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THE FISCAL REGIME FOR LARGE-SCALE MINING IN URUGUAY¹

This paper provides a review of the fiscal regime applicable to large-scale mining in Uruguay and gives a preliminary forecast of potential government revenue from the Valentines mining project. The current mining fiscal regime in Uruguay is found to be capable of capturing for government a fair share of fiscal take while remaining competitive for investment. At the same time, there is room to strengthen the rules for determining the tax base, and to reduce the administrative burden and transfer pricing opportunities associated with the current basis for determining the royalty rate.

A. Introduction

1. This paper reviews the current fiscal regime for large-scale mining in Uruguay and provides some preliminary forecast of potential government revenue from the Valentines iron ore mining project in the country. There are two main purposes for this review: (a) to assess the Uruguayan mining fiscal regime against modern mining taxation practices, and (b) to provide some preliminary forecast of potential government's revenue from the iron-ore mining project.

2. The paper is organized as follows. The first part of the paper provides a qualitative assessment of the current mining fiscal regime, with an outline of the major fiscal instruments followed by an assessment of their design and related fiscal provisions (Sections A–D). It also provides a quantitative assessment of the competitiveness of the current mining fiscal regime in Section E, followed by a summary of key conclusions and recommendations in Section F. The second part of the paper provides the results of potential government revenue forecast from the Valentines project using the Fiscal Assessment for Resource Industries Model (FARI) of the IMF's Fiscal Affairs Department. A summary description of the current mining fiscal regime examined in this review is contained in Annex I, followed by a summary of economic assumptions used in the analysis in Annex II, and a set of mining fiscal regimes used for fiscal comparison in Annex III.

B. Mining Fiscal Regime Review

3. This review examines the major revenue-raising fiscal instruments and related special fiscal provisions against modern practices.² The fiscal regime for large scale mining in Uruguay comprises three major fiscal instruments, namely, mineral royalty (canon production),

¹ Prepared by Victor Kitange.

² For a detailed discussion of the design and implementation issues for extractive industry fiscal regimes see *Fiscal Regimes for Extractive Industries*, IMF Board Paper (August 2012).

income tax (IRAE) and additional income tax (additional IRAE). Other tax instruments of minor fiscal impact, including rental charges (canon surface) and a fee for contract stability have also been noted.

C. Royalty

Assured Minimum Flow of Revenue

4. The inclusion of mineral royalty (canon production) in the Uruguayan fiscal regime serves a useful purpose of providing the host government an assured minimum flow of revenues as long as there is mineral production. This is an important feature of a modern mining fiscal regime. In developing host countries given their budgetary and other financial needs, mineral royalties are particularly important for mining projects to be politically sustainable. Increasingly, revenues from mining are earmarked for local government or community use, and mining projects are expected to provide a source of financial support for local social and economic development.

5. The two tier royalty rate structure for Class III³ mineral deposits (including iron-ore mining) adds a complexity to the Uruguayan mining fiscal regime. The mining fiscal regime fixes in the law a 5 percent royalty rate in the first five years of production and 8 percent in the subsequent years. The same revenue objective could also more simply be achieved by a single standard royalty rate. The two tier structure gives a lower rate presumably to reduce the fiscal burden on mining companies in the early production years when they are still recovering their initial capital outlay. However, since royalty is not sensitive to mine profitability, it is a blunt instrument to give incentive to invest. Better alternatives include accelerated depreciation that allows companies to recoup investment before paying taxes combined with a modest single royalty rate. In addition, since a royalty adds to production costs, it may lead to premature shutdown of production particularly towards the end of production life as a mine becomes more costly to produce. It is therefore not uncommon for mining fiscal regimes to provide for targeted royalty relief (reduction or deferral), on a project-by-project basis, to prevent premature production shutdown *towards the end of production life*. But even in such cases, clearly spelt out justification must accompany an application for such a relief to authorities and in accordance with transparent economic criteria and procedures set out in the law.

6. The royalty rates for Class III deposits applicable to iron-ore are broadly in line with international trends. Table 1 shows a comparison of royalty rates on metallic minerals (base metals) including iron ore in a selection of countries, showing headline ad valorem rates ranging from 3 percent (Kazakhstan) to 10 percent (India). Minnesota in the United States and China both levy specific royalty rates (per unit quantity of mineral). The royalty rates in the Uruguayan

³ Metallic and non-metallic resources not included in other categories. Any person is able to mine minerals of this class subject to a permit.

regime are levied as a percentage on some measure of the value of production (ad valorem royalty rates), 5–8 percent. These rates are largely in line with the international trends. However, it should be recognized that they add to cost and can make the extraction of some resource deposits unviable or reduce mine economic life. It is thus, best practice for royalty rates to be levied at modest levels in keeping with international trends.

