by

The Chamber of Mines of Zambia

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FOREWORD

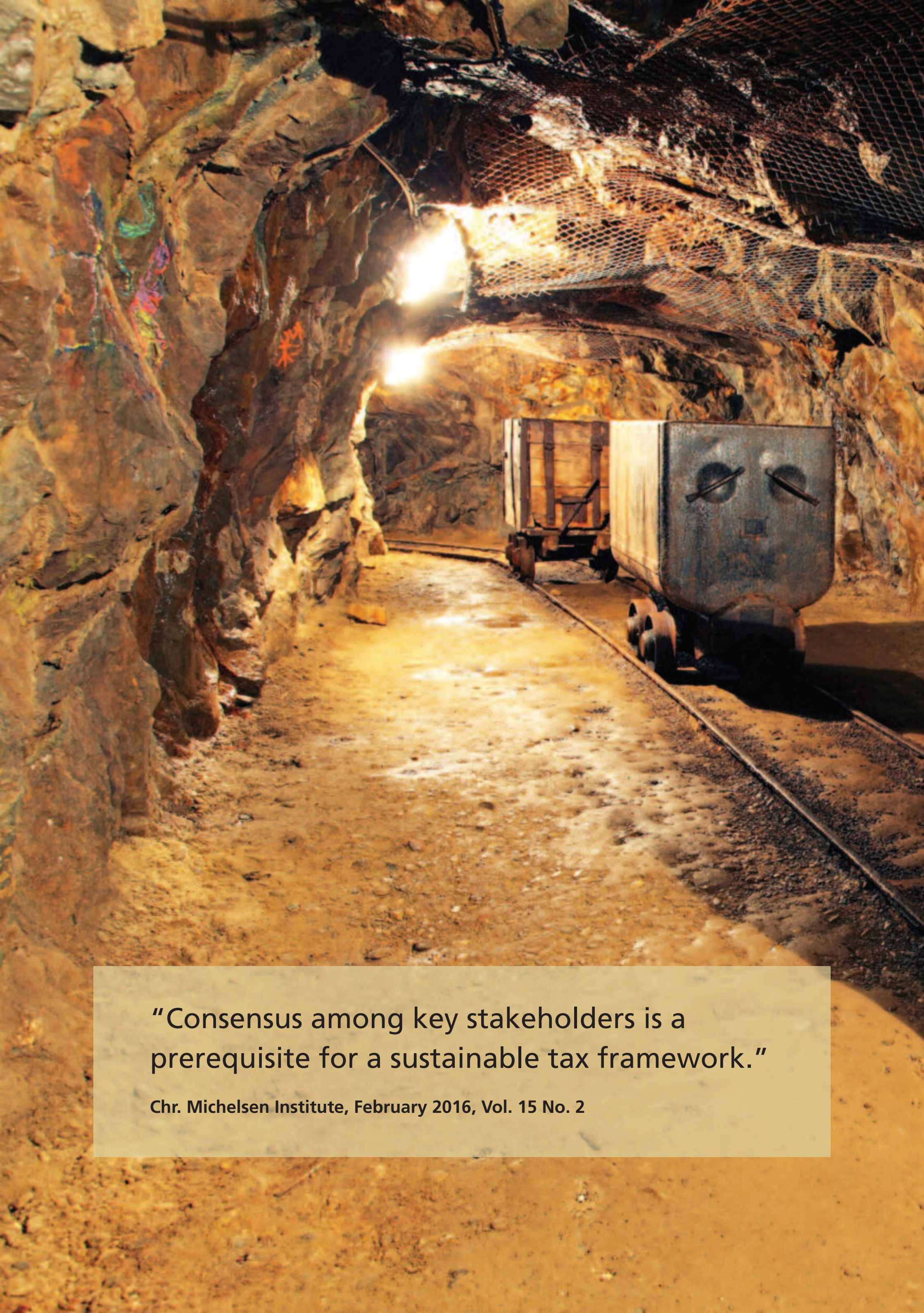
Mineral Royalties (MRT) are a standard part of the mining-tax regimes of many countries around the world, including Zambia. In recent years, it has been a hot topic in Zambia, and with good reason.

But, what is MRT? Why is it used, and how does it fit within the wider taxation regime? What are its defining characteristics? Which countries use it, and how does our Zambian regime compare?

These are some of the themes developed in this short report. It has been written in plain, accessible English, and deals in broad generalities rather than complex detail.

The purpose of this document is to give Zambians an understanding of a critical issue presently affecting the mining industry, and the wider context in which the issue is situated. We sincerely hope you will find it useful.

Nathan Chishimba
Chamber of Mines President



> "Consensus among key stakeholders is a prerequisite for a sustainable tax framework."
>
> **Chr. Michelsen Institute, February 2016, Vol. 15 No. 2**

MINING IN ZAMBIA – WHERE ARE WE NOW?

