CHAPTER 8

IMPACTS OF FISCAL REFORMS ON COUNTRY ATTRACTIVENESS: LEARNING FROM THE FACTS

LISA E. SACHS, PERRINE TOLEDANO, JACKY MANDELBAUM,* WITH JAMES OTTO

"The discovery of rich seams of metal in remote places used to bring prospectors rushing in the hope of making their fortunes. Now a different sort of scramble is under way, as governments around the world try to lay their hands on a bigger share of the proceeds of mining…[But investors] claim that countries that acquire a reputation for moving the goalposts may find that when times are tougher investors will think twice before agreeing to new deals—although if that were really true, they would have left many of the countries concerned long ago."[1]

INTRODUCTION

Since 2007, the financial media and international conference circuit have been sounding the alarm about a growing international trend of "natural resource nationalism." Commodity prices have trended upward, even following the global economic crisis in 2008, and governments around the world have been taking another look at their share of the soaring revenues from the mining and hydrocarbon sectors. Investors, however, have a different take on the handsome profits of recent years; investments in natural resources (specifically, in oil, gas, and mining) are among the most risky, they note, and years of strong prices are interspersed with years of

* L. Sachs, P. Toledano, and J. Mandelbaum are co-lead authors of this chapter.

1. "What's mined is yours: Prospecting for riches in the tax code," *The Economist,* October 4, 2007, available at http://www.economist.com/node/9916503 (last visited July 16, 2012).

high costs and low revenues. The oft-repeated warning by investors is that if countries insist on a greater share of the revenues when prices are high, they will kill the goose that lays the golden egg, so to speak: Investors will pack up their equipment and leave, and new investors will be deterred both by onerous taxes and by the political risk of a country that seemingly cannot ensure a stable investment environment.

On the other hand, there is a widespread perception, especially in resource-rich developing countries, that natural resource wealth "has not translated into broader prosperity."[2] These resources are non-renewable; the host countries have one opportunity to benefit from their subterranean wealth. Once the resources are extracted and sold, there is no going back to reclaim a greater share of the profits. Against that backdrop, countries see the rising commodity prices as an important opportunity to capture the increasing value of their resources, especially in the context of urgent public investment needs and budget deficits resulting in part from the downturn in the global economy.

Until recently, it could be argued that many mineral-led economies were in a fiscal race to the bottom as each country attempted to compete in order to attract scarce foreign investment. Today, however, in a global economy where mineral demand spirals ever higher and well-funded new entrants have entered the market (for example, Brazilian, Chinese, and Indian firms), there is less need to offer preferential terms to attract investors. With a crowded field of investors, governments have predictably moved away from policies emphasizing attracting investors to ones that seek to maximize national benefits.

In recent years, the list of countries reviewing the fiscal terms of their natural resource concessions is long and growing, including both developed and developing countries such as Algeria, Australia, Bolivia, Canada, Chile, China, Ecuador, Ghana, Guinea, Indonesia, Israel, Kazakhstan, Liberia, Mongolia, Namibia, Nigeria, Peru, Tanzania, the United Kingdom, the United States, Venezuela, and Zambia.

RESOURCE NATIONALISM

Although the recent fiscal reforms in the natural resource sector in each country were motivated by a range of factors, resulting in substantially varied processes and outcomes, and involving national and international stakeholders to differing degrees, industry and the media have consistently labeled reforms which favor the well-being of the country over that of the producers as "resource nationalism."[3]

There is no common definition of the approaches and outcomes that constitute "resource nationalism," and indeed, the range of government policies that has been dubbed as such underscores just how unhelpful that term is as an organizing principle. As Halina Ward describes, the term has been used to refer to cases ranging from outright nationalizations to increased taxes in times of high commodity prices; from cancellation of existing resource contracts to more demanding local content or environmental regulations; from increased state participation

2. William Wallis, "Mining: Growing backlash against groups who are 'minting it,'" *Financial Times,* December 14, 2011, available at http://www.ft.com/intl/cms/s/0/10b5b53a-24ca-11e1-bfb3–00144feabdc0.html#axzz20KGKZyWs (last visited July 16, 2012).

