E/C.18/2020/CRP. 52

Distr.: General 18
5 October 2020

Original: English

Committee of Experts on

International Cooperation in Tax Matters Twenty-first session
Online meeting of 20-30 October 2020
Item 3(e) of the provisional agenda
Update of the Handbook on Selected Issues for Taxation of the Extractive Industries by Developing Countries
Chapter XX: Tax Treatment of Financial Transactions in the Extractive Industries

Note by the Secretariat

Summary

The **Tax Treatment of Financial Transactions in the Extractive Industries** is among the new topics for the update of the Handbook on Selected Issues for the Taxation of the Extractive Industries by Developing Countries. It is presented to the Committee FOR DISCUSSION and APPROVAL its 21st Session.

It elaborates on different financing approaches commonly used in the mining, and oil and gas sectors and provides guidance on tax-related issues.

There are a lot of crosscutting issues between financial transactions in extractive industries and intragroup transfer pricing within the same MNE. This chapter will focus on tax treatments of financial transactions that are not discussed in the United Nations Practical Manual on Transfer Pricing. The transfer pricing considerations related to the intra-group financial transactions along the value chain are not addressed as such in the United Nations Practical Manual on Transfer Pricing. In addition, because of the importance of intra-group financing in the extractive industries, beyond the market price compliance issues, thin-capitalisation and important financial expenses may constitute a risk of base erosion for local companies. Such issues will be discussed here.

This chapter elaborates on the thin capitalization rule in the extractive industries, reviews current debate on interest limitation issues and provide concrete application examples in developing countries as part of financing mechanisms. Other topics developed include hedging instruments, performance guarantees, and farm-in/farm-out agreements.

The first draft was presented at the 20th Session. Taking stock of the Committee's comments and other inputs from the Subcommittee's members, the new draft is substantively more detailed. New content such as "Extractives industry value chain", or "alternative source of funding" were developed, while other topics such as "tax issues of streaming arrangements" and "Hedge instruments" were redrafted, detailed with practical or country examples.

TAX TREATMENT OF FINANCIAL TRANSACTIONS IN THE EXTRACTIVES INDUSTRY

CONTENT

1 Introduction.

Natural resources play a key social, economic and political role in 81 countries which, globally, account for a quarter of GDP and half of the population. Africa alone accounts for about 30% of the world's mineral reserves, 10% of oil and 8% of natural gas[1]. Financial transactions are an important component of the business in the extractive industries as funding requirements and financial risks are significant.

This chapter elaborates on different financial transactions relevant for the extractives sector and provides guidance on tax issues. The chapter also covers joint venture arrangements which are common in the industry, and farm in and farm out arrangements which can be used to fund early stage project expenditure such as exploration. There are a lot of crosscutting issues between financial transactions in extractive industries and transfer pricing as financial transactions may involve related parties. This chapter will focus tax treatments of financial transactions that are not discussed in the United Nations Practical Manual on Transfer Pricing. The transfer pricing considerations related to the intra-group financial transactions along the value chain are not addressed as such in Chapter 9 of the United Nations Practical Manual on Transfer Pricing. In addition, because of the importance of intra-group financing in the extractive industries, beyond the market price compliance issues, thin-capitalisation and important financial expenses may constitute a risk of base erosion for local companies. The Chapter 9 of the UN Transfer Pricing Handbook does not provide guidance on these issues.

Considering the importance of this issue for the extractive industries in developing countries, and in view of the difficulties encountered in applying the at arm's length principle to financial transactions, particularly with regard to the comparability analysis, this chapter elaborates on the thin capitalization rule in the extractive industries, reviews current debate on interest limitation issues and provide concrete application examples in developing countries. Useful guidance is also provided in the United Nations Practical Portfolio, Protecting the Tax Base of Developing Countries against Base-eroding Payments: Interest and Other Financing Expenses.

This chapter addresses five important topics concerning financial transactions: financing mechanisms, hedging instruments, performance guarantees, farm-in/farm-out agreements and metal streaming arrangements.

2 Financing mechanisms in the extractive industries.

In view of the capital intensive nature of extractive´s projects and their exposure to varying degrees of risk depending on its stage of development, investors typically require different sources of financing over the life of the project. This section takes into consideration the typical features of extractive industry financing including the large scale of projects, with long-term time periods and subject to high uncertainty at its inception and because numerous risks of various natures. Some of these risks are described below.

2.1. Main risks in the extractive industries.

[1] https://www.worldbank.org/en/topic/extractiveindustries/overview

Some of the risks faced by the extractive industries are common to all types of industry for example market risk triggered by a disrupting factor such as geopolitical tension or a pandemic event, that could generate global recessionary conditions and lead to an economic down turn . Others, however, are inherent to the sector and deserve special attention.

(i) Geopolical risk

Geopolitical risk is the risk an investment could suffer as a result of political changes or instability in a country. It involves political revolutions, coups, elections, ethnic conflicts, disputes in the arena national or international policy, property rights, route of pipelines, navigation, etc.

Extractive´s activities are sometimes carried out in countries that present or may present scenarios of social, political or economic instability that could lead to situations such as the increase of taxes and royalties, the establishment of production limits and volumes for exports, mandatory renegotiations or annulment of contracts, regulation of product prices, and (in rare circumstances) nationalization, expropriation or confiscation of assets, loss of licence, changes in government policies, changes in commercial customs and practices or delayed payments, among others.

(ii) Commodity price risks

Fluctuations in benchmark prices of natural resources are probably one of the main risks faced by companies involved in the extractive industry. Commodity prices are subject to exogenous factors (e.g. geopolitical environment, influence by international players or relevant countries, technological changes, natural disasters, etc.) and therefore to volatility, as a consequence of fluctuations in international supply and demand.

(iii) Interest rate risks

The rate of interest on financial transactions is determined by market rates and the creditworthiness of the borrower. Where such transactions include a reference rate (e.g. Euribor or borrowing costs), the interest rate risk refers to the chance that such borrowings will suffer as the result of unexpected interest rate changes. This risk is common to all industries however the risk can be important for long life projects which exist in the extractives industry. The company's policy will determine whether there is a preference for exposure to floating rates, fixed rates or a combination of both.

Companies may seek to manage interest rate risk by hedging their investments with interest rate swaps and other instruments.

(iv) Currency risks

Currency risk, commonly referred to as exchange-rate risk, arises from the change in price of one currency in relation to another. Investors or companies that have assets or business operations

across national borders are exposed to currency risk that may create unpredictable profits, losses and cash flows. Normally, the extractive industry operates with the United Stated dollar in international markets being the currency normally used in trading.

Currency risk and the resulting volatility can be managed by hedging.

(v) Geological risks

In addition to the mentioned risks that can be found in other sector, the extractives sector also faces a very particular risk denominated geologic risk, which includes the chance of making discovering a resource through exploration. However, it is not enough to find hydrocarbons or mineral resources, but that the discovery is economically profitable during the expected life term of the project. Significant investment is required to determine whether a resource can be viably extracted and exported to the market. Geological risk also exists throughout the construction and operation phases of extractive projects. For example the permeability of hydrocarbon deposit is overestimated, the ore is more variable than expected, ground conditions are less favourable than estimated.

Unlike other types of risks, uncertainty from geological risks cannot be minimized through hedging or other derivatives, but by sharing or diluting such geological risks through joint-ventures or exchanging interest in the project in consideration of works (farm-in and farm-out agreements).

(vi) Safety and operational risks

For completeness, it is noted that safety and operational risk is another very material risk in the extractives sector. To some degree the financial impacts of operational risk are managed by extractive companies though an insurance company which is part of the corporate group (a 'captive' insurer). Essentially this is a form of self-insurance relatively small events that happen often.
It is more challenging to fully mitigate the financial risks related to a one off catastrophic event resulting from major operational failures such as for a mining operation: tailings and water storage, underground event or geotechnical event resulting in multiple fatalities, operations cessation and significant financial impact. This chapter does not cover this topic further.

2.2. Extractives Industry value chain

In this section we present the peculiarities of the value chain of the oil and gas and mining industries. The activities in the oil and gas industry are grouped into three main segments: upstream, midstream and downstream.

Upstream encompasses exploration, development and production, decommissioning. In the upstream sector, oil can be either unconventional or conventional depending on the method of extraction, although there is no consensus on what methods or processes are unconventional. Unconventional sources may become conventional over time, as the unconventional technologies become better understood and more widely adopted.

The midstream sector is composed of assets and services that provide a link between the supply side and demand side of the value chain, and include the activities of storage and transportation of oil, natural gas and processed products, from production sites to refineries via pipelines, trains, tankers, and trucks.

The downstream comprises refining and marketing refined petroleum products. In the downstream sector, refineries convert crude oil into a variety of products that are consumed by residential and commercial users, industrial users, and electric utilities. Petroleum products, like crude oil, are traded globally.

All segments of the value chain are capital intensive. Some companies specialize in just one component of the value chain, while others, called integrated companies, participate in all of them.

Mining industry structure has similarities with hydrocarbons structure. The main activities in the mining process can be classified into extractive related, which involves exploration, development and mining; processing related, which encompass processing or beneficiation, smelting and refining, other added value activities; and transport and storage.
In the mining industry value chain different stages are undertaken depending on the type of mineral product sold. The figure below displays the typical stages in the mining value-adding chain from initial exploration to marketing of refined metals on terminal markets.
Figure 1: Mining life cycle and financing requirements

Acquisition & exploration	• Exploration companies usually unable to borrow from external sources (no income) • Exploration is equity financed • Up-front payments to host governments (e.g. signing bonus)
Development & construction	• Exploration companies may sell their interests to others (totally or partially) • May negotiate alternative financing for the mine e.g. streaming agreements • Heavy financing needs – package of finance obtained • Main interaction with external funding sources e.g. project finance/ capital markets • Host governments may seek equity stake
Mining, beneficiation & sales	• Project generates cash flow from mineral product sales • Main production taxes and royalties begin • Cash pooling between entities • Capital spending requirements fall, focus on maintenance/inputs • Repayment of investors (debt and other) • Sale of mine assets/change of ownership • Provisions for mine closure usually required • Focus on maintenance expenditure • Mine expansions may occur, requiring additional capital

	investment • Trade finance secured to conclude sales (e.g. shipping costs)
Closure & restoration	• Mine production stops, income therefore ends • Asset sales or re-deployment to other projects • Spending to restore mine site • External loans usually unavailable again

Source: IGF and OECD (2018)

Financing needs and instruments in the extractive industries will vary at each stage of the value chain.

2.3. Financing decision and the value chain

The financing decision in the extractive industries follows broadly the same reasoning as in other industries. In the course of doing business, companies seek funding from two sources: equity and debt. However, in extractive industry, the financing needs, and therefore the type of financial instruments, depends on the business requirements along the value chain. During development and production, companies will generally use a combination debt and equity.

(i) Financing at the exploration stage of the project

The exploration phase of an extractive industry project is characterized by its capital intensity and the high risk and uncertainty involved in finding a commercial discovery of natural resources.

In general, during the exploration phase, companies are unable to borrow to fund exploration due to the high risk during this phase. Financing of exploration is therefore mainly through equity. For stand-alone exploration companies without other producing operations, equity issuance would more clearly be the first or only option as these companies generally have low debt capacity due to a lack of proven reserves and cash flow. Companies and MNE groups with other operating projects and cash flow may be able to raise additional debt to fund exploration however in general MNE groups use equity or equity like instruments to fund subsidiaries undertaking exploration.

(ii) Financing at the development and production stages

The evaluation and appraisal phase involves confirming and evaluating the presence and extent of reserves shown by the works (i.e. testing and exploratory drilling) performed during the exploration stage. The information provided from testing and exploratory drilling as well as other geological and available information allow the company to move forward with development. In addition to information obtained from exploration drilling, extensive work is required to determine the viability of the extractive project and this will be covered by a feasibility study covering for example, technical extraction methods, early design works, assessing infrastructure requirements such as access to utilities, pipelines roads, rails and ports, processing methods, impacts on the environment and local communities.

Where existence of proven resources (considered commercially producible) starts to become clearer or, more evidently, construction and/or production begins, companies may seek external funding, including structuring finance.

In the extractive industries, host government partners in extractive projects are common and this is a key factor influencing the choice of financing arrangements. For example when equity funding is provided it may dilute the interest of Government shareholders which do not contribute to their share of funding in which case debt may be the preferred method of funding.

2.4. Traditional source of funding

The extractive industry business traditionally has been financed directly from the partners in a joint venture by equity in the more risky stages of the project. However, more complex financing schemes can be developed depending on financing needs, visibility on future cash flows, company size, and risks.

Traditional sources of financing include a wide range of financial instruments: debt, equity, joint venture agreements, project finance, flow-through share (FTS), etc.

(i) *Debt financing.*

When companies raise capital by issuing debt, they have several potential sources from which to seek funds. Types of corporate debt issued by companies include: bank debt, notes, debentures, mortgage bonds, and asset-backed bonds. Bank debt is the most common instrument, especially for small and medium sized businesses. It is often secured by company assets or other types of collateral that may be required by the bank. Debentures and notes are unsecured debt, which means that in the event of a bankruptcy bondholders have a claim to only the assets of the firm that are not already pledged as collateral on other debt. Typically, notes have shorter maturities (less than 10 years) than debentures. Asset-backed bonds and mortgage bonds are secured debt: specific assets are pledged as collateral that bondholders have a direct claim to in the event of bankruptcy. Mortgage bonds are secured by real property, whereas asset-backed bonds can be secured by any kind of asset.

