equity ownership are mainly controlled by large multinational mining companies and financial institutions concentrated in leading economies.**

5. Key lessons learned

- **New modeling approaches are needed to address technological change and supply-side constraints.**
- **The macro-financial and environmental impacts of the critical mineral boom must not be overlooked.**
- **The full ownership structures of mining assets must be thoroughly considered.**



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