3. The term "creeping expropriation" is sometimes used interchangeably with "resource nationalism," but the first term suggests something being taken away (from the investor), while the latter implies something being gained (by the country.)

in projects to greater mandated investments in infrastructure or social development projects.[4] Ward also lists a number of actual definitions of "resource nationalism" from various sources that are as widely varied in their attempt to define the term as are the underlying policies.

Even without an agreed definition, the concept of "resource nationalism" has assumed a distinct anti-investor, nationalistic flavor in its use. When reforms are implemented, investors are quick to accuse countries of resource nationalism, whether the policies in question are driven by political motivations or are fiscally motivated, that is, "reflective efforts to right the inequities of past deals or political climates."[5] Indeed, there have been prior instances when resource nationalization has had a distinctive political, largely non-fiscal motive, such as the expropriation of foreign mines that took place in post-colonial nations (to demonstrate control), and the wave of petroleum nationalizations, export restrictions and price hikes in the 1970s and 1980s, which some consider "retaliation for Western support of Israel in the Yom Kippur War."[6] On the other hand, while a few cases of recent resource sector reforms reflect political whims, more often they reflect economic factors, such as high commodity prices buoyed by the growing demand in China and India, record profits for extractive industries, and budget deficits exacerbated by slower growth in other sectors, that have put the spotlight on the imbalance of deals concluded under different circumstances and by previous regimes.

In this chapter, we analyze recent cases in which host countries have introduced fiscal reforms in their natural resource sectors. By focusing on cases in which countries have revised the taxes applicable to the sector with relative moderation, and not on cases of other types of reforms, we can assume that the policy objective behind the reforms was to increase the government's share of the resource wealth, and not a political power-grab or other strategic effort to nationalize assets. This is further illustrated by the government's apparent willingness to engage with the industry in each case, whether in consultations or in case-by-case negotiations.

INVESTOR OUTCRY

In each case in which a country has announced its intentions to review its fiscal regime for its natural resource sectors, the response of the investor community has been consistent and predictable. As the quotation from the *Economist* article at the beginning of this chapter summarizes, investors consistently declare (to the governments and to the media) that stability of the fiscal terms over the life of a project is necessary to attract and retain investments in the sector; that any adjustments to the tax regime in favor of the host government will make the investors' projects unprofitable to continue; and that the combination of a more onerous tax code and an unstable regime will deter future investors, hurting the host country's long-term competitiveness. This investor response has been consistent for reforms in low and middle-income countries (such as Tanzania, Guinea, Ghana, Peru, Zambia, Indonesia, and Chile) and high-income countries (such as Australia, the United States, the United Kingdom, and Canada), alike.

4. Halina Ward, "Resource nationalism and sustainable development: A primer and key issues," Working Paper (London: International Institute for Environment and Development, March 2009), p. 8–9.

5. Ward, "Resource nationalism and sustainable development: A primer and key issues," *op. cit.*, note 4, p. 41.

6. A.F.M. Maniruzzaman, "The issue of resource nationalism: Risk engineering and dispute management in the oil and gas industry," 5(1) *Texas Journal of Oil, Gas and Energy Law* 79 (2009), p. 81.

"Judged by the financial press of the U.S. and Europe, the renegotiations of contractual terms are a sign of perfidious host-country behaviour," Jeffrey Sachs wrote. "But there is of course much more than meets the eye."[7] In most of these cases, the increasing prices resulted in a decreasing share of the profits for the host countries and "windfall" profits for the industry. In developing countries, not only has the share of profits declined with the price increases, but more noticeably, the high profits of the international investors have not been matched by "increased or commensurate" benefits for the countries or communities.[8] In the case of Africa, a 2011 report on Africa's mineral regimes notes that "the widespread sense that Africa has not obtained commensurate compensation from exploitation of its mineral resources is impossible to ignore."[9]

The investor response and accompanying references to "resource nationalism" in each case, however, rarely if ever look at the underlying questions of equity, politics, changed circumstances, or other factors that would make such reforms understandable, if not inevitable. Writing specifically about the recent spate of petroleum contract renegotiations, George Kahale III, cautions that the term "resource nationalism" is "an over-simplification of what has been happening on the ground and [is] no substitute for informed analysis of both the facts and the legal issues underlying the major renegotiations of the last five years [...]. Without an understanding of the facts underlying a renegotiation, one can easily jump to the wrong conclusions, and that is precisely what seems to have been happening with alarming frequency on the conference/seminar circuit, where conclusions are too often drawn from incomplete information derived from press releases or press reports."[10] As Halina Ward notes, "the relative absence of producer country non-industry voices from the debate makes it largely one-sided."[11] Indeed, the investors' warning that proposed tax reforms will make countries "less competitive and will stymie fresh investment"[12] follow almost every announced review of current fiscal arrangements.