(ii) *Equity financing*

Equity financing generally involves the issue of the company's share and giving a portion of the ownership of the company to investors in exchange for cash. In the case of extractive industries, particularly mining and oil and gas given the high level of risk during the exploration stage, the financial capital is obtained primarily by way of equity and the return to investors may be by way of a capital gain should the project be disposed of, or through future dividends if exploration leads to a profitable mining operation. The principal advantage of equity financing is that it carries no repayment obligation and provides extra working capital that can be used to grow a business. Since equity financing is a greater risk to the investor than debt financing is to the lender, the cost of equity is often higher than the cost of debt.

(iii) *Joint venture agreements*

Normally, single companies may not wish to assume full exposure to an investment where there is no proven reserves. To gain access to larger, high-value projects that they could not access alone, companies enter into joint ventures with other companies as a mechanism to access

resources and share the risk that exist at different stages of life cycle of the project. Some joint-ventures do not involve creation of a separate entity (ie they are 'unincorporated joint ventures'). In other cases, companies may opt to set up a separate legal entity such as a jointly owned company (incorporated joint ventures').

Under an unincorporated joint venture each participant holds an undivided interest in the project, as well as a direct interest in the assets and production from the project in proportion to its specified working interest. Where more than one working interest owners exist, normally a joint operating agreement contractually establishes how the project will be operated and how the costs will be shared.

Under an incorporated joint venture the project and assets and productions are held by a company, with each participant holding shares in the company proportionate to its interest. In this case, shareholders agreements, establishes how the project will be operated and how costs will be shared. Where a host country government holds a partial equity stake in a project, this will be the typical structure i.e. the host country government (or government owned entity) will be a shareholder in the company which owns the extractive project.

The typical joint venture in the extractive industry is where one of the participants manages and runs the entire operation (operator), with the others contributing only funding and, potentially, input on strategy-level decisions. The joint venture agreement or shareholder agreement requires all participants to pay their share of expenses upon a cash call by the operator. In some cases the operator or a related party of the operator will receive a management fee for providing management services in relation to the project.

For unincorporated joint ventures, financing of the project is made through cash-calls or advances, which are requests for payment sent by the operator to non-operating partners for anticipated future capital and operating expenditures. Under this approach, the operator first estimates how much cash will be required for the operations during a certain period of time, normally a month, and then makes the request of the cash-call to the rest of non-operator partners. Since it is based on estimations, it is unlikely that cash-calls equal the actual cash expenditure. Once the actual cost has been determined, the operator issues a billing stating the correct amount. The difference, over or under, is generally adjusted in the next cash-call.

An alternative approach for the operator to collect cash would be to directly use a billing and payment approach, where the operator uses its own funds throughout a period, normally on a monthly basis, to pay suppliers and subcontractors, and afterwards send the non-operators a billing statement asking them to pay their proportionate share of the billing.

All these forms of funding are made through transitory accounts in the balance sheet of the operator and no interest is derived from debt financing. In the petroleum industry, goods or services charged into the joint venture by the operator are generally required under industry practice to be at cost (no mark-up) and subject to audit by the co-venturers.

For incorporated joint ventures, a similar process is followed, however 'cash calls' are generally provided by shareholders by way of equity contributions in relation to existing shares, or shareholder loans.

However, funding some specific projects under unincorporated joint-venture regime where a National Oil Company (NOC) is a party can be quite challenging when it fails to meet its cash

call equity obligations upon demand. In Nigeria, the cash call gaps between the national oil company and its joint-venture partners were funded initially through Alternative Funding Agreements (AFA) or Carry Agreements (CA) model and was subsequently improved upon as Modified Carry Agreements (MCA).

Example of Modified Carry Arrangement (MCA) in Nigeria

Modified Carry Agreement is a financing agreement whereby the International Oil Companies (IOC's) in a Joint Venture will advance loan to Nigerian National Petroleum Corporation (NNPC) for the purpose of investing in upstream projects. The ``Modified Carry Agreement'' (MCA) introduces greater level of transparency and accountability with repayment and compensation being on ``Cash-basis'' not oil. The NNPC lifts and markets the Carry Oil and Share Oil, due to the Carrying party, and pays cash to the operator for the cash financing provided. The Carrying party recovers the Carry Capital Cost (CCC) in Dollars. An Escrow Account is opened, and the sales proceeds with respect to the Carry oil and Share oil are paid into the Escrow Account. NNPC's Portion of the Agreed Capital Cost approved by the Joint venture partners is financed by the JV Operator through monthly cash call payments into a dedicated account for the project.

The NNPC would allow the other JV partners to take capital allowances as allowed by the Petroleum Profit Tax (PPT) to recover 85 per cent of the principal loan. By taking the allowance, the IOC's are reducing the taxable profit that they ought to have paid. The remaining 15 per cent plus eight per cent interest would be paid in cash from the increased production from which the investment was made. If for any reason, the oil field where the investment was made could not produce, then payment of the 15 per cent plus the eight per cent interest would be stopped.

(iv) *Project finance*

Project financing involves the financing of projects based on the projected cash flows of a particular project rather than the balance sheet or cash flows of its owners. For large scale mining projects in developing countries project finance can be used a risk sharing tool for investors.
Project finance is generally be issued on a 'limited' or 'non-recourse basis' in that in the event of default, lenders only have recourse to the specific project assets and cash flow rather than other assets of investors. This may mitigate financial risk for project owners, including host governments which may hold an equity stake in the project. During the construction phase a guarantee may be required from one of the investors but once construction is finished and the project generates cash flow, the guarantee will generally be removed. It is common for project finance to be provided by a consortium of lenders including institutions such as the World Bank. For oil & gas, project financing is more prevalent in the downstream sector than in the more capital intensive and high-risk upstream sector. The fact that the latter is long-term in nature implies that future revenue streams are less stable and predictable than in other large-scale projects that are not exposed to, amongst others, commodity price risk. In some cases project finance lenders may require borrowers to undertake foreign exchange or commodity price hedging to remove volatility and ensure there are sufficient cash flows to service project finance debt.

(v) *Flow-through share*

A flow-through share (FTS) is a tax-based financing incentive that is available to, among others, the mining sector. A FTS is a type of share issued by a corporation to a taxpayer, pursuant to an agreement with the corporation under which the issuing corporation agrees to incur eligible exploration expenses in an amount up to the consideration paid by the taxpayer for the shares.

The corporation "renounces" to the taxpayer an amount in respect of the expenditures so that the exploration and development expenses are considered to be the taxpayer's expenses for tax purposes. As a result of the corporation renouncing the expenses, the shareholder can deduct the expenses as if incurred directly.

Flow-through share (FTS) in Canada

In Canada the FTS regime allows public companies to issue a unique type of equity that allows individual and corporate investors to deduct the purchase cost from their personal income for tax purposes, provided the company issuing the shares spends the funds on prescribed exploration and development expenses for Canadian projects.

According to Canada Revenue Agency (CRA): "Certain corporations in the mining, oil and gas, and renewable energy and energy conservation sectors may issue FTSs to help finance their exploration and project development activities. The FTSs must be newly issued shares that have the attributes generally attached to common shares. "Junior resource corporations often have difficulty raising capital to finance their exploration and development activities. Moreover, many are in a non-taxable position and cannot deduct against taxable income which they do not yet generate in that phase. The FTS mechanism allows the issuer corporation to transfer the resource expenses to the investor. A junior resource corporation, in particular, benefits greatly from FTS financing. The FTS program provides tax incentives to investors who acquire FTSs by allowing:

- deductions for resource expenses renounced by eligible corporations; and
- investment tax credits for individuals (excluding trusts) on resource expenses in the mining sector that qualify as flow-through mining expenditures.

In addition to traditional instruments, some promoters of extractive projects are increasingly resorting to sector-specific innovative financing and hybrid instruments which combines the characteristics of equity and debt.

2.5. Alternative source of funding

In a context where access to traditional financing is becoming complicated, mining companies are increasingly turning to alternative financing and creative deals structures for growth and funding. These have included hybrid instruments, streaming agreements

(i) *Hybrid financial instruments*

Hybrid financing instruments are sources of finance which possess characteristics of both equity and debt. Some well-known hybrid financing instruments are preference shares, convertible bons, warrants, options etc.

Preference shares are special types of share capital having fixed rate of dividend and carrying preferential rights over ordinary equity shares in sharing of profits and also claims over assets of the firm. It is ranked between equity and debt as far as priority of repayment of capital is concerned. Like debt carries a fixed interest rate, preference shares have fixed dividends attached to them. But the obligation of paying a dividend is not as rigid as debt. Non-payment of a dividend would not amount to bankruptcy in case of preference share.

A **convertible bond** is a bond that gives the holder the option to convert or exchange it for a predetermined number of shares in the issuing company. Because convertibles can be changed into stock and, thus, benefit from a rise in the price of the underlying stock, companies offer lower yields on convertibles. If the stock performs poorly, there is no conversion and an investor is stuck with the bond's sub-par return—below what a non-convertible corporate bond would get. As always, there is a tradeoff between risk and return**.**

Companies issue convertible bonds for two main reasons. The first is to lower the coupon rate on debt. Investors will generally accept a lower coupon rate on a convertible bond, compared with the coupon rate on an otherwise identical regular bond, because of its conversion feature. This enables the issuer to save on interest expenses, which can be substantial in the case of a large bond issue. The second reason is to delay dilution. Raising capital through issuing convertible bonds rather than equity allows the issuer to delay dilution to its equity holders. A company may be in a situation wherein it prefers to issue a debt security in the medium-term—partly since interest expense is tax-deductible—but is comfortable with dilution over the longer term because it expects its net income and share price to grow substantially over this time frame. In this case, it can force conversion at the higher share price, assuming the stock has indeed risen past that level.

(ii) *Streaming agreements*

Streaming arrangements can vary in their precise form. Typically they are contracts for ongoing supply of mineral production under which, upon advance payment of a premium, the buyer agrees to purchase, at a fixed, discounted and predetermined price, all or part of the mineral production to be extracted by a mining company during a certain period or even throughout the life of the mine. The arrangement provides the funding necessary for mining company to develop, construct and operate or expand the mine. This arrangement also allows the mining company to capitalize on the basis of proven but still unexplored mineral reserves as an alternative to loans or more equity. Streaming arrangements are typically entered into by extractive companies which are not able to access liquidity via conventional debt markets.

Contrary to capital investment financing, streaming arrangements enable mining companies to minimize their risk of dilutions to shareholders and avoid debt financing costs, particularly at times when credit access conditions are unfavorable. Streaming transactions may also benefit the purchaser in a scenario of increasing commodity prices, as it will be able to freeze the price of a future mineral purchase tending to escalate, and resell such product at market price.

Streaming transactions involve certain risks. One of them is the possibility of the production being none or insufficient, preventing the seller from delivering the mineral as agreed. Purchasers reduce their exposure by demanding guarantees traditionally offered to financial agents in financing transactions. Another risk is market volatility, as oscillations may affect the profit margins originally envisaged by the purchaser and ultimately render production and, consequently, streaming itself, impossible.

(iii)*Asset-backed finance*

Asset-backed finance is a method of providing companies with working capital and term loans that use accounts receivable, inventory, machinery, equipment, or real estate as collateral. It is essentially any loan to a company that is secured by one of the company's assets.

Asset-backed finance lenders tend to favor liquid collateral that can be easily turned to cash if a default on the loan occurs. Physical assets, like machinery, property, or even inventory, may be less desirable for lenders. When it comes to providing an asset-backed loan, lenders prefer companies with not only strong assets but also well-balanced accounts.

For less liquid assets, companies are moving towards securitization mechanisms. Securitizations involve a credit-enhancing financial structure in which an owner of cash flow-producing assets pools some of those assets and transfers them to a newly-formed, special purpose entity, or SPE. The SPE then issues notes in a private placement or public offering. The notes are secured by the SPE's assets, but are non-recourse to the sponsor. The proceeds received by the SPE from the notes' issuance are then transferred to its parent sponsor company in exchange for the transferred assets.

In extractives industry, mineral interests, non-operating and operating working interests, royalty interests, overriding royalty interests, volumetric production payments can be transferred to an SPE and can serve as the source of funds to service the notes issued by the SPE. Transfer pricing issues may arise, since these transactions are often carried out as intra-group transactions.

2.6. Tax issues for financing instruments

(i) *Equity tax issues*

Returns on equity are generally in the form of dividends. The tax treatment of dividends depends on specific tax rules in the paying jurisdiction and the recipient's jurisdiction. Most tax regimes would not provide tax deductions for dividends paid, and shareholders would typically be corporate entities located in offshore jurisdictions where dividends are unlikely to be subject to tax due to an exemption regime or tax treaty. In other words, there is generally symmetry of tax treatment for the payer and the recipient: in that dividends are not deductible, and dividends are not assessable. Where equity is raised directly from the market, then shareholders would be subject to tax on dividends in accordance with specific tax rules in their country of residence.

Dividends may be subject to withholding tax in the paying jurisdiction depending on domestic law and the applicable tax treaty. Other shareholders may be the host country government which would typically invest through a domestic corporation (in which case the normal tax rules for distribution of dividends between domestic corporations would apply).