Table 1. Comparison of Royalty Rates for Base Metals (Including Iron-Ore)

	Country	Royalty Rate	Royalty Base
1	Australia - Western	5%–7.5% [depending on types of iron ore]	Gross invoice value of the mineral less transport and packaging
2	Brazil	2%	Sales revenue less taxes levied on revenue, insurance and freight costs
3	China	0.5–4% + RMB 10–25/ton	Sales revenue
4	India	10%	Sales revenue
6	Kazakhstan	3%	Gross revenues less extraction cost
7	Liberia	5%	FOB Liberia; London pm gold fixing
8	Russia	4.8% (conditioned ferrous metal ore)	Sales less freight and refining cost
		Formula-based	
9	South Africa	max 5% (refined minerals) max 7% (unrefined minerals)	Gross sales
10	Tanzania	4% (metallic minerals incl. precious)	Gross value
11	United States - Minnesota	\$2.412/long ton in 2011, adjusted by GDP deflator	Weight

Source: Fund staff estimates.

7. The existing royalty rate base determination on a net-back approach—based on gross sales minus certain costs—is more burdensome to administer. It also means that the effective royalty rates are likely to be lower than their face values. Ad valorem royalty rates can be charged on the value of mineral sale (gross value basis) or the value remaining after deduction of certain costs from the gross sale value of mineral product (net-back basis). The latter approach is the case in Uruguay where transportation costs and other related costs are deductible to arrive at the rate base (mine gate value) for charging the royalty. Compared to the gross value basis, the net-back basis requires accounting and auditing of deductible costs and creates challenges in addressing associated transfer pricing problems. Because of the trade-off between the rate level and the rate base, to achieve the same effective royalty rates, headline royalty rates on a net-back value basis should be higher than on a gross value basis. As a revenue neutral simplification measure, the government’s fiscal objective could simply be achieved by levying a lower single royalty rate on the gross value of iron ore production and thus simplify the current royalty regime.

D. Income Tax

Major Revenue Source

8. Income tax is a key feature of a modern mining fiscal regime. The current income tax rate for mining is the corporate income tax rate of 25% applicable to all businesses. Its application to the mining businesses ensures that the normal return to equity is taxed at corporate level just as in other economic sectors. In the Uruguayan mining fiscal regime, income tax would be one of the most important sources of government's revenue from profitable mines. Since it is profit related, it is less distorting than royalty but government revenue from this source can be unpredictable and volatile.

Table 2. Income Tax Regime for Mining in a Selection of Countries

Country	Income Tax Rates	Depreciation Rules
Australia - Western	30%	100% exploration; declining value or prime cost method for capital expenditure
Brazil	34%	100% for exploration and development costs; straight-line 10 years for equipment and machinery and buildings
China	25%	100% on exploration; 10% straight-line on development; 0.25% straight-line on replacement
India	30% + a 5–10% surcharge if above certain thresholds	15% declining balance for plant and machinery
Kazakhstan	18%	Rates chosen by companies with max. 25% per year
Liberia	30%	100% pre-production cost; 20% production capital cost
Russia	20%; reduction possible	Ten groups of assets with different depreciation rates; straight-line or declining balance
South Africa	28%	100% development; straight-line (unspecified rate) exploration
Tanzania	30%	100% exploration and development
United States - Minnesota	15–35% (federal); 2.45% (state)	70% in first year on exploration and development cost, balance on straight-line over 5 years; other methods possible
Uruguay	25%	100% or 20% straight-line for pre-production expenditures; 10% for production capital expenditures

Source: Fund staff estimates.

Tax Rate

9. The existing income tax rate of 25% is within international trends. Corporate income tax rates in the 25–35% range are common around the world. However, investors are not only concerned with the level of tax rate, but also the tax base on which it is levied. Therefore it is important to consider tax rates in the context of allowable tax deductions since critical to determining effective tax rates are depreciation rules (Table 2 above).

Tax Base

10. The special rules for mining income tax base under the existing fiscal regime in Uruguay are generally consistent with best practices. It is customary for the calculation of taxable income in the mining industry to take place under special rules regarding allowable expenditures (expenses and depreciation), treatment of losses and related matters. This approach recognises the special characteristics of mining, particularly the magnitude and timing of capital expenditures in developing mines and mine infrastructure. These are already features of the current Uruguayan mining fiscal regime.

