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Determining the Price of Minerals

A transfer pricing framework

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Introduction

In the mining sector, royalties and corporate income taxes are generally based on the value of the mineral transacted. Consequently, it is critically important that any transactions involving the purchase and sale of minerals are valued correctly. Due to the frequency and scale of related-party transactions, the potential risk to tax revenues posed by transfer pricing non-compliance can be high, particularly around the value of the extracted minerals.

The transfer price is the price of a transaction between two entities that are part of the same economic group of companies. The price transacted between the two related entities is the "transfer price," and the process for setting the price is referred to as "transfer pricing." The arm's length principle is the international standard that determines transfer prices for corporate income tax purposes by multinational enterprises (MNEs) and tax administrations.

When independent enterprises transact with each other, the conditions of their commercial and financial relations (e.g., the price of the good) are generally determined by market forces (Organisation for Economic Co-operation and Development [OECD], 2022). However, when associated enterprises transact with each other, their commercial and financial relations may not be directly affected by external market forces in the same way as transactions between independent enterprises (OECD, 2022). Therefore, for corporate income tax purposes the profits of associated enterprises may be adjusted as necessary to ensure that the arm's length principle is satisfied, that is, the conditions of the commercial and financial relations that they would expect to find between independent enterprises in comparable circumstances (OECD, 2022).

Establishing the arm's length conditions involves gathering vast amounts of information (both publicly available and in the taxpayer's possession) in order to determine what independent parties would have agreed to in comparable circumstances, that is, the conditions that might be expected to operate between independent entities dealing wholly independently with another in comparable circumstances. When applied to the mining sector, particularly in relation to minerals where publicly available information on industry and pricing data is not readily available, there are both practical and technical challenges in applying the arm's length principle. These challenges are further amplified in resource-constrained and lower-capacity tax administrations in developing countries.

Recognizing this challenge, the OECD Centre for Tax Policy and Administration Secretariat and the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) have prepared this practice note to guide tax administrations on how to apply transfer pricing rules to the sale of mineral products.

About This Practice Note

Mining provides a significant contribution to the economies of many developing countries; however, determining an arm's length price for the sale of the host state's mineral products can be challenging. The cross-border sale and purchase of mineral products between related parties poses a significant base erosion and profit-shifting risk through MNEs selling mineral products to related entities abroad at prices below arm's length, thereby shifting sales revenue and profits offshore—generally to a low-tax jurisdiction. Developing countries may face challenges in appropriately pricing minerals that are extracted from the host state. These challenges can include access to reliable and accurate information, limited transfer pricing legislation, access to adequate resources (both staff and industry experts), capability of the tax administration and regulators, and knowledge of the industry.

The framework contained in this note is primarily for tax administrations in resource-rich developing countries where mining activity is being undertaken by MNEs. For tax administrations to apply it effectively, countries will need to have or adopt legislation that addresses related-party transactions. Generally, transfer pricing rules apply to transactions that occur cross-border, that is, between two jurisdictions; however, there can also be domestic transfer pricing issues as well—particularly when certain entities within a jurisdiction have differing rates of corporate income tax, which could create incentives for domestic transfer mispricing. For example, a mine might be taxed at a higher rate than a related-party processing facility also located in the host state, creating an incentive to shift profits into the processing facility to utilize the lower tax rate.

The framework provides practical and meaningful guidance for developing countries to accurately delineate the transaction and price mineral sales on an arm's length basis. Specifically, it identifies the primary economic factors that influence the pricing of minerals using transfer pricing principles. This framework is then applied to specific minerals in a series of stand-alone pricing schedules that will be released gradually over time. Finally, the practice note includes several simplified administrative approaches to applying transfer pricing rules to mineral sales that may be especially relevant for developing countries.

Importantly, this practice note does not replace, alter, or affect the OECD Transfer Pricing Guidelines (TPG) (OECD, 2022) interpretation of Article 9 OECD Model Tax Convention (OECD, 2017) or the application of countries' domestic transfer pricing laws and the interpretation of those laws by the respective tax administration. Furthermore, this practice note focuses solely on how to price minerals on an arm's length basis. It does not provide any guidance on other potential transfer pricing risks, such as the treatment of marketing or trading hubs, financial transactions, etc. Finally, the IGF and OECD recognize that some countries adopt different policy approaches to pricing minerals sold to related parties. IGF explores some of these options in its handbook on *The Future of Resource Taxation*. This note is focused

on the implementation of the comparable uncontrolled price (CUP) method to price minerals sold to related parties and consequently does address alternative approaches.

How Is It Structured?

The first section of the practice note sets out a high-level summary of the mining value chain and identifies areas where related-party transactions could pose a risk to tax revenues by taxpayers inappropriately applying the arm's length principle or not applying it at all. The second section of the practice note specifically addresses transfer pricing risks associated with mineral pricing. The practice note will be followed by several schedules that each apply the framework to a specific mineral.

What Gap Is the Practice Note Filling?

This practice note complements action by the Platform for Collaboration on Tax (PCT), the United Nations, the World Bank Group, and others to produce toolkits and handbooks on high-priority tax issues facing developing countries. In particular, the PCT's *A Toolkit for Addressing Difficulties in Accessing Comparables Data for Transfer Pricing Analyses* (PCT, 2017) suggested that countries may use quoted prices where available to apply the CUP method to price mineral sales and concluded that "further work on the efficient and effective application of such approaches based on quoted prices is recommended" (PCT, 2017, p. 13).

This practice note also expands on the practical application of comparability adjustments in the PCT's publication, such as adjustments to reflect the physical characteristics of a mineral, delivery terms of a mineral sale (e.g., freight adjustments), and the consideration of other economically significant factors (PCT, 2017).

This practice note should be read in conjunction with a previous practice note issued by IGF-OECD that focused on determining the value (or quality) of mineral exports, *Monitoring the Value of Mineral Exports* (Readhead, 2018). Understanding the quality or value of the mineral is a necessary precondition to being able to price it. This publication was developed as part of the IGF-OECD joint program on addressing base erosion and profit-shifting risks in the mining sector.

Potential Transfer Pricing Risks Along the Mining Value Chain

Potential Transfer Pricing Risks Along the Mining Value Chain

Many physical products that we use every day originate from the extractive sector, whether that is a mineral, metal, or hydrocarbon. The extraction of minerals and metals from the Earth's crust has been conducted since prehistoric times, with mining operations evolving from being labour intensive to modern high-tech operations that use advanced machinery.

Although artisanal mining[1] operations continue to be a feature of the mining industry, this discussion of the mining value chain will focus on conventional structures seen in large-scale mining activities undertaken by MNEs. The large-scale mining operations undertaken by MNEs pose material transfer pricing risks for developing countries, given their size, scale, volumes produced, cross-border transactions, and their access to both human and financial capital.

This section of the practice note will briefly cover the main stages of the mining value chain and associated transfer pricing risks. For additional detail and a comprehensive overview, refer to the following publications listed in Box 1.