(ii) *Debt financing tax issues*

Debt Financing comes from bank loans, intragroup borrowings or the issuance of securities such as bonds or treasury bills issued to private investors. The advantages of debt financing are numerous. The lender has no control over the company, and therefore debt financing avoids capital dilution. This is particularly relevant in joint ventures where there may be a partner (including host country governments) who is unable to contribute to their share of funding or participate in additional equity rights issues. In this case debt is likely to be preferred over equity otherwise the partner's interest would be diluted. Finally, it is easy for the company to forecast expenses because loan payments are generally non-contingent obligations to repay a loan, and do not fluctuate, unlike dividends which are generally discretionary. This allows the company to retain any additional profits due to the fixed nature of the repayment.

Finally, interest on debt is generally tax deductible and therefore reduces the borrower's cost of funding, compared with equity. Interest will typically be subject to tax for the recipient (unless a specific exemption regime exists), however, as lenders for developing country projects are typically non-resident, debt financing has an impact on the tax base for developing countries through the deductibility of interest expenses[2]. This impact can be accentuated if the level of debt is excessive compared to the level of equity or if interest rates on intra-group loans are not in accordance with transfer pricing regulations. However, it is noted that it is quite common for large mining projects to be in a tax loss position in the early stages of their life cycle, due to the larger up-front capital investments involved. Where the use of loss carry forward is restricted, then some the benefit of interest deductions may be lost in which case base erosion may not arise.

Interest payments will typically be subject to withholding tax depending on the relevant tax treaty and the nature of the lender. However, in the commercial context of the extractive sector, the choice of financing, and therefore interest deductibility, depends on the value chain.

As mentioned above, during the exploration phase, equity is dominant and debt financing is rarely available as a financing choice for non-revenue generating exploration companies. Indeed many production sharing contracts (PSC) or domestic law expressly determines that interest payments from loans are a non-recoverable or non-deductible expense when related to the extractive industry.

Example: interest deductibility in Indonesia under production sharing contracts

Article 13 of the government regulation of the republic of Indonesia number 27 of 2017.
"Categories of non-recoverable operating costs in production sharing and income tax calculation comprise of:

- (…)
- Costs for interest on loans;"

[2] This is generally the case under general corporate income tax rules but e.g. in production sharing agreements , deductions for interest is often excluded. Reference is made to the Chapter on Production Sharing Agreements.

If exploration is successful, significant amounts of up-front capital are required for the construction of the mine, production platform and construction of wells and capital continue to be required during the productive life of the mine to maintain operating capacity and to fund possible expansion. For new comers, the process of raising new equity through the stock market is complex and expensive and the project proponents try to avoid to excessively dilute their ownership in the project by excessive reliance on equity. Mature extractive companies finance projects via internally generated funding and/or a mixture of short term commercial paper programs and medium to long term debt.

Companies in developing countries may face difficulties in mobilizing debt directly from third parties. As a result, multinational companies set up treasury centres, or internal banks, centralizing capital raising and liquidity mobilization at the MNE group level. Centralized financial management is a necessary instrument to meet the significant financing needs in the extractive sector and it is therefore common for developing country projects to be funded by equity and debt from related parties. The provision of debt from related parties including, centralized financial centers may give rise to profit shifting and transfer pricing issues in developing countries. First, the high level of intra-group debt can lead to thin capitalization, consequently a high amount of interest is paid to affiliated companies, reducing the taxable profit which is attributed to the local mining company.

Second, the significant size of financing for a mining business means that even minor mispricing of related party debt can have a material impact on taxable profits.. Thirdly, hybrid financial instruments (convertible bonds, redeemable preference shares, subordinated loans) can create tax arbitrage opportunities by taking advantage of mismatches in tax treatment between the tax systems prevailing in different countries. The hybrid nature of financial instruments makes it difficult to distinguish between what constitutes debt and what constitutes equity, and therefore complicates the task of the tax authorities to first appropriately characterize the tax treatment of the instrument, and secondly, if it is determined to be debt, to establish the arm's length interest rate. Finally, although hybrid arrangements such as mandatory redeemable preference shares are rare in capital markets, the relative complexity of hybrid instruments and their associated risks would normally be associated with a higher charge, which makes it relatively easy to manipulate the related spread to shift profits[3].

(iii) ***Interest expenses limitation.***

Where interest rates and debt are in line with market practices, and within the limits prescribed by each country's own legislation, interest charges are tax deductible. However, as noted above, the deduction of interest may create the possibility of profit shifting, while the different taxation (due to different tax rates or different tax base definition among countries) is the incentive to use a debt tax planning strategy. Debt tax planning as defined by the OECD (2016) include:

- groups placing high levels of third-party debt in high tax countries,
- groups using intra-group loans to generate interest deductions in excess of the group's actual third-party interest expense, and
- groups using third-party or intra-group financing to fund the generation of tax-exempt income

[3] Several anti-hybrid mechanisms have been introduced to limit abuse: in US and Australia, anti-hybrid legislation will deny deductions for interest where there is a payment, and the recipient is not subject to Tax. EU Anti-Hybrid Legislation (ATAD 2) rules and OECD Pillar 2 discussed below point in the same direction.

To cope with these risks of profit shifting using debt, international institutions and tax authorities favour rules limiting interest and thin-capitalization. In this framework, the approach recommended by OECD (BEPS action 4) can be described as follows: the deduction of interest and payments economically equivalent to interest is limited to 10-30% of the entity's/group's taxable EBITDA.

Following OECD (BEPS action 4), "*the best practice approach is based around a fixed ratio rule which limits an entity's net interest deductions to a fixed percentage of its profit, measured using earnings before interest, taxes, depreciation and amortisation (EBITDA) based on tax numbers This is a straightforward rule to apply and ensures that an entity's interest deductions are directly linked to its economic activity. It also directly links these deductions to an entity's taxable income, which makes the rule reasonably robust against planning*" (BEPS Action 4, n° 23).

The limitation of the deductibility should include all deductible net financing costs. This includes intra group interest as well as third party interest, to ensure the total level of debt is within the acceptable limits.

At the European Union level, the Anti-Tax Avoidance Directive (ATAD) obliges the EU Member States to introduce an EBITDA rule. Following ATAD (art.4) "*exceeding borrowing costs shall be deductible in the tax period in which they are incurred only up to 30 percent of the taxpayer's earnings before interest, tax, depreciation and amortisation (EBITDA)".* EBITDA is calculated by adding back to the income subject to corporate tax in the EU Member State of the taxpayer the tax-adjusted amounts for exceeding borrowing costs as well as the tax-adjusted amounts for depreciation and amortisation. Tax exempt income are to be excluded from the EBITDA of a taxpayer.

ATAD 2[4] introduce new rules addressing hybrid mismatches (art 9):

1) *To the extent that a hybrid mismatch results in a double deduction: (a) the deduction shall be denied in the Member State that is the investor jurisdiction; and (b) where the deduction is not denied in the investor jurisdiction, the deduction shall be denied in the Member State that is the payer jurisdiction.*

2) *To the extent that a hybrid mismatch results in a deduction without inclusion: (a) the deduction shall be denied in the Member State that is the payer jurisdiction; and (b) where the deduction is not denied in the payer jurisdiction, the amount of the payment that would otherwise give rise to a mismatch outcome shall be included in income in the Member State that is the payee jurisdiction.*
3) *(…)*

In a number of developing countries, the following measures are used to address thin-capitalization:

- Capitalization rules setting a limit on the ratio of debt to equity,
- Interest capping rules that limit the amount of interest that can be deducted by an entity for tax purposes in any one year as a proportion of their gross income or EBIT; and/or
- Group-wide rules that allocate interest expense as a function of the subsidiaries individual contributions to the MNE's consolidated revenue or earnings.

[4] COUNCIL DIRECTIVE (EU) 2017/952 of 29 May 2017 amending Directive (EU) 2016/1164 as regards hybrid mismatches with third countries.

In **Rwanda**[5], the interest paid on loans and advances from related entities is not tax deductible to the extent that the total amount of loans/advances exceeds four times the amount of equity during the tax period. This provision does not apply to commercial banks, financial institutions, and insurance companies.

In **Senegal**[6]**,** the deduction of interest by local companies is limited by Senegalese tax legislation. This limitation is attached to the rate and the amount:

- Rate – the rate of interest paid to shareholders, partners or other persons with whom the company has a non-arm's length control, on the basis of the amounts they directly leave or make available, or through intermediaries, to the company in addition to their share of capital, whatever the form of the company, cannot exceed the rate of advances of the issuing institution (BCEAO) plus three points.
- Amount – interest paid to legal persons is not allowed as a deduction in the case of:
  - remunerated amounts made available that exceed one-and-a-half times the share capital and;
  - if, at the same time, it exceeds 15% of profit from ordinary activities plus interest, depreciations and provisions are taken into account for determining the same result.

Interest is only deductible if the capital is fully paid up. Also, the deduction of interest paid to persons is limited to the remuneration of the sums made available by said persons that do not exceed the amount of the share capital; this limitation does not apply to interest paid by companies not subject to corporation tax to their associates who are subject to a tax on income in Senegal because of these interests.

The total amount of deductible net interest owed annually to all debts incurred by an enterprise member of a group of companies does not exceed 15% of ordinary activity income plus interest, and deprecations and provisions taken into account for the determination of this same result. But this limitation does not apply if the company provides evidence that the net interest expense ratio of the group of companies is greater than or equal to its own net interest charge ratio.
Certain adjustments are made in relation to the limitation about the amount of interest paid or owed by financial institutions or by insurance companies covered by the CIMA[7] code, companies that are members of a group of companies composed solely of those resident in Senegal.

In **Gabon**[8], thin capitalisation rules have been introduced by the Finance Act 2018. A company is deemed thinly capitalised when the amount of interests paid on inter-company loans exceeds, simultaneously, the three following limits during the same fiscal year: (i) the product of interest payments on inter-company loans x ((1.5 x equity)/loans granted to group affiliates); (ii) interests received by the company by affiliates; (iii) 25% of the profits before tax + interests paid + depreciation taking in consideration to be deducted from the considered tax profit + share of the rents of leasing taken into account for determining the transfer price of the property at the end of the contract. When the company paying the interest is deemed to be thinly capitalised, only a portion of that interest may be deductible from the taxable result.

[5] EY, Worldwide Corporate Tax Guide, 2019
[6] Chambers and Partners (https://practiceguides.chambers.com/practice-guides/corporate-tax-2020/senegal)
[7] Conférence interafricaine des marchés d'assurance (CIMA)
[8] Code Général des Impôts, Art.11-II-2-a.(LF2018).

In **Brazil**[9]**,** under thin-capitalization rules, interest expense arising from a financial arrangement with a related party is deductible only if the related Brazilian borrower does not exceed a debt-to-net equity ratio of 2:1. In addition, interest expense arising from a financing arrangement executed with a party established in a low-tax jurisdiction (LTJ) or benefiting from a privileged tax regime (PTR) is deductible only if the Brazilian borrower does not have a debt-to-net equity ratio of greater than 0.3:1.

In **Mongolia**[10]**,** from 1 January 2020, interest deductions for related party interest are limited to 30% of EBITDA.

In **Vietnam**[11]**,** a new decree effective from May 1, 2017 introduces interest restrictions based on a fixed-ratio rule limiting tax relief for a company's total interest costs to 20% of its EBITDA.

(iv) *Tax issues of streaming arrangements.*

Tax outcomes are fact specific and can depend on the terms of the arrangement as well as the accounting treatment of the arrangement. Tax issues include:

- Tax treatment the up-front payment as well as tax treatment of the ongoing payments and receipts from the counter-party. For example, revenue may be recognised over the term of the arrangement as product is delivered, or taxed up-front upon receipt of cash, or it may be treated as a financial arrangement, akin to a loan (with no tax up-front, but interest payments may be deductible and subject to WHT).

- Whether the streaming arrangement (any interest component) attracts WHT, and whether it is treated as debt for the purposes of interest restriction/thin capitalization rules. If it is considered to be a financing arrangement that has an interest component, whether interest is deductible may be relevant – some countries do not give tax deductions for 'conditional' interest payments.

- If the arrangement is with a related party, transfer pricing would be relevant.

Streaming arrangements tax issues: Chilean Case

Under Chilean law a non-resident Buyer will not be levied with taxes for deliveries of metal, whereas the resident Operator will be levied with general income taxes upon receipt of the consideration or purchase price. However, considering that the Operator may be required to repay the uncredited amount of the upfront payment under certain circumstances, such initial upfront payment may be structured as a security or as a payment subject to a condition so that the corresponding taxes are only accrued and paid once the streamed metal is delivered and actually credited against the received funds. Also, if the deposit's repayment obligation bears interests, such interests are subject to a withholding tax at a rate of 35 per cent of the amount paid.

Conversely, purchase of streamed metal by a local Buyer to a non-resident Operator is also subject to a withholding tax at a rate of 35 per cent of the amount paid.

[9] EY, Worldwide Corporate Tax Guide, 2019
[10] EY, (taxinsights.ey.com/_images/Ey-tax-magazine-text.png)
[11] EY, https://taxinsights.ey.com/_images/Ey-tax-magazine-text.png

Finally, if both parties are residents, payments made under the streaming agreement are subject to general income taxes as well as value added tax at a rate of 19 per cent of the amount paid.