Pre-production Expenditure

11. The rules regarding allowable deduction of pre-production capital expenditures under the existing regime are consistent with best practices. The existing mining fiscal regime provides for pre-production expenditures to be capitalised and depreciated from the year production starts. It is best practice to start initial capital allowances in the year of commencement of commercial production. In addition, modern taxation practices provide for a partial year rule (i.e. if production starts after six months, only half a year's capital allowance will be allowed) and in this way, all assets are treated identically relative to income produced, irrespective of when they are purchased or constructed. It is unclear how the partial year rule would be implemented under the current Uruguayan mining fiscal regime.

Depreciation Rate

12. The rules regarding depreciation rate for tax purposes under the existing mining fiscal regime suggest room for further improvement. Mining companies under the existing fiscal regime can choose whether to deduct in full or depreciate their pre-production capital expenditures over 5 years from the production year. This option to decide the depreciation method is an unnecessary complexity. It is international practice however for pre-production expenditures to be allowed in full in the production year (Table 2) recognising the risk involved when the expenditures were being incurred. For capital expenditures incurred during production, less generous rates of depreciation are used but generally 3–5 year depreciation period is not uncommon internationally (Table 2). The 10 percent rate (10 years) under the existing regime in Uruguay is not so generous compared with other regimes in Table 2 above except for China even though it has the advantage of bringing forward government revenue compared to faster depreciation rates.

Thin Capitalization and Interest Deductibility

13. The current mining fiscal regime does not include special rules for dealing with transfer pricing associated with debt financing in mining projects. It is common for commercialisation of large mining projects to be financed by both debt and equity. Not only is the use of debt help to finance the large capital requirement for mining but also, to reduce income tax liability since interest on the debt is usually deductible in determining the income tax base. Hence, modern tax practices seek to provide safeguards against excessive use of debt

financing or excess interest rate eroding the tax base. Thus, general rules regarding thin capitalization, including rules to disallow deduction of excessive interest charges are standard features of modern mining fiscal regimes. They may include provisions to deny immediate deduction for interest payments that exceed some proportion of income (for instance, 50 percent plus interest earned) and a “safe harbor” at a debt equity ratio of, say, 1.5:1. Other provisions may include limiting deductibility of interest rate to an arm’s length equivalent criterion and including it in tax legislation, normally as part of a general transfer pricing rule. An alternative is to specify a margin over a benchmark international US\$ interest rate. The advantage of specifying such criteria is the transparency and certainty thereby created between tax payers and tax administrators.

Ring-Fencing

14. The Uruguayan mining fiscal regime does not provide special rules for restricting deductibility of costs and tax losses incurred under separate mining licenses. A mining company may hold several licenses to carry out mining activities in Uruguay and can consolidate its income and costs in determining its income tax base. Thus a company generating income from mining activities anywhere in the country will be able to seek tax relief for the expenditures incurred wherever mining activities are conducted in the country. The government must determine whether to allow such relief and, if so, on an unrestricted or restricted basis (commonly referred to as “ring-fencing”). Ring-fencing helps to protect the tax base of a producing mine from being eroded by the company’s expenditure incurred in activities unrelated to the production of the mine profits.

15. A country must balance between maximising immediate revenue and the risk of immediate revenue loss with potential increase in future revenue. Allowing a mining company to include exploration costs incurred under other licences (unrestricted basis) for example may reduce the company’s risk, encourage further mineral exploration and lead to opening of future new mines. However, a country with only one large mine such as Uruguay and limited potential for developing similar large mines in the future, ring-fencing (restricted basis) is particularly relevant to protect its profit tax base on which profit related tax instruments i.e. the IRAE and additional IRAE are relied upon to generate the largest government share from the mine.

Tax Losses

16. The rule limiting carrying forward of tax losses up to 5 years under the Uruguayan fiscal regime means that companies may pay income tax before they have fully recovered their costs. The loss carry forward limit brings forward revenue whereas removing the limit may lead to deferral of government revenue. However, this feature tends to increase the perceived commercial risks particularly in marginally profitable mines. In spite of this, imposing a time limit on the losses as is the case in Uruguay is commonplace in mining fiscal regimes because tax authorities with weak administration may find it difficult to audit very old losses. The best

practice supports longer time limit e.g. 7 years for loss carry forward to reduce the risk of taxing losses rather than profits.