There is a pressing need for new investment in the industry to prevent a future decline.

Despite extremely tough local conditions, 711,515 metric tons of copper was produced in Zambia in 2015. That compares with less than 250,000 tons in 2000.

Mining is a long-term business, and these rising production figures result from investment decisions taken years ago. So, what can Zambia expect for the future?

According to the World Bank "growth in production will begin to slow after around 2019. Along with the decline in production, there will be a decline in government revenue, mining industry jobs, and foreign exchange. However, production levels can increase over the long run if there is a new wave of investment."

Mining is beset with uncertainty – uncertainty about the quality and extent of what lies beneath the ground, uncertainty about the future direction of commodity prices, regulation, and so on.

The capital investment necessary to maintain, or increase production levels – and government revenue and employment levels – is perceived to be high-risk, and needs assurances to be deployed.

Mining companies do not themselves have access to the huge amounts of money necessary to deliver these expansion plans; it must be raised from investors all over the world.

The simplicity, stability, predictability, and ultimately the attractiveness of Zambia's minerals fiscal policy environment and taxation regime, is vital to providing the assurances these investors require, especially given that copper mining in Zambia is a high-cost business.

For the mining industry, this is critical: the instruments used within a taxation regime, and the rates at which taxes are set, together establish the incentives and disincentives a mining company faces in deciding whether and how much to invest, how many workers to employ, and what ore to extract – which in turn can affect the life-span of the mine.

At present, a number of critical investment decisions have been put on hold indefinitely. For the good of the Industry, and the economy of Zambia, these must be urgently encouraged.

MINING TAXATION: A DELICATE BALANCE

What is an ideal mineral tax regime? It is one that delivers the maximum benefit for a country's citizens from its mineral resources.

Maximum benefit to the citizenry might not necessarily be the same as maximum benefit to the Government, in terms of tax receipts.

For example, a healthy mining industry has significant multiplier effects within the wider economy that far outweigh its contribution to the national coffers.

Studies by the International Mining and Minerals Council (ICMM) have shown that for every $1 generated by mining, at least an additional $3 are generated elsewhere in the host economy. In addition, for every one direct mining employee, employment is generated for a further 3-5 employees elsewhere in the economy.

The broad aims of Government minerals taxation policy must therefore be to generate immediate and lasting revenue in a manner which:

- Has no adverse impact on the health of the Industry.
- Encourages (or, at least does not discourage) the investment needed for future development, which is the pipeline of future tax receipts.

PROFIT-BASED TAXATION: HOW IT WORKS

Long lead-time to profitability
The huge capital investment required for a new mining operation means that mines can take many years after production starts to become 'profitable' for tax-paying purposes. This concept is often seriously misunderstood, and needs some explanation.

A profit-based tax, such as Corporate Income Tax (CIT), provides a certain amount of relief for capital expenditure already sunk into a project – in other words, once the business is up and running, a company can set aside some of the money already invested against any tax that might be owing.

This is a critical incentive to investment, and is common to all industries and businesses across the world. It is more apparent in the mining industry because of the size of capital investment involved and the long lead-times to production.

How does it work in practice?
The capital invested in a new mine has already been spent in the exploration and construction phase; the relief from tax comes in future years when the mine is in production. So, a new mine could well be productive, and generating cash for investors (who have already committed their capital), but not yet be paying tax. Depending on the legislation, and the amount of capital committed, this situation could last for many years.

How then does a Government generate revenue at the early stages of a mine's life cycle?
That is where royalty payments – known in Zambia as Mineral Royalty Tax (MRT) – come in.

WHAT IS A ROYALTY TAX (MRT)?

The defining characteristic of a royalty tax is that it is levied on production, not profit.

Strictly speaking, a royalty payment is not a tax. Nor does it solely apply to minerals.

A royalty is defined as a payment made to the owner of an asset by those who wish to make use of it to generate revenue. Royalties are often paid to writers, artists and musicians for the use of their copyrighted works.

The payment of royalties for the use or extraction of mineral resources is similarly an acknowledgement of ownership, in this case paid to the Government, as steward of a nation's non-renewable resources.

Given that it is one of many potential sources of Government revenue levied on the extraction of mineral resources, royalties are regarded as part of a nation's wider minerals taxation policy.

Advantages of MRT

When applied to mineral resources, a royalty tax's defining characteristic is that it is levied on production (e.g. sales, revenue, tons mined), rather than profit.

This means that it is payable from the first day of operations, and thus generates an immediate revenue stream for the Government long before a mine is ever judged profitable. Furthermore it is relatively simple to calculate and administer, and is payable on a monthly basis.

Disadvantages of MRT

Royalties are a blunt instrument; they are not sensitive to the distinctive circumstances of each mine.