3 Hedging instruments in extractive industries

3.1. Introduction

A company's business may be affected by different types of business and financial risk that can have a significant impact on its profits and cash flows. These risks arise as a consequence of volatility in the exchange rates, interest rates and commodity prices. Many risks are common across industries. However, more than in other sectors, the extractive industries are more exposed to some of these risks. For example, a large proportion of the transactions in the extractive sector are exposure to foreign currency risks – the importation of equipment, the export of extractive material and operational costs can all be in different currencies. Many extractive operations are carried out in developing countries and due to the narrowness of local financial markets, exposures to interest rate risk on international markets through debt funding can be more pronounced and subsequently affect profitability. Finally, mineral products, oil, gas and other extracted natural resources can be subject to price volatility, which again has the potential for material impacts on profitability.

Hedging is a form of insurance to reduce the risk of adverse price movements in an asset. Hedging is used by parties who seek to manage existing risks by entering into a derivative transaction which reduces their risk or exposure to a potential future event. It attempts to eliminate the volatility associated with the price of an asset by taking offsetting positions contrary to what the investor currently has. Used effectively, hedging is a good instrument in securing profits in an uncertain world, particularly protecting earnings against currency fluctuations arising from timing differences between costs and revenues. A true hedging pattern will mean that derivatives are generally bought more when a price curve is approaching a top or in a falling price trend than in rising price trends, thus achieving the goal that the hedging is specific to each underlying transaction, that each underlying transaction to be hedged is treated separately.

In a hedging transaction a mining company enters into the futures or options market taking an opposite position they have outside the futures market (for example, a contract to sell commodities at a particular price). A hedge results in a gain or loss in the futures or options market, offsetting the gain or loss in the physical commodity. Thus, this type of futures or options strategy is entered into for the purpose of price insurance (hedging).

In contrast to hedging to manage risk as described above, companies may also use derivatives for speculative purposes. The main purpose of speculation is to profit from betting on the direction in which an asset will be moving. Speculators trade based on educated guesses on where they believe the market is headed. For example, if a speculator believes that a commodity is overpriced, they may short sell the respective commodity futures and wait for the price to decline, at which point he or she will buy back the stock and receive a profit. Unlike ordinary hedging transactions, there is opposite position outside of the futures market (for example, no underlying commodity sale agreement that matches the hedge). Speculators are vulnerable to both the downside and upside of the market; therefore, speculation can be extremely risky. In a hedging pattern where there is a component of speculation, the derivative buyer will try to lock in as low a cost or as high a revenue as possible, limiting the removal of the upside potential as much as possible. A speculative strategy consists of entering into futures or options market transactions

with the motive of making money on the rise or fall of the market price. Many countries have specific tax rules that apply to derivatives. For example, Zambia ring-fences hedging income from business income, thereby removing any incentive for companies to engage in abusive hedging.[12] Some countries have specific rules that deal separately with speculative hedging e.g. the United States, certain gains and losses from speculative hedging are treated as capital gains and losses whereas gains and losses from hedging that is undertaken for the purpose of risk management are taxable or deductible as ordinary income or expenses.

The analysis of hedging via derivatives is technically complex and this can further complicate a tax administration's analysis of the actual conditions of the transaction, as the counterparties may not be known, and this type of transaction may trigger events that may be within the control of the MNE. In addition, hedging transactions with related parties that are not matched by an external hedge by the MNE, may constitute aggressive tax planning[13] . Following Pietro Guj and al[14] "where the risk has not in fact been transferred out of the MNE, it is problematic as to whether a charge for its transfer should stand and be deductible. As with other types of services provided by a MNE through a low tax jurisdiction, there is a need to closely examine and verify that the arrangements are arm's length, that is to say that the terms and conditions are such that an independent party would have entered into the arrangement. As with captive insurance arrangements, the risk needs sufficient nexus to the mining activities to be a real rather than a theoretical risk. The host country tax administration should also verify that the services allegedly provided are for a real activity that is not duplicated".

For the management of the risk associated with extractive operations, independent companies analyze the most appropriate strategy for hedging. The extent to which extractive companies undertake speculative hedging will be governed by an entities policy and risk appetite.

3.2.Diversification

Another way which risk can be managed to some extent is through diversification. Diversification, that is investing in a variety of unrelated businesses, often in different locations—can be an effective way of reducing a firm's dependence on the performance of a particular industry or project. In theory it is possible to "diversify away" all the risks of a particular project. In business practice, companies differentiate between company-specific risks that are diversifiable, such as the bankruptcy of a customer, and risks that concern the market as a whole that are not diversifiable. Financial theory holds that investors should not be remunerated for diversifiable risks, only non-diversifiable risks, also called market risks, are remunerated. In practice, however, diversification could be expensive or fails because of the complexity of managing diverse businesses. In any case, companies mainly use hedging instruments for non-diversifiable risks.

For an independent company, given the sometimes high cost of hedging, it is a cost-benefit analysis that should determine whether or not to use hedging instruments. For group members of a MNE, however, there may be a group hedging strategy that involves, for group members, the use of instruments to hedge risks which, for an independent company, could be mitigated by diversification. In these circumstances, this practice could be considered as not at arm's length and subject to a thorough transfer pricing analysis. For more details on this aspect, reference is

[12] https://taxsummaries.pwc.com/zambia/corporate/income-determination
[13] OECD (2013) Aggressive Tax Planning Based on After-Tax Hedging https://www.oecd.org/tax/aggressive/after_tax_hedging_report.pdf
[14] Pietro Guj, Stephanie Martin, Bryan Maybee, Frederick Cawood, Boubacar Bocoum, Nishana Gosai and Steef Huibregtse: Transfer Pricing in Mining with a Focus on Africa. A Reference Guide for Practitioners. N°1036.

made to the UN Transfer Pricing Manual.

For most multinational groups, including extractive industries, there are different approaches in terms of how the strategy and policy in relation to the acceptable level of exposures to these risks, and the approach to hedging them. In some cases the policy is driven by a centralized treasury function which would assess the required external derivatives depending on the group's overall position and policy. This policy is then applied to subsidiary operations in various jurisdictions. However, policies of individual multinational groups will differ in practice.

3.3. Derivative instruments

Derivatives are financial instruments (contracts) that do not represent ownership rights in any asset but, rather, derive their value from the value of some other underlying commodity or other asset. Usually, the underlying variables are the prices of traded assets: stocks, equity indices (S&P500, Nikkei225, CAC40), bonds (government, corporate), commodities (gold, platinum, oil), Interest rates indices (Libor, Eonia). When used prudently, derivatives are efficient and effective tools for isolating financial risk and "hedging" to reduce exposure to risk.

Derivative contracts transfer risk, especially price risk, to those who are able and willing to bear it. Derivatives can be traded on organized markets, or alternatively agreed-upon between two counterparties ("over-the-counter" or "OTC" transactions).

(i) Exchange traded derivative

An exchange traded derivative (ETD) is a standardized financial instrument that is traded on an organized exchange market. When traded on an organized market, a derivative has a market observable price. When dealing in exchange traded, products terms are standardized and the clearinghouse guarantees that the other side of any transaction performs to its obligations. That is, it assumes all contingent default risk so both sides do not need to know about each other's credit quality. Since the contracts are standardized, accurate pricing models are often available.

Standardization makes easy for the investor to determine how many contracts can be bought or sold. Each individual contract is also of a size that is not daunting for the small investor.

Exchange traded derivatives can be used to hedge exposure or speculate on a wide range of financial assets like commodities, equities, currencies, and even interest rates.

(ii) Over the counter (OTC) derivatives

An over the counter (OTC) derivative is a financial instrument traded off an exchange, the price of which is directly dependent upon the value of one or more underlying securities, equity indices, debt instruments, commodities or any agreed upon pricing index or arrangement. If the derivative is an OTC, its value can be calculated using a model, the price is no observable on a market.

OTC markets are less transparent and operate with fewer rules than do exchanges. All of the securities and derivatives involved in the financial turmoil that began with a 2007 breakdown in the U.S. mortgage market were traded in OTC markets. This market still accounts for the bulk of derivatives trade today. The notional value of outstanding OTC derivatives increased from $532 trillion at end-2017 to $595 trillion at end-June 2018 (BIS, 2018).

In the extractive industries, given the variety of operators' needs and profiles, OTC derivatives dominate the market. The most common instruments include foreign exchange rate (FX risk),

interest rate swap and commodity price risk.

3.4. Foreign Exchange Risk Hedging (FX risk),

Movements in foreign exchange rates can result in gains and losses. Exposure to this volatility generally arises where a company enters into transactions which are in a different currency from their accounting and/or tax currencies (often referred to as 'functional currency'). Many resource groups accounting functional currency is US dollars, given that commodity sales transactions are in US dollars. However, local operations of multinational groups may be required to adopt local currency for accounting and/or tax purposes, depending on specific accounting and tax rules, as well as company policy. Many countries allow resource companies to calculate taxable profits in US dollars rather than local currency. Accounting rules are generally dictated applicable accounting standards.

Company policy and risk management strategy will dictate which foreign exchange rate risk are acceptable and which risk should be actively managed through hedging.

A foreign exchange risk (FX risk) hedge is a method used by companies to eliminate or "hedge" their foreign exchange risk resulting from transactions in foreign currencies (see foreign exchange derivative). A foreign exchange hedge transfers the foreign exchange risk from the trading or investing company to a business that carries the risk, such as a bank. There is cost to the company for setting up a hedge. By setting up a hedge, the company also forgoes any profit if the movement in the exchange rate would be favourable to it.

Companies in extractives industry are involved in international trade and are more exposed to FX risk due to the nature of their business. FX risk makes the economic planning process for businesses difficult and financial outcomes uncertain. These companies are mainly exporters. They pay for goods in the local currency while their revenues are denominated in a foreign currency. The appreciation of the local currency means getting less revenues in local currency for an exporter who sells products abroad and the opposite, more revenues in local currency, if the national currency depreciates.

Importers pay for imported goods in a foreign currency and receive revenues in the domestic currency. Unlike exporters, the depreciation of the local currency is unfavorable for importers as they will have to pay more local currency to suppliers in a foreign currency. If the national currency appreciates, an importer will have to pay less amounts of local currency.

FX volatility can also arise from debt funding arrangements: either with parties or from related parties e.g. where the currency of the debt is a different currency from the currency of the lender or borrower.

FX risk makes financial outcomes uncertain for exporters and importers as they cannot incorporate this risk in their price setting process and this also makes the business planning process hard.

FX hedging is a way to reduce the FX risk. FX hedging enables importers and exporters to:

- Project cash flows in different currencies;
- Determine the prices that were foreseen in business plans;
- Maintain operational stability.

One of the hedging instruments used by companies in extractives industry to mitigate FX risk is

the currency forward contract. A currency forward is a binding contract in the foreign exchange market that locks in the exchange rate for the purchase or sale of a currency on a future date.

Example - Foreign Exchange (FX) Hedging

Assume a Belgian export company (BelCo) is selling US$1 million worth of goods to a U.S. company and expects to receive the export proceeds a year from now. BelCo is concerned that Euro may have strengthened from its current rate of US$1 = €1.09 (1€ = US$ 0.91 a year from now, which means that it would receive fewer Euros per US dollar. BelCo, therefore, enters into a forward contract to sell $1 million a year from now at the forward rate of US$1 = 0.90 € (1€ = US$1.11).

If a year from now, the spot rate is US$1 = 0.87 € (1€ = US$1.15)—which means that the Euro has appreciated as the exporter had anticipated – by locking in the forward rate, the exporter has benefited to the tune of 30,000 € (by selling the US$1 million at 0.90€, rather than at the spot rate of 0.87€). BelCo has received 870,000 € for the sale of goods in addition to the gain from the forward contract of 30,000 €. On a net basis they receive total of 900,000 €.

On the other hand, if the spot rate a year from now is 0,92€ (i.e. Euro weakened contrary to the exporter's expectations), BelCo will receive 920,000 € for the sale of goods and will have a loss from th loss from the forward contract of 20,000 € As above, on net basis BelCo receives a total of 900,000 €.

In both cases, the effect of the forward contract hedge is that BelCo has ensured that it receives 900,000 € by locking in the exchange rate of US$1 = 0.90 €

Without undertaking the hedge, BelCo would have been exposed to unpredictable exchange rate volatility. Had the currency weakened they will have received only 870,000 €. Had the currency appreciated they would have received 920,000 €.

The sale of goods will be taxable and the exchange gain or loss forward contract will be taxable or deductible, so on a net basis, BelCo would be appropriately taxed on the net receipt of €900,000.

3.5. Interest Rate Swap (IRS)

The interest rate risk refers to the exposure to movements in interest rates. Interest rates on debts such as bonds can be issued at either fixed or floating interest rates. For resource companies, treasury policy and risk management strategy will determine whether there is a preference for exposure to fixed interest rates, floating rates, or some combination of the two. For resource companies this interest rate risk can be managed by using interest rate swaps which can swap fixed interest rates for floating rates, and vice versa. A typical example would be where a resource company has issue fixed rate bonds in order to raise finance from third party investors, and the company chooses to swap those bonds so they are instead exposed to floating interest rates. The resource company will enter into an interest rate swap with another third party (typically a bank)or an a centralized treasury company capable of undertaking hedging activities.