17. In Uruguay, a mining company can transfer losses from other mining areas to its profitable mines elsewhere in the country and hence, reduce its tax payments. Where mining profits are ring-fenced on a mine area by mine area basis (including contiguous mine areas), the risk to government of revenue deferral through unlimited carry forward of tax losses is reduced. Uruguay could consider introducing a longer, if not unlimited, carry forward of tax losses together with tight ring-fencing rules (i.e. within a company's mine area or contiguous mine areas), and thin capitalization and limit on interest deductibility to safeguard against base erosion.

Payments to Decommissioning Fund

18. The existing mining fiscal regime's rules on tax deductible expenditures do not have an express provision to allow project payments to fund future mine site decommissioning costs. Unless expressly provided in the tax code, provision against a future expense is not usually tax deductible. Modern mining fiscal regimes provide special rules to allow as tax deductible contributions made to an abandonment or reclamation fund. It is recommended that the government consider introducing an appropriate provision in the tax legislation.

E. Additional Income Tax

19. The additional income tax on large-scale mining provides for fiscal progressivity of the current mining fiscal regime. Fiscal progressivity is one of the modern principles for mining taxation. The additional income tax is a profits tax in which the rate of tax varies automatically with annual profitability of a mining project to capture for the government a share of the annual profits generated by the project. It means that mining projects of relatively low ratio of profit to revenue will bear a lower tax burden, and this could reduce perceived risk and, thus, encourage investment.

The additional income tax rate is determined by the following formula:

(MOM x 0.9 – 0.25) x 100; and MOM is capped at 0.70

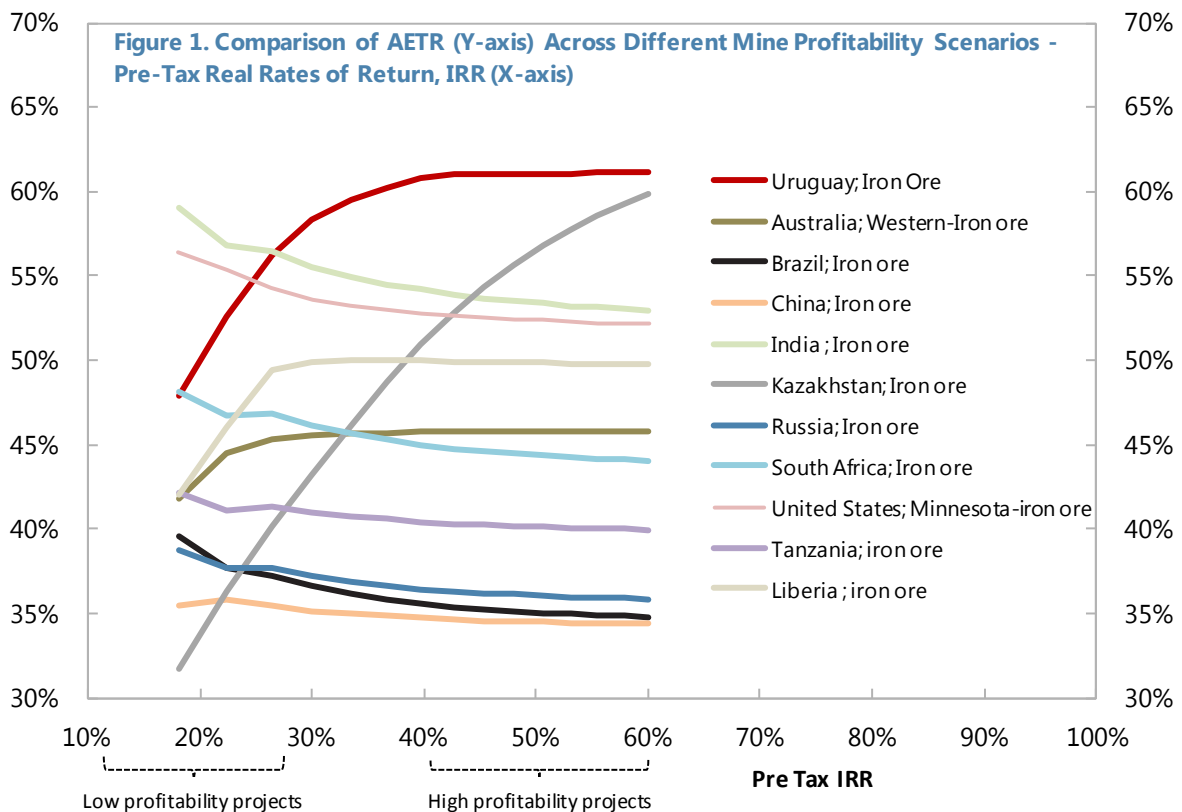
Where:

- Operational Mining Margin (MOM) is the quotient resulting from dividing net operational mining income by operational mining income.
- Operational mining income equals to mineral sales multiplied by sale price.

