

African and Fiscal Affairs Departments

# Tax Avoidance in Sub-Saharan Africa's Mining Sector

*Prepared by a joint team led by Giorgia Albertin,  
Boriana Yontcheva, and Dan Devlin, comprising  
Hilary Devine, Marc Gerard, Irena Jankulov Suljagic,  
Vimal Thakoor, and Sebastian Beer*

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## Executive Summary

Higher public spending to meet the development objectives of sub-Saharan Africa (SSA) requires boosting revenue mobilization. Financing needs – already substantial before the COVID 19 pandemic – have increased further as SSA countries rightly responded to mitigate the pandemic’s socio-economic impact. As part of revenue mobilization efforts, natural resource taxation has the potential to make a substantial contribution in the region, supporting countries in reaching their development goals.

The mining sector plays an important role in many SSA countries, but its overall contribution to revenue mobilization could be enhanced. Fifteen SSA economies are considered “resource-intensive” (excluding oil), with mining making a significant contribution to countries’ national output, exports, and foreign direct investment (FDI) inflows. These countries have chosen fiscal regimes for mining that place royalties and corporate taxation at their center, but overall revenue from mining in most resource intensive economies in SSA remains relatively limited.

Multinational enterprises (MNEs) play a dominant role in SSA countries’ industrial mining sector. MNEs mobilize substantial capital resources and specialized capacity in efficient resource extraction across most SSA resource-intensive countries. However, revenue from these MNEs has been reduced by two forces. First, countries try to attract inbound investment by lowering tax burdens, which has stoked unhealthy regional tax competition. Second, international profit shifting by these MNEs has reduced the tax base in producing countries. For instance, nearly half of FDI inflows into SSA mining come via third country investment “hubs” (that is, countries with very high FDI to GDP ratios) which, when combined with light taxation of these conduit investment entities, are conducive to profit shifting.

This departmental paper aims to contribute to the international policy debate around profit shifting, tax avoidance and SSA’s revenue mobilization efforts in three ways. First, it examines the importance of mining, the role of MNEs, and mining revenue outcomes in SSA. Second, it assesses the magnitude of



profit shifting in mining drawing on new macro level research, supplemented by case studies to illustrate the lived experience of tax avoidance in SSA mining. Third, the paper identifies tax policy reforms that could boost revenue mobilization in SSA.

New research into the extent of profit shifting in SSA mining indicates African countries are losing between \$470 million and \$730 million per year in corporate income tax on average from MNE tax avoidance. The baseline estimate—which also includes SSA economies with mining but not defined as resource intensive—suggests a revenue loss of about \$600 million, based on tax rate differentials between African countries and offshore affiliates in the same MNE group. These effects are larger than what has been found for other sectors. The analysis also finds that rules to restrict profit shifting (for example, through limitations on interest deductions against corporate income taxes) can significantly reduce the extent of profit shifting.

Targeted policy actions could critically help resource-intensive countries in reducing tax avoidance in mining and foster revenue mobilization. A concerted effort to close off current profit shifting channels could pay dividends. Recommended actions include strengthening and simplifying transfer pricing protections, limiting interest deductions; improving tax treaty practices, limiting tax incentives, and strengthening investment negotiation practices. In addition, for those countries imposing capital gains tax on indirect transfers occurring offshore, recent work by partners in the Platform for Collaboration on Tax has highlighted where protections could be strengthened. Linking tax policy changes to similar policy actions elsewhere can help promote change, strengthening the benefits of the region acting together. Countries will also need to engage closely with international efforts to reform corporate income taxation, which can have implications for how mining MNE profits are taxed.

Many SSA countries have already taken steps to address vulnerabilities to profit-shifting in the mining sector. As examples, Sierra Leone's new fiscal regime moved the country away from negotiating fiscal terms mine by mine; Guinea, Liberia, and Mali have strengthened transfer pricing protections, South Africa and Nigeria have set limits on interest deductions; nine of the 15 resource intensive economies have alternative minimum taxes that can ensure some corporate taxes are paid each year, and Kenya introduced a limitation of benefits article into its tax treaty policy.

These actions hold the promise of stronger revenue mobilization from mining in SSA. There is no single cause of disappointing mining revenue performance, and likewise no silver bullet in raising more revenue quickly. Improving tax policy and tackling tax avoidance require careful preparation and stronger capacity, which take time, resources, and political commitment.

# Introduction

Countries' ability to reach the UN Sustainable Development Goals relies crucially on securing their financing. They must find ways to contribute significantly to the funding of their development objectives, and revenue mobilization is a key component of that contribution. Sub-Saharan African (SSA) countries also have clear goals to increase industrialization<sup>1</sup> and integration into the global economy, which can create policy tensions with revenue raising objectives.

Furthermore, the impact of the global COVID-19 pandemic and policy responses to support the economy and protect the most vulnerable have also strained the budgets of SSA countries (as elsewhere). This will require fiscal repair in the coming years once the emergency has passed.

Natural resources taxation has the potential to make a substantial contribution to all these objectives. Tightening controls against international profit shifting could be a key component to mobilize domestic resources and support fiscal recovery. The IMF is actively assisting developing countries to ensure their fiscal regimes for mining – and their tax systems more generally – effectively collect taxes while fostering investment.

This paper discusses the role of the mining sector in SSA countries (Chapter 1) and focuses on the contribution to government revenue mobilization of MNEs active in the mining sector in SSA and the fiscal regime structures used (Chapter 2). Drawing on existing research on base erosion and profit shifting the paper then provides estimates of the magnitude of tax avoid-

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<sup>1</sup>See for example, the African Union's African Mining Vision, adopted in 2009 that urged Africa to be “. . . thinking about how mining can contribute better to local development by making sure workers and communities see real benefits from large-scale industrial mining . . .” (African Union 2009).

ance in mining in the region (Chapter 3).<sup>2</sup> It then highlights “real world” case studies from the region to illustrate channels of tax avoidance and the challenges faced by SSA governments (Chapter 4). It finally discusses policy actions that can be—and are being—taken to combat revenue losses by countries in the region (Chapter 5).

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<sup>2</sup>To enable a focused examination of the particular circumstances in mining, the analysis conducted in this paper excludes oil and gas production.

## CHAPTER

# 1 Mining and Multinationals in Sub-Saharan Africa

## A Key Economic Role

The mining sector plays a key role in SSA, with 15 countries in the region defined as “resource-intensive.”<sup>1</sup> A substantial proportion of the world’s mining production comes from Africa, including more than 30 percent of global production of chromium, cobalt, manganese, platinum, gem diamonds and tantalum (Republic of Austria 2020) (Figure 1).<sup>2</sup> Based on 2018 data, 10 of the top-15 most mining-intensive economies in the world are in SSA (ICMM 2020).<sup>3</sup> Thus, mining plays a major role in several SSA countries. In total, the region produced minerals with an estimated worth of about \$350 billion in 2018 (Republic of Austria 2020).<sup>4</sup> These include cobalt and tantalum in the Democratic Republic of the Congo, diamonds in Botswana, gold in Burkina Faso and Tanzania, bauxite in Guinea, copper in Zambia, uranium in Namibia, iron ore in Liberia, and platinum in South Africa.

Furthermore, SSA countries have substantial untapped mining resources. The region is estimated to possess 30 percent of global mineral reserves (UNEP 2008). This indicates a future where mining will continue to play a key role—including as inputs in emerging technologies, for example car batteries that require cobalt (significant reserves in Democratic Republic of the Congo), manganese (South Africa, Gabon, Ghana), and graphite (Mozambique, Madagascar, Zimbabwe). In addition, the role of mining in SSA could

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<sup>1</sup>SSA countries defined as resource-intensive (IMF Sub-Saharan Africa Regional Economic Outlook) are: Botswana, Burkina Faso, Central African Republic, Democratic Republic of the Congo, Ghana, Guinea, Liberia, Mali, Namibia, Niger, Sierra Leone, South Africa, Tanzania, Zambia, and Zimbabwe. The definition used in this paper excludes petroleum.

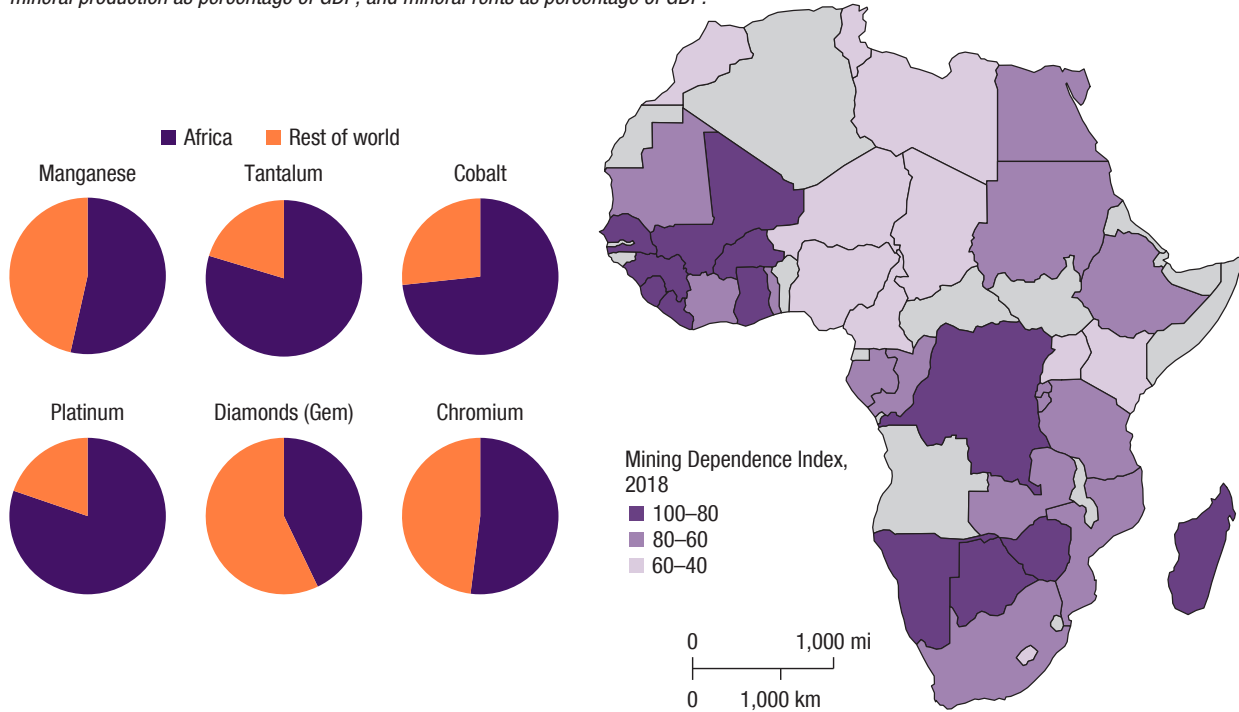
<sup>2</sup>This is based on quantities produced.

<sup>3</sup>Democratic Republic of the Congo, Guinea, Burkina Faso, Mali, Sierra Leone, Liberia, Ghana, Namibia, Madagascar, and Botswana.

<sup>4</sup>Data exclude diamonds.

**Figure 1. Mining in Africa**

Africa has considerable mineral resources—see examples below in which Africa contributes more than 30 percent of global production. In addition, many African economies are highly dependent on mining (darker shading of economies indicates higher mineral dependence). The index of mining dependence, an assessment developed by the International Council for Mining and Metals (ICMM), is a scale from 1–100 (100 being most dependent) that assesses the importance of mining to an economy. It is a synthesis of mineral exports; change in these exports over time; value of mineral production as percentage of GDP; and mineral rents as percentage of GDP.



Sources: Production data: Republic of Austria (2020); and Mining Dependence Index, ICMM.

grow further if rates of regional exploration increase: many stakeholders perceive the region to be relatively under-explored (Figure 2).<sup>5</sup>

Looking at the national accounts of African economies, the importance of mining can be seen in several ways (Figure 3). These include:

- Over the last decade, the mining sector contributed about 10 percent to GDP on average across the 15 SSA countries considered resource-intensive.
- In most SSA resources-intensive countries, mining exports represent 50 percent of total exports on average.
- The mining sector is the main source of foreign direct investment (FDI) inflows in the region, representing about one-third of total inflows in 2017 (Figure 3), albeit with large variations among countries and over time as

<sup>5</sup>See for example, <https://blogs.platts.com/2019/01/23/can-africas-mines-sector-shake-off-investors-negative-perceptions/>

projects are developed and commence.

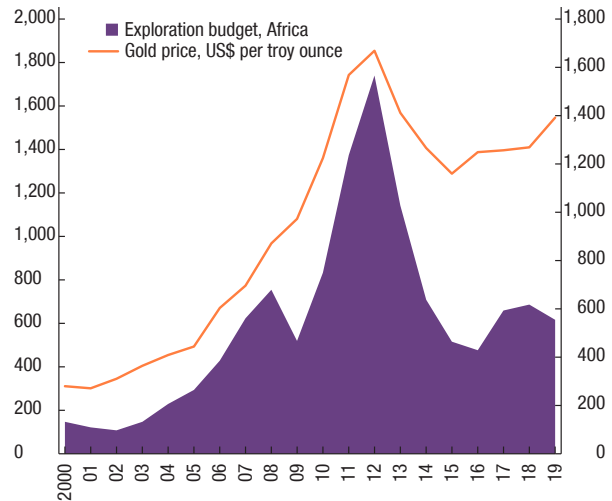
## A Heavy Reliance on Multinational Enterprises

Multinational enterprises (MNEs) play a dominant role in mining in SSA countries. African governments and domestic investors often lack the capacity to exploit mineral resources. For resource-intensive countries in the region, more than 80 percent of all entities making payments to governments are foreign-owned MNEs—that is, corporate groups operating in multiple countries (Figure 4).

Most big mining MNEs have a presence in Africa (Laporte and de Quatrebarbes 2015). These include Glencore Xstrata (for example, iron ore in Mauritania; zinc in Burkina Faso; copper and cobalt in Democratic Republic of the Congo; nickel in Tanzania; copper, cobalt, and zinc in Zambia; zinc in Namibia; chromium in South Africa), Rio Tinto (aluminum in Cameroon and Ghana, bauxite in Guinea, ilmenite in Mozambique, copper and ilmenite in South Africa), Anglo American (diamonds in Botswana, Namibia, and South Africa; platinum and palladium in Zimbabwe; iron ore and manganese in South Africa), Barrick (copper in Zambia and, following the 2019 Rand-gold merger, gold in Mali), Newmont (gold in Ghana), AngloGold Ashanti (gold in Ghana, Guinea, Mali, Namibia, Democratic Republic of the Congo, and South Africa), and Kinross (gold in Ghana and Mauritania).

MNEs mobilize substantial capital resources and bring specialized capability to resource extraction. MNEs are typically better-suited to undertaking these investments than governments and their expertise can help ensure SSA mines operate efficiently and maximize the gains from mineral deposits. MNEs involved in mining may also be service-based businesses not directly engaged in mineral exploitation (for example, they may provide rock sampling/drilling services).

**Figure 2. Africa Gold Mining Exploration and Gold Price**  
(Millions of US dollars, left scale; US dollars per troy ounce, right scale)

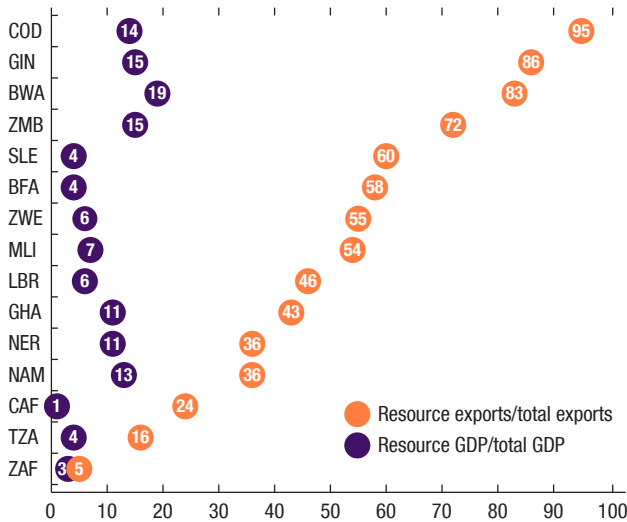


Sources: S&P Global; and IMF staff estimates.