An interest rate swap (IRS) is an agreement between two counterparties to exchange interest rate

cash flows at specified intervals. Interest rate swaps usually involve the exchange of a fixed interest rate payment based on a particular notional amount for a floating rate payment on that same notional amount, or vice versa. If a counterparty holds a "payer swap", it pays a fixed rate and receives a floating rate from the other counterparty. The counterparty that pays a floating rate and receives a fixed rate is said to hold a "receiver swap". At the time of the signing of an IRS agreement, the present value of the swap's expected fixed rate flows will be equal to the present value of the expected floating rate payments. As interest rates change, so will the value of the swap. IRS are typically quoted in terms of fixed rate, or alternatively the "swap spread, which is the difference between the fixed rate of the swap and the equivalent local government bond yield for the same maturity. The floating rate index is commonly an interbank offered rate (IBOR) of a specific tenor in the appropriate currency of the IRS. Normally, the parties do not swap payments directly, but rather each sets up a separate swap with a bank. In return for matching the two parties together, the bank takes a spread from the swap payments (example 0.30% overall, or 0.15% from each party).

Example 1 –Interest Rate Swap Contract

Companies A and B make an interest rate swap agreement with a nominal value of $100,000. Company A believes that interest rates are likely to rise over the next couple of years and aims to obtain exposure to potentially profit from a floating interest rate return that would increase if interest rates do, indeed, rise. Company B is currently receiving a floating interest rate return, but is more pessimistic about the outlook for interest rates, believing it most likely that they will fall over the next two years, which would reduce their interest rate return. Company B is motivated by a desire to secure risk protection against possible declining rates, in the form of getting a fixed rate return locked in for the period.

The two companies enter into a two-year interest rate swap contract with the specified nominal value of $100,000. Company A offers Company B a fixed rate of 5% in exchange for receiving a floating rate of the LIBOR rate plus 1%. The current LIBOR rate at the beginning of the interest rate swap agreement is 4%. Therefore, to start out, the two companies are on equal ground, with both receiving 5%: Company A has the 5% fixed rate, and Company B is getting the LIBOR rate of 4% plus 1% = 5%.

Now assume that interest rates do rise, with the LIBOR rate having increased to 5.25% by the end of the first year of the interest rate swap agreement. Let's further assume that the swap agreement states that interest payments will be made annually (so it is time for each firm to receive its interest payment), and that the floating rate for Company B will be calculated using the prevailing LIBOR rate at the time that interest payments are due.

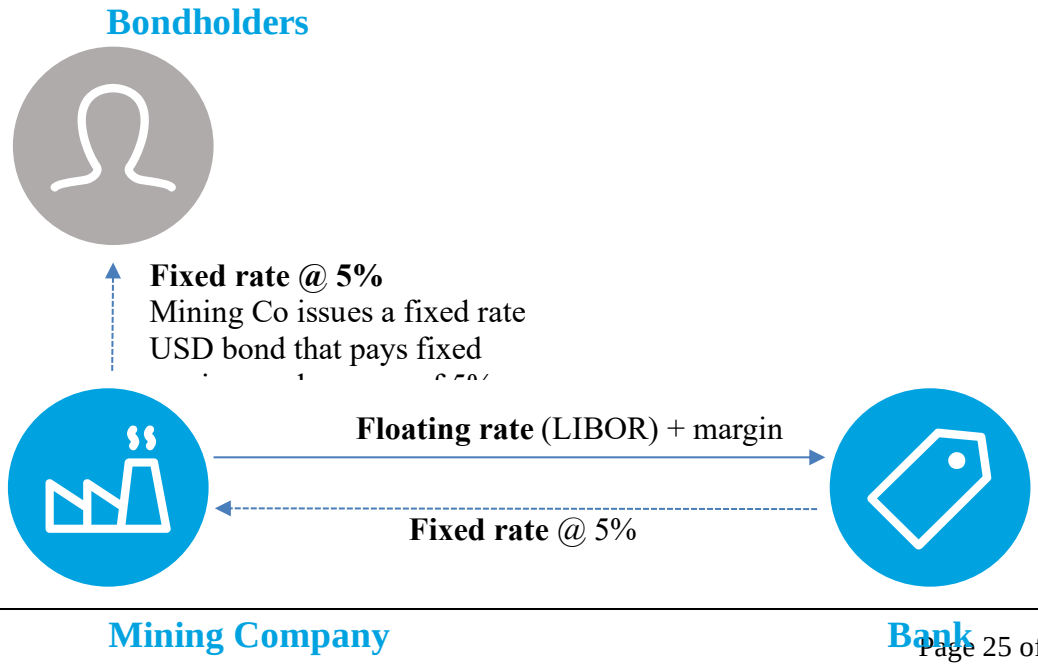
Company A owes Company B the fixed rate return of $5,000 (5% of $100,000). However, since interest rates have risen, as indicated by the benchmark LIBOR rate having increased to 5.25%, Company B owes Company A $6,250 (5.25% plus 1% = 6.25% of $100,000). To avoid the trouble and expense of both parties paying the full amount due to each other, the swap agreement terms state that only the **net difference** in payments is to be paid to the appropriate party. In this instance, Company A would receive $1,250 from Company B. Company A has profited from accepting the additional risk inherent with accepting a floating interest rate return. Company B has suffered a loss of $1,250, but has still gotten what it wanted – protection against a possible interest rate decline.

What if at the end of the first year of their agreement, the LIBOR rate had fallen to 3.75%? With its fixed rate return, Company B would still be owed $5,000 by Company A. However,

Company B would only owe Company A $4,750 (3.75% plus 1% = 4.75%; 4.75% of $100,000 = $4.750). This would be resolved by Company A paying $250 to Company B ($5,000 minus $4,750 = $250). In this scenario, Company A has incurred a small loss and Company B has reaped a benefit.

Example 2: Mining Company IRS arrangements

In this example, Mining Company raises debt in the external bond market with a fixed coupon and seeks to manage the exposure with an interest rate swap to convert the economic exposure to floating rates.



Key features of the above arrangement include:

- Mining Company issues a bond (in order to raise funds) that pays its investors based on a fixed interest rate at 5%.
- Under Mining Company treasury policy, there is a preference for floating rather than fixed interest rates.
- Mining Company executes an interest rate swap with an external counterparty, usually a financial institution (in this case the 'Bank'). In practice, the mining company will often execute multiple interest rate swaps of smaller notional amounts with different banks to manage its counterparty credit risk exposure to the banks.
- The interest rate swap is an agreement between the two parties to exchange interest payments based upon a specified notional principal amount for a specified term with all terms documented.
- Effectively the above arrangement transfers the fair value interest rate risk in relation to the fixed rate bonds to the Bank in exchange for a floating rate. The Bank charge the Mining Company a small execution fee and a credit charge, which will be factored into into the overall margin charged by the bank to the mining company. Except for the bank's remuneration, the swap contract is intended to have a zero net present value when executed. If it did not, an up-front payment on receipt would typically arise to makes a gain or loss when entering into the contract. Either party could then make a gain or loss, depending on where market interest rates move; this being the nature of the hedge.
- Mining Company continues to pay interest at the fixed rate to the bondholders.
- Swap payments will be made periodically between mining company and the bank on a net basis (if settlement is agreed on this basis). If the floating rates exceed the fixed rates, mining company will pay the bank the difference. If fixed rates exceed the floating rates, the bank will pay the mining company the difference. On a net basis, Mining Company will have incurred interest expense on the bonds based on floating interest rates.
- The floating leg rate of the swap is re-set periodically on a quarterly basis by reference to the benchmark, conventionally 3m US Libor. [Note: Global benchmark reform will alter the way in which floating rate swaps will be priced as Libor is phased out and replaced with alternative floating rates.]

Tax issues

- Mining company will continue to pay interest to the external bondholders. This will typically be deductible for tax purposes. The timing of deductions depends on specific tax rules for example, where accounting standards require derivatives to be accounted for at fair value and some jurisdictions may impose tax on fair value movements in the accounts. Interest deductions would also subject to consideration of limitations such as thin capitalisation EBITDA-based tests discussed in this Chapter.
- Swap payments made to the bank would be deductible for tax purposes, and swap payments received from the bank will be taxable. These could be subject to similar restrictions on finance cost deductibility, in certain jurisdictions.
- If the bond-holders are non-resident, then interest payments might be subject to interest withholding tax.
- Several countries would treat swap payments, as 'interest' from perspective of EBITDA based interest restrictions, and some would impose withholding tax subject

to specific reliefs (e.g. Treaty). Others such as the UK have a specific exemption from withholding taxes, but have a separate rule disallowing deductions for net payments to tax havens

Related party swaps:

It is common for multinational mining groups to centralise treasury functions including legal relationships with derivative counterparties. This can result in cost, certainty and time efficiencies. Therefore, it would be common for a centralised treasury entity to enter into the swap with the external bank. This may be a different entity from the entity with the underlying debt instrument. In these cases it would be common for the treasury entity to enter an internal back to back swap on identical commercial terms with the Mining Company that has issued the external bonds. On a net basis, Mining Company therefore has the exposure to floating interest rates and the Treasury entity is net neutral. The Treasury entity would likely charge a fee to the Mining Company for executing the swap.

3.6. Commodity Price Risk Hedging.

(i) How does commodity price hedging work?

Commodity price risk refers to the uncertainties of future market values and of the size of the future income, caused by the fluctuation in the prices of commodities. These commodities may be gold, oil, grains, metals, gas, electricity etc. Diversified multinational resource companies are exposed to commodity price risk. Company policy and strategy will determine the level of commodity price hedging that will be undertaken: ranging from limiting hedging only where there are fixed price commodity contracts (reflecting a preference for exposure to floating commodity prices), to sophisticated speculative hedging which carries a higher potential financial reward, but also a higher risk. Other resource investors may prefer a fixed income stream without volatility and would therefore hedge in order to replace floating prices with fixed commodity prices. Broadly, hedging involves entering into a derivative contract whose value moves in the opposite direction to their underlying position (e.g. the position from the physical sale of commodities), the company cancels part or all of its potential risk.

Hedging can be performed by taking a long (buy) or short (sell) position against the asset or physical product. Long (buy) hedge position is a strategy taken by generally producers or manufacturers which need to acquire the commodity, to protect from the prices of these commodities going up in the future when they have to source the asset at a future price. A producer that buys a futures contract will, on contract expiry, receive delivery of the contracted quantity and quality of a commodity at the price determined when he purchased the futures contract.

Short hedge is taken when a company are already selling the given commodity (or asset) and wish to protect from the prices falling in future (i.e. protect against a fall in revenue to the seller). A short position in the commodity market, involves a company selling futures contracts. These contracts specify that the seller of the contract will deliver a stated amount of commodity (or asset), on the date specified on the contract. A company that has sold a futures contract will, on contract expiry, deliver the contracted quantity and quality of commodity at the price determined

when he sold the futures contract.

There are various financial instruments, which can be used to hedge commodity price risk. These instruments consist of futures, forward contracts, options and swaps.

(ii) Commodity futures contracts.

A commodity futures contract is an agreement to buy or sell a predetermined amount of a commodity at a specific price on a specific date in the future. Commodity futures can be used to hedge or protect an investment position or to bet on the directional move of the underlying asset. Futures contract executed in commodity exchange can be physically settled upon contract maturity or cash settled. The pay-off structure is linear with respect to the market price at the time of settlement.
Commodity futures contracts are regulated and traded on exchanges and therefore standardized in terms of the quantity and characteristics of the underlying commodity. Although futures contracts are based on a future sale of a commodity, they are typically cash settled and rarely end in physical delivery. Therefore, market participants in the commodity futures trade are not necessarily commodity producers or buyers looking to hedge price risk, but often investors from outside the commodity space who aim at making a profit from transactions, taking advantage of commodity price movements. Commodities futures contracts can be used by speculators to make directional price bets on the underlying asset's price. Positions can be taken in either direction meaning investors can go long (or buy) as well as go short (or sell) the commodity.

Futures contract: Short Hedge Example

A coal mining firm has just entered into a contract to sell 155,000 tons of coal, to be delivered in 3 months' time. The sale price is agreed by both parties to be based on the market price of coal on the day of delivery. At the time of signing the agreement, spot price for coal is USD 74.45/ton while the price of coal futures for delivery in 3 months' time is USD 74.00/ton.

To lock in the selling price at USD 74.00/ton, the coal mining firm can enter a short position in an appropriate number of NYMEX[15] Coal futures contracts. With each NYMEX Coal futures contract covering 1,550 tons of coal, the coal mining firm will be required to short 100 futures contracts.

The effect of putting in place the hedge should guarantee that the coal mining firm will be able to sell the 155,000 tons of coal at USD 74.00/ton for a total amount of USD 11,470,000.

Scenario #1: Coal Spot Price Fell by 10% to USD 67.01/ton on Delivery Date

As per the sales contract, the coal mining firm will have to sell the coal at only USD 67.01/ton, resulting in a net sales proceeds of USD 10,386,550.

By delivery date, the coal futures price will have converged with the coal spot price and will be equal to USD 67.01/ton. As the short futures position was entered at USD 74.00/ton, it will have gained USD 74.00 - USD 67.01 = USD 6.99 per ton. With 100 contracts covering a total of 155,000 tons, the total gain from the short futures position is USD 1,083,450

[15] The New York Mercantile Exchange (NYMEX) is the world's largest physical commodity futures exchange.

Together, the gain in the coal futures market and the amount realised from the sales contract will total USD 1,083,450+ USD 10,386,550 = USD 11,470,000. This amount is equivalent to selling 155,000 tons of coal at USD 74.00/ton.

Scenario #2: Coal Spot Price Rose by 10% to USD 81.90/ton on Delivery Date

With the increase in coal price to USD 81.90/ton, the coal producer will be able to sell the 155,000 tons of coal for a higher net sales proceeds of USD 12,694,500

However, as the short futures position was entered at a lower price of USD 74.00/ton, it will have lost USD 81.90 - USD 74.00 = USD 7.90per ton. With 100 contracts covering a total of 155,000 tons of coal, the total loss from the short futures position is USD 1,224,500

In the end, the higher sales proceeds is offset by the loss in the coal futures market, resulting in a net proceeds of USD 12,694,500- USD 1,224,500 = USD 11,470,000. Again, this is the same amount that would be received by selling 155,000 tons of coal at USD 74.00/ton (net income of $11,470,000).

From a tax perspective, in each scenario the gain or loss related to the coal futures contract will generally be taxable or deductible, so that the net taxable income is the same ie $11,470,000. This hedge would be considered to be effective on an after tax basis.

Complexities can arise where the tax treatment of the coal futures contract is different from the sale of coal, or where the futures contract is with a related party.

The main concern for tax authorities would be related party transactions for which there is no external hedge by the related party e.g. an internal hedge only. This is a transfer pricing issue so reference is made to UN transfer pricing manual.

(iii) Commodity forward contracts

Forward contracts are very common in extractives industry. A forward contract is an agreement between two parties – a buyer and a seller to purchase or sell a commodity at a later date at a price agreed upon today. The main features of a forward contract are:

- Forward contracts are bilateral contracts, and hence, they are exposed to counterparty risk
- There is risk of nonperformance of obligation by either of the parties, so these are riskier than futures contracts.
- Unlike futures contracts, which are always traded on an exchange, forwards contracts always trade over-the-counter (OTC), or can simply be a signed contract between two parties. Each contract is custom designed and hence, is unique in terms of contract size, expiration date, the asset type, quality, etc.
- The specified price in a forward contract is referred to as the delivery price. The forward price for a particular forward contract at a particular time is the delivery price that would apply if the contract were entered into at that time. Forward price and delivery price are equal at the time the contract is entered into. However, as time passes, the forward price is likely to change whereas the delivery price remains the same.

Example 1: Aluminium Fixed Forward Contract

- Mining Co has aluminium production located in Country X. Aluminium prices are generally based on prices referenced on the London Metal Exchange (LME). Pricing in contracts with customers is based on the prior months' monthly average LME price (i.e. the prices fluctuate based the LME price).
- Mining Co's related entity 'Treasury Co' is resident in Country Y. Treasury policy has determined a preference to fix the price of aluminium sales for a period of 12 months. Treasury Co enters a fixed price forward contract with a bank, to fix the forward price of aluminium with the bank.
- Under the fixed forward contract, Treasury Co agrees to sell to the bank at the forward price and buy at the monthly average price (the same as the customer price). The ease with which this market price (the forward price) may be observed in the market may depend on the particular commodity being hedged; i.e. the depth and liquidity of the market in that commodity. And in some cases, a perfect hedge may well not be available – i.e. a widely available market price for a generic commodity may be used as a proxy
- In practice, physical sales do not occur between Treasury Co and the bank, and the forward contract obligations are settled on a net basis. If average monthly prices are higher than the forward price, Treasury Co will make a payment to the bank (the bank will make a gain). If average monthly prices are lower than the forward price, the bank will make a payment to Treasury Co (bank will make a loss).
- Treasury Co is a service provider to Mining Co and therefore it enters into a 'back to back' arrangement with Mining Co, so in effect the gain or loss from the hedge is allocated to Mining Co, which is the company with the exposure. In all instances the physical gains will be offset by a derivative loss (and opposite for physical loss)[16] .
- The Derivative allows both the buyer and seller to fulfil their commercial needs.

Tax issues

- Mining Co has in effect hedged its sales revenue so that it receives the agreed forward price. That is, they are receiving the prevailing (floating) price on the physical sale of aluminium, whilst paying that floating price and receiving the fixed price on the forward derivative. The net revenue from the combination of the realisation of the physical sale and the derivative will be taxable, less costs. There may be a timing difference in relation to when the gain or loss from the hedge compared to the underlying sale e.g. the derivative is taxed on a fair value basis i.e. based on 'marked to market' movement in the accounts, whereas the underlying sale would effectively taxed on a realisation basis i.e. when the sale is recorded in the profit and loss statement.
- Where the hedge gain or loss is not taxed in the same way as the underlying sale, then the hedge will not be considered effective on an after tax basis.
- Treasury Co has facilitated the hedge on behalf of Mining Co, as they act as a broker and are remunerated as a service provider, based on its functions, assets and risks. As Mining Co realises the full gain/loss on the combination of the physical transaction and the derivative, transfer pricing concerns should not arise.
- In some cases a central Treasury entity may hedge on behalf of different producing companies in the group, in which case the back to back arrangements may not precisely mirror the single external hedge, but an appropriate allocation methodology should be

[16] As noted above, in reality it is unlikely that companies are able to obtain a perfect hedge due to market imperfections.

used and the Mining Company should be required to demonstrate that the intra-group hedge pricing is in accordance with arm's length terms.

- There are other trading models, which involve more complex transfer pricing considerations. These usually involve where a group company, in this instance Treasury Co, takes positions (which may be speculative) in the market that result in greater risk and reward. In such instances, Treasury Co would require substantially more capital, undertake more functions (decision making) and bear significantly more risk, which would ultimately lead to bigger gain and loss opportunities.
- If the hedge is purely intra-group then transfer-pricing risks may arise – Mining Co will need to demonstrate the pricing is in accordance with arm's length terms and should be prepared to explain the commercial basis for entering an intra-group hedge, especially when the multinational group position has not been externally hedged. For example, the tax authority may have legitimate concerns where a forward price locked in under a futures contract is lower than published forward prices. This would require documentation setting out comprehensive analysis of the accurate delineation of the actual transactions under and the commercial rationality of the transactions. Further detail can be found in the UN Transfer Pricing Manual.

Example 2- Speculative Commodity forward contracts in mining

Some mining companies engage in more sophisticated trading and speculative hedging. They have the potential to profit if they believe the value of their commodity will move in an expected direction. For example, if a gold mining company (GoldCo) expects the gold price to fall and hence sell forward much more gold than GoldCo can produce in time for the forward sale - this is speculation as GoldCo will be required to buy gold from third parties at the spot price at the time to deliver into the forward contract.

This is particularly relevant in the mining industry as many miners are enticed by the potential substantial financial rewards if they can correctly predict the direction of their underlying commodity, e.g. If the prevailing market price for gold is $1300/oz, but GoldCo believes the market price will decrease to $1,000/oz, GoldCo can enter into a forward contract with a counterparty which would compel the counterparty to purchase an pre-agreed quantity of gold at the pre-agreed $1300/oz. When the contracted time for delivery arrives, GoldCo will then go to the market, buy the pre-agreed gold at the market prevailing $1,000/oz and sell to the counterparty at the pre-agreed $1,300/oz and hence lock in a profit from the trade.

However this potential financial reward also carries a higher potential risk: if predictions of future prices are incorrect, large losses can arise. Resource company policy will generally the determine the level of speculative hedging that can be undertaken.

Tax Issues

A taxable gain or loss would arise from the speculative hedge. Some countries tax rules treat speculative hedging differently from other hedging (for example, India, as set out further below).

Another issue may be the appropriate entity in the resource company group which recognizes gains and losses from speculative trading. This is governed by transfer pricing analysis.

(iv) Commodity swap contracts

A commodity swap is a type of derivative contract where two parties agree to exchange cash flows dependent on the price of an underlying commodity. A commodity swap is usually used to hedge against price swings in the market for a commodity, such as oil and livestock. Commodity swaps allow for the producers of a commodity and consumers to lock in a set price for a given commodity. No physical commodity is actually transferred between the buyer and seller. The commodity swap contracts are entered into between the two counterparties, outside any centralized trading facility or exchange and are therefore characterized as OTC derivatives.

In general, the purpose of commodity swaps is to limit the amount of risk for a given party within the swap. A party that wants to hedge their risk against the volatility of a particular commodity price will enter into a commodity swap and agree, based on the contract set forth, to accept a particular price, one that they will either pay or receive throughout the course of the agreement. Because swaps do not involve the actual transfer of any assets or principal amounts, a base must be established in order to determine the amounts that will periodically be swapped. This principal base is known as the "notional amount" of the contract.

Example – Commodity swaps contracts in oil

A refiner and an oil producer agree to enter into a 10-year crude oil swap with a monthly exchange of payments. The refiner (Party A) agrees to pay the producer (Party B) a fixed price of $25 per barrel, and the producer agrees to pay the refiner the settlement price of a futures contract for NYMEX[17] light, sweet crude oil on the final day of trading for the contract. The notional amount of the contract is 10,000 barrels.

Under this contract the payments are netted, so that the party owing the larger payment for the month makes a net payment to the party owing the lesser amount. If the NYMEX settlement price on the final day of trading is $23 per barrel, Party A will make a payment of $2 per barrel times 10,000, or $20,000, to Party B. If the NYMEX price is $28 per barrel, Party B will make a payment of $30,000 to Party A. The 10-year swap effectively creates a package of 120 cash-settled forward contracts, one maturing each month for 10 years.

So long as both parties in the example are able to buy and sell crude oil at the variable NYMEX settlement price, the swap guarantees a fixed price of $25 per barrel, because the producer and the refiner can combine their financial swap with physical sales and purchases in the spot market in quantities that match the nominal contract size. The producer never actually delivers crude oil to the refiner, nor does the refiner directly buy crude oil from the producer. All their physical
purchases and sales are in the spot market, at the NYMEX price.

The table below summarizes the characteristics, advantages and disadvantages of the main derivative instruments in commodities markets.

Product	Purpose	Advantages	Disadvantages

[17] The New York Mercantile Exchange (NYMEX) is the world's largest physical commodity futures exchange. NYMEX is part of the Chicago Mercantile Exchange Group (CME Group). The CME Group is the world's leading and most diverse derivatives marketplace.

Forward contract	Can be used to facilitate planning and budgeting by locking in a future price and a fixed date for the transaction	• Can be tailored to specific delivery dates and quantities • Ensures physical delivery for both producer and consumer • Can be used to support feasibility of production, application for finance or preexport finance	• Fixed contract that requires delivery • Credit or counterparty risk • Loss of profit where future price has had favourable movement at delivery • Pricing not transparent
Futures contract	Used to hedge price risk without needing physical settlement	• Contracts are standard with no need for negotiation • Minimal counterparty risk as futures are settled through clearing house • Initial position can be easily reversed	• Possible requirement to meet margin calls • Possible loss of profit where price at settlement is higher than futures price • Futures product may not match commodity being hedged
Commodity options	Used to protect against unfavourable movements in commodity price while providing some ability to participate in favourable movements in price before or at settlement date	• Ability to take advantage of favourable movement in commodity price • Can be tailored to suit organisation's requirements • Fewer cashflow issues than futures as often margin calls are not Required • More effective hedging product where supply is uncertain	• Premiums can be expensive • Usually some loss of favourable movements of commodity price
Commodity swaps	Used to guarantee longer term income streams from commodity and to lock in longer term pricing	• Use of swaps can assist in obtaining finance for projects through locking in longer term pricing • Provides longer term hedge • Tailored to suit the organisation's needs • In some cases, no margin calls	• Counterparty risk • Possibility of taking advantage of favourable price movements may be lost • Difficult to close out

3.7. Tax issues of derivatives.

Broadly, the tax issues related to hedging include:

(i) ***The timing of recognition from gains and losses***

Broadly, there are two main dimensions along which the tax treatment of hedging using derivatives can vary. The first is the timing of recognition of gains and losses for tax purposes. For some derivatives, gains or losses are not recognized until the underlying asset changes hands

or the contract expires or is sold. Other derivatives are taxed on a mark-to-market basis—that is, their gains and losses are calculated and taxed each year on the basis of the year-to-year change in the derivative's fair-market value. Some countries rely heavily on accounting treatment of hedges and some have specific tax timing rules.

(ii) ***The characterization of gains and losses***

One of the tax issues is the recognition of gains and losses from hedging against movement in commodity price in calculating upstream taxes. There is different variation in tax regimes among countries. Some countries may treat the gains and losses from commodity price hedging differently from the underlying sales. Some attempt to match the tax characterization of hedges to the underlying assets they are hedged against. For example, hedges in relation to sales contracts would give rise to ordinary income and deductions whereas hedges related to capital assets may be taxed as capital gains and losses. Some have specific rules related to speculative hedging (for example, India, as discussed further below).

(iii)***Transfer Pricing issues.***

Hedging contracts sometimes involve affiliated parties, directly or indirectly and transfer pricing issues should be addressed if hedging gains and losses have to be recognized. To challenge this issue, it is often fundamental to have a good understanding of commercial pricing of hedging instruments. Where the hedge is only with a related party and is not externally hedged by the MNE, this may raise further complexities however it is noted that there may be genuine commercial purposes for undertaking a hedge with a related party. Tax authorities would seek to ensure the pricing is in accordance with arm's length terms and would expect to see documentation explaining the commercial basis for entering an intra-group hedge. The tax authorities' challenge may also be to ensure that the hedging relates to a "real" risk with a nexus with the mining activities and that this risk has actually been transferred out of the MNE. Further detail can be found in the UN Transfer Pricing Manual.

Tax authorities have concerns that hedging may be used for tax avoidance purposes. Many countries have specific anti-avoidance rules which may apply as well as rules requiring disclosure of derivative transactions so that they can be more readily identified.