BOX 1. THE MINING VALUE CHAIN AND POTENTIAL TRANSFER PRICING RISKS PUBLICATIONS

Publication 1: Part A of *Transfer Pricing in Mining With a Focus on Africa: A Briefing Note* (Guj et al., 2017) for a more detailed explanation of the mining value chain and the transfer pricing risks that occur along it.

Publication 2: The toolkit developed by the African Tax Administration Forum (ATAF) and the German Federal Ministry for Economic Cooperation and Development (BMZ) titled *Toolkit for Transfer Pricing Risk Assessment in the African Mining Industry* (Readhead, 2017). This toolkit provides African tax authorities with various ways to assess the transfer pricing risks in the mining industry. It focuses on four key transfer pricing risks (marketing arrangements, intercompany debt, procurement services, and management services) that are predominant in the mining industry.

Publication 3: IGF and the OECD previously published a practice note on *Limiting the Impact of Excessive Interest Deductions on Mining Revenue*. It aims to assist countries in understanding how mining companies legitimately use debt finance within a corporate group.

[1] "Artisanal mining" refers to small-scale and largely informal mining that is low tech and involves minimal industrial machinery. See IGF guidance on artisanal and small-scale mining.

The Mining Value Chain

Mining involves exploring for, developing, and extracting minerals and metals, and in some instances, non-mineral crystals, such as opals and organic materials, such as amber. The common feature of mining is that it involves the extraction and sale of naturally occurring and non-renewable resources found in the Earth's crust. In addition to the extraction of mineral resources, modern multinational mining companies can also be involved in midstream logistical and selling activities, as well as downstream processing of minerals and metals.

Exploration

Prior to the establishment of a mine, there is an exploration process that spans the initial prospecting to the completion of a preliminary estimate of the orebody. The orebody model is then used as a basis to determine whether the resource deposit is economically viable to mine.

Modern mineral exploration involves the use of advanced scientific techniques to estimate the size and complexity of the mineral deposit, such as sample drilling and geological analysis of mineral quality, and airborne, electromagnetic, and gravitational surveying techniques.

Exploration is a high-risk venture. It can be undertaken by companies that specialize in exploration, large multinational companies, or outsourced to service companies that perform certain aspects of the exploration process.

Development

The development phase of the mining value chain involves feasibility studies, mine design planning, and construction. The duration of the development phase varies from months to years depending on the type and complexity of mine that is being developed.

In designing and planning a mine, various commercial options to extract and process the orebody are considered. The design options are then assessed from a financial perspective through feasibility studies to determine whether it will be economical to proceed to the construction and production stages. If the feasibility study and the economic modelling demonstrate that the project would meet the mining company's internal investment rate of return (or hurdle rate), they are then proposed to the board (both locally and offshore) for final approval. The financial aspect of a project is supplemented by environmental, social, and governance considerations whether to invest in a project or not.

Once the production or mining licences have been granted by the governing authorities, construction of the mine and the supporting infrastructure can begin. The development phase of the mine can often continue for many years as the production phase moves from the easier-to-extract sections of the resource deposit to harder-to-access parts of the orebody. Construction is not limited to the mine itself but may involve building roads, ports, bridges,

railways, lodging for mining personnel, processing facilities, and other critical supporting infrastructure.

The construction stage requires substantial investment by the mining company, which can be funded by way of equity or debt, or a mixture of both. Given the significant capital costs associated with the development stage, mining companies should strictly manage capital and operating expenditures to ensure the project remains within the forecasted budgeted figures.

Production

Mining production typically involves surface mining or underground mining.

Surface mining involves the removal of overburden, such as vegetation, soil, and layers of bedrock, to access the mineral deposit. Common techniques for surface mining are open-pit mining and strip mining.

Underground mining involves tunnelling and building shafts deep into the Earth's crust to access mineral deposits. This technique is relatively costly and can only be done where it is geologically safe to do so. The different types of underground mining are distinguished by the types of shafts used and the extraction technique.

In addition to these two common mining techniques, some minerals are extracted using less common methods such as in-situ leaching, brine mining, and placer mining. None of these methods involve physically removing ore from beneath the surface but instead use a solution-based recovery method.

In-situ leaching involves drilling holes into permeable bedrock and pumping leaching chemicals to dissolve the ore, then extracting the mineral by repumping it back up to the surface. This type of mining is most commonly used to extract industrial salts and uranium.

Brine mining involves the extraction of minerals that have already been dissolved naturally in water with high levels of salt concentration. Brine mining is used for industrial minerals such as bromine, iodine, and potash. More recently, brine pools have become an important source of lithium, supplying approximately half of the world's supply.

Placer mining involves sifting valuable material from sediments. This is typically done in riverbeds, sands, and other environments where resource deposits occur naturally in a sedimentary environment. This technique is typically used to recover precious metals and gemstones.

Processing

After the ore is extracted, the minerals undergo processing to separate waste material (referred to as gangue material or tailings) from the valuable mineral or metal. Commonly referred to as milling, it involves one or more combinations of chemical and mechanized processing to crush, grind, and wash the ore. For certain extractive materials, processing can involve blending to produce a consistent and marketable grade of ore.

The conclusion of the processing results in a sellable mineral ore or concentrate that is intended to have a more consistent purity (or grade) that may be desired by some customers.