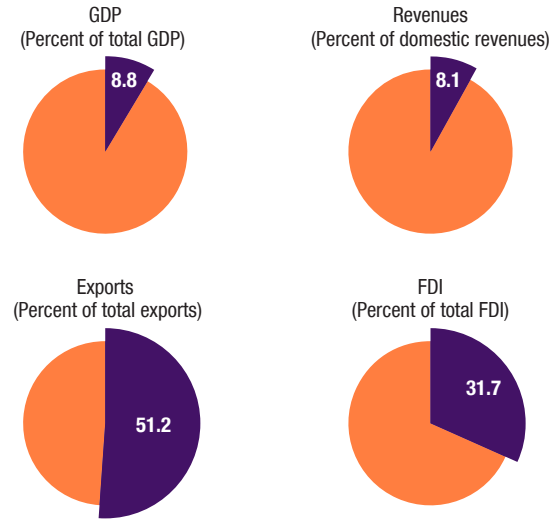
**Figure 3. Contributions of Mining Resources to SSA Countries (Average, 2009–19)**

For many economies in the region, mining plays a substantial role in the economy.

**1. Mining Contribution of GDP and Exports in Sub-Saharan Africa, Average 2014–19 (Percent)**



**2. Mining Contribution to GDP, Domestic Revenues, Exports, and Foreign Direct Investment, Average SSA Resource-Rich Countries 2009–19 (Percent)**

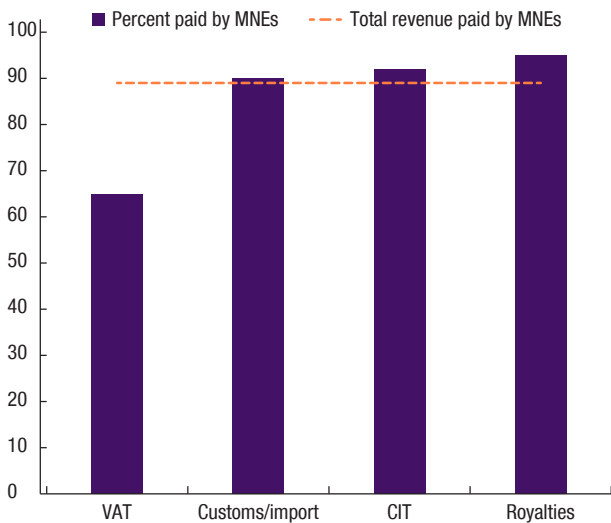


Sources: Country authorities; FAD Resource Revenue Tax Database; FDI markets; and IMF staff estimates.

**Figure 4. Importance of MNEs in Mining and Revenue Mobilization in SSA**

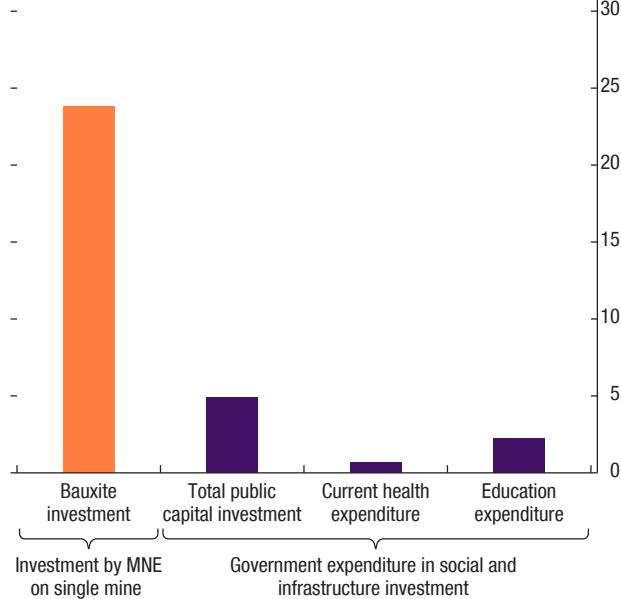
MNEs dominate mining in SSA, as indicated by their proportion of total revenue payments to governments.

**1. EITI Revenue—Payments by MNEs as Percentage of Total Payments**



This recent mine in Guinea indicates the scale of the investment relative to government expenditure categories.

**2. Guinea, Bauxite Mining Investment Compared with Public Expenditure, 2018 or Latest (Percent of GDP)**



Sources: Extractive Industries Transparency Initiative (EITI); UNCTAD World Investment Report 2019; World Bank Development Indicators; and IMF staff estimates. Note: Data for EITI reporting countries only, for MNEs operating in mining (excludes payments made under EITI by petroleum MNEs). Payments of VAT are notably lower than other revenue categories because MNEs that export their minerals are typically entitled to VAT refunds for tax paid on their inputs.

## CHAPTER

# 2

## Mining Fiscal Regimes and Tax Revenue Performance—Adequate Fiscal Gains?

### Fiscal Regime Settings for Mining Investors

Mining investors operate under “tax-royalty” fiscal regimes across the region. Most countries in Africa operate a mining fiscal regime based on a combination of royalties, corporate income tax, and, for many, on the state taking a non-controlling ownership stake in projects, receiving dividends from corporate profits. Alternative minimum taxes (AMTs) are used frequently to buttress the company tax when tax payments would otherwise fall below some minimum level. Taxes targeted at economic rents are used much less frequently (see Annex 1 for summary of fiscal regimes).

Almost all resource-intensive countries in SSA use contracts to define the fiscal terms applying to particular projects. These contracts override domestic revenue legislation, incorporating tailored fiscal terms for projects based on upfront negotiations. The included fiscal terms often deviate from the generally-applicable fiscal regime and also include clauses to fix (“stabilize”) those terms over time.

### Revenue Patterns

Payments data reported under the Extractive Industries Transparency Initiative (EITI) show mining companies making a wide range of payments. For the nine resource-intensive economies participating in EITI, payments comprise those directly related to mineral production (for example, royalties, state participation dividends) and payments made under generally applicable revenue laws (for example, CIT, trade taxes). For EITI countries<sup>1</sup>:

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<sup>1</sup>Nine of the 15 resource-intensive countries in the region participate in EITI. Data presented use latest available for each country (most are 2014 or 2015, given lags in reporting).



- Royalties contribute over 25 percent of total payments in all countries except Liberia and Mali (around 15 percent).
- Corporate taxes represent over 15 percent of total payments. The only exceptions were Liberia and Sierra Leone which were both below 5 percent (although data for both are affected by the Ebola pandemic that began in 2014).<sup>2</sup>
- Taxes on mining company goods and trade (excises, customs duties, and export taxes) are contributing materially to total payments. In Burkina Faso, Guinea, Mali, and Zambia, these represent over 15 percent of total payments. In Ghana, Niger, Liberia, Sierra Leone, and Tanzania, however, these payments were less than 15 percent.
- The source of remaining payments varies. Ghana for example received around 38 percent of payments from state participation dividends while, in contrast, Sierra Leone received around 18 percent of payments from license fees (see Annex 2 for charts).

For the 15 resource-intensive economies of the region, revenue from mining accounts for 2 percent of GDP, on average. Most remain in the range of 1–3 percent of GDP, on average, with Botswana a notable outlier, consistently recording higher mining revenues than other African economies at over 12 percent (Figure 5, panel 1). This revenue performance is reinforced by 50-50 joint venture arrangements with De Beers<sup>3</sup> for both diamond mining and trading. Botswana also negotiated a 15 percent stake in De Beers itself (Korinek 2013). These arrangements generate dividend revenue and may also help stifle international profit shifting within the joint-venture companies by exerting managerial influence. Beyond Botswana, only Guinea and Zambia have mining revenues that contribute over 15 percent of total revenues—for the remaining ten economies, the contribution is much lower (nine economies are under 10 percent of total revenue; Figure 5, panel 2).

There are concerns that this level of revenue does not represent a “fair” sharing of the benefits of mining for the region. General concerns about international profit shifting by MNEs are at the forefront of the international tax debate (IMF 2021) and with MNEs dominating African mining, these concerns have mixed with regional concerns about the sharing of resource wealth. African Union leaders, for example, have noted a paradox that the region’s “vast mineral wealth exist[s] side by side with pervasive poverty” (African Union 2009).<sup>4</sup> A related concern is that changes in the value of

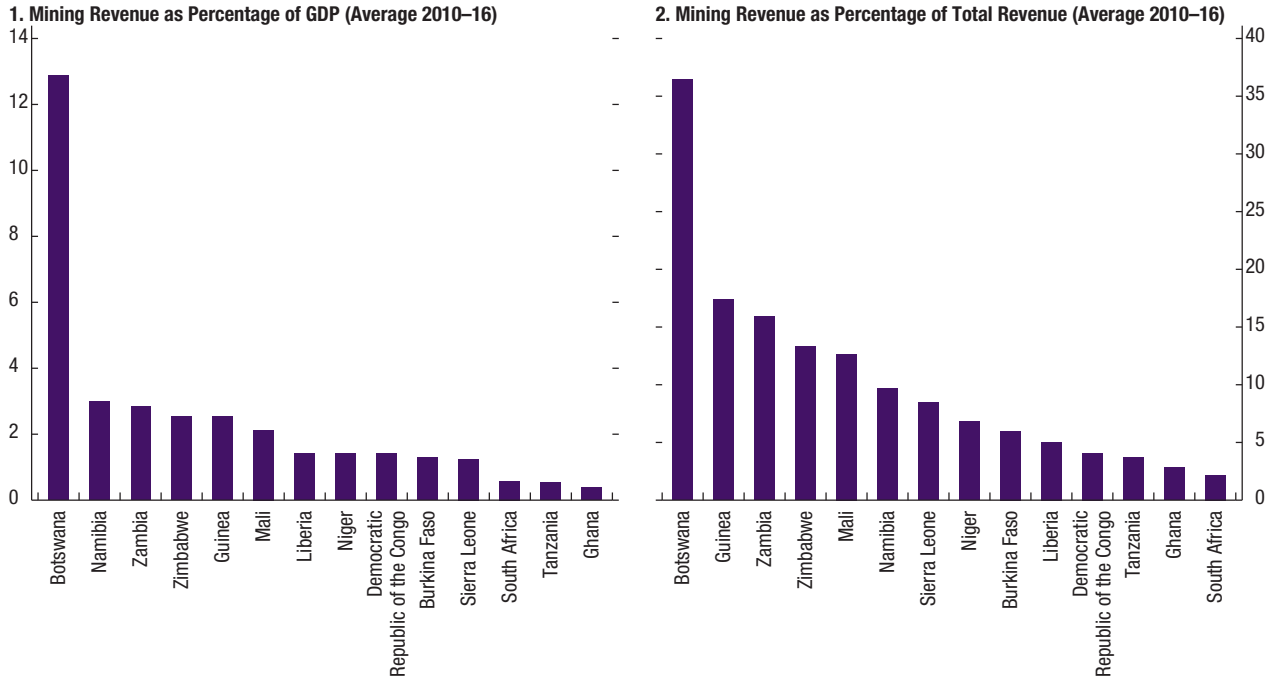
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<sup>2</sup>Guinea was also affected by the pandemic, but CIT remained more than 15 percent of total payments.

<sup>3</sup>De Beers is part of the MNE Anglo American.

<sup>4</sup>See also, for example, the “Illicit Financial Flow” report of the High-Level Panel on Illicit Financial Flows from Africa (United Nations 2015), which includes concerns around tax avoidance, as well as tax evasion and criminality/corruption.

Figure 5. Mining Revenue in Sub-Saharan Africa



Source: IMF.

mineral production are not reflected in mining revenues—particularly during periods of strong prices—which is seen as an indicator MNEs are enjoying economic rents and fiscal settings are unbalanced. Mansour (2014), for example, observed that tax revenue from natural resources in SSA<sup>5</sup> increased by about 1.4 times between 1985 and 2010 while world mineral prices increased by a factor 2.3 on average; and de Quatrebarbes and Laporte (2015) estimated that the value of regional mineral production increased by 4.6 times during 2000–10, while government revenues from nonrenewable resources only increased by a factor of 1.2.

Numerous factors affect the potential to raise revenues in mining and contribute to fostering development in SSA. These are examined to place concerns around international profit shifting by mining MNEs into their wider context and examine what might be driving any disconnect between the extent of economic rents and revenue performance.

<sup>5</sup>This study included petroleum.

## **Fiscal Regime Structure**

The structure of mining fiscal regimes in SSA directly affects the pattern and magnitude of revenue from mining. As noted, the region has tended to adopt a fiscal regime model with a prominent revenue role for mineral royalties, company taxes, and state participation.

Fiscal instruments vary in their potential to raise revenue, responsiveness to changes in production values, and ability to capture economic rents (as well as their impact on investment decisions). Corporate income tax (CIT) and resource rent taxes, for example, are designed to capture more of the “upside” from mining relative to royalties, which aim for greater stability in revenue over time—even in times of lower mineral prices (IMF 2014).<sup>6</sup> Even for CIT, there can be lags between commodity price increases and when governments might receive increased tax payments, depending on the financial position of companies and whether the investor can use prior-year losses to offset current profits. The primacy of royalties in the region and lesser role for cash flow taxes on economic rents places some limits on how responsive the total fiscal regime can be to changes in prices and production. Fiscal instruments also have unique vulnerabilities to different types of avoidance and profit shifting, which can affect performance, potentially reducing revenue from profit-based instruments such as CIT and state participation dividends (examined in Chapter 4).

## **Corporate Taxation and the Pressures of Tax Competition**

Competition for inbound investment can manifest via tax incentives, particularly CIT rate reductions and/or provision of tax holidays. Efforts to boost economic development have seen policymakers encourage investment via reduced tax rates on many sectors, and this includes mining. This tax competition can be incorporated into tax legislation, investment promotion laws, mining codes, and/or as provisions in individual investor agreements.

The instruments used to engage in such tax competition vary across countries, but often arrive at the same result—lower CIT rates and/or periods of zero tax (Table 1). Examining the 15 resource-intensive economies, in 2020:

- Only three countries had lower CIT rates for mining, compared to other sectors, in their legislation, six had higher rates, and the remaining six applied the same rate across industry sectors.

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<sup>6</sup>Conceptually, state participation dividends should also capture this upside because they are distributions of corporate profits in producing countries.

Table 1. Corporate Taxes and Incentives

	Tax and Mining Law		Incentives (mining eligible)		Resource Contracts	
	General CIT Rate (percent)	Mining CIT Rate (percent)	Investment Law	Economic Zones (percent)	Usage	CIT Rate <sup>2</sup> (percent)
Botswana	22	—	15 percent CIT	5–10 CIT	yes	no data
Burkina Faso	27.50	—	Exempt from min tax	see note 1	yes	17.5 CIT
Central African Republic	30	—	Exempt from min tax	—	no data	no data
Democratic Republic of the Congo	30	30 + s/tax	—	—	yes	0 CIT (15 yrs prodn)
Ghana	25	35	—	—	yes	32.5% CIT rate
Guinea	25–35	30	Exempt from min tax	see note 1	yes	0 CIT (10 yrs prodn)
Liberia	25	30 + s/tax	—	—	yes	25 CIT, no s/tax
Mali	30	—	25 percent CIT for 15 years	—	yes	0 CIT (3 yrs prodn)
Namibia	32	35–50 + s/tax	—	—	no data	no data
Niger	30	—	Exempt from min tax	—	yes	0 CIT (3 yrs prodn)
Sierra Leone	25	25 + s/tax	—	see note 1	yes	0 CIT (3 yrs prodn)
South Africa	28	28–32 <sup>3</sup>	—	see note 1	no data	no data
Tanzania	25–30	—	—	see note 1	yes	no data
Zambia	35	15–35	—	—	yes	25 CIT rate
Zimbabwe	24.7	15 + s/tax	—	0 CIT	yes	0 CIT (5 yrs prodn), then 15

Sources: IBFD; Intergovernmental Forum on Mining, Metals and Sustainable Development mining incentives database; Natural Resource Governance Institute; resourcecontracts.org; and IMF.

<sup>1</sup>Unclear if mining is included/excluded from possible SEZ status.