For resource-rich countries especially, but not only those that depend on their mineral wealth for their long-term development, it is therefore important to understand the implications of fiscal reforms on the attractiveness of their resource sectors for current and future investors, beyond the immediate outcry from investors. The objective of this chapter is to help with this analysis: It looks at cases in which fiscal reforms have been introduced by host countries over the objections of investors, and assesses to what extent the investors' threats of withdrawing their investment or of decreased competitiveness of the host country were realized as a result.

7. Jeffrey D. Sachs, "Addressing political risk in the energy sector," in Karl P. Sauvant, ed., *World Investment Prospects to 2011: Foreign Direct Investment and the Challenge of Political Risk* (London, New York and Hong Kong: Economist Intelligence Unit, 2007), p. 81, available at http://www.vcc.columbia.edu/pubs/documents/WorldInvestmentProspectsto2011.pdf (last visited July 16, 2012).

8. United Nations Economic Commission for Africa and the African Union, *Minerals and Africa's Development: The International Study Group Report on Africa's Mineral Regimes* (Addis Ababa: United Nations Economic Commission for Africa, 2011), p. 92, available at http://www.africaminingvision.org/amv_resources/AMV/ISG%20Report_Eng.pdf (last visited July 16, 2012).

9. United Nations Economic Commission for Africa and the African Union, *Minerals and Africa's Development: The International Study Group Report on Africa's Mineral Regimes, op. cit.*, note 8, p. 92.

10. George Kahale III, "The uproar surrounding petroleum contract renegotiations," 82 *Oxford Energy Forum* (2010), p. 5, available at http://www.curtis.com/siteFiles/Publications/Oxford%20Energy%20Forum.pdf (last visited July 11, 2012)

11. Ward, "Resource nationalism and sustainable development: A primer and key issues," *op. cit.*, note 4, p. 23.

12. Wallis, "Mining: Growing backlash against groups who are 'minting it,'" *op. cit.*, note 2.

Part A explores specific features of extractive sectors and extractive industry investments that make such fiscal reforms especially common, and therefore, to an extent, to be expected. Part B introduces several case studies that are explored throughout the chapter. These case studies were selectively chosen from different legal regimes, from both mineral and hydrocarbon regimes, and from both developed and developing countries.[13] The legal regimes include those in which the fiscal terms are set solely in law and those in which they are set out in a negotiated contract that can supersede or augment statutory fiscal terms. This section describes the reforms that were undertaken and provides some observations about the processes. Part C documents the investor response, beginning with the immediate reaction of the investor to the government and to the media, and continuing through the response of the investor after implementation of the reform. This part looks at the results of the Fraser Institute's attractiveness index to assess the impacts on host countries' attractiveness to mining investors after the fiscal reforms. Part D parses and analyzes the case studies and investor responses in more detail, and suggests some further areas of research that could usefully guide policy makers in future cases. Finally, part E proposes some policy implications of the analysis, including, importantly, whether other mechanisms or processes could be implemented to anticipate and manage the inherent risks and fluctuations in the sector, reducing the need for and incidences of contested fiscal reforms.

