The Platform for Collaboration on Tax

A Toolkit for Addressing Difficulties in Accessing Comparables Data for Transfer Pricing Analyses

Includinga supplementary reporton
Addressing the Information Gaps on Prices of Minerals Sold in an Intermediate Form

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EXECUTIVE SUMMARY

A common concern of developing economies in the implementation of transfer pricing regimes UHODWHV WR GLIILFXOWLHV LQ DFFHVVLQJ LQIRUPDWLRQ RQ ´FRindependent parties used in the application RI WKH DUP·V ipOH Q JWVSRnsSe UuoLtOeF challenge and under a mandate from the Development Working Group of the G20, the Platform for Collaboration on Tax (PCT) ² a joint initiative of the IMF, OECD, UN, and World Bank Group ² has developed a toolkit to assist tax administrations of developing countries.

Available statistics and academic research on the availability of information on comparables corroborate the difficulties reported by many developing countries. Often, the information relevant to a jurisdiction can only be accessed through the purchase of a licence from database providers. However, even putting aside the financial cost of acquiring access to such databases, challenges for developing country tax administrations often remain, particularly in cases where little relevant information relating to a specific jurisdiction or even region exists. Where the information does exist, it may exhibit differences compared to the transactions under review. Typically, in such cases, transfer pricing practitioners need to consider using imperfect data, including the use of data from foreign markets. However, the effectiveness of such approaches has not been studied sufficiently to enable definitive conclusions to be drawn about when they are reliable or how any adjustments to account for such differences should be applied.

Responses Considered in the Toolkit

The toolkit first puts the search for comparables information into context, providing an outline of the comparability analysis process, and cross-references to more detailed guidance material where needed. In particular, the importance of accurately delineating the transaction under review is emphasised. This essential first step drives the selection of the most appropriate transfer pricing method and the subsequent criteria for the search for comparables. A range of practical examples and case studies are provided to illustrate these principles, including in commodities and minerals given their importance to many developing countries. The toolkit also includes practical tools to assist with delineating the transaction and undertaking a search for potential comparables. A number of common approaches to adjusting imperfect comparables are described, together with several country practices.

The toolkit sets out a number of policy options that developing economies could consider, together with some additional initiatives that could be taken on by countries, or international or regional organisations to more systematically mitigate the problems caut>md( )-42.91.998 (o)202 (nv602e991 (

x   Use

PART I: INTRODUCTION - ADDRESSING THE DIFFICULTIES IN PERFORMING COMPARABILITY ANALYSES

A transfer price is a price employed in a transaction between associated enterprises. When independent enterprises transact with one another, market forces determine the pricing of those transactions. This may not always be the case in transactions between associated enterprises.

Transfer pricing is a legitimate and necessary feature of the commercial activities of multinational enterprises. However, where the transfer prices between the associated enterprises do not accord with internationally applicable norms, [1] they can distort the allocation of profit among the countries in which a multinational enterprise operates. When transfer pricing artificially shifts profits out of a country it, first and foremost, denies the country essential tax revenue. Such profit shifting can also have much wider implications: tax avoidance by high- S U R I L O H F R U S R U D W H W D [S D \ H U V Z L O O E H S H U F H L Y H G undermine the legitimacy and credibility of the wider tax system, thus discouraging compliance

Comparability analyses are an important element in   W K H   L P S O H P H Q W D W L R Q   R I   W K

length principle, requiring a comparison of the conditions in transactions between

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´ F R P S D U D E L O L W \t is important to emphasise that comparability analyses are not always

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how the use of available data may be optimised through widening the criteria for data-selection

This toolkit addresses issues of comparability for transfer pricing, generally. However, in recognition of the importance of the extractive industries[7] and other commodities sectors to the economies of many developing countries, a special emphasis has been placed on clarifying issues that can be critical in these sectors. While the issues and tools set out in the toolkit will be generally applicable regardless of the
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PART II: ISSUES ARISING WHEN CONDUCTING A COMPARABILITY ANALYSIS

x The economic circumstances of the parties and of the market in which the parties operate; and

x The business strategies pursued by the parties[11]

2.1 Broad-based analysis of the taxpayer's circumstances

(Step 2[13] of typical process outlined in Chapter III of the OECD Transfer Pricing Guidelines; Paragraph 5.3.1 of the UN Practical Manual on Transfer Pricing)

Undertaking a broad-based analysis of the taxpayer's circumstances is an analysis of the industry, competition, economic and regulatory factors, and other elements that may affect the taxpayer and its environment. [14] See Part A of Examples 1, 2, and 3.

2.2 Accurate delineation of the actual controlled transaction ³ focus on the economically significant characteristics

(Step 3 of the typical process outlined in Chapter III of the OECD Transfer Pricing Guidelines; Parat02 (h03>]Tf>72 (o)-3U-3.a.006 ( )1-3 (.002 (r5(s)]TJ-5.994 (lPUaCD)->]Tf>72 (o3.876 -13.32 Td [(laod[(laod02 (r5

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The OECD Transfer Pricing Guidelines consider the assumption of risks [18] to be a crucial part of the functional analysis and the process of delineating a transaction. This is an important aspect to consider as the assumption of greater risks carries the expectation of greater profits. Any contractual assumption of risk must be borne out by the conduct of the parties and in the substance of the transaction. Therefore, in the context of the functional analysis, as set out in the OECD Transfer Pricing Guidelines (at paragraph 1.60) a detailed analysis of risks is proposed out according to the following steps:

1. The identification of specific, economically significant risks;
2. The determination of how the specific, economically significant risks have been contractually assumed;
3. Gather information on the conduct of the parties, i.e. how the associated enterprises that are parties to the transaction operate in relation to assumption and management of the specific, economically significant risks, and, in particular, which enterprise or enterprises perform control [19] functions and risk mitigation functions; encounter upside or downside consequences of risk outcomes (e.g. greater or lower than anticipated revenues or costs); and have the financial capacity to assume the risk);[20]
4. (i). The determination of whether the contractual assumption of risk is consistent with the conduct of the associated enterprises (i.e. whether the associated enterprises follow the contractual terms);
4. (ii). The determination of whether the party assuming the risk [as determined in 4(i)] exercises control over the risk and has the financial capacity to assume the risk based on the information gathered in Step 3. If so, this party is regarded as assuming the risk and Step 5 need not be considered;
5. If the party assuming risk does not control the risk or does not have the financial capacity to assume the risk, allocate the risk to the party that does control it and has the financial capacity to assume it.

The accurately delineated transaction should be priced taking into account the financial consequences of risk assumption, as appropriately reallocated (if necessary), and appropriately compensating risk management functions, as understood in OECD Transfer Pricing Guidelines.[21] See Part B of case studies 1, 1A, 1B, 2, and 3.

Other economically relevant characteristics, such as those relating to the property or services transferred and the economic circumstances of the parties and of the market in which the parties operate should also be considered in terms of their possible impact on the reliability of potential comparables. For example, if the transfer pricing analysis shows that the

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geographic location of potential comparables may not be a significant factor to be taken into account. See Section 3.4.

The international standard on transfer pricing allows, in specific circumstances, for a transaction to be disregarded.

Box 2: Sugar Producer

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manufacturers). In practice, this method is most often used when there are internal comparables available, perhaps for a different product, but involving comparable functions, assets, and risks.[30]

Since the Cost Plus method is also applied at a gross profit level, the same cautions about

Typical PLIs used include:

x   Return on Sales (ROS) for distributors/resellers of tangible products where no unique and valuable contributions are made by the tested party;

x   Return on Assets (ROA) and Return on Capital Employed (ROCE) for asset-intensive industries, such as manufacturing (where no unique and valuable contributions are made by the tested party). A return on assets basis may also be useful in cases where assets are a key profit driver but other potential PLIs are not available or cannot be reliably applied, e.g., for a manufacturer that both purchases raw materials and sells finished goods to related parties, thus making unreliable a transfer pricing analysis based on costs or revenue (since both figures represent its related party transactions).

x

In most cases, the transactional profit split method is applied by splitting the actual combined

can demonstrate sufficient substance   Z R X O G   D O V R   K H O S   W R   H Q V X U H   D U P · V minimise the risk of inappropriate taxation.

Taking into account the potential disadvantages inherent in this type of approach, but also the potential benefits, this toolkit proposes that work should be carried out to determine the feasibility of further developing these types of methods to increase their reliability and address the risks of imposing non-   D U P · V   O H Q J W K For example, the potential for developing specific approaches for particular commodities, and incorporating a framework for adjustments such as those based on netback approaches (described below in Section 5.4.4 of Part II), may be explored..

See also the section on prescriptive approaches in Part III, Section 4.3

2.4.3 Process of selecting the most appropriate method

The OECD Transfer Pricing Guidelines provide guidance on the identification of the most appropriate method as follows:

> ¬ the selection process should take account of the respective strengths and weaknesses of the methods; the appropriateness of the method considered in view of the nature of the controlled transaction, determined in particular through a functional analysis; the availability of reliable information (in particular on uncontrolled comparables) needed to apply the selected method and/or other methods; and the degree of comparability between

Box 3. Stylised Case: Bolpen Inc

This simplified example illustrates the application of alternative transfer pricing methods to arrive at the profits accorded to each party.

Bolpen Manufacturing in Country X manufactures pens, which are sold to an associated enterpat Td [(B)16.

Scenario 3: Assume that the TNMM is selected to benchmark a return to Bolpen Sales (i.e. Bolpen Sales is selected as the tested party). Furthermore, assume it is determined that the PLI to be used is a mark-up on operating costs only. A benchmarking study is used to establish a mark-up on operating costs of 10%.

The table below provides simplified financial statements after application of the TNMM:

	Bolpen Manufacturing	Bolpen Sales
Sales revenue	1258	1,500
Cost of inputs or Cost of sales	400	1258

Assume Bolpen Sales is chosen as the tested party and a TNMM with a PLI of a return on sales is selected as the transfer pricing method. A search for comparables results in a benchmark return of 5 percent net margin on sales.

	Bolpen Manufacturing	Bolpen Sales
Sales revenue	1205	1,500
Cost of inputs or Cost of sales	400	1205
Gross profit	805	295
Operating costs	50	220
Operating profit	755	75 (i.e. 5% of 1500)

2.4.4 Conclusions on selecting the most appropriate method

There is no hierarchy in the selection of transfer pricing methods.   There can be situations, based on the accurate delineation of the transaction, where a transactional profit split is more appropriate than a CUP or a one-sided method,[44] and vice-versa. If it is possible to benchmark a return for one of the parties to a transaction (normally a party that undertakes only routine activities and does not make unique and valuable contributions), then a one-sided method such as a cost plus, resale price or TNMM may be found to be the most appropriate method. On the other hand, if the parties are highly integrated and/or both make unique and valuable

transaction between a taxpayer and an independent party can be regarded as a reliable comparable for controlled transactions carried on by the same taxpayer.[45]

However, in practice,   D S S O L F D W L R Q   R I   W K H   D U P · often relies Will want So L Q F L S O H   I external comparables.   An external comparable exists where there is a comparable transaction between two enterprises that are independent of one another, and neither of which is a party to the controlled transaction. The most common source of information on external comparables is commercial databases, which are discussed in the section below.

3.3 Commercial databases

Commercial databases are not necessarily designed for transfer pricing purposes.   They typically contain information from public disclosures, for instance, audited company accounts required by corporate, market, financial services, or other regulators, and may cover a large number of sectors and companies.

There are different types of databases. Some contain only financial markets data, others contain data on particular transactions, and still others contain company accounts or other financial information. Some databases collate information from specific geographic areas. The amount of available detail also varies by database, company, and geographic area. In many cases, since the database relies on disclosures required by certain regulatory bodies, the extent of disclosures in a database is determined by the relevant disclosure requirements (see Appendix 3 for an overview of relevant databases). This tends to limit the amount of data directly drawn from developing countries.

Limitations and challenges in using commercial databases

As has been noted above, most commercial databases collate information produced for purposes other than transfer pricing   . This can mean that the information collected does not always address the issues relevant for a transfer pricing analysis.

With respect to commercial databases, many developing countries report two core challenges: access and limited data coverage.   First, they highlight difficulties, including costs involved, in relation to accessing commercial databases. Second, even where they can be accessed,the databases often contain limited information on local economic operators that may potentially serve as comparables.

A combined review of several private databases   [46] commonly relied upon by practitioners does suggest a scarcity of domestic information that can be used for comparability analysis in many countries.   The table in Appendix 4 summarises information available in several databases to transfer pricing practitioners globally for the year 2013. To approximate practical requirements only local companies that are independent and for which revenue and net margin L Q I R U P D W L R Q   L V   D Y D L O D E O H   I R U   W K H   S R V V L E O H   D S S O L F D W L R

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[45] Paragraphs 3.27-3.28 of

TNMM)[47] have been counted. Of about 8,885,000 global records for which revenue and net margin information is available, around 5,000,000 meet the basic independence requirement. For more than 164 countries, fewer than 1,000 local observations were available that met the stipulated minimum requirement in 2013. While ongoing efforts of commercial providers to increase coverage are improving the situation,[48] it will regularly be necessary to look for alternative, non-domestic information sources in many countries.

At first glance, this review confirms that for many countries, and in particular emerging and developing economies, there may not be easy access to local comparables. It is noteworthy that this list of countries with very limited domestic information available in public databases includes many that have introduced comprehensive transfer pricing regulations. In

To assist market price discovery, numerous publications have arisen for particular mineral and other commodity products , publishing information on market conditions and recent transactions. These publications are based on observations of transactions and/or continuous

the conditions of the controlled transaction differ from those forming the basis for the quoted price.[50]

It should be noted that pricing data described above will normally be relevant only where the CUP method is the most appropriate method. Depending on the outcome of comparability analysis, other methods may be more appropriate for transactions involving commodities.

3.4 Identification of potential comparables

(Step 7 of the typical process described in Chapter III of the OECD Transfer Pricing Guidelines, Section B.

External comparables

It may also happen that derived from the functional analysis, information regarding the controlled transaction has been clearly delineated but no potential internal comparables have been identified for the analysis   . In this case, external comparables need to be considered and identified. Depending on the facts and circumstances of the case and on the comparability factors affecting the potential comparables, external comparables could be sought from domestic and/or foreign sources of information. Appendix 3 of this report presents an overview of available sources of public data.