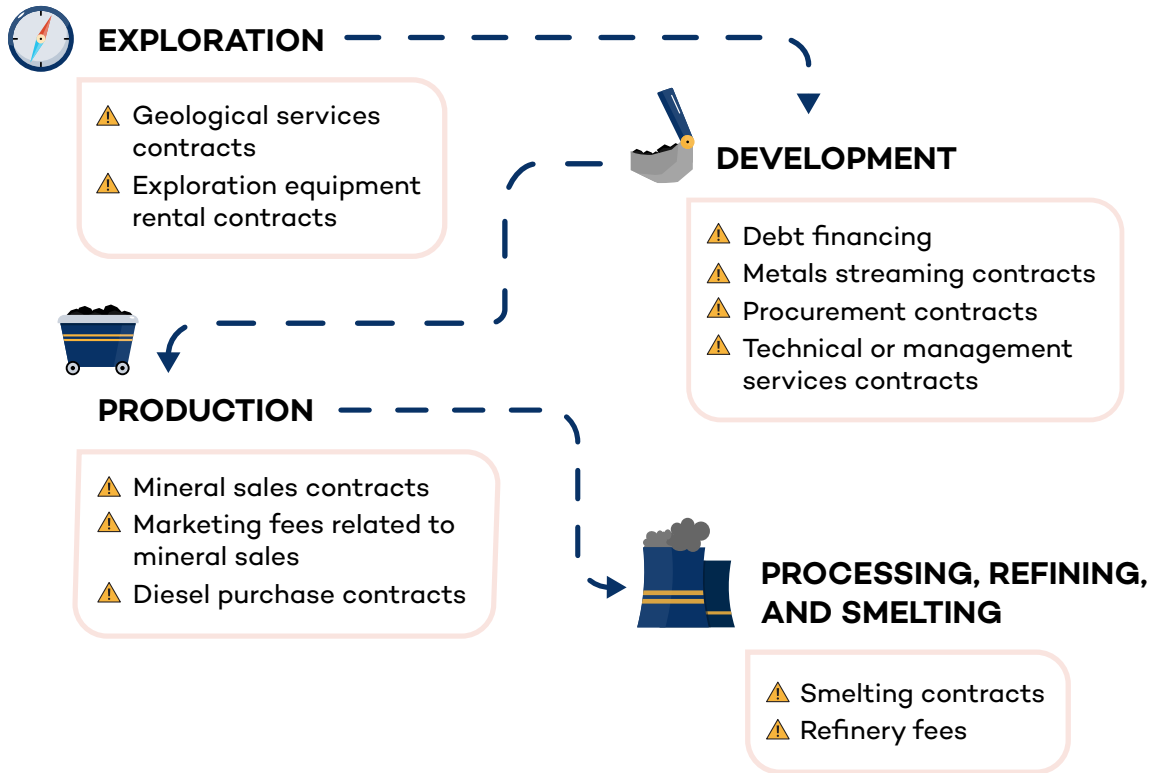
Refining and Smelting

After the underlying ore has been processed, some vertically integrated mining companies have metal refining facilities that further purify metal concentrates to produce a higher-grade metal. Metal refining techniques can vary depending on the underlying ore and metal, ranging from the use of electrolytic refining, hydrolysis, or the use of heat to separate metal, called pyrolysis.

Smelting can also be considered a form of metal refinement whereby extreme heat is applied to an ore to melt and extract the base metal and remove any impurities or trace elements.

Figure 1 provides a useful representation of primary mining activities up to the point of export.

FIGURE 1. The mining value chain in a snapshot



Source: Authors' diagram.

Common Transfer Pricing Risks Along the Mining Value Chain

Transfer pricing risks can arise where there is a cross-border transaction between related parties within a multinational group. Although this note does not specifically address domestic transfer pricing risks, the same principles apply where there are domestic transactions between related parties, for example, the sale of mineral products by a mine to a related-party smelter located in the same jurisdiction. While this note does not seek to identify all the possible transfer pricing risks that can occur along the mining value chain, it does highlight some of the most material risk areas before focusing on the risks that arise from related-party mineral sales specifically. Other practice notes published by the OECD Secretariat and IGF (e.g., *Limiting the Impact of Excessive Interest Deductions on Mining Revenues* [Devlin, 2017]) delve into specific risk areas, such as the use of debt financing in the mining sector.

The common transfer pricing risks along the mining value chain are outlined in Table 1.

TABLE 1. Transfer pricing risks along the mining value chain

Stages along the value chain	Description of transfer pricing risk
Exploration	• The exploration phase of mining involves the use of specialized geologists, engineers, and equipment. These activities can be done either in-house by a mining company or outsourced to a third-party service provider. • Under both scenarios, transfer pricing risks can arise when there are intra-group technical services or intra-group rental of specialized equipment (i.e., charging above an arm's length price for the provision of the service and/or the use of the asset).
Development	• Several transfer pricing risks can occur at the development stage. The most notable—and generally the largest—risk is related-party financing. Related-party financing risks can manifest in the form of related-party debt, derivative instruments, and other alternative funding structures, such as the use of related-party metal streaming arrangements. • As the majority of mine developments require substantial capital investments, financing risks can be significant and persist throughout the life of the mine if the debt is not paid down.

Stages along the value chain	Description of transfer pricing risk
Development (continued)	• Similar to the exploration stage, the development stage of the mine can involve intra-group services that are subject to transfer pricing risks. The common types of intra-group services are technical services, management services, and international secondees (fly-in/fly-out workers). • Mining-specific technologies, such as mining know-how developed or exploited during the development stage, may lead to transfer pricing risks regarding the charging or being charged fees for the use of this intellectual property. • The development stage can also involve the use of large and sophisticated machinery and equipment. Where this equipment is sourced from related parties, transfer pricing risks can arise from either excessive pricing of the capital equipment purchases or excessive rental charges. Other associated consumable purchases, such as diesel (for trucks and generators) or tires, can also be subject to excessive pricing risks or service fees paid to offshore procurement hubs.
Production	• All the transfer pricing risks during the development stage also exist at the production stage. This stage also results in the production of sellable minerals. Mispricing of minerals can occur at different stages but is best evaluated at the point where the sale is made to a related party, usually offshore. • The selling of minerals can also involve the use of related-party sales and marketing entities, which can charge a service fee or agency commission, incorrectly price the mineral, or receive a discount on the sale price of the mineral. The use of sales and marketing entities has been subject to tax controversy in several resource-rich countries: see, for example, the Canadian case The Queen v. Cameco Corporation, 2020 FCA 112. Determining the arm's length remuneration for related-party sales and marketing entities is beyond the scope of this toolkit.
Processing, refining and smelting	• Transfer pricing risks can arise from related-party refining and smelting facilities due to excessive treatment and refining charges. It is also not uncommon to have sales and marketing entities interposed between the mining entity and the refinery or smelter, and therefore the same marketing hub risks can also occur during this stage of the value chain. • The following section of this practice note will focus on transfer pricing risks that can occur at the production and processing stages of the value chain and provides a useful framework to price related-party sales of minerals.

A Framework for Applying the CUP Method to Value Minerals

A Framework for Applying the CUP Method to Value Minerals

The large-scale mining industry is a highly capital-intensive venture that involves a complex value chain and the use of sophisticated equipment, engineering, and technology. This complexity, combined with the need for economies of scale, often means that MNEs almost exclusively operate large mining projects. As discussed in the preceding section, it is therefore not unusual that related-party transactions are prevalent along the value chain. This practice note focuses on a framework to accurately value the minerals sold to related parties. However, this does not mean that the other transfer pricing risks outlined in the previous section are not material and can be disregarded. A thorough risk assessment of all related-party transactions of an MNE to ascertain the material transfer pricing risks is critically important to ensure that the correct amount of profit is taxed.

Due to the frequency and scale of related-party transactions, the potential risk to tax revenues posed by transfer pricing non-compliance can be high, particularly for the sales price of extracted minerals. The potential significance of the risk, coupled with the capacity constraints in developing countries, can lead to immense challenges for tax administrations. This practice note is intended to help tax administrators identify the economically significant factors that determine the price of a mineral sales transaction, the options available to obtain market data of comparable prices, and how (and when) to make comparability adjustments that will improve the reliability of a comparable price.

Importantly, this practice note does not replace, alter, or affect the OECD TPG (OECD, 2022) interpretation of Article 9 OECD Model Tax Convention (OECD, 2017), or the application of countries' domestic transfer pricing laws and the interpretation of those laws by the respective tax administration. Furthermore, the framework is not intended to provide or explain the context within which commercial contracts are actually negotiated. Rather it seeks to provide a practical and coherent framework to price related-party sales of minerals that is consistent with the OECD TPG and to apply that framework in the context of certain minerals specified in the accompanying schedules.

Owing to the unique conditions and circumstances that can arise in mineral classes, there may be other relevant aspects that can influence mineral prices that are not discussed in this practice note. Where that is the case, such unique factors will need to be evaluated to determine their relevance in the context of the comparability factors outlined in the OECD's (2022) TPG at Paragraph 1.36.

The framework of the mineral pricing analysis follows the CUP method outlined in the OECD TPG and explained below, focusing on the key aspects of the transfer pricing analysis.

An Overview of the CUP Method as It Relates to Mineral Pricing

The CUP Method

The CUP method compares the price charged for property (i.e., a mineral) or services transferred in a controlled transaction to the price charged for property or services transferred in an uncontrolled transaction in comparable circumstances. An uncontrolled transaction is comparable to a controlled transaction for the purposes of applying the CUP method if one of the following two conditions is met (OECD, 2022):

1. None of the differences between the transactions being compared or between the enterprises undertaking those transactions could materially affect the price in the open market.
2. Reasonable, accurate adjustments can be made to eliminate any material differences.

The OECD Transfer Pricing Methods

The OECD TPGs focus on identifying the most appropriate transfer pricing method for a given transaction. There are five OECD-recognized transfer pricing methods (OECD, 2022):

- The traditional transactional methods:
    - CUP
    - Resale price
    - Cost plus.
- The transactional profit methods:
    - Transactional net margin
    - Profit split

There is generally no hierarchy in the selection of a transfer pricing method, and the most appropriate method is to be applied.

The Choice of Transfer Pricing Method for Mineral Sales

The consensus view presented in the 2022 OECD TPG at Paragraph 2.18 is that the CUP method is generally an appropriate transfer pricing method for transactions involving commodities such as minerals, and, if administered

correctly, it is the most direct and reliable way to apply the arm's length principle. Consequently, in such cases the CUP method is preferable over all other transfer pricing methods. Historically, given the availability of pricing information in the extractive sector, the CUP method would generally be an appropriate transfer pricing method for related-party mineral sales. Furthermore, where the CUP method and another transfer method can be applied in an equally reliable manner, the CUP method is preferred (OECD, 2022). However, it does not mean that any of the other transfer pricing methods should be disregarded altogether.

BOX 2. APPLICATION OF THE CUP—OVERVIEW OF THE OECD TPG

Paragraphs 2.18 to 2.22 of the OECD TPG provide guidance on the application of the CUP method for establishing an arm's length price for the sale of commodities between associated enterprises. The OECD TPG's reference to commodities is a physical product for which a quoted price is used as a reference price to set prices in uncontrolled transactions.

Paragraph 2.18 of the 2022 OECD TPG outlines that the term "quoted price" refers to the price of the commodity in the relevant period obtained in an international or domestic commodity exchange market which can be sourced from transparent price reporting or statistical agencies or governmental price-setting agencies. Furthermore, a "quoted price" could be referring to differing elements of a commodity price, such as the price of a commodity on a quoted exchange, a quoted premium or discount to the quoted exchange, quoted shipping rates for specific routes, and/or quoted treatment and refining charges.

It is important to ensure that any such indexes are being used as a reference by unrelated parties to determine prices in actual transactions between them. This is critically important, as taxpayers may present indexes or a "quoted price" that are not in fact used in the market between unrelated parties or are used in very specific and unique circumstances that are not comparable to the controlled transaction.

As outlined in Paragraph 2.20 of the 2022 OECD TPG, if a quoted price is used for determining the arm's length price, the standardized contracts that stipulate specifications based on which commodities are traded to derive a quoted price for the commodity may be relevant. Where there are differences between the conditions of the controlled and uncontrolled transaction that materially affect the price, they should be examined and accurate adjustments should be made to ensure that the economically relevant characteristics of the transactions are comparable.

Comparability Analysis for Mineral Sales

Under the CUP method, the arm's length price for a commodity transaction may be determined by reference to comparable uncontrolled transactions

and/or by reference to comparable uncontrolled arrangements represented by a quoted price.

Accordingly, for the CUP method to be applied reliably, the economically relevant characteristics of the controlled transaction and those transactions from which the quoted price is obtained need to be comparable. The specific comparability factors to consider when comparing the controlled transaction to a quoted price are listed (this list is not exhaustive) below. These comparability factors are covered in greater detail in the next section (using the CUP method to determine the price of the mineral sold).

- Physical features and quality of the commodity
- Volumes being transacted
- Period of the arrangement
- Timing, location, and terms of delivery
- Other factors such as transportation, insurance, foreign exchange, and payment terms.

As outlined in Paragraph 2.17 of the 2022 OECD TPG, every effort should be made to adjust the data so that it may be used appropriately in applying the CUP method. Where there are material differences between the conditions of the controlled transaction and the conditions of a quoted price, reasonable, accurate adjustments should be made to ensure that the economically relevant characteristics of the transaction are comparable (OECD, 2022).

In applying the CUP method, the terms and conditions between unrelated parties, including the price of the mineral, can be compared and ultimately applied to the sale of a mineral between related parties, assuming that the transactions fulfill the comparability factors as outlined in the 2022 OECD TPG (Paragraph 1.36). In particular, a high degree of product comparability is critical in applying the CUP method reliably. The CUP method involves comparing the price of a product (i.e., a mineral) with another product; therefore, any minor differences in the product can have material differences in the price. This is highlighted in Paragraph 2.17 of the OECD TPG: "minor differences in the property transferred in the controlled and uncontrolled transactions could materially affect the price." As an example, the price and market dynamics for iron ore and coking coal are different even though they are both used in steel production.

As each and every commodity is different with its own unique supply and demand dynamics, it is important for any transfer pricing analysis to thoroughly evaluate the particular commodity under review. The accurate delineation of a transaction involves understanding the key supply and demand factors that influence the terms and conditions of a transaction. Since the commercial and market aspects of each commodity are different, this toolkit is supplemented by several schedules that each apply the framework to a specific mineral.

The factors discussed above in applying the CUP method in relation to a quoted price apply equally to locating a comparable uncontrolled transaction (i.e., a sale of the commodity between two unrelated parties). Given that commodities are generally sold to multiple buyers, including to related and unrelated parties, there might be transactions entered with independent parties under circumstances comparable to the controlled transaction. These transactions (i.e., sales to independent parties under comparable circumstances) can be either a comparable transaction between one party to the controlled transaction and an independent party ("internal comparable") or between two independent parties, neither of which is a party to the controlled transaction ("external comparable") (OECD, 2022).

Therefore, to ascertain the arm's length conditions, it is vital to collect all third-party contracts for the sale/purchase of the commodity that the taxpayer (or other entities within the group) has entered into during the relevant time period. The specific terms and conditions contained in a sales/purchase contract between the taxpayer (or other entities within the group) and independent parties will be relevant sources of information to ascertain the arm's length conditions—subject to the arrangements being comparable to the controlled transaction. As outlined in Paragraph 2.21 of the 2022 OECD TPG, taxpayers should provide tax administrations with reliable evidence and documentation as part of their transfer pricing documentation. This should include third-party end-customer contracts, information to justify price adjustments from quoted prices or comparable uncontrolled transactions, and information for non-tax purposes, such as a detailed description of the supply chain, forecasted financials, or any analysis undertaken as part of the final investment decision for a mine. However, in practice, tax administrations have difficulty in accessing this information, as taxpayers often argue that this information is offshore and/or commercially sensitive. To alleviate this, tax administrations should take all reasonable steps to ensure that there is no disclosure of confidential information.[2]

Once the arm's length conditions are determined, they can be compared to the actual conditions that were entered into by the taxpayer to ascertain whether there are any material differences between the two—that is, arm's length conditions versus actual conditions.

Using the CUP Method to Determine the Price of Minerals

In applying the CUP method to related-party mineral sales the comparability factors or economically relevant characteristics outlined in Paragraph 1.36 of the 2022 OECD TPG are to be considered. Paragraph 1.37 of the 2022 OECD TPG further notes that the extent to which each factor is economically relevant in a particular transaction depends on the extent to which it would be taken into account by independent enterprises when evaluating the terms of the same transaction were it to occur between them. Considering

[2] See Paragraph 5.44 of the 2022 OECD TPG

this, there are three comparability or economically relevant factors that are particularly important to consider when applying the CUP method to scenarios involving related-party mineral sales. These are:

1. The characteristics of the product, such as the physical features and quality of the commodity.
2. The economic circumstances that existed at the time the sales agreement was entered into, that is, the period of the arrangement.
3. Contractual terms, such as quantity transacted, transportation terms, payment terms, insurance, quotation periods, foreign exchange, and treatment and refining charges.

Importantly, this framework is premised on the following overarching conditions:

1. The associated mining enterprise, i.e., the seller, is treated as a mining enterprise that is part of a larger multinational mining group.
2. Being part of the multinational group, the mining enterprise would have access to knowledge and intelligence of the commodity market conditions from its sister companies or its parent entity. This market knowledge and intelligence could include an awareness that the producing mine is one of a finite number of production entities in the world, and it produces a finite resource that is the primary source of value creation.
3. It is on this basis that the associated mining enterprise, operating wholly independently, would assess all of the options realistically available to it with the full benefit of market intelligence and knowledge that the wider MNE group has access to, and sell at the highest possible price, taking into account its commercial objectives.

Associated Mining Enterprise

The conditions of the associated mining enterprise set the framework through which comparable transactions can be identified. The test under the arm's length principle is what terms would the associated mining enterprise (i.e., the seller of the mineral) agree to with an unrelated buyer of the mineral. The arm's length principle recognizes the associated mining enterprise within the context of the MNE group, so when negotiating with an unrelated buyer, the associated mining enterprise (the seller) considers the impact of belonging to the MNE group.[3] In the context of mineral pricing, this includes taking into consideration the policies, procedures, and past behaviours of the MNE.[4] For example, whether they sell at an index price, offer discounts to the index price, sell the goods on a long-term basis at certain quotation periods, or manages the shipping to the delivery point.

Conversely, it would be inappropriate to apply the arm's length principle assuming a complete detachment or divorce of the mining enterprise from

[3] See Paragraph 1.34 of the 2022 OECD TPG.
[4] See Paragraph 1.134 of the 2022 OECD TPG.

the wider MNE group. Such a scenario would represent a departure from the commercial reality of the actual circumstances, which is that an entity within an MNE group operates as part of the group. Taxpayers often misapply the stand-alone entity approach to justify that the associated mining producer is in a perceived weak bargaining position, has limited access to capital (both financial and human), and is often in a weak financial position as reasons to undervalue the mineral.

Furthermore, to assume that an independent mining enterprise would sell a mineral or metal in complete ignorance of commodity market conditions and commercial objectives would be an inappropriate application of the arm's length principle. Such behaviour would be inconsistent with rational commercial behaviour in an arm's length transaction.

BOX 3. EXAMPLE OF THE ASSOCIATED MINING ENTERPRISE

As an example, a metals and mining MNE group that has knowledge of the market and industry, a strong balance sheet, and expertise when negotiating with an independent buyer should be able to achieve better terms and conditions compared to a mining entity that owns a single mine that is in the start-up phase with limited cash flow.

As such, when conducting the transfer pricing analysis in determining the price of the mineral, the test is to consider whether the associated mining enterprise, i.e., the seller has the same bargaining power to that of the metals and mining MNE group.

If the associated mining enterprise has the same bargaining power as the metals and mining MNE group, the associated mining enterprise should be able to achieve the same or similar result (i.e., terms and conditions in a sales contract) as if the metals and mining MNE group was negotiating with and selling the commodity to an unrelated independent buyer.[5]

Economically Relevant Factors

Physical Characteristics of the Product

Being a physical product, the characteristics of the mineral in question are of particular relevance and importance. This requires an understanding of the chemical properties of the mineral, which needs to come from a representative sample. For additional information regarding the export valuation process and extracting representative samples, see Readhead (2018), Chapter 2.

The general principle applicable to all minerals relies on three factors:

1. The quantity of the payable element, that is, the mineral or metal.

[5] For the avoidance of doubt, this relates solely to the price of the mineral and the remuneration for the hypothetical mining enterprise and not the arm's length remuneration of other group entities i.e., marketing, trading, or transportation entities.

2. Downward adjustments for undesirable physical properties, such as impurities that increase the cost of extracting or refining the payable element. These may be referred to as "penalties" in commercial contracts.
3. Upward adjustments for desirable physical properties of the payable element that have a positive bearing on the costs of extracting, refining, or smelting. This may also include other valuable by-products in the primary ore that can be commercially extracted and consumed or marketed.

In commercial contracts, the physical properties of the element (mineral or metal) to be delivered to the buyer are specified within a certain quality specification, with upward or downward adjustments to be applied within a stated tolerance. Delivery of a product that is below a certain tolerance threshold may result in the cargo being rejected—often referred to as "off-specification."

A mining entity operating wholly independently would be expected to understand the quality of its ore reserves to the best of its ability. It would be expected to take into consideration its commercial objectives and options realistically available and negotiate terms with an independent buyer that would generally maximize those objectives. Such objectives would reasonably be expected to include factors such as maximizing the price of the delivered product, terms that reflect reasonable variances in its level of production, minimize the imposition of penalties, and overall profitability considerations. To this end, a related-party contract that departs significantly from a contemporaneous market price for the delivery of a cargo or contains terms that unreasonably increase the likelihood of penalties (e.g., strict impurities thresholds) may raise concerns about whether such terms are consistent with the arm's length principle. Related-party contracts constructed in such a manner should expect to attract scrutiny from tax administrations.

Economic Circumstances

Outside of the underlying value of the commodity itself, other important factors that can have a material impact on the price agreed between independent parties are the commercial and financial factors affecting how the arrangement takes place. These can include the balance between supply and demand, the structure of the buyer and seller (as well as their respective market reputations and customer relationships), the production history of the mine, and any sovereign risk associated with the host state. In practice, these factors can have varying degrees of influence on the price agreed to between independent parties, depending on the type of commodity and period of sale. Collectively, these factors fall under the economic circumstances described at Paragraph 1.36 of the 2022 OECD TPG.

Although each of these factors is discussed below in further detail, tax administrations must exercise practical judgment on the sum of the overall arrangement. The price agreed in an arm's length sales contract

should reflect the following: 1) what the market will bear and 2) a price that sufficiently covers the marginal cost and returns a reasonable profit for the entity that owns the mine. There may be instances where the mining entity sells a certain shipment for a loss, but loss-making cargoes are unable to be sustained and are not expected to occur over the medium or long term.

Supply and Demand Dynamics

Mineral and metal prices are subject to global (and regional) demand and supply factors, and expectations of those price trends at the time the contract is negotiated can influence pricing terms, although to varying degrees.

For minerals or metals that have an established and transparent benchmark price[6] (e.g., precious and base metals), supply and demand dynamics are expected to have less of an impact. This is because sales contracts for these types of minerals and metals will typically reference a particular quoted price (it reflects the market conditions at the time) as well as the exact period and method to select the benchmark sales price for a specified cargo. An example is the London Metals Exchange (LME) price indexes, which are often cited in metal sales contracts as a benchmark index such as "Average quoted monthly x metal LME price, 2 months after shipment." Furthermore, even for minerals or metals that have an established and transparent quoted price, any differences between the conditions of the controlled and uncontrolled transaction that materially affect the price should be examined, and accurate adjustments should be made to ensure that the economically relevant characteristics of the transactions are comparable.

However, for minerals and metals that do not have a transparent market price or index, the contemporaneous views of global and regional demand and supply can influence pricing terms. This is because negotiating parties do not have a reliable quoted price they can refer to and must therefore negotiate a price based on expectations of the specific commodity market.

Depending on the practice and conventions of the specific mineral or metal market, long-term contracts may contain price renegotiation clauses to hedge price risk for both parties. This can be expressed in the form of trigger dates or events that will serve as a catalyst to bring both buyer and seller to renegotiate certain pricing terms or other clauses within the contract. Although not true in all instances, generally the longer the contract, the more likely such clauses will exist. An example would be a 10 year umbrella supply agreement between a buyer and seller, which is then governed by annual price reviews and negotiations that set the price of the mineral, and/or potentially other sales terms, for each year (e.g., treatment and refining charges, freight charges etc.).

6 Also referred to as a "quoted price" at Paragraph 2.18 of the 2022 OECD TPGs.

Structure of the Buyer and Seller Entities

Although the selling and buying entities in the mining industry are generally price takers (as opposed to price setters), the relative market concentration of the selling and buying entities can influence the degree of bargaining power that each has in an arm's length negotiation process.

In general, a commodity market that has a lower concentration of dominant sellers and buyers would result in the market participants being price takers, and any divergence from the established market price, such as a commodity index, is marginal or non-existent. As an example, the gold market has a lower concentration of dominant sellers and buyers with an established market price for the mineral; therefore, there is minimal opportunity for divergences from the market price.

In a commodity market where there is one or a small group of highly dominant producers or consumers *and* where there is no transparent commodity index, the dominant players may have a greater ability to directly influence the market price. In these economic circumstances, the remaining producers in those markets are "price-followers" and "take" the price negotiated by the dominant players as the market price for a specified period, which is usually a year.

Examples of such economic circumstances are becoming rarer in the mineral and metal markets with the democratization of market information and market intelligence published by price reporting agencies, which has contributed to the evolution of commodity benchmark indexes.

The Production History and Market Reputation of the Producing Mine

Continuity of supply is an important factor for buyers of minerals, particularly for metallurgical ores, due to the cost of shutting down and restarting refineries and smelters. Therefore, a proven track record of producing a stable and consistent quantity and quality of minerals is an important factor in contractual negotiations.

New mines that do not have a track record of production or reliability of production may have a smaller pool of customers who are willing to take on the risk of supply disruptions or the quality of delivered products not meeting expectations. Depending on the size of the customer pool for that commodity, the absence of a production track record may affect the mine's bargaining position and, therefore, its ability to sell at the market price. Miners in this position may need to offer a discount to the market price to attract buyers.

Sovereign Risk Associated With the Mine's Location

Sovereign risk in the host state may be a concern to a buyer due to the potential for some form of exogenous intervention that negatively affects the mine's production. In this regard, sovereign risk is directly linked to the production track record or expected production of the actual mine itself. Where the mine has not yet commenced production, buyers may look to the production track record of other mines that operate in the host state. In this respect, sovereign risks may already be reflected in the factor immediately above. It is, therefore, important to avoid duplicating any economic factors that have already been considered.

Other sovereign risks that do not directly have an impact on the mine's operation would have little bearing on the price of a mineral. For example, the creditworthiness (i.e., credit rating) of the host state is not expected to have any bearing on the price of a commodity sold from that country. Rather, the creditworthiness of the host state reflects the probability of default on the host state's debt obligations and the recovery prospects for creditors upon default. Changes in the creditworthiness of the host state (other than a default event) are not expected to influence the market price of a mineral being produced from that same country.

Contractual Terms

Terms and conditions embedded in the sales contract can have a bearing on the final price agreed. These include things such as quantity transacted, transportation terms, payment terms, insurance, quotation periods, foreign exchange, treatment and refining charges, etc. As an example, the transportation term could be on a cost and freight basis in which the seller is responsible for the transportation, and the price of the mineral is inclusive of freight. Alternatively, the transportation term could be on a free-on-board basis in which the buyer organizes the transportation from the point when goods are loaded on a vessel and the price that is paid is for the mineral only (including any relevant costs up to the loading point). Terms and conditions may shift risk or responsibility between the buyer and seller, i.e., quotation period optionality, and parties would generally expect to be compensated for bearing any additional risks. The impact of differing terms and conditions on pricing is generally specific to each mineral and will be dealt with in the schedules that follow.

It should be noted that prior to making any comparability adjustments to reflect related-party contractual terms, one must first accurately delineate the transaction to determine whether the specific terms and conditions are consistent with the arm's length principle. As an example, the payment term in the controlled transaction is 120 days; however, the payment terms in the CUP identified, and the industry standard is 30 days. A comparability adjustment is not required to adjust the CUP to reflect the 120-day payment terms in the controlled transaction, as this condition is not considered arm's length. The technical process is outlined under the OECD 2022 TPG from paragraphs 1.33 to 1.50 (OECD, 2022).

Due to the movement and volatility of the commodities market, a particularly relevant comparability factor for a commodity transaction is the pricing date. The pricing date refers to the specific date (date on which the contract was entered into) or time period used to reference quoted prices (i.e., quotation periods). These factors will have a bearing on identifying comparable transactions as it is necessary to ensure that any potential comparable transaction was entered into during a comparable time period as the controlled transaction. Controlled transactions that exhibit quotational period optionality (ability to select different quotational periods) and backward-looking pricing would require additional evidence from the taxpayer to establish that these are arm's length terms and conditions and may face greater scrutiny from tax administrations to ensure these terms and conditions comply with the arm's length principle.

The schedules for specific minerals that will accompany this practice note will have practical examples of the more commonly seen contractual clauses and provide illustrations on how to make comparability adjustments.

Options Realistically Available – Commercial Reality

The arm's length principle effectively requires an assessment of whether the commercial or financial relations (examples include a transaction, a practice, an understanding, an arrangement, alternatives realistically available, a strategy etc.) and resulting conditions, and the allocation of profit, make commercial sense for the entities to the transaction/arrangement, from the perspective of independent parties dealing wholly independently with each other. As part of a transfer pricing analysis, the concept of "options realistically available" needs to be considered.

Paragraph 1.38 of the OECD 2022 TPG introduces the concept of "options realistically available":

> Independent enterprises, when evaluating the terms and conditions of a potential transaction, will compare the transaction to the other options realistically available to them, and they will only enter into the transaction if they see no alternative that offers a clearly more attractive opportunity to meet their commercial objectives. (OECD, 2022)

A transfer pricing analysis requires consideration of the options realistically available to the parties to a transaction. This is premised on the assumption that an entity would only enter into a transaction if there was clearly no better alternative to meet its commercial objectives.

One arm's length option may be for the entity to not enter into the transaction or arrangement—that is, not selling the mineral to the related-party entity. As an example, independent mining entities would consider if they could sell their mineral on comparable terms and conditions at a higher price to another entity and if that option was available, then the independent mining entity could have entered into that alternative arrangement.

As noted in Paragraph 1.141 of the 2022 OECD TPG, a tax administration should not disregard the actual transaction or substitute other transactions for it unless under exceptional circumstances. Paragraphs 1.142 to 1.145 of the 2022 OECD TPG outline when this would be appropriate. It states that the transaction as accurately delineated may be disregarded and, if appropriate, replaced by an alternative transaction, viewed in its totality, which differs from transactions that would have been adopted by independent enterprises behaving in a commercially rational manner in comparable circumstances (OECD, 2022).

As such, when conducting a transfer pricing analysis, it's important to consider alternative structures and arrangements that are realistically available. If that alternative arrangement presents a clearly more attractive opportunity that meets the independent mining entities' commercial objectives, then that alternative arrangement may be applied for transfer pricing purposes.

Mineral-Specific Factors Impacting Price

Not all commodities have a publicly quoted price. In such cases, the risk of transfer mispricing may be higher (and identifying the risk more difficult) than for minerals that have a quoted price.

Broadly, the framework to price minerals as outlined within this practice note will be easier to apply when there is a lower degree of opportunity for MNEs to undervalue the mineral. On the contrary, the framework might be more difficult to apply when the pricing is more opaque and alternative methods or different comparability standards may need to be applied.

This does not mean that there is limited to no transfer pricing risk when commodities have a quoted price. There may be significant risks in relation to other terms and conditions of a sales and purchase contract, such as treatment and refining charges, transportation clauses, payment terms, quotation period optionality clauses, volume flexibility, discounts applied, or premiums not applied. All these factors have value and can shift value from seller to the buyer and need to be examined carefully to ensure that they are also arm's length. However, by applying this simplified approach to minerals with quoted prices (subject to the appropriate adjustments and comparability requirements discussed above), tax administrations can allocate more resources to understanding and valuing more complex minerals.

Administrative Approaches to Pricing Minerals

Administrative Approaches to Pricing Minerals

This section reviews administrative approaches that resource-rich countries have adopted for the purpose of applying transfer pricing rules to related-party mineral sales. The objectives of the administrative approaches discussed below are to simplify compliance for taxpayers and spare audit resources for tax administrations.

Taxpayer Guidance

Verifying adjustments to the quoted price is not always straightforward. A simple step that governments can take to improve compliance is publishing their recommended transfer pricing methodology for specific minerals. For example, in the case of intermediate products such as copper concentrate, providing guidance on how quality adjustments and processing costs should be determined (see Box 4). There is a long history of tax administrations publishing guidance for taxpayers on a range of issues, including transfer pricing, and it is recommended in particular for the administration of extractive industry fiscal regimes (Calder, 2014).

By publishing the recommended transfer pricing methodology for the minerals most relevant to their mining industry, governments can provide transparency, clarity, and advance tax certainty to taxpayers. This encourages compliance and should limit the administrative resources required to audit compliant taxpayers. It also places the burden of proof on taxpayers when they decide not to follow the published guidance.

Governments may use the mineral pricing schedules of this practice note as a starting point in drafting their own taxpayer guidance. To further improve relationships with taxpayers, governments may also consult various stakeholders, including seeking to understand the general economic circumstances of the industry and taxpayers' general contractual terms with third-party buyers before finalizing a guidance document.

BOX 4. HYPOTHETICAL EXAMPLE OF TAXPAYER GUIDANCE ON THE PRICING OF COPPER CONCENTRATE

Note that this example does not address co-products in the concentrate, such as gold or silver.

1. The source of publicly quoted prices to be used for the purpose of calculating the sales price is the monthly average of the official LME Copper Grade "A" daily cash price for the calendar month of sale, expressed in USD/tonne.

2. The recovery rate to be applied to the copper concentrate to account for metal that could not be economically recovered in the treatment and refining process is (as an example) 97% or higher, unless the taxpayer can justify otherwise.
3. Any penalties deducted from the reference price for impurities should not exceed the internationally accepted penalty rates for the impurities present in copper concentrate.
4. Any treatment and refining charges deducted from the reference price should be lower than or equal to the monthly average treatment and refining charges for copper concentrate such as those listed by Metal Bulletin (Fastmarkets).
5. An appropriate quotation period should be applied, such as the average price of copper in the month of sale. The date of sale is defined as the earlier of the following: The date of shipment (physical transfer) or the date of invoice, or the date of payment. The date of physical transfer is preferred, however.

Safe Harbour Approach

As defined in the OECD 2022 TPG, a safe harbour in a transfer pricing regime is a provision that applies to a defined category of taxpayers or transactions and that relieves eligible taxpayers from certain obligations otherwise imposed by a jurisdiction's general transfer pricing rules.[7]

Countries with limited administrative resources may be interested in a safe harbour approach. Companies that opt into a safe harbour regime and apply prices in related-party transactions at or above the safe harbour pricing method defined by the government do not attract scrutiny (beyond confirming they have applied the safe harbour correctly) from the tax administration. Companies that transact below the safe harbour price are required to justify their pricing methodology to the tax administration. Similar to issuing taxpayer guidance, this approach shifts the burden of proof from the tax administration to taxpayers, encouraging them to provide additional information to the tax administration to assess the value of the mineral.

Safe harbours are a common tool used by tax administrations around the world generally to protect low-risk transactions, reduce compliance costs, and save audit resources. The OECD TPG states that "transfer pricing compliance and administration is often complex, time consuming and costly. Properly designed safe harbour provisions, applied in appropriate circumstances, can help to relieve some of these burdens and provide taxpayers with greater certainty" (OECD, 2022). This necessarily implies a trade-off between strict compliance with the arm's length principle and ease of administration.[8]

[7] See Paragraph 4.102 of the 2022 OECD TPG.
[8] See Paragraph 4.112 of the 2022 OECD TPG.

Publicly communicated safe harbours for commodity prices are not yet common but could be effective for risk assessment purposes and a tool that tax administrations could use in selecting which taxpayers and transactions to audit. From this perspective, a safe harbour on commodity prices is not substantially different from the publication of taxpayer guidance on commodity pricing by a tax administration. It provides transparency and adds certainty for taxpayers when selling minerals to related parties.

Safe harbours are particularly promising for countries with limited audit resources and large mineral sectors. For example, the Republic of Guinea adopted a safe harbour regime for bauxite prices in related-party transactions in July 2022 (IGF, 2023). This was motivated by the repeated assessment that export prices of bauxite, the principal ingredient in aluminum and Guinea's main export, were often undervalued. Under this regime, called the "bauxite reference price," companies are required to sell their bauxite at or above a reference price or demonstrate what the arm's length price for the mineral they sell is. The reference price is calculated by a formula from international price indexes, quality and transport adjustments, as recommended by this toolkit and the accompanying schedule on bauxite.

The risk in this approach is that the safe harbour price ends up being lower than the arm's length price in many transactions. In this case, the taxpayers may choose to apply the safe harbour price, which the tax administration may not be able to challenge, even if it is lower than the arm's-length price. The tax administration will have to monitor outcomes of the sales price to ensure that there is not a "drift" down to the benchmark, that is, that the benchmark becomes a ceiling price. Paragraph 4.132 of the 2022 OECD TPG notes that for more complex and higher-risk transfer pricing matters, it is unlikely that safe harbours will provide a workable alternative to a rigorous, case-by-case application of the arm's length principle.

Alternatively, the safe harbour could be used for risk assessment purposes only.

Advance Pricing Arrangements

An advance pricing arrangement (APA) is an arrangement between one or more tax administrations and one or more associated enterprises that determines, typically in advance of the controlled transaction, the transfer pricing outcome of that transaction over a fixed period.

An APA can be a unilateral arrangement where the tax administration and the taxpayer in its jurisdiction establish an arrangement without the involvement of another tax administration. However, a unilateral APA may affect the tax liability of associated enterprises in other tax jurisdictions.[9] Typically, unilateral APAs can be quicker to complete with a lower administrative burden. However, they do not provide complete tax certainty for the taxpayer/tax administration, and double taxation may still arise.

[9] See Paragraph 4.140 of the 2022 OECD TPG.

Due to these concerns, taxpayers and tax administrations generally prefer bilateral (two jurisdictions are involved) or even multilateral (more than two jurisdictions are involved) APAs. In practice, bilateral APAs are more common than multilateral APAs as controlled transactions, particularly regarding the sale of minerals, only involve two jurisdictions, i.e., the seller and buyer jurisdictions.

An APA may have a range of advantages to both the tax administration and the taxpayer. These could include:[10]

- Eliminating uncertainty through enhancing the predictability regarding the tax treatment of certain transactions;
- Providing an opportunity for both tax administrations and taxpayers to consult and cooperate in a non-adversarial spirit and environment;
- Preventing costly and time-consuming examinations and litigation of major transfer pricing issues.

An APA may have some disadvantages to both the tax administration and the taxpayer. These could include:

- Additional strain on transfer pricing audit resources, as tax administrations will generally have to divert resources to administer the APA.
- APAs not being available to all taxpayers because the procedure can be expensive, intensive (particularly for information gathering) and time-consuming.

Taking into consideration the pros and cons of an APA program, a tax administration may consider this as a viable option to seek certainty over the price of its mineral exports in a co-operative manner with very large taxpayers, or for mineral products..

Further considerations relevant to the mining industry could include:

- **Fixed prices:** Given the long-term nature of an APA and the volatility of the commodity market, it would not be appropriate to agree a fixed price for a mineral over an extended period. Sales and purchase contracts may include a price review clause to alleviate this issue, however, an APA is designed to provide certainty and ease of administration—as such, it would not be appropriate for all stakeholders to continually meet and negotiate a new price.
- **Variable prices that move with market conditions:** That is, an index price would be better suited to an APA for mineral sales.
- **Predictability:** Taxpayers and tax administrations need to pay close attention to reliability and predictability, i.e., what is the appropriate pricing index to use when considering the scope of an APA. Unreliable predictions or outcomes should not be included in APAs, i.e., the pricing index used in third-party contracts that are consistently changing.

[10] See Section F.3, "Advantage of the APAs" of the 2022 OECD TPG.

- **Critical assumptions** are essential to ensuring that over time the APA provides an appropriate balance for all stakeholders involved. Critical assumptions could include significant and fundamental changes in the market or industry, business operations, and the quality and quantity of the mineral.
- **The nature and history of the mineral:** If the tax administration has knowledge and expertise in a particular mineral, then they would have additional certainty regarding the appropriate transfer pricing outcomes. However, if the mineral is relatively new to the tax administration, i.e., the recent rise in lithium, additional caution should be placed on entering an APA, particularly over an extended period.

When entering an APA in the mining sector, the framework for applying the CUP method as documented earlier and this toolkit more broadly equally applies as it would for any review or audit compliance product.

Conclusion and Further Work

Much of the world's largest extractive natural resource deposits are located in developing countries, yet governments in many developing countries have not been able to translate those inherent natural riches into financial benefits for their countries and citizens. There are several reasons for this, one of which is potential under-pricing of mineral exports.

There have been other publications that have sought to address transfer pricing issues in mining, such as the PCT's *A Toolkit for Addressing Difficulties in Accessing Comparables Data for Transfer Pricing Analyses* (PCT, 2017); the Deutsche Gesellschaft für Internationale Zusammenarbeit and ATAF's *Toolkit for Transfer Pricing Risk Assessment in the African Mining Industry* (Readhead, 2017); and the World Bank *Group's Transfer Pricing in Mining with a Focus on Africa* report. This practice note complements and extends the work undertaken by the PCT, ATAF/BMZ, and World Bank Group and sets out a practical framework to value minerals from a transfer pricing perspective. To assist in the application of this framework, a series of schedules that address specific minerals will be subsequently published, designed to be read together with this note. In this way, idiosyncratic issues that are present in a certain mineral sector will be able to be dealt with in a more comprehensive manner.

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Determining the Price of Minerals: A transfer pricing framework

In the mining sector, government revenue is generated by levying royalties and income taxes on the value of the mineral transacted. However, due to the frequency and scale of related party transactions, the potential risk to tax revenues posed by transfer pricing non-compliance can be high, particularly around the value of the extracted minerals. This toolkit provides practical and meaningful guidance for developing countries to determine the price of minerals sold to related parties using the arm's length principle. It offers a framework on how to use transfer pricing principles to apply the Comparable Uncontrolled Price method, including identifying the primary economic factors that influence the price of minerals ("mineral pricing framework") to ensure that developing countries are able to tax mineral exports appropriately. It also includes simplified administrative approaches to pricing mineral sales that could reduce the administrative burden for developing countries.

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