Tax authorities' concerns may also relate to interest withholding tax, currency of borrowing and rationale for hedging, pricing of swap payments, speculation using commodity futures or option contracts. Risk hedging via derivatives can further complicate a tax administration's analysis of the actual conditions as the counterparties may not be known, and this type of transaction may trigger events that may be within the control of the MNE.

Example- Taxation issues of derivatives in France

For the tax treatment of financial derivatives, the French Tax Code distinguishes the derivative products between over-the-counter transactions and transactions on organized markets.

Over-the-counter products:
The following instruments are considered as over-the-counter financial products:

- Interest rate swaps;
- Forward Rate Agreement;
- Option-derived products (caps, floors, collars); and

- Forward sale and purchase contracts.

The Tax Code provides that unrealized profits are taxable only at the outcome of the contract. The losses incurred may be deducted through a deductible reserve only to the extent that a global estimated budget of the operation involved has been prepared and reflects a global loss.

Organized market products:

The following products are considered as dealt in the organized market:

- Contracts and options traded on the MATIF[18] and MONEP[19]; and
- Foreign currency transactions (including currency swaps).

The Tax Code sets forth as a general principle the application of the mark-to-market rule to operations involving financial futures on organized markets. There is a special tax treatment for operations, when the sole purpose is the hedging of a transaction due to occur during the following financial year. In this case, the profit realized through the hedging instrument is not taxable at the end of financial year but at the outcome of the contract. To qualify for the tax treatment of hedging transactions, an economic hedge must meet the following conditions:

- The sole purpose of the use of a forward instrument must be hedging of a transaction due to happen in the following year and traded in another type of market;
- The occurrence in the next year of the transaction must be highly likely; and
- The correlation between the value of the hedging instrument and of the hedged element must be sufficient (however, a sufficient correlation is not defined).

In addition, a document indicating the main characteristics of the hedged element and of the hedging instrument must be transmitted to the tax authorities.

Example- Taxation issues of derivatives in Nigeria.

There are no specific rules for taxing derivative transactions in Nigeria, The general rules of taxation therefore becomes applicable. The first issue to deal with is a determination of whether there has been a gain, profit or losses which will be taxable under the Capital Gains Tax Act (CGTA) or Companies Income Tax Act (CITA). The general rule is that capital gains are ordinarily to be considered under the provisions of CGTA while trading profits or losses falls under the provisions of CITA.

Example- Taxation of forward contracts in India.

Following the ICDS[20] , a forward contract is defined as an agreement to exchange different currencies at a forward rate, and includes a foreign currency option contract or another financial

[18] Marché à terme international de France (MATIF)
[19] Marché des Options Négociables de Paris (MONEP)
[20] Income Computation and Disclosure Standards

instrument of a similar nature. ICDS relating to the effects of changes in foreign exchange rates provides that forward contracts can be divided into following types for the purpose of determining the tax treatment:

- Forward Contracts not intended for trading or speculation purpose and entered into for the purpose of settlement of a particular asset/ liability on a future date;
- Forward Contracts intended for trading or speculation purpose and entered into for the purpose of gaining from such contract;
- Forward Contracts entered into to hedge the foreign currency risk of a firm commitment or a highly probable forecast transaction.

(i) Forward Contracts not intended for trading or speculation purpose and entered into for the purpose of settlement of a particular asset/ liability on a future date:

At the time of contract:

The difference between spot exchange rate at the date of contract and contracted forward rate is regarded as premium/ discount on such forward contract. The exchange difference in relation to such contracts is required to be amortized as an income or expense within the period of contract.

On Contract renewal/ cancellation:

Any profit or loss arisen on the renewal/ cancellation of forward contract will be charged to profit or loss in the year of such cancellation/ renewal.

On restatement of forward contract:

The restatement exchange gain/loss on forward contracts shall be allowed as deduction in the year of restatement (i.e. on the basis of its unrealized status also).

On realization of forward contracts:

The realization exchange gain/loss on forward contracts shall be allowed as deduction in the year of its realization if the settlement has taken place within the same year.

(ii) Forward Contracts intended for trading or speculation purpose and entered into for the purpose gain from such forward contract.

ICDS provides that exchange fluctuation loss/gain on foreign currency derivatives held for trading or speculation purposes are to be allowed only on actual settlement and not on mark to market ('MTM'). Hence, gain/loss arisen on forward contract entered into for trading and speculation purpose is taxable or allowed as deduction at the point of settlement.

(iii) Forward Contracts entered into to hedge the foreign currency risk of a firm commitment or a highly probable forecast transaction.

Entire profit and loss impact, premium/ discount and exchange difference on contracts that are entered into to hedge the foreign currency risk of a firm commitment or a highly probable forecast transaction, shall be recognized at the time of settlement.

4 Financial and performance guarantees

In the extractive sector, as in most industries, guarantees are part of the business. Guarantees may be required for access to finance, to guarantee the proper execution of contracts, to ensure site rehabilitation when mining or oil operations are closed. In the extractive industries, broadly three types of guarantees can be distinguished: financial guarantees, performance guarantees and financial surety.

4.1. Financial guarantee

A financial guarantee is a contract by a third party (guarantor) to back the debt of a second party (the creditor) for its payments to the ultimate debtholder (investor). It provides for the guarantor to meet specified financial obligations in the event of a failure to do so by the guaranteed party. The ultimate aim of the financial guarantee is to enable the creditor to access credit on better terms than if he had borrowed solely on the basis of his creditworthiness.

Often, the guarantor is not a third party. In multinational enterprises (MNE), financial guarantees may be granted by group member(s) of the MNE. The guarantees may be formal, covered by a contract specifying the guarantor's commitments, or simply be implicit, resulting from the mere fact of being a member of the MNE.

Following OECD[21] (2019), "*The accurate delineation of financial guarantees requires initial consideration of the economic benefit arising to the borrower beyond the one that derives from passive association*" (D.1.1). (…) "*The effect of potential group support on the credit rating of an entity and any effect on that entity's ability to borrow or the interest rate paid on those borrowings would not require any payment or comparability adjustment*" (C.1.3).

The analysis of financial guarantees related to financial transactions in extractive industries applies the same reasoning to other sectors. Tax implications of intragroup financial guarantees are analyzed in the UN Manual on Transfer Pricing for Developing Countries (Paragraph B.9.4.1.2).

4.2. Performance guarantees

The aim of performance guarantees is to provide security for non-financial obligations issued to one party as a guarantee against the failure of the other party to meet obligations in the contract (other than obligations in respect of payments, indebtedness or other monetary obligations of any kind) as agreed between the parties. The performance guarantee may trigger the payment of an amount when the terms of the contract have not been fulfilled, and there is a resulting financial loss.

Traditionally, performance guarantees are used to hold suppliers accountable. Performance guarantees are commonly used in sectors where long-term and large contracts prevail, such as the natural resources or construction. While financing guarantees assures repayment of money, a performance guarantee provides an assurance of compensation in the event of inadequate or delayed performance on a contract.

[21] Transfer Pricing Guidance on Financial Transactions, BEPS Action 4, 8-10, February 2020

For example, in the Oil and Gas sector, Engineering, procurement and construction (EPC) contracts contain performance guarantees backed by performance liquidated damages (PLDs) payable by the Contractor if it fails to meet the performance guarantees. Following the EPC contracts, in addition to delivering a complete facility, the Contractor must deliver that facility for a guaranteed price by a guaranteed date and it must perform to the specified level. Failure to comply with any requirements will usually result in the Contractor incurring monetary liabilities.

In the upstream industry usually governments secure projects by requiring Exploration & Production (E&P) local companies to provide additional guarantees aiming at ensuring compliance with the work´s commitments taken. Given the materiality of the investments needed and the high risk of the projects, as a general practice parent companies guarantees are granted by the headquarters to the local E&P affiliates, with no remuneration, since there is not a market for these guarantees (they are usually unlimited or disproportionately high considering the solvency of the affiliate and therefore no financial institution would be willing to grant such guarantees).

4.3. Financial surety

A financial surety instrument is an important tool in ensuring that funds are available to guarantee effective mine closure and rehabilitation. In the context of offshore oil and gas exploitation, it also includes dismantling of platforms and other constructions[22]. It is the main financial tool used to insure that, for example, environmental liabilities are not passed on to the government after the mining closure or oilfield decommissioning. In general, financial surety are issued by financial institutions such as bonding companies, banks or insurance companies.

There is a number of different financial surety[23]: letter of credit, surety bond, trust fund, company guarantee, insurance scheme, pledge of assets.

(i) Letter of credit

A letter of credit (LC) or bank guarantee is an unconditional agreement from bank and a to provide funds to a third party on demand. A LC can be used for a variety of purposes. For example extractive companies may obtain LCs to secure customer payments for commodities. They may also be used to secure funding for rehabilitation. In this case, the third party is the relevant government or other authorized body within the government. A LC includes the terms and conditions of the agreement between the proponent and the government, with reference to the rehabilitation program and the agreed-upon costs. The LC is usually issued for a year and renewed annually following a review of rehabilitation requirements and costs. If a letter of credit is not renewed and the proponent fails to provide an acceptable alternative form of guarantee, then the government has the option of drawing the full amount prior to expiry. The funds held in an LC do not generate any interest.

(ii) Surety bond

[22] For more details on this issue, reference is made chapter in this Handbook on Decommissioning.
[23] See European Commission (2007) Guidelines on Financial Guarantees and Inspections for Mining Waste Facilities

A surety bond or a performance bond is an agreement between an insurance company and a proponent to provide funds to a third party under certain circumstances. In this instance, the third party is the relevant government department. A surety bond includes the terms and conditions of the agreement between the proponent and the government with reference to rehabilitation programs, agreed-upon costs, and conditions for the release of the bond.

A surety bond is issued by an insurance company, ideally one that is licensed under the relevant legislation. It is issued for a specific time period and can be renewed for further time periods based on a credit review of the proponent. During this process the amount of a surety bond can be increased or decreased depending on the amendments to the rehabilitation program. If a surety bond is not renewed and the proponent fails to provide an acceptable alternative form of surety, then the government has the option of drawing the full amount. The proponent should be responsible for all fees and charges associated with a surety bond.

The surety bonds are attractive to smaller companies as they do not involve tying up capital. However, as the cost of the surety depends on the rating of the mining company, this cost could be substantially higher for small companies, especially those without proven track records.

(iii) Trust fund

A trust fund is a fund established pursuant to an agreement between a trust company and the proponent for the sole purpose of funding the rehabilitation of a site. In addition to a trust fund, there should be a signed agreement between the proponent and the government, administered by the trust company, that stipulates the proponent's responsibility with regard to the trust. This agreement should identify who the ultimate beneficiary of the funds is, state that the trust fund exists to provide security for the rehabilitation costs of a particular site, specify the total amount required, and outline a schedule of payments.

A trust fund should be maintained by a trust company that may be required to be licensed under the relevant legislation. The types of investment available to the fund manager should be decided by the proponent and the government and specified in the agreement. Contributions to a trust fund are usually structured as a series of payments over a specific time period. The management and performance of a trust fund should be subject to periodic review[24].

Where a government-mandated mine for tax reclamation fund is required, payments into the fund should be allowed as a deductible expense at the time they are made for purposes of income tax and mining taxes.

(iv) Company guarantee

A company guarantee or a self-guarantee is based on an evaluation of the assets and liabilities of the company and its ability to pay the total rehabilitation costs. A company guarantee requires a long history of financial stability, which can be evidenced by either audited financial statements prepared by an accredited accounting firm, or, a favorable credit rating from a specialized credit rating service, or both.

[24] For more details on this issue, reference is made on the Handbook on Decommissioning.

Where the company is a member of a multinational group, it is the parent company or a financially robust affiliate which guarantees to provide the funds needed by the subsidiary to close and rehabilitate the mine site. The parent company consolidates the liabilities of its subsidiaries and guarantees in its balance sheet. If the parent is a large, financially healthy company, its guarantee is often more reassuring than that of the (usually smaller) local subsidiary. However, also multi-nationals are not immune to financial stress and may default on their guarantees, which could leave the government or civil society with the burden of cleanup and rehabilitation.

Many jurisdictions do not accept a company guarantee as a form of financial surety because of the public perception that a self-guarantee for a mining company is a contradiction in terms. Of those that do allow a company guarantee, some will accept this form of financial surety only for the first half of the life of the project or for part of the surety.

(v) Insurance scheme

There is a wide range of insurance options. General forms of insurance schemes are the premium financing, commercial general liability and professional indemnity, for instance, which normally do not cover environmental liabilities or long term rehabilitation costs.

The difference with a surety bond is that the later involves three parties: the person doing the work (principal or proponent), the person requiring the work (obligee, or the government), and the surety company providing the bond (surety). The bond guarantees that the principal will fulfill the terms of the contract and, if they don't, the obligee can file a claim against the bond to recover their losses from the surety. Insurance protects the proponent. Surety bonds protect the obligee who contracted with the principal to perform specific work on a project by reimbursing them when a claim occurs.

Queensland Mine Rehabilitation and Financial Assurance Regime

In order to manage environmental risk at mine sites, financial security, called a Financial Assurance (FA), is required to be provided by resource companies to the government prior to commencing mining activities. The amount of the FA is determined by the likely cost of rehabilitation for the area of disturbance, using the Queensland Government's FA calculator. A new Bill 2018 proposes the introduction of revised financial insurance provisions and establishes the Financial Provisions Fund, otherwise known as the 'scheme fund'. The scheme fund will receive contributions made by the holders of environmental authorities. Other contributions will also be made to the scheme fund, including amounts earned as interest on cash surety held.

