



MALI

TECHNICAL ASSISTANCE REPORT—MINING AND PETROLEUM TAXATION (DIAGNOSTIC ASSESSMENT)

December 2015

This paper on Mali was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed in September 2014

Copies of this report are available to the public from

International Monetary Fund • Publication Services
PO Box 92780 • Washington, D.C. 20090
Telephone: (202) 623-7430 • Fax: (202) 623-7201
E-mail: publications@imf.org Web: <http://www.imf.org>
Price: \$18.00 per printed copy

International Monetary Fund
Washington, D.C.

INTERNATIONAL MONETARY FUND

Fiscal Affairs Department



MALI

**MINING AND PETROLEUM TAXATION
(DIAGNOSTIC ASSESSMENT)**

Grégoire Rota-Graziosi, Oana Luca, Bertrand Laporte, and Maude Lavoie

September 2014

Table of Contents	Page
Acronyms.....	4
Preface.....	5
Summary of Recommendations.....	6
I. The Natural Resources Sector in Mali.....	7
II. The Principles of Optimal Taxation of the Extractive Industries (Mining and Petroleum) ..	9
A. Transparency.....	9
B. Simplicity of the Mining and Petroleum Codes.....	10
C. Stability Clause.....	11
D. Principle of Progressive Taxation.....	13
III. Mining Taxation.....	15
A. Exploration and Production Activities.....	15
B. Mining Codes in Mali.....	19
C. Analysis of Mineral Resource Rent Sharing.....	27
IV. Petroleum Taxation.....	37
A. General Comments on the Draft Petroleum Code.....	38
B. Specific Comments.....	40
C. Economic Analysis of Petroleum Tax Regimes.....	50
V. Issues Common to the Extractive Industries (Mining and Petroleum).....	57
A. Taxation of Certain Transactions: Farm-Out Agreements and Overriding Royalties.....	57
B. Site Rehabilitation and Depletion of Reserves.....	58
VI. Protection of the Tax Base for Certain Domestic Taxes Against Aggressive Tax Optimization.....	61
A. Arm’s Length Principle and Transfer Prices.....	61
B. Inflation of Costs and the Role of the Mining List.....	62
C. Taxation of Capital Gains Resulting from Direct and Indirect Transfers of Malian Assets.....	64
D. Valuation of Services and Purchases of Highly Specialized Equipment.....	65
Annex I. Major Mineral Production Operations in Africa in 2010 by Country (Excluding Oil and Gas).....	68
Annex II. Instruments for Taxation of the Extractive Industries.....	69
Annex III. Hypothetical Mining Project.....	72
Annex IV. Tax Regimes in the Mining Sector in Some African Countries.....	73
Annex V. Hypothetical Petroleum Project.....	75

Annex VI. Petroleum Taxation in Comparable Countries.....	76
---	----

Tables

1. Tax and Nontax Revenues from the Mining Sector According to the EITI.....	8
2. Main Gold-Producing Countries in Africa (in kg).....	16
3. Mines in Operation in Mali.....	17
4. Exports by Gold Mines in Mali (in kg).....	18
5. Financial Ratios of Mining Companies in Operation.....	19
6. Administrative Arrangements for the Mining Levies.....	20
7. Key Tax and Customs Provisions of Mali's Mining Codes.....	23
8. Mali: Mining Fiscal Regimes.....	28
9. Mali: Alternative Regimes for Mining.....	36
10. Mali: Economic Data by Scenario.....	36
11. Choice of Contracts around the World.....	41
12. Mali: Petroleum Fiscal Regimes (Current and Alternative).....	50
13. Petroleum Model Results.....	52
14. Structure of Imports by Mining Companies and their Subcontractors in 2012.....	63
15. Average Effective Customs Duty Rate by Company in 2012.....	63
16. Summary of the Effects of Levies on the Mining Sector for Investors and the Government.....	71

Figures

1. Number of Exploration Permits Issued.....	16
2. AETR by Tax Regime and Mine.....	29
3. Mali: AETR (Mining).....	30
4. Mali: Net Cash Flows and Taxes Collected.....	30
5. Mali: Progressivity of the Mining Fiscal Regimes.....	31
6. International comparisons: AETR in Various Countries.....	32
7. International comparisons: Progressivity (Mining).....	33
8. Mali: Progressivity of Current and Alternative Regimes (Price Sensitivity).....	35
9. Mali: Progressivity of Current and Alternative Regimes (Cost Sensitivity).....	35
10. Mali: Progressivity of Alternative Regimes.....	53
11. International Comparisons: AETR (Petroleum).....	55
12. International Comparisons: Progressivity of Fiscal Regime (Petroleum).....	55
13. Distribution of Imported Goods by Tax Rate in 2012 (%).....	63
14. Example of a Mining Project.....	72
15. Example of a Petroleum Project.....	75

Boxes

1. NPV, IRR, AETR.....	27
2. Petroleum Resource Rent Tax and Production Sharing Based on the R-factor.....	51
3. Various Approaches to the MRRT.....	70

ACRONYMS

AETR	Average effective tax rate
AUREP:	Authority for the Promotion of Oil Research
Bbl:	Barrel of oil
BIC:	Tax on industrial and commercial profits
Bln:	Billion
CET:	Common External Tariff
CFAF:	Franc of the African Financial Communities
CFE:	Fixed employer contribution
CGI:	General Tax Code
CM:	Mining Code
CP:	Petroleum Code
CPS:	Tax on services
DGD:	Directorate General of Customs
DGE:	Large Enterprise Directorate
DGI:	Directorate General of Taxes
DNDC:	National Property and Land Registry Directorate
DNGM:	National Geology and Mines Directorate
EITI:	Extractive Industries Transparency Initiative
FARI:	Fiscal Analysis of Resource Industries
GDP:	Gross domestic product
HS:	Harmonized system
IMF:	International Monetary Fund
INPS:	National Social Security Institute
IRR:	Internal rate of return
IRVM:	Tax on investment income
IS:	Corporate income tax
ISCP:	Tax on selected products
VIT:	Variable income tax
Mln:	Million
MRRT:	Mineral resource rent tax
NPV:	Net present value
OECD:	Organization for Economic Cooperation and Development
TAF:	Tax on financial activities
TIPP:	Domestic tax on petroleum products
VAT:	Value added tax
WAEMU:	West African Economic and Monetary Union
WAS:	Withholding at source
UNO:	United Nations Organization
USD:	United States dollar

PREFACE

As part of the implementation of the technical assistance program financed by a specialized fund (*Managing Natural Resource Wealth-Topical Trust Fund*, or *MNRW-TTF*), a mission from the Fiscal Affairs Department (FAD) of the International Monetary Fund (IMF) visited Bamako from June 19 to 30, 2014. A document detailing the objectives and technical assistance financed by this fund can be found on the IMF's website at: <http://www.imf.org/external/np/otm/2010/110110.pdf>. The members of the mission were: Grégoire Rota-Graziosi (mission chief), Oana Luca (IMF, Fiscal Affairs Department), and Bertrand Laporte and Maude Lavoie (IMF experts). The purpose of the mission was to perform a diagnostic assessment of mining and petroleum taxation in Mali.

The mission presented its conclusions to Mr. Boubou Cissé, the Minister of Mines, and senior officials in the ministry's central and external services; Messrs. Togola and Soussourou, advisors to the Minister of Finance; and Mr. Sidima Dienta, Director General of Taxes (DGI), and senior officials in the ministry's central and external services.

The mission also met with representatives of mining companies and representatives of the major development partners.

The mission organized a workshop on Monday, June 23, on the modeling of rent sharing between private investors and the government, which was attended by the Minister of Mines and about 30 officials from various government units involved in mining taxation.

The mission also hosted a seminar organized by Mr. Boubou Cissé, the Minister of Mines, on Friday, June 27, on the principles of optimal taxation of extractive industries and the implications for Mali. It was attended by the Minister of Mines and about 60 participants from the government units concerned, the private sector, and civil society.

The mission carried out its work with the assistance of Messrs. Hamara Touré and Ousmane Mamadou Konaté, who served as the mission's contacts for the mining and oil sectors, respectively. It also received assistance from Mr. Anton Op de Beke, the IMF Resident Representative, and his staff, who facilitated the mission logistics.

SUMMARY OF RECOMMENDATIONS¹

The mining sector directly and indirectly contributed 21.6 percent of the government's tax revenues in 2011 (3.28 percent of GDP), or 18.6 percent of total revenues (3.89 percent of GDP). The purpose of this diagnostic assessment was to identify the main weaknesses in mining and petroleum taxation in Mali, and to propose some approaches to remedy these problems. The recommendations are therefore essentially intended for consideration by future mining and petroleum tax policy missions, which will refine the recommendations put forward here and supported by the Malian authorities. To this end, the mission prepared the following matrix of the technical assistance project financed by the MNRW-TTF.

Table A.1. Matrix of Objectives and Measures (mining and petroleum taxation component of the technical assistance project)

Objectives/Measures	Performance Indicators	Deadline
Objective 1. Increase transparency in the mining and petroleum sector		
Publish the tax agreements and feasibility studies of companies holding mining rights online.	Together with investors in the sector, develop a feasibility study model providing sufficient economic and financial information to evaluate the profitability of a mining or petroleum project.	December 2014
Guarantee financing for the rehabilitation of mining and oil sites.	Create a special fund at the Central Bank financed by grants for the rehabilitation of extraction sites.	2015 Budget Law
Objective 2. Improve the management of the mining and petroleum sector		
Strengthen coordination among the customs and tax administrations and the directorate responsible for mines.	Priority indicator: Create an inter-ministerial unit responsible for mining and petroleum taxation; Regularly share of information among these government agencies.	December 2014
Strengthen the financial analysis capacities of government agencies.	Develop and maintain mining rent-sharing models for each mining project based on the published feasibility studies. Regularly update the mining lists.	2014 and subsequent years December 2014 and subsequent months.
Objective 3. Address aggressive tax optimization behavior		
Strengthen the tax legislation as regards the tax base for the IS (corporate income tax).	Draft law on the introduction of the arm's length principle in the General Tax Code; Introduction of an under-capitalization rule.	2016 Budget Law
Tax capital gains related to indirect transfers of mining rights.	Draft law.	December 2015
Objective 4. Mining and petroleum taxation		
Improve mining and petroleum taxation.	Present a proposal to the Assembly for a revised Petroleum Code based on advice from IMF experts.	December 2014
	Present a proposal to the Assembly for a revised Mining Code based on advice from IMF experts.	December 2015
Simplify the administration of mining and petroleum taxation.	Strengthen the ring-fencing principle in the Mining and Petroleum Codes.	2014 and 2015
	Merge the ad valorem royalty and the ISCP.	2015

^{1 1} The original version of this report was in French. The present English translation is for consultation purpose only.

I. THE NATURAL RESOURCES SECTOR IN MALI

1. **The mining sector directly and indirectly contributed 21.6 percent of the government's tax revenues in 2011² (3.28 percent of GDP), or 18.6 percent of total revenues (3.89 percent of GDP).** Table 1 presents a detailed breakdown of the revenues from the mining sector. The petroleum sector is still at the exploration stage and is generating very little in the way of revenues (the surface tax, issuance fee, and training and promotion fund³).
2. **Mining taxation in Mali has a particularly important role to play in the mobilization of domestic revenues.** The seven mining companies in operation and their subcontractors, or 72 of the 409 companies registered with the Large Enterprise Directorate (DGE), Mali's large taxpayer unit, in 2012, account for more than 45 percent of the corporate income tax (IS) collected. According to the most recent report of the Extractive Industries Transparency Initiative (EITI), covering the year 2011 and published in 2013, direct taxation is the primary source of revenues, accounting for 36 percent, which is higher than the figure for royalties (30 percent of revenues). Finally, mines in operation served as important tax collection agents in 2011, withholding CFAF 33 billion, or 20 percent of total revenues. However, the withholdings at source for the value-added tax (VAT) and for the tax on industrial and commercial profits (BIC) were expected to decline significantly from 2011 onward in accordance with the international best practices.⁴
3. **The mission's recommendations are aimed essentially at ensuring the establishment of certain tax principles that, in line with international best practices, should be contained in a Mining Code (CM) or Petroleum Code (CP), and at protecting the tax base of certain taxes already in place.** Chapter II presents some principles that should guide the Mining Code and Petroleum Code. Chapter III discusses mining taxation in Mali, while Chapter IV deals with petroleum taxation. Chapter V addresses issues that are common to both mining and petroleum taxation, such as the taxation of farm-out agreements or overriding royalties, and the rehabilitation of mining sites. Finally, the last chapter deals with the protection of existing taxes against the risks of aggressive tax optimization on the part of multinational corporations operating in Mali.

² The year 2011 is used here since it is the most recent year for which revenues have been audited by the EITI.

³ This fund is replenished directly by companies holding oil exploration permits and is intended for the training and potential remuneration of government officials responsible for this sector. The contribution to this fund by each company ranges between US\$250,000 and US\$500,000. The relevance of this fund will be discussed in Chapter IV.

⁴ The withholding at source of the VAT and the BIC was abolished for companies duly registered with the tax administration. It is still being collected in the informal sector and from service providers who are not registered in Mali.

Table 1. Tax and Nontax Revenues from the Mining Sector According to the EITI

Year audited	2006	2007	2008	2009	2010	2011
Total revenues	115.7	136.0	125.9	176.2	168.6	196.2
	3.62%	3.97%	3.22%	4.16%	3.68%	3.89%
Tax revenues	90.7	112.5	105.3	149.6	132.6	165.0
	2.83%	3.29%	2.69%	3.54%	2.89%	3.28%
Direct tax revenues	31.8	60.2	56.5	73.8	56.4	60.0
IS (corporate income tax)	29.2	58.3	54.6	67.3	50.8	53.8
IRVM (tax on investment income) (1)		0.1	0.0	4.1	3.3	2.8
Payroll taxes (2)	2.6	1.7	1.9	2.4	2.3	3.4
<i>TL (housing tax)</i>	0.2	0.2	0.2	0.3	0.3	0.4
<i>TFP (vocational training tax)</i>	0.1	0.4	0.4	0.5	0.5	0.7
<i>CFE (fixed employer contribution)</i>	2.2	1.2	1.2	1.2	1.1	1.7
<i>TEJ (youth employment tax)</i>		0.0	0.1	0.4	0.4	0.6
Indirect tax revenues	8.1	10.8	8.5	19.4	16.0	20.4
VAT (3)		6.9	5.6	12.0	9.4	0.0
Customs duties	8.1	3.9	2.9	7.4	6.4	20.4
Other taxes	0.0	0.0	0.0	0.0	0.2	
Other tax revenues	1.1	1.2	1.2	1.8	2.1	2.6
Business license taxes	1.1	1.2	1.2	1.8	2.1	2.6
Tax revenues specific to the mining sector	32.1	26.2	28.7	38.3	41.1	49.0
Ad valorem tax	15.5	13.9	14.5	21.2	20.5	24.6
Excise tax on gold (CPS and ISCP)	16.5	12.3	14.1	16.8	20.4	24.1
<i>CPS (tax on services) (4)</i>	16.3	12.3	14.1	16.5	15.1	2.1
<i>ISCP (tax on selected products)</i>	0.2	0.0	0.0	0.2	5.3	22.1
Surface royalties	0.1	0.1	0.1	0.3	0.2	0.3
Withholdings at source (5)	17.5	14.0	10.3	16.3	17.0	33.0
Taxes on wages and salaries	4.8	4.6	4.2	8.0	8.0	10.0
BIC withholdings	5.0	0.7	1.9	2.5	5.6	7.4
VAT withholdings	6.0	8.7	4.2	5.9	3.4	15.6
Other withholdings	1.7	0.0	0.0	0.0	0.0	0.0
Nontax revenues	25.0	23.5	20.6	26.5	35.9	31.2
Dividends	20.4	18.5	15.7	20.3	29.6	22.8
Social security contributions (INPS)	4.6	5.0	5.0	6.3	6.3	8.4
<i>GDP</i>	<i>3,201</i>	<i>3,425</i>	<i>3,913</i>	<i>4,233</i>	<i>4,582</i>	<i>5,038</i>
1: The IRVM (tax on investment income) applies only to dividends paid to the government; those paid to other shareholders are exempt under the mining agreements.						
2: Payroll taxes are payable by the employer.						
3: Nondeductible VAT.						
4: The CPS (tax on services) and ISCP (tax on selected products) are the same tax. The name varies depending on the mining code referenced.						
5: Taxes not payable by the company itself, but which it collects.						
Source: EITI, field mission.						

II. THE PRINCIPLES OF OPTIMAL TAXATION OF THE EXTRACTIVE INDUSTRIES (MINING AND PETROLEUM)

4. **The tax regimes⁵ applicable to the extractive industries (mining and petroleum) in developing countries are the result of a trade-off between a desire to attract the international investors needed to maximize mineral resource rent and sufficient taxation of that rent.** Two key characteristics distinguish the mining sector from other economic activities, influencing the optimal tax regime applied to the sector: the particularly large, for the most part irreversible, investments involved, which are tied to the mining site itself; and the uncertainty regarding the profitability of a project (operating costs, the price of the minerals being extracted, and so on). This chapter presents, in order of priority, some principles on the taxation of extractive industries that the mission believes to be important for Mali, namely: transparency, simplicity, stability, and progressivity.

A. Transparency

5. **The transparency of the mining or petroleum sector in Mali⁶ could be improved through the online publication of agreements signed with operating companies and their feasibility studies.** The mining agreements for each project are the subject of decrees published in the *Journal Officiel* (official gazette) and are listed in the EITI report (2013). Updating and online publication of these decrees would be consistent with international best practices. In addition, some Malian mining companies are part of Canadian or Australian groups (see Table 1). Canada and Australia both impose very rigorous economic and financial filing requirements on companies that are listed on their stock exchanges. Thus, all feasibility studies filed in Mali by companies that are members of a Canadian group are already available on the official Canadian securities website at www.sedar.com. Furthermore, these groups are required to provide details on their activities for each individual mining project in their financial statements. The production, sales, and unit operating cost (per ounce of gold produced) of each Malian mining project are presented in the quarterly and annual financial statements of these groups, which are available on the website mentioned above.

6. **Transparency is an instrument that allows the government to attract (and screen) multinational companies that operate in accordance with best practices.** Countries that host the head offices of multinational companies operating in the extractive industries stand out for their financial reporting laws. Opacity favors companies with the worst practices and drives companies that are subject to the strictest financial disclosure laws

⁵ Tax systems should be understood in the broad sense, since our approach is to include tax revenues and nontax revenues such as mining royalties in the definition of these tax systems.

⁶ Mali is a member of the EITI.

away from the Malian market. Transparency in Mali is a tool that can be used to promote positive discrimination in favor of socially responsible multinational companies.

7. **The establishment of a standardized framework for the economic analysis of mining and petroleum project feasibility studies would improve governance in the natural resources sector.** The project feasibility study is a key document, both for obtaining mining rights and for the financing of the project. Such studies are legally binding in Canada, for example, where they can serve as evidence for stockholders who are taking legal action against the board of directors of a company in which they hold shares. The standardization of economic and financial information through coordination between the Ministry of Mines and the Ministry of Finance would be desirable to ensure the uniformity of economic data⁷ and better management of certain key variables, such as the value of capital goods and production costs. Identifying significant cost overruns could also be useful in the DGI's risk analysis to assess possible transfer pricing practices aimed at reducing taxable profits in Mali. Likewise, the overexploitation of mineral deposits, which seriously compromises the productive life of mines, could be identified more easily. Finally, the standardization of these economic studies would make the Fiscal Analysis of Resource Industries (FARI) model designed by the mission and provided to the authorities easier to use.

B. Simplicity of the Mining and Petroleum Codes

8. **The simplicity of the mining and petroleum laws is an essential condition for ensuring proper management of government revenue.** The simplicity of the law strengthens the transparency of the sector. It also improves the business climate by avoiding certain differing interpretations between the investors and the government agencies concerned. Finally, it reduces the administrative costs of the tax regime, in particular those borne by public agencies for the definition, implementation, and monitoring of tax and nontax revenues.

9. **One important simplification tool is the principle of ring-fencing, which limits the number of mineral exploration and/or operating permits that can be held by the same mining or oil company.** This restriction makes it possible to reduce the risks of offsetting and tax avoidance, in particular with regard to the corporate income tax (IS), between two mining or petroleum projects that are at different stages of operation. With ring-fencing, the activities and taxable profits linked to each operating permit can be monitored more easily by the tax administration.

10. **The strictness with which the ring-fencing principle is applied can vary, depending on the country.** It may simply involve assigning only one mining operating

⁷ For example, the eight feasibility studies that were consulted for the design of the rent-sharing model (see Chapter III) use different discount rates, ranging from 5 percent to 11.2 percent.

permit per mining company and requiring a mining group to create a separate legal entity to hold other permits, particularly exploration permits. Some multinational companies are organized in this way, in particular to ensure transparency vis-à-vis their shareholders. Some countries allow a mining operating company to also hold exploration permits. Others limit the number of exploration permits that one company may hold. The final decision regarding the perimeter of the ring-fencing, or the consolidation allowed, remains a political decision and should take into account both the capacity of the government agencies concerned to monitor the economic activities of companies with rather complicated organizational structures and the level of interference and management costs for mining companies resulting from a ring-fencing principle that is too strict.

11. **The ring-fencing principle can also help to combat the tax fraud associated with any system of exemptions.** VAT or customs duty exemptions granted to holders of exploration or operating permits during the development phase, for example, may lead to fraudulent behavior involving the diversion of imported goods from their original use. The ring-fencing principle also excludes economic operators in other sectors of activity from holding exploration and operating permits or requires the creation of a dedicated company that has been properly identified with the tax administration services.