A. WHY CAN FISCAL REFORM BE EXPECTED IN THE EXTRACTIVE INDUSTRIES?

There are a number of features of extractive industry regulation and markets that make contracting and licensing difficult and revisions of the terms governing the investments likely, if not necessary. First, investments in large-scale extractive industries are generally long term, lasting for 20 to 50 years or longer. As Kahale notes, "agreements of such duration tend to undergo fundamental changes at least once in the course of their life."[14] There is good reason for that: The conditions and assumptions that exist at the time that the original terms are agreed (or specified in legislation) will almost surely change over the multi-decade span of the investment, fundamentally altering the balance of risks and benefits that were agreed at the outset or anticipated in the fiscal terms set in law. Indeed, in the case of the recent reforms, the assumptions and circumstances that existed at the time the previous terms were agreed have fundamentally changed; prices have soared, lesser-known countries have proven themselves as safe investment destinations, and in some cases, new administrations have replaced more corrupt regimes that would "sell" an investor-friendly stabilized package for an up-front, under-the-table payoff.

13. While the principles are similar with respect to the implementation of reforms and investor reaction in the mineral and hydrocarbon sectors, the structure of the hydrocarbon sector is in many cases further complicated by the presence of national oil companies (NOCs). NOCs can play an intermediary role between the investor (an International Oil Company (IOC)) and the government and are often linked in some way to the government. We do not deal in this chapter with the implications of a NOC-IOC contract for fiscal reforms and renegotiations of contracts. Relevant issues may include, for instance, the fact that in a production sharing contract, there are often two tiers of "tax" (profit oil for the NOC as well as national taxes), the fact that often the NOC is linked to the prime ministers department or another lead agency, and the question of whether reforms should and do apply to NOCs, among other issues posed by these complex relationships.

14. Kahale, "The uproar surrounding petroleum contract renegotiations," *op. cit.*, note 10, p. 3.

Additionally, new investors from home countries whose major objective is security of supply rather than profit have proliferated.[15]

Second, the long duration of these large-scale investments compounds a second important feature of extractive industry legal and fiscal frameworks: The terms are necessarily set (in law) or agreed to (in contract) when there is great uncertainty about the economic outcomes of potential investment in the sector,[16] due to uncertainty about the geology at the time of exploration and economics, markets, risks, and politics over the duration of a typical investment. When the reserves are proven to be greater than originally anticipated for instance, as in the case of Bolivia,[17] the previously agreed terms require a rebalancing to achieve the originally anticipated proportional allocation of benefits.

Third, natural resource markets are highly volatile, so even where there is greater confidence in the geology or political stability in a particular country, for instance, the market volatility can change the underlying economics drastically over the course of an investment. Since the markets are a key determinant of the fiscal benefits that are allocated by the contracts and fiscal regime, unanticipated changes to the market structure can fundamentally alter the outcomes (and fairness) of previously agreed terms. As Thomas Wälde pointed out, "most developed producing countries—including the UK, the US or Norway—adjust their tax and regulatory system regularly [. . .] tak[ing] into account the relative profitability of the industry (and thus the size of the 'resource rent' available for taxation) which is significantly responsive to the price levels [. . .]" among other factors.[18]

It is therefore important to realize that many fiscal reforms and renegotiations are adjusting the terms of contracts and/or law that were set under substantially different circumstances. The prices of many commodities have risen dramatically in recent years (see figures 1 and 2), for instance, resulting in a skewed distribution of benefits in favor of the investors. Moreover, many of the previously agreed terms were set in an era of privatization, when, at the encouragement of the international community, some developing countries were agreeing to less-favorable terms to attract investors, with the assumption that increased investments would lead to major benefits. These agreements that were "very unfavourable from the host country's standpoint [. . .] invariably led to trouble as circumstances changed and the anticipated benefits of privatisation did not materialize."[19]

15. Companies whose main business is the making of refined metals and other downstream metal products, or state-owned companies who are especially concerned with securing a supply of resources for their domestic markets, may forego upstream profits in order to reduce raw material supply constraints that would put at risk downstream profits. Over the past decade there has been an increase in the number of Chinese, Indian, Japanese, and Korean firms that have substantial downstream metals-related businesses taking an interest in mining either through direct or minority ownership tied to off-take agreements. In times of tight mineral supplies, vertical integration, or secured access to primary resources, may be perceived as a strategic necessity.

16. See Bryan Land, "Capturing a fair share of fiscal benefits in the extractive industry," 18(1) *Transnational Corporations* 157–73 (2009), p. 157, available at http://archive.unctad.org/en/docs/diaeiia20097a7_En.pdf (last visited July 16, 2012).

17. "When companies such as Petrobrás (Brazil) and Repsol (Spain) acquired their interests in Bolivian natural gas in the 1990s, the declared natural gas reserves were less than 10trn cu feet. A few years later, the reserves were declared to be vastly greater, perhaps between 50trn and 100trn cu feet." Sachs, "Addressing political risk in the energy sector," *op. cit*., note 7, p. 81.

18. Thomas Wälde, "Rule of law and the resource industries' cycles: Acquired rights versus the pressures inherent in the political economy of the international energy and resource industries," 1(1) *Journal of World Energy Law and Business* (2008).

19. Kahale, "The uproar surrounding petroleum contract renegotiations," *op. cit*., note 10, p. 3.

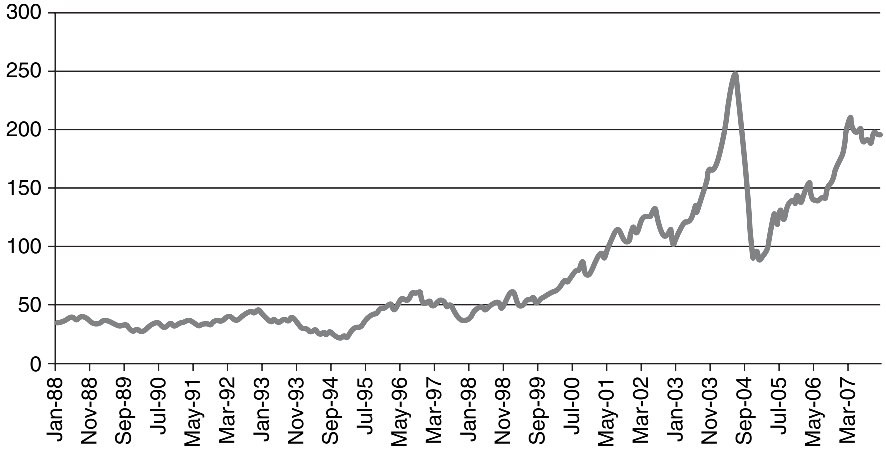

FIGURE 1: Commodity Fuel (energy) Index Monthly Price (in US$)

Source: http://www.imf.org/external/np/res/commod/index.aspx

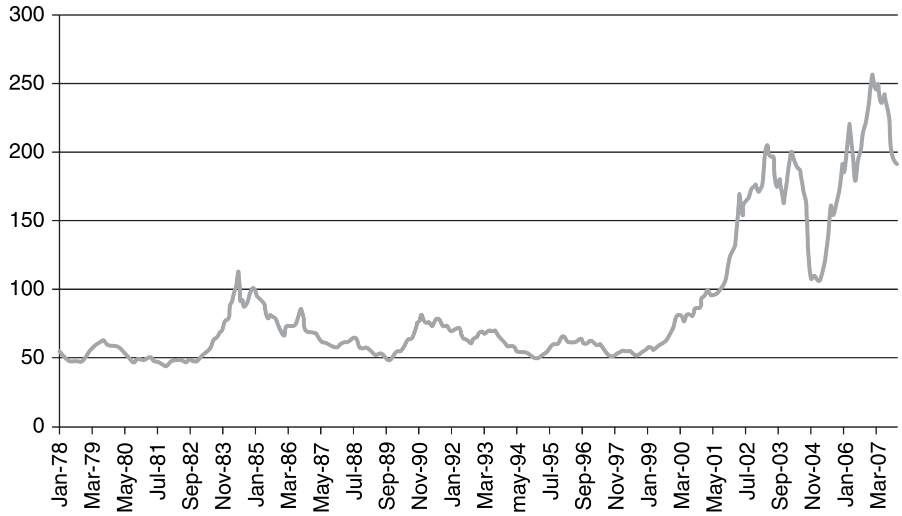

FIGURE 2: Commodity Metals Price Index Monthly Price (in US$)

Source: http://www.imf.org/external/np/res/commod/index.aspx

Investors have tried to bring greater certainty to their investments through various forms of stabilization terms,[20] most commonly freezing the legal framework in effect at the signing of the contract for the duration of the investment. Included in these stabilization terms, in many cases, are provisions for fiscal stability, freezing the fