Beyond Borders: A Global Perspective of International Real Estate Valuation

CHAPTER 60:
ADDRESSING VALUATION CHALLENGES IN CROSS-BORDER MINING AND EXTRACTIVE INDUSTRIES

AUGUST 26, 2025 | BRUCE D. GREENBERG, FRICS |MAI | SRA | ASA | ARM

Stand on a wind-carved ridge above a copper porphyry or on a desert pad beside a newly spudded well, and valuation stops being abstract. It becomes a story about geology meeting regulation, commodity markets meeting community expectations, and cash flow models trying to catch all of it. Cross-border deals add another twist: the rules that shape the orebody's (or reservoir's) value change as quickly as the passport stamps. This article follows that story—narratively, not by checklist—to show how experienced practitioners thread standards, markets, fiscal terms and social licence into a defensible number.

From geology to cash flow: the standards that frame value

Everything starts with what can be reported. For hard-rock mining, most markets lean on CRIRSCO-family codes—JORC in Australasia, NI 43-101 in Canada, SAMREC in South Africa—whose shared definitions draw bright lines between Exploration Results, Resources and Reserves. The valuer's first discipline is to anchor cash flows only to Reserves (and, with care, portions of Resources), and to reconcile classifications across jurisdictions before comparing projects. In the United States, public disclosure now follows SEC Regulation S-K 1300, which modernized Guide 7 and aligned terminology with global practice. These frameworks don't tell you what the orebody is worth; they tell you what you may say about it, and that guardrail is foundational in cross-border work.

For oil and gas, the language shifts to PRMS—probabilistic reserves and resources classes that carry their own rules for booking and risking volumes. Again, valuation discipline means keeping category-appropriate risking and avoiding the temptation to blur 2P and 3P just to make the spreadsheet sing.

Markets, metals and marketing: where prices really bite

Cross-border mining valuations often live or die on concentrate marketing assumptions. It's not enough to plug in an LME price deck; payability, penalties, and the treatment and refining charge (TC/RC) cycle can swing NPVs dramatically. TC/RCs are negotiated discounts for turning concentrate into metal, and they tighten when smelter capacity is scarce and loosen when it isn't; long-term contracts often follow a yearly benchmark set in Asia. Getting that cycle wrong is a classic error in diligence.

A recent illustration: after a year of exceptionally high terms, benchmark copper TC/RCs for 2025 dropped sharply to about \$21.25/mt and 2.125¢/lb in agreements between a major miner and Chinese smelters—transforming netbacks for concentrate sellers virtually overnight. A cross-border valuer had to recut offtake terms, re-run logistics choices, and revisit smelter optionality to avoid overstating cash flows.

Fiscal regimes and the state's share

The same orebody can be worth very different amounts once the state takes its share. Royalties (ad valorem vs. profit-based), free-carried interests, production-sharing, ring-fencing and stability clauses vary widely, and revisions are common in commodity booms. Seasoned valuers therefore model a base regime and credible policy paths—adjusting carry, cost-recovery, and sliding scales—to understand downside capture and upside give-away across jurisdictions. The IMF's guidance remains a sturdy lens for comparing the neutrality and progressivity of these regimes.

Social licence, transparency and closure: liabilities that move the dial

Today's diligence crosses from spreadsheets into governance. In many host countries, EITI implementation now requires deeper disclosure of contracts, beneficial ownership and energy-transition exposure, which in turn sharpens cash-flow visibility and sometimes surfaces risks that a desktop review would miss. Meanwhile, upstream counterparties increasingly expect alignment with the OECD's five-step due diligence framework for minerals from high-risk areas. Incorporating those expectations—by testing supply-chain traceability costs, for instance—keeps valuations credible with lenders and boards.

Environmental and end-of-life obligations also carry real weight. Under IFRS, exploration and evaluation assets are subject to impairment triggers, while decommissioning and restoration liabilities are recognized early and re-measured as assumptions change—affecting both value and timing. On the ground, credible closure plans and financial assurance are increasingly non-negotiable; governments draw on World Bank toolkits and similar guidance to set those expectations, and buyers price them in.

A narrative of practice: stitching it together

Imagine a cross-border acquisition of a copper-gold project in the Andes with concentrate headed to Asian smelters. The technical team first reconciles Resources and Reserves across JORC and S-K 1300 language to ensure like-for-like volumes. Marketing runs two price decks and a TC/RC curve tied to the current benchmark and a reversion scenario, reflecting smelter tightness. Tax then layers the host country's new profit-based royalty, tests the stability clause, and meters FX leakage. ESG diligencers map EITI-driven disclosure obligations, check community agreements against OECD expectations, and cost a closure plan aligned with international good practice. Only then does the model feel trustworthy enough for a bid range—and even then, it's delivered with scenario probabilities, not false precision.

What works best (without the bullet points)

The most reliable valuations read like well-kept field notes. They tell the reader what the orebody is allowed to say under the relevant reporting code; they show how metal or barrel prices translate into realized revenues after TC/RCs, penalties or differentials; they let the fiscal regime speak in cash rather than slogans; and they acknowledge that transparency, human rights due diligence and closure are not footnotes but cash items with timing and risk. Above all, they are explicit about uncertainty—using structured scenarios and, where appropriate, real-options overlays to capture expansion, deferment or curtailment choices that cross-border operators actually make.

Conclusion

Cross-border extractive valuations are less about a single "answer" than about telling a coherent, defensible story under multiple legal, market and social grammars. If the story is transparent about what can be reported, humble about what the market might do, rigorous about how the state will take, and honest about how communities and closure obligations shape timing and spend, it will travel well—across borders and through investment committees.

Sources & citations

1. JORC Code (2012) – Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
2. NI 43-101 (2024 consolidated version) – Canadian securities disclosure standards for mineral projects.
3. SEC Regulation S-K 1300 (2018) – Modernization of property disclosure requirements for mining registrants in the U.S.
4. CRIRSCO International Reporting Template – Committee for Mineral Reserves International Reporting Standards.
5. SAMREC Code (2016) – South African Code for Reporting of Mineral Resources and Mineral Reserves.
6. PRMS (2018) – Petroleum Resources Management System, Society of Petroleum Engineers.
7. IMF (2012) – Fiscal Regimes for Extractive Industries: Design and Implementation.

Bruce D. Greenberg
FRICS |MAI | SRA | ASA | ARM
Managing Director | Principal
+1-480-440-2842 Ext. 01
bdgreenberg@fourcv.com
www.fourcv.com