<sup>2</sup>CIT rate used in at least one current resource contract.

<sup>3</sup>Gold CIT rate varies according to formula (but cannot go below 28 percent).

Note: While many countries maintain statutory corporate tax rates for mining that are in line with, or higher than, other sectors of the economy (green shading), they can be reduced through incentive policies (red shading). The actual rates applying to many investors can also be negotiated away in investment contracts. All data as at 2020, but resource contracts reflect latest year available (in operation 2020 but signed in a prior year). s/tax = additional tax above CIT.

- Three countries have investment promotion and/or special economic zone provisions that include CIT rate incentives for mining explicitly, and an additional four countries have investment promotion laws that switch off alternative minimum taxes.<sup>7</sup>
- At least nine countries have reduced CIT tax rate as tax incentive in at least one resource contract with investors. Five countries do not publish their resource contracts.

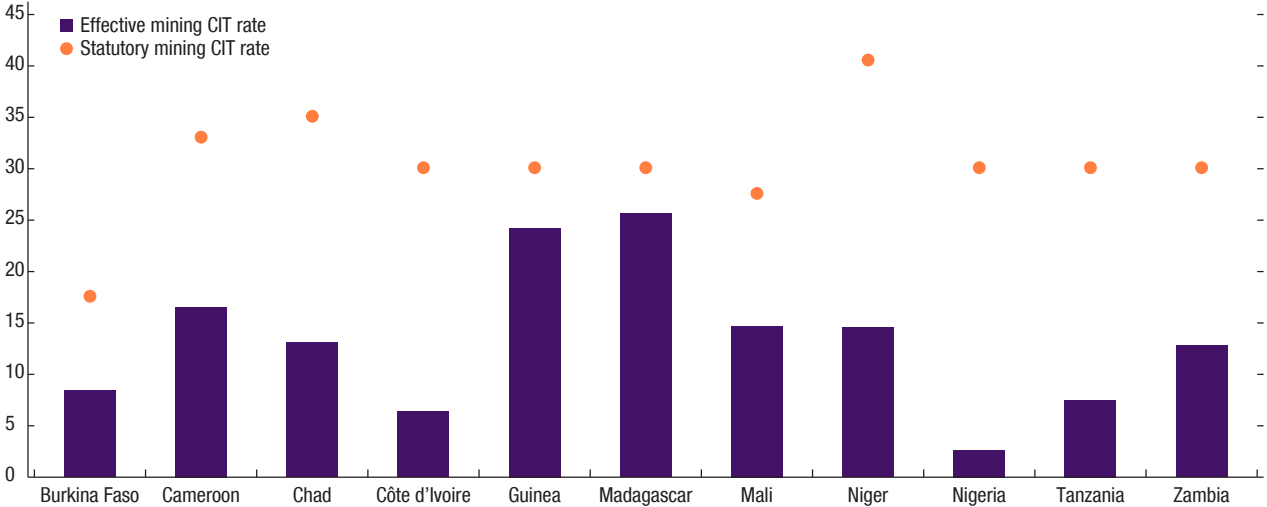
Ad hoc and reduced taxation in mining contracts continue to act as a major impediment to revenue mobilization. These negotiated fiscal terms are direct financial transfers to investors, but usually not instrumental in whether investments occur (PCT 2015). The use of investment-based incentives and

<sup>7</sup>In an additional five countries, legislation does not explicitly include/exclude mining.

**Figure 6. Statutory CIT Rates on Mining and Implicit Tax Rates (EITI Countries)**  
(Percent)

The effect of incentives, reduced tax rates, and other tax code provisions (for example, accelerated depreciation) can be incorporated into a metric of the overall characteristics of the company tax system facing mining companies. As noted in Botman, Klemm and Baquir (2008), what matters in understanding CIT revenue performance is the combined effect of tax rules, which influence investment decision making (whereas statutory rates matter as incentives for profit shifting).

Extractive Industry Transparency Initiative (EITI) payments data for mining MNEs in the region enables an implicit country level CIT rate to be calculated. The implicit tax rates below use CIT revenue from mining companies, taken as a percentage of the mining sector's gross value add (broadly, the contribution of the sector to GDP). These are backward looking estimates and therefore affected by past tax rules and the history of company losses which may be used to reduce taxable income. For the region, implicit CIT rates appear to be significantly lower than statutory rates, which in part relates to the fact that value added is used in the denominator (rather than taxable profit). What is notable, however, is the large difference in this gap across countries.



Sources: Extractive Industries Transparency Initiative (EITI); IMF Fiscal Affairs Tax Rate Database; and IMF staff estimates.

Note: The statutory CIT and the effective CIT series are not directly comparable, due to methodological differences in calculation. Effective CIT rates have been averaged over the three latest years available. Some statutory CIT rates differ to Figure 5 (Figure 5 uses latest year available, Figure 6 rates match effective tax rate data). Countries chosen on basis of data—some countries not available due to data limitations.

resource contracts also suggest a degree of policy incoherence within governments, as investment promotion comes at the expense of revenue mobilization (especially notable in those countries where tax legislation provides for *higher* tax rates on mining than other sectors).<sup>8</sup> When combined with other common features of CIT systems for mining (for example, accelerated depreciation), implicit CIT rates appear to be notably below statutory CIT rates (Figure 6).

Creating tax-preferred sectors or entities in the economy also facilitates purely domestic tax planning. This domestic tax avoidance focuses on shifting profits from taxable entities to tax-preferred entities, which can be done by both MNEs and domestic firms (examined further in Chapter 4).

<sup>8</sup>Mansour (2014) notes that the 1980s–90s was a period when mining in the region was “not properly taxed,” an additional factor that may be influencing more recent revenue performance as the region may still be experiencing a hangover from these earlier policies if resource contracts were used (and are still operational).

## Macro Evidence of MNE Tax Avoidance in SSA

International profit shifting involves MNE actions to take advantage of tax differentials between countries. At its simplest, this means MNEs seek to allocate corporate tax deductions to countries with higher tax rates, with the corresponding income allocated to lower-tax countries.<sup>1</sup> For example, an interest-bearing loan could be arranged between different entities within an MNE group, with interest expenses claimed as deductions in the higher-tax country, and the interest income allocated to the lower-tax counterpart.

At the macro level, these tax-planning strategies have placed the international corporate tax system under unprecedented stress (IMF 2019). A recent study on the empirical profit shifting literature concluded that a 1 percentage point larger tax rate differential (between different entities in an MNE) reduces reported pre-tax profits in the higher-taxed affiliate by 1.5 percent (Beer, De Mooij, and Liu 2019).<sup>2</sup>

There is evidence that developing countries are severely affected by profit shifting, more so than advanced economies. While uncertainty remains on the magnitude of profit shifting by MNEs and associated revenue losses, developing countries are frequently considered the “prime losers” from global profit shifting.<sup>3</sup> One study estimated the revenue loss at 1 percent of GDP for OECD economies and 1.3 percent of GDP for developing countries globally (Crivelli, De Mooij, and Keen 2016).

MNEs involved in natural resource extraction may be more likely to relocate profits than MNEs in other sectors. MNEs in resource extraction tend to

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<sup>1</sup>This is because the international tax framework relies largely on separate accounting, whereby an MNE is taxed at the level of individual subsidiaries operating in different countries – for further discussion see Beer and Loeprick (2018).

<sup>2</sup>Known as a “semi-elasticity.”

<sup>3</sup>See discussion in Devereux (2021).

operate across a wider scope of industry sectors than other MNEs, making them more complex, and they typically contain dedicated entities within the group with a higher ratio of intangible assets (for example, mining rights) to total assets (Beer and Loeprick 2015).<sup>4</sup> Both of these indicators tend to be associated with an increased sensitivity of reported profits to international tax rate differentials (Beer and Loeprick 2018).

## **Quantifying the Impact of Profit Shifting in SSA—New Evidence**

Sectoral analysis on the magnitude of profit shifting, such as for mining, is relatively limited but new evidence is emerging. The lack of analysis of mining profit shifting is in part explained by significant data gaps that remain in the region,<sup>5</sup> but efforts to increase transparency around extractive industry investment and revenue reporting are enabling new data sets to emerge. For example, EU- and Canada-based MNEs are now required to disclose payments to governments on a country-by-country (CBC) basis,<sup>6</sup> building upon transparency initiatives such as EITI. Combining payments data, EITI reports, an internal IMF resource revenue data set,<sup>7</sup> and financial information from more than 600 MNE groups (with subsidiaries in more than 160 countries) has enabled new analysis of firm-level profit shifting in the extractive industries, taking into account differences between mining and petroleum MNEs (Beer and Devlin 2021).

This new research points to MNE profit shifting in mining as a material threat to revenue mobilization in SSA. A key measure to gauge the extent of profit shifting by MNEs is the sensitivity of their reported profits to international tax rate differentials. The sensitivity of taxable profits captures how the location of reported profits within an MNE changes in response to changed profit shifting incentives; the latter is measured as the difference between the host country tax rate and the average CIT rate affiliates in the same MNE group face. The regression results indicate that an increase in the CIT rate of a host country by 1 percentage point decreases the tax base (reported profits) in the mining sector in that country by about 3.5 percent—over double the elasticity reported when MNEs from all sectors are included. This research

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<sup>4</sup>Complexity is a measure of how many different industry sectors the MNE group operates in, with the theory being that these groups are more difficult to audit, tend to have more cross-border transactions, and those transactions are more varied. Intangible assets can be difficult to value, providing scope for tax planning (although in mining MNE groups other asset groups such as plant and machinery assets tend to be much higher).

<sup>5</sup>See discussion in Laporte and de Quatrebarbes (2015).

<sup>6</sup>The Accounting Directive 2013/34/EU requires European-based MNEs to record their payments to governments worldwide since 2014. The Canadian analog of these reporting obligations – the Extractive Sector Transparency Measures Act - came into effect in 2015.

<sup>7</sup>The Resource Revenue Database records information gathered by IMF desk economists for 74 countries.

also provided some evidence that MNEs in mining may be more sensitive to international tax rate differentials than petroleum MNEs.<sup>8</sup>

These results are robust to different model specifications. These specifications control for factors that may explain differences in reported earnings (for example, the magnitude of real production factors employed across firms, and income per capita). While the measured sensitivity to tax differentials is larger than previous estimates for the economy as a whole, it is consistent with earlier findings on heightened risks in the hydrocarbon extraction and variation at the industry level.<sup>9</sup> Moreover, both datasets used for analyzing tax avoidance—CBC reports and revenue information at the country level—arrive at similar conclusions.

Building on this research, African countries are estimated to be losing about \$450–730 million in CIT revenue a year on average from mining MNE tax avoidance. This baseline estimate suggests a loss of about \$600 million per year, based on the observed tax rate differentials between African countries and offshore affiliates in the same MNE group. There are two primary sources of uncertainty around this estimate: the semi elasticity itself and the true tax rate differential for each MNE. Using confidence intervals for the elasticity and the tax rate differential, the upper bound would imply a maximum loss of \$1.5 billion on average per year (see Annex 3 for explanation). The analysis also indicates that rules to restrict profit shifting can materially reduce the extent of profit shifting (discussed in Chapter 5).

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<sup>8</sup>Petroleum MNEs were found to be less sensitive to tax rate differentials, with a semi-elasticity at about 1 percentage point lower than mining firms. Potential reasons for this divergence are discussed in Beer and Devlin (2021).

<sup>9</sup>See Beer and Loeprick (2018) and Barrios and others (2018).





## Country-Level Experiences: Investment Patterns, Base Erosion, and Profit Shifting

This chapter examines the “lived experience” of profit shifting in mining in SSA countries. It highlights the patterns of investment, channels of profit shifting, and tax policy choices that are hindering resource revenue and which can amplify revenue leakages. It is based on case studies from the region drawn from IMF technical assistance reports, public information, and interviews with authorities.<sup>1</sup>

### Prevalence of Inbound Investment Via “Hubs” and Tax Treaty Shopping

#### Inbound Investment into Mining in SSA Countries

Consistent with the evidence on MNE responses to tax rate differentials, inbound investors are often channeling mining investments into the region via third countries. These intermediary jurisdictions—broadly referred to as “investment hubs” in this paper—have high levels of FDI relative to their economy.<sup>2</sup>

These intermediary countries often impose light taxation on entities in the hub country that are used as a conduit to investment elsewhere. This light taxation is typically achieved through some combination of operating a territorial tax system (offshore profits not taxed), having low profit taxes, applying no taxes on the transfer of business interests or capital gains, and/or having extensive tax treaty networks with low withholding taxes.<sup>3</sup> Conduit countries typically have most (if not all) of these elements, in addition to other factors

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<sup>1</sup>The strength of local capacity to formulate tax policy and raise revenue is examined in Annex 3 as a “cross-cutting” issue.

<sup>2</sup>This paper adopts the OECD definition of an investment hub for countries with FDI exceeding 150 percent of GDP.

<sup>3</sup>This paper follows the general tax characteristics outlined in Beer and Loepnick (2018).

such as a stable legal regime. Light conduit taxation incentivizes financial investments to pass through these countries with little contribution to the local economy (de Mooij and others 2020). According to one estimate, countries with a tax treaty with an investment hub risk losing three times more in company tax associated with CIT tax avoidance than those that do not (Beer and Loeprick 2018).<sup>4</sup>

Nearly 45 percent of FDI flows into SSA mining come via investment hubs (African Business Review 2017). In some countries, the investment-hub share of FDI exceeds 50 percent (for example, Liberia and South Africa; Figure 7). Thirteen of the 15 resource-intensive economies see investment hubs feature in their top-5 sources of inward investment, while the remaining two economies feature established territorial jurisdictions (for example, Barbados, Cayman Islands, and the Isle of Man). These hubs are also used for other business functions such as procurement and marketing/sales of mine production.

Mauritius has emerged over recent decades as a significant regional investment hub for inbound investment into SSA. Mauritius has an FDI to GDP ratio of about 2,000 percent, and it is a top-5 inbound investment source for seven of the 15 resource-intensive economies of the region. This status is enhanced by the country's low taxes on conduit investment entities.<sup>5</sup>

### Tax Treaty Shopping

Withholding taxes—particularly in developing countries—act as a “backstop” for company (and personal) income taxes, helping to ensure company income is taxed as funds flow offshore. For offshore investors with little connection to the local economy, withholding taxes can replace tax filing obligations, simplifying tax administration. Tax rates are set in local legislation but can be modified, typically reduced, in bilateral tax treaties and investor agreements.

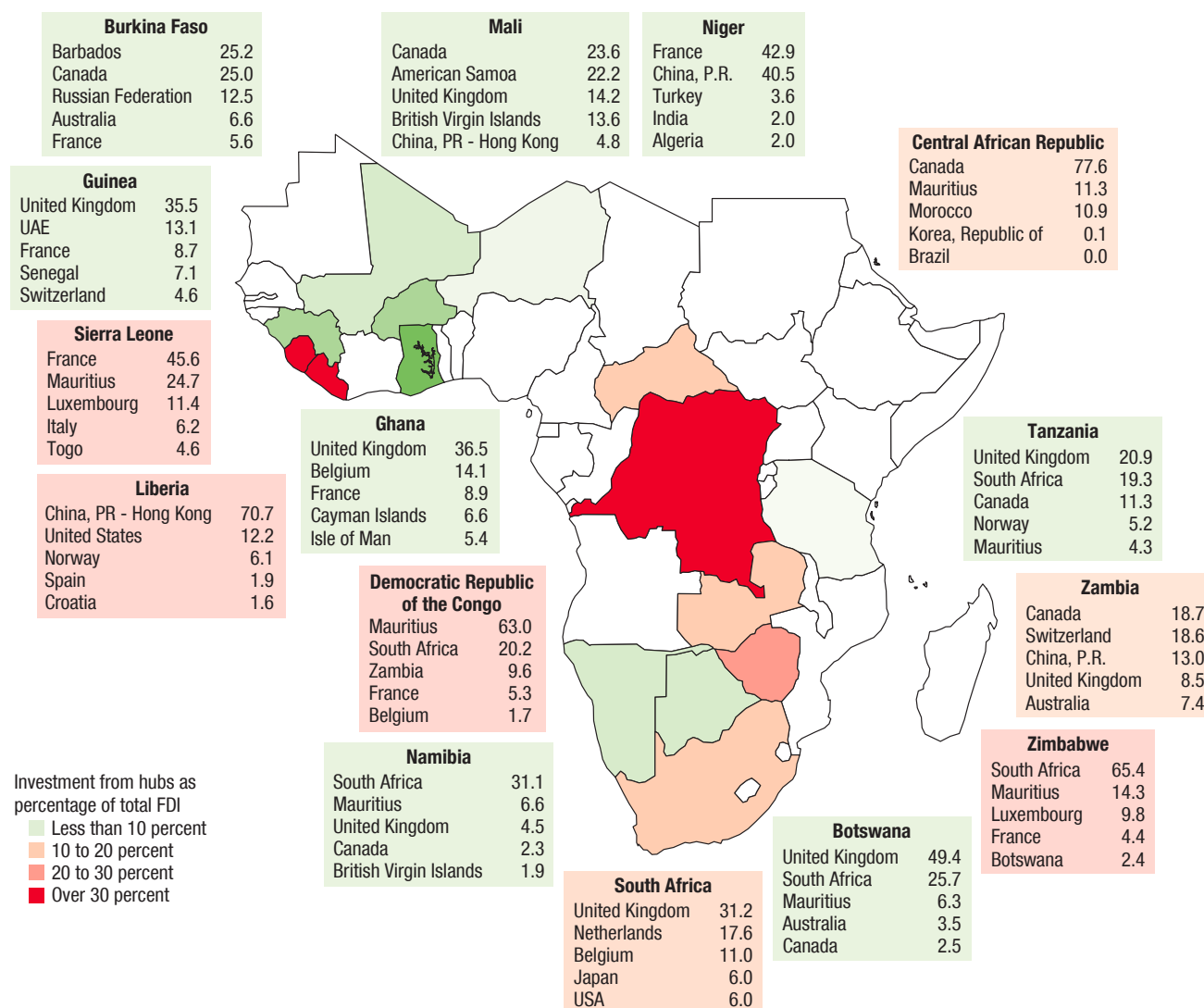
Tax treaty withholding tax rates are under pressure in the region (Table 2). Once withholding tax rates are reduced in one treaty, this creates pressures in subsequent negotiations for other countries to be afforded the same treatment, and for MNEs to use that revised treaty to divert profits to a location where they will not be taxed. This is especially the case with conduit coun-

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<sup>4</sup>More recently, however, Mauritius enacted tax changes to remove “potentially harmful” elements of its tax system and limit access to treaty benefits (OECD 2019), which may have some impact on the pattern of new inbound investment into Africa if tax differentials narrow (existing investors are protected).

<sup>5</sup>In addition, many tax advisors have enthusiastically promoted these arrangements. See, for example, Deloitte's promotion of certain qualifying investment entities in Mauritius that faced a maximum effective tax rate of 3 percent (Deloitte Mauritius 2013).

**Figure 7. Top 5 Sources of FDI Inflows to Extractive SSA Countries**  
(Inward direct investment positions, US dollars, 2019 or latest percent of total FDI inflow)



Source: IMF Coordinated Direct Investment Survey.

tries that have chosen low or zero withholding tax as their policy, but less so in “residence countries.”

Where investments in the region are routed via low-tax conduit countries, withholding tax reductions with those countries brings profit shifting risks. Unless local company tax base protection measures are in place, withholding tax reductions remove a “last line of defense” in taxing income and profits before they are repatriated. The more withholding tax reductions are afforded

**Table 2. Withholding Taxes in SSA—Reductions Relative to Domestic Law**

	<b>Dividends</b>	<b>Interest</b>	<b>Royalties</b>
	<b>Lowest Treaty Rate</b>	<b>Lowest Treaty Rate</b>	<b>Lowest Treaty Rate</b>
Botswana	5	7.5	5
Cameroon	10/15	10	0
Côte d'Ivoire	10	10	5
Equatorial Guinea	n/a	n/a	n/a
Gabon	15	10	0
Ghana	10	0	8
Guinea	0	0	0
Guinea-Bissau	10	10	10
Kenya	5	10	10
Liberia	15	20	20
Mali	5	5	0
Mauritania	10	10	0
Mozambique	0	0	5
Namibia	10	10	0
Niger	10	15	0
Nigeria	7.5	7.5	7.5
Republic of Congo	0	0	0
Senegal	0	0	0
Sierra Leone	0	0	0
South Africa	0	0	0
Tanzania	0	0	0
Togo	10	15	0
Uganda	0	10	10
Zambia	0	5	5
Zimbabwe	7.5	5	7.5

Source: IMF based on IBFD.

Note: This table shows the lowest withholding tax rate afforded by each country in the region to at least one of its treaty partners. Dividend rates are for direct investments with >10% ownership. Orange-shaded rates indicate a reduced tax rate relative to that country's legislated withholding tax rate, while red-shaded rates indicate the country has afforded a zero-tax rate to a treaty partner. White-shaded rates indicate treaty rates are equal to the legislated rate.

to conduit countries, the stronger the incentive for MNEs to route investments in this way (often referred to as “treaty shopping”).

Material gaps remain between inbound sources of investment and tax treaties coverage, however (Table 3). On average, the 15 resource-intensive economies only have treaties with two of their top-5 inbound investment sources, which at first glance might suggest that withholding tax reductions might be less of a risk for the region. But local policy actions are weakening the potential for withholding taxes to combat the outflow of untaxed income—for example, Botswana, Central African Republic, Democratic Republic of the Congo, and Zambia have all unilaterally reduced dividend withholding taxes to zero in domestic law for mining companies, and Guinea has overridden domestic withholding taxes in resource contracts with investors.

Table 3. Foreign Direct Investment Sources and Tax Treaty Coverage

	Domestic Law		Major Inbound Investment Sources and Tax Treaty Dividend Withholding Rates									
	Rate (percent)		#1 Source	Rate (percent)	#2 Source	Rate (percent)	#3 Source	Rate (percent)	#4 Source	Rate (percent)	#5 Source	Rate (percent)
Botswana	0		United Kingdom	5	South Africa	10	Mauritius	5	Australia	—	Canada	—
Burkina Faso	12.5		Barbados	—	Canada	—	Russian Fed.	—	Australia	—	France	12.5
Central African Republic	0		Canada	—	Mauritius	—	Morocco	—	Korea	—	Brazil	—
Democratic Republic of the Congo	0		Mauritius	—	South Africa	5	Zambia	—	France	—	Belgium	15
Ghana	0–8		United Kingdom	7.5	Belgium	5	France	7.5	Cayman Island	—	Isle of Man	—
Guinea	15		United Kingdom	—	United Arab Emirates	0	France	15	Senegal	—	Switzerland	—
Liberia	15		China PR - HK	—	United States	—	Norway	—	Spain	—	Croatia	—
Mali	7–10		Canada	—	American Samoa	—	United Kingdom	—	British Virgin Island	—	China PR - HK	—
Namibia	10		South Africa	5	Mauritius	5	United Kingdom	5	Canada	—	British Virgin Island	—
Niger	10		France	10	China PR	—	Turkey	—	India	—	Algeria	—
Sierra Leone	10		France	—	Mauritius	—	Luxembourg	—	Italy	—	Togo	—
South Africa	20		United Kingdom	5	Netherlands	0	Belgium	5	Japan	5	United States	5
Tanzania	10		United Kingdom	—	South Africa	20	Canada	20	Norway	20	Mauritius	—
Zambia	0		Canada	15	Switzerland	5	China PR	5	United Kingdom	5	Australia	—
Zimbabwe	0–15		South Africa	5	Mauritius	10	Luxembourg	—	France	10	Botswana	5

Source: IBFD tax treaty database; and IMF, Coordinated Direct Investment Survey (2019 or latest available).

Note: Dividend withholding tax rates are for direct investors with >25% ownership of local entity. Democratic Republic of the Congo—domestic rate for mining is zero, otherwise 20%; Ghana—dividends from free zone companies exempt (otherwise 8%); South Africa—Netherlands MFN rate from Sweden treaty; Zambia—dividends paid by a mining company are exempt from tax (otherwise 20%); Zimbabwe—dividends to approved investors are exempt. For the 15 resource-intensive economies of the region, investment hubs are a notable source of inbound investment (blue-shaded countries). Mauritius plays a prominent role, as a top-5 source of investment for seven economies. Among non-hub investment sources, the United Kingdom has the greatest prominence (8 economies), followed by Canada (7), France (6), and South Africa (5). Notable gaps remain between investment sources and tax treaty coverage, however, with SSA economies having treaties only with two of their top-5 investment sources on average.

Only two resource-rich countries in SSA—South Africa and Burkina Faso—have taken steps to limit treaty shopping, using tools developed under the OECD/G20 project against Base Erosion and Profit Shifting (BEPS) (OECD 2020a). Both countries have signed up to a multilateral convention implementing the tax treaty elements of the BEPS package (often referred to as the “multilateral instrument” or “MLI”).<sup>6</sup> One benefit of the MLI is the inclusion of a strengthened “limitation of benefits” article in tax treaties that is intended to confine treaty benefits (for example, reduced tax rates) to *bona fide* investors from those countries—albeit this only applies for treaties the signatories identify as being covered. As part of the MLI process, South Africa will have upgraded protections in its treaties with key sources of investment including Cyprus, Mauritius, Singapore, Switzerland, and United Arab Emirates.<sup>7</sup>

### Intra-Company Transactions (Abusive Transfer Pricing)

Much of the following discussion relates to transactions and practices between members of the same global corporate group (referred to as “related parties” or “affiliates”). The terms and conditions used in these transactions to exchange value are usually referred to as “transfer prices.” Introduced almost a century ago, transfer pricing analysis involves comparing the conditions of an intragroup transaction to the price that independent companies would have agreed under similar circumstances (at “arm’s length”).

Related party transactions are observed across most business functions, including financial flows within the MNE. These transactions include the sale of mine production to marketing hubs; the provision of services from one arm of the group to another; and fees associated with procurement for the mine both during the development phase (for example, capital equipment) and the operating phase (for example, fuel or chemicals).

These transactions can bring efficiencies for the group by centralizing functions, but they also provide profit shifting opportunities if the mining entity effectively “over-pays” for the goods or services provided. Intermediaries can ensure that the MNE coordinates sales from its mines (for example, stopping different mines in the group from accidentally bargaining against one another), as well as arranging contracts and managing payments. But these transactions can also be used to shift profits abroad, by underpricing the mine production through discounting (creating an arbitrage opportunity in which their affiliate then on-sells the shipment at higher prices), and/

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<sup>6</sup>For Burkina Faso, the agreement came into force in February 2021; South Africa has yet to ratify the MLI.

<sup>7</sup>These tax treaties have been nominated as “covered tax agreements” under the MLI. Burkina Faso in contrast has a limited treaty network that does not cover these countries.

or by paying marketing and other fees above the true cost of providing those services.

African tax administrators report that issues relating to transfer pricing represent one of the highest risks to the tax base of African countries (ATAF 2020). Transfer pricing approaches can be difficult to apply and can quickly swamp the capacity of tax authorities to assess the related transactions. The difficulty is establishing whether the payments made are commensurate with the goods or services provided and the terms under which arm's length parties would have transacted. This requires economic analysis, commercial experience, and data.

Judgments as to whether related party transactions are in line with arm's length outcomes must often be made on the basis of incomplete information. The specialized nature of many of the inputs needed for mining makes finding "comparables" a difficult task (PCT 2018a). Moreover, the financial databases and pricing publications used for this analysis have relatively limited coverage of the region. This exposes tax auditors to the prospect of having their decisions overturned on appeal and can create a disincentive for auditors to take on more complex cases.<sup>8</sup> It also potentially exposes investors to auditors seeking inducements, given their discretion over the decision. In addition, many tax authorities in the region simply do not have access to the data and/or the personnel required to undertake this analysis without a high opportunity cost to other tax compliance tasks.<sup>9</sup>

### **A: Related Party Loans**

Financial transactions within MNEs (a subset of transfer pricing) are a major channel for profit shifting. Simple contractual arrangements can be established whereby, for example, one subsidiary of the MNE located in a low-tax jurisdiction lends to another in a producing country. The larger the loans and the higher the interest rate used, the higher the income tax deductions in the producing country and the more profit moved offshore (Table 4).

IMF capacity building in Africa has consistently identified exposure to excessive interest deductions as a key risk. In addition, interviews with tax authorities have confirmed that this is a concern across the region, with many identifying related party loans as a significant profit shifting vulnerability

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<sup>8</sup>In Liberia for example, auditors were usually expected to complete audits within a fixed time limit (several months) with completion linked to their performance evaluation—a disincentive to take on a complex audit of a mining MNE that could take a year or more unless senior managers expressed clear support.

<sup>9</sup>Some observers, for example Vann and Cooper (2016), note that OECD guidelines set an unduly high standard as to how similar transactions must be considered "comparable." This provides scope for disputes between tax authorities and taxpayers about how a transaction should be analyzed.



**Table 4. Profit Shifting Via Interest Deductions**

*This example illustrates how interest deductions can be used to avoid tax. In both scenarios shown, EUR1 billion is invested. In the “High-Debt Scenario” case, loans from the parent company abroad make up 90 percent of assets, leading to larger interest deductions relative to the “Low-Debt Scenario” case and 19.2 million euros in CIT losses per year.*

Calculation	Item	Unit	Low-Debt Scenario	High-Debt Scenario
1	Equity (1)	EUR	900	100
2	Debt (2)	EUR	100	900
3	Assets (3)	EUR	1,000	1,000
4 = 2 / 3	Debt/equity	%	0.11	9.00
5	Interest rate/year	%	0.08	0.08
6 = 2 * 5	Deductible interest/year	EUR	8	72
7	CIT rate	%	0.3	0.3
8 = 6 * 7	Deductible interest * CIT rate	EUR	2.4	21.6
9	CIT value of profit shifting	EUR		19.2

Source: IMF Country Report No. 18/142.

(Figure 8). This is despite more and more countries implementing some form of interest limitation rules (of the 15 resource-intensive economies, only Central African Republic, Democratic Republic of the Congo, Liberia, and Mali had no limitation rules by mid-2020).<sup>10</sup>

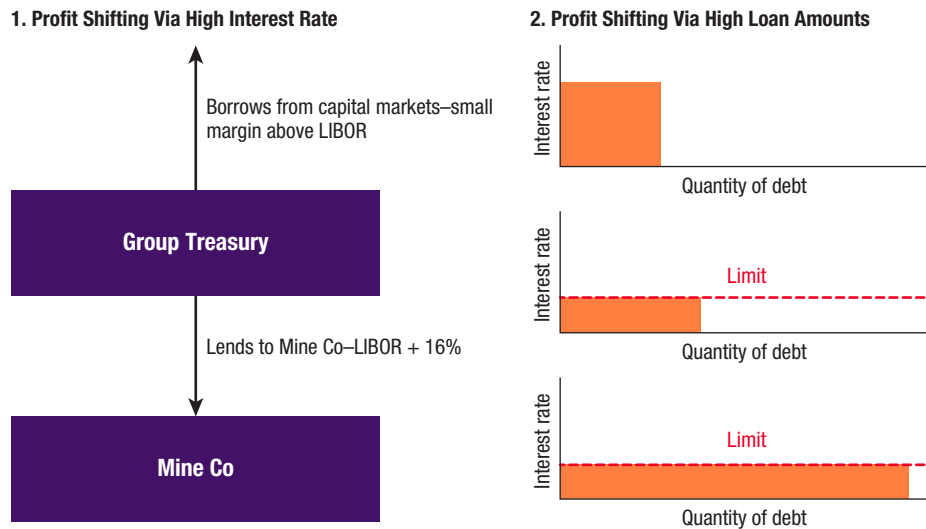
In Figure 8, panel 1, a relatively simple case from the region illustrates the basic approach to profit shifting via the use of loans. In one country, the authorities identified loans being made from a related party in a low-tax jurisdiction to a local mining company. In Sierra Leone, one company used an interest rate well above its cost of borrowing from financial markets, adding a rate premium of 16 percent to the Overnight London Interbank Offered Rate. The cost of these loans means the local mining company is not expected to pay<sup>11</sup> income tax on its mining operations for years to come—at the time there were no limitations on this transaction.

In Figure 8, panel 2, another example from the region serves to illustrate how narrowly targeted rules that limit interest deductions can lead to MNE adaptation with the same result. Authorities in Mali had imposed a limitation on the interest rate that could be used to calculate allowable interest deductions—effectively closing off the arrangement outlined in panel 1. However, with no associated limitations on the *size* of the intra-group loans,

<sup>10</sup>Source: IBFD. Liberia has a fixed cap on interest, although its design may make it relatively straightforward to circumvent.

<sup>11</sup>Recent OECD transfer pricing guidance may make it possible to combat this arrangement using transfer pricing rules—if it could be established that no independent parties would enter into such a loan. Challenging the arrangement in this way, however, would be exceptionally difficult for low-capacity tax authorities given the asymmetries in legal capabilities with larger MNEs and the high degree of subjectivity in establishing just what independent parties would and would not do in these circumstances.

Figure 8. Examples of Profit Shifting Via Loans in SSA



Source: IMF.

Note: The Group Treasury is the MNE’s arm that borrows from international financial markets. LIBOR = Overnight London Interbank Offered Rate.

the MNE restructured its financing to reduce the interest rate, but increase the quantity borrowed, maintaining the amount of tax deduction.

Loans can be used in other ways to avoid taxation and those tax benefits drive whole investment strategies. In mine acquisitions, for example, “leveraged buyouts” involve investors borrowing as much as possible to finance the purchase of a mine, using the assets of the mine as collateral. Once the funds are borrowed offshore and the mine entity is purchased, the now-related entities agree that the mining entity will borrow from the offshore entity, generating deductions to the mining entity (OECD 2018). Moreover, loans can be used to facilitate purely domestic tax planning (discussed under tax incentives).

Non-controlling state equity stakes are vulnerable to profit shifting via debt. With many countries electing to take non-controlling stakes in resource projects, MNEs have an incentive to lend to local subsidiaries to absorb local profits before they can be paid as dividends. This practice can also lower dividend withholding tax revenue. Smaller (passive) equity stakes are more vulnerable, since they confer no input into management or financial decision making. The use of debt is, in part, a practical response to a government-imposed constraint: additional capital must not dilute the agreed equity stake of the government, so it is provided as loans. But it can also

be used to stream profits to preferred shareholders.<sup>12</sup> As an example of this vulnerability, in Ghana one MNE parent advanced all funds for the development of a project to the local subsidiary as interest-bearing debt. It further decided no dividends would be paid from the subsidiary until all debt had been repaid. This eliminated dividend revenue and dividend withholding tax. Even with interest limitation rules that denied some interest deductions for CIT, the company was *still better off* characterizing cashflows as interest than dividends.

Cash flow taxes targeting economic rents, however, often exclude deductions related to interest, making them less vulnerable. In contrast to corporate taxes, cash flow taxes often allow the immediate expensing of capital spending in the year they occur, rather than affording depreciation allowances. By doing so, this removes the justification for deductions for interest expenses (Baunsgaard and Devlin 2021). This all but closes off a significant profit shifting channel.

### **B: Under-Pricing Minerals and the Remuneration of Marketing Hubs**

A lack of open market transactions for many mineral products means that such sales can be manipulated to shift profits offshore. This lack of market transparency can be due to several factors, including a concentration of producers (for example, lithium production) and vertical integration of MNEs whereby mine production is sold as an input to another part of the company group.<sup>13</sup> Zambia's Mopani copper mine is a well-publicized example of mineral underpricing between related parties, with the company being ordered to pay an additional \$13 million in tax in 2020.<sup>14</sup>

Profit shifting can occur via several techniques. These include under-quoted prices, mis-specified reference prices, excessive penalty adjustments for the grade of the shipment, commissions and handling fees, or not declaring income from by-product minerals (PCT 2018b). In Liberia, for example, a mining MNE sold all production via a related party in a low tax country. In its sales contract, the company made quality adjustments (as is standard practice) but then also applied additional discounts on the price for marketing and other costs that were not explained or justified (Figure 9). These adjustments and fees reduced the value of shipments by more than 10 per-

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<sup>12</sup>As stated by the Confederation of British Industry in its submission to the OECD BEPS process: “to partially mitigate the one-sided risks carried by the mining company [where the government will repay its equity stake from future project profits], they [companies] will often also introduce shareholder debt . . . to enable the mining company’s investment to be at least partially repaid in priority.” (OECD 2015).

<sup>13</sup>In this circumstance, the firm need not process the mineral into a grade that would be widely traded in transparent markets, making it more difficult to price.

<sup>14</sup>See *Zambia vs Mopani Copper Mines Plc.*, May 2020, Supreme Court of Zambia, Case No 2017/24.

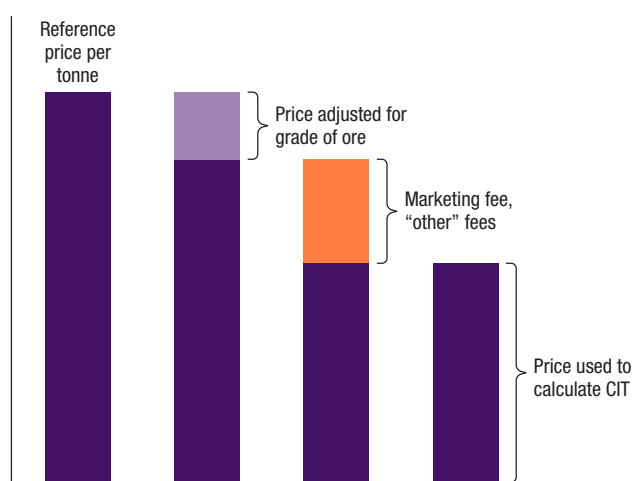
cent, transferring about \$500 million in profits offshore over several years.

Over-payment for services to offshore affiliates is a common issue. Many countries in SSA note that their mining exports are sold first to affiliates in low-tax countries, who then on-sell to final customers outside the group. Many companies are using substantial service, marketing, or management fees to

offshore affiliates as a simple profit-shifting mechanism. In another recent example, South Africa's revenue authorities recovered about \$185 million in tax to settle the over-remuneration of an offshore iron ore marketing hub in Luxembourg.<sup>15</sup>

This is also an area of revenue risk for royalties and cash flow taxes, but some royalties are less exposed. Fiscal instruments that base their calculations on the value of mineral product sales (primarily mineral royalties, CIT, and resource rent taxes) all face mispricing risks. Often mineral royalties are calculated on a "gross" basis excluding costs such as sales fees which reduces vulnerabilities, and for some minerals (for example, precious metals) they are calculated with reference to the value of the contained mineral rather than on the value of the product that is sold.<sup>16</sup> This approach simplifies the royalty calculation considerably and removes avenues for mispricing, but it is not applicable to all minerals (for example, royalties for low-grade bauxite might use the value of the ore rather than refined aluminum prices).

Figure 9. Profit Shifting Using Mineral Prices



Source: IMF.

<sup>15</sup>See press release of Kumba Iron Ore, at: <https://www.angloamericankumba.com/media/press-releases/2017/03-02-2017>.

<sup>16</sup>For example, a gold concentrate product could pay royalties based on the value of the percentage of gold in the product (multiplied by a recognized international reference price such as the LBMA gold price).

### **C: Use of Subcontractors to Move Profits Outside the Mining Fiscal Regime**

MNEs may also structure domestic mining operations into two or more entities to move profits beyond the mining fiscal regime. While most countries clearly impose taxes and royalties on the holder of the right to extract resources, there can be some uncertainty about other entities that undertake core functions involved in mining. For example, a company may create a second related company in the producing country (the subcontractor) that is contracted to undertake all mining on behalf of the local mining license holder, paying a service fee for the mining done on its behalf. This may allow the MNE to move profits outside of the mining fiscal regime and into general company tax law. The pressures for these arrangements are stronger where the corporate tax rate faced by the holder of the mineral license is higher than the generally-applied company tax rate, as the tax rate differential creates an incentive to book profits outside the project's "ring fence."<sup>17</sup>

### **Offshore Indirect Transfers of Interests in Mining Companies**

For mining companies, capital gains from projects can be substantial. These gains (that is, income from the change in asset values) can occur when initial discoveries are made by exploration firms, or later in a mine's life if the project exceeds initial expectations (for example, if costs are lower, or ore grades are better than expected). New information can cause the value of a mining lease (or operational mine) to quickly change—for example, when Global Atomic Corporation announced a discovery of uranium oxides in Niger, its share price jumped by 43 percent (Table 5).

The frequency of capital transactions varies across minerals. As one snapshot of the general trend, according to S&P Global, of the 33 transactions done in the first quarter of 2018 valued above \$5 million, 17 targeted gold, 8 copper, with the remainder in diamonds and cobalt (2 each) and silver, palladium, nickel, and zinc (1 each).<sup>18</sup>

Both commercial and tax motives drive ownership changes. For example, exploration-focused companies are usually unable to borrow because they generate little-or-no income—their remuneration comes when they discover minerals that can be commercially mined and sell the rights to that

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<sup>17</sup>There can also be issues with taxing payments to subcontractors that are unrelated to the MNE, for work done in the producing country.

<sup>18</sup>It may be that for those minerals with transparent international markets (for example, precious metals, copper) have more transactions because they may be more readily "priceable" by a larger pool of investors and financial analysts.

Table 5. Mineral Discoveries and Share Price Changes

Company	Commodity	Country	Date of Announcement	Share Price Gain (percent)
Algold Resources	Gold	Mauritania	16-Oct-18	76.0
Symbol Mining	Zinc	Nigeria	9-Jan-18	66.6
Fe Ltd	Cobalt	Democratic Republic of the Congo	16-Feb-18	60.0
Mount Burgess	Zinc	Botswana	16-Mar-18	54.5
Black Earth	Graphite	Madagascar	19-Jul-18	52.9
Tajiri Resources	Gold	Burkina Faso	15-Feb-18	45.1
Global Atomic	Uranium	Niger	5-Jul-18	42.9
AVZ Minerals	Lithium	Democratic Republic of the Congo	10-Jul-18	38.8
Orion Minerals	Zinc	South Africa	1-Feb-18	38.1
Teranga Gold	Gold	Burkina Faso	4-Dec-18	24.0
Golden Star	Gold	Ghana	17-Dec-18	17.0
Teranga Gold	Gold	Burkina Faso	27-Feb-18	15.8

Source: IMF based on S&P Global data.

Note: The focus is on transfers of direct investments, rather than portfolio share sales.

resource (OECD 2018). In addition, operational mines can change hands as investor priorities change. But irrespective of the motivation, capital gains can represent substantial income to investors. Transactions may be for specific mine assets or indirectly, involving the sale of shares of a company that operates a mine.

Most resource-intensive SSA countries tax capital gains, but offshore transactions can be harder to tax. While there is a tax policy debate on whether these gains should be taxed, 13 of the 15 resource-intensive economies in SSA have made the decision to tax them—only Namibia and Zambia do not tax these gains in some way. But as noted earlier, many investment hubs exempt these gains from taxation, providing a strong incentive for transactions to be structured in these locations. Engineering an offshore transfer can also defeat producing-country withholding taxes, both on dividends (if profits are retained and accumulated rather than distributed), and on interest (if interest is capitalized in the producing country and repaid when the entity is sold). This creates serious challenges for producing countries:

- Identifying transactions: Offshore transactions can be difficult for producing countries to detect and investors may not report them to authorities in a timely way. They may also be undertaken through complex legal structures across multiple countries. Moreover, countries that do not tax these gains may also be less interested in monitoring them, removing a potential information-gathering avenue for producing countries.<sup>19</sup>

<sup>19</sup>See outline of these issues in PCT (2020).

- Asserting a legal right to tax them: Where offshore transactions are legally constructed to occur in other jurisdictions (and as noted, effected through complex ownership chains), this can raise disputes as to whether a source country has the authority to tax those gains (a “taxing right”) under domestic law, reinforced in tax treaties. This can also create complexity in domestic tax legislation.

### Tax Incentives and Stabilization of Fiscal Terms

As noted in Chapter 2, tax incentives to promote investment are common. Incentives can also be included in investment negotiations, and, in some countries, companies have been afforded substantial tax cuts. Project-by-project negotiation of fiscal terms is particularly high risk for revenue loss, particularly where governments are drawn into expedited negotiations that can be leveraged to press for concessions, often locked in by stabilization clauses.

In Guinea-Bissau for example, an investor proposed a tax/royalty reduction that would cost about \$400 million in revenue over the mine’s life. The investor proposed an investment contract with zero CIT for an initial period of production, half-rate CIT thereafter; no limitations on interest; no VAT or customs duties; no dividend or interest withholding taxes; no capital gains tax; a reduced royalty rate; CIT accelerated depreciation; and stabilized fiscal terms (unless tax changes were advantageous).<sup>20</sup>

Despite their prevalence, tax incentives are not usually the decisive factor in whether an investment proceeds. Where countries afford entities tax holidays or other investment-based incentives, they increase the risk that all companies—whether they be multinational or domestic—will seek arrangements that make best use of those incentives, which may or may not stimulate the economic activity desired.<sup>21</sup> Where companies in one part of the economy for example are tax-free, this increases incentives to shift domestic profits into those entities and away from sectors that are taxed. These incentives also increase competitive tax pressures in the region.

In Mozambique (Figure 10, panel 1), one MNE was able to adopt simple internal company transactions to shift profits from its mining business (which paid tax) to another entity in the same country that was tax-exempt, operating in an export processing zone (EPZ). Using a loan arrangement, the two companies were able to generate tax deductions for the mining company and interest income for the zero-taxed EPZ entity. The tax cost of the arrangement was estimated at EUR 20 million per year.

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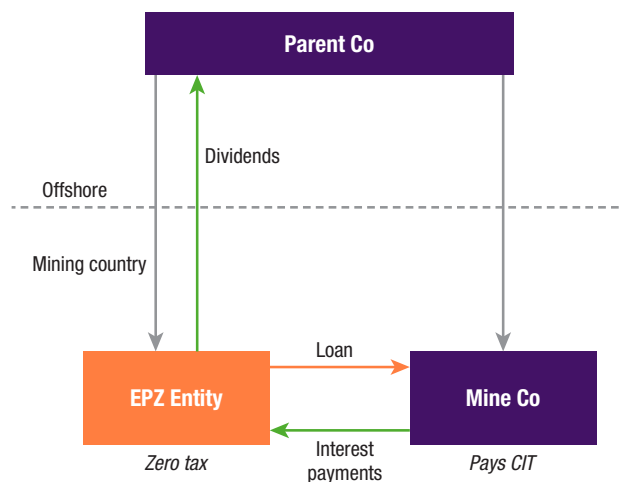
<sup>20</sup>While it is not in any way illegal to ask for incentives, the concern is that these requests are being made by some investors.

<sup>21</sup>See discussion in PCT (2015).

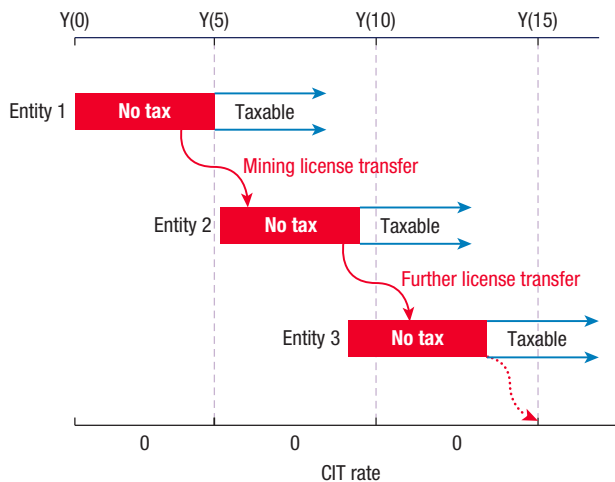


Figure 10. Unintended Effects of Tax Incentives: SSA Examples

## 1. Export Processing Zones and Domestic Profit Shifting



## 2. Design Flaws in Incentive Policy



Source: IMF.

Tax incentives afforded as special economic zones (SEZs) are also being used in unintended ways. Many practitioners (including the Platform for Collaboration on Tax) continue to caution that incentives risk revenue losses far more than what was anticipated, tipping a mining project's relative costs and benefits toward a net loss. In Guinea for example, legal design flaws meant CIT holidays were afforded to mining investments but not tied to a particular project or project license. This meant companies could restructure their affairs as the holiday was set to expire, transferring the mining license to another local entity with the same owners, restarting the tax holiday for another 5 years. In effect, projects could be shielded from CIT indefinitely (Figure 10, panel 2).

Tax stabilization clauses amplify potential revenue risks and complicate tax reform. These agreements reduce the range of possible tax outcomes the investor might face over the life of the project, acting as an incentive in themselves—particularly when investors are able to enjoy favorable tax changes whilst being shielded from potential tax increases. Moreover, they can make it exceptionally difficult for countries to legislate base protection measures and lengthen the transition to a new fiscal regime—in Sierra Leone, for example, authorities may need to wait another 10–15 years until existing investors are subject to the recently enacted fiscal regime for mining.<sup>22</sup>

<sup>22</sup>Based on a review of existing resource contracts published at [www.resourcecontracts.org](http://www.resourcecontracts.org). This would be the case if existing investors elect to remain under their existing contracts. Any form of renegotiation would see the investor transition to the newly-legislated standard fiscal terms, however.





## Combating International Profit Shifting

Corporate income taxation has clear profit-shifting vulnerabilities and these appear elevated in mining relative to many other sectors. The vulnerabilities, highlighted through international tax reform processes such as the G20/OECD Base Erosion and Profit Shifting (BEPS) process, are also borne out by the IMF's experiences in supporting tax policy and administrative reforms in African countries through technical assistance.

These vulnerabilities, which affect all resource-producing countries, are exacerbated where there are capacity gaps. A lack of local capacity in tax administration and across government (including in policy formulation and inter-agency coordination) mean corporate taxes are underperforming in most African countries (Annex 5). International research and practical country experience both indicate transfer pricing (including via loans) as a clear area of vulnerability.

These channels of profit shifting reflect a combination of drivers—including tax policy choices. The relative performance of CIT (and the overall fiscal regime) is partly the outcome of policy choices on incentives and lack of profit-shifting defenses. Many countries are setting corporate tax rates in the mining sector below generally applicable rates, usually to encourage investment in mining, and there is a general absence of resource rent taxes that could help improve the return to governments, particularly in times of strong commodity prices.<sup>1</sup> Some countries are also favoring fiscal regime instruments that can be more susceptible to profit shifting (for example, state participation).

Once the health and economic dangers from the COVID-19 pandemic have eased, many countries will need to begin the process of fiscal repair. The

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<sup>1</sup>For an overview of resource rent taxes, see IMF (2012).

commodity impacts of COVID-19 have not been uniform across the region (gold prices, for example, have strengthened), but stronger protections against revenue losses in the taxation of natural resources could play a material role in fiscal repair.

Wider international corporate tax reform to address problems with the current system has potential implications for how producing countries tax their natural resources. In particular, reform to introduce a global minimum effective corporate tax (referred to as “Pillar 2” of the Inclusive Framework process) could provide producing countries a new mechanism to ensure some corporate tax is paid by mining MNEs.<sup>2</sup> This approach could also lessen pressures for corporate tax competition and tax holidays to induce investment: producing countries that choose not to impose corporate taxes on mining MNEs could run the risk that the new global minimum tax affords countries where the MNE parent entity resides the right to tax corporate profits that have been, in essence, under-taxed. These potential advantages may be counterbalanced to some extent however by other possible impacts: the tax advantage to investors of existing tax incentives may be diminished (which may then cause a rush to stabilize fiscal terms), and there is also a material danger that tax competition simply moves from corporate taxes to other fiscal instruments, or to providing direct subsidies. Much depends on the final design of these rules.

### Key Policy Steps to Address Current Vulnerabilities

New research into profit shifting (Beer and Devlin 2021; Chapter 3) presented robust evidence on the efficacy of interest limitation rules in preventing profit shifting. Countries that have implemented rules combating excessive interest deductions were shown to reduce the sensitivity of MNE profits to tax rate differentials by half (Beer and Devlin 2021). This indicates that interest limitation rules for mining MNEs should be an immediate policy priority for countries in SSA—especially those economies currently without such protections.

It also suggested that the effective *application* of transfer pricing rules is essential to limit transfer mispricing. While there is also some evidence, albeit weaker, from this research that the introduction of transfer pricing rules might limit profit shifting, the key factor is implementation. Thus, for those countries that intend to apply the arm’s length standard, this requires political

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<sup>2</sup>Other elements of tax reform (focused primarily on business models associated with the digitalization of economies—so-called Pillar 1), consciously exclude natural resources and maintain the broadly accepted consensus that location-specific rents associated with natural resources should be taxable in those countries where they arise.

will, as well as real investments in staff training, data gathering, and information exchange.<sup>3</sup> Strong tax department capacity is essential. Alternatively, simplified approaches may be preferable (discussed in PCT 2018, Baunsgaard and Devlin 2021).

There are several further priority measures SSA economies should implement to ensure the mining sector further contributes to revenue mobilization efforts. While these actions are not exhaustive, they represent a set of initial steps that would yield tangible results, taking into account the specificities of each country. These measures span most of the issues identified in Chapter 4, and further detail is in Annex 6.

### Investment Policy and Incentives

- **Tax Incentives:** Tighten the use of fiscal incentives, including a “standstill” on new tax rate incentives (including zero rates), preferably in cooperation with neighboring countries; review existing provisions; and confine any new tax incentives to the most efficient options, such as accelerated depreciation (if offered at all). Also ensure any proposed incentives receive appropriate scrutiny of their revenue cost.
- **Investment Negotiations:** Limit the scope of stabilization provisions for investors (if used) to key terms (for example, corporate tax rate), ensure tax officials participate, and if local capacity is low, bolster the negotiating team with external expertise.<sup>4</sup> Remove authority of investment promotion authorities to negotiate agreements without senior Ministerial consideration of fiscal impact and risks.

### Tax Base Protections

- **Locking in core taxing rights:** the effective taxation of minerals starts with legislation that affirms the right of the producing (source) country to tax mining activity. This includes a strong definition of a “permanent establishment” that includes not only the fixed physical presence of the mine but also captures services provided in connection with the mine,<sup>5</sup> and a

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<sup>3</sup>As well as actions to slow the “brain drain” of skilled officers to higher-paying private firms such as accountancy firms, which can be a constant challenge.

<sup>4</sup>In one recent example from Liberia, harnessing specialized mineral pricing expertise in a royalty price agreement (renegotiation) is expected to increase government royalty revenue from iron ore by between 14 and 24 percent between 2017 and 2026. See: <https://oecd-development-matters.org/2020/06/18/negotiating-a-royalty-pricing-agreement-lessons-from-liberia/>.

<sup>5</sup>This would strengthen the right to impose withholding taxes on service payments, which may particularly assist countries with limited capacity in their tax authorities.

clear policy intention to tax gains on the sale of mines whether they occur domestically or offshore.

- **Transfer Pricing:** Establish legislation and protections against abusive transfer pricing, including placing the onus on taxpayers to substantiate the appropriateness of intra-group transactions. Adopt pricing guidelines for all mineral sales made to related parties and impose yearly limits on tax deductions for marketing and logistics.<sup>6</sup>

### Treaty Policy

- **Double Tax Treaties:** Limit treaty shopping by inbound investors by adopting treaty shopping protections either bilaterally or via the MLI, and maintain withholding taxes on royalties, interest, and management/service fees.<sup>7</sup> In addition, expand treaty definition of “immovable property” in accordance with the PCT Toolkit.

### Additional Actions

In addition, for those countries imposing capital gains tax on indirect transfers of interests in mines, this taxation could be strengthened. As outlined in the PCT Toolkit, authorities can act by:

- Updating tax treaties to ensure capital gains taxation can be imposed on the offshore transfer of “immovable” assets. Both the UN and the OECD model treaties have text that clarifies this right to tax the offshore capital gain in the source county.<sup>8</sup> This treaty protection must also be supported by domestic legislation which defines immovable assets so as to include their indirect transfer.<sup>9</sup>
- Adopting either of the two “model” approaches outlined in the Toolkit to tax these offshore transfers. This could be by treating an offshore indirect transfer as if it was a transfer of the underlying asset (“model 1”),<sup>10</sup> or by treating the gains from the offshore sale as domestically sourced income, with tax imposed on the actual seller abroad (“model 2”).<sup>11</sup>

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<sup>6</sup>ATAF has prepared draft legislation, available at its website ([www.ataftax.org](http://www.ataftax.org)).

<sup>7</sup>Countries may consider reviewing existing treaties to identify those that are unbalanced, to prioritize renegotiation.

<sup>8</sup>Currently in Article 13(4).

<sup>9</sup>For further clarity, mining titles should be included in the definition of immovable assets where needed.

<sup>10</sup>This is frequently referred to as “deeming” transaction to be a disposal of the underlying asset(s).

<sup>11</sup>The toolkit also provides guidance on improving compliance, covering detection of offshore transfers, enforcement of tax laws, and tax collection.

Greater use of cash flow taxes targeting economic rents would help countries to improve their fiscal regimes and participate in commodity price upswings. For example, a simplified cash flow tax on a mining project that excludes interest deductions could be implemented, tailored to local capacity (Baunsgaard and Devlin 2021). These taxes can increase budget revenue volatility since they are more responsive to commodity prices. However, they can make the overall fiscal regime more attractive to investors, particularly when combined with a reduced role for more distortionary fiscal regime elements such as royalties.

### **Implementing the Changes**

One of the most challenging aspects of tax policy—particularly in mining industries where investors have made up-front investments—is the transition to new tax rules. Investors can become fearful and seek special treatment or stabilized fiscal terms if they are made worse off by tax changes. Tax policy changes should not, however, be delayed, particularly where they are targeted at clear base erosion strategies. Investor concerns can be addressed by either allowing taxpayers to continue to operate under existing arrangements and “opt in” to new rules when they wish to, or by providing a transition period that affords investors time to restructure their affairs (for example, rewrite loan agreements) before the new rules apply. For especially relevant fiscal terms in mining contracts, authorities should consider the option of renegotiation.

Linking tax policy changes to international developments and similar policy changes elsewhere can help promote reform. Multilateral policy developments, either in the African region or at the global level, can provide political assistance to local tax changes. Governments may be more able to implement unpopular tax policies if they can show that neighboring countries and competitors for inbound investment are also acting.

## **Recent Reforms and Progress in SSA**

Many countries have taken steps to address vulnerabilities, often with the support of IMF technical assistance and other external cooperation partners. These actions demonstrate progress is possible and that countries in the region can leverage regional experiences. The IMF continues to support these efforts, along with other international cooperation partners (Annex 5).

- In Sierra Leone, authorities implemented a new fiscal regime, the Extractive Industries Revenue Act (EIRA), that moved the country away

from negotiating fiscal terms mine by mine. This places clear limits on investors attempting to take advantage of information asymmetries and seek special deals, with the additional discipline that investors seeking to renegotiate existing contracts are transitioned to the EIRA's fiscal terms. The EIRA also introduces a resource rent tax (RRT), whose tax rate is calculated with reference to the general CIT rate—in that way, CIT cuts do not become windfall gains to the investor, as the RRT rate adjusts automatically. This reform was implemented in 2018 by a newly elected government early in its first term.

- In Liberia, authorities strengthened transfer pricing rules and related documentation requirements. These documentation provisions place a stronger emphasis on MNEs identifying related party transactions and explaining how those transactions are comparable with what arm's length parties would have done. This helps the authorities assess MNE risks and ensures companies understand how they must be able to explain their transactions. The authorities promoted this reform as providing greater clarity and certainty to business taxpayers.
- In Guinea, the authorities recently strengthened the legal framework to address risks of transfer pricing in the mining sector. Key international taxation provisions were introduced in the legal framework in 2019, including provisions to support the arm's length principle, with the support of IMF technical assistance. This reform aimed at mobilizing additional tax revenues in the mining sector to create fiscal space for priority spending under the three-year IMF-supported Extended Credit Facility.
- In South Africa, the authorities implemented a limitation on interest deductions using a maximum allowable interest rate calculation. These limits set a clear expectation on investors as to how much debt is permissible in local entities, reducing the need for transfer pricing analysis. In addition, those provisions also adjust automatically to changes in interest rates, meaning authorities do not need to revisit their design frequently. South Africa implemented these reforms around the time the G20 and OECD launched their BEPS Actions, taking domestic action that coincided with international momentum to strengthen interest limitation rules.<sup>12</sup>
- In Kenya, the authorities introduced a limitation of benefits article into their tax treaty policy. This approach strengthens its domestic legislation which also provides for limitations in access to treaty benefits. In addition, Burkina Faso, Cameroon, Côte d'Ivoire, Gabon, Mauritius, Nigeria, Senegal, and South Africa have all signed the MLI to limit treaty benefits, which should strengthen protections against treaty shopping. These reforms were also the result of multilateral tax reform under the BEPS process.

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<sup>12</sup>While noting it did not implement the BEPS-advocated limitation based on earnings.

- In Nigeria, the authorities implemented a limitation on interest deductions in the 2020 Finance Act. This limitation is calculated in line with the “BEPS Action 4” approach as a percentage of earnings before interest, tax, depreciation, and amortization. This new limitation was included to assist Nigeria to meet budget financing targets (EY Nigeria 2019).
- In Mali, authorities enacted transfer pricing regulations in 2016–17, clarifying the application of the arm’s length principle. In addition, the regulations introduce documentation requirements based on the OECD Master file/Local file approach as well as a simplified declaration. This positive development allowed Mali to perform better risk assessments of profit shifting, to select the types of audit that have good probability of yielding additional revenues and to perform audits more effectively. However, more remains to be done as Mali’s transfer pricing regulations—while consistent with international standards—do not apply to intercompany transactions *within* Mali. This is potentially a significant risk, due to the various preferential regimes for direct and indirect taxes, which create incentives for MNEs to manipulate their transfer prices within Mali—for example, between a profitable mine reaching the end of its life and a new mine (organized as different but related subsidiaries), or between a mine and its related subcontractors.

These actions hold the promise of stronger revenue mobilization from mining in SSA. There is no single cause of disappointing mining revenue performance, and likewise no silver bullet in raising more revenue quickly. Improving tax policy and tackling tax avoidance require careful preparation and stronger capacity, which take time, resources, and political commitment.





## **Annex 1. SSA Resource-Intensive Countries—Fiscal Regime Summary**

Annex Table 1.1. Summary of Fiscal Regimes for Mining

	Royalty		Resource rent tax				Corporate income tax (mining)			Other instruments	
	Rate (percent)	Base	RRT type	Tax rate (percent)	CapEx	Interest cost recoverable	Tax rate (percent)	Interest limitations	Alternative minimum tax	State participation (percent)	
Botswana	3–10	Net	Variable income tax	22–70	Expensed	Yes	22	EBITDA (30%)	—	15 (W)	
Burkina Faso	Price-based	Gross	—	—	—	—	27.5	EBITDA (15%), Rate cap	Yes	10 (F)	
Central African Republic	3–7	Gross	—	—	—	—	30	Rate cap	Yes	—	
Democratic Republic of the Congo	1–10	Net	Excess profits tax	50	Depreciated	Yes	30	Deduction cap	Yes	10 (F)	
Ghana	5	Net	Rate of return	10	Expensed	No	35	Thin cap (3:1)	—	10 (F)	
Guinea	3–5	Gross	—	—	—	—	30	EBITDA (15%)	Yes	—	
Liberia	4.5	Gross	Rate of return	20	Expensed	No	30	Deduction cap	Yes	—	
Mali	3	Gross	—	—	—	—	30	Thin cap (1:1), Rate cap	Yes	10 (F)	
Namibia	3–10	Gross	—	—	—	—	35–50	Thin cap (3:1)	—	—	
Niger	Variable	Gross	—	—	—	—	30	Thin cap (2:1), Rate cap	Yes	10 (F)	
Sierra Leone	3–8	Gross	Rate of return	Variable	Expensed	Yes	25	Thin cap (3:1)	Yes	15 (F)	
South Africa	0.5–7	Gross	Variable income tax	0–34	Expensed	Yes	28–32	EBITDA (40%)	—	—	
Tanzania	3–5	Gross	—	—	—	—	25–30	Thin cap (7:3)	Yes	16 (F)	
Zambia	5–6	Gross	Export duty	—	—	—	15–35	EBITDA (30%)	—	—	
Zimbabwe	1–15	Net	Rate of return	28–31	Expensed	No	15	Thin cap (3:1)	—	—	

Source: IMF staff.

Note: The use of resource contracts means fiscal terms for projects may vary, and stabilization provisions may mean older projects may not operate under these summary terms (see Chapter 4 discussion). DB = declining balance; EBITDA = earnings before interest, tax, depreciation, and amortization; F = free equity; SL = straight line; state participation = indicates general government policy (may vary across mining projects); W = working interest.

## Annex 2. Mining Revenue Payments in African EITI Countries

EITI payments data from the region indicates a variety of approaches to raising revenue from mining. Based on 2014–15 EITI reports that break down payments by head of revenue,<sup>1</sup> several observations can be drawn for EITI-reporting countries:

- Royalties contributed more than 25 percent of total payments in reporting countries, with the exception of Liberia and Mali at about 15 percent (Annex Figure 2.1).
- Corporate taxes represented more than 15 percent of total payments. The only exceptions were Liberia and Sierra Leone, both below 5 percent.
- Taxes on mining company goods and trade (excises, customs duties and export taxes) are contributing materially to total payments. In Burkina Faso, Guinea, Mali, and Zambia, these represent more than 15 percent of total payments. In Ghana, Niger, Liberia, Sierra Leone, and Tanzania, however, these payments contribute less than 15 percent.
- The source of remaining payments varies considerably. Ghana for example received about 38 percent of payments from state participation cash flows (that is, dividends, either paid directly to government or via SOEs). In contrast, Sierra Leone received around 18 percent of payments from license fees.
- Taxes based on economic rents made no contribution to total payments in African EITI countries, given their limited use in the region at the time.<sup>2</sup>

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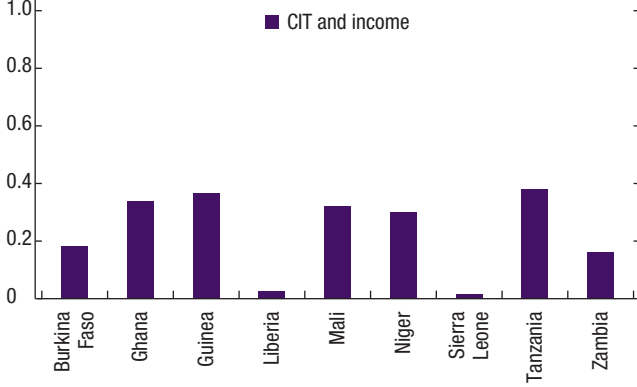
<sup>1</sup>Nine countries defined as “resource intensive” participate in EITI. Data presented use latest available for each country (most are 2014 or 2015, given lags in reporting). Data for Guinea, Liberia, and Sierra Leone were affected by the Ebola epidemic that began in 2014.

<sup>2</sup>For gold production, for example, no African country in the FERDI database had a resource rent tax by 2015 (Annex 5).

Annex Figure 2.1. Mining Fiscal Regime Payments by MNEs, EITI Countries, 2014–15

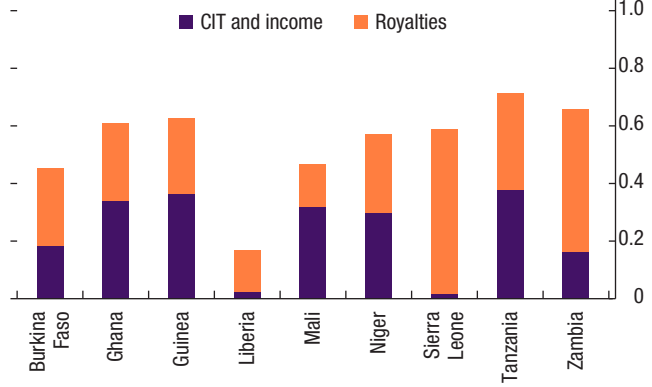
Company taxes contribute to total payments.

1. Resource Payments, 2014–15  
(Percent of total payments)



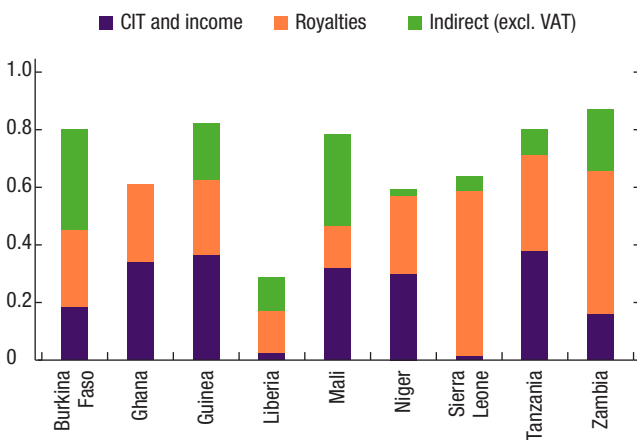
And with mineral royalties, tend to make up the cornerstone of fiscal regimes.

2. Resource Payments, 2014–15  
(Percent of total payments)



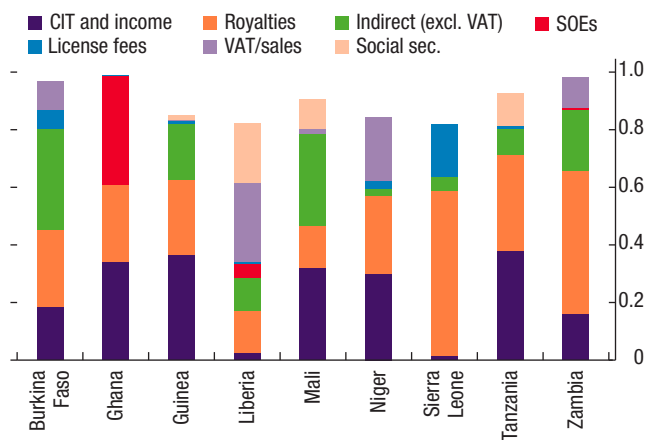
Customs duties, excises, and export taxes make a material contribution to total payments.

3. Resource Payments, 2014–15  
(Percent of total payments)



Remaining payments vary across countries.

4. Resource Payments, 2014–15  
(Percent of total payments)



Sources: EITI; and IMF.

The EITI data suggest that inefficient revenue instruments contribute substantially to total payments within mining fiscal regimes. Taxes on mining inputs and on trade are “lose-lose” for the region, increasing compliance costs for investors and administrative burdens on governments, while harming the overall attractiveness of mining in the region. Whether this pattern of revenue is attributable solely to MNE tax avoidance is unclear, but it is plausible that countries have attempted to “diversify” revenue sources. Combating profit shifting could therefore be associated with material improvements to the fiscal regimes of many countries in the region, which would also have a greater impact on investment attractiveness than income tax cuts or other incentives.

## Annex 3. African Mining Sector Revenue Losses from MNE Profit Shifting

Chapter 3 presents estimates of potential revenue losses in Africa from MNE profit shifting to avoid CIT in producing countries. These estimates are based on a 2021 IMF Working Paper (WP) by Beer and Devlin examining the sensitivity of extractive industry MNE profits to international differentials in CIT rates.

Using relationships estimated in the paper, the authors also provide global estimates of the magnitude of MNE profit shifting in the extractive industries.<sup>1</sup> For this joint AFR-FAD paper, the authors have also provided estimates of potential revenue losses for sub-Saharan Africa.

### Estimated Relationship Between International Tax Rate Differentials and Profit Shifting

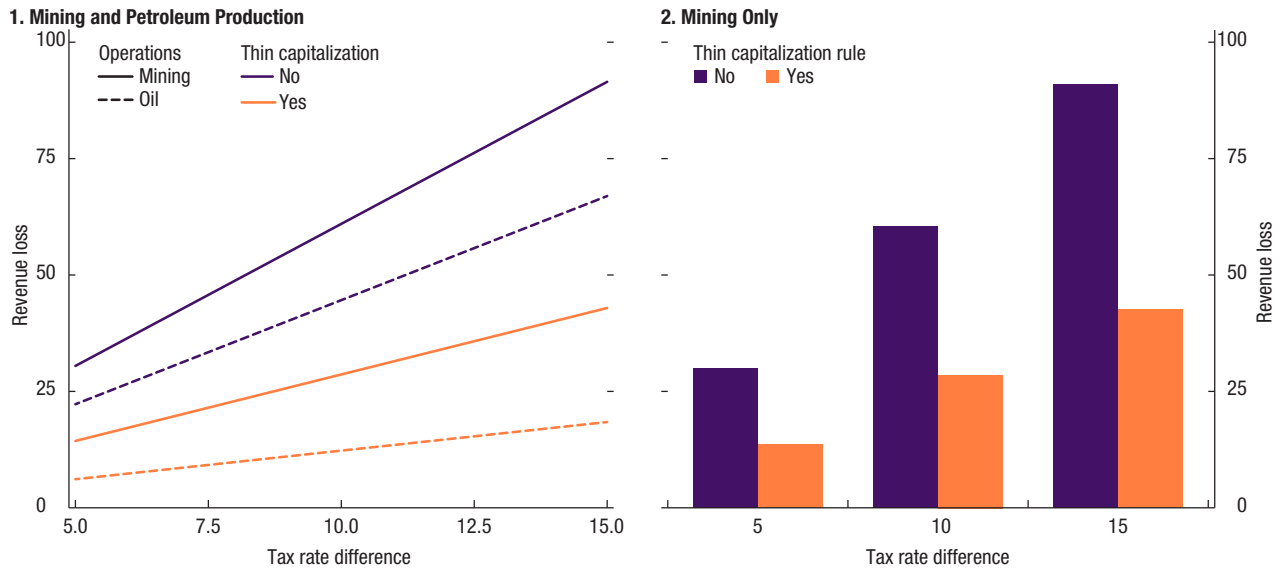
Annex Figure 3.1 illustrates tax revenue losses as a function of tax avoidance incentives, using the estimated relationships in the WP. The *x*-axis shows differences between the local CIT rate and the average CIT rate of offshore related parties (that is, members of the corporate group). The larger the differential between local and offshore tax rates, the greater the benefit from international profit shifting and hence more of the tax base in producing countries is at risk to tax avoidance.

As outlined in the WP, the sensitivity of mining MNEs to tax rate differentials (solid lines) is estimated to be higher than for petroleum MNEs

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<sup>1</sup><https://www.imf.org/en/Publications/WP/Issues/2021/01/15/Is-There-Money-on-the-Table-Evidence-on-the-Magnitude-of-Profit-Shifting-in-the-Extractive-49983> These estimates use the available panel data from the working paper, and so include countries in sub-Saharan Africa that have mining but may not be defined as one of the 15 “resource intensive” economies.

**Annex Figure 3.1. Simulated Relationships Between Tax Rate Differentials and CIT Revenue Loss (Percent)**



Source: IMF.

(dashed lines).<sup>2</sup> For example, mining MNEs that are not constrained by thin capitalization rules may relocate up to 60 percent of the corporate tax base (in producing countries) offshore if faced with a tax rate differential of 10 percent (that is, local taxes are 10 percentage points higher than the average offshore rate—purple line in Annex Figure 3.1). The WP also provided strong evidence that the potential revenue at risk from profit shifting is markedly higher if no interest limitation rules are applied (orange lines in Annex Figure 3.1).

### Deriving Revenue Loss Estimates from Estimated Profit Shifting Sensitivity

As noted above, the WP provided estimates (“simulations”) of total global potential revenue losses. The semi-elasticities underlying the simulations were estimated using average tax rate differentials as explanatory variables.

To quantify the revenue effects from profit shifting, the simulation exercise for SSA follows this same approach and uses the same average tax rate differentials for each country in Africa that has mining (and with enough data

<sup>2</sup>Petroleum MNEs are included for comparative purposes only, they are not included in the revenue estimates presented in this paper.

for country estimates to be produced). Country-specific revenue losses from profit shifting, expressed in terms of current revenue, are approximated using:

$$Baseloss_i = \varepsilon_i d\tau_i \quad (A.1)$$

in which  $\varepsilon_i$  is a semi-elasticity of taxable profits with respect to international tax rate differentials and  $d\tau_i$  is a tax rate differential.

Drawing on the WP, the simulation uses country-specific tax rate differentials and conditional semi-elasticities that vary depending on the presence of thin capitalization rules and the importance of mining revenues in total natural resource revenues to quantify revenue losses. In SSA economies, average tax rate differentials range between -13 and 17 percent, with an average of 4 percent. In a few countries, the tax rate differential is *negative* (that is, local CIT rates are lower than offshore average), meaning those countries could expect to see profit shifting in their direction.<sup>3</sup>

The regionwide estimate is then a weighted average of country-specific estimates, with the relative size of country-specific tax bases used as weights:

$$Baseloss = \sum_i Baseloss_i \frac{Base_i}{\sum_j Base_j}$$

These regional estimates are presented in Chapter 2 of this paper (and Annex Table 3.1). With an average tax rate differential of about 4 percent, the region may be losing about \$600 million in tax revenue annually due to profit shifting in the mining sector.<sup>4</sup>

**Annex Table 3.1. Simulated Revenue Losses**

	Average tax rate differential (percent)	Revenue loss (mn USD)
Using WP Panel Data	4.14	600

Source: IMF staff estimates.

<sup>3</sup>Mauritius, for example, is identified in this paper as having low tax rates that make it attractive to profit allocation.

<sup>4</sup>To curb the effect of extreme outliers on the results, simulated tax base losses for one country have been winsorized since they exceeded the total potential tax base.



## Estimation Issues

There is uncertainty about the true magnitude of international profit shifting. Some of the issues affecting the estimates are discussed here.

### Use of Average Offshore Tax Rates

Using an average offshore tax rate to calculate country tax differentials (and motives for profit shifting) is an approximation for the “real-world” tax rates MNEs face. In practice, an MNE group’s low-tax locations will be the primary vehicles for most profit shifting (that is, we should be most interested in a 5 percent tax rate affiliate than those entities in the group that are facing a 30 percent CIT rate).

For this reason, it is likely to be that using an average of all offshore tax rates the group faces to calculate the tax differential actually narrows the tax rate differential more than the true differential, and therefore understates the true incentive to profit shift. As noted above, the higher the differential, the higher will be the simulated tax revenue losses.<sup>5</sup>

### Accounting for Uncertainty in Profit Shifting Simulations

Equation (A.1) shows that two types of uncertainty may affect the accuracy and magnitude of country-specific revenue loss estimates:

- **Uncertainty concerning the true semi-elasticity.** The semi-elasticity is estimated using a limited number of observations and the actual sensitivity of taxable profits may differ from this estimate. As reported in Chapter 2, the WP reports an average semi-elasticity of 3.5, which is associated with a standard error of 0.6. If the underlying estimation errors are normally distributed, the true semi-elasticity lies, with a probability of 90 percent, between 2.5 and 4.5.
- **Uncertainty concerning the true tax rate differential.** The simulation uses (unweighted) average tax rate differences between a given affiliate and the rest of its corporate group to approximate profit shifting incentives. However, this variable may be subject to measurement error and specific entities within the group may be more heavily used than others (as noted in previous issue). Cross-country variation in tax rate differentials informs

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<sup>5</sup>It is also worth noting the WP estimated linear relationships between tax rate differentials and shifted profits, which may not reflect the true “shape” of the relationship (for example, linear, quadratic or some other form—see discussion in Bratta, Santomartino, and Acciari 2021).

Annex Table 3.2. Regionwide Revenue Losses (millions of US dollars)

		Tax rate differential	
		Baseline	Upper Bound
Semi-elasticity	Baseline	600	1,230
	Upper Bound	732	1,527

Source: IMF staff estimates.

Note: Cells labeled with “Upper Bound” depict estimates using a 90 percent confidence band, taking into account different dimensions of uncertainty. The “Baseline-Baseline” cell depicts the baseline estimate presented in Chapter 2.

the upper bound on this type of uncertainty.<sup>6</sup> The standard deviation of foreign tax rates is 0.06, implying that actual tax rate differences could be up to 10 percent smaller or larger than the country-specific differential recorded.

Annex Table 3.2 summarizes regional revenue losses when factoring in these different dimensions of uncertainty. The first column (“baseline”) depicts revenue losses assuming that the relevant tax rate differentials are known with certainty while allowing for imperfect knowledge of the semi-elasticity. Given that the semi-elasticity was estimated with narrow confidence bands, revenue losses are likely (probability of 90 percent) not to exceed \$732 million, even when accounting for this source of uncertainty.

The first row shows the impact of treating tax rate differentials as a stochastic variable while taking the semi-elasticity to be deterministic. This dimension of uncertainty does have a more notable impact on simulated revenue losses, with the upper bound estimate (\$1,230 million) now over double the baseline estimate. Finally, when both the semi-elasticity and the tax rate differential are treated as stochastic variables, the statistical distribution of simulated revenue losses becomes more dispersed and regionwide losses may reach up to \$1,527 million.

<sup>6</sup>In the presence of measurement issues, tax rate differentials can be expressed as  $d\tau_i = t_i - t_i^f + \nu_i$  in which  $t_i$  is the local statutory tax rate,  $t_i^f$  is the relevant but unobservable foreign (average) tax rate, and  $\nu_i$  denotes the measurement error in country  $i$ . An upper bound estimate for variation induced by measurement problems,  $Var[\nu_i]$ , is  $Var[d\tau_i - t_i]$  in case the measurement error is uncorrelated with the true foreign tax rate. The upper bound coincides with the actual variance when all MNEs face a uniform foreign tax rate.



## Annex 4. The Role of Local Capacity in Tax Policy and Revenue Mobilization

A lack of capacity across government agencies is a cross-cutting issue that adds to the difficulty of raising revenue from mining in SSA.<sup>1</sup> In the context of tax policy, local capacity broadly refers to the government's ability to set out, and then meet its revenue-raising objectives. This means being able to:

- set tax policy consistent with overall revenue strategy (and which encourages investment)
- design tax and revenue legislation
- negotiate fiscal terms (as occurs in some countries)
- administer laws to help taxpayers understand their obligations, detect revenue leakages, and ensure that investors pay what they owe.

Numerous bodies across government have an important role in revenue mobilization—beyond the tax department. These agencies include, for example, line ministries such as a Ministry of Mines to regulate the sector and in some countries, collect royalty revenue; customs authorities to monitor cross-border trade and impose duties and taxes; government laboratories (or other processes) to test and verify mineral product characteristics; the judiciary to settle tax disputes in specialized tax law; and Members of Parliament to legislate tax reforms.

These bodies need to work coherently to raise revenue from mining. They must be resourced adequately, possess specialist expertise, and cooperate effectively based on shared policy goals, information, and analysis. Agencies also need to be actively monitoring for revenue risks and proactively searching for tax avoidance so that avoidance can be stopped quickly and be connected into international information networks with fellow resource producers (and beyond) to share information.

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<sup>1</sup>For an outline of the state of capacity in the region, see for example, Tsafack Nanfosso (2011).



## Annex 5. Statutory Company Tax Rates for Gold Producers Compared to General Rate

Annex Table 5.1 compares the statutory company tax rates against tax rates that apply to mining companies. During 2011–18, most countries had lower tax rates on mining relative to the general tax rate applied to other sectors (years where the general CIT rate is lower than the mining-specific rate are shaded green, mining tax rates lower than the general rate are shaded red).

In some countries, the lower tax rate was in the form of a lower legislated rate, while in others this effect arose due to legislated tax exemptions afforded to all mining companies. Resource rent taxes are included where they apply, as an indication of their prevalence (and as a reminder that there are other income and profit taxes that may be relevant).

Note, however, that these are the legislated rates, which could overstate the actual tax rate many companies are paying. This is because many investors are operating under resource contracts with fiscal terms that override tax legislation. This effect may also be seen where tax holidays have been negotiated with individual firms.

Annex Table 5.1. Mining CIT Rates vs Generally Applicable CIT Rates

		2011	2012	2013	2014	2015	2016	2017	2018	Comments
Angola	General	..	..	..	30	30	30	30	30	
	Specific	25	25	25	25	25	25	25	25	Mining rate lower
Benin	General	30	30	30	30	30	30	30	30	
	Specific	25	25	25	25	25	25	25	25	Mining rate lower
Burkina Faso	General	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	Mining rate lower 2010-14
	Specific	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	No rate differential
Cameroon	General	45	45	45	45	40	40	40	40	No rate differential. 2018, RRT introduced
	Specific	40	40	40	40	35	35	35	35	Mining rate lower 2010-13, then no differential
Republic of Congo	General	35	34	33	30	30	30	30	30	
	Specific	30	30	30	30	30	30	30	30	Mining rate lower
Democratic Republic of the Congo	General	40	40	35	35	35	35	35	35	
	Specific	30	30	30	30	30	30	30	30	
Côte d'Ivoire	General	30	30	30	30	30	30	30	30	
	Specific	25	25	25	25	25	25	25	25	Mining rate lower from 2012; RRT removed 2014
Gabon	General	40	7	7	7	7	7	7	6.25	
	Specific	35	35	35	35	35	35	35	35	Mining rate lower 2013-17, then general rate lower; RRT removed 2012
Ghana	General	25	25	25	25	25	25	25	25	Exemption likely makes effective mining rate lower
	Specific	..	..	..	..	..	..	..	..	General rate lower
Guinea	General	35	35	35	35	35	35	35	35	
	Specific	35	35	35	35	35	35	35	35	
Kenya	General	50	removed	removed	removed	removed	removed	removed	removed	
	Specific	30	30	30	30	30	30	30	30	No rate differential
Madagascar	General	22	21	20	20	20	20	20	20	
	Specific	25-40	25-40	25-40	25-40	25-40	25-40	25-40	25-40	General rate lower
Mali	General	35	35	35	35	35	35	35	35	
	Specific	25	25	25	25	25	25	25	25	Mining rate lower
Mauritania	General	25	25	25	25	25	25	25	25	
	Specific	25	25	25	25	25	25	25	25	Exemption makes mining rate slightly lower (if production starts)
Niger	General	30	30	30	30	30	30	30	30	
	Specific	30	30	30	30	30	30	30	30	Exemption makes mining rate lower
Nigeria	General	30	30	30	30	30	30	30	30	
	Specific	25	25	25	25	25	25	25	25	Exemption makes mining rate lower
Senegal	General	25	25	25	25	25	25	25	25	
	Specific	30	30	30	30	30	30	30	30	Mining rate lower to 2012, then n.a.
Sierra Leone	General	30	30	30	30	30	30	30	30	
	Specific	30	30	30	30	30	30	30	30	Same rate, but 2018 RRT was introduced
South Africa	General	28	28	28	28	28	28	28	28	
	Specific	34	34	34	34	34	34	34	34	Higher specific rate, but this is a maximum rate
Tanzania	General	30	30	30	30	30	30	30	30	
	Specific	30	30	30	30	30	30	30	30	No rate differential
Zimbabwe	General	28	28	28	28	28	28	28	28	
	Specific	15	15	15	15	15	15	15	15	Specific rate lower

Source: IMF based on FERDI database.

Note: Sierra Leone 2018 RRT rate an IMF estimate based on CIT and RRT rates at the time. RRT = resource rent tax.

## Annex 6. Action Items to Combat Profit Shifting

**Annex Table 6.1**

Recommended Action	How to Achieve	Targeted Outcome
<b>Action 1: Interest Deductions</b>		
Set annual limits on interest deductions for CIT.	A limit on interest deductions removes the need for tax authorities to examine the facts and circumstances around related-party borrowing.	Interest deductions capped.  Reduced transfer pricing analysis.
	Existing investors could be afforded a carry-forward of deductions exceeding the yearly limit as a form of “grandfathering.”	Incentives for debt push downs reduced.
	This could be combined with a requirement that all lending (even below the limit) be commercially justified.	
Ensure definition of “interest” includes other expenses which are economically similar.	Define interest (that would be subject to limitations) to include payments that are lieu of interest (for example, loan fees).	Interest limitation harder to circumvent.
<b>Action 2: Lock in Source Taxing Rights</b>		
Review domestic definition of permanent establishment to ensure services are captured.	Amend domestic definition of a “permanent establishment” to include services rendered in connection with mine operations.	Ensure services are included within the domestic law definition.
Ensure domestic tax law includes taxation of capital gains.	Amend domestic tax provisions to include gains from the sale of mine assets, whether those sales occur domestically or offshore.	Domestic right to tax capital gains is established.
<b>Action 3: Combat Abusive Transfer Pricing</b>		
Establish pricing guidelines for all mineral sales made to related parties. <sup>1</sup>	Where sales are made to related parties, it is essential to review pricing approaches against established practices for the sale of that mineral product. <sup>2</sup>	Pricing methodology agreed with investor for each mineral sold to related parties.
	That means: - harnessing formal tax cooperation networks where available; - seeking information from authorities in the region (or beyond) where the same mineral is being mined about how its minerals are priced; or - purchasing specialized industry expertise from market analysts or data publishers.	No transfer pricing analysis required.
Impose limits on tax deductions for marketing and logistics.	Authorities should provide guidance to taxpayers setting out which reference prices and price adjustments are permissible.	
	In the case of payments made to related parties in low tax jurisdictions, require taxpayers to substantiate the actual cost incurred by the offshore entity in providing those services (in place of commissions that are applied as a percentage of the value of a shipment).	Profit shifting via marketing and logistics fees is limited.  Less transfer pricing analysis.
	By doing so, corporate entities in offshore jurisdictions would be less able to rely on intermediary entities with little substantive presence.	



## TAX AVOIDANCE IN SUB-SAHARAN AFRICA'S MINING SECTOR

### Action 4: Strengthen Double Tax Treaties

Limit treaty shopping by inbound investors by adopting the MLI (or adopting its protections bilaterally).	<p>Tax treaty shopping could be limited by joining the MLI.</p> <p>Alternatively, countries could re-negotiate treaties to adopt the protections developed under the BEPS process and to identify existing treaties with greatest tax base risks.</p> <p>As a first step, prioritize those countries representing the major sources of inbound investment.</p>	<p>Limits opportunities for treaty shopping.</p> <p>Withholding tax reductions in treaties more narrowly confined.</p>
Maintain non-zero withholding taxes on royalty and service fee payments.	Develop a tax treaty policy that maintains a minimum withholding tax on interest, service payments, management fees and royalties.	Outbound income flows have some "minimum" tax applied.
Expand treaty definition of "immovable property".	Treaty definition should be expanded to ensure it covers indirect transfers of interests in mining assets (building on similar domestic law definition).	Strengthens producing country's rights to tax offshore indirect transfers.

### Action 5: Limit the Use of Incentives

Confine tax incentives to most efficient options.	<p>Tax holidays should be immediately removed from the suite of incentives offered to investors.</p> <p>Incentives could be confined to indirect tax and customs duty exemptions, accelerated depreciation and/or tax stabilization (incorporating Step 5 below). Any incentives afforded should also include a "sunset" provision, imposing a time limit.</p> <p>Adopting a regional approach to incentives would greatly reduce pressures for tax competition.</p>	Tax incentives limited or phased out completely.
Connect dedicated resource rent tax rate to the CIT rate.	<p>For those countries with excess profits or resource rent taxes, the tax rate can be calculated with reference to the standard company tax rate.</p> <p>Impose tax on post CIT cash flows. This means any CIT avoided can be "picked up" by the rent tax.</p>	Protects revenue by ensuring investors do not receive windfall gains if tax rates are cut after investments have been made.
Adopt anti avoidance provisions to limit transactions with related parties.	For countries with SEZs offering reduced tax rates, the preferential rate could be removed where company income or tax deductions exceed a threshold level with related parties domestically (for example, 20 percent or more).	Limits potential for domestic transfer pricing.

### Action 6: Offshore Indirect Transfers (for those countries taxing capital gains)

Impose reporting requirement on local entities.	Companies in producing countries should be required to report material changes in ownership of the mine when they occur offshore, removing the need to monitor international jurisdictions for transactions that may be liable for local CGT. <sup>3</sup>	<p>Authorities have increased awareness of transfers that may be liable to CGT.</p> <p>Reduces administrative burden on capacity constrained administrations.</p>
Impose CGT liability on local entity for offshore transfer.	<p>Adopting either of the two "model" approaches outlined in the PCT toolkit:</p> <ul style="list-style-type: none"> <li>- Model 1: treat an offshore indirect transfer as if it was a transfer of the underlying asset; or</li> <li>- Model 2: treat the gains from the offshore sale as domestically sourced income, with tax imposed on the actual seller abroad.</li> </ul>	CGT on offshore transfers is protected.

### Action 7: Investor Negotiations

Limit scope of stabilization provisions for investors, if used.	<p>Develop a standardized model clause on stabilization that is afforded to investors if needed. This would afford SSA economies greater balance in ensuring their tax systems can evolve with international developments.</p> <p>Apply time limits to stabilization, for example, when 2–3 years of production have occurred.</p>	Stabilization limited to narrow range of fiscal terms and time bound.
Strengthen negotiation capacity with investors and review of revenue cost.	Include tax department in negotiations, and if local capacity is low, include external support for negotiations (for example, to assist with the negotiations themselves or provide analytical/legal support to inform decisions).	All negotiations with investors on fiscal terms conducted with specialist expertise.

<sup>1</sup>Outside the scope of this paper but also essential is ensuring mineral testing and weighing functions are operating to accurately assess weights and mineral grades.

<sup>2</sup>As CIT and royalties are calculated on different bases, the calculation for each may be different (for example, royalties are usually calculated without consideration of deductible expenses such as marketing fees).

<sup>3</sup>For further information on this issue, see Platform for Collaboration on Tax Toolkit.

## Annex 7. IMF Support for Resource-Rich Economies in Sub-Saharan Africa

Taxation issues are central to all core functions of the IMF's engagement with resource-rich developing countries—surveillance, lending, and capacity development—focusing on individual countries, on regions, and on international spillovers. Due to its specialized expertise and ability to integrate policy, administrative and legislative dimensions, the IMF helps developing countries build institutions and capacity to turn their natural resource wealth into sustainable development. IMF support has made use of various diagnostic and analytical tools—including the Tax Administration Diagnostic Assessment Tool (TADAT) and Fiscal Analysis for Resource Industries (FARI)—complemented by the work of the IMF's regional technical assistance centers. While the engagement is multifaceted, domestic revenue mobilization efforts concentrate on capacity development under specially designed thematic funds and international taxation mainstreaming.

The Managing Natural Resource Wealth Thematic Fund (MNRW-TF) supports capacity building in resource-rich low and lower-middle income countries. The key emphasis is on the design, implementation and administration of the tax and non-tax fiscal regime for extractive industries while also supporting macro-fiscal revenue management and statistics. Nearly 20 SSA countries have benefitted from MNRW-TF assistance through country-specific and regional projects since the launch of the Fund in 2011. The MNRW-TF also supports the IMF's research and analytical work on managing natural resource wealth, identifying good practices, and distilling lessons from experiences. Recent publications include two flagship publications on the fiscal regime for mining and petroleum, a handbook on revenue administration of extractives, and a public release of the IMF's FARI model to perform extractive industry fiscal analysis. Capacity building is delivered through multiple channels, including technical advice tailored to country needs and implementation capacity reinforced by expert support for the implementation

of reforms. Technical Assistance on natural resource taxation is also provided to countries that are unable to access the MNRW-TF.

International tax issues arise frequently in the country-specific advice and the training offered to IMF member countries each year. Increasing attention is being paid to international taxation spillovers including the importance of securing the tax base on inbound investment for developing countries. Since 2016 and as a part of Article IV consultations, international taxation mainstreaming has been undertaken in 25 countries worldwide, including four SSA countries—Kenya, Mali, Tanzania, and Uganda—with more in process.

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