F. Competitiveness of the Mining Fiscal Regime

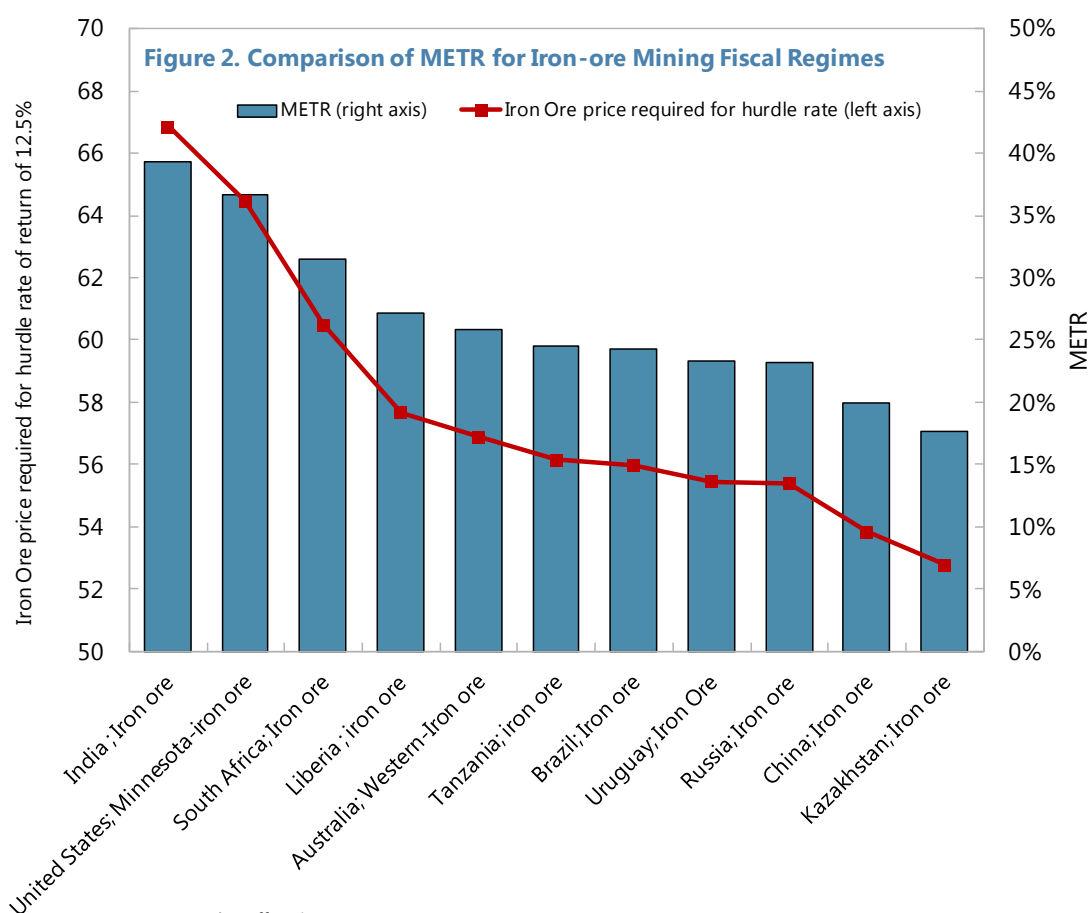
20. The tax burden expressed as a percentage share of mining profits captured by government is a useful measure to evaluate competitiveness of a mining fiscal regime in a host country. This is usually known as government take and expressed as average effective tax rate (AETR). A mining company can compare AETR in Uruguay with ones in competing investment opportunities in other competitor countries and if the AETR in Uruguay is higher for substantially the same risk investment opportunity, investment is likely to be directed elsewhere. Investors will choose those investment opportunities that meet their minimum required risk adjusted rate of return on investment (“hurdle rate”).