As MRT is based on production, it has no regard for costs – which will always vary between different mines. So, two mines with completely different cost structures and profit levels might end up paying the same royalty tax.

In fact, a mine can be making a loss and still have to pay the royalty – that is precisely what is happening across the Industry at the moment. Some loss making mines might even have to borrow money in order to make the payments.

How is that?

Remember, a royalty payment is a cost to the business. When falling prices drive margins to close to zero, or even below, the royalty rate can mean the difference between the mine breaking even or making a loss. Even if the mine is loss making it is still obliged to pay royalties, which must be funded somehow.

Further, there are other potential negative consequences that must be taken into account by policymakers. For instance, a royalty rate that is too high can lead to the underutilisation of a nation's resources – particularly lower grade ore – because beyond a certain point dictated by the royalty tax, it makes more financial sense to just leave it in the ground.

How does this work?

As a royalty rate increases, so do the costs of a mining operation. In order to stay profitable, mines are forced to restrict mining to the higher grades of ore available to them. Remember, for every ton of rock that is taken out of the ground, only a tiny amount of copper is extracted. This involves huge effort, and expense. When costs tighten, a mine is forced to only target those areas where the ore is highest – i.e. where the value of each ton extracted is that much higher.

If this state of affairs persists, it inevitably means that the productive lifespan of a mine is that much shorter, and much of the copper will remain in the ground.

"Although mining royalties are a relatively simple form of taxation, they can be indiscrimate, leading to perceptions of unfairness between different royalty payers."

Trends in Taxation, KPMG Global Mining Institute 2014

MRT: PART OF THE TAX MIX

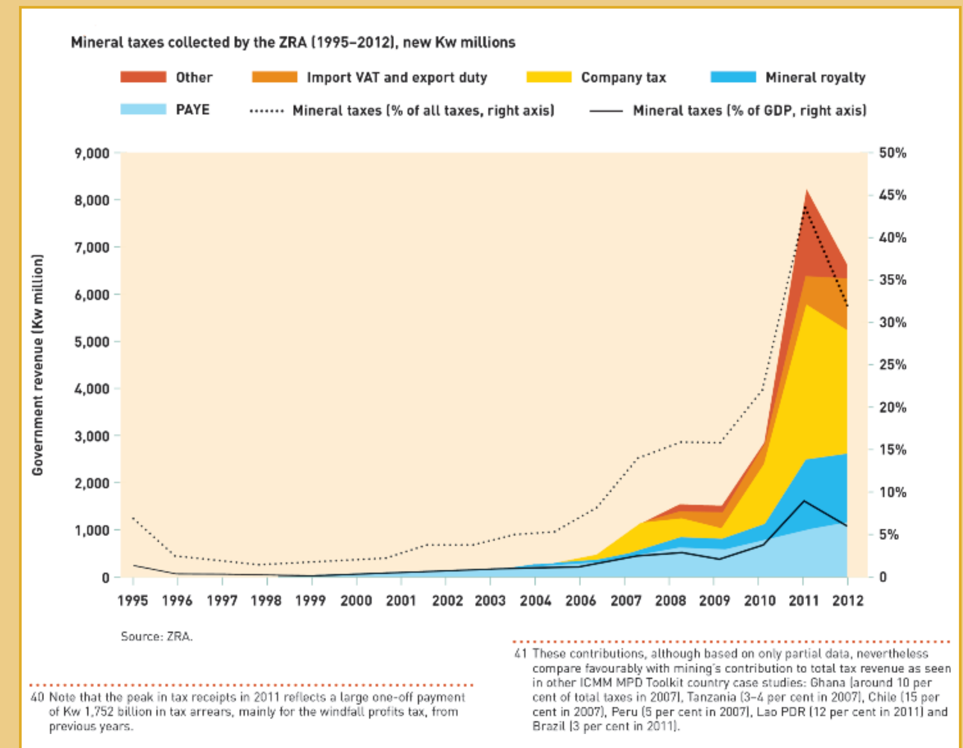
Many countries use mining royalty taxes and they are always part of a wider tax mix which includes profit-based tax.

MRT part of a wider tax mix
A mineral royalty tax is never the only tax which countries levy on their mining industries; where it does exist, it always sits alongside a tax on profits.

MRT contributes to a regular flow of tax revenue
The combination of a royalty and a profit-based tax results in a regular flow of tax revenue for governments over the entire life of a mine.

Profit tax eventually takes over from MRT
MRT is important in the early stages of a mine's life cycle, as it produces a tax-revenue stream despite the fact that the mine is not yet profitable. Several years later, once the mine has reached profitability, profit-based tax kicks in and starts to contribute to overall tax revenues.

When mines become profitable, as they did in Zambia after 2008, the returns from CIT completely eclipse royalty payments.



Source: ZRA.

40 Note that the peak in tax receipts in 2011 reflects a large one-off payment of Kw 1,752 billion in tax arrears, mainly for the windfall profits tax, from previous years.

41 These contributions, although based on only partial data, nevertheless compare favourably with mining's contribution to total tax revenue as seen in other ICMM MPD Toolkit country case studies: Ghana (around 10 per cent of total taxes in 2007), Tanzania (3–4 per cent in 2007), Chile (15 per cent in 2007), Peru (5 per cent in 2007), Lao PDR (12 per cent in 2011) and Brazil (3 per cent in 2011).

Comparison with other national mining taxation regimes		
COUNTRY	ROYALTY	CORPORATE INCOME TAX
Australia	2.5-5%	30%
Brazil	2%	25%
China	0.5%-4%	25%
Ghana	5%	25%
Indonesia	4%	25%
South Africa	0.5%-7%	28%
DRC	**2%**	**30%**
Zambia (2015)	**6-9%**	**30%**

Fig1. Corporate income tax and royalty rate comparison – copper.
Based on: Trends in Taxation: KPMG Global Mining Institute©

WHAT IS THE 'RIGHT' LEVEL OF MRT? AN INTERNATIONAL PERSPECTIVE

Governments across the world grapple with the same dilemma: what is the 'right' level of royalty tax?

If you set the rate too low, you don't get enough upfront tax revenue from new mining ventures. If you set it too high, it makes the upfront cost of the mining venture prohibitive; in the case of existing operations, it pushes profitability further out in time, and for both new and old mines it decreases the overall return on investment. When that happens, investors may decide it's not worth starting new mining ventures at all, or continuing to invest in old ones – and this kills the very tax revenue that the government wanted to generate in the first place.

THE IMF VIEW

Zambia's royalty rates are among the world's highest.

IMF concern on MRT levels

A country report (No. 15/153, June 2015) by the International Monetary Fund (IMF) suggests Zambia's MRT rates are too high.

"A comparison of prevailing royalty rates in 2014 shows that, at 6%, Zambia's royalty rate was among the highest fixed rate among copper-producing countries. "Governments are attracted by royalties because they generate an immediate stream of revenue once mining production starts. However, royalties discourage investment because they do not respond to changes in costs."

Analysis shows Zambia tax rates among world's highest

The report presents a cross-country analysis to assess the mining fiscal regimes in place before and after the changes to MRT introduced by the 2015 budget. The analysis is based on two stylized copper-mining projects – one high-cost, the other low-cost. For the low-cost mine, "at 50%, the AETR [Average Effective Tax Rate] for Zambia was second-highest among major copper producing countries". For the higher-cost mine, "the model shows Zambia's fiscal regime as less attractive for investors than those in other copper-producing countries".

THE WORLD BANK VIEW

MRT rates above global norm.

A World Bank report (Making Mining Work for Zambia, June 2015), also suggests the country's MRT levels are too high. "Zambia's mineral royalty rates have in recent years tended to exceed the global norm, even before the rate jumped temporarily to 20 percent on open-pit mines in 2015. Most major mineral producers charge less than six percent."

World Bank: Optimism about Zambia's long-term mining potential, but the country must take a long-term view on mining tax revenues to encourage investment in new projects.

ZAMBIA'S MINING FUTURE

The World Bank's 2015 report expressed "good reasons for optimism" about the potential for new copper mining ventures in Zambia.

It cited a recent US Geological Survey, which revealed "a significant quantity" of undiscovered copper – about 8.4 million tons – in a region that extends through the Copperbelt and Central provinces.

However, this ore body lies deep underground and will require greater effort, technical expertise and capital to extract. "As a result, exploration of the undiscovered copper is unlikely if companies observe that they cannot earn a return from the already-discovered deposits."

Concluding remarks

In December 2015, the Chamber of Mines gave a media briefing on the commodity crisis, and the current state of the global and domestic copper mining industry.

There are new, huge mines coming on stream (in Indonesia, for instance) that do not have the production costs we see in Zambia, which are able to thrive in the present low price environment.

These are the mines of the future that Zambia must compete with.

Quite apart from the millions of tons of undiscovered copper, huge amounts of capital investment are required to modernize and improve existing productivity – particularly on the Copperbelt – if Zambia is to be competitive, and have a long-term future as a major copper producer.

What should we do then?

If Zambia is to attract this needed investment its mining taxation levels, particularly MRT, must at the very least lie within global norms. Given Zambia's specific production conditions, many would argue that an even bolder approach is necessary.

"Root expectations in the reality of Zambia's specific conditions. Much of the copper Zambia mines is either costly to unearth or has only recently been placed in production. This implies lower economic profits, in comparison to operations elsewhere, and therefore lower tax revenue than some have been expecting. The mines Zambia has developed more recently need time to mature and will become major taxpayers in the future."

'Making Mining Work for Zambia', Zambia Economic Brief, World Bank Group, p.13 (June 2015)

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