



Analysis & Research Critical Materials

July 2024



Critical Materials: Analytical highlights

CRM by substitutability and recycling rates

		Recycling Rate (%)		
		<10	10-30	>30
Substitutability	High (low risk)			Copper Silver Zinc
	Medium			Cobalt Aluminium
	Low (high risk)	Lithium		Nickel Palladium
	Unknown			Gold

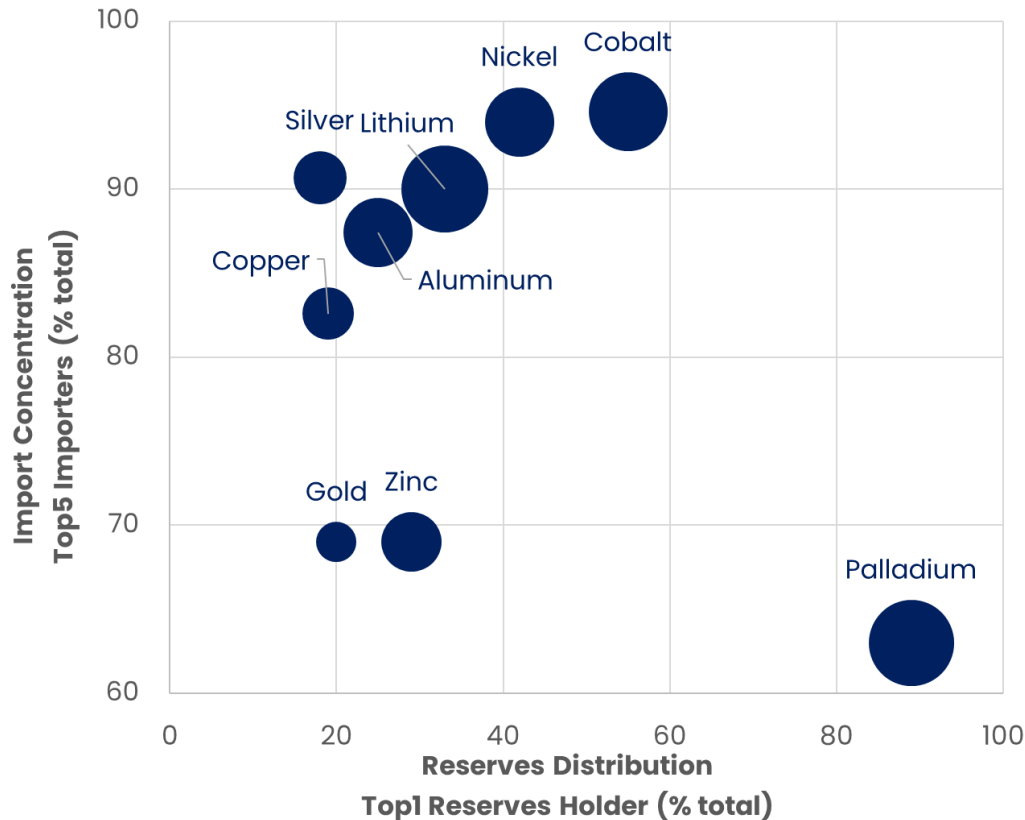
The critical materials listed at the top and right of the table demonstrate a high level of recyclability and a strong ability to be substituted by other metals, such as zinc.

In contrast, the materials positioned at the bottom left of the table are either not recyclable, not recyclable to a significant extent, or can only be substituted for other metals to a limited extent, as is the case with lithium.

Source: TAC ECONOMICS, USGS, Royal Society of Chemistry

Critical Materials: Analytical highlights

Reserve distribution versus import concentration



Bubble size: Top5 Producers (% total)

This graph illustrates the balance of power between holders of critical materials reserves and the main importers/demanders.

It also highlights the absolute power of a monopoly supplier, as seen with palladium, and the influence of importers for a material that is not monopolized and can have diversified supply sources, as is the case with lithium.

Source: TAC ECONOMICS, CEPII/BACI, Royal Society of Chemistry

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