21. The tax burden on iron-ore mining under the current fiscal regime is considered to be reasonably within the international range. IMF simulations of mining fiscal regimes around the world using its FARI model suggest reasonably achievable AETRs for mining range from 40–60 percent. The simulation of the Uruguayan mining fiscal terms suggests an AETR ranging from 40 for low profitability outcomes increasing to 60 percent high profitability outcomes (Figure 1 below). In addition, the fiscal regime seems to be fairly progressive making it capable of generating a fair share of fiscal take for government. The economic assumptions used are set out in Annex II and mining fiscal regimes in Annex III.



22. The efficiency of the fiscal regime in encouraging investment in mine expansion can be measured by Marginal Effective Tax Rate (METR). This is the government's proportion of pre-tax profits for a project which is just viable for the investor post-tax. It is calculated as pre-tax rate of return minus investor's hurdle rate of return as a ratio of pre-tax rate of return. It shows the relative fiscal "burden" placed on the project by the fiscal regime at the margin of project viability.

23. The METR of the mining fiscal regime in Uruguay is relatively low, depicting a relatively efficient fiscal regime. The results of simulations conducted using the IMF FARI model to compare the METR for the fiscal regime for iron-ore in Uruguay and a selection of comparator countries are shown in Figure 2 below. To carry out this simulation, iron ore prices were varied to generate pre-tax return for a typical iron-ore mine under each fiscal regime required to achieve a post-tax hurdle rate of return of 12.5 percent. The results show the METR for Uruguay to be within the lower end of the results among comparator countries, meaning that it is relatively efficient and less distortive to investment decisions.



G. Conclusions and Recommendations

24. The current mining fiscal regime in Uruguay is considered capable of capturing for government a fair share of fiscal take while remaining competitive for investment. It imposes a lower tax burden on less profitable mines, thus encouraging development of marginally profitable iron ore deposits and captures a higher take in highly profitable mines. This progressivity of the fiscal regime allows it to generate a competitive government take without deterring investment in profitable mines.

25. The fiscal regime could benefit from further improvements by reducing one of the major revenue risks to government of base erosion. In particular, it is recommended that rules for determining the tax base could be strengthened by:

- Ring-fencing the tax base by mine area (to include contiguous mine areas) for IRAE and Additional IRAE purposes
- Introducing thin-capitalization and limits on deductibility of interest for tax purposes
- Introducing express provision for deductibility of financial contributions by a mining company to fund future mine site closure and rehabilitation costs.

26. The administrative burden and transfer pricing opportunities associated with current *net-back* basis for determining the royalty rate base can be reduced. In this respect, it is recommended the government consider:

- Charging royalty on a *gross value basis* (at the price realized at point of sale within the country for domestic sales or FOB price for exports) but at a lower rate than the current rate on net-back back basis.
- Introducing arm's length pricing principle for the rate base valuation for royalty purposes coupled with advance pricing agreement for iron-ore sales.

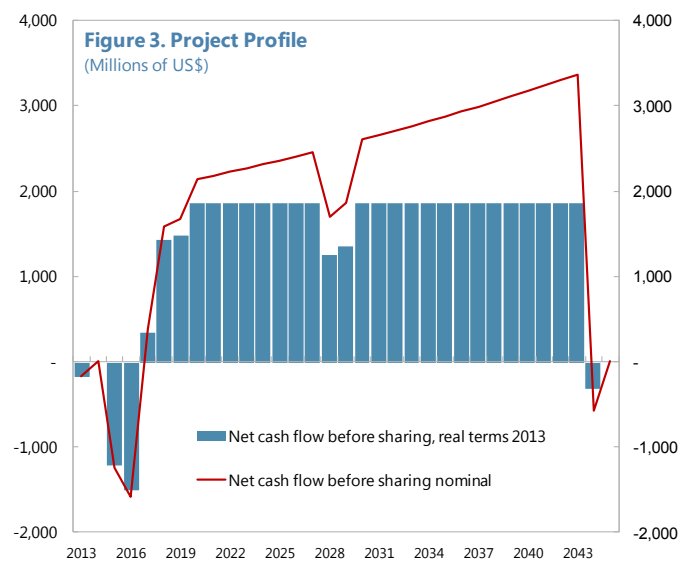
H. Revenue Forecast

27. The revenue forecast from Valentines mine project is based on an illustrative iron-ore project example with 27 year project life and average project profitability at pre-tax real IRR of 37.5 percent. The key project features and profile are set out below in Table 3 and Figure 4. A temporary drop in the profile in years 2008–2009 reflects additional capital investment of about US\$1,100 million for new development including drilling and pre-stripping operations.

Table 3. Illustrative Key Parameters of the Project

Total production (million tons)	467
Production Life (years)	27
Production (million ton/yr)	18
Total pre-production capital costs	2870
— Exploration	170
— Development	2700
Production capital costs	3590
Total operating costs	5645
Decommissioning	315
Iron ore base price (US\$ per ton)	120
Pre-tax IRR	37.5%

Source: Fund staff estimates.



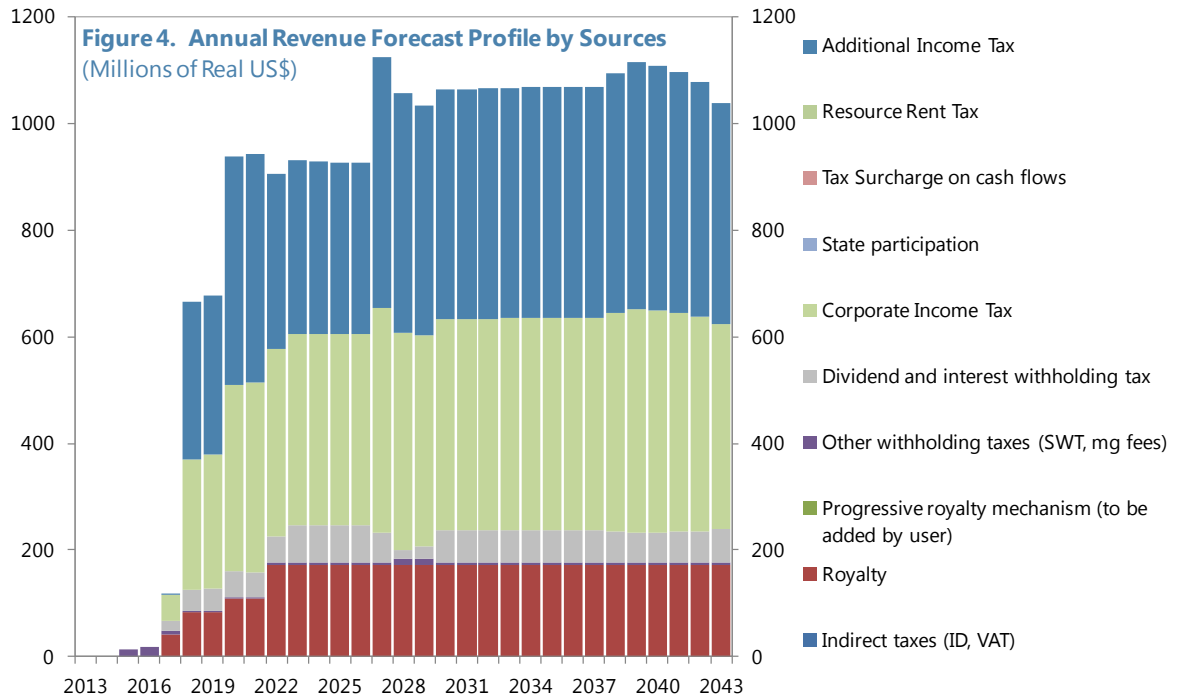
Source: Fund staff estimates.

Table 4. Revenue Forecast Over 27 Years (Real US\$ Million)

Royalty	4,228
Other withholding taxes (SWT, mg fees)	147
Dividend and interest withholding tax	1,452
Corporate income tax	9,885
Additional income tax	10,557
Total government revenue	26,269

Source: Fund staff estimates.

28. The government's revenue from the project over the 27 year project life is forecast to be US\$26 billion. The revenue is derived primarily from the three major taxes, namely, royalty, income tax and additional income tax. Other fiscal instruments making minor contributions include withholding tax on dividends and interest payments (Table 4 and Figure 5 below).



Source: Fund staff estimates.

Remarks on the Revenue Forecast

29. The revenue forecast is based on project assumptions that may not reflect the actual project data. However, the project example used in generating the forecast reflects a plausible iron-ore mine development, based on production figures and pre-production capital cost estimates obtained using publicly available data on the Valentines project. Comparison was also drawn from similar iron-ore mining projects in Sierra Leone, and Liberia. Nonetheless, the forecast should be treated as primarily indicative.