(vi) Pledge of assets.

Pledge of assets takes the form of all surplus equipment and scrap metal that remains at the mining site after operations have ceased. The surplus equipment includes buildings and stationary equipment. The scrap metal includes all metal debris produced during site demolition and cleanup.

If a pledge of assets is being used as a financial surety, the government should make sure that, among other conditions, there is market demand for the assets. The value estimation should be

carried out by a third party and should include the cost of retrieving and transporting the assets from the site to the marketplace. The estimate should also be recalculated periodically. This is generally viewed as a high risk form of financial surety and is not accepted in many countries.

4.4. Tax implications of performance guarantees

Following the World Bank (2009)[25], there are five separate issues related to tax and a financial surety fund[26]. These are:

- Whether money paid into the financial surety is counted as an operating cost or an expense, and is therefore tax deductible,
- Whether decommissioning and rehabilitation costs count as operating costs, and are therefore tax deductible
- If any interest earned on the financial surety fund is taxable
- If any capital gain made on the financial surety fund is taxable
- If the financial surety fund will be taxable when it is released back to the company.

If the funds paid into a financial surety are tax deductible, then the decommissioning and rehabilitation costs should not be—or vice versa. But there is a problem making decommissioning and rehabilitation costs tax deductible because the majority of the expenditure comes once a mine has ceased operating, and so there is no income to offset the tax. One way of getting around this problem is to allow a company to claim tax deductions for closure provisions based on a unit of production during the operating life of the project (World Bank, 2009).

The situation is more complex in the case of an intra-group guarantee that is the case where a parent company guarantee (ultimate parent or other suitable related entity) of the Contractor provides that it will perform the Contractor's obligations if, for whatever reason, the Contractor does not perform.

An intra-group performance guarantees involves three parties:

- the client – an unrelated entity seeking to buy goods or services from the group;
- the contractor – a group company that is primarily responsible for completing obligations towards the client; and
- the guarantor – a group company that promises to step in and take over if the contractor cannot fulfill its obligations.

Fees for performance guarantees are structured similarly to fees for financial guarantees. However, their valuation for transfer pricing purposes poses additional challenges[27]. The guarantee base represents the amount at risk and therefore depends on (i) events that trigger the contractor's failure to fulfill its obligations (contract default triggers), and (ii) probability that they occur. Activating an intra-group performance guarantee may result in the guarantor completing the task of the contractor, paying the client a compensation or a combination of the above. As to financial guarantees, the criteria for deductibility should be heavily weighted on

[25] World Bank (2009), « Financial Surety », Extractive Industries for Development Series #7, June 2009.
[26] For more details on this issue, reference is made on the Handbook on Decommissioning.
[27] For the analysis of the transfer pricing aspects of performance guarantees, reference is made to the Chapter 9 Transfer Pricing Manual, "The application of the arm's length principle to intra-group financial guarantees (B.9.4.)"

whether and/or to what a degree the related arrangements actually shift risk from the MNE at the consolidated level to a third unrelated party.

Following OECD (2017)[28], intra-group performance guarantees should be paid for if :

- the guarantor should perform a deliberate concerted group action; just "being there" (passive association) is not enough. However, even when deliberate action is performed, it is not always clear that it involves the payment of a fee. For example, issuing a letter of comfort is a deliberate concerted action. Still, whether this is enough to warrant a fee remains unclear, in many cases a letter of comfort falls under a passive association as they simply confirm certain facts.

- the contractor should benefit from this action : enhance its commercial or financial position. If the contractor has a strong track record and performance guarantees are routinely required then it could be argued that there may be little or no value in the performance guarantee.

Often, in addition to the intra-group guarantee, a guarantee is provided by a third party bank to secure the mining company's commitments to the host country[29]. In such cases, the question is whether the guarantee provided by the third party bank does not cover all the commitments entered into by the mining company, in which case the intra-group guarantee is superfluous and should therefore not be remunerated. This scheme will require comparability analysis based on similar instruments provided by the related guarantor to third party (internal comparable) or similar instruments provided by third parties in the market (external comparable).

5 Farm-in / Farm-out agreements

5.1 Purpose

The extractives industry is characterized by high risk in the exploration phase and high capital cost of development if the exploration results in a commercial discovery. For these reasons it is not uncommon for the industry to spread risks and share costs by operating through joint ventures. Joint venture partners may also bring special expertise. For example, some companies specialize in particular types of terrain, some may have knowledge of adjacent resource plays and others may have experience in managing large projects. Getting the right partners involved increases the prospect of a venture being a success and for that reason most governments support, or at least try not to discourage, efforts to bring new investors into an existing contract.

5.2 Definitions

A farm-in / farm-out agreement is an agreement entered into by the holder of an extractive industry contract or licence (farmor) to assign an interest in the contract or licence to a new joint venture partner (farmee) in return for the farmee assuming responsibility for future obligations of the venture. The definition does not apply to a sale of assets or shares for immediate consideration. The holder of the existing contract or licence is called the "farmor" and is said to "farm out" part of its rights. The new investor is called "farmee" and is said to have "farmed in"

[28] OECD (2017) Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations
[29] See Example 8, UN Handbook, Taxation of the Extractive Industries by Developing Countries 2017, p.278.

to the contract or licence.

5.3 Types of assignment

There is no standard form of agreement or assignment as farm-outs differ depending on the resource to be extracted, the investment stage it has reached and the circumstances of the parties. However the assignment will normally require the carrying out of a specified work obligation in respect of exploration or other commitments. It may also include an upfront cash amount payable when the agreement is signed.

Normally, whether the venture is successful or unsuccessful, the farmor has no obligation to reimburse the farmee for the expenses incurred. The farm-out agreement may relate to specified work commitments or work commitments up to a specified amount (so called "capped"). If a commercial discovery has been made, the new partner may have to pay a premium over costs already incurred.

In consideration for the assumption of future obligations, the farmee will receive an agreed percentage of the farmor's participating interests in the contract. The transfer of the interest in the right may be immediate on signing of the agreement or deferred to a later point in time, usually when the farmee has fulfilled its work commitments under the agreement, and may be subject to approval of the host government.

5.4 Farm-out before commercial discovery

In the case of a farm-out during the exploration phase, the farmee is taking a share of the risk of failure and would not normally have to pay a premium to come into the venture. In such a case, the farmor would transfer a percentage of any future revenues in return for the farmee bearing the same percentage of the cost of the agreed work commitment (what is called at "ground-floor"). However, there may also be an upfront cash payment from the farmee to reimburse the farmor for costs incurred prior to the farm-out ("promote agreement").

(i) *Tax treatment of farmor*

The tax treatment of any upfront cash payment will depend on many facts, but is typically treated as a reduction of past expenditures, the impact of which will depend on the tax treatment of the original expenditure, or typically, if in excess of prior expenditures, as an ítem of income. Thereafter, the farmor would claim tax relief on its own share of future expenditure and pay tax on its own share of future revenues.

(ii) *Tax treatment of farmee*

The tax impact to the farmee would normally follow the tax treatment realized by the farmor on the original expenditure. As in the case of the farmor, the farmee would claim tax relief on its own share of future expenditure and pay tax on its own share of future revenues.

5.5 Farm-out after commercial discovery

In the case of farm-out of a successful venture, the farmee is taking less risk and would be expected to pay a premium to secure a share of the future revenues. This premium could take the form of an upfront cash payment, or an agreement to undertake a percentage of future expenditure that is higher than the percentage of participating interests to be transferred, or payment of an overriding royalty or a combination of these.

(i) Tax treatment of farmor

Any upfront cash payment would normally be taxed on the farmor as an ítem of income with respect to the premium received. Thereafter, the farmor would normally claim tax relief on its own share of future expenditure and pay tax on its own share of future revenues. In theory this is similar to the tax treatment of a farm-out during the exploration phase but in practice the farmor pays more tax in this case, because its share of future tax-deductible expenditure is less and/or its share of future taxable revenues is more. However an alternative treatment would be to value the premium element implied by the difference in future expenditure and revenue sharing percentages and tax that element upfront. That would require a present value estimate to be made of future expenditure and revenue, a fairly complex exercise.

(iii) *Tax treatment of farmee*

The farmee would normally be allowed a tax deduction for any upfront cash payment to the extent that the farmor reported the same cash amount as taxable income. As in the case of the farmor, the farmee would claim tax relief on its own share of future expenditure and pay tax on its own share of future revenues. Again, in theory this is similar to the tax treatment of a farm-out during the exploration phase but in practice the farmee pays less tax in this case, because its share of future tax-deductible expenditure is more and/or its share of future taxable revenues is less. Under the alternative treatment described above, which involves valuing the premium and taxing it upfront, this means that farmee is effectively able to claim a deduction equal to the amount of income reported by the farmor, but only later, as and when future expenditure is incurred and revenues earned.

5.6 Examples

In some countries, farm-out arrangements must be approved by the local authorities. In Chad, any farm-in/farm-out arrangement is subject to the prior written approval of the Chad Government (represented by the Minister of Petroleum). The request for approval is submitted by the farmer, after payment of a fixed fee depending on the petroleum operations stage. Upon approval and farming completion, the farmee is considered as holder or co-holder of concerned petroleum blocks from the beginning, in the proportion of the participating interest acquired.

The tax consequences of farm-in and farm-out arrangements must be considered on a case-by-case basis, depending on how the agreement is structured and whether the farm-out arrangement is before or after the commercial discovery.

(i) Ghana

In Ghana, the farmee is entitled to a deduction for the cost it incurs over a period of five years

from the date of commencement of commercial operations. Where there is a farm-in/farm-out agreement after the commencement of operations, the written-down value of the petroleum capital expenditure is apportioned between the farmer/farmee in proportion to their respective interests.

(ii) Kenya

In Kenya, the transferor in the farm-out transaction is taxed on the gain if the net gain forms part of the taxable income of the transferor and is taxed at the corporation tax rates. If an interest is transferred at the time of the agreement, the taxable income of the transfer shall not include the value of any work undertaken by the transferee on behalf of the contractor. If the transfer of an interest is deferred until some or all of the work undertaken by the transferee is completed, the amount payable to be included in the taxable income of the contractor as gains or profits from business excludes the value of the work undertaken by the transferee on behalf of the contractor.

(iii) Nigeria

The Nigerian Petroleum (Amendment) Decree 1996 (Decree No. 23): "farm-out" means " an agreement between the holder of an oil mining lease and a third party which permits the third party to explore, prospect, win, work and carry away any petroleum encountered in a specified area during the validity of the lease".

Scenario	**Tax treatment of farmor**	**Tax treatment of farmee**
Farm-out pre-discovery at cost: tax treatment of upfront cash payment	Upfront cash payment is used to reduce pre-production costs of the farmor.	Upfront cash payment forms part of the farmee's pre-production costs, to be amortized against future revenue when the block commences production.
Farm-out pre-discovery at cost: tax treatment of ongoing expenditure commitment	All pre-discovery costs are capitalized as part of the farmor's pre-production costs to be amortized against future revenues.	All pre-discovery costs are warehoused as part of the farmor's pre-production costs to be amortized against future revenues.
Farm-out post-discovery at a premium: tax treatment of upfront cash payment	Where it is discovered that the farmor has enjoyed a Capital Gain from the upfront payment at a premium, then Capital Gains Tax at 10% is applied on the difference between sales proceeds (upfront cash) and the cost of the portion farmed out. The farmor reports the overriding royalty received from the farmee as income and it is subject to tax.	Total upfront cash payment forms part of the farmee's costs in the joint venture and deductible against revenue from the joint venture project. The farmee pays an overriding royalty to the farmor on production revenues.

Farm-out post-discovery at a premium: tax treatment of ongoing expenditure commitment	Ongoing expenditure is tax deductible if it satisfies the WEN (wholly, exclusively & necessarily incurred) test. Where it is discovered that the farmor has enjoyed a Capital Gain from the upfront payment at a premium, then Capital Gains Tax at 10% is applied on the difference between sales proceeds (upfront cash) and the cost of the portion farmed out. The farmor reports the overriding royalty received from the farmee as income and it is subject to tax.	The farmee's tax deductible expenditure increases by the amount of the premium where the farmee and farmor file their tax returns separately. The farmee pays an overriding royalty to the farmor on production revenues.

(iv) Brazil

Scenario	**Tax treatment of farmor**	**Tax treatment of farmee**
Farm-out pre-discovery at cost: tax treatment of upfront cash payment	Upfront cash payment is considered as farmor's taxable revenue.	Upfront cash payment is treated as part of the concession's intangible asset cost.
Farm-out pre-discovery at cost: tax treatment of ongoing expenditure commitment	Brazil doesn´t have a specific law provision for this issue. Ongoing expenditure would be subject to normal tax rules.	The ongoing expenditure commitment is considered cost and is treated as part of the concession's intangible asset cost.
Farm-out post-discovery at a premium: tax treatment of upfront cash payment	Upfront cash payment is considered as farmor's taxable revenue.	It is considered cost and is treated as part of the concession's intangible asset cost.
Farm-out post-discovery at a premium: tax treatment of ongoing expenditure commitment	Brazil doesn´t have a specific law provision for this issue. Ongoing expenditure would be subject to normal tax rules.	The ongoing expenditure commitment is considered cost and is treated as part of the concession's intangible asset cost.