12. **The simplicity of the tax regime for the extractive industries also requires a streamlined structure for the government agencies concerned.** A number of different government agencies falling under several ministries are responsible for handling the payment of taxes, levies and royalties by the extractive industries in Mali (see Table 6). This fragmentation significantly increases the costs associated with the management of this sector for both the government and private investors. It has a negative impact on transparency and good governance in the sector, with investors receiving conflicting information.

C. Stability Clause

13. **The stability clause⁸ used in the extractive industries is a mechanism to protect against the political risk of expropriation or a unilateral revision of mining taxation.** The very nature of extractive activities explains the use of the stability clause. On the one hand, decisions regarding particularly large investments are deemed to be irreversible⁹ and their costs are deemed to be sunk costs because they are specific to the project. On the other hand, extractive activity is by definition a rent-based activity, the value of which remains highly uncertain at the time of investment: the price of the mineral extracted may vary

⁸ Stability clauses were introduced by American oil companies in the 1930s with the aim of protecting themselves against the risk of nationalization in Latin America. A detailed analysis of these clauses is provided in Daniel et al. (2010).

⁹ An investment is called irreversible when there is no competitive market on which the investment could be traded, since, in the case of mining or oil, it is physically linked to a mineral deposit in which the investment is being made.

considerably; the production cost is also uncertain (technological innovations, unforeseen technical difficulties in the extraction process, and so on). Finally, the life of a mining or petroleum project can be highly variable, with some projects spanning several decades. These specific aspects give rise to the time inconsistency problem: the government has an incentive to revise the initial sharing of mining or oil rent to its advantage once an irreversible investment has been made.

14. **The stability clause is aimed at locking in the terms for the sharing of this rent.** Like an insurance policy, it protects the private investor against opportunistic behavior by the government, which could be tempted to expropriate the rent by revising the taxation rules after the investment has been made. By limiting the government's room to maneuver, the stability clause not only makes the country more attractive, but it also lends credibility to the government's commitments and policies. Above a certain level of credibility and political stability, stability clauses are no longer as important to investors or the government has sufficient credibility in its tax policies that no investor will require a stability clause, as is the case with Ghana and its gold mining sector.

15. **Various forms of stability clauses exist around the world: the freezing of rent sharing by fixing some aspects of a tax (rate, base) once and for all, or the regular renegotiation of various taxes and levies by mutual agreement.** Some countries apply a premium to the stability clause by increasing certain taxes if a stability clause is provided (Peru, Chile, Papua New Guinea). Generally speaking, a modern stability clause links the tax and customs terms to the general tax legislation or to the code of the sector concerned to limit the discretionary aspect of any agreement. In other words, industrial extraction is treated like any other sector of activity in terms of the generally applicable tax provisions: IS, IRVM, VAT, and so on. Specific "quasi-taxes," such as surface or ad valorem royalties, free equity, and production-sharing contracts, supplement the generally applicable provisions to obtain an equitable sharing of rent.

16. **Although stability clauses are necessary in Mali, the ones defined by the Mining Codes (1991, 1999, and 2012) and the draft Malian Petroleum Code seem to be excessively generous because they are particularly long (30 years) and asymmetrical (changes in taxation can only be favorable to the investor).** The duration of the stability clause is fixed at 30 years, regardless of the nature of the resource being extracted. However, an analysis of feasibility studies for the gold mining sector, the first resource to be extracted in Mali, shows that the productive life of the mines is considerably shorter, about 10 years or less (see Table 3). In addition, the payback period (starting from the breakeven point) of existing mining projects estimated on the basis of the available feasibility studies is particularly short, generally less than five years (see Figure 2). Finally, an excessively long period may complicate matters because it could lead to the existence of several tax regimes within the same territory for the same activity. This also creates a risk of tensions between the government and the private sector, undermining the very purpose of these clauses, since

changes in prices and profitability associated with mining or petroleum projects are impossible to predict over several decades.

17. **The cost of the asymmetry of the stability provision in the 1991 Mining Code and the draft Petroleum Code is significant, with an adverse impact on the rent-sharing terms for the government, in particular in mining.** The asymmetry is the result of a provision in these codes that allows companies to freely opt for any tax provisions more favorable to them, thereby enabling them to reduce their tax burden. For example, the lowering of the IS¹⁰ and IRVM rates since 1991 has reduced the share of mining rent going to the government (see Figure 3). This asymmetry also inevitably leads to differing interpretations of the law by investors and the tax administration, which has a negative impact on the business climate in Mali and its attractiveness. Generally speaking, any tax reform that is aimed at reducing the rate of a tax or levy or expanding the tax base will reduce the share of mining rent going to the government.

D. Principle of Progressive Taxation

18. **The progressivity of the tax system applicable to natural resources is aimed at ensuring an automatic variation in the rent sharing between the government and the investors based on the profitability of the mining or petroleum project concerned.**¹¹ With a progressive tax regime, the government's share increases when the profitability of a mining or petroleum project improves, and it declines when the reverse is true. This feature offers several advantages: (1) it is automatic and therefore does not require difficult renegotiations; (2) it enables the government to benefit from a larger share, specifically and normally when there is a rise in the world price for the natural resource concerned; (3) it reduces the risk for the investor by reducing the tax burden when the profitability of the mining or petroleum operations is low; (4) by reducing the risk for the investor, it reduces the profit ratio required by the investor and increases taxable rent. These advantages strengthen the stability of the tax regime, variations in which are known and predictable for the two parties, and they reduce the risk for the investor.

19. **The progressivity of the tax system nevertheless assumes that the government agrees to bear some of the investment risk.** The optimal level of progressivity therefore results from a trade-off similar to that made by investors between the expected return (the share of rent going to the government) and the risk associated with this return. The

¹⁰ The current IS rate under the General Tax Code is 30 percent; the 2012 Mining Code sets a rate of 25 percent; and some agreements signed specify a rate of 45 percent or even 50 percent. The asymmetry of the stability clauses therefore allows mining companies to reduce the tax rate on their profits to 25 percent.

¹¹ Daniel et al. (2010) and IMF (2012) provide a review of the progressivity of mining and petroleum tax regimes around the world.

progressivity of a tax regime varies depending on the tax instruments used. Chapters III and IV present a more detailed analysis of the question of progressivity for the mining and petroleum sectors and offer some specific recommendations.

Recommendations

- Require online publication of the agreements of extractive companies and their project feasibility studies (mining and petroleum sectors);
- Establish the ring-fencing principle in a revised Mining Code and in the draft Petroleum Code;
- Streamline the institutional organization of various mandatory levies in the extractive industries sector;
- Reduce the duration of stability clauses in a revised Mining Code and in the draft Petroleum Code;
- Improve the progressivity of the mining and petroleum taxation regimes (see Chapters III and IV).

III. MINING TAXATION

A. Exploration and Production Activities

Economic analysis of the Malian mining sector

20. **The Malian mining sector today is comprised mainly of gold mining, with seven industrial mines in operation (see Table 3).** There are many placer gold mining sites in Mali, accounting for up to 20 percent of the country's gold production.¹² A small iron mine is active in the Koulikoro region, but its development prospects are limited. The manganese mine in Ansongo has been shut down.

21. **Encouraged by rising mineral prices since 2008, the number of exploration permits has increased significantly, reaching a peak of 101 exploration permits issued in 2011, 87 of which were for gold (see Figure 1).**¹³ Ten other minerals account for the 14 other exploration permits issued. Putting these sites into production depends on a number of factors, including mineral prices, production costs, and, of course, the tax regime in force.¹⁴

22. **Mali is the second-largest producer of gold in West Africa, behind Ghana, and the fourth largest on the continent (see Table 2).** In spite of the rebound in gold production in 2013, the downward trend in production in Mali could continue over the next four years (see Table 4). Putting five new mines into production will not make up for the planned closure of the Yatela and Kalana mines. There are, however, plans for extending production at several mines that are at the end of their operating life, which could reverse this trend (see Table 3).

23. **Gold mining activities in Mali are uniform from a tax standpoint, since all of the companies in operation are subject to the same tax regime (the 1991 Mining Code).** The tax regime is locked in when the exploration permit is obtained, and the duration of these permits was set at nine years under the 1991 and 1999 Mining Codes. Thus, for most of the projects implemented during the 2000s, the tax regime was set before the entry into force of the 1999 Mining Code. The situation is similar for the new projects covered by the 1999 Mining Code (see Table 3). However, the asymmetrical stability clause and "special" agreements have complicated what was a fairly straightforward approach. SOMIKA does not pay any ad valorem royalties. At the time of its project extension in 2012, which modified the technology used, SEMOS negotiated a continuation of the tax regime under the 1991 Mining

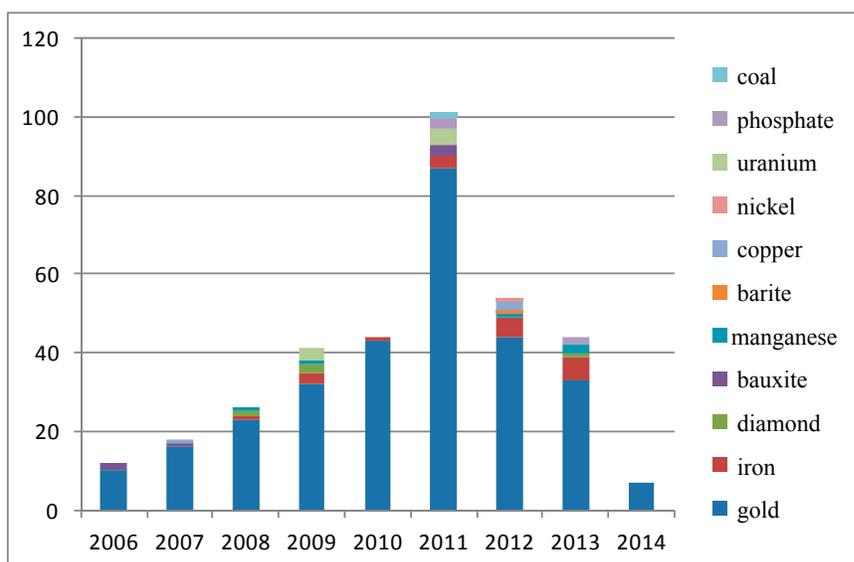
¹² The technical assistance from the IMF does not cover artisanal mining activities.

¹³ Following the visit by the mission and after the finalization of this report, 130 exploration permits and operating permits were revoked by the Minister of Mines.

¹⁴ For reference purposes, Annex I provides a map of mineral extraction in Africa in 2010.

Code. The amendment to the contract contained a compromise, with the maintenance of an exemption period for three years (instead of five years) in exchange for a reduction in the IS from 35 percent to 30 percent.

Figure 1. Number of Exploration Permits Issued



Source: National Geology and Mines Directorate (DNGM), Ministry of Industry and Mines.

Table 2. Main Gold-Producing Countries in Africa (in kg)

	2007	2008	2009	2010	2011
Afrique du Sud	252 598	212 571	197 628	188 701	181 000
Ghana	72 209	72 980	79 883	76 332	80 122
Tanzanie	40 193	36 434	39 112	39 448	44 000
Mali	48 850	41 160	42 364	36 360	35 728
Burkina Faso	2 250	6 033	11 581	22 939	31 774
Soudan	6 049	7 508	14 914	26 317	23 379
Guinée Equatoriale	15 628	19 945	18 091	15 217	15 695
Zimbabwe	6 750	3 579	4 965	9 100	12 824
Erythrée	30	30	30	500	12 000
Ethiopie	4 368	3 465	6 251	5 936	11 000
Côte d'Ivoire	1243	4205	6947	5310	9871
Mauritanie	2251	6254	8000	8325	8200
Autres pays	24212	20317	26160	26389	25173
Total	476 631	434 481	455 926	460 874	490 766

Source: United States Geological Survey (USGS)

Table 3. Mines in Operation in Mali

Company	Mine	Mineral	Owners	Legal basis	Date of operating permit	Surface area (km ²)	Beginning of production	Expected duration of operation	Comments
SOMISY	Syama	gold	Resolute Mining (80%)	1991 CM	9/23/1989	191.4	1990	extension in 2009 for 7 years	12/12/2006 amendment ¹
SEMOS SA	Sadiola	gold	Malian govt. (20%) Iamgold (41%) AngloGold Ashanti (41%)	1991 CM	8/1/1994	302.6	1996	extension in 2014 for 10 years	
MORILA SA	Morila	gold	AngloGold Ashanti Iamgold (40%) Malian govt. (20%)	1991 CM	8/4/1999	199.8	2000	15 years	
YATELA SA	Yatela	gold	AngloGold Ashanti Iamgold (40%) Malian govt. (20%)	1991 CM	2/25/2000	212.0	2001	7 years	In process of closing
SOMIKA SA	Kalana	gold	Avnel Gold (80%) Malian govt. (20%)	1999 CM	12/17/1984	387.2	2004		Establishment agreement of 2/14/2003
SOMILO SA	Loulo	gold	Randgold Resources Malian govt. (20%)	1991 CM	7/15/1999	372.1	2005	6 years	
SEMICO SA	Tabakoto/S	gold	Endeavor Resources Malian govt. (20%)	1991 CM	12/15/1997	113.0	2006	10 years	
WASSOUL'OR	Kodiéran	Gold	Private Malians (55%)	1991 CM	5/30/1997	100.0	2013	8 years	Production suspended/ technical and financial problems
SAHARA MINING SA	Tienfala	iron	Pearl Gold SA (25%) Malian govt. (20%) Sandeep (80%) Private Malians (5%) Govt. (15%)	1999 CM	2/5/2010	2,055.0	n/a	10 years	
SAHEL RESOURCES and MINERALS SA	Dogoro	iron	n/a	1999 CM	11/2/2011	430.0	n/a	n/a	Transfer from Sahara Mining SA
MALI MANGANESE SA	Ansongo	manganese	n/a	1999 CM	7/15/2011	212.0	n/a	16 years	Project not started/ facilities destroyed
GOUNKOTO SA	Goukoto	gold	Randgold Resources Malian govt. (20%)	1991 CM	8/3/2012	99.9	2012	22 years	Transfer from Somilo SA
NEW GOLD MALI SA	Bagama	gold	n/a	n/a	12/20/2012	40.0	n/a	n/a	No development work done
ROBEX	Nampala	gold	Robex (80%) Malian govt. (20%)	1999 CM	n/a	n/a	2015	9 years	

^{1/} The December 12, 2006 amendment states that the production commencement date is the date on which the mine reaches 90 percent of its production capacity for at least 60 consecutive days.
Source: Ministry of Mines and mission.

Table 4. Exports by Gold Mines in Mali (in kg)

	2010	2011	2012	2013	2014	2015	2016	2017
SOMILO SA	10 835	10 758	14 289	20 088	13 633	14 464	14 709	15 397
SEMOS SA	9 777	10 989	7 754	8 067	6 295	6 999	6 080	4 951
MORILA SA	9 050	9 357	6 519	5 476	3 805	3 057	1 735	1 302
SOMISY SA	2 797	3 275	4 031	5 360	7 613	9 407	9 088	9 046
SEMICO SA	3 356	3 316	3 446	4 511	5 058	4 285	3 802	1 816
YATELA SA	5 073	2 783	2 070	2 370	1 260	1 320	1 270	
SOMIKA SA	515	364	397	393	175			
WASSOUI OR						200	200	200
Other						200	200	1 221
Autres	962							
Total	42 366	40 821	38 507	46 265	37 839	39 932	37 084	33 933

Source: Directorate General of Customs (DGD) for exports and DNGM for projections.

Financial analysis of mining companies in operation

24. The mission performed a preliminary financial analysis based on the corporate tax return information made available to it. These returns involved the seven mining companies in operation in Mali in 2012 and 2011. Table 5 presents some financial ratios: average, minimum, and maximum value for the Malian mining companies and for Canadian companies. The operating margin (operating income/turnover) is considerably higher in Mali than in Canada, reflecting a higher level of risk in Mali. There is also a significant difference among the mining companies (e.g., one reporting an operating margin of more than 51 percent and another reporting losses) that can be explained by the nature of the sites or differing stages of development. Personnel expense in Mali is half what it is in Canada (6 percent of turnover compared to 12 percent, respectively). Financial expenses were equal to almost 5 percent of turnover in 2012, with a large variation among companies (from 1.6 percent to almost 15 percent). Among these expenses, write-downs for exchange rate losses are relatively large in Mali, even though the company enjoys the monetary stability provided by the CFA franc. Finally, the debt ratio appears to be relatively moderate (1.3 times the amount of equity capital), as a result of the placement of retained earnings in reserves.

Table 5. Financial Ratios of Mining Companies in Operation

	2012			2011			Canada	
	Average	Max	Min	Average	Max	Min	2012	2011
Operating margin	28.3%	51.8%	-37.1%	28.0%	58.8%	-9.3%	16.2%	23.2%
Net margin	25.2%	49.1%	-372.4%	22.4%	29.7%	-12.1%		
Personnel exp./turnover	6.4%	29.4%	0.5%	5.9%	14.5%	0.2%	12.7%	10.2%
Outside contract./turnover	21.3%	44.7%	3.8%	13.3%	29.4%	4.0%		
Financial exp./turnover	4.9%	14.9%	1.6%	6.6%	26.1%	0.5%		
Exchange loss/turnover	2.2%	3.0%	0.0%	2.0%	4.6%	0.3%		
IS/turnover	4.5%	10.1%	0.0%	4.1%	14.5%	0.0%	5.7%	8.8%
Indebtedness	132.1%	13986.4%	-4468.1%	132.2%	1545.6%	0.0%		

Source: Tax returns, Statistics Canada, and mission calculations.

25. **This very preliminary analysis reveals a certain amount of heterogeneity among mining companies as far as economic profitability is concerned.** This type of analysis could be performed in a systematic way to distinguish mining companies on the basis of their tax avoidance risk (see Chapter V).

B. Mining Codes in Mali

Description

26. **The mining companies (and their subcontractors) in operation in Mali are governed by three mining codes and their model agreements:** Order 910065/P-CTSP and Decree 91-278/PM-RM of September 19, 1991; Order 99-032/P-RM of August 19, 1999, and Decree 99-256/PM-RM of September 15, 1999; Law 2012/015 of February 27, 2012; and Decree 2012-311/P-RM of June 21, 2012. All of the gold mines currently in operation are subject to the 1991 Mining Code. Like the other member countries of the West African Economic and Monetary Union (WAEMU), Mali has not applied the Community Mining Code (Regulation 18/2003/CM/UEMOA of December 23, 2003), for which the implementing decrees have not been enacted. The mission did not consider it useful to look at the Community Mining Code. Table 7 presents the main aspects of the tax regimes for industrial mines.

27. **The main taxes, duties, levies, and royalties under the Mining Code are managed by four directorates in three different ministries:** the Directorate General of Taxes (DGI) and the Directorate General of Customs (DGD) in the Ministry of Economy and Finance; the National Geology and Mines Directorate (DNGM) in the Ministry of Mines; the Property and Land Registry Directorate (DNDC) in the Ministry of State Property and Land Affairs (see Table 6). This list also includes the mandatory levies imposed by the National Social Security Institute (INPS), which is under the supervision of two ministries: the Ministry for Humanitarian Action, Solidarity and the Elderly and the Ministry of Economy and Finance (see Rota-Graziosi et al. 2014).

28. **The three mining codes make provision for the stability of the tax system, although their implementation approaches differ.** Article 96 of the 1991 Mining Code states that the establishment agreement defines the taxes and levies payable by the company for the duration of the agreement (30 years), with the possibility for the company to benefit from any new tax provisions that would reduce the tax burden. Article 102 of the 1999 Mining Code and Article 118 of the 2012 Mining Code are more restrictive, allowing the company to opt for a more favorable tax regime on the condition that it adopts the regime in its entirety. Subsequent articles in each of these two codes define the taxes, duties, levies, and royalties payable by each company depending on the phase of the project (exploration or production). Article 118 of the 2012 Mining Code restricts the scope of the stability clause by explicitly excluding duties, levies, and mining royalties.

Table 6. Administrative Arrangements for the Mining Levies

	Departments	Ministries
Permits		
Exploration permits	National Geology and Mines Directorate (DNGM)	Ministry of Mines
Operating permits	DNGM	Ministry of Mines
Fees for the issuance/renewal of mining rights	DNGM	Ministry of Mines
Acquisition of equity	National Property and Land Registry Directorate (DNDC)	Ministry of Housing, Land Affairs, and Urban Planning
Royalties		
Surface	DNGM during the exploration phase and DNDC during the operational phase	Ministry of Mines/ Ministry of Housing, Land Affairs, and Urban Planning
CPS/ISCP	Directorate General of Taxes (DGI)	Ministry of Economy, Finance, and Budget
Ad valorem tax	DNDC	Ministry of Housing, Land Affairs, and Urban Planning
Direct taxation		
IS	DGI	Ministry of Economy, Finance, and Budget
IRVM	DGI	Ministry of Economy, Finance, and Budget
Capital gains on the sale of rights	DGI	Ministry of Economy, Finance, and Budget
Payroll taxes	DGI	Ministry of Economy, Finance, and Budget
Super profit tax	DGI	Ministry of Economy, Finance, and Budget
Indirect taxation		
Import duties and levies	Directorate General of Customs (DGD)	Ministry of Economy, Finance, and Budget
VAT	DGI and DGD	Ministry of Economy, Finance, and Budget

Source: Mission.

29. **The main changes in the 1999 and 2012 Mining Codes concern the IS and the introduction of preferred dividends for the 10 percent free equity acquired by the government.** The 1999 Mining Code eliminated the exemption applicable for five years after

commencement of production and no longer specifies the tax rate, which is whatever rate is indicated in the General Tax Code. The 2012 Mining Code reintroduces a corporate income tax rate of 25 percent for the first 15 years of production, which is more favorable than the rate under the General Tax Code (30 percent). The 2012 Mining Code also introduces a tax on “excess production,” which is considered by the Malian authorities to be a super profit tax. Article 124 states that in the case of production exceeding the levels approved annually by the company’s board of directors by 10 percent, the generally applicable IS is applied to this excess production. The concept of preferred dividends introduced in 1999 requires the distribution of 10 percent of profits to the government. This provision was maintained in the 2012 Mining Code. It should be noted that the tax on investment income (IRVM) withheld by the mining company is payable only on the dividends paid to the government. The rate is 10 percent. Other shareholders are exempt from the IRVM.

30. **The Malian authorities have taxed direct capital gains from the sale of mining rights since the adoption of the 1999 Mining Code.** The tax is applied at the rate of 10 percent. The 2012 Mining Code seeks to strengthen this provision by introducing a minimum tax based on exploration costs for sales of exploration permits (with a rate of 2 percent) and based on the value of the mine (feasibility study) for operating permits (with a rate of 1 percent). Chapter V reviews the question of the taxation of capital gains on direct and indirect transfers of mineral or oil rights.

31. **Several adjustments have been made to the mining royalties and fees since the 1991 Mining Code.** The flat-rate issuance and renewal fees for mining rights, which were not changed in 1999, were adjusted in the 2012 Mining Code, while surface royalties, the value per km² of which was adjusted in 1999, have not been modified since then. The ad valorem tax, which existed in the 1991 Mining Code, was eliminated in the 1999 code and then reintroduced in the 2012 Mining Code. There has been no change in either its rate (3 percent) or its base (the ex-mine price). Following the transposition of WAEMU Directive 03/98/CM/UEMOA on excise taxes into national law, the tax on services (CPS) was converted into a special tax on selected products (ISCP). Decree 2012-278/P-RM of June 13, 2012 defined the ISCP rates for each product, the rate for gold being 5 percent. This rate was lowered to 3 percent by Decree 2012-311/P-RM of June 21, 2012 implementing the 2012 Mining Code.

32. **Indirect taxation has not changed in the three codes.** A mining list identifies the products that may benefit from customs advantages (temporary admission and exemption from customs duties). This list was compiled in 1998 and is the only list, i.e., it is the same for all companies in the sector. It contains 332 products and does not link the Harmonized System coding to the product description. Temporary admissions and exemptions essentially cover the exploration phase and the first three years of production. However, the list of goods that benefit from these advantages beyond the first three years is not consistent with Articles 29 and 30 of the WAEMU Community Mining Code. A company is exempt from the VAT until the end of the third year of production and there is no limit for petroleum

products required for mining activities. These provisions are not in compliance with Article 33 of the Community Mining Code and Article 34 of the VAT directive.

Comments

33. **The tax regime and its administration remain complicated.** The law states that the ISCP is based on turnover, while the ad valorem tax is based on the ex-mine price. In practice, turnover is used as the tax base for both of these taxes. An examination of the tax returns of mining companies by the EITI indicates that the adjusted ad valorem tax revenues are exactly equal to the revenues from the ISCP on gold at the same rate (3 percent), in spite of the different tax bases. Therefore, it does not appear that the law is being enforced. Furthermore, these two taxes, which are very similar, are being collected by two different directorates under two different ministries – the DGI and DNDC. Moreover, the surface royalty is collected by the DNGM during the exploration phase and by the DNDC during the operating phase. It appears that the law has been enforced on a discretionary basis since 2012 since only three companies in operation have paid the surface royalty. This administrative arrangement increases tax collection costs, weakens government revenues, and is an obstacle to improving the sector's transparency.

34. **A strengthening of institutional capacity is essential to gain a better understanding of the impact on government revenues of decisions by the various parties involved in the mining sector.** The technical assistance missions financed by the trust fund are aimed in particular at capacity building in Mali in the area of mining revenue, through the presentation of a calibrated model for the economy and Malian mining projects as described in the following section. This Fiscal Analysis of Resource Industries (FARI) model combines technical, economic, and tax data. It therefore requires close collaboration among a number of directorates in various ministries for it to be properly configured and used. The present fragmented institutional structure is unlikely to allow for this kind of collaboration.

35. **A FARI technical unit could be established under the oversight of an inter-ministerial committee for economic and tax research and assessment of the mining sector.** Ownership of the model by this team would make it possible to develop the model and turn it into an effective management tool for mining tax policy and the country's macroeconomic management, in support of the needs expressed by the staff of the two main ministries involved in this sector. The technical unit would also contribute to the centralization of legal, tax, and social data pertaining to the mining sector.

Table 7. Key Tax and Customs Provisions of Mali's Mining Codes

	1991 Mining Code	1999/2000 Mining Code	2012 Mining Code
Duration of permits			
Exploration permit	Art. 17. 3 years renewable twice in 3-year increments with a reduction in surface area of 50%	Art. 34. 3 years renewable twice in 3-year increments with a reduction in surface area of 50%	Art. 38. 3 years renewable twice in 2-year increments
Operating permit	Art. 53. 30 years renewable in 10-year increments	Art. 43. 30 years renewable in 10-year increments	Art. 66. 30 years renewable in 10-year increments
Issuance and renewal fees for mining rights	Art. 91. CFAF 300,000 for exploration permit; CFAF 1,000,000 for operating permit	Art. 103. CFAF 500,000 for exploration permit; CFAF 1,000,000 and CFAF 2,000,000 for operating permit	Art. 107 and implementing decree. CFAF 5,000,000 for exploration permit; CFAF 100,000,000 for operating permit for groups 1 and 2 and CFAF 20,000,000 for groups 3 to 5
Acquisition of equity		Art. 42. 10% free equity and preferred dividends if accounting profit reported additional paid equity up to a maximum of 10%	Art. 65. 10% free equity and preferred dividends if accounting profit reported; additional paid equity up to a maximum of 10%
Stability	Art. 96. Duration of the agreement for tax base and rate	Art. 102. Duration of the agreement for tax base	Art. 118. Duration of the agreement for tax base and rate, with the exception of duties, fees, and mining royalties
	Art. 96. Adoption of any tax measure that is more favorable	Art. 102. If a new regime is more favorable, adoption in its entirety	Art. 118. If a new regime is more favorable, adoption in its entirety
Royalties			
Surface	Art. 92. Between CFAF 50 and CFAF 200 per km ² during the exploration phase, then CFAF 75,000 per km ² during the operating phase	Art. 104. Between CFAF 1,000 and CFAF 2,000 per km ² during the exploration phase, then CFAF 100,000 per km ² during the operating phase	Art. 107 and implementing decree. Between CFAF 1,000 and CFAF 2,000 per km ² during the exploration phase, then CFAF 100,000 per km ² during the operating phase
CPS/ISCP	Art. 92. 3% of pre-tax turnover	Art. 105. 3% of pre-tax turnover	Art. 121 and implementing decree. 5% of pre-tax turnover for groups 1 and 2
Ad valorem tax	Art. 92. 3% of the ex-mine price		Art. 121 and implementing decree. 3% of the ex-mine price
Sources: CM and CGI.			

Table 7. Key Tax and Customs Provisions of Mali's Mining Codes (cont.)

	1991 Mining Code	1999/2000 Mining Code	2012 Mining Code
Direct taxation			
IS	Art. 22.3, decree on establishment agreement. 45%	Art. 109. General Tax Code at the time of signing	Art. 124. 25% for the first 15 years of production
Withholdings at source	Art. 22.4, decree on establishment agreement. Exemption for 5 years after production has started CGI. Providers without a permanent establishment in Mali/50% allowance for expenses/IS rate	CGI. Providers without a permanent establishment in Mali/50% allowance for expenses/IS rate	CGI. Providers without a permanent establishment in Mali/50% allowance for expenses/IS rate
Deficit carried forward	CGI. 3 years CGI. Accelerated	CGI. 3 years CGI. Accelerated	CGI. 3 years CGI. Accelerated
Minimum flat tax (IMF)	CGI. 0.75%	CGI. 0.75%	CGI. 1%
IRVM		CGI: interest 9%, dividends 10%, bonds 13%, exemption for dividends paid to parent company	CGI: interest 9%, dividends 10%, bonds 13%, exemption for dividends paid to parent company
Capital gains on sale of rights		Art. 107. 10%	Implementing decree. 10%; in the absence of capital gains, 2% of the amount of exploration costs/1% of the value of the mine (according to feasibility study)
Payroll taxes	CGI (Fixed contribution payable by employers, housing tax: 8.5%)	CGI (CFE, TL, TFP: 8.5%)	CGI (CFE, TL, TFP, TEJ: 8.5%)
Undercapitalization rules	LIBOR + 2% for deductible interest	CGI: BCEAO rate + 2% for deductible interest. Shareholder loans may not exceed 100% of nominal share capital	CGI: BCEAO rate + 2% for deductible interest.
Super profit tax			Art. 124. Production exceeding projected output by more than 10% taxed at the BIC rate in the general taxation legislation

Table 7. Key Tax and Customs Provisions of Mali's Mining Codes (cont.)

	1991 Mining Code	1999/2000 Mining Code	2012 Mining Code
Indirect taxation			
Mining list		Single list from 1998	
Import duties and levies	Arts. 97 and 98. Temporary admission and exemption before commencement of production and then temporary admission for materials and heavy equipment and exemptions for mining inputs for 3 years	Arts. 114 and 115. Temporary admission and exemption before commencement of production and then temporary admission for materials and heavy equipment	Arts. 133 and 134. Temporary admission and exemption before commencement of production and then temporary admission for materials and heavy equipment and exemptions for mining inputs for 3 years
Common levies, statistical fees, and pre-shipment inspection	CGD	CGD	CGD
Duties and levies on petroleum products	Arts. 97 and 98. Exemption for mining activities (energy)	Arts. 114 and 115. Exemption for mining activities (energy) and social and health-care infrastructure facilities	Arts. 133 and 134. Exemption for mining activities (energy)
VAT	Arts. 97 and 98. Exemption before commencement of production and for 3 years thereafter	Arts. 114 and 115. Exemption before commencement of production and for 3 years thereafter	Arts. 133 and 134. Exemption before commencement of production and for 3 years thereafter
Sources: CM and CGI.			

36. **The ring-fencing principle is not included in the 2012 Mining Code.** It is supposed to be dealt with in the implementing decree (according to Article 16 of the 2012 Mining Code), but the decree does not address this matter. While the current operating companies each hold just one permit, the 2012 Mining Code and its implementing decree suggest that one company could acquire several permits, thereby limiting the government's ability to properly assess the economic profitability of each mine.

37. **The tax and customs advantages of the various mining codes apply not only to the holders of exploration or operating permits, but also their subcontractors.** This provision significantly increases the risk of tax avoidance or even evasion, in particular with regard to indirect tax revenues (VAT and customs duties, see Chapter VI).

38. **Operating permits are valid for 30 years, which is excessive, especially for the gold mining sector.** The 2012 Mining Code reduces the term of exploration permits by two years, but leaves the term of operating permits at 30 years, renewable in 10-year increments. This term exceeds the operating life of most Malian mines (10 to 15 years) by a considerable margin. The complications resulting from the application of several mining codes during the operating life of mines imposes a heavy burden in terms of the administrative costs of mining taxation, creates tensions between the government and private investors, and is an obstacle to improvement of the transparency of the tax system. Finally, the lengthy period of validity of permits weakens the stability of the tax regime.

39. **The scope of the stability clause was reduced under the 2012 Mining Code since it explicitly excludes duties, levies, and mining royalties from the clause.** In addition, a mining company may choose to opt for more favorable tax provisions only if it adopts all of them in their entirety. This provision makes it possible to avoid cherry-picking of the most advantageous tax arrangements set out in the various mining codes. However, it does not prevent companies from benefiting from new provisions in the General Tax Code or the General Customs Code, such as a reduction in the IS rate. Changes to rent sharing to the detriment of government revenues are thus less automatic, but they remain poorly managed. The exclusion of duties, levies, and mining royalties may also turn out to be a deterrent for some investors, since the revision of royalty rates is unilateral at the initiative of the government and the risk of expropriation by means of these tax instruments is not negligible.

40. **The 2012 Mining Code does not improve the automatic progressivity of the mining tax regime compared to the previous mining codes.** The revision of the stability clause mentioned above introduces progressive taxation at the discretion of the authorities, which runs the risk of being detrimental to the development of the mining sector. Moreover, Article 124 of the 2012 Mining Code is particularly difficult to enforce. Either it will be easily circumvented by the mining companies since it is based on the annual production statements of these companies, or it will be a source of disagreement and conflict between the government and private investors. This article should be revised and the concept of overproduction (which could be harmful by shortening the operating life of the mine) should

be distinguished from the concept of excess profits. Overproduction could be subject to penalties. It needs to be correctly and clearly defined, however. The production plan established in the feasibility study could be reviewed on a regular basis by mutual agreement between the private investor and the Ministry of Mines. The desire to tax excess profits is legitimate, but Article 124 does not appear to offer an effective way to do this. The mechanism currently being proposed is not a tax on super profits based on the profitability of the mine and/or changes in mineral prices. An improvement in the progressivity of the mining tax regime requires a revision of the tax system, involving the private sector and the assumption of risk by the government. The main instruments of this progressivity are discussed in the following section.

C. Analysis of Mineral Resource Rent Sharing

The analytical model

41. **The FARI model is described in the methodological note provided to the authorities, which contains a simplified version of the model.** The essential concepts of net present value (NPV), internal rate of return (IRR), and average effective tax rate (AETR), among others, are defined in Box 1.

Box 1. NPV, IRR, AETR

Net present value (NPV): The NPV is used to calculate the present value of a stream of money (income or expenditure). Applied to an investment project, it allows an investor to determine if the income generated by the project will cover the investments made under economic conditions acceptable to the investor. The discount rate reflects the investor's preference for present income.

Internal rate of return (IRR): This is the discount rate at which the NPV of a project = 0.

Average effective tax rate (AETR): $\frac{NPVGvt}{NPVptcf}$

NPVGvt is the discounted government revenues and *NPVptcf* is the discounted pre-tax cash flows. The AETR is therefore the share of mining rent going to the government in the form of taxes, tax and non-tax duties levies, dividends received, and so on.

In the calculation of the AETR, government revenues and pre-tax net cash flows of a project are initially calculated at the undiscounted value, and then at present value (for example, at a discount rate of 10 percent) to take into account the opportunity cost of the invested capital. When the IS and dividends account for the bulk of governments revenues from a mining project, the AETR is lower since the amortization of the initial investment reduces profits for the first years of the life of a mining project. This relationship is the opposite when royalties account for most of the revenues.

Changes in rent sharing since the 1991 Mining Code

42. **Since 1991, mineral resource rent sharing has improved significantly in favor of the government, in spite of a slight decline between the 1999 Mining Code and the 2012 Mining Code, owing to a reduction in the IS rate in the 2012 code (see Figure 2).** The mission analyzed rent sharing under the four regimes applicable in Mali, the key parameters of which are summarized in Table 8. Rent sharing varies considerably from one mine to another (see Figure 2) and depends basically on the company's cost structure. The date of the feasibility studies is therefore especially important since an older mining project will have lower costs. This explains in part why the share of the rent going to the government under the SOMILO SA (Loulo) project is small; its feasibility study, which was done in 2004, is the oldest and it has not been possible to discount the production costs.

43. **Under the 2012 Mining Code, the government receives close to 40 percent of the mineral resource rent on average, compared to 47 percent under the 1999 Mining Code (see Figure 2).** The 1999 and 2012 Mining Codes improved the share going to the government by eliminating the five-year tax exemption contained in the 1991 Mining Code.¹⁵ The decline in the IS/BIC rate between these two mining codes, from 35 percent to 25 percent, reduced the percentage of the government's share of the rent by 5 points, and this loss was not fully compensated for by the (re)introduction of an ad valorem tax. This is particularly true for the most profitable projects, such as Somisky or Goukoto.¹⁶ At the same time, the effective royalty rate of 6 percent places a heavier burden on more recent investment projects, the production costs of which are higher (see, for example, the AETR applicable to Yanfolila).

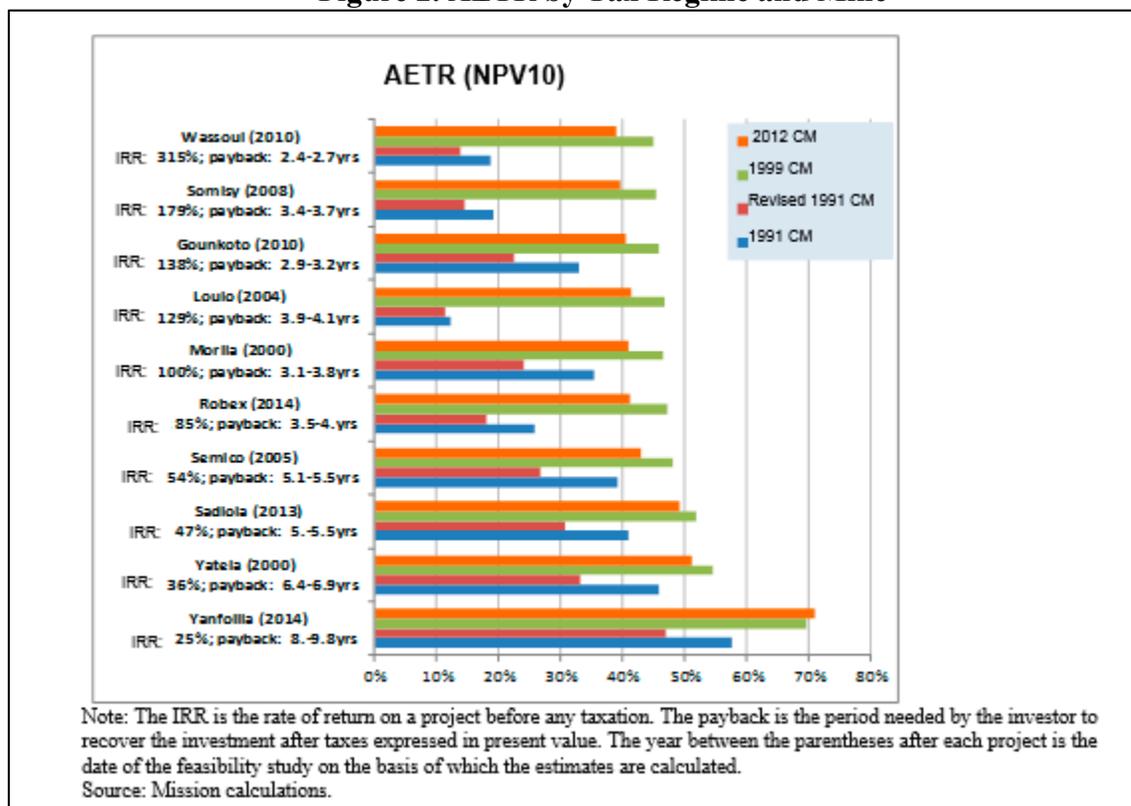
Table 8. Mali: Mining Fiscal Regimes

	Modeled parameters			
	1991 Mining Code	Revised 1991 Mining Code	1999 Mining Code	2012 Mining Code
ISCP	3%	3%	3%	3%
Ad valorem royalty	3%	3%	-	3%
IS	45%	25%	35%	25%
Duration of IS exemption	5 years	5 years	-	-
Preferred dividends	no	no	10%	10%
IRVM dividends	-	-	10% on dividends paid to the government only	
IRVM interest	-	-	9%	9%

¹⁵ This temporary exemption has a particularly harmful effect in the natural resources sector by encouraging mining companies to strip off as much as they can, thereby shortening the productive life of the mineral deposit.

¹⁶ The results presented for each mining project are based on the feasibility studies that were provided to the government and made available to the mission. The mission understands, however, that some of the studies have been revised and the information provided here may not be the most recent (for example, Wassoul'or, which delayed the start of production by at least three years from the date indicated in the feasibility study).

Figure 2. AETR by Tax Regime and Mine



44. Considering a hypothetical gold mining project (see Annex II), the changes in the mining codes since 1991 have improved the progressivity of the tax regime¹⁷ and have enabled the government to receive a share of the mining rent earlier in the life cycle of a mine (see Figures 3, 4, and 5). Under the 1999 and 2012 Mining Codes, a significant share of government revenues is collected after production has begun, in the form of proportional royalties that are higher than those under the 1991 Mining Code. In addition, the absence of an IS exemption period naturally moves the payment of this tax up in time (although at a lower rate than under the 1991 Mining Code).

45. These favorable changes in the legislation should nevertheless be put into perspective, since most of the mines in operation in Mali are operating under a revised version of the 1991 Mining Code, which turns out to be more generous than the original version. The asymmetry of the fiscal stability clause has significantly reduced the share of the rent going to the government, since this clause has enabled mining companies to reduce

¹⁷ The progressivity indicator used is defined by Daniel et al. (2010). It corresponds to the government's share of *net profits* of the project in question. *Net profits* are the income of a mining project less the operating costs and replacement investment expenses; the initial investment is not included in this formula. Progressivity is assessed by observing the variation in the government's share in the *net profits* of a project when the profitability of the project varies, for example in reaction to a change in the price of the mineral being extracted or in production costs.

their IS rate from 45 percent (applicable in 1991) to 25 percent (the rate under the 2012 Mining Code), while maintaining the IS exemption period, which turns out to be relatively long (five years) compared to the average life of mining projects in operation (8 to 15 years). Figure 2 illustrates the systematic decline in the AETR by 5 to 10 percentage points per mining project between the two versions of the 1991 Mining Code.

Figure 3. Mali: AETR (Mining)

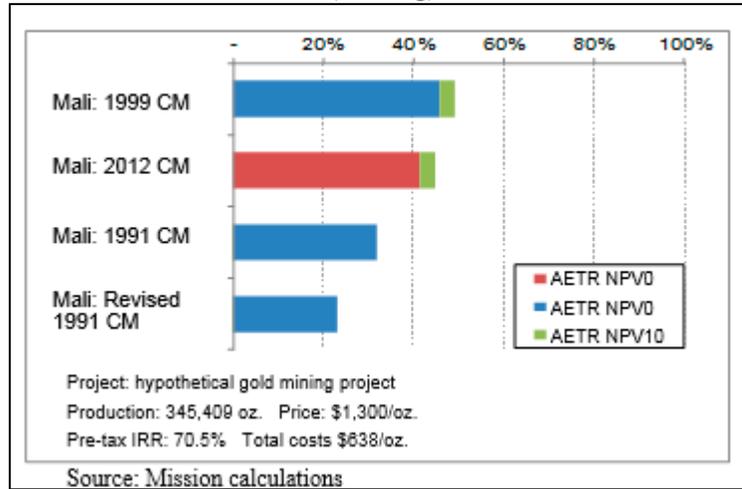
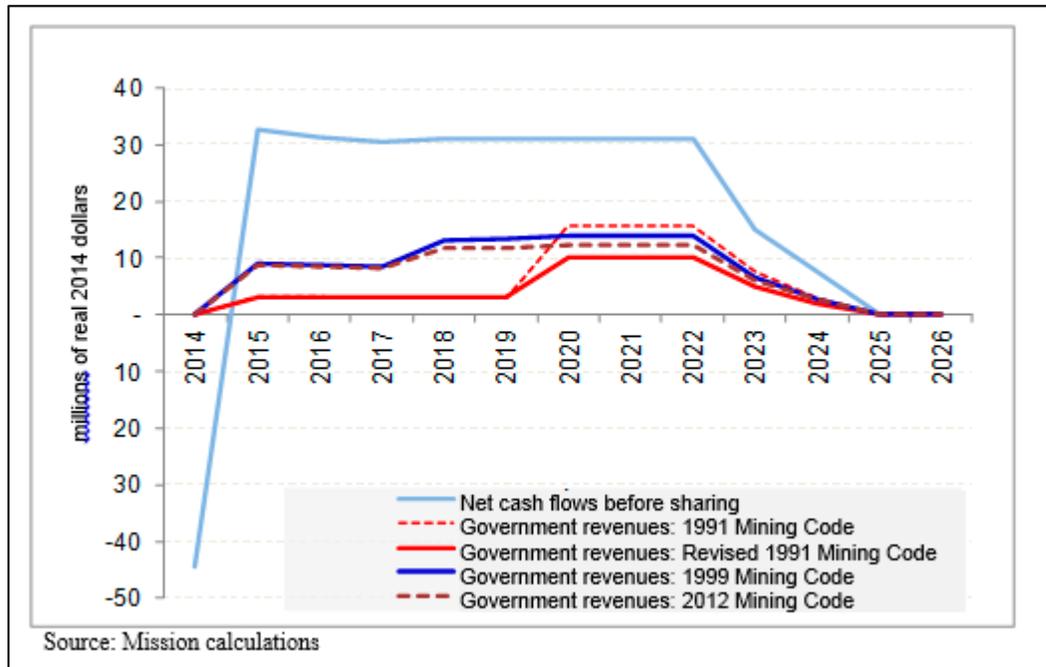
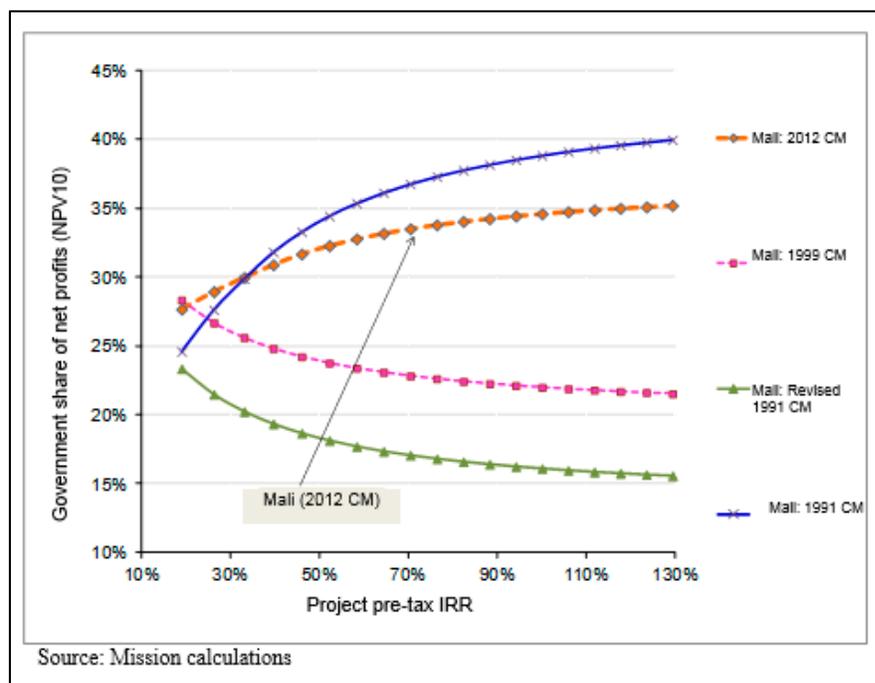


Figure 4. Mali: Net Cash Flows and Taxes Collected



**Figure 5. Mali: Progressivity of the Mining Fiscal Regimes
(Discount rate = 10%)**



International comparisons

46. **Mali's current tax regime as defined by the 2012 Mining Code provides for a smaller share for the government than in similar countries in the region (see Figure 6).**¹⁸ The international comparisons made here are based on new investors and are aimed at assessing Mali's attractiveness and rent sharing. The AETRs presented here are not applicable at this time since most of the mines in operation in the countries in question are subject to previous mining codes or special mining agreements. An international comparison of the AETRs actually applied is not possible, given the confidentiality clauses in force in some countries.

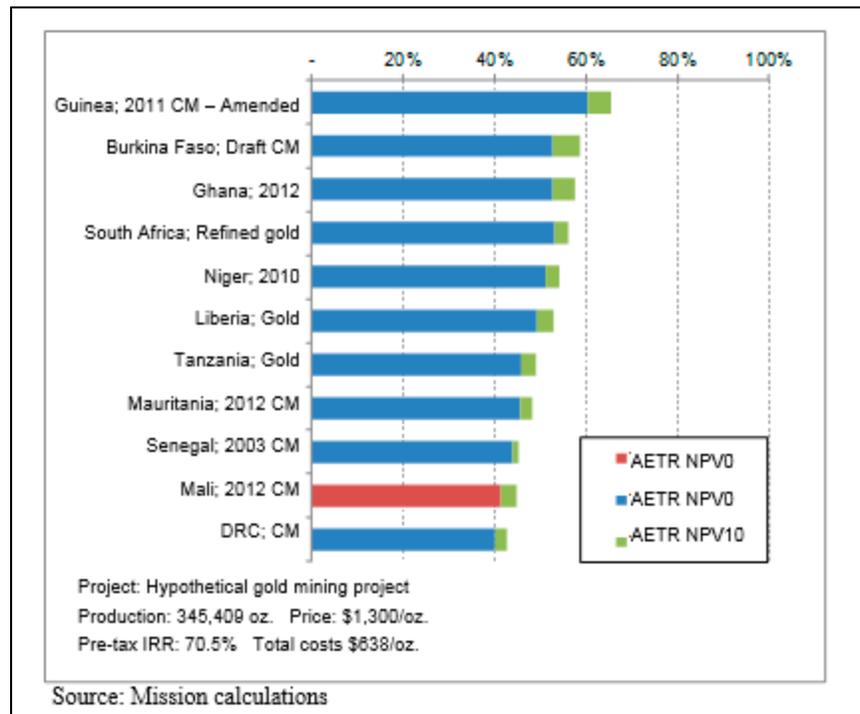
47. **The Malian tax regime turns out to be more regressive than the regimes in comparable countries, however (see Figure 7).** This regressivity means that the share of mining rent going to the government in Mali will be relatively smaller than in other countries for more profitable projects. It also means that some mining projects will either cease operations earlier in Mali than in Ghana, for example, or will not go into production because they are not profitable enough, given the heavy fixed tax burden. The regressivity of the system can be explained by a lack of progressive tax instruments in the regimes defined by the mining codes and their respective decrees. Several countries have introduced a relatively

¹⁸ See Daniel et al. (2010) for a detailed analysis of mining and petroleum tax regimes at the global level and Charlet et al. (2013) for an analysis of the tax regimes in Francophone countries in West and Central Africa.

progressive regime, by means of either a specific mineral resource rent tax, a variable corporate income tax rate, or progressive proportional royalties. Sierra Leone is currently considering the introduction of a mineral resource rent tax.¹⁹ Liberia applies a tax surcharge that is payable above a particular profitability threshold. The tax regime for gold mines in South Africa is based on a royalty rate and a corporate income tax rate that vary depending on profitability. A similar regime is being developed in the Democratic Republic of the Congo (DRC). Finally, in Niger and Burkina Faso the royalty rate is progressive, varying according to the price of the mineral.

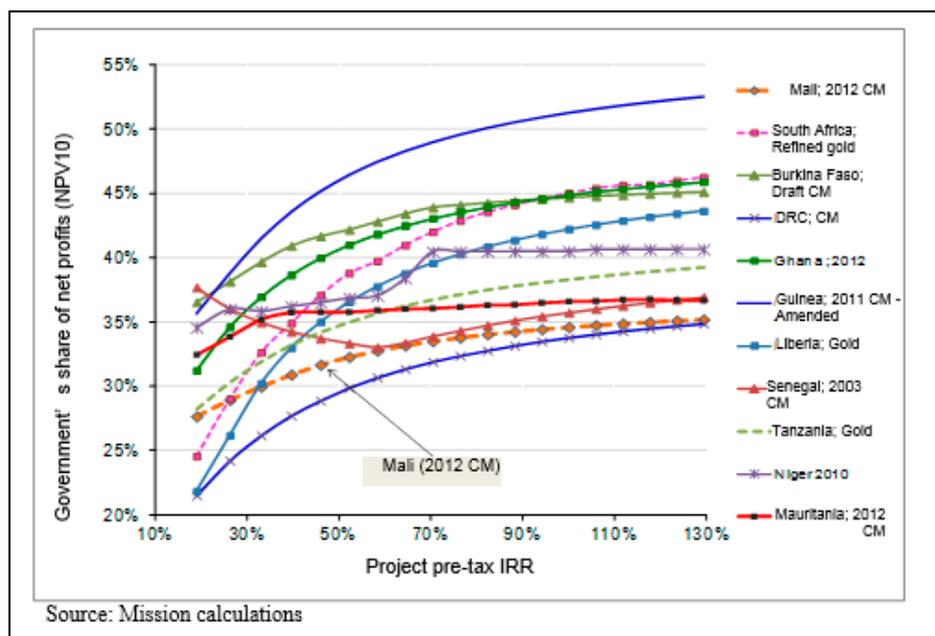
48. **Mali's attractiveness in terms of taxation of the mining sector is therefore mixed based on the two principal criteria analyzed: the AETR and the progressivity of the tax regime.** The 2012 Mining Code implicitly favors highly profitable mining projects, since the more profitable a project is, the lower the tax burden on the investor. By the same token, the Malian tax regime could turn out to be a deterrent when a project is not very profitable. Finally, we should qualify our comments by emphasizing that the tax dimension is clearly just one of the criteria used when investors are deciding whether to invest in the Malian mining sector.

Figure 6. International comparisons: AETR in Various Countries (Discount rate = 0% and 10%)



¹⁹ In Ghana, the 2012 budget introduced a special tax (a windfall tax) of 10 percent on exceptional income, but its application has been delayed following the drop in the price of gold.

Figure 7. International comparisons: Progressivity (Mining)
(Discount rate = 10%)



Analysis of the tax regimes in Mali and proposed alternative regimes

49. **The mission considered several options for the reform of mining taxation in Mali, which are aimed primarily at improving its progressivity.** The five options presented below all allow for the achievement of an AETR of 50 percent with a gold price equal to US\$1,300/oz. They are nevertheless not equivalent, since options 3 and 5, which base the progressivity of the tax on the price of gold, are not neutral, unlike those that use a measure of profitability, which can be deducted from taxable profits (after an accounting restatement).²⁰ For information purposes only, and with a view to encouraging a more in-depth discussion in the future, the mission examined the following five scenarios:

1. **A 15 percent mineral resource rent tax (MRRT)**, which taxes cash flows once the investor has recouped all of his investment costs and earned an after-IS return of 12.5 percent.
2. **A variable income tax (VIT) based on a profitability threshold** similar to the formula applied in South Africa, with a maximum rate of 40 percent.
3. **A variable income tax (VIT) based on three price thresholds** that is applied at a rate of 25 percent if the price of gold is below US\$1,000/oz., 30 percent if the price is between US\$1,000/oz. and US\$1,200/oz., 35 percent if the price is

²⁰ The mission did not recommend options 3 and 5 (see IMF, 2012 for a more detailed analysis) but included them in the analysis for illustration purpose at the request of the authorities.

between US\$1,200/oz. and US\$1,500/oz., and 40 percent if the price is above US\$1,500/oz.

4. *A progressive royalty based on three profitability thresholds*, which is applied at a rate of between 3 percent and 5 percent of revenues depending on the profit/earnings ratio, similar to the formula applied in South Africa.
5. *A progressive royalty based on three price thresholds*, which is applied at a rate of 3 percent if the price of gold is less than US\$800/oz., 5 percent if the price is between US\$800/oz. and US\$1,000/oz., 7 percent if the price is between US\$800/oz. [sic] and US\$1,100/oz., and 9.5 percent if the price is above US\$1,300/oz.

50. **Figures 8 and 9 illustrate the progressivity of each proposed regime based on changes in the price of gold (Figure 8) and changes in production costs (Figure 9).** The share of the rent going to the government improves significantly as expected (see Table 10). The tax regimes that base their progressivity on the price of gold rather than the profitability of a project (regimes 3 and 5) turn out to be much less effective in increasing the government's share when the improvement in profitability results from a reduction in production costs, as opposed to a rise in prices (Figure 9). The mission would like to stress that the first option is the one recommended by the IMF, since it is the most neutral. This simulation work is aimed primarily at generating interest on the part of the Malian authorities in a more progressive tax regime. Future missions may refine this work in consultation with the authorities.

Recommendations

- Establish a mining taxation unit responsible in particular for the FARI model, bringing together staff from the Ministry of Finance (DGI, DGD) and the Ministry of Mines.
- Establish the ring-fencing principle in a revised version of the Mining Code or in an implementing decree.
- Combine the ad valorem royalty and the ISCP.
- Improve the progressivity of the mining taxation regime by considering the introduction of a tax, the rate of which would vary automatically with the profitability of a mining project.

Figure 8. Mali: Progressivity of Current and Alternative Regimes (Price Sensitivity)
(Discount rate = 10%)

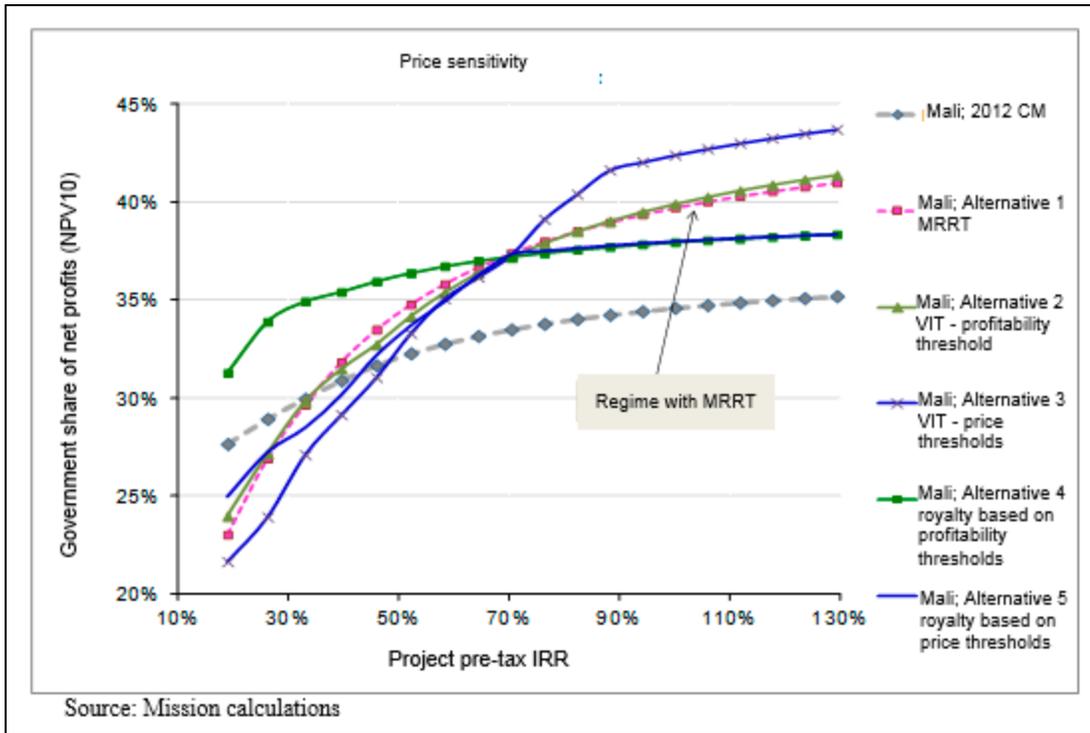


Figure 9. Mali: Progressivity of Current and Alternative Regimes (Cost Sensitivity)
(Discount rate = 10%)

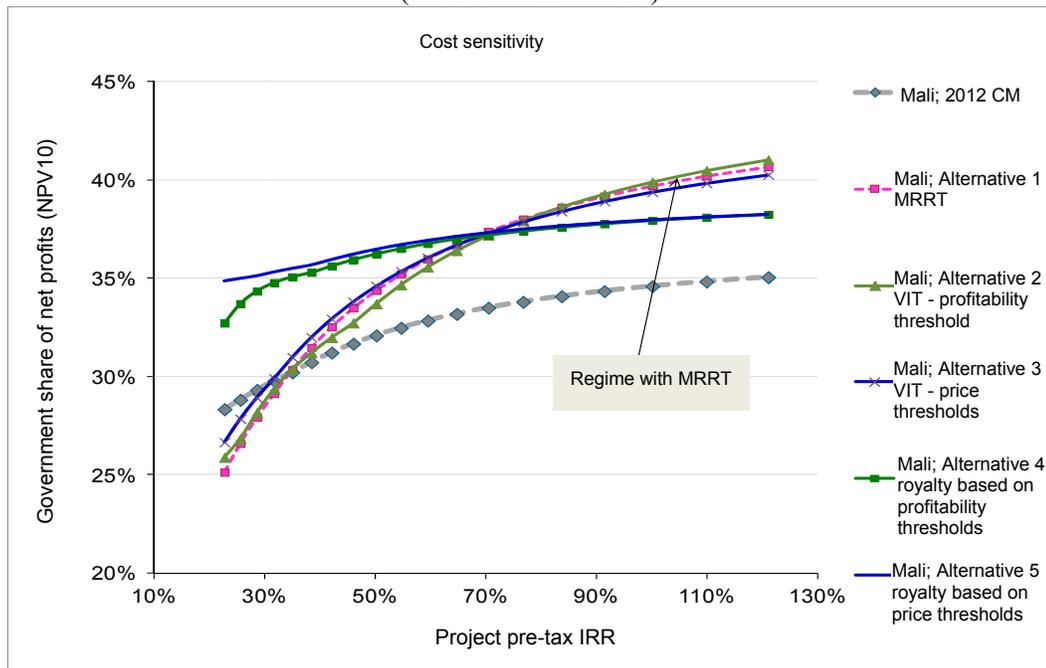


Table 9. Mali: Alternative Regimes for Mining

Tax terms	1991 CM	Revised 1991 CM	1999 CM	2012 CM	FAD1-RRT	FAD2-VIT	FAD3-price IS	FAD4-RoyaltyProf	FAD5-RoyaltyPrice
(Royalty) ISCP	3%	3%	3%	3%	3%	3%	3%		
(Royalty) Ad valorem tax	3%	3%		3%					
(Royalty) Progressive								0.5%–7%	3%–9.5%
Corporate income tax (IS)	45.0%	25.0%	35.0%	25.0%	25.0%	25%–40%	25%–40%	25.0%	25.0%
duration of IS exemption	5 years	5 years							
IRVM Dividends					10% on dividends paid to the government only				
IRVM Interest			9%	9%	9%	9%	9%	9%	9%
Preferred dividends	no	no	10%	10%	10%	10%	10%	10%	10%
Tax surcharge					15% with 12.5% uplift				

Source: Mission.

Table 10. Mali: Economic Data by Scenario

	units	1991 CM	Revised 1991 CM	1999 CM	2012 CM	FAD1-RRT	FAD2-VIT	FAD3-price CIT	FAD4-RoyaltyProf	FAD5-RoyaltyPrice
Project pre-tax IRR	%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Project after-tax IRR	%	61%	62%	46%	48%	46%	46%	46%	45%	45%
Pre-tax undiscounted value of project	US\$ Mln	229	229	229	229	229	229	229	229	229
After-tax undiscounted value of project	US\$ Mln	155	176	124	134	122	122	122	124	123
Undiscounted government revenues	US\$ Mln	73	53	105	95	107	106	107	105	105
Undiscounted AETR	%	32%	23%	46%	41%	47%	47%	47%	46%	46%
Pre-tax discounted value of project (rate of 10%)	US\$ Mln	132	132	132	132	132	132	132	132	132
After-tax discounted value of project (rate of 10%)	US\$ Mln	92	102	67	73	66	66	66	66	66
Discounted government revenues (rate of 10%)	US\$ Mln	40	30	65	59	66	66	66	66	66
Discounted AETR	%	31%	23%	49%	45%	50%	50%	50%	50%	50%

Source: Mission calculations, FARI model, mission.

IV. PETROLEUM TAXATION

51. **The hydrocarbon extraction industries (oil and natural gas) in Mali are still in their infancy.** A limited number of exploration licenses have been issued in the past, but no commercially viable hydrocarbon deposits have been discovered to date. The Petroleum Code applicable to existing exploration activities was adopted on August 2, 2004 (Law 04-037).

52. **The draft new Petroleum Code was reviewed carefully by the mission and the mission's comments are contained in a separate document that has been provided to the authorities.** The following components of the legislative framework covering oil exploration and production were examined by the mission: the revised version of the Petroleum Code and its implementing decree, the model production-sharing contract (PSC) and model concession contract, and the General Tax Code, which governs the tax obligations of all companies.

53. **The draft new Petroleum Code remains complex, in spite of an initial review by the IMF's Fiscal Affairs Department in May 2014.** The code applies to activities involving the exploration, production, transportation, marketing, and refining of oil and natural gas. Rights to engage in these activities are granted by contract. The draft Petroleum Code provides for four different types of agreements or contracts²¹ (concession, production-sharing, service, and reconnaissance contracts), at the company's discretion, and it sets out a complicated taxation regime, most of the components of which apply to all types of contracts:

- Maximum government equity holding of 20 percent, and the possibility for domestic private investors to acquire an additional 5 percent stake, for a maximum of 25 percent;
- The IS rate is set at a reduced rate of 25 percent, compared to 30 percent under the General Tax Code;
- A tax surcharge when profits are 10 percent above projected profits;
- The ISCP based on turnover excluding the VAT, at a rate of 5 percent;
- Surface royalties, the rate of which varies depending on whether the company is in the exploration phase or the operating phase;
- In the case of concession contracts only, ad valorem royalties, the rate of which varies depending on the production and type of resource (oil or natural gas);

²¹ The mission is adhering strictly to the nomenclature of the draft Petroleum Code here.

- In the case of production-sharing contracts only, production sharing based on the quantity produced;
- In all cases, the possibility of a signature bonus when an operating license is granted, the potential terms of which have not been established by the authorities;
- Finally, the holders of an oil contract must pay other ordinary duties and taxes applicable to all companies established in Mali, including social fees and contributions, the fixed employer contribution, and the tax on wages and salaries payable by employees, among others.

54. **The draft Petroleum Code also provides for a number of additional levies specific to the oil sector.** These levies include a contribution to the vocational training and staff promotion fund of the Hydrocarbons Administration, ranging from US\$250,000 to US\$500,000 per year and the funding of a social, economic, and cultural development plan and a training plan for personnel of Malian origin. The current legislative framework does not contain any details regarding service and reconnaissance contracts, which are being developed by the relevant government agencies at this time.

A. General Comments on the Draft Petroleum Code

55. **The legislative framework analyzed is complex and should be simplified.** A number of factors contribute to the unnecessary complexity of the draft Petroleum Code: the information needed for a clear understanding of the legislative framework is found in a patchwork of different documents (the Petroleum Code, decrees, agreements, the General Tax Code), which gives rise to some ambiguities and inconsistencies; the many types of contracts and the terminology related to different types of licenses makes it difficult to understand the significance of each of the articles of the law under all of the possible circumstances; there is a very broad range of levies and taxes to which companies are subject; and finally, the range of activities subject to the Petroleum Code (from exploration to refining) also complicates the understanding of the legislative framework.

56. **The draft Petroleum Code should be thoroughly revised in order to eliminate any legislative ambiguity.** It is recommended that follow-up missions continue to provide assistance to the Malian authorities in the revision of subsequent versions of the Petroleum Code. Consultations could also be held with the major oil companies on the Petroleum Code and model contracts to ensure that all of the proposed rules are reasonable. Clear, complete, transparent and flexible rules benefit all of the parties and will help the government avoid unpleasant surprises in terms of the way that rules may be interpreted by multinational corporations.

57. **All aspects of taxation should be addressed in the General Tax Code.** Some countries prefer to use simple and specific codes to govern the hydrocarbon industry, rather than a code that addresses all matters related to the sector. The legislative framework

concerning exploration and extraction activities could be handled in one law; the tax aspects could be incorporated into the General Tax Code; environmental aspects could be dealt with in environmental laws and regulations, and so on. In particular, it would be preferable not to address the IS or customs issues in the draft Petroleum Code, its implementing decree, or in agreements with companies:

- In terms of governance, the IS and other aspects of the Petroleum Code do not fall under the jurisdiction of the same government agencies and ministers. Removing tax-related items from the Petroleum Code would help to improve the consistency of the tax policy.
- Removing the tax-related items from agreements and the Petroleum Code would strengthen the government's position, i.e., that these items are not subject to negotiation with the companies.
- Use of the General Tax Code would increase transparency and simplify the administration of the rules and their understanding by the companies. The risk of inconsistency would also be reduced.

58. **At the same time, the General Tax Code could be enhanced.** A new chapter dealing with certain expenditures specific to the petroleum sector (for example, the deductibility of royalties, the allowance for exploration and oil field development expenses, the tax treatment of provisions for the rehabilitation of oil fields, among others) could be added to the General Tax Code.

59. **According to the simplicity principle, transport and refining activities should not be covered by the Petroleum Code, unless they are performed by the holder of an oil contract.** The natural resources exploration and extraction industries are frequently treated differently since they use resources that belong to the state as their raw materials. Rent sharing between the government and the investor gives rise to provisions that are specific to this sector, in particular those pertaining to royalties, production sharing, and other similar mechanisms. The government also wishes to ensure that the production of these materials is in accordance with best practices, so as to maximize the resources recoverable from the deposits belonging to it. Companies specializing in pipelines and refining have commercial and industrial activities just as any other industry does. The majority of the provisions of the Petroleum Code are ill-suited to their economic reality (they perform neither exploration nor production operations). If their activities give rise to certain specific concerns, such as those related to environmental standards, for example, these concerns can be addressed in the relevant laws and regulations. Thus, a distinction should be made in the Petroleum Code to clarify that these activities are covered only if they are undertaken by holders of an oil contract.

B. Specific Comments

Reduction in the number of contracts (simplicity principle)

60. **The Petroleum Code provides for four types of contracts, with the choice of contract type left to the companies' discretion.** These contracts include concession, production-sharing, service, and reconnaissance contracts. There are few differences between concession and production-sharing contracts (PSCs) in the current version of the Petroleum Code, apart from the form of the royalties (an ad valorem royalty in the case of concession contracts and production sharing in PSCs). The specifications for the service and reconnaissance contracts have not yet been defined by the authorities. The specifications for service contracts will likely be in line with practices elsewhere in the world in this area, while reconnaissance contracts would be of very short duration, non-exclusive, and would deal with companies that want to perform reconnaissance of an area before making a long-term commitment to the government under an oil contract.

61. **The Malian authorities need to make a choice among the concession, production-sharing, and service contracts.** The authorities justify the range of contracts offered in part as a feature that makes the Malian tax system more attractive. That said, multinational oil companies are accustomed to operating under all types of contracts, and it is unlikely that this flexibility would be a factor in firms' decisions about the location of their business operations. Multinational companies can be expected to limit themselves to weighing the different types of contracts in order to identify those most likely to reduce the share that they would have to pay to the government in cash or in kind.

62. **Very few countries offer concession, production-sharing, and service contracts at the same time.** Table 11 presents the various types of agreements in 74 oil-producing countries. Only 4 of the 74 countries offer a choice among three types of contracts and 48 countries (or 65 percent) allow the use of just one type of contract. For the 24 African countries considered in this study, the proportions are similar. However, while half of the African countries listed favored the production-sharing contract as the only possible type of contract, the trend outside of Africa is to favor concession contracts. In Africa and elsewhere in the world, when two types of contracts are possible, they are generally concession contracts and production-sharing contracts. Over all, production-sharing contracts are used in 20 of the 24 African countries.

63. **Concession, production-sharing, and service contracts may all enable the government to achieve its oil rent sharing objectives and can be adapted to support the specific objectives of the Malian government.** Senior officials explained that their initial objective is to gain practical experience with each of these contracts, as deposits are discovered and put into production, so that a decision can be made subsequently regarding the type of contract to favor. That said, in its current form the Petroleum Code provides for only a few differences among the types of contracts, other than the ad valorem royalties (in

concession contracts) and the forms of production sharing under PSCs. These parallel systems increase the complexity of the regime for government agencies and companies, without actually pursuing objectives that are clearly different in practice.

Table 11. Choice of Contracts around the World

	Number of countries	% of total
All oil-producing countries		
Laws providing for production-sharing contracts only	17	23%
Laws providing for concession contracts only	28	38%
Laws providing for service contracts only	3	4%
Laws with more than one type of contract:		
- production-sharing and concession	19	26%
- production-sharing and service	1	1%
- service and concession	2	3%
- three types of contracts	4	5%
Total	74	100%
African countries		
Laws providing for production-sharing contracts only	12	50%
Laws providing for concession contracts only	3	13%
Laws providing for service contracts only	0	0%
Laws with more than one type of contract:		
- production-sharing and concession	6	25%
- production-sharing and service	1	4%
- service and concession	0	0%
- three types of contracts	2	8%
Total	24	100%
All countries, excluding Africa		
Laws providing for production-sharing contracts only	5	10%
Laws providing for concession contracts only	25	50%
Laws providing for service contracts only	3	6%
Laws with more than one type of contract:		
- production-sharing and concession	13	26%
- production-sharing and service	0	0%
- service and concession	2	4%
- three types of contracts	2	4%
Total	50	100%

Source: Ernst and Young, 2013 *Global Oil and Tax Guide*

64. **The addition of service contracts is unnecessary.** While the specifications of service contracts are not included in the current version of the draft Petroleum Code, this type of contract is in practice often quite similar in its results to the production-sharing contract. The authorities mentioned that service contracts could allow them to have greater control over oil production in Mali. In several other countries, a key distinction between concession contracts and production-sharing contracts is the transfer of ownership of the hydrocarbons, which normally takes place at the wellhead under a concession contract and at the point of

export under a production-sharing contract. The draft Petroleum Code does not make this distinction, and according to Article 3, transfer of ownership would occur at the wellhead in every case. A production-sharing contract, with its clauses regarding the transfer of ownership, is frequently seen as promoting better control by the government. The Malian authorities are encouraged to reconsider whether a change in the parameters of the production-sharing contracts might not better meet their objectives (for example, with regard to the moment of transfer of ownership), as opposed to the introduction of a new type of contract.

65. To simplify the legislative framework, its administration, and companies' compliance with their tax obligations, it is strongly recommended that the authorities choose just one type of oil contract, which can be adapted to suit the preferences of the Malian government. The following observations can be made regarding production-sharing and concession contracts:

- Concession contracts are easier to administer than production-sharing contracts in the case of Mali, since they are based on concepts similar to those in the mining sector: the IS and production-based royalties. In a concession contract, the complexity of calculating oil prices and oil profit sharing is avoided.
- When the ownership of hydrocarbons is transferred to the companies at the point of export, production-sharing contracts allow the government to manage its oil reserves directly through the shares of production granted to it.
- The ultimate choice of the type of contract therefore requires a trade-off between two different objectives – simplicity or control over oil operations.

66. In all cases, an exploration contract could supplement a concession contract or a production-sharing contract by dealing separately with companies that want to simply perform a field reconnaissance survey before making a commitment.

Adjustment of the IS rate

67. The Petroleum Code provides for an IS rate that is lower than the rate under the General Tax Code. The rate for oil companies is set at 25 percent, while the current general IS rate is 30 percent.

68. The IS rate should be the rate set in the General Tax Code. Given the complex tax regime that applies to all oil contracts, it is unlikely that the reduction in the IS from 30 percent to 25 percent would have a significant impact on companies' investment decisions. So as not to add to the complexity of the system and its administration, it is recommended that the rate applicable to the oil sector be kept the same as the regular IS rate. In fact, the existence of oil rents could justify the rate in the oil sector actually being higher than in the rest of the economy, possibly on a progressive basis. The progressivity issues are

discussed further below. The restriction imposed by the WAEMU directive regarding tax rates could be discussed by the Commission.

Eliminate the tax on profits in excess of projected profits

69. **The draft Petroleum Code provides for a tax surcharge when a company earns profits that exceed projected profits by more than 10 percent.** The exact value of this surcharge is poorly defined in the current code, as is the methodology for determining the amount of projected profits.

70. **The tax on profits in excess of projected profits should be eliminated in favor of better progressivity instruments already presented for the mining sector.** The authorities explained that this provision was aimed at two separate objectives: (1) to discourage overproduction of oil resources; and (2) to introduce a windfall profits tax. The mission believes that these two objectives will not be effectively achieved with the current provision of the code and that these objectives should be addressed under two separate clauses. On the one hand, profits can rise from one year to the next without involving a similar increase in production, such as when market prices rise, for example. On the other hand, the concept of “projected profits” is vague and can be easily manipulated by companies that benefit from a significant informational advantage in terms profit projections. A fairly simple tax avoidance technique here would be to systematically inflate price projections and/or understate cost projections in order overstate projected profits each year and avoid reporting profits in excess of the projected profits.

71. **Oil laws in several jurisdictions contain provisions to avoid overproduction, but generally speaking controls on overproduction are put into place through regulatory measures.** For example:

- The Canadian provinces establish maximum production rates for each well. Explicit authorization is required to increase production above that threshold and the companies must demonstrate that the increase will not result in a reduction in the amount recoverable from the well. Failure to comply with these limits can result in revocation of the operating license or even a reduction in the recoverable amount that the operator is permitted to extract.
- The laws of developing countries that were reviewed call for the use of best practices regarding throughput. In Uganda, for example, the law states that oil production should be carried out in such a way that the maximum amount of oil is recoverable from each well, in accordance with prudent technical and economic practices that make it possible to avoid any waste of the resource.

72. **Rather than employing a tax on profits in excess of projected profits, the draft Petroleum Code could include clauses that explicitly address overproduction.** The Petroleum Code could, for example, follow the model of Uganda’s legislation and be more

explicit about the behavior expected of operators in this regard. In addition, the authorities could reach an agreement with the companies at the outset regarding the maximum production rate for a well (based on technical studies performed by the companies). In the event of overproduction, violators could have their licenses revoked, following a clear warning by the authorities. This approach could be justified by the national interest in not wasting the country's oil resources.

73. Countries that want to introduce a windfall profits tax in the oil sector frequently use the “R-factor” to manage the share of production going to the government, as well as rent taxes in the case of concession contracts. A possible approach for Mali is discussed below.

Related party transactions and transactions between nonresidents

74. The calculation of oil costs includes certain rules to limit abuses involving transfer prices between related companies. Generally speaking, most of the elements of the cost calculations require that related party transactions be reasonable, and within the limits of the terms that would be set among independent third parties.

75. The matter of transfer pricing is addressed more fully in Chapter VI and should be given greater priority in the General Tax Code. We would like to mention here that greater harmonization between the calculation of oil costs and the calculation of expenses deductible from the IS would be desirable, partly because these transactions are common to all areas of activity. Monitoring of transfer prices via the IS is also relevant to the oil sector, since companies holding concession or production-sharing contracts will be affected by the calculation of costs for purposes of the IS. Examples of rules that should ideally be harmonized include:

- The financial expenses allowable in the calculation of oil costs include a rule that limits debt to 70 percent of oil development costs. Instead of a rule of this nature, a rule regarding under-capitalization at the company level would be desirable, in order to avoid debt overhang and abusive interest charges. In addition, financial expenses may be explicitly excluded from oil costs since the entire amount of an investment, regardless of the type of financing (equity capital or borrowing), is already included in the calculation of oil rent.
- The calculation of oil costs includes a limit on the deductibility of overhead charged by nonresidents for oil operations. The General Tax Code does not provide for such a limit, but it does include a maximum for head office overhead. Harmonization of these rules would be desirable, and these two limits should be included in both contexts.

76. **These rules could be expanded to set limits on the deductibility of costs associated with any transaction between a Malian oil company and its affiliates abroad.** Each of the expenses referred to in Annex 2 of the model agreement as being deductible could specify what is acceptable for related party transactions (for example, consulting, equipment purchases, etc.). The specific comments provided in the document that accompanies this aide-mémoire indicate the articles that could be expanded and suggest approaches to determining the value of these related party transactions. This issue is also discussed in greater detail in Chapter VI.

77. **The use of source withholding on payments to nonresidents should be based on the general legislation already in place.** Furthermore, if the tax aspects are maintained in the draft Petroleum Code, it should be clear that the withholding at source applies to head office overhead and other services provided by nonresident companies and covers the taxes due. The draft Petroleum Code could refer to the IS-BIC withholding system at the rate of 15 percent, which is currently applied in Mali for services performed by nonresidents.

Direct participation by the government in production

78. **The draft Petroleum Code states that the government reserves the right to exploit deposits that have been declared unprofitable by a license holder.** In cases in which multinational companies have determined that a project is not profitable, it is highly likely that the Malian government would lose money operating the same site. These funds would be better invested in local development, training, and infrastructure construction programs, which would help to attract more foreign companies to Mali. Given the fact that the industry is in its infancy, the most profitable projects will be undertaken by companies, since in addition to the normal operating costs, they will have to enter into costly works for the construction of roads, pipelines, and so forth, in addition to the training of a workforce that has no experience in oil field operations. The more developed the infrastructure and the better trained the local workforce, the lower the profitability required by the companies.

79. **Oil that cannot be extracted profitably in a given year is not lost and will remain in the ground in Mali.** As technologies change and local infrastructure is developed, the extraction of this oil could become profitable at some point in the future and could produce a higher return for the Malian government.

Tax on selected products (ISCP)

80. **The draft Petroleum Code provides for two types of taxes on turnover: ad valorem royalties and the ISCP.** The ad valorem royalty provided for under concession contracts is based on the gross value of production. Similarly, the tax base for the ISCP is the value of crude oil exports.

81. **It is recommended that the ISCP on crude oil exports be eliminated.** The application of both the ISCP and ad valorem royalties complicates the tax system. To compensate for the ISCP, the authorities could consider an increase in the ad valorem royalty rates in concession contracts. Similarly, the production-sharing parameters in PSCs could be revised if it is determined that the abolition of this tax would reduce government revenues in an unacceptable way.

Tax treatment of natural gas extraction

82. **In the current version of the draft Petroleum Code, the ad valorem royalties payable on the extraction of natural gas are set at lower rates than the royalty rates for crude oil.** Furthermore, the model contract provided to the mission does not call for different production-sharing arrangements for natural gas and oil. The authorities believe that incentives and a framework for natural gas production are necessary for the development of this industry.

83. **The consistency of the tax treatment of natural gas extraction in the various types of contracts should be reviewed.** The authorities want to establish an identical tax levy regardless of the nature of the deposit – natural gas or oil – and regardless of the type of contract – production sharing or concession. This is not the case currently, since royalties under concession contracts differ between oil projects and gas. Depending on the terms selected, it is possible to achieve this sort of equivalent treatment either by using adapted parameters, or by using an energy or thermal equivalent for oil and natural gas.

Exemptions during the exploration phase

84. **The Petroleum Code states that during the exploration phase companies are exempt from certain taxes and levies (the IS/BIC, the IRVM, the tax on property income (IRF), license fees and related contributions, the stamp duty on plans to export hydrocarbons, the ISCP, the VAT, the tax on financial activities (TAF), and the domestic tax on petroleum products (TIPP).** The intent of the authorities is to provide a tax incentive to encourage companies to set up business in Mali.

85. **The exemptions are poorly targeted.** The range of exemptions provided for under the Petroleum Code would most likely not do much to attract companies in the exploration phase, since the amounts payable for a number of the taxes referred to would in all likelihood be very low or equal to zero if they were applied. The IS and ISCP exemptions are not relevant since companies in the exploration phase typically do not have taxable income. The VAT exemption could weaken the VAT by leading to credit balances among subcontractors of companies holding exploration permits. Their liability for the VAT nevertheless requires a redefinition of the scope of this tax. This list of exemptions is poorly targeted and should be eliminated; no tax incentive can alter the behavior of companies that would not be paying the tax in any case.

86. **It is important not to overestimate the importance of tax exemptions in company decisions to invest in a given country.** This is true in every sector of activity, but especially in the oil sector, which is characterized by the presence of economic rents. When a company analyzes an investment opportunity, the tax system is just one factor among many that affect the expected return on a project (such as projected oil prices, infrastructure development, the social environment, and so on). The attractiveness of a tax system will depend then not only on the tax rate and the tax base, but also on how well it operates, including its predictability, simplicity, efficient administration, effective dispute resolution system, and so on.

Training and promotion fund

87. **The Petroleum Code and its implementing decree state that during the period of validity of each oil right, the oil companies must make an annual payment to the Authority for the Promotion of Oil Research (AUREP) for its training and promotion fund, in a minimum amount of US\$250,000 during the exploration phase and US\$500,000 during the operating phase.** These figures are negotiable with each company at the time the contracts are signed.

88. **This type of participation by private companies in the training of personnel working within the relevant ministry is common and is aimed at developing the government's capacities.** The conditions set forth in the Petroleum Code, however, raise a number of problems. The creation of a special fund undermines the integrity of the government budget and its oversight if the fund is not clearly integrated into the budget. The transfers made by the companies should follow transparency rules and should be included in the published oil contract. The amounts to be transferred should not be subject to negotiation.

89. **The training fund should be eliminated.** To improve the transparency of the government budget and reduce its complexity, strengthening the major taxes (IS, royalties, production sharing), rather than increasing the number of special levies and taxes, is recommended. The share of taxes going to the AUREP for its administrative needs and training could be specified in the government budget, rather than by means of a separate quasi-tax levy.

90. **If this fund is not eliminated, a change in the approach to its financing and its explicit inclusion in the government budget are strongly recommended.**

Provision regarding expatriate personnel

91. **The draft Petroleum Code states that contractors should give preference to the hiring of Malians and that they should have a training program in place for Malian personnel.** Provisions of this type are frequently used in developing countries to help the countries develop local expertise. However, the draft Petroleum Code also states that contract

holders and their subcontractors may hire the expatriate personnel necessary for the effective performance of their activities in Mali for a maximum period of five years only.

92. **The five-year limit on the employment of expatriate personnel is too restrictive.** Although it did not perform an exhaustive review, the mission was able to find just one other example of a country that imposes such strict constraints on the employment of foreign personnel after a certain period of time, and that is Nigeria. There the period that a contractor may continue to employ foreign personnel has been extended to 10 years. It takes more than five years to complete the training and gain the experience necessary to manage and perform all of the operations at an oil production site, and it is not realistic to assume that no foreign personnel would be needed for effective extraction operations after this period of time. This provision of Mali's draft Petroleum Code will no doubt be perceived quite negatively by potential investors and will give rise to harmful discretionary exceptions.

93. **The provision aimed at restricting the employment of expatriate personnel should be eliminated.** That said, while the provisions of the draft Petroleum Code that require the training of local residents and the hiring of local personnel who are equally qualified may be in line with practices in other developing countries, they could be reinforced. For example, better oversight of companies' training and hiring of local personnel could be considered, in the form of periodic reporting by the companies, for example. This is the approach that is being taken in Guinea, where contractors are also encouraged to give preference to the hiring of local personnel for jobs that do not require special qualifications.

Use of auctions

94. **In its current form, the draft Petroleum Code does not provide for the use of auctions, which are a method employed by a number of oil-producing countries.**

95. **Auctions could increase the progressivity of Mali's tax system.** A large number of oil-producing countries make use of public auctions, whether to allocate exploration blocks, to determine the share of production that will go to the government, or to determine a contract signature bonus. This group includes developed countries, but also countries such as Angola, Uganda, Libya, Brazil, and Ecuador. This practice generates revenues for the government at the beginning of a petroleum project and increases the productivity of the tax in a natural way – projects with the greatest profit-earning potential are those for which auctions generate the greatest income for the government.

96. **Auctions could be held when an oil contract is signed.** The draft Petroleum Code currently provides for the possibility of a signature bonus at the point that an operating license is granted. Since at this point the government already has a commitment with a particular company under an oil contract, the use of an auction would not be possible for this kind of bonus, if it is retained. On the other hand, if a bonus is to be paid at the time an oil

contract for an exploration license is signed, the amount of the bonus could be determined by public auction.

97. **This approach is currently not contemplated by the authorities, but it could be revisited over the medium term.** Given that the oil industry in Mali is in its infancy, the use of public auctions could be delayed. As its industry develops, Mali is encouraged to consider the introduction of auctions.

Other comments on the legislation and regulations received

98. **Additional provisions could be considered by Mali.** In addition to the points mentioned in this report, the authorities could consider the inclusion of other provisions in the draft Petroleum Code:

- A provision calling for the publication of oil contracts and feasibility studies would promote transparency and accountability, as well as public access to the geological and technical data received from the companies following the specified confidentiality period.
- The addition of provisions to avoid any potential conflict of interest and to prevent government employees from having any interests that could compromise or limit their independence in the performance of any function related to the administration of oil contracts. Companies could, for example, be required to declare any potential connection to government employees or their family members at the time that they apply for a license. The draft Petroleum Code could also contain provisions prohibiting kickbacks to government employees and political personnel, subject to severe penalties.
- Clarification of the institutional framework and the roles and responsibilities of the minister and senior officials, in particular the addition of a specific provision regarding the official who has the right to negotiate oil contracts on behalf of the government, are recommended. Generally speaking, good practices require that this official be independent of the political authorities.
- If certain articles of the draft Petroleum Code, the implementing decree, or other relevant codes take legal precedence over some of the terms of oil contracts (or particular articles), or vice versa, for example, in the event of a contradiction between the terms and definitions used in each of these documents, this should be clearly indicated in order to facilitate the resolution of potential disputes.
- The implementing decree contains a number of fees expressed in CFA francs or U.S. dollars for the issuance of licenses and permits and other items. It might make sense to adjust the amount of these fees on an annual basis depending on the inflation rate. This is particularly important if generous stability clauses are maintained.

99. **Detailed article-by-article comments on the new Petroleum Code have been prepared by the mission and are provided in a document attached to this report.**

C. Economic Analysis of Petroleum Tax Regimes

100. **The mission conducted a quantitative analysis of the tax regime applied to upstream activities in the oil sector with the aid of the Fiscal Affairs Department's FARI modeling framework.** The mission compared the petroleum tax regime under the current legislation to that of other regional and international producers. In addition, it compared the current regime to a set of alternative tax arrangements that would be more progressive than the code now in place.

101. **The scale of potential discoveries in Mali remains uncertain.** Based on the preliminary results of geological prospecting in the region, most of the deposits or groups of adjacent deposits are likely to be relatively small or medium-sized, for the most part in the range of 100 million barrels to 200 million barrels. Accordingly, the mission analyzed the petroleum tax regime based on a small-scale hypothetical project (and at the same time tested the robustness of the results based on a medium-sized hypothetical project). Annex II provides a summary of the basic data for this project. The project showed pre-tax profitability, producing a pre-tax net cash flow of US\$6 billion (undiscounted) and an IRR of 37 percent.

Quantitative assessment of the Petroleum Code

102. **For its quantitative analysis, the mission evaluated the representative tax regime for a concession contract and production-sharing contract based on the current parameters of the Petroleum Code.** For the concession contract, the analysis was based on the following assumptions: the ad valorem royalty rate increases with production; the ISCP is applied at a rate of 5 percent; the IS is applied at a reduced rate of 25 percent; and the government has free equity equal to 10 percent.²² In the case of the production-sharing contract, the limit on oil costs is 75 percent; the share of profit oil going to the government is based on production thresholds; and the government also has free equity equal to 10 percent. Table 12 presents all of the key modeled parameters.

²² Acquisition of free equity by the government is less common in petroleum projects than in mining projects. The government tends to take a passive stake in petroleum projects, with the exploration costs reimbursable with or without interest.

Table 12. Mali: Petroleum Fiscal Regimes (Current and Alternative)

Tax clauses	Parameters			
	Current regimes		Alternative regimes	
	Concession	Production sharing	Concession	Production sharing
ISCP	5%	5%	-	-
Ad valorem royalty	Oil 5% -15% Gas: 5%		Oil 8% Gas: 3%	-
IS	25%	25%	30%	30%
Cost Stop	-	75%, costs of financing recoverable. Unlimited carry forward of losses.	-	Maximum 60%, costs of financing not recoverable. Unlimited carry forward of losses.
Sharing of profit oil	-	The share of profit oil going to the government varies between 25% and 55% depending on the production thresholds	-	The share of profit oil going to the government varies between 40% and 60% depending on the R-factor, calculated as follows: (cumulative amount of cost oil + profit oil – operating costs)/(cumulative amount of development and exploration costs)
Petroleum resource rent tax	-	-	30% after a minimum return of 15% (after taxes)	-
Govt. equity	10% free equity	10% free equity	10% free equity	10% free equity
IRVM dividends	10%	10%	10%	10%
IRVM interest	10%	10%	10%	10%

Source: Petroleum Code, IMF staff.

Box 2. Petroleum Resource Rent Tax and Production Sharing Based on the R-factor

Governments use different mechanisms to increase the progressivity of a tax in the oil sector. Some use a progressive corporate income tax rate, which increases with companies' taxable income. Better progressivity can also be achieved by basing the royalty thresholds on world oil prices, rather than on production thresholds. In the case of production-sharing contracts, progressivity can be achieved by basing the sharing on the project's effective profitability rate (the approach recommended by the IMF).

R-factor

The R-factor is a profitability ratio that is equivalent to the ratio of a company's cumulative net income to cumulative investment. When this ratio reaches 1, for example, the company has generated enough income from its oil well to recover its investments. When production sharing is based on the R-factor, the government's share rises according to the value of this ratio.

Petroleum resource rent tax

Similarly, under a concession contract, calculation of the R-factor can be used to determine the value of the petroleum resource rent tax. According to the suggested approach, a 30 percent tax surcharge is to be applied when the cumulative return on pre-tax net profit (before interest and including depreciation) exceeds 15 percent.

103. **One of the first observations from the qualitative analysis is that, based on the parameters used, the concession regime and the profit oil sharing mechanism are not equivalent from a tax standpoint.**²³ The initial intent of the authorities was to create two systems that would produce the same tax effect, but in reality there is a significant difference between the two regimes, creating opportunities for trade-offs and profit maximization for the different investors. Table 13 shows these differences. The AETR (undiscounted)²⁴ obtained with production sharing is 60 percent, while the AETR under a concession contract is just 50 percent, with a difference in government revenues of close to US\$650 million. Some of this difference can be attributed to the production thresholds chosen in the calculation of the ad valorem royalty applied to concession contracts. These thresholds are poorly suited to a potential environment in which the productivity of wells in Mali would be similar to the types of oil wells found in the region; in most cases, only the first two thresholds would be used in practice. The analysis also showed that the tax regime in Mali could be more progressive. In general, and as the following section will show, the government's share is higher in the other countries studied than in Mali.

Table 13. Petroleum Model Results

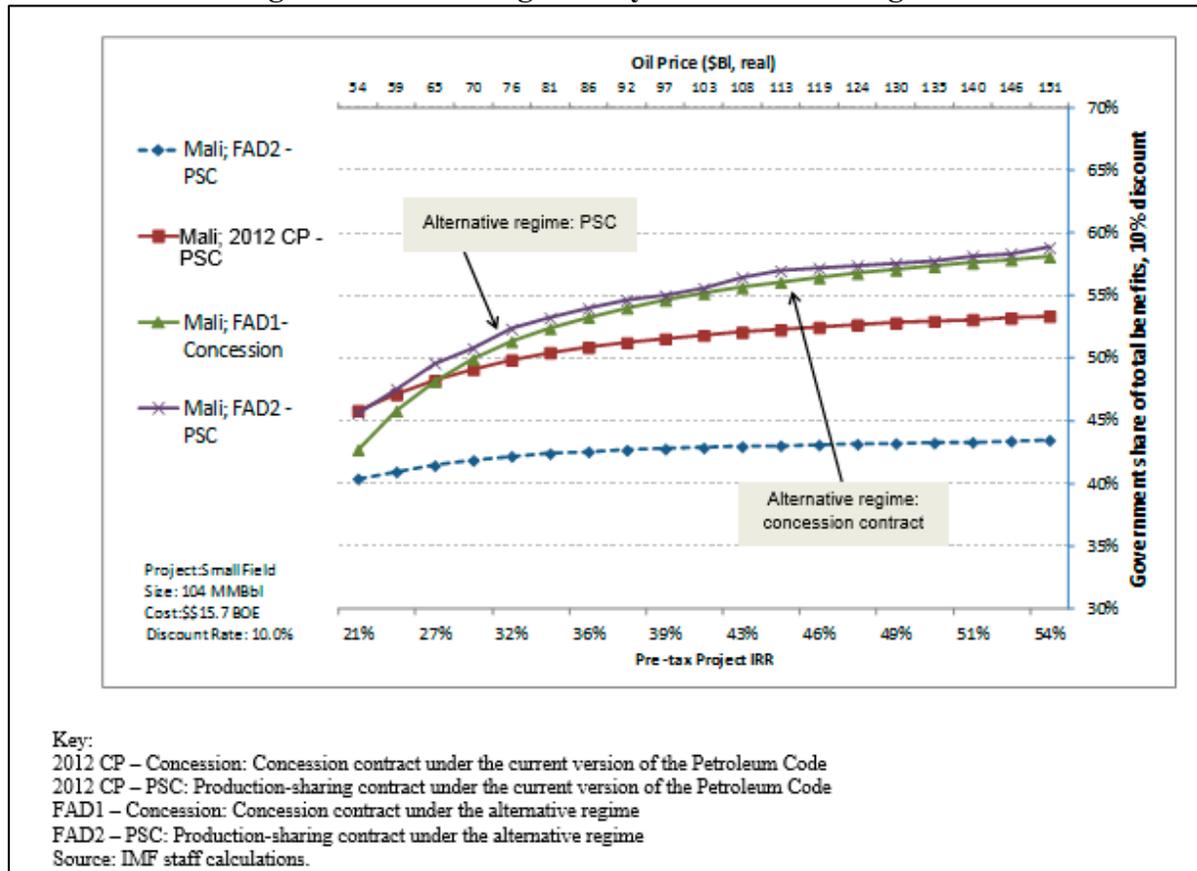
<i>Constant 2012 USD</i>		Concession (current)	PSC (current)	Concession (alternative)	PSC (alternative)
Project pre-tax real internal rate of return (IRR)	%	37%	37%	37%	37%
After-tax real IRR (debt and equity) of investors	%	26%	23%	23%	23%
After-tax real equity IRR	%	29%	26%	25%	25%
Pre-tax net cash flows (NCF), undiscounted	US\$ Mln	6.187	6.187	6.187	6.187
After-tax NCF (debt and equity) of investors, undiscounted	US\$ Mln	3.102	2.455	2.185	2.137
Government revenues, undiscounted	US\$ Mln	3.085	3.732	4.002	4.050
AETR, undiscounted	%	50%	60%	65%	65%
Pre-tax NCF, discounted at 10%	US\$ Mln	1.588	1.588	1.588	1.588
After-tax NCF (debt and equity) of investors, discounted at 10%	US\$ Mln	708	533	478	468
Government revenues, discounted at 10%	US\$ Mln	880	1.055	1.110	1.120
AETR, discounted at 10%	%	55%	66%	70%	71%
Price of oil	US\$/Bbl	90	90	90	90
Pipeline transport tariff	US\$/Bbl	15	15	15	15
Source: IMF staff estimates.					

²³ A change in these parameters can be used to equalize the AETR under the two types of contracts, and even to reverse the results discussed above. The mission used parameters that seemed to it to be the most realistic in terms of the current taxation situation in Mali and in the mining sector in particular.

²⁴ The amount going to the government is estimated in the form of the AETR, or the government's share (total amount of the government's royalties, profit oil, indirect taxes, and interest) of the pre-tax net cash flow from a profitable oil field. For a detailed discussion, see Box 2.

104. **The mission analyzed two alternative scenarios:** (1) an alternative tax regime for concession arrangements with a fixed royalty rate of 8 percent and a 30 percent petroleum resource rent tax payable after a minimum return of 15 percent on the investor's after-tax cash flows; and (2) a more progressive formula for the sharing of profit oil based on the R-factor (see Box 2). Under this scenario, the share of profit oil going to the government is at first 20 percent, with an R-factor below 1, and it rises steadily, to 25 percent, 30 percent, 35 percent, reaching 40 percent when the R-factor is above 4. Table 13 presents a summary of all of the modeled parameters for the alternative regimes.

Figure 10. Mali: Progressivity of Alternative Regimes



105. **The two alternative tax regimes produce a similar AETR that is close to 70 percent in the baseline case** (at a price of US\$90 per barrel). They are also more progressive than the existing regimes. The progressivity of the regimes is expressed by the government's share of the project's net profits in relation to a pre-tax profitability rate bracket, based on changes in oil prices.²⁵ The sensitivity analysis is performed for prices between US\$54 and US\$151, rising in increments of 3 percent. Figure 7 shows that the share

²⁵ See footnote 16 for an explanation of the progressivity indicator and the concept of the government's share of net profits.

going to the government increases at a relatively more rapid pace with the price of oil under the alternative regimes compared to the current Petroleum Code, which means that these two regimes are more “progressive.”

International comparisons

106. **The draft Petroleum Code and the alternative scenarios were compared to regimes applicable in other countries** (see Annex III). In the case of the concession contract, the alternative scenario is characterized by the addition of a super profit tax. For the production-sharing contract, the mission considered a larger share of profit oil.

107. **The current production-sharing mechanism places Mali within the international range in terms of the share going to the government** (see Figure 11).²⁶ Under the concession regime, the government share in Mali is the lowest among the group of countries studied. The alternative regimes do, however, result in a share of around 70 percent at its discounted value (compared to 66 percent and 55 percent under the current draft Petroleum Code), owing to a larger increase in the share of profit oil or the petroleum resource rent tax surcharge, respectively.

108. **The current regime is relatively generous for profitable oil fields.** A more progressive system, such as the alternative regimes described above or the system in Angola, would allow the government to earn additional rent when profitability rises, without necessarily imposing a heavier burden on marginal projects when profitability falls. The progressivity curve of Angola’s regime is quite pronounced, owing to a net profit-sharing mechanism for projects that is linked to the internal rate of return, supplemented by a corporate profit tax of 50 percent (see Figure 12).

²⁶ A number of assumptions are needed to perform these international comparisons, in particular a perfect implementation of the tax regimes, application of the strictest ring-fencing principle (no research costs other than those tied to an operating permit are considered), and the absence of aggressive tax optimization.

Figure 11. International Comparisons: AETR (Petroleum)

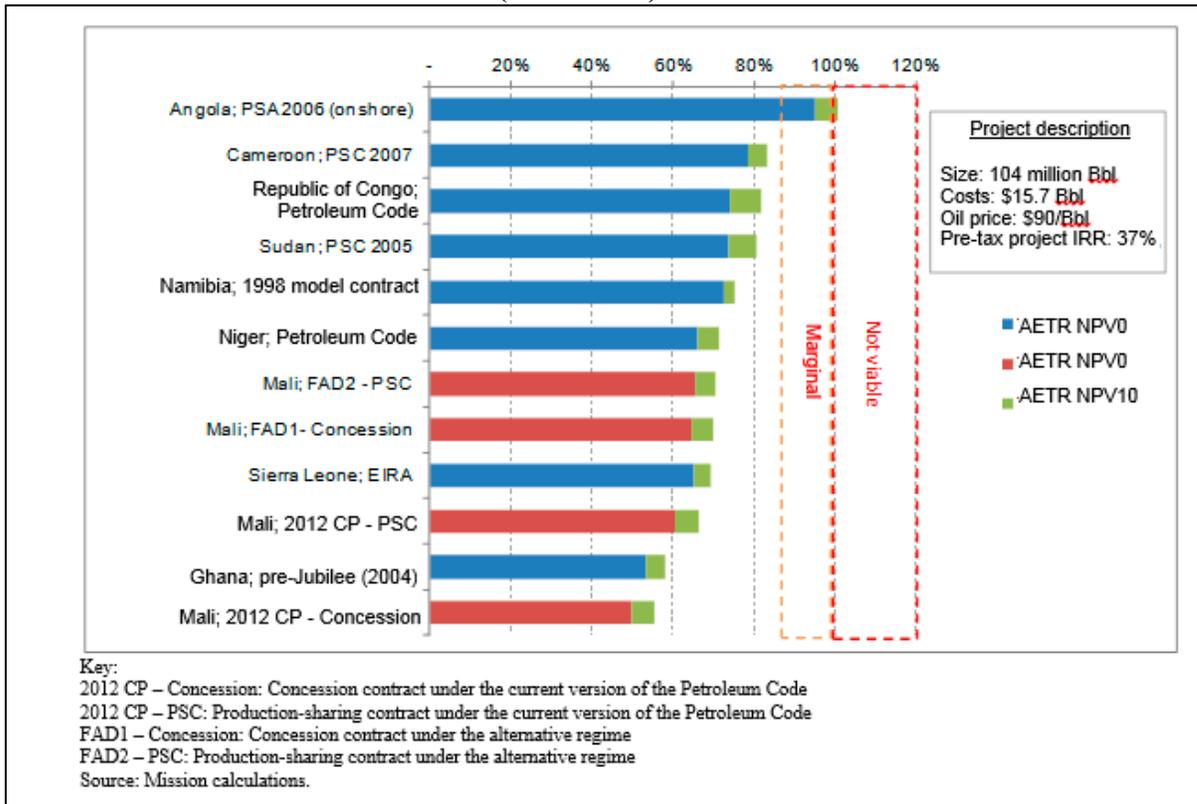
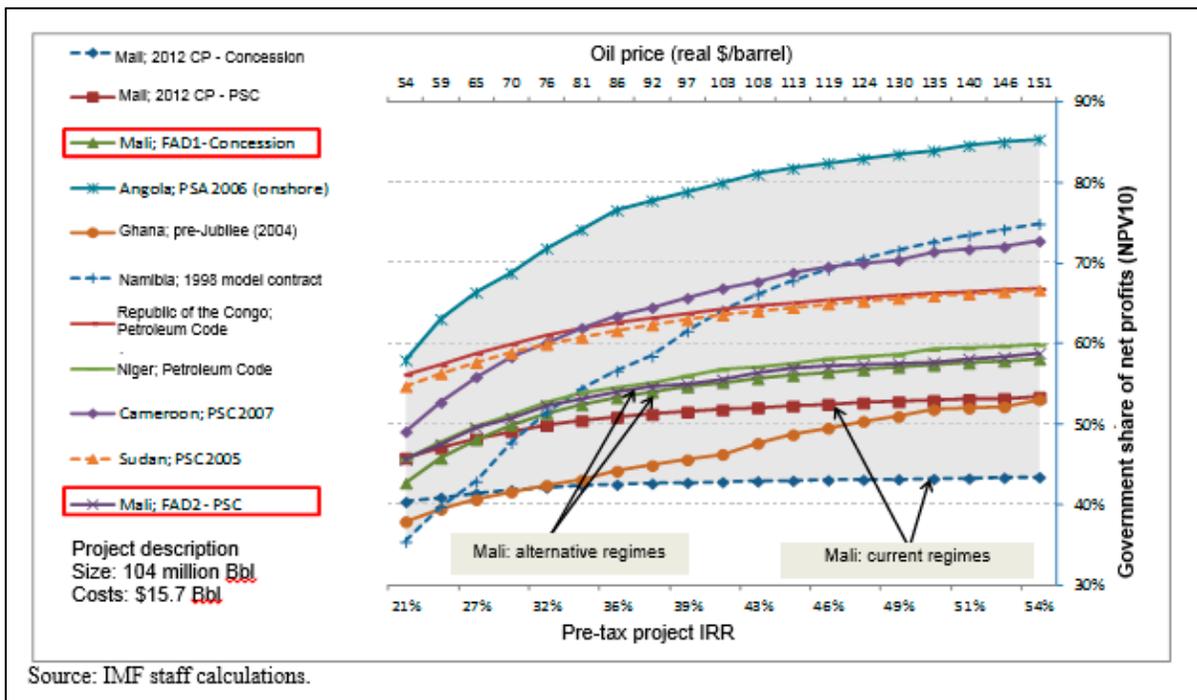


Figure 12. International Comparisons: Progressivity of Fiscal Regime (Petroleum)



Recommendations

- Simplify the legislative framework of the draft Petroleum Code.
- Address all tax-related matters in the General Tax Code.
- Separate the tax treatment of upstream and downstream activities (for example, transport and refining) from extraction activities in the Petroleum Code.
- Do not introduce service contracts.
- Make a choice between concession contracts and production-sharing contracts.
- If production-sharing contracts are kept in place, the transfer of ownership of hydrocarbons under these contracts should be established at the point of export and not at the wellhead.
- Maintain and develop reconnaissance contracts.
- Raise the IS rate to 30 percent.
- Eliminate the provision aimed at imposing a tax on profits in excess of projected profits.
- Manage potential overproduction through the regulation of maximum production thresholds determined jointly by the authorities and private investors in accordance with international best practices.
- Employ approaches that are better targeted at capturing oil rent.
- Harmonize the rules dealing with related-party transactions in the General Tax Code and those used for the calculation of oil costs.
- Strengthen the rules governing related-party transactions.
- Include specific provisions in the General Tax Code regarding withholding at source on payments made to nonresidents.
- The government should not get involved in extraction operations at unprofitable sites.
- Combine the ISCP and the ad valorem royalty (concession contracts) or the relevant production-sharing parameters (for PSCs).
- Provide for greater consistency in the tax treatment of natural gas.
- Abolish the training and promotion fund or modify its financing by following best practices in public finance and eliminating the possibility of negotiating the participation of private companies in this fund.
- Eliminate the provision limiting the employment of expatriate personnel to five years.
- Make the tax regime more progressive and increase the share going to the government, by means of a fixed ad valorem royalty of 8 percent, the introduction of a rent tax in concession contracts, as well as the use of the R-factor to determine production sharing in PSCs.

V. ISSUES COMMON TO THE EXTRACTIVE INDUSTRIES (MINING AND PETROLEUM)

A. Taxation of Certain Transactions: Farm-Out Agreements and Overriding Royalties

109. **Farm-out or risk-sharing agreements are widely used in the mining sector.** A farm-out agreement is a contract under which one company (the farmor) transfers a direct stake in a mining right to a third party (the farmee) in exchange for a sum of money and/or an agreement under which the farmee undertakes to pay certain expenses. For example, the farmor holds 100 percent of a Malian mining right and agrees to transfer a 20 percent stake in exchange for a payment by the farmee of 1 million currency units and a commitment by the farmee to pay exploration expenses of 150 million currency units during the next two years. Some countries have deliberately chosen not to tax transfers of this kind essentially for two reasons: (1) to provide an additional incentive for exploration activities; and (2) the extreme complexity of agreements of this kind, given that it is difficult to measure the service delivery component of these agreements in monetary terms (unlike the example given above).

110. **The taxation of farm-out agreements supplements the tax regime, in particular with regard to capital gains.** In the absence of this sort of taxation, a number of transactions could be reclassified by economic agents as farm-out agreements with the aim of avoiding the capital gains tax. There are several possible options: (1) consider the monetary payment as a taxable bonus for the seller under the IS and as a deductible expense for the buyer under the IS; and (2) consider the market value at the time of the transaction, tax any possible capital gain realized, and allow for the deduction of the price paid.

111. **Overriding royalties are also transactions that occur frequently in the mining sector and that could lead to tax avoidance.** For example, company A holds an exploration permit that has not yet resulted in the discovery of a deposit. The company sells its permit to company B in exchange for a payment of US\$10 million and the payment of a 2 percent royalty over the next 20 years. No capital gain appears at the time of the transaction for company A. In addition, company B (which could belong to the same group as company A) could reduce its taxable income by treating this royalty as a taxable expense. The income earned by company A is certainly taxable; however this company, which is engaged in the exploration business, disappears with the transfer of the mining right. Thus, the transfer of Syama by Randgold Resources Limited to Resolute Mining Limited, which was announced on June 15, 2004, gave rise to an overriding royalty payment reported in the financial statements of Resolute Mining Limited.²⁷ This royalty is equal to US\$10 per ounce for the first million ounces produced, and then US\$5 per ounce for the next 3 million ounces

²⁷ For example, see page 104 of the 2013 financial statements of Resolute Mining Limited.

produced, if the price of gold is above US\$350. Overriding royalties could even be reclassified as dividends, then written back to income subject to the IS and the IRVM.

112. **Several approaches are possible to limit the resulting revenue losses.** The discounted amount of royalties paid is very difficult to estimate since royalties can vary significantly depending on the price of the mineral concerned. Payment of the royalty can be considered a financial cost for company B. This royalty is then similar to an interest payment and could be subject to the IRVM for company A.

B. Site Rehabilitation and Depletion of Reserves

Financing of mining and oil site rehabilitation

113. **Mining companies establish provisions for site rehabilitation, and the annual amounts set aside for such provisions are deductible from the IS.** There is a risk that funds mobilized in this way may never be allocated in their entirety or even in part to site rehabilitation. There have been numerous scandals associated with mine closures around the world that illustrate this type of risk, and this is particularly important in Mali, since some mines are reaching or will soon reach the end of their operating life.

114. **The current version of the draft Petroleum Code does not provide for a formal mechanism to ensure funding for the rehabilitation of sites.** The 2012 Mining Code does not provide for this type of mechanism either. The current version of the draft Petroleum Code requires that at the end of the operating period, the company put into place and fund a closure and rehabilitation plan for the extraction zone, the monitoring, assessment, and oversight of which are to be performed by a Closure Committee. Some concerns have arisen as a result of a lack of assurance that the required money will be available at the time of the site closure.

115. **A number of countries require that funds be set aside annually for site rehabilitation.** Country authorities have a number of alternative mechanisms at their disposal to ensure that there is funding for the rehabilitation of oil fields and mining sites, with the most common being the creation of escrow accounts or trust accounts or requirements to post letters of credit, bonds, or other forms of guarantees. In Africa, the practices observed vary:

- In Guinea, the oil contract establishes the terms and conditions under which the contractor is required to place a deposit in an escrow account each year, on the basis of the indicative rehabilitation budget approved by the authorities. This amount, which is intended for the financing of the rehabilitation plan, is recoverable as an oil cost, but is not deductible for purposes of calculating the corporate income tax. In the case of the Mining Code, the funds are supposed to be deposited by the operator in a trust account.

- In Uganda, the amounts are supposed to be deposited in a dedicated fund when oil production reaches 50 percent of the recoverable quantities and they are deductible as operating costs.
- In Algeria, the funds needed for site rehabilitation are deposited each year in an escrow account and are deductible from the corporate income tax.

116. **The establishment of an escrow or trust account is recommended for the mining and oil sectors.** This type of arrangement will enable the government to ensure effective site rehabilitation and to assuage the concerns of local populations with regard to mining activities. It is also important that such an arrangement be considered from the outset of oil production operations. These amounts could be set aside annually in an escrow account or a trust account with the aim of ensuring that sufficient funding is available when a site is closed. Since these funds will no longer be available to companies for their current operations, their deductibility from the IS and inclusion in total oil costs could be considered. The procedures for the creation of such an account should be established by decree and should not be subject to negotiation with the mining or oil companies.

Depletion reserve

117. **Companies may take a tax deduction for the depletion reserve without actually having to undertake these expenses.** The authorities have raised concerns regarding the depletion reserve that is currently permitted under the 2012 Mining Code and the adoption of which is planned in the draft Petroleum Code. This reserve allows companies to save an amount intended for exploration that is deductible from the IS. In the event that the reserved funds are not actually used for the designated work, these funds are written to the company's income three years after they were recorded. The authorities noted that these funds are frequently not used for exploration purposes. There is some ambiguity in the current version of the draft Petroleum Code regarding the planned ceiling for the reserves for hydrocarbon exploration work, but there is nevertheless a provision that these funds may be set aside and will be deductible from the IS, following a practice similar to that provided for under the 2012 Mining Code.

118. **It is unlikely that the depletion reserve, as it is envisaged, will achieve the objective of encouraging oil exploration.** On the one hand, the depletion reserve favors companies that are not actively engaged in exploration in a given year: it enables a company to deduct costs that have not been incurred for tax purposes up to three years in advance and allows any company to defer the IS, whether or not it is planning to undertake an exploration project. The full deductibility of these costs when they are actually incurred is the practice in a number of countries and is sufficient to avoid any abuse.

Recommendations

- Establish the taxation of overriding royalties and farm-out agreements.
- Introduce a formal mechanism to ensure funding of the rehabilitation of petroleum and mining sites.
- Remove the depletion reserve from the 2012 Mining Code and the draft Petroleum Code.

VI. PROTECTION OF THE TAX BASE FOR CERTAIN DOMESTIC TAXES AGAINST AGGRESSIVE TAX OPTIMIZATION²⁸

119. **The IS and IRVM tax are the main taxes whose base is exposed to tax optimization behavior.** Global Financial Integrity estimates average annual revenue losses of US\$38 billion between 2008 and 2010 among African countries owing to transfer pricing practices, compared to the US\$29.5 billion in bilateral aid that the continent receives (see *African Progress Report*, 2013). The calculation of oil costs could also potentially be exposed to this type of behavior. In addition to direct taxation, the value-added tax, which remains a significant source of revenue for the Malian government, is also weakened by the exceptional arrangements granted to subcontractors under the various mining codes. Specific treatment of this issue is being postponed until a subsequent mission.

A. Arm's Length Principle and Transfer Prices

120. **Multinational companies can realize significant tax savings by manipulating transfer prices among different entities within their group.** This practice consists of establishing prices among associated enterprises (OECD terminology) or related companies (general English terminology), that are different from prices based on the arm's length principle, so as to shift profits to countries with low tax rates and costs to countries with high tax rates. The main transfer pricing practices observed around the world are as follows:

- The under-capitalization of one company and its financing by a subsidiary of the same group, allowing for the shifting of some of the income in the form of interest charges to a country that is ideally a tax haven, where the lending subsidiary generally resides. This behavior to avoid taxation can be addressed by a specific rule regarding under-capitalization.
- Generally speaking, the inflation of production costs and charges through the manipulation of related-party transaction prices allows for the shifting of profits from the country where the production site is located to a tax haven.
- Some sales contracts are aimed at lowering the turnover realized in the country where the production site is located, and therefore reducing the royalties, IS and IRVM owed. For example, hedging contracts allow for the declaration of a selling price that is below the market price (the world price for certain resources, such as gold or oil), while committing the company in Mali to transfer a specific quantity of the resource being extracted to a group subsidiary located in a tax haven at a later date.

²⁸ IMF (2014) reviews the effect of tax competition on corporate income tax revenues around the world, and among developing countries in particular.

- Finally, transfers of a Malian company's assets at low prices between related parties allow for the realization of capital gains by subsidiaries located in tax havens.

121. **Article 81 of the General Tax Code is aimed at controlling the shifting of profits outside of Mali through the application of the equivalent of an arm's length principle.**

This article addresses manipulations of purchase or sale prices. It states that in the absence of information, the reference prices for taxable products are those used between independent companies.

122. **While Article 81 of the General Tax Code is part of an effort to protect the IS tax base in Mali, it appears to be insufficient and difficult to enforce.** It should be supplemented with the establishment of the arm's length principle as defined by the OECD, which is aimed at: (1) the restoration of tax neutrality between local and multinational enterprises; and (2) determination of taxable operating income by the local subsidiary. Governments also believe that prices for transactions between associated enterprises or related companies should correspond to the arm's length price, whether these transactions involve deliveries of tangible or intangible goods, the provision of services, or even loans.

123. **The under-capitalization of any Malian company that is a subsidiary of a multinational group can be corrected by a rule on under-capitalization to be introduced into the General Tax Code.** An increase in the current interest rate by three points over the central bank's key rates is insufficient to avoid profit-shifting through the assumption of excessive debt by the company holding the mining rights.

B. Inflation of Costs and the Role of the Mining List

124. **A common practice in the area of international profit-shifting is the inflation of production costs or investments, giving rise to deductible write-downs.** This practice is particularly damaging for income in the mining sector since imported goods generally benefit from exemptions.

125. **The three mining codes grant tariff advantages based on a single mining list established in 1998.** The goods included on this list are exempt from customs duties during the exploration phase and for the first three years of production. Heavy equipment may benefit from a temporary admission regime.

126. **The time limit on the customs duty exemption for imports means that the opportunities for the inflation of costs are concentrated at the beginning of the life of a project.** Currently, most of the projects have been under way for a number of years, which explains the structure of imports in the sector (see Table 14 and Figure 13). More than 75 percent of imports involve intermediate goods (inputs). Some 66 percent of imports are subject to a customs duty rate of at most 5 percent. The low average effective rate of customs

duties provides companies with opportunities for tax optimization (see Table 15) throughout the entire life of a project.

Table 14. Structure of Imports by Mining Companies and their Subcontractors in 2012

	in CFAF	%
Consumer goods	2,257,897,855	1.51
Intermediate goods	115,736,170,776	77.34
Capital goods	31,646,275,244	21.15
Total	149,640,343,875	

Source: Directorate General of Customs, mission calculations.
Note: Classification based on the UN Broad Economic Categories (BEC).

Figure 13. Distribution of Imported Goods by Tax Rate in 2012 (%)

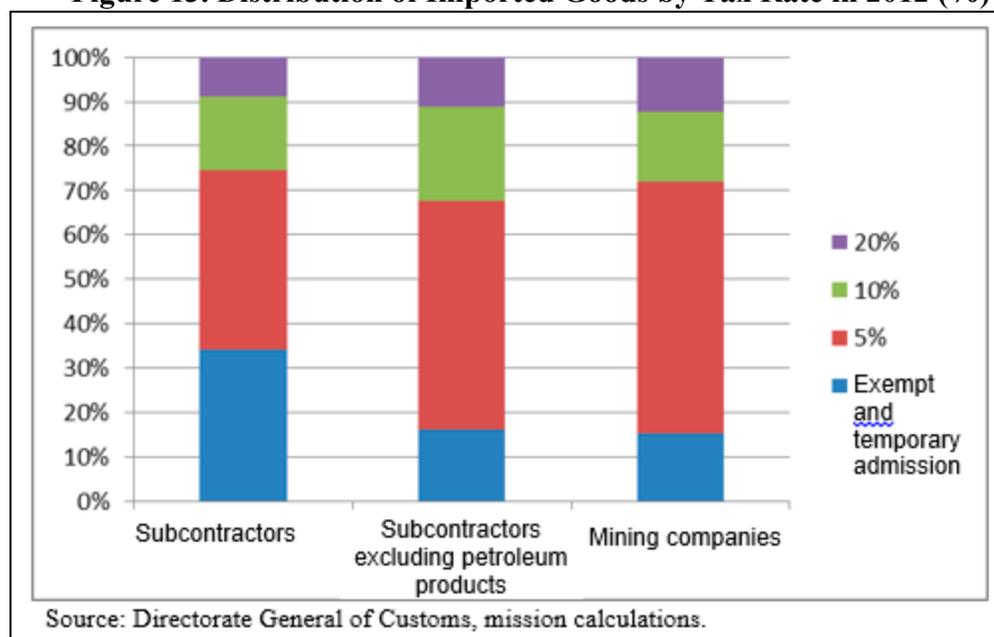


Table 15. Average Effective Customs Duty Rate by Company in 2012

Company	Effective customs duty rate (%)
SEMICO SA	8.18
SEMOS SA	8.06
SOMIKA SA	7.30
SOMISY SA	0.00
YATELA SA	5.53
SOMILO SA	7.60
MORILA SA	7.31

Source: Directorate General of Customs, mission calculations.

127. **The mining list is relatively old and the goods on the list are not defined in accordance with the Harmonized System (HS) classification, which has a negative impact on government revenues.** Technological advances mean that the list is partially obsolete. Above all, the absence of any references to the HS headings in the Common External Tariff (CET) leaves room for interpretation and certainly for discussion between customs officials and companies during the customs clearance of exempt goods that are declared.

C. Taxation of Capital Gains Resulting from Direct and Indirect Transfers of Malian Assets

128. **The decision not to tax capital gains on the transfer of an asset or a Malian company could be an incentive policy decision.** Moreover, agreements to avoid double taxation generally restrict the ability to tax this type of income. Nevertheless, a capital gains tax exemption entails a tax expenditure that should not be overlooked and could have a significant adverse impact on the tax administration's control of the tax bases related to resource extraction activities.

129. **The taxation of capital gains resulting from the direct transfer of a mining or oil right in Mali is governed by the General Tax Code like any other capital gain.** The capital gain is included as part of the company's taxable income if the holder of the right is a legal entity. It should be included under the IRVM or under the tax on property income if the holder of the right is an individual (see Rota-Graziosi et al, 2014, for a detailed analysis of the taxation of all capital gains under the General Tax Code²⁹). It should be noted that the capital gain realized increases the value of the asset concerned and therefore the depreciation expense related to this asset that can be deducted from the IS for the company acquiring the asset. The recognition of a capital gain therefore results in immediate revenue, i.e., the capital gains tax, and future revenue losses, i.e., the higher depreciation expense that reduces the IS owed.

130. **The establishment of a rule for the taxation of capital gains related to indirect transfers of mining rights could follow the model of the United Nations Convention, which is preferable to the OECD model in the case of Mali.** In fact, Article 13.5 of the UN model allows for the taxation of capital gains in the source country – that is, in the country of the company whose rights are being transferred – when the transferring party has retained a certain percentage of the capital of the company whose rights are being transferred. This model is in contrast to the OECD rule for the taxation of capital gains on securities in the country of residence, covered by Article 13.5 of the OECD Model Convention. According to

²⁹ The general tax policy mission recommends that the application of the WAEMU directive defining the tax base for the corporate income tax be revised, in particular the corporate income tax exemption for capital gains on condition that they are reinvested within three years in a member country. This mission also recommends that capital gains on property realized by individuals be subject to taxation.

this model, capital gains on the alienation of securities are normally taxable in the country of which the alienator is a resident. The mechanism for taxation at the source that is proposed here, following the UN model, already exists in the legislation of some major countries, such as India and China.

131. **The proposed rule would complement the system currently in place in Mali for the taxation not only of capital gains from transfers of mining or oil rights, but also any direct or indirect transfer of the shares of a Malian company holding a mining or oil right.** In practice, it may be difficult to identify indirect transfers of a Malian company's shares. The purpose of this recommendation by the mission is to provide the administration with a legal arsenal allowing it to take transfers of this type into account when its oversight capacities have advanced. To this end, it will be necessary for the transferring party to inform the Malian government of a transfer when it exceeds a certain fixed threshold of 10 percent or 20 percent, for example.

132. **For tax collection purposes, provisions could be made for the establishment of a withholding mechanism to ensure that taxes are collected.** A company established in Mali, whose rights are being directly or indirectly transferred, should withhold the amount of tax on capital gains realized abroad on the direct or indirect transfer of its rights. The new mechanism should be inserted in the form of an article in the General Tax Code. For reasons of simplicity, in the event that this tax is withheld at source when the transferring company is a nonresident, the mission suggests that the capital gain realized not be included in the IS tax base.

133. **The taxation of capital gains related to direct or indirect transfers may either be included within the framework of the IRVM or defined as a new separate capital gains tax, as is the case in Australia or South Africa, for example.** Such a proposed law, if adopted, should be the subject of a communication by the Ministry of Finance and the Ministry of Mines to inform the taxpayers potentially concerned, in particular those involved in the mining sector.

D. Valuation of Services and Purchases of Highly Specialized Equipment

134. **The identification of comparable transactions is sometimes difficult.** One of the challenges associated with the valuation of transfer prices in the natural resource sector is that some of the transactions are highly specialized and, when these transactions are between related parties, it can be difficult for the authorities to identify comparable transactions and determine if the purchase prices presented by the companies are reasonable.

135. **The authorities are encouraged to equip themselves with simple mechanisms to make up for this lack of information on comparable transactions.** Some examples of such rules could include:

- Purchases of supplies, machinery, and specialized equipment between related parties could be valued using the cost-plus price approach. Under this approach, rather than identifying comparable transactions, the authorities ask the taxpayer to provide a detailed statement of the production cost of supplies, machinery, or equipment borne by the affiliated company (the documentation requirements should be clearly defined in the regulation). This cost price can be increased by a portion of the profit established in the regulation. When the supplies, machinery, or equipment are leased, the value of the asset under the cost-plus price approach would be multiplied by the ratio of the time that the equipment is in use in Mali to the useful life of the asset.
- Companies may make use of the specialized services of other entities that are members of their group. In situations when it is not possible for the authorities to identify comparable transactions, it is suggested that the Malian authorities opt for a simple method to determine the value of these services. The costs incurred by the service provider should be documented, including costs related to staff salaries, prorated on the basis of the number of days needed to support the company's operations in Mali. These costs may be increased by an amount that represents the profit margin, which may be equal to that provided for imports of supplies, machinery, and equipment.

Recommendations

- Review the arm's length principle in the General Tax Code and its application methods.
- Consider the adoption of an under-capitalization rule in the General Tax Code.
- Update the mining list.
- Review the taxation of capital gains related to direct and indirect transfers of mining or oil rights.
- Provide for alternative methods for the handling of highly specialized transactions.

Bibliography

Africa Progress Panel, 2013, *Equity in Extractives: Stewarding Africa's Natural Resources for All*, United Nations Report.

Charlet, Alain, Bertrand Laporte and Grégoire Rota-Graziosi, 2013, La fiscalité minière en Afrique de l'Ouest et du Centre (Mining Taxation in West and Central Africa), *Revue de Droit Fiscal*, 48, pp. 11-32, November.

Daniel, Philippe, Michael Keen and Charles McPherson, 2010, *The Taxation of Petroleum and Minerals: Principles and Practice*, Abingdon: Routledge.

International Monetary Fund, 2012, Fiscal Regimes for Extractive Industries: Design and Implementation, available at www.imf.org/external/np/pp/eng/2012/081512.pdf.

International Monetary Fund, 2014, Spillovers in International Corporate Taxation, available at www.imf.org/external/np/pp/eng/2014/050914.pdf.

OECD, 2013, *Addressing Base Erosion and Profit Shifting*, February.

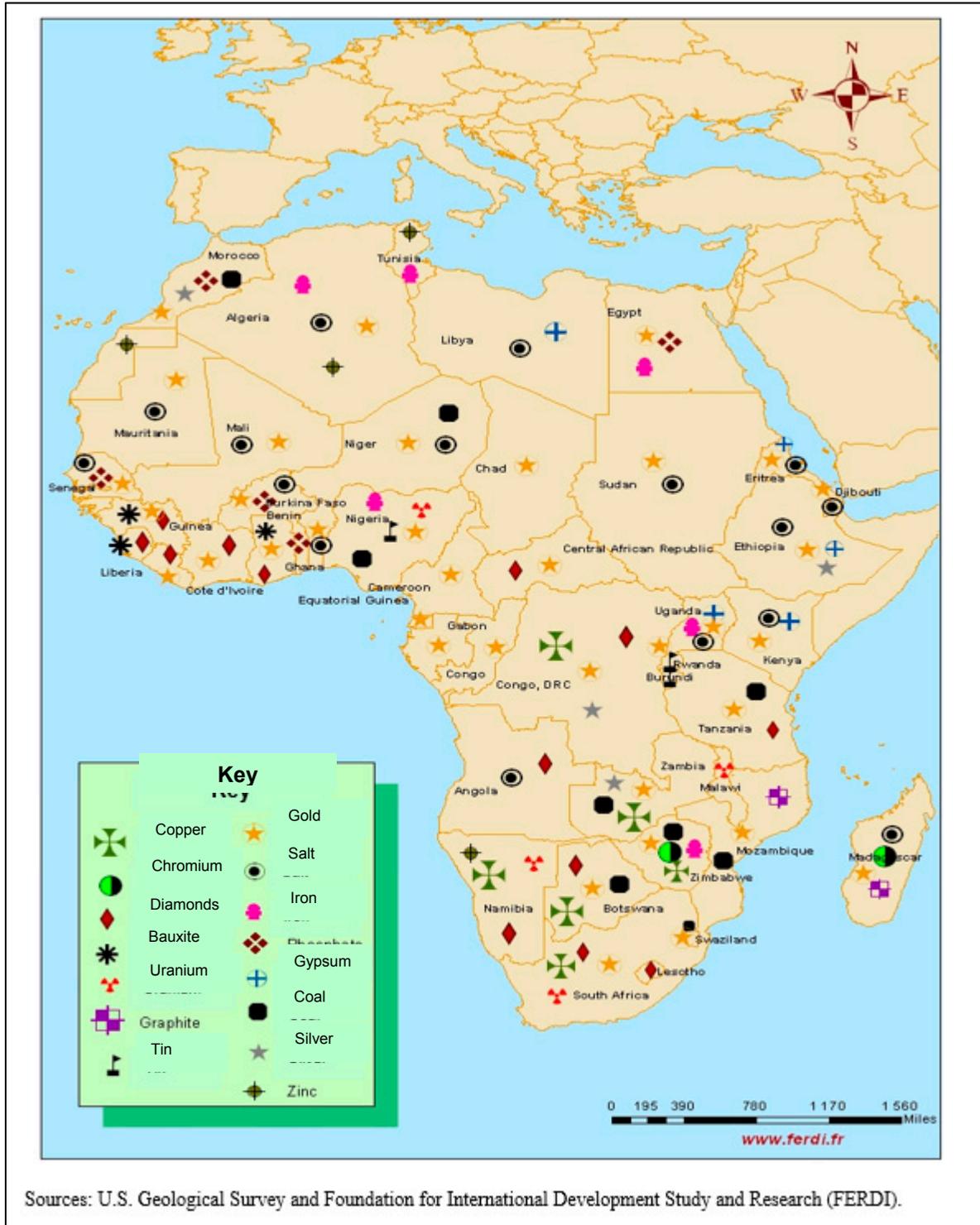
Rota-Graziosi, Grégoire, Anne-Marie Geourjon and Gilbert Ménard, 2014, *Tax Policy (Diagnostic Assessment)*, IMF, June.

Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations, OECD) available at:

http://www.oecd-ilibrary.org/taxation/oecd-transfer-pricing-guidelines-for-multinational-enterprises-and-tax-administrations-2010_tpg-2010-en
www.oecd.org/fr/fiscalite/prix-de-transfert/principes-de-locde-applicables-en-matiere-de-prix-de-transfert.htm (in French).

A copy of the *United Nations Practical Manual on Transfer Pricing for Developing Countries* is available online in English on the United Nations website at the following address: http://www.un.org/esa/ffd/documents/UN_Manual_TransferPricing.pdf.

**ANNEX I. MAJOR MINERAL PRODUCTION OPERATIONS IN AFRICA IN 2010 BY COUNTRY
(EXCLUDING OIL AND GAS)**



ANNEX II. INSTRUMENTS FOR TAXATION OF THE EXTRACTIVE INDUSTRIES

The mining sector is (or could be) subject to specific levies in addition to the taxes and levies provided for under the General Tax Code. The latter include the IS, the IRVM, and the tax on property and property income, among others. Taxation under the general tax legislation in Mali is covered by a technical assistance program dedicated to general taxation. The taxation of profits in the extractive industries, as in any other sector, has the advantage of relative neutrality, but is particularly exposed to the risk of cost inflation (transfer pricing). The rest of this section is devoted to nontax levies, i.e., those not arising from the General Tax Code.

Mining royalties

Mining royalties are a reliable source of revenue for the government from any mining project. They do, however, have the disadvantage of increasing the marginal cost of projects and of reducing the operating life of mining projects and even making some new projects unviable. Furthermore, royalties are regressive, with the share of the rent going to the government being higher for less profitable projects.

The mechanism for calculating mining royalties varies considerably from one country to another. Royalties may be applied to the volume and/or value of production. China, for example, applies a 4 percent ad valorem tax on gold plus a specific tax per metric ton. The value that is used could be the ex-mine/wellhead price of the resource, the value of the processed product net of processing costs, or the value of exports net of transportation and other costs. Different rates can therefore produce the same tax burden depending on the base on which they are calculated.

The royalty rate is not necessarily constant. The rate can rise with the quantity extracted or with the price of the resource. Small projects may be exempt from the royalty owing to low earnings (small artisanal mines). In the case of a progressive rate based on the price of the resources (Burkina Faso since 2012, Mongolia for gold), extraction is stimulated when the investors anticipate an increase in the price of the resource. Administration costs are higher than with a constant rate.

Diverging from the normal use of the term, mining royalties may be based on profits earned by companies, i.e., levied on income less costs. For example, Ghana applies royalties to net income less operating costs and capital costs.

In practice, mining royalties offer three main advantages over other instruments of taxation: (1) they are easy to implement; (2) they generate revenues from the first unit of the resource extracted; and (3) they have a stable and/or predictable base. The development of taxation in Mauritania [Mali?] in this area thus appears to be in line with international best practices.

Mineral resource rent tax (MRRT)

The MRRT is based on economic profit, i.e., the difference between income generated by an activity and the economic and nonfinancial costs charged to that activity. In practice, the MRRT is a proportional tax on discounted cash flows that is applied from the point that the project reaches a level of profitability guaranteed to the investor.

The MRRT distributes the risk between the government and the investor, while at the same time guaranteeing a certain profitability to the investor. It does not add to the marginal production cost and is therefore neutral for the investment decision. Projects that are not viable with a mining royalty can thus become viable with an MRRT.

In order to avoid the disadvantages of a royalty with multiple rates, an alternative is to apply an MRRT and an ad valorem royalty at the same time, both of which would be fully deductible. This combined system reduces taxation-related distortions and increases the flexibility of the system. This is an effective collection system for projects that generate higher profits. For investors, the risk premium is higher than with an MRRT alone, but less than with ad valorem mining royalties alone.

Box 3. Various Approaches to the MRRT

Brown Tax. The Brown tax is based on the project's cash flow from all of the company's real transactions. The tax base is therefore comprised of all income from the sale of the resource, less all current or capital real expenses. No deductions are made for interest or other financial expenses since investment expenses are immediately subtracted from income. During the period when cash flows are negative, typically the development phase, the government provides a refund to the investor based on the tax rate multiplied by the amount of losses. During the positive cash flow phase, or the production period, the government receives a fixed proportion of the rent.

MRRT. This tax is similar to the Brown Tax but with the carry forward of the deficit to subsequent years. The MRRT is used when the government does not want to provide a refund to the investor during negative cash flow periods. The tax is therefore paid only when the investor reaches a minimum return threshold.

Variable tax on profits. This tax is based on the principle of a profits tax, but with a rate that varies depending on the ratio of profit to gross income generated by the activity. This tax is applied in South Africa where the profit tax rate for the gold industry may be lower or higher than the ordinary rate.

Tax surcharge on cash flow. The tax base for the profits tax is adjusted by adding back depreciation and interest on capital, and deducting any capital expenditure during the fiscal year in full. This tax is applied to the petroleum sector in the United Kingdom.

Free government equity

Free government equity increases the real immediate cost of investments without guaranteeing additional revenues for the government over the medium and long term. When the government acquires free equity, the collection of additional revenues by the

government is dependent upon: (1) realization of profits after the BIC and (2) the dividend redistribution policy chosen by the company's shareholders. This second condition can be removed with the creation of preferred dividends, as in the 2012 Mining Code. The cost for the investor is immediate since the return on invested capital is automatically reduced. There are nevertheless two advantages to government equity: (1) it meets a political requirement by systematically involving the government in any project for the extraction of nonrenewable resources and can have a stabilizing effect on the tax regime from a public opinion standpoint; (2) it also offers the advantage of better access to financial and other information, not only about the company holding the contract (under Malian law) but also about investors holding the remaining 90 percent. This advantage is important when there is a significant change in ownership of the contract holder and potential capital gains.

The trade-off between the criteria listed above and the features and flaws of each type of levy defines the architecture of the optimal tax system for the mining sector. Table 16 [16?] provides a summary of these different parameters. Their optimal combination is determined by the specific characteristics of a country and its administrative capacities in particular.

Table 16. Summary of the Effects of Levies on the Mining Sector for Investors and the Government

	Investor		Capture of Rent by the Government		
	Project Cost	Project Risk	Flexibility	Collection Delay	Administrative Cost
Mineral resource rent tax	Moderate	Low	High	Moderate	High
Profit tax	Moderate	Low	Moderate	Moderate	Moderate
Mining royalties					
<i>Ad valorem</i>	<i>High</i>	<i>High</i>	<i>Low</i>	<i>Short</i>	<i>Low</i>
<i>Progressive</i>	<i>High</i>	<i>High</i>	<i>Moderate</i>	<i>Short</i>	<i>Low</i>
Government equity	High	High	No	Long	Moderate

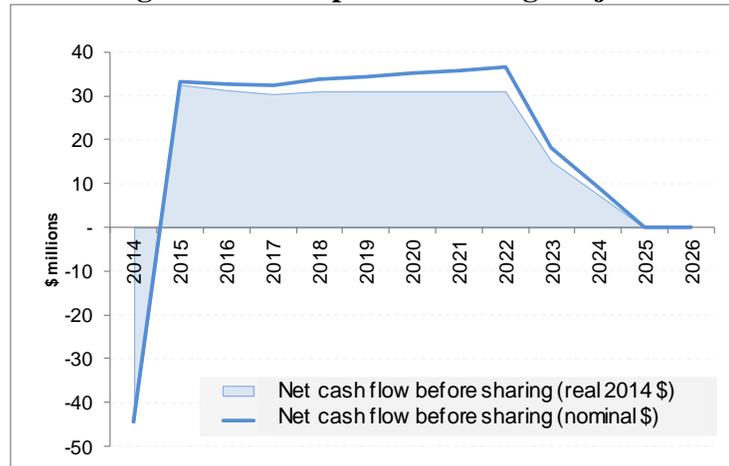
Source: IMF mission.

ANNEX III. HYPOTHETICAL MINING PROJECT

For the analysis performed in Chapter II, the mission designed a hypothetical mining project with characteristics that are representative of mining in Mali. The project is a low-grade gold mine. The development costs are relatively low and are consistent with those of an open-pit mine, and the unit operating costs are US\$450. All of the figures are expressed in real dollars (adjusted for inflation).

Figure 14 shows the profile of the cash flows from the mine assuming a long-term selling price of US\$1,300/oz. This price reflects the current expectations on the part of gold producers. The project shows pre-tax profitability, taking into account the assumptions referred to above with regard to prices and costs. The mine produces a pre-tax net cash flow of US\$229 million (undiscounted) and an IRR of 70.5 percent.

Figure 14. Example of a Mining Project



Gold project		
Gold production	345	000 oz.
Years	10	
	\$ million	\$/oz.
<i>In real 2014 dollars</i>		
Development costs	65	188
Operating costs	155	450
Total cost	221	638
Selling price		1,300
Source: Mission estimates.		

ANNEX IV. TAX REGIMES IN THE MINING SECTOR IN SOME AFRICAN COUNTRIES

	Mining royalties	BIC/IS	Depreciation rule	Loss carryforward	Equity	IRVM dividends	IRVM interest	Specific tax surcharges	VAT
Mali (2012 Mining Code)	3% ISCP on turnover + 3% ad valorem on ex-mine price (1)	25%	accelerated (declining balance method)	3 years	10% free + option for 10%	10%	9%	none	exemption for petroleum products, limited to 3 years for other products
South Africa	Progressive royalty of 0.5%–5% of adjusted revenues; rate varies according to profitability of mine	0%–34%; variable rate according to profitability of mine	immediate deduction	unlimited	zero	15%	15%	none	14% (zero rate on presumed exports)
Burkina Faso (draft Mining Code)	Progressive royalty of 3%-4%-5% of turnover; progressivity thresholds: US\$1,000, US\$1,300, and US\$1,500 per oz.	27.5%	economic depreciation (operating life of mine and production profile)	4 years	10% free	12.5%	12.5%	none	18% (petroleum products not deductible)
Democratic Republic of the Congo	2.5% of ex-mine price	30%	accelerated (60% the first year, declining balance depreciation in subsequent years)	5 years	zero	10%	0% (interest paid abroad)	none	exempt
Ghana	5% of revenues (f.o.b. price)	35%	straight line, 5 years	5 years	10% free	8%	8%	none (2)	exempt
Guinea (2011 Mining Code - amended)	5% of revenues (price based on London fixing)	35%	33.3% for development costs; 20% for machinery and equipment	3 years	maximum of 15% free + option for maximum of 20% paid	10%	10%	none	exempt

ANNEX IV. TAX REGIMES IN THE MINING SECTOR IN SOME AFRICAN COUNTRIES (CONCLUDED)

	Mining royalties	BIC/IS	Depreciation rule	Loss carryforward	Equity	IRVM dividends	IRVM interest	Specific tax surcharges	VAT
Liberia	3% of revenues (f.o.b. price)	30%	straight line, 5 years	unlimited	zero	5%	10%	20% tax on additional profits (deductible from corporate income tax) after 22.5% return	(presumed) exempt
Mauritania (2012 Mining Code)	Progressive royalty of 4%-6% of turnover; progressivity thresholds of US\$1,000 to US\$1,800 per oz.	25% and exemption for 3 years	straight line, 3 years (exploration costs)	unlimited	10% free + option for 10%	10%	zero	none	partial liability
Niger	Progressive royalty of 5.5% of revenues (f.o.b. price) if the profit/revenue ratio is less than 20%; 9% if the ratio is between 20% and 50%; and 12% if it is above 50%	30%	straight line, 5 years	unlimited	10% free	10%	0%	none	exempt
Senegal (2012 Mining Code)	3% of ex-mine price (London fixing less transportation costs) + 5% CSMC on turnover (3)	30% (with 40% tax credit for investment)	straight line, 5 years during exploration, declining balance method for capital expenditures during development and production	3 years	10% free	zero (payments abroad)	zero (payments abroad)	none	exempt for 15 years from the granting of the operating license for large projects
Tanzania	4% of revenues (f.o.b. price)	30%	immediate deduction	unlimited	10%	zero	10%	none	exempt

Note: The rates indicated here are those of the mining codes in force and may differ from those actually applied in the tax agreements.

1/ The ISCP is the tax on selected products.
2/ The 2012 budget introduced the application of a 10% special tax on windfall mining profits, but it has been put on hold at this time.
3/ The CSMC is the special contribution for mines and quarries.
The IRVM is the tax on investment income.

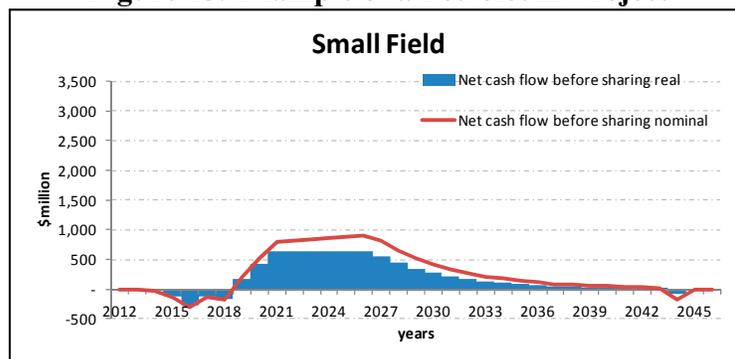
Source: Fiscal Analysis of Resource Industries (FARI) database of the Fiscal Affairs Department.

ANNEX V. HYPOTHETICAL PETROLEUM PROJECT

For the analysis performed in Chapter III, the mission designed a hypothetical petroleum project with characteristics that are representative of activity based on Mali's geological features. All figures are expressed in real dollars (adjusted for inflation). The project requires development costs of US\$310 million and a unit operating cost of US\$8. In the sensitivity simulations for a medium-sized oil field, the mission assumed a unit price of US\$6, taking into account economies of scale.

Figure 15 shows the profile of cash flows from the field assuming an f.o.b. (Gulf of Guinea) selling price of US\$90 per barrel and a pipeline transport tariff of US\$15 per barrel. This is a hypothetical tariff that covers transport to the border with Chad and from there, transport to the existing Chad-Cameroon oil pipeline. The project shows pre-tax profitability, taking into account the assumptions referred to above with regard to prices and costs. The field produces pre-tax net cash flows of US\$6 billion (undiscounted) and an IRR of 37 percent.

Figure 15. Example of a Petroleum Project



Small field		
Production	104	millions of barrels
Years	25	
<i>In real 2012 dollars</i>	\$ million	\$/barrel
Exploration costs	330	3.2
Development costs	310	3.0
Development drilling	81	0.8
Operating costs	834	8.0
Rehabilitation costs	81	0.8
Total cost	1,636	15.7
Source: Mission estimates, Questor database		

ANNEX VI. PETROLEUM TAXATION IN COMPARABLE COUNTRIES

	Angola (onshore)	Ghana (pre- Jubilee)	Cameroon	Kenya	Republic of Congo	Madagascar (onshore)	Namibia	Norway	Sudan	Sierra Leone
Regime (1)	PSA	Tax/Royalty	PSC	PSC	PSC	PSA	Tax/Royalty	Tax/Royalty	PSA	Tax/Royalty
Signature/production bonus	Zero	Zero	Production bonus	Zero	Zero	Production bonus	Zero	Zero	Zero	Signature bonus
Royalty rate	Zero	5%	Zero	Zero	15%	Sliding scale, based on production; 8%–20%	5%	Zero	5%	10%
Cost recovery limit	50%	100% (2)	60%	80%	60%	60%	100% (2)	100% (2)	45.5%	100% (2)
Profit sharing (% of profit oil going to the government)	Sliding scale, based on the IRR; 15%– 40%	N/A	Sliding scale, based on the R- factor; 20%–60%	Sliding scale, based on production; 50%–90%	Sliding scale, based on production; 35%–75%	Sliding scale, based on the R-factor; 30%–60%	N/A	N/A	Sliding scale, based on production; 69.9%–79.8%	N/A
Corporate income tax	50%	30%	40%	40%	35%	Zero	35%	28%	Zero	30%
Depreciation rule	Straight line, 5 years	Deductible	Straight line, 5 years	Straight line, 5 years	Straight line, 5 years	Straight line, 4 years	Straight line, 3 years	Straight line, 6 years	Straight line, 4 years	40% first year, 20% remaining 3 years
Carry forward of losses	Unlimited	Unlimited	Unlimited	Unlimited	3 years	5 years	Unlimited	Unlimited	Unlimited	10 years
Tax surcharge on profits	Zero	Based on the IRR; 25%– 40%	Zero	Zero	Zero	Zero	Based on the IRR; 33%– 50%	Based on the IRR; 50%	Zero	Based on the IRR; 40%
Withholding from dividends	Zero	8%	16.50%	Zero	20%	15%	10%	Zero	Zero	5%
Withholding from interest	10%	10%	16.50%	Zero	20%	15%	Zero	Zero	Zero	5%
Govt. equity	15%	10%	25%	10%	Zero	Zero	Zero	Zero	8%	10%

Source: Fiscal Analysis of Resource Industries (FARI) database of the Fiscal Affairs Department.

1/ The taxation may vary from one contract to another. The conditions shown above are those used in the model simulations.

2/ Under the royalty and tax systems, the investor receives 100 percent of the revenues remaining after royalties for cost recovery. This system is similar to a cost recovery limit of 100 percent in the PSCs, also after royalties