Annex I. Summary of the Fiscal Regime for Mining in Uruguay

Country	Uruguay		
Regime	Royalty + CIT		
Industry	Mining		
	Rate/value	Comments /Base for calculations	Source
Royalty (canon production)			
Class III deposit	5% yr 1–5 8% from yr 6	as a percentage of gross revenue (Class III: metallic and non metallic)	Mining Code - Law no. 15242 A <i>Canon Production</i>
Class IV deposit	10%	(Class IV: incl. building material)	
Additional Income Tax (IRAE)	0–38%	Tax rate = MOM x (0.9–0.25) x 100 MOM is capped at 0.70, where: MOM = net operational mining income divided by operational mining income	Tax Code: Obligation(Article 102) MOM (Article 107) Rate(Article 110) Tax base(Article 111)
Additional production fee	2%	Fee for contract stability. Same base as canon production	Tax Code (Article 43)
Income Tax (IRAE)	25%		IBFD 2013
Ring fencing	mine	Income from mining products	Mining Code (Article 103)
Capital expenditure allowance for tax calculations			
Pre-production costs	5 years	Straight line depreciation (also full expensing at production start allowed)	Tax Code (Article 51)
Capital expenditure	10 years	Straight line depreciation (Equipment and Machinery)	IBFD 2013
Loss Carry Forward	5 years		Tax Code
Decommissioning	none	No funding scheme established	Tax Code
VAT	22%	General rate	IBFD 2013
Custom Duties			
Import taxes	Exempt	General rate: 6%, 15% and 20%,	IBFD 2013
Export taxes	Exempt		IBFD 2013
Withholding Taxes			
On Dividends	7%		IBFD 2013
On Interest	12%		IBFD 2013
On Royalties	12%		IBFD 2013
On Subcontractors	12%		IBFD 2013
Income Tax Treaties		Available with several countries	IBFD 2013
Thin capitalization	None		Tax Code
Rentals (N\$ per ha.) (currency: new peso)	Year 1: 200 Year2: 400	Prospecting period (<i>canon surface</i>)	Mining Code (Article 45)
	Year 1: 200 Year2: 400 Year3+: 600	Exploration period (<i>canon surface</i>)	Mining Code (Article 45)
State Participation Equity	None	No direct State equity interest in mines	Mining Code

Source: Fund staff estimates.

Annex II. Summary of Economic Assumptions

Field Name	Valentines Project
Base year	2013
Development start year	2014
Real interest rate	2%
Discount rate general	10%
Discount rate for net benefits	10%
Hurdle rate	12.5%
Grace period after last drawdown startup	0
Debt repayment years	6
Interest rate, margin over LIBOR	3%
Exploration costs borrowed	0%
Development costs borrowed	75%
Pre-tax IRR (nominal)	39%
Production starts in year	2016
Years of production	27

Source: Fund staff estimates.

Annex III. Summary of Fiscal Regimes Evaluated for Comparison

Country	Royalty rate	Royalty base	Corporate Income Tax	Depreciation rule	VAT	Import duties	Export Tax	Loss carry forward	Additional Profit Tax	Dividend Withholding Tax	Interest Withholding Tax	Equity
Australia - Western Australia	5%–7.5% [depending on types of iron ore]	Gross invoice value of the mineral less transport and packaging	30%	100% exploration; declining value or prime cost method for capex	10%; 0% exports	Concessions apply if values > \$10 million	None [assumed]	Indefinite	22.5% MRRT; excluding “small miners” (less than AUD 75m of MRRT mining profits per year)	30% [unfranked]; 0% [franked]	10%	None
Brazil	2%	Sales revenue less taxes levied on revenue, insurance and freight costs	34%	100% for exploration and development costs; SL 10 years for equipment and machinery and buildings	17%; 0% exports	5%–12%	Exempt	Indefinite	None	None	15%	—
China	0.5–4% + RMB 10–25/ton	Sales revenue	25%	100% on exploration; 10% SL on development; 0.25% SL on replacement [assumed]	0% exports	Exempt	None [assumed]	5 years	None	10%	10%	—
India	10%	Sales revenue	30%+5%–10% surcharge if above certain thresholds	15% DB for plant and machinery	2%–10%; 0% exports	Exempt	20% [iron ores and concentrates]	8 years	None	16.22%	21.01%	—
Kazakhstan	2.8%	Gross revenues less extraction cost [assumed]	17.5%	Rates chosen by companies with max. 25% per year	0% exports	Exempt	None	10 years	0%–60% excess profit tax, based on ratio of income to deductions	15%	15%	—