<p style="text-align:center;color:#4a90d9;">Box 5. Sugar Producer</p>

This simplified example illustrates the identification and use of external comparables.

Following the facts of the illustration in Box 2, Company A produces a commodity product that is traded with associated enterprises only.

The accurate delineation of the transaction shows that Company A purchases sugar cane from

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warehousing and logistics functions, assets and risks, and smaller sales forces. In such cases, consideration should be given to widening or re-ordering the search criteria to prioritise the features of the transaction which are the most economically relevant; and using other means, such as carefully selected financial or diagnostic ratios[51] to refine the search.

<p style="text-align:center;color:#4a90d9;">Box 7. A Typical Process to Screen for C omparables</p>

1   Industry/business activity qualification codes

A common starting point in the comparables search process is industry/business activity classification codes. The most common classification codes are presented in Appendix 5. Additionally, other countries have also created their industry classification codes for statistical purposes or utilise other sources of business activity classification codes. A list of these codes is provided in Appendix 6.

In practice, the Standard Industry Classification codes (SIC), the Nomenclature of Economic Activities in the European Community (Nomenclature statistique des activités économiques dans la Communauté européenne, NACE), and the North American Industry Classification System (NAICS) industry codes are the most commonly used by taxpayers and tax administrations worldwide, but any of the codes may be relevant depending on the data available. Guidance on how these three industry codes are used is provided in Part C of Case Study 3.

2   Geography/region/country/market

It generally makes sense to consider potential comparables from the same geographic market as the tested party in the first instance as this will minimise any potential differences that could have a material effect on the comparison. Where there is no information available relating to transactions that are in other respects comparable to the tested transaction and relate to the same geographic market, it is important to consider the relative importance of the various comparability factors, bearing in mind that the aim is to find the most reliable comparables available. That is, other comparability factors such as those relating to the functional analysis may be more important in a particular case than the geographic market, in which case, this screening criterion could be demoted or even abolished.

Where the market is considered to be a key comparability factor, it may be appropriate for this to be defined as a country, a region, or group of countries that are considered to be either (a) a single or largely integrated market; or (b) sufficiently simi lar to the market of the tested transactions.
See also Part 1 Section 5.5 on use of foreign data.

3   Key words related to the business activity

7 K L V   V W D J H   J H Q H U D O O \   L Q Y R O Y H V   L G H Q W L I \ L Q J   D Q G   V H D U F K L

an

6   Independence

$ I X Q G D P H Q W D O   H O H P H Q W   R I   W K H   D U P·V   O H Q J W K   S U L Q F L S O H transaction and uncontrolled transactions. Therefore, most search processes will seek to eliminate transactions that have been entered into by entities that belong to a multinational group. See Appendix 7

Countries have adopted different positions on the use of secret comparables[53] ranging, for example, from explicit provisions allowing for the use of non-public information in China; to strong opposition to their use in Austria and the United States. Most, but not all, countries

The OECD, WBG, and World Customs Organization (WCO) have been developing practical

in accounting classifications between industries and countries are more likely to reduce the reliability of comparisons made at a gross profit level.

Box 9. Broadening Search C riteria

The tax administration in Country A was undertaking a transfer pricing audit of a local subsidiary of a large MNE. It had delineated the controlled transaction as the sale and purchase of construction and mining machinery. An analysis of the industry revealed that this sector is highly cyclical. The local subsidiary was engaged in marketing, sales, and distribution activities, and was found to assume a significant market

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5. Determination of and Making Comparability Adjustments Where Appropriate

(Step 8 of the typical process discussed in Chapter III of the OECD Transfer Pricing Guidelines; Paragraph B.2.3.5 of the UN Practical Manual on Transfer Pricing)

5.1 General

Where there are material differences in the condition under examination between the

There is no universally accepted method for comparability adjustments nor is there consensus among tax administrations about the reliability of different comparability adjustments. However, the most commonly used comparability adjustments are:

x   working capital adjustments (see Section 5.1);

x   adjustments for accounting differences (see Section 5.2); and

x   country risk adjustments (see Section 5.5.3)

Other types of adjustments are discussed in Section 5.4.

<p align="center">Box 1 1. Country P ractices</p>

Many countries take a very cautious approach in the application of comparability adjustments. Several countries have noted the ´comparability adjustments will not materially alter the resulting arm's length range of outcomes that small adjustments will not materially alter the resulting arm's length range of outcomes fundamental differences in comparability with the controlled transaction.

Some countries also expressed concerns about whether a comparability adjustment proposed in fact

Where a company has a higher net working capital, it would be expected to make a higher
EBIT than an otherwise similar entity with lower net working capital. $ W   D U P · V   O H Q J W K   W
provision of, for example, more favourable payment terms (and thus a higher level of receivables
on the balance sheet) would be expected to lead to higher prices to take account of the cost of
holding the additional working capital required, or the interest income forgone as a result of
holding that capital. Similarly, a company with greater inventory might in principle be expected
to earn a higher EBIT than a company with lower inventory.

By performing working capita(p)in3004 (l.998 (to)-18.00206 (e)11.998 (d)8.996 ( )]TJ 0 -14.04 TD [(to)-6.004 (e

may give rise to additional costs and complexity out of proportion to any increase in reliability or

such items as rebates, capitalisation of certain expenditures, inclusion in cost of goods sold. Classification of certain items as operating/non-operating when the PLI being tested is at the operating profit level.

Due to the limited amount of detailed information, it can be difficult to make reliable adjustments for differences in accounting treatment. However, some practical solutions exist. Timing differences in accounting standards can be mitigated by using multiple year data. Some permanent differences and classification differences can be eliminated or minimised by applying the TNMM on a net margin level.

An example of an adjustment for accounting differences is provided in Appendix 10 (f24.48.998 (5.4.1 A4.006(m)

5.4.2 Contract and payment terms

Adjustments may need to be considered where there are material differences between the contract terms of the controlled transaction under review and the uncontrolled transaction(s) that are potentially comparable. For example, if the price for the purchase and sale of a commodity specifies that the shipping terms are CIF (cost, insurance, and freight) and it LV GHWHUPLQHG WKDW DQ DUP·V OHQJWK SULFH IRU WKH WUDQV\ price for the commodity, where that quoted price is an FOB (free on board) port price, a

In some cases, conversion ratios and treatment and refining costs relevant for particular

Box 15. Use of a Netback Approach for Freight Costs

This simplified example illustrates the application of a netback approach.
Revenue authorities commonly need to make adjustments to account for differences in delivery terms between the transaction under review and other transactions occurring at the time ³ particularly for mineral and commodity transactions. In particular, an adjustment is often required for freight charges to establish the price that would be paid for a product at a different geographical location. [68] To determine the amount R I W K L V D G M X V W P H Q W   ´ Q H W E D F N V µ D U H R I W H Q X V H G Such caseV. W U D F W L Q J these are published estimates of freight costs between various ports worldwide. These costs can vary based on factors such as the product being shipped, the date of transport, and size of vessel used.

Figure 1 provides a simple example of a netback. The revenue authority typically takes the related party transaction under review and applies the netback to make it possible to compare the price against data from unrelated party transactions of materially the same product around the same time. At this stage in the process of comparability analysis, this calculation is for the purposes of analysis only (it is not done to adjust taxes paid).

Figure 1: Exa

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5.5 Dealing with a lack of (local) comparables

5.5.1 General

As has been noted earlier, it may be the case that uncontrolled transactions from markets other than that of the tested party can constitute reliable comparables, [70] or may be

However, in some cases it may be more relevant to consider selection criteria which focus on similarity of economic conditions between the foreign and local markets (either in general, or as it relates to the particular industry sector) rather than proximity per se. Some countries also report a practice of selecting acceptable foreign markets based on a reference to similar country credit ratings and/or economic structures (including legal and regulatory systems, dominant industries, etc.).

Other than in situations involving a comparison of the price of products with a truly global (or regional) market, such as for certain commodities, the validity of relying on foreign market data has not been comprehensively analysed . Meenan et al. (2004) investigate whether DUP·V OHQJWK UDQJHV GLIIHU Union Their analysis supports the SHDQ assumption of homogenous profitability distributions and therefore endorses the use of pan-European data. An update of the study for the European Commission by Peeters et al. (2016) using data from 2010-2014 also concludes that pan-European searches provide for a reliable representation of local profit expectations. Conducting a similar exercise , but using company data from 2006-2014, which includes the more volatile years of the financial crisis, does, however, suggest notable heterogeneity in profitability ratios also in the European context (see Appendix 11 for the analysis).[73]

In sum, the use of foreign data ³ though fairly extensive in practice given the lack of local comparables ³

5.5.3 Adjusting for country risk by adding a premium (or a discount) to the PLI

Country risk can be defined as the risk induced by the country location of a business activity rather than the fundamental nature of the activity.   This risk may derive from the political or economic environment in which that business operates. Country risk is not only a transfer pricing construct, but a real variable that businesses take into account when making investments or entering into third-party transactions.

Most proposals for country risk adjustments simply seek to add a premium/discount to the comparables' results . Such risk-based adjustments are designed to account for differences in risks assumed in relation to competition, credit, foreign exchange, product liability, technological obsolesce, etc.Arguably, however, to adjust for an increase in risk, the range of results should be wider, rather than simply higher. Greater risk, while equating to a higher profit potential, may or may not result in higher actual profits and could in fact result in greater losses.

There are numerous ways that country risks are adjusted for in practice.   These range from very complex to very simple, having relative advantages and disadvantages. One approach is by using working capital adjustments as a proxy for country risk. Büttner (2012) presents the use of the spread in government bond yields applied to operating assets as the basis for such an adjustment to the operating profit. Gonnet et al. (2014) suggest adjustments to operating profit based on differences in the weighted average cost of capital (WACC) of the tested party and the comparables.

It should be noted, however, that there is little empirical evidence on the reliability of the proposed approaches. Careful consideration should be given as to whether such approaches can account for differences in risk and thus in expected profitability (to the extent that they exist) for commercial ventures in different countries.

Examples of country risk adjustments are provided in Appendix 12.

5.5.4

from zero to the level of the tested party in Country B and applying to them a Country B interest rate, which adjusts the revenues for the comparables and, thus the profit margins which result. Formulas on how to calculate this adjustment are provided in Appendix 13.

<div style="text-align:center; color:#5b9bd5;">Box 16. Country Practices</div>

Developing countries, often out of necessity, have to rely on foreign comparables. Country specific risk adjustments can, therefore, be of particular importance for developing countries.

In order to perform country risk adjustments, judgement is required . Some countries, like Australia, tend to avoid making these adjustments. Colombia considers that it does not have enough knowledge regarding when and how to use a country risk adjustment (and in which types of transactions).

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engaged in comparable transactions under comparable circumstances may not establish exactly the same price for the transaction.[76]

Therefore, a common practice is to calculate a range of results and determine whether the ILQDQFLDO LQGLFDWRU UHODWLQJ WR WKH WUDQVDFWLRQ XQGHU [...] ,I VR LW ZLOO EH W\SLFDOO\ FRQVLGHUHG WKDW WKH WUDQVIHU [...] either the taxpayer or the tax authority must make an adjustment to taxable profit that places the relevant indicator within the range.

7UDQVIHU SULFLQJ UXOHV LQ VRPH FRXQWULHV PD\ H[SOLFLWO\ allow the use of a statistical techniq XH LQ FDVHV ZKHUH DQ DUP·V OHQJWK U[...] identified. These are considered further below.

$UP·V OHQJWK UDQJH

$Q DUP·V OHQJWK UDQJH LV D UDQJH RI UHOHYDQW ILQDQFLDO L[...] resale margie arrgaro36592 56 (rs)13.00(ie)15 (ak)-D [(.00- -50.-rg /9 Tc 137.3/C2_1 10.up6 Tf -Tc 12.84)13.00[...]

6.2 Statistical approaches

The application of the most appropriate method may result in a number of financial indicators for which the degree of comparability of each to the controlled transactions, and to each other, is uncertain.   This may be the case where, for example, a commercial database is used. Such a database is unlikely to provide sufficient information to allow a comparison between the underlying transactions to be carried out with a high degree of accuracy. In such cases, the transfer pricing rules may specify that a statistical technique must be used. An interquartile range is perhaps the most common statistical technique used, but many others exist. See Appendix 14 on how to calculate an interquartile range .

<div align="center">

Box 17. Sugar Producer

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Following the facts of the illustration in Box 5, Company A (the sugar producer) is most accurately characterised as a contract manufacturer, whereby the most appropriate transfer pricing method is a TNMM, using operating profit/full costs as the PLI. The database search provided 33 potential comparables. The relevant PLI ratios (operating profit/full costs) for each of the potential comparables were extracted

Box 18. Country P ractices

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subjective uses of such techniques.[78] See Appendices 16, 17, and 18 on common financial ratios and acronyms and ratios measuring functions, assets, and risks

6.4 Build-up approaches

A build-up approach divides the activities of an enterprise into a number of component parts and then determines or tes   W V   D Q   D U P · V   O H Q J W K   U H W X U Q   I R U   H D F K   R I The return for the combined activity is the sum of the return for each of the components.

<div align="center">Box 19. Country Practices: Build-Up Approaches</div>

The build-up approach may be applied in some circumstances by Australia. Where it is applied, it is usually in conjunction with other transfer pricing methods / approaches.

As an example, take an entity, Company X, located in Country X that assembles products from components, and then markets and sells the finished product to third

7. Summary

Part II explained the role that data on comparables play in undertaking a transfer pricing analysis and in establishing, or testing, the pricing of a transaction between associated enterprises. Part II also suggested actions that might be taken to improve the accessibility of existing data and to enhance the effectiveness of comparability analyses.

PART III: APPROACHES TO APPLYING INTERNATIONALLY ACCEPTED PRINCIPLES IN THE ABSENCE OF COMPARABLES

1. Introduction

The issues discussed in Part II, and the actions suggested, are unlikely to provide a complete solution to the core problem faced by many developing countries ³ insufficient data to undertake a reliable comparability analysis. Developing countries consistently report this as an issue, and it ZDV KLJKOLJKWHG LQ WKH ,QWHUQDWLRQDO 2UJDQLVDWLRQ LI.2TT3

Such regulations typically specify:

x   D F D W H J R U \   R I   W U D Q V D F W L R Q   W K D W   I D O O V   Z L W K L Q   W K H   V D I

x   a transfer pricing method that is expected to be applied to such transactions;

x   a level (or range of levels) of a financial indicator to be used in the application of that method. This may be, for example, a price, gross profit margin or a net profit margin, or a range of such margins.

For example, a safe harbour on method may specify that a cost-plus method is to be used, and a margin of say 5 percent to be applied when determining or testing the transfer pricing of the provision of a certain defined type of service.

Safe harbours are most suitable for transactions which, in principle, are able to be benchmarked ³ normally involving functions that do not use valuable intangibles or assuming significant risk.   In principle, these are typically the types of function conducted by the   ´ W H V W H G   S D U W \   side when a one-sided method is used.

Where the taxpayer opts out of the safe harbour, it must apply the transfer pricing rules and document their application. A taxpayer that opts out of a safe harbour regime generally bears the EXUGHQ RI SURRI WKDW LWV FKRVHQ PHWKRG PHHWV WKH DUP'V will thus be a more straightforward option for many developing countries as it has the potential to reduce administrative costs.

In the context of this toolkit, the most significant benefit of a safe harbour on method is to eliminate the need for a taxpayer to conduct a full comparability analysis and benchmarking study in determining or testing its transfer pricing and in preparing its documentation.   At the same time, a tax administration is relieved of conducting the same comparability analysis and benchmarking analysis during an audit of a specific case. Where the tax administration does conduct an audit, it would normally be restricted to verifying that the transaction in question falls within the scope of the safe harbour. A safe harbour thus provides a cnsacmini x xCa6 (e)11.9 (36e)-31a002099-1 (e)11:0e96 (n)8duu-3.99e96 (n)8nrt3.99298 f0b998 6 (du)63h36e

There are merits to regional or international co-operation in establishing safe harbour regimes.

x   The first opportunity is to establish bilateral safe harbours, which are agreed between two

Box 20. Country P

4.2 Safe harbours on TP process

A safe harbour on TP process stipulates a process that a taxpayer must undertake in order
W R L G H Q W L I \ D Q D U P · V O H Q In cases where the process is followed, the
taxpayer is provided with some certainty that the resulting price or margin will be accepted by
W K H W D [D X W K R U L W \ D V D Q D (or a minimum would provide the taxpayer argin
with protection from penalties), but in contrast with the safe harbours for TP described in the

With regard to the transfer of intangibles or rights in intangibles, income-based methods or valuation techniques based on discounted value of projected future income streams or cash flows (discounted cash flow method) that can be attributed to the intangible at issue can be useful.

Guidance on valuation techniques is provided in Section D.2.6.3, Chapter VI of the *OECD Transfer Pricing Guidelines* and in Examples 27, 28, and 29 (also, less explicitly, in Examples 16 and 17) of the Annex to Chapter VI.

With regard to large capital assets, the arm's length value may be determined according to market data, a professional valuation, or a method based on purchase price and subsequent depreciation.

With regards to the last of these, at least one country has introduced specific rules, which involve the acquisition of new or used assets by taxpayers from connected persons. The acquisition price of assets will be significant, for example, for the acquisition of assets that give rise to tax deductible depreciation. Such an approach might require the invoice for the acquisition of the asset when it was purchased from an independent third party and in the case of a used asset, the subsequent application of the decline in value already amortised since the asset was purchased. If the asset in question is sold in a different state from the one in which it was purchased, barring ordinary wear and tear, or if there is no third-party invoice, or in the case of an asset built or assembled using a number of components and thus with several invoices, a technical appraisal may be performed by a third-party expert not employed by the company.

While valuation techniques can be very useful, their reliability will depend on the assumptions used in the valuation. In addition to the valuation report, an analysis based on such techniques should therefore also consider the basis of the underlying assumptions (e.g. in business or project plans and forecasts and those used in the valuation report itself) as well as the sensitivity of the analysis to changes in these assumptions.

7. Advance Pricing Arrangements and Other Co-Operative Compliance Approaches

While not directly addressing the issue of a lack of comparables information, some countries find advance pricing arrangements or other co-operative compliance approaches,[93] such as advance rulings or pre-filing reviews, useful to develop greater understanding of business operations: for example, materials provided in an APA application

transactional profit split is found to be the most appropriate method. Similar information and data may also be available when other compliance initiatives are undertaken with taxpayers belonging to the same industry, either separately or as a group.

However, APAs and other co-operative compliance products can also entail some risks.

PART IV: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS FOR FURTHER WORK

1. Summary

This toolkit has been prepared in response to concerns raised by developing countries regarding the challenges they face in identifying the data needed to carry out a transfer pricing analysis as part of a tax audit . Research described in this toolkit suggests that this is indeed a significant issue. In many developing countries, the relevant information on local comparables either does not exist (or is very scarce) or is not available in a way that is usable. This toolkit describes ways in which the pool of data on potential comparables may be increased and approaches that countries can take to improve access to exs tonove o.998 (y)--T2i ttenonoan5gacc if out   iar

2. Conclusions

Despite the potential of the measures mentioned above, this toolkit recognises that they do not offer a complete and comprehensive solution   . This toolkit concludes that there are three key areas that developing countries might consider particularly effective, and that could merit further development .

2.1. Safe harbours

In some contexts, safe harbours can be used to mitigate the effects of poor availability of data . This toolkit sets out a number of relevant issues for countries considering the adoption of safe harbours in their transfer pricing rules, including how best to design such approaches in order to minim ise the potential for harmful outcomes, such as double taxation or tax

2. Explore actions that may be taken to increase the number of countries that require the central registration of financial accounts of private and public companies   , thus providing data for inclusion in commercial and other databases.

B.   Improving access to commercial databases

3. Consider means by which developing countries can be supported in acquiring commercial databases , and building the skills to use them effectively. For instance, capacity building and sharing of best practices on the efficient and effective use of databases could be provided as part of other technical assistance initiatives supporting transfer pricing administration, through regional co-operation, or expert deployments.

4. Explore opportunities for regional and international co-operation for acquiring and using commercial databases .

C.   Effective use of existing data

5. Undertake further research and spread available good practices on measures that m998 (ur)3., ocq s
   C.ad.s ceo5 (n)8.9g2 (o)ap, urExdif1 (s)-1.92 .994 (ee15 (n)8.9e (at)-3.0c (s)3.996 . (e)-4.9-1.902 ( )3.o)]839-

9. Consider the feasibility and the advantages and disadvantages of measures designed to protect the tax bases of developing countries in cases where there is both a systemic high risk of tax loss and an inability to apply transfer pricing and other measures due to lack of information or gaps in capacity . An example of such a measure would be the proposed limitation on the deductibility of interest based on a ratio of net interest to EBITDA set out in BEPS Action 4. Similar measures that could be explored may include limitations on royalty

Based on the contracts and the sales invoices between B Co and final customers provided by A Co to the auditor, the taxpayer has characterised B Co as an entrepreneur selling coal to third parties. To verify this, the tax auditor wants to interview the country director of A Co.

Part B: Accurate delineation of the actual controlled transaction [3] focus on the economically significant characteristics (refer to Section 2.2)

Evidence based on the actual conduct of the parties

Country A's tax official visited A Co, which reveals the following:

- Because of the expertise and experience of A Co's staff due to their direct involvement in the coal production process, A Co is contracted to assist B Co in finding customers.

- A Co invites customers to Country A at least once a year to review and discuss the technical specifications of current and expected future coal production, as well as expected customer demand for the coming period. The personnel.

- During those visits, A Co also negotiates with customers final purchase terms.

- There is not much contact between the staff from A Co and B Co. Sometimes B Co advises A Co on market conditions in customer countries and arranges meetings with customers on behalf of A Co.

- B Co pays A Co a service fee (based on cost plus a markup of 8 percent) for its marketing support activities.

- In accordance with the offtake agreement between A Co and B Co, B Co does in fact purchase all available coal inventories from A Co. In most cases, B Co purchases the coal and instantaneously sells it to its third-party customers.

- The final purchase contracts are always between the third-party customers and B Co

Assessment of functions, assets, and risks

Functions:

- A Co is the mining company responsible for all the steps in the coal mining process. Furthermore, A Co finds customers, maintains the market, makes strategic decisions about which markets to serve and how, negotiates all customer contracts, performs on-going contract management, and effectively manages inventory, delivery shortfalls, and excesses.

- B Co performs limited sales and marketing functions. Its activities include preparing market reports, arranging meetings for A Co, attending customer meetings to provide translation or linguistic services and other administrative tasks or coordination activities

To adjust the profit for A Co, the tax auditor uses B Co as the tested party. With the functional profile of B Co characterised as a service provider or commissionnaire, a search is performed to find comparables to benchmark a return for B Co. The transactional net margin method (TNMM) with (full) costs as the PLI was selected as the most appropriate transfer pricing method for the case. In this regard, much of the analysis focuses on determining the appropriate cost base in B Co since this will have a greater influence on the total transfer price than the mark-up.[104] The adjustment in Country A to the deductible sales commission expense of A Co will be equal to the difference between the result from the comparability analysis and the actual profits in B Co.

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[104] The illustration in footnote 29 to the section on the cost plus method (Part II, 2.4.1) is equally relevant to the application of a TNMM with a PLI based on full costs. For convenience, the text of that footnote reads, "To illustrate: if an arm's length mark-up on costs determined through the comparability analysis is 5%, and the cost base is determined to be 600, the total transfer price will be calculated as 600 * 1.05 = 630. Thus the cost base accounts for around 95.2% of the total transfer price (600/630), and the mark-up only 4.8% (30/630)."

x   B Co performs limited sales and marketing functions. Its activities include preparing

Delineating the actual transaction

Taking all factors into account, the risks contractually allocated to A Co and B Co are supported by the substance of the arrangement. In this regard, A Co is subject to significant risks as a producer and seller of coal, while B Co is subject to more limited risks in terms of marketing, as well as risks relating to the procurement of shipping and insurance services.

Comparability

The tax auditor confirms the transfer pricing method used by the taxpayer, in which B Co is the tested party. With the functional profile of B Co characterised as a provider of marketing services as well as a procurer of shipping and insurance services, a search is performed to find two types of comparables to benchmark the returns for B Co. The transactional net margin method (TNMM) with (full) costs as the PLI was confirmed as the most appropriate transfer pricing method for the marketing services. The higher levels of risk and autonomy involved in the facilitated sales were the reason for the volume-based remuneration being considered as the most appropriate method for remunerating B Co in relation to these transactions.

Case Study 1B: Thermal Coal

Assets:

x   A Co owns all the equipment needed for the coal mining process. B Co owns coal

Case Study 2: Construction

Part A: Broad- E D V H G   D Q D O \ V L V   R I   W K H   W D [S D \ H U · V   F (2.u)F X P V W D Q F H V   U

Organisational structure

; < =   L V   D   P X O W L Q D W L R Q D O   J U R X S   R I   F R P S D Q L H V   W K K ´ * U R X S µ
design and project-management services for large- V F D O H   H Q J L Q H H U L Q J   S U R M H F W V
ultimate parent company and head office are located in Country F.

In 2012, the Group was engaged to provide a full range of engineering services with respect to
the construction of an oil refinery in Country M. The refinery was being constructed by MNO Ltd.,
a petroleum company operating in Country M. In 2012, the Group set up a local subsidiary

Evidence based on the actual conduct of the parties

Tax audit

Country A revenue authorities perform a tax audit at A Co. The audit confirms B Co purchases the unrefined gold from A Co and invoices and sells the finished gold bars to third-party customers. According to the financial statements of B Co, it has been recording substantial profits over recent years, primarily as driven by its contractual arrangement with A Co.

Assessment of functions, assets, and risks

B Co:

Functions:

x   Refining of gold, silver, and platinum group metals;

x   Selling refined precious metals to customers via over-the-counter (bilateral) sales;

x   B Co manages its price risk by aiming to ensure it undertakes the refining activities as quickly as possible, generally taking only a few hours, scheduling delivery appropriately to minimise delays, and hedging arrangements when it purchases each doré bar;

x   Testing and analysis of unrefined precious metals for purity, and of refined precious metals for quality assurance before sale;

x   Disposing of all waste materials from the refining process;

x   Producing ceremonial products from the precious metals for retail sale (such as commemorative coins).

Assets:

x   All assets relating to the refining process, including buildings and equipment;

x

5	Text screening	For example: gold, refinery, refining, production, nonferrous, non-ferrous, precious, metals	The purpose of this step is to include companies that operate in a similar environment and perform similar functions.
6	Financial data availability Operating revenue/turnover	Companies for which the database did not report operating profit/loss financial data and turnover figures for at least two of the years from 2013 through to 2015 were eliminated. Companies for which the database did not report turnover figures of at least EUR 5 million in at least one of the years from 2013 through to 2015 were eliminated.	The purpose of this step is to improve reliability of the data by eliminating companies with only a single year of financial data, thereby ensuring sufficient data to calculate the ratios. This step also eliminates companies in a start-up or close down phase, which will have additional costs associated with their activities.

Codes for gold refining[105]

Europe:

Description		NACE code 2441	
Digits	Purpose	Digits	Application
	Section	C	Manufacturing
1 and 2	Major group	24	Manufacturing of basic metals
3	Industry group	4	Manufacture of basis precious other nonferrous metals
4	Industry	1	Precious metals production

North America:

APPENDIX 1

Questionnaire : Functional analysis

The questionnaire included below (from the Inland Revenue Service of the United States of America) is an example of the kinds of questions which may be relevant in undertaking a functional analysis. As is noted below, the list of questions included should not be regarded as exhaustive, nor will all questions be relevant in all cases. For example, while the questionnaire includes sections on functions, risks and intangible assets, other assets are not addressed, but may be relevant in a particular case.

This questionnaire is provided here simply as a possible starting point for the development of tailored functional analysis questionnaires suitable to the particularities of individual cases. Furthermore, it may be the case that transfer pricing documentation already prepared by the taxpayer, such as the Master File and Local File, may contain the answers to some of the questions posed below. A review of this existing information can therefore help to refine and better target the questionnaire. Existing available information and an understanding of the industry in which the taxpayers operate can be helpful in focusing the functional analysis on the most economically significant functions, assets and risks relevant to the transaction at hand.

Exhibit 4.61.3-4 (05- 01-2006) [106]
Transfer Pricing Functional Analysis Questionnaire

For guidance in performing a functional analysis of a business this questionnaire sets out a list of generic questions that might be used to gain an understanding of the various functions, risks, and intangibles. The list is not intended to be exhaustive and should be tailored to suit the needs of the specific business entity being reviewed.

ANALYSIS OF FUNCTIONS

I. Manufacturing

    A. Materials purchasing
        1. What materials or partly finished goods are purchased?
        2. From whom are purchases made?
        3. Are any purchases made from related companies?
        4. Where and how are raw materials purchases?
        5. Who performs the purchasing function?
        6. Who plans purchasing schedules?
        7. Who negotiates purchasing arrangements?
        8. Who approves the vendor as being of acceptable quality?
        9. Do purchasing decisions require head office approval?
        10. What are the other approvals required? Who makes these approvals?
        11. Are any purchases made on consignment?
        12. What are your major risks?

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[106] Source: IRS (2006), accessed at https://www.irs.gov/irm/part4/irm_04-_061-003.html#d0e2784

B. Inventory
1. Where is inventory held?
2. Who controls the levels of inventory?
3. How are inventory levels controlled?
4. Is there a computer system?
5.

4. Who provides the equipment and techniques for quality control?
5. How much product is lost because it fails quality and control checks?
6. What are your major risks?
7. What decisions require head office approval?
8. What are the approvals required?

H. Shipping of products
1. Who pays freight charges for product in and out?
2. Who arranges shipping of products?
3. Who ships your products?
4. Where are the products shipped?
5. How are they shipped?
6. Who is responsible for the selection of shippers?
7. Who is responsible for shipping deadlines?
8. What are your major risks?
9. What decisions require head office approval?
10. What are the approvals required?

II. Research and development
1. What research and development do you carry out?
2. Is any research and development carried out on your behalf by related companies?
3. Do you commission third parties to carry out research and development on your behalf?
4. Where are products designed?
5. What input do distributors have on manufacturing, product design or product modifications?
6. How important is the development of patents in the industry?
7. What patents do you own? Describe the unique products created by each patent.
8. What unpatented technical know-how have you developed that might differentiate your products from competitors, create import cost efficiencies, or give you an advantage in increasing your market share?
9. What decisions require corporate head office approval?
10. What are the approvals required?
11. Who formulates the budget?
12. Are license agreements in existence between you and related companies or third parties?
13. Is there a cost sharing agreement in force and if so what are the details?
14. Provide a copy of the cost sharing agreement and the relevant details.

III. Marketing
A. Strategic
1. Do you carry out your own marketing?
2. Are market surveys performed? Do you monitor market demand?
3. What decisions require head office approval?
4. What are the approvals required?
5. Who are your competitors?
6. Who assesses demand in foreign markets?
7. What are the risks related to demand for your products?
8. Who formulates the marketing budget?

9. Does your distributor always buy what your manufacturer produces?
10. Has your manufacturer ever refused to fill an order?
11. Do related companies carry out marketing on your behalf?
12. Are third-party distributors used?
13. Who chooses, authorizes, and controls third-party distributors?

6.

3. Is corporate reputation significant in your business?
C. Developed marketing organization
1.

APPENDIX 2

APPENDIX 3

Examples of commercial databases used for transfer pricing

Annex taken from World Bank Group (2016): ´7UDQVIHU 3ULFLQJ Economies: A Handbook and Cross-Country Analysis in Developing for policy PDNHUV DQG SUDFWLWLRQHUV µ

Note: List is not intended to be exhaustive. There are a range of other providers. Moreover, this list should not be regarded as an endorsement of, or recommendation to use any of the databases or database providers included herein.

Provider	Database	Geographical Coverage	Content Coverage
Bloomberg [107]	Bloomberg Reference Data Services	Worldwide	Financial markets data
Bureau van Dijk [108]	Osiris	Worldwide	Company financial information (listed)
	Orbis	Worldwide	Company financial information (private and listed)
	Amadeus	Europe	As above
	Oriana	Asia-Pacific	As above
	Aida	Italy	As above
	Bel-First	Belgium-Luxembourg	As above
	Dafne	Germany	As above
	Diane	France	As above
	Fame	UK and Ireland	As above
	Icarus	US and Canada	As above
	Odin	Nordic and Baltic	As above
	Mint Korea	Korea	As above
	Reach	Netherlands	As above
	Ruslana	Russia, Ukraine and Kazakhstan	As above
	Sabi	Spain and Portugal	As above
	Sabina	Austria	As above
	Zephyr	Worldwide	Mergers and acquisitions information
Capital Market Publishers India	Capitaline TP [109]	India	Company financial information (private and listed)
Centre for Monitoring Indian Economy [110]	Prowess [111]	India	Company financial information (private and listed)
Dun & Bradstreet	Company360 [112]		
	Mergent Million		

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			listed)
Hedge Fund Research	HFR Database	US	Hedge fund information
IBISWorld	IBISWorld	Australia	Company financial information (private and listed)
InfoCredit	Teigil	Poland	Company financial information (private and listed)
Intangible Spring[114]	Intangible Spring	Worldwide (US & Canada)	Invotex Group

Thompson Reuters[127]	Dealscan[128]	Worldwide	Financial transactions data (loans)
	Eikon	Worldwide	
	Lipper	US	
	Worldwide public company data	Worldwide	
	Worldwide private company data	Worldwide	
	Worldwide intangibles data	Worldwide	

APPENDIX 4

# of independent records with revenue and net margin information	Countries	Quantity
=<10	Afghanistan (AF), Albania (AL), Algeria (DZ), Andorra (AD), Angola (AO), Anguilla (AI), Antigua and Barbuda (AG), Armenia (AM), Aruba (AW), Bahamas (BS), Barbados (BB), Belize (BZ), Benin (BJ), Bhutan (BT), Brunei Darussalam (BN), Burkina Faso (BF), Burundi (BI), Cambodia (KH), Cameroon (CM), Cape Verde (CV), Central African Republic (CF), Chad (TD), Comoros (KM), Congo (CG), Congo, Democratic Republic of (CD), Costa Rica (CR),	

APPENDIX 5

Most common types of classification codes

System	Code	Description	Website
Standard Industrial Classification	SIC	Created in the 1930s to standardise data in the United States. It is the most widely used reference guide for comparability purposes.	www.sec.gov/info/edgar/siccodes.htm
North American Industry Classification System	NAICS	Six-digit industry grouping system developed in co-operation between the United States, Canada, and Mexico.	www.census.gov/eos/www/naics/index.html
Nomenclature of Economic Activities	NACE	Four-digit statistical classification of economic activities in the European Union. Taken from its name in French, Nomenclature statistique des activités économiques dans la Communauté européenne.	http://ec.europa.eu/competition/mergers/cases/index/nace_all.html

International
Standard
Industrial
Classification
ation .01 72.84 8

APPENDIX 6

A selection of other types of classification codes

The following table sets out a selection of other types of classification codes that are available in various countries. Note that the inclusion of these codes should not be taken as implying that the tax administration or taxpayers in the country concerned use the indicated classification system exclusively, or indeed at all in any particular case. For example, the South African Revenue Service regularly uses both the Standard Industrial Classification (SIC) codes and the Statistical Classification of Economic

APPENDIX 7

Independence criteria [130]

The Bureau van Dijk Independence Indicatorsare noted as A, B, C, D, and U, with further qualifications. It should be noted that this appendix only provides a brief summary of the independence indicators applied by Bureau van Dijk. Further information on the meaning and relevance of these indicators is available. For example, the legal character of the identified shareholder(s), e.g. whether they are natural persons or corporations, may be relevant to judgements as to the acceptability of a particular potential comparable.

Indicator A

Definition: Attached to companies with known recorded shareholders none of which having more than 25% of direct or total ownership.

This is further qualified as A+, A or A-:

- A+: Companies with 6 or more identified shareholders (of any type) whose ownership percentage is known
- A: As above, but includes companies with 4 or 5 identified shareholders
- A-: As above, but includes companies with 1 to 3 identified shareholders

The logic behind these qualifiers is that the probability of having missed an ownership percentage over 25% is the lowest when the greatest number of shareholders is known, so that the company's degree of independence is more certain.

The qualification A+ is also attributed to A companies in which the sum of direct ownership links (all categories of shareholders included) is over 75%. Which means that those companies cannot have an unknown shareholder with 25% or more and can thus not be identified with an Independence Indicator other than A.

Please note that BvD also gives anA- notation to a company that is mentioned by a source (Annual Report, Private Communicationor Information Provider) as being the Ultimate Owner of another company, even when its shareholders are not mentioned.

As it can been seen from the above definitions, the qualifications "+" or "-" do not refer to a higher or a lower degree of independence but to the degree of reliability of the Indicator that is attributed.

In BvD terminology "A" companies are called "Independent companies".

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[130]   Source: Bureau Van Dijk https://webhelp.bvdep.com/Robo/BIN/Robo.dll?project=amadeusneo_EN&newsess=1

<u>Indicator B</u>

Definition: Attached to companies with a known recorded shareholder none of which with an ownership percentage (direct, total or calculated total) over 50%, but having one or more shareholders with an ownership percentage above 25%.

The further qualification as B+, B and B- is assigned according to the same criteria relating to the number of recorded shareholders as for indicator A.

The qualification B+ is also attributed to B companies in which the summation of direct ownership percentages (all categories of shareholders included) is 50.01% and higher. Indeed, this means that the company surely does not qualify under Independent Indicator C (since it cannot have an unknown shareholder with 50.01% or higher).

<u>Indicator C</u>

Definition: Attached to companies with a recorded shareholder with a total or a calculated total ownership over 50%.

The qualification C+ is attributed to C companies in which the summation of direct ownership percentage (all categories of shareholders included) is 50.01% or higher. Indeed, this means that the company surely does not qualify under Independent Indicator D (since it cannot have an unknown direct shareholder with 50.01% or higher).

The C indicator is also given to a company when a source indicates that the company has an

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APPENDIX 8

Factors to consider when reviewing a comparables search process

x   Choice of transfer pricing method:

comparable (e.g. at a similar stage of a particular business cycle; carrying out a similar business strategy; or subject to the manifestation of similar economically significant risks, etc.).

x   Number of comparables: The number of comparables can influence the interquartile range. If there is a big number of potential comparables from initial screening, it may be appropriate to incorporate quantitat ive selection criteria in some cases. If the number of comparables is small, the use of a statistical interquartile range may not be meaningful.

x   Comparability adjustments and diagnostic ratios: These adjustments should only be made to increase the comparability and the reliability of the data, not to create comparability. Caution is advised when using adjustments or diagnostic ratios.

APPENDIX 9

In the example set out below, TestCo (the tested party) has been identified as having significantly

classes of assets or liabilities, the calculation may be considerably more complex than shown above.

x   The purpose of working capital adjustments is to improve the reliability of the comparables. There is a question whether working capital adjustments should be made when the results of some comparables can be reliably adjusted while the results of some others cannot.

There are alternative approaches to perform working capital adjustments. One alternative would

E H   W R   D G M X V W   W K H   W H V W H G   S D U W \ · V   U H V X O W   W R   U H V X O W V   W R

E R W K   W K H   W H V W H G   S D U W \   D Q G   W K H   F R P S D U D E O H V ·   U H V X O W V   W R

APPENDIX 10

Example of adjustment for accounting differences

Employee Stock-Based Compensation Adjustment[131]

of a country's firms' lie The analysis seeks to determine whether the interquartile range is constant across the countries under review. The null-hypothesis reads:

$$H_s: \quad \bar{H}_i = \tau \quad \text{and} \quad \bar{H}_i^{\tau} = \psi \quad \text{for all } i$$

If these 2N conditions (two for each country) simultaneously hold, the aggregate cumulative distribution function also satisfies the same equalities with the same profitability ratios τ and ψ.

average of country-specific distributions. For countries with large weights, the test is thus less likely to reject the hypothesised equality.[134]

This approach thus deviates from both Meenan et al. (2004) and Peeters et al. (2016) in using a joint test. However, country-specific results were also provided for a more nuanced picture and for closer comparability with prior analyses.

3. Sample selection and descriptive statistics

The analysis conducted by the authors drew on the database ORBIS (commercially offered by Bureau van Dijk), which provides consolidated and unconsolidated financial information on firms worldwide. Companies operating in the manufacturing or retail sector (Nace Rev 2. Main Sections C and G) were selected and information on profitability and size measures for the years 2006-2014 retrieved. To ensure that the main dependent variables were not distorted by strategic pricing decisions of multinational enterprises, the approach adopted by Meenan et al. (2004) in restricting the sample to independent firms was followed. [135]

The baseline sample comprises roughly 600,000 European firms in the manufacturing and retail sectors. To strengthen sample homogeneity, the baseline set was limited in a sequence of six steps, summarised in Table 1 below.

First, firms were excluded if less than six years of the main dependent variable were observed Following Meenan et al. (2014) the dependent variable across industries was differentiated: the Return on Assets was used for firms in the manufacturing sector and the Operating Profit margin for firms in the retail sector.

Second, small firms, with sales below EUR 2 Mio were excluded. For comparability with prior work, the dataset was restricted to firms operating in one of four narrowly defined industries (see details below) and excluded start-ups. After eliminating firms with exceptional profitability ratios (Step 3),[136] firms were excluded if they are located in countries with less than 10 firms in the same industry to ensure that the statistical tests are meaningful.

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[134] An alternative approach would exclude the country-

Figure 1: Heterogeneity in profitability ratios across countries
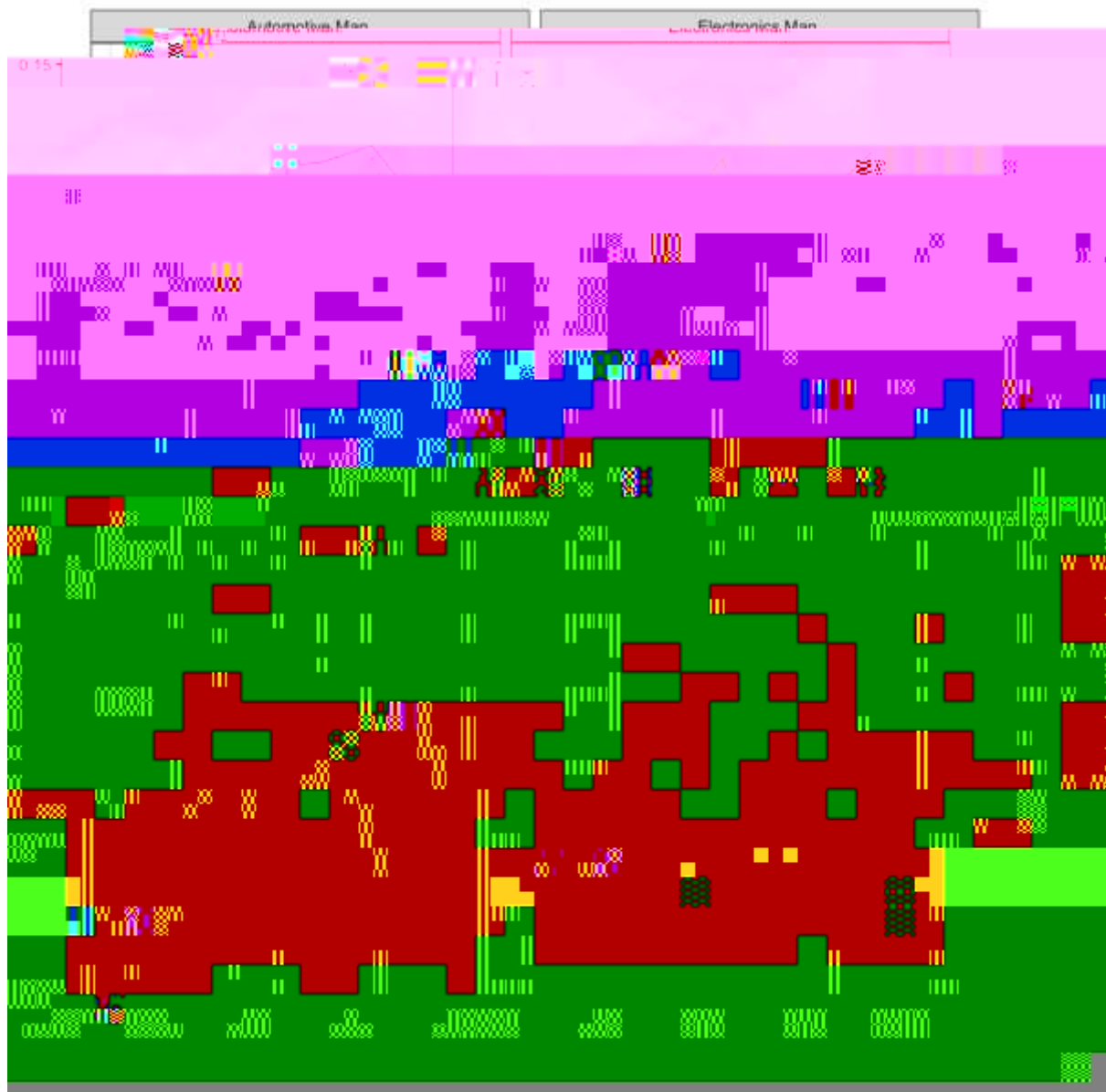
4. Results

Table 4 presents the results of the chi-square test The joint hypothesis that all country-specific profitability distributions correspond to the aggregate distribution was first tested. To obtain more granular results, correspondences between country-specific and aggregate quartiles were subsequently investigated separately for each country (and industry).

The first three rows present results for the joint test, examining whether industry-specify profitability quartiles are constant across countries. The first and second lines give W K H Ó statistic and the degrees of freedom respectively. The third line depicts the probability that the observed interquartile distributions derive from one underlying distribution which is constant across all countries. The test procedure rejects the null-hypothesis in all industries and time periods at the 1% level.

APPENDIX 12

Examples on country risk adjustments

As noted in Part II, section 5.5, there is no established way of making reliable adjustments for differences in geographic market. The examples below set out two possible ways of making such adjustments, but it should be stressed that the appropriateness and reliability of these would need to be considered in each case.

As was also noted in Part II, section 5.5, arguably, an increase in risk should result in a widening of the potential range, rather than a systematic increase.

<u>Example 1</u> [139]

Simplified country risk adjustmen(d)9.006[(need)-3.002 ( )13g( )Tj /TT1 (is)5.994 (k)4.006 (a)8.002 (d)-secsod c

<u>Example 2</u>

Country practices - Canada

Company A is a limited risk entity operating in Country A. The only available (reliable) comparables are from Country C. Following a functional analysis, it is determined that a TNMM is the most appropriate transfer pricing method for the tested transactions, and the return on assets (ROA) is the most appropriate PLI (with Company A as the tested party) to benchmark comparable companies set.

Final set of unadjusted comparables						
	ROA 2011	ROA	ROA	ROA	ROA	

Final set of country risk adjusted comparables						
	ROA 2011	ROA 2012	ROA 2013	ROA 2014	ROA 2015	Average
Minimum	4.56%	0.68%	2.22%	4.49%	-1.43%	2.10%
Lower quartile	13.66%	6.23%	7.07%	8.98%	10.84%	9.36%
Median	17.02%	13.23%	11.65%	11.52%	15.35%	13.75%
Upper quartile	20.10%	20.20%	20.14%	17.63%	19.21%	19.46%
Maximum	39.87%	30.00%	23.66%	25.76%	35.67%	30.99%
Average	17.17%	14.27%	13.13%	13.49%	15.49%	14.71%
ROA tested party	3.45%	-6.21%	3.12%	1.25%	-4.17%	-0.51%

As a result of the adjustment, the outcome for the ROAs of the comparables has increased. It
 V K R X O G   E H   U H F R P P H Q G H G   W R   D G M X V W   W K H   W H V W H G   S D U W \ · V   5 2
under consideration.

APPENDIX 13

Formulas for a two-step approach   to country risk [140]

Equation 4 - Income statement adjustment

$$\Delta S = \Delta AR \cdot r_{st}$$

Where:

$\Delta S =$ the adjustment to sales by adjusting the accounts receivable in line with the local target company

$\Delta AR =$ the impact on accounts receivable estimated as part of the balance sheet adjustment

$r_{st} =$ the short- term interest rate of the local market in which the target company operates.

APPENDIX 14

Interquartile range

The interquartile range is defined as the variate distance between the upper and lower quartiles. This range contains one half of the total frequency and provides a simple measure of dispersion which is useful in descriptive statistics.µ[141]

Interquartile ranges, being a measure of central tendency, are only statistically meaningful where there is a sufficiently large sample size.

There are a number of ways of calculating the interquartile range. Most databases provide a tool to calculate an interquartile range.
MS Excel also contains a tool to calculate the interquartile range, which is commonly used in practice. It can be applied as follows:

Step 1: Enter your data into a single Excel column on a worksheet. For example, type your data in
 F H O O V $ W R $ ' R Q · W O H D Y H D Q \ J D S V L Q \ R X U G D W D

Step 2: Click a blank cell (for example, click cell B2) and then type =QUARTILE(A2:A10,1)   < R X · O O
need to replace A2:A10 with the cell references in your data set. For example, if you typed your data into B2 to B50, the equation will be =QUARTILE(B2:B50,1)   7 K H ´ µ L Q W K L V ([F H O I
(A2:A10,1) represents the first quartile (i.e. the point lying at 25 percent of the data set).

Step 3: Click a second blank cell (for example, click cell B3) and then type =QUARTILE(A2:A10,3). Replace A2:A10 with the cell references in \ R X U G D W D V H W   7 K H ´ µ Excel formula (A2:A10,3) represents the third quartile (i.e. the point lying at 75 percent of the data set).

Step 4

APPENDIX 15

Financial ratios and acronyms

Description	Formula
Tax leverage	$6 . A R \dfrac{02}{'\$6}$
Financial leverage	$(. A R$

APPENDIX 16

Common acronyms

Financial statements line items	Acronym
Income statement	
Sales (Turnover)	TO
Cost of goods sold	COGS
Gross profit	GP

APPENDIX 17

Ratios measuring functions, assets, and risks

Specific implication

b.   in the case of toll manufacturing, service fees received for the qualifying manufacturing activity

5.   <u>Condition 1</u> - The compensation received by the taxpayer for transactions related to that activity (but not for any other transactions conducted by the taxpayer) is not less than the applicable minimum amount:

a.   In cases where the taxpayer conducts a qualifying manufacturing activity that is contract

APPENDIX 19

Country practices on safe harbours for low value-adding transactions

Country	Safe harbour margin/mark - up	Low value -adding transactions defined	Excluded transactions
OECD	5%	Supportive nature, not part of the core business of the MNE group, not	

Country	Safe harbour margin/mark-up	Low value-adding transactions defined	Excluded transactions
		such supporting services. However, an adjustment would indeed be applied if: i) activities are involved that are part of or add more than marginal value to the primary business processes of the group or ii) the respective services are also more than occasionally rendered to independent enterprises.	development and research & development.
New Zealand	7.5% (+/- 2.5%)[143]	Services which are not integral to the profit-earning or economically significant activities of the group. They include activities that are V X S S R U W L Y H R I W K H J U business and are generally routine, but are not similar to activities by which the group derives its income. NOTE: Also applies to de minimis cases.[144]	Not explicitly identified.
Singapore	5%	5 H I H U U H G W R D V ´ U R X V Usually having the following characteristics: related to activities W K D W V X S S R U W W K H J U business, different from those main activities, not intended to be carried out for profit but may be required for the effective functioning of the group, and centralised within the parent or group service company for business convenience and efficiency reasons. There is also a non-exhaustive list of routine services. Also, not offered to unrelated party.	Not explicitly identified.
US	Cost (no mark-up)	Services must qualify as either ´ V S H F L I L H G F R Y H U H G P D U J L Q F R Y H U H G V H U Q R W E H V H U Y L F H V W K business judgment contribute significantly to key competitive	

147

Country	Safe harbour margin/mark-up	Low value-adding transactions defined	Excluded transactions
		renderer, recipient, or both. Specified covered services are listed in an IRS publication; currently there are 101 services on the list. Low margin covered services are those that have a median comparable a U P · V O mark-up on total services costs of less than or equal to 7%.	experimentation; engineering or scientific services; financial transactions, including guarantees; and insurance or reinsurance.

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      Available here:

x

x

Supplementary Report

EXECUTIVE SUMMARY

This supplementary report also responds to a request from the G20 DWG, and arose in the context of increased recognition of the centrality to development of strong tax systems and of the importance of external support in building them.

Mining drives the economies of many developing countries, but raising revenue from mineral product transactions can be challenging. The cross-border sale and purchase of mineral products

traded in intermediate forms. They examine the mining and transformation of minerals to traded products in intermediate forms, the trading of those produc2e67adfators aofpg re2

INTRODUCTION

The cross-border sale and purchase of mineral products between related parties creates base erosion and profit shifting (BEPS) risks. These transactions (between entities within the same MNE) risk separating substantive economic activity from where profit is reported and taxes are paid. One relatively straightforward form of base erosion is for MNEs to sell mineral products to a related entity abroad at prices below equivalent sales to unrelated parties, thereby moving sales revenue and profits offshore, to take advantage of lower tax rates abroad (see Box 1 for stylised example). In other cases, companies may engage in straight tax evasion by mis-reporting the value of product shipments they are making.

Box 1. Potential Revenue Impact ² Example from Copper Sales

The example below shows a hypothetical situation in which an exporter of a mineral product ² in this case a concentrate ² could under-price the true value of their shipment to revenue authorities. As the table below demonstrates, the revenue impact of under-priced shipments can add up quickly. Revenue losses can be from, amongst other things, under-quoting prices, mis-specifying reference prices, excessive deductions or price adjustments, handling or other fees, or simply not declaring the presence of valuable by-products (e.g. gold and silver in a copper concentrate).

Copper Concentrate Shipment	Market Price	10% Under-priced Copper	Copper under-priced, no gold declared
	$m	$m	$m
Gross Value of Cargo FOB [A]	39.5	35.1	32.7
Production Costs [B]	22.5	22.5	22.5
Royalty [C]	1.7	1.5	1.4
CIT Base [AB-C]	15.4	11.1	8.8

Company Tax Payab 135.26 P

Box 2. Comprehensive Tools and Information are Needed for TP Analysis

Transfer pricing rules can be a complex area of tax law, requiring specialised officials.   Applying

BUILDING AN UNDERSTANDING OF THE MINING SECTOR ² A METHODOLOGY

Introduction

Building an understanding of the mining sector operating within a country can be challenging. But as noted earlier, it is an essential component to understanding potential base erosion risks and to applying transfer pricing analysis. The key is to build that knowledge in a systematic way.

The OECD has developed a systematic process to assist revenue authorities to build their understanding of mining products and pricing practices.   The process has 6 steps which sequentially help officials understand the profile and structure of the domestic mining industry, the mines in operation and what they are producing. Once the mining sector has been mapped, this allows administrators to identify key mineral products to be examined, as well as data that may be needed to assist in understanding the economic context of the industry.

As mineral product knowledge becomes increasing sophisticated, information asymmetries should narrow and revenue authorities should be able to use market pricing information more effectively.   Naturally, different revenue authorities are at different stages of expertise with

	produce those products?
	‰ Where does this take place?
	‰ Does this mine have similarities with other mines domestically? (These similarities might be in, for example, inputs used; products produced; transportation methods employed; and/or customers.)
	‰ What entities are involved in the transformation and what are their key functions?

The second step is to identify in detail the actual products each mine produces and sells,

The third step is to understand what those products are used for, what drives their prices and how they are traded internationally. This means understanding who potential customers for the product might be (for example, smelters are a key buyer of copper concentrates, as are

The fourth step is to identify related party sales and understand the economic context to

The last step is to devise approaches or methodologies that can address as many of those information gaps as possible. This issue is addressed comprehensively in the Toolkit on Comparability, but includes where to look for additional data, and which transfer pricing methods might be most appropriate given the facts and circumstances of the taxpayer.

Step 6: Devise a way forward when there are information gaps.	‰ Are there alternate sources of information? (for example, could information on smelting or refining costs be obtained from elsewhere?)
	‰ Are there commonly used methodologies to derive a price from another product?
	‰ Would these withstand dispute resolution processes?
	‰ Is it worth investing in additional data or consultancy expertise?
	‰ If so, how much will this cost?
	‰ How long will it take to receive the information?
	‰ What legal powers are available if the taxpayer refuses to provide information?
	‰ Which other countries might be able to assist?
	‰ Can informal country networks help reinforce understanding of key pricing practices for that product?
	‰ Can information be obtained through formal information exchange mechanisms?

WIDER ISSUES CONNECTED TO MINERAL PRODUCT PRICING

Relationship Between Prices under Corporate Income Tax and Royalties

A common issue that producing countries must confront is how their royalty systems and corporate income tax (CIT) treat the value of shipments of mineral products.   Often the prices used for each of these will not be the same, even though on the face of it, it may appear that they should be.

One key issue is the point on the transformation chain at which each is imposed   .

x   Royalties are typically applied to products at the early stages of the transformation chain, for exa P S O H W K H \ P D \ E H L P S R V H G D W W K H S R L Q W W K H P L Q H U D J D W H µ   7 K L V D S S U R D F K L V X V H G V R D V W R L P S R V H W K H W D [mineral, rather than any value-adding associated with beneficiation.

Long-Term Supply Agreements

MNE groups typically formalise the roles of various group entities by concluding contracts between them. For entities involved in mining activities, the contractual arrangements may often specify that the mining company will focus on production, whilst other entities are allocated responsibility for related functions such as procurement and finance. This means there will often be instances where the producing entity agrees to sell all mineral products from the mine firstly to a related party (typically offshore), who in turn then disposes of the mineral product either to another entity within the company group or to arm's length parties

These agreements often cover the mine's total production. The parties may agree a fixed price for all shipments in a period meeting certain quality specifications, or they may prescribe a pricing formula based on a transparent reference price.

This can complicate the use of spot price transactions as potentially comparable transactions for transfer pricing analysis, because these agreements modify the economic relationship between the parties.[148] As a result, a long-term sales agreement must be read in the context of other arrangements that may exist between the parties (and their actual conduct).

There can be various motivations for these agreements, and it is important to examine the actual conduct of the parties as well as the intention of the parties in forming the agreement and the benefits that each party receives. Both parties should benefit from such an agreement, even though the distribution of benefits will depend on a number of factors. For example, these agreements may formalise:

x <u>The transfer of a business function such as sales and marketing</u>, with the buyer then taking responsibility for activities that could include finding independent customers for the product, negotiating sales, collecting payments and arranging product

These economic exchanges can have different remuneration mechanisms. For example, remuneration may be in the form of the buyer receiving a percentage discount off the value of

The existence of a long-term contract need not mean the CUP method based on quoted prices for transfer pricing analysis cannot be applied.   The contract will often still have a

THE MINERAL PRODUCT CASE STUDIES

The OECD has prepared several case studies on the key mineral products produced at different mines.   These case studies are intended to provide developing countries with detailed industry information and contribute to building greater mining sector knowledge in tax administrations.

The case studies are on products from copper, iron ore, thermal coal and gold mines.   These minerals were chosen because each has products that are commonly sold in intermediate forms and because each is particularly relevant to many developing countries. These studies are focused on medium and large-scale mines, since these are predominantly operated by MNEs.

Copper	Copper is an important metal across numerous industries due to its thermal and electrical conductivity. Its applications include in construction and telecommunications. It is also resistant to bacteria and fungi, making it useful to applications such as cooking equipment and water sanitation. The process for transforming the copper ore to pure metal depends on the type of ore (oxide-based or sulphide-based).
	Many developing countries such as Peru, Zambia and Kazakhstan export copper as a concentrate, which is a powder typically containing around 30 percent copper following initial beneficiation. Some countries such as Zambia also export copper anodes and others, as Democratic Republic of Congo, export refined copper cathodes.
Iron Ore	Iron ore is a bulk commodity that provides the ferrous content for VWHHOPDNLQJ 7KH FROOHFWLYH XVH RI W\SHV RI GHSRVLWV ZKLFK FDQ EH JURDQG 'ORZGHµ RU Ugrade ores of between approximately 50 to 65 percent iron are made up primarily of hematite, while low-grade ores are primarily composed of magnetite (contains up to 30 percent iron) and taconite (usually less than 30 percent iron).
	Key exports for developing countries are iron ore fines, lumps, concentrates, pellets and sinter feed. For countries with higher-grade ore, these are more likely to be exported as fines or lumps, whilst for countries with lower grade ores, further domestic beneficiation is usually required to create concentrates, pellet or lump products. Along with traditional exporters such as Brazil and South Africa, Sierra Leone, Liberia and Mauritania are all emerging as iron ore exporters.

Thermal Coal

Case Study: Copper

Mining Production and Key Products

Copper Mining

To separate the copper ore from the surrounding rock, drilling and blasting processes are used.

percent copper cathodes. This process is known as "electro winning".

between 50 and 70 percent. In most instances the matte is transferred directly as a molten liquid to a converter, but it may also be poured into ingots, cooled, and moved to a separate facility.

In the converter, more silica is added to the matte and air is blown through the furnace to again melt the materials and separate the copper from another slag containing the iron. Following this process, the copper is known as "blister" copper and is 99 percent pure. Small impurities including oxygen, sulphur and iron are still present, requiring further treatment. Depending again on the type of smelter, the blister copper may be cooled and shaped into ingots for transportation to another facility, or carried directly to an anode furnace for casting.

During the casting process, natural gas is blown into the melt to burn off excess oxygen. At end of the process, molten copper of approximately 99.4 percent purity is poured into moulds and cooled. These shapes are "anodes".

4   Refining is the final step in the production of effectively pure copper. The anodes are refined using an electrolytic process where the anodes are placed in tanks with a sulphuric acid solution along with fine "starter" sheets of pure current is applied to the solution causing the anodes to dissolve and copper to attach to the starter sheets, eventually forming 99.9 percent pure copper cathodes. Precious metals do not dissolve in the solution, instead dropping to the base of the refining cell and forming "anode slime. This slime" is collected and the precious metals recovered through a leaching process.

Pricing Practices

7KH FRSSHU SURGXFWV PRVW FRPPRQO\ WUDGHG DW DUP·V OHQJ
copper cathodes. Trade in copper ore is uneconomic because much of the ore material is gangue (i.e. commercially worthless).[151] Blister and anode copper products are traded, but these markets are more opaque because transactions occur much less frequently.

Copper Concentrate Pricing and Market Conditions

Copper in concentrate is traded widely between independent parties, and final contract terms depend on the nature of the relationship between buyer and seller, as well as prevailing market

Components of an Agreement

The agreed price for concentrates is typically based on a formula, which is the sum of value of
W K H   F R Q W D L Q H G   P H W D O V   ´ S D \ E O H   P H W D O V µ   O H V V   W K H   V X P R
typical contract would contain provisions to:

x calculate the value of payable metals;

x calculate deductions and penalties (typically, treatment and refining charges, and
penalties for impurities and/or penalties for excessive moisture where needed);

x outline other concessions that may be extracted by t K H   S X U F K D V H U   V X F K   D V   ´ S U L F
S D U W L F L S D W L R Q µ

x allocate related costs such as insurance, sea freight, taxes and duties; and[152]

x outline payment terms.

Assay of the concentrate is essential to pricing calculations, because the physical characteristics of the concentrate directly affect its price. The further away from standard specifications, the more adjustments that could be expected to attain the final agreed price.

Payable Metals - Copper Reference Price

The agreed payment will be based on the percentage of copper present in the concentrate, which is valued by referencing the price of refined copper on one of the major commodity

made to account for the fact that the buyer (e.g. a smelter) cannot recover all of the copper during the smelting and refining processes. Rates of recovery vary between smelters, but payments are typically adjusted in a routine way with more efficient smelters taking advantage of their efficiency by receiving essentially ´IUHH PHWDOµ)RU FRQFHQWUDWHV DU copper, smelters typically pay for 96-97 per cent of the value of the copper present, so a concentrate with 30 percent copper might actually be paid for around 29 percent copper. [153] Below 30 percent, typically the payable percentage is reduced by 1 unit (100 basis points). Below 22 percent, the deduction increases to 1.1 percent (Boliden, 2008). Conversely, if the percentage exceeds 30 percent, the smelter might reduce the recovery adjustment.[154]

Payable Metals ² Precious Metals (Gold and Silver)

For gold, quantities below 1 gram per dry tonne of concentrate typically do not receive payment, because they are uneconomic for smelters to recover. For gold above one gram per tonne, the concentrate buyer typically pays based on the London Bullion Market Association (LBMA) gold spot price (see Gold chapter for pricing information), noting that only around 97.5 percent of the material is paid for, to account for metals lost during the recovery process.[155]

incorporated into similar supply arrangements between parties not involved in the agreement.[156]

TCs are usually expressed in US dollars per tonne of concentrate. For example, the 2015 TC was around USD 107 per tonne. TCs may increase for concentrates with copper content above 40 percent, but this depends on conditions in the concentrate market (that is, if it is hard to source concentrates, smelters may reduce the charge). RCs are usually expressed in USD cents per pound of payable copper in the concentrate. For example, 2015 RC was around USD 10.7

fnc9tlnce (.)-41.998 (cS)-2m4 (o)-3.93p1.998c(i)3.002 (sb582 (e,)377.0064 (814 (40)Tj 0 c)5 (p)7.992 (r)-2.900

 (e)17.00dis2 (apo0.006 ( )004 (le o)i)3.002f (o)-3.9 (en)8.99998 (cS)-2m0 -16.08 u02 (oh a)-43.002 002 (i)3.00

ayrnccayciclco H Uo Rc Spo

Blister and Anode Copper

As noted, blister copper trading is less common and consequently pricing practices are more opaque. Blister and anode products are often sold from smelters to refineries, and this often is confined within corporate groups. [157] Consequently, there is much less pricing information available.

Similar to concentrates, pricing is based on a calculation of the value of payable metals less charges and deductions. As noted earlier, at the blister stage, the product is around 98 to 99 percent copper, and sellers paid based on the percentage of copper present. Payments are also made for precious metals, with an adjustment (reduction) applied to account for losses of

Box 5: Commodity Exchange Prices and Cathode Price Premiums

Exchange prices such as the spot price quoted on the London Metal Exchange (LME) are commonly used as a reference price to calculate payable copper for products earlier in the transformation chain (such as concentrates and blister/anode products). These exchange prices also form the basis of physical trades in refined copper cathodes, but the exact payments in a particular transaction are the result of several factors such as metal quality and proposed delivery time relative to other options in the market. This means LME spot price for copper cathodes may not be the only pricing information needed by revenue authorities looking to verify the price used in a related party transaction.

Additional Information   : Impurities in Copper Concentrates

The table below outlines the common penalty elements that may be found in copper concentrate contracts. Please note - these tolerances are indicative.

Penalty Element	Reason for Penalty	For each %	Exceeding %
Arsenic	Reduces conductivity of copper, raises recrystallization temperature of copper, causes cracking at the copper grain boundaries. Also a known human carcinogen, requiring environmental mitigation measures. Expensive to dispose of.	0.1	0.2
Antimony	Reduces copper cathode conductivity, annealability (ability of the copper to be strengthened through annealing process), drawability (ability to stretch out copper rods into finer wire). Also a possible human carcinogen.	0.01	0.1
Bismuth	Causes cracking of copper rods, poor drawability even at very low concentrations. As concentrations increase, the copper will work-harden more quickly (broadly, the copper hardens when bent or deformed).	0.01	0.05
Selenium	Makes cathode copper more prone to cracking during wire drawing. Toxic to humans at higher concentrations. Combines with copper during refining, reducing amount of copper recovered.		
Tellurium	Increases the brittleness of copper, causing rod cracking and poor drawability. Combines with copper during electrolytic refining, reducing amount of copper recovered.		
Lead	Toxic to humans, requiring environmental mitigation measures.	1.0	1.0
Nickel	Nickel in anodes decrease the solubility of copper in the electrolyte liquid during the refining stage. It must also be removed from the electrolyte. Nickel is also a human carcinogen, requiring environmental mitigation measures. But the recovered nickel sulphate can be sold.	0.1	0.5
Cobalt	Toxic to humans at higher concentrations. But can be recovered and sold if concentrations are high enough.	0.1	0.5
Chlorine	Causes corrosion in smelter components such as smelter flues if it condenses as hydrochloric acid. Can require environmental mitigation.	0.01	0.05
Fluorine	Can pose significant difficulties for smelters if it mixes with water and forms hydrofluoric acid which corrodes and in high concentrations, causes health problems. Smelters are reluctant to accept concentrates with high fluorine, or charge significant handling penalties.	10 ppm	330 ppm
Cadmium	A toxic heavy metal classed as a carcinogen to humans, requiring mitigation measures.	n.a.	n.a.
Mercury	Highly toxic, raising waste disposal costs and can damage smelter equipment. Can remain in smelter gases, requiring the gas to be cooled below zero degrees Celsius to reduce its concentration. Techniques to remove mercury add to capital and operating costs. Requires disposal.	1 ppm	10 ppm
Zinc	In high enough concentrations, will increase viscosity of the slag during smelting, increasing the loss of copper.	1.0	3.0
Silica, Alumina, Magnesia	In high enough percentages, smelter melting point is increased, requiring higher operating temperatures (therefore more energy) to limit lost copper.	1.0	5.0

Source: C Fountain, The Whys and Wherefores of Penalty Elements in Copper Concentrates.
n.a. ²

Mining Production and Key Products

Note: Iron ore fines and concentrates are also used to produce sinter products, which are similar to iron ore pellets. However, sinter products are difficult to transport and consequently not frequently traded

Iron Ore Mining

Pelletisation: Iron ore pellets are used by steelmakers in blast furnaces, and in direct

Pricing Practices

Iron ore products are diverse, targeting a range of customer requirements. The most traded products are iron ore fines, followed by pellets and iron ore lumps. Iron ore concentrates are also traded but make up only a small proportion of international trade (CRU, 2014).

The significant size of the steel industry in China means transactions with Chinese firms play an important role in iron ore demand and price setting. For example, China represented 55.8 percent of apparent iron ore consumption in 2012, followed by Japan at 7.1 percent and India at 6.2 percent (World Steel Organisation, 2015).Many pricing publications consequently focus on transactions with delivery to Chinese ports or regions as being indicative of international market directions. [162]

Iron ore pricing has undergone considerable structural change over the last decade. Prior to 2010, the majority of iron ore contract prices were set in annual negotiations between large iron ore suppliers and steel makers. Those agreed prices then formed a basis for other market transactions, between parties not connected to the initial negotiations.

From 2010 however, contracts moved increasingly towards quarterly or monthly terms as they H [S L U H G   D Q G   Z H U H   U H Q H J R W L D W H G   Z L W K   Dt price Gefrh inglVLQJO\ DF (RBA, 2012).[163] Iron ore contracts have now evolved further to the widespread use of price indices, discussed further below.

Iron ore trading is increasingly done using electronic trading platforms, which are membership-based and focused on physical trading. For example, the GlobalORE platform and the China Beijing International Mining Exchange (CBMX) platform are increasingly used in transactions[164] by major iron ore suppliers and purchasers for standardised iron ore products involving physical product delivery, although companies advise this is still small relative to the total number of transactions involving physical delivery.

Pricing Elements in Iron Ore Product Transactions

Iron ore prices are determined fundamentally by prevailing market conditions (and expected future conditions) in both iron ore product supply and the current and expected demand from the global steelmaking industry. For particular iron ore products, prices are determined primarily E \   W K H   D P R X Q W   R I   L U R Q   ´ I H µ   L Q   W K H   S U product.

Other characteristics that affect the final agreed price also include:

- x   the physical form of product being sold (for example, fines, lumps and pellets) and its suitability as a steelmaking input;

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[162] $ X V W U D O L D   D Q G   % U D] L O   F R P S U L V H   D U R X Q G   S H U F H Q W   R I   & K L Q D · V   L U R Q   R U H   L P S
[163]   This change has been concurrent with an increasing use of centralised marketing entities to manage functi4.005 ( )d>5.995()e( )]TJ ET q (4

x   the impurities present in the product; and

x   delivery and payment terms.

In addition, other factors such as the duration of the agreement and the relative negotiating skills of the parties affect final agreed prices, albeit at the margin. [165] Market conditions can vary across regions and change over time ² even seasonally ² but the underlying utility of the iron ore products remains connected to their use as a steelmaking input.

Iron Ore Price Benchmarks

As iron ore contracts have evolved towards shorter durations and greater price transparency, price indices have emerged that are increasingly used to set prices for iron ore products. This is an evolution from contracts that agreed fixed prices for the duration of the contract (The Steel Index, 2013).

In particular, iron ore products are often based around the price of iron ore with 62 percent iron per dry metric tonne, although contracts may be specified using different price metrics (see Box). Several pricing indices have been developed to track the price of 62 percent iron products, including:

x   IODEX (published by Platts);

x   Mysteel (published by Mysteel.com);

x   Metal Bulletin (published by Metal Bulletin Ltd);

x   TSI (published by The Steel Index);

x   Argus Steel Feedstocks (ICM, published by Argus Media ltd); and

x   China Iron Ore Price Index (CIOPI, published by the China Iron and Steel Association).

shipment of iron ore fines with iron content of 61 percent would be adjusted (discounted) proportionately to the benchmark 62 percent price. [167] This proportional adjustment however only applies to iron ore products that have iron content within this range. [168]

Adjustments Based on Physical Form

Once the level of iron in the transacted product has been established, prices can be adjusted depending on the physical form of product — both positively and negatively — which may fluctuate over time in accordance with market conditions. For example, products in lump or pellet form attract price premiums relative to fines because they are suitable for immediate use in furnaces, but this premium for shipments to China may increase during the year if cold weather in China restricts alternative local supplies of fines (Rio Tinto, 2015).[170]

Commonly applied adjustments are:

x   For fines: a penalty adjustment may be applied where pieces are very small (sometimes
       U H I H U U H G   W R   D V   ´ V X S H U I L Q H V µ   U H I O H F W L Q J   D G G L W L R Q D O [171]

x   for lumps: unusually large lumps may attract a smaller premium if they exceed a fixed
       percentage of the shipment, reflecting additional processing that may be required;
       and[172]

x   for pellets: premiums above fines may be paid depending on the quality of the pellets. In
       particular, pellets made for use in direct reduction steelmaking processes usually attract a
       greater premium than pellets made for blast furnaces.

Price adjustments based on size are typically negotiated between the parties depending on the transaction, but some pricing data on lump and pellet premiums is published (see Annex on data sources).

Penalties and Deductions   — Impurities

The level of impurities in an iron ore product directly affects negotiated prices. Higher levels of certain impurities will commonly incur penalties relative to standardised grades, because of the unwanted effects they have on the properties of iron (and therefore steel - outlined in Additional Information). The most important impurities affecting prices for iron ore products are silica, D O X P L Q D   S K R V S K R U R X V   V X O S K X U   D Q G   ´ O R V V   R Q   L J Q L W L R Q µ   L moisture content.

Contracts would usually specify limits on each of these impurities, with actual adjustments made on the basis of testing (assay) results. In addition, alkalis such as lithium, sodium and potassium

products (alumina below 4 percent) can have their own index price with a higher price than standard grades.

x   Moisture levels do not have a significant effect on prices since iron ore products such as fines and lumps are priced per dry metric tonne. Pellets would be very unlikely to attract moisture penalties, as the induration process usually means they have no more than 2 percent moisture.

x   For other impurities, pricing adjustment information is difficult to find and terms would be negotiated bilaterally.

Several factors limit the extent of impurities in iron ore products. In particular, mines usually aim to produce products that adhere to commonly traded impurity levels to ensure products are able to be offered into markets with more buyers and sellers.[173] In addition, certain impurities will be limited by maritime transportation rules. For example, maritime safety regulations limit moisture content of iron ore products (IMO, 2009). Where products materially exceed impurities commonly seen in markets, companies may accept harsher penalties if they choose to sell, but this provides strong incentives to blend the ore with other grades if the mine is able to, or at least invest in equipment to enable further beneficiation.

Other Factors Affecting Prices

Adjustments based on physical location and delivery date

As noted above, the size of demand for iron ore from Chinese steel mills means a significant amount of pricing information focuses on Chinese ports where products are imported.

Pricing publications commonly publish prices for products located at Chinese ports, on CFR trade terms. As a result, revenue authorities commonly need to adjust prices to account for differences in delivery terms. In particular, this is often required for freight charges, to establish the price that would be paid at a different geographical location. To make this D G M X V W P H Q W   ¶ Q H W E D F N V used by contracting parties[174] and revenue authorities (see related Toolkit on comparability for a discussion of netback pricing).

The prices obtained in iron ore transactions are also affected by the expected duration of shipment and delivery date. In markets where there is an expectation that iron ore prices will fall[175], sellers may be able to obtain a premium relative to a pricing index if they are able to deliver more quickly than what other suppliers might commonly provide. Conversely, for product suppliers offering longer delivery times relative to those commonly available, they may be penalised by adding a discount to the index price.

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173   7 K L V K D V O H G W R W K H G H Y H O R S P H Q W R I L U R Q R U H S U R G X F W ´ E U D Q G V µ W K D W D
     including iron present, particle size, impurities and moisture.
174   Contracts negotiated under the GlobalORE trading platform use this approach, for example.
175   A V L Q G L F D W H G E \ W K H I X W X U H V F X U Y H V O R S L Q J G R Z Q Z D U G V O R R V H O \ G H I L Q H G D V

Contract duration (spot and term contracts)

Iron ore product pricing is affected by the nature of the relationship between the parties,

Additional Information

Iron Ore [2] Key impurities

Key impurities in iron ore that must be brought within commonly accepted limits are:

x   Silica - increases the brittleness of iron. If silica is left in the iron ore, during iron smelting it can be alloyed into the iron. It is usually relatively easy to remove because of the density difference between silica-rich minerals and iron-rich minerals (Reed, 2013).

x   Phosphorous - also makes iron more brittle, and only very low tolerances are accepted (Reed, 2013). It also, however, increases the hardness, strength and fluidity of steel.

x   Sulphur - also makes iron more brittle, but also prone to crackir. It also, hows talso ma(o)-4.006 ( )13.002

Case Study: Thermal Coal

Coal Mining and Key Coal Products

Thermal Coal Mining

The coal is severed from the surrounding land using mechanical digging processes. These

S U R F H V V H V   L Q F O X G H   W K H   X V H   R I   G U D J O L Q H   H [F D Y D W R U V   D W   R S

D Q G   S L O O D U µ   S U R F H V V H V   D W   X Q G H U J U R X Q G Geo-as-Oillans to 2016L F K   X V H   V

up the roof of the mine as excavation occurs (Shaw, 2016).

7 K H   F R D O   L V   W K H Q   P R Y H G   W R   D Q   L Q L W L D O   V W R F N S L O H   W K H   ´ U

begin to transform the coal to a saleable product.

> Crushing and Screen ing : The coal is transported to a series of crushers in a circuit, to reduce the pieces to a smaller, more uniform size. Screens are used to remove pieces that remain larger than the target size (e.g. 50 millimetres) and these pieces are sent back for further crushing.

> Once the pieces are at their target size, they may be transported from the mine for delivery to customers (or traders) if impurities and quality are within acceptable limits. Alternatively, further cleaning processes may be required to remove surrounding waste material and to reduce the presence of impurities (particularly ash, sulphur and nitrogen).

> Cleaning: Coal particles of different sizes may be separated and sent for different washing processes. Numerous processes are used to clean the coal, exploiting differences in the density of the coal relative to surrounding rock (the coal is lighter, IEA, 2014). For example, the coal may be fed into barrels and mixed with fluid causing the coal to float while heavier material sinks and is removed (OTC Journal, 2011).

> Very fine particles may be sent through a flotation process , in which slurry containing the fine coal particles is mixed with air bubbles, with the coal attaching to the surface of the iurf2994 ( )]b06 ( )-55 998 (a)9..998 (ding79.006 (th)3.996 (l)3.002 (o)5.994 (at)6.9992

Thermal Coal Usage and Markets

Thermal, or steam coal[76] is an energy source consisting primarily of carbon. There is a range of
 F R D O   Z L W K   Y D U \ L Q J   H Q H U J \   S R W H Q W L D O   J U R X S H G   L Q W R   I R X U   J U

x   The energy security policies and environmental policies (particularly policies to limit carbon emissions) of major importers and exporters influence the structure and evolution of coal markets.

x   Tighter environmental regulation in China has changed the profile of coal imports to China away from high-impurity coals.

x   The Indian Government has recently relinquished its role as the sole trader of coal (via Coal India Ltd) and allowing sub-national governments and private actors to mine and sell directly to end-users (IEA, 2016).

Coal Trade

In 2014, the total trade of thermal coal was 1.05 billion tonnes, of which around 945 million was traded by sea (IEA, 2015). Coal trade is therefore is a large international market, but this international trade only represented around 17 percent of total coal production (the remainder was produced and consumed domestically).

The Pacific Basin dominates the international trade of coal, since it is where the largest importers and exporters are located, with the Atlantic Basin being the other main international market.[182]

On the export side , the largest exporters by total tonnage in 2014 were Indonesia (estimated 421 million tonnes, mt), followed by Australia (196 mt), Russian Federation (127 mt), Colombia (85 mt) and South Africa (74 mt). On the import side , Asian buyers form the majority of coal importers by weight. China is the largest thermal coal importer, importing an estimated 219 mt in 2014 - representing over 20 percent of coal imports globally. This is followed by India (175 mt), Japan (137 mt), Republic of Korea (96 mt) and Chinese Taipei (58 mt). Countries in Europe and the Mediterranean are also significant purchasers, particularly Germany, United Kingdom, and Turkey.

Price developments in China are highly influential in international price formation, explained by W K D W F R Q V X P S W L R Q large share of total coal consumption.[183] 7 K H , ($ R E V H U Y H V W K D W ´ ¬ F R D China is still the clearing market, i.e. the main place where price is formed, in the Pacific Basin, especially for low calorific coal. Imports mainly from Indonesia and Australia compete with

Pricing and Contracts

Customer Requirements

Understanding the economic context of the ultimate coal user is essential to understanding which coal they buy and their supply requirements (Shaw, 2016). For example, where there is a

F R Q W L Q X R X V Q H H G I R U S R Z H U V X F K D V H O H F W U L F L W \ J H Q H U D W R

base load electricity, or in smelting or 641.998 (o)-3.996 (nt)-3.002 (i)15 u(641.998 (o)-3.996us ( ))12.008 a(o)6.

Price Indices

Price Indices exist for several coal types originating from major supply ports including coals from South Africa, Australia, Indonesia, Colombia and Russian Federation. These indexes have shorthand names commonly used by traders, referring to the particular publications that monitor and report on prices for those trades.

- x   ´$3,µ LV WKH PRVW FRPPRQO\ XVHG UHIHUHQFH price in the for imported coal to North West Europe (6000 kcal/kg NAR). The volume of API2-based derivatives is more than 2.5 billion tonnes.

- x   Other popular indices are API4 and API6. API4 is the benchmark price for coal exported from Richards Bay in South Africa (6000 kcal/g NAR). API6 is the benchmark price for coal exported from Newcastle in New South Wales, Australia (6000 kcal/kg NAR).

- x   For the Americas, the Central Appalachian Coal Price Benchmark (CAPP) spot prices are the most widely referenced for thermal coal in the eastern USA. CAPP spot coal prices are FRPPRQO\ XVHG WR SULFH ERWK SK\VLFDO DQG ILQDQFLDO term contracts. CAPP spot prices reflect the value of the coal at the CAPP Delivery Zone location. These prices do not reflect delivery costs from the delivery zone to another location, emission abatement costs nor any other handling charges (Tradition, 2013).

Given the range of qualities of coal internationally traded, there are different indices for different qualities. For example, ICI1-ICI5 are five indices published by Argus for coal exported from Indonesia, with calorific values ranging from 3000 to 6200 kcal/kg NAR.

Impurities

Impurities in coal can damage equipment and/or must be mitigated when the coal is burnt according to environmental regulation, increasing costs. Impurities that routinely result in price penalties (when above commonly observed market levels) are ash and sulphur.

- x   Ash Content: Ash remains after the complete combustion of all organic matter and the oxidation of the mineral matter present in the coal – it is therefore the incombustible material present in the coal. It is measured as a percentage of the air dried coal sample. Since ash does not contribute to the calorific value of the coal, its presence increases costs. In particular, a higher ash content increases transport and handling costs per unit of energy contained in the coal, and also was002 (ag)-3

(HGI) measures grindability. Price adjustments are not usually made for variations in HGI - rather, contracts usually specify a typical HGI value for each shipment, and a (lower) HGI value that would entitle the buyer to reject the shipment.

x   coal piece size distribution: the size of coal pieces does not usually affect prices, because power plants pulverise the coal down to fine powder immediately before it is used. It is more likely a shipment would be rejected if the piece size distribution was too large. But contracts will typically specify the particle characteristics of the shipment, with maximum percentages of large pieces (above 50 millimetres) and very small pieces (less than 6 millimet res).

Contract Periods

Spot transactions dominate the international trade in thermal coal. But there is a range of customer practices when purchasing thermal coal. The coal contract may specify a fixed price per tonne, or use an agreed reference price. Usually a fixed-price contract will be shorter, and not

Additional Information : Contract Units of Measurement and Common Terms

Tonnes and Tons: The quantity of coal to be priced will be clearly specified in contracts, either in metric tonnes (1,000 kilograms) or, in transactions involving USA firms, short tons (2000 pounds or equivalent to around 0.907 metric tonnes).

British thermal units (BTUs): approximately 1055 joules of energy (1 BTU/lb = 0.556 Kcal/kg).

Case Study: Gold

Gold Mining

Gold is usually in microscopic particles in the ore, and only small amounts of gold are typically extracted from each tonne of ore. Large mines may extract ore with an average grade as low as 1 gram per tonne.

Gold Production

The process of ore extraction depends on the grade and geometry of the ore body, particularly its proximity to the surface. Drilling and blasting are generally used to mine hard rock deposits, but significant amount of gold are also won from easily excavated alluvial deposits.

The ore is initially moved by trucks to a mill to be crushed and ground into increasingly smaller pieces. Primary crushers are used to break down the largest rocks to a size that can be more manageably handled. Conveyor belts move the broken ore to subsequent crushing machines, with screens used to sieve out pieces that are still too large.

typically around 80-85 percent gold, with the balance made up of silver, copper, other base and platinum group metals, and impurities. In some countries the doré contains more silver than gold.

Refining: Mines send their doré bars to a refinery to separate the gold, silver and other metals and remove remaining impurities. There are several different refining processes used depending on the composition of the product to be refined and scale of operations.

 8 V L Q J   W K H   ´ 0 L O O H U µ   S U R F H V V   W K H   J R O G   L V   P H O the molten metal, drawing out impurities, which rise to the surface. This approach3

The reference price is most often based on London Bullion Market Association (LB0$·V WZLFH daily electronic auctions. The results of these auctions (AM and PM) are published as an official ´/%0$ *ROG 3ULFHµ TXRWHG SHU ILQH WUR\ RXQFH LQ 86' (XU information services such as Bloomberg and Reuters then republish that information as well as real-time price developments based on information from key refined gold traders.

Refineries may use the LBMA reference price directly for the day the bar was received[195], or alternatively may slightly adjust this spot price to provide the refinery a commission (that is, the refinery would take a spread on the price they pay for unrefined gold and the price they receive

Additional Information

Gold - Measurement for trading

Example of refinery outturn document

Source: Indonesian Stock Exchange

Gold - /RFDWLRQ ´/RFRµ 6ZDSV

Gold markets have developed a system to simplify and manage the transfer of gold internationally, reducing the quantity of gold that needs to be physically transported.

Loco swaps are a linked gold purchase and sale of the same quantity which offset one another, where the two parts of the transaction are for gold in different physical locations. For example, a ORFR VZDS PLJKW EH XVHG WR WUDQVIHU RXQFHV RI JROG I +RQJ .RQJµ WR /RQGRQ ,Q WKLV FDVH WKH UHILQHU\ ZRXOG

- x EX\ WKH JROG IURP WKH PLQHU LQ +RQJ .RQJ ZLWKGUDZLQJ account in Hong Kong, and

- x VHOO WKH JROG EDFN WR WKH PLQHU LQ /RQGRQ GHSRVLWL account.

The two transactions are done simultaneously in the same currency, at the prevailing prices for gold in each location - in this hypothetical example, assume the loco London price is $1002 per ounce, the loco Hong Kong price is $1000, a discount of $2 per ounce. The miner would then pay the refiner the location discount, in this case $200 (100 ounces at the discount of $2 per ounce).

Source: Perth Mint.

CONCLUSIONS AND POSSIBLE FURTHER WORK

As outlined in this supplementary report and the related Toolkit for Addressing Difficulties in Accessing Comparables Data for Transfer Pricing Analyses, applying transfer pricing rules to commodity transactions ²

x   Expanded study areas: Also based on the feedback of developing countries, the work could also be expanded into wider areas including a deeper examination of price setting in freight markets, (both land and seaborne); and onto targeted areas including costs of key mining, smelting or refining inputs, since these determine CIT and royalty deductions. Several organisations have expressed interest in pursuing this work. Further work could also be done comparing cross-country experience in setting prices for tax/royalty

Shipping – Key Standardised Trade Terms "Incoterms"

For products transported by sea, another key factor affecting final price will be the costs of transportation. Several incoterms are used depending on market conditions and the bargaining power of the parties. The most common are FOB, CFR and CIF.[203]

- FOB "Free On Board" means that the seller delivers nominated by the buyer at the named port of shipment or procures the goods already so delivered. The risk of loss of or damage to the goods passes when the goods are on board the vessel, and the buyer bears all costs from that moment onwards.
- CFR "Cost and Freight" means that the seller delive[rs] procures the goods already so delivered. The risk of loss of or damage to the goods passes when the goods are on board the vessel. The seller must contract for and pay the costs and freight necessary to bring the goods to the named port of destination.
- CIF "Cost Insurance and Freight" means that the sel[ler] vessel or procures the goods already so delivered. The risk of loss of or damage to the goods passes when the goods are on board the vessel. The seller must contract for and pay the costs and freight necessary to bring the goods to the named port of destination. The seller also contracts for insuran[ce against the buyer's risk of loss] of or damage to the goods during the carriage. The buyer should note that under CIF the seller is required to obtain insurance only on minimum cover. Should the buyer wish to have more insurance protection, it will need either to agree as much expressly with the seller or to make its own extra insurance arrangements.

One other term that is used is "ex works" which means supplier will make the product available at the place it was created, rather than at, for example, the port of export. This means the buyer must pay costs of transporting the product from the factory or place of manufacture, and takes all delivery risks at that point.

Shipping – Key terms

Bulk shipping – methods

- Bulk Freight – the ore is free/loose, not in packaging of any sort (and not in a shipping container). The product usually goes straight into storage hold of the ship.
- Break Bulk – the commodity is in bags, bales, drums, etc. This can make it more expensive to load/unload.

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[203]

Payment terms

Several payment terms are referred to in pricing publications, which have different implications for the timing of payments. Selected terms are defined below.

- At sight : the purchaser must pay on receipt of an invoice from the seller.
- Letter of credit: in G L F D W L R Q   I U R P   W K H   S X U F K D V H U · V   E D Q N   W K D W   L V transaction (that is, if the buyer refuses to pay, the seller has recourse to the bank for payment).
- Cash against documents : seller retains ownership of the product until payment is made. A mutually-agreed intermediary (such as a bank) holds proof of purchase that is provided to the purchaser once payment has been received by that intermediary.
- Documents against acceptance (D/A):   shipping and title documents are passed to the buyer by an intermediary (such as a bank) only if the buyer accepts the accompanying bill of exchange or draft by signing it.

Documents and communications

- % L O O   R I   / D G L ² A key document used in the transportation of goods, outlining the contents of shipment (type and quantity) and destination of the good being carried. It is a document between the seller and the transporter/carrier.

Source: Investopedia.com

- Notice of Readiness (NOR)   ² A communication from a shipmaster that advises either the sender of receiver of the cargo that the ship has arrived at port and is ready for loading or unloading.

Source: Businessdirectory.com

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Australian Government, Canberra

Barrick Gold Corporation   ´ $ Q Q X D O   5 H S R U W   I R U   ) < µ   7 R U R Q W R

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ANNEX 2 ² DATA SOURCES ON TRANSACTIONS FOR EACH CASE STUDY

Please note - The following information is from the websites of publication service providers and discussions with company representatives. It is a reference source for revenue authorities, but the PCT does not endorse the inform3 -.48 0.48 re f76.0b7i evere . 2 (e)-72.005 (r)-2.0

Concentrates China	-	Asian Metal	Concentrate must have minimum 20 percent copper.
		Offer price data on Chinese copper concentrates, including by region.	

the time of contract confirmation

- x USA East Coast delivered - Premium above the official first position COMEX price for copper at the time of contract confi rmation
- x Far East CIF Far Eastern Port - Premium above the official LME cash settlement price for copper at the time of contract confirmation

Far East means: CIF S W* n BT.96(F).8 re Sr Ea

Cathode price premiums	Metal Bulletin Research ² Base Metals Weekly Market Tracker Provides information on premiums over spot copper prices for Shanghai, Singapore, Rotterdam and USA.	Publication also contains information on copper demand -supply balance and price forecasts. Free sample available at website.	Metal Bulletin Research
Penalties	CRU: Copper Concentrates Market Outlook Includes an analysis of concentrate quality , including tables and charts indicating copper grades and specifications for payable and penalty elements.	Biannually (October, April) plus updates. Also access to CRU analysts.	CRU Concentrates

Others checked: Asian Metal has no information on penalties. CRU Copper Raw Materials publication also contains information on sulphuric acid prices obtained by smelters (available at CRU Concentrates)

Gold

ITEM	COMPANY & PRODUCT	NOTES	SOURCE
Gold price per ounce daily price	London Bullion Market Association Publishes the daily AM and PM London fix spot prices in USD. Data on website only for 2015.	No data export facility. Indicative (unofficial) prices in EUR and GBP also provided. Free publication.	LBMA
Gold price per ounce daily price	Wall Street Journal Publishes daily spot price based on PM London fix. Price in USD. Refers to Handy and Harman base price for gold bar.	Data can be exported to MS Excel (XLS), CSV, XML, JSON. Free publication.	WSJ
Gold price per ounce monthly average	Western Australian Department of Mines and Petroleum Provides schedule of average monthly spot prices (for use in royalty assessment forms).	Monthly average spot price, quoted in USD and AUD. Based on London fix. No daily data. As at April 2015, data ranged from 1996 to end -2014. Free publication.	WA Department of Mining and Petroleum
Gold price per ounce	: R U O G % D Q N ´3 L Q N 6 K H H W V µ Publishes monthly average gold spot price, based on London PM fix.	Quoted in USD. Updated monthly. Data available from 1960 onwards. Free publication.	World Bank
Platts	Platts Metals Daily Third party information on precious metals (e.g. LBMA AM and PM gold price fix, COMEX spot prices).	Subscription publication. No unique data. Market commentary on price movements.	Platts

Others checked: Asian Metal

Iron Ore

PRODUCT

Iron ore - fines   The Steel Index

TSI is owned by Platts.

Offers reference prices for iron ore fines imported into China.

Also offer a monthly Iron Ore Review publication, summarising price movements and market conditions. Sample available at TSI

Iron Ore Fines, Chinese Imports (CFR Tianjin Port):
- x 62% Fe (US$/dry tonne)
- x 58% Fe (US$/dry tonne)
- x 62% Fe, 2% Al (US$/dry tonne)
- x 63.5/63% Fe (US$/dry tonne)
- x 65% Fe (US$/dry tonne)

Iron ore geographical adjustments	Platts ² metals market data package price to remove the cost of shipping from several origins. Denoted in $USD/DMT. Netbacks available for:	More detail of the specifications available at Platts Methodology and Specifications Guide .

Platts ² metals market data package

price to remove the cost of shipping from several origins. Denoted in $USD/DMT. Netbacks available for:

- x Australia (FOB port Hedland, Capesize vessel)
- x Brazil (FOB Tubarao, Capesize vessel)
- x East India (FOB Haldia/Paradip, Handymax vessel)
- x West India (FOB Mormugao, Handymax, Panamax vessels available)
- x South Africa (FOB Saldahna Bay, Capesize vessel)

More detail of the specifications available at Platts Methodology and Specifications Guide .

Deducts dry bulk freight assessments from IODEX 62 per cent Qingdao. Based

Thermal Coal

PRODUCT	COMPANY & PRODUCT	NOTES	SOURCE

Coal price information, market developments	Argus Coal Daily International
	
	Publication providing information on recent coal market developments, news and data.
	  x API 2 and API 4 swap prices
	  x Argus cif ARA (Amsterdam Rotterdam Antwerp) spot coal assessments
	  x		

Standardised Coal Trading Agreement	GlobalCOAL Standard Coal Trading Agreement (SCoTA) Provides standardised set of terms and conditions for international coal sales and purchases.	Viewing the standardised contract is free, but using requires signing up to a product licencing agreement.	GlobalCOAL
Economic developments and analysis of coal markets	IEA Medium Term Coal Market Report 2016 Major publication covering coal market developments in wider energy market context. Includes: x Trends in coal demand and supply x Developments in trading of coal products globally x Forecasts of demand and supply conditions x Analysis of investment in coal supply x Information on country trade in coal products	Authoritative source on coal market developments, trading and outlook (economic context to the trade in coal).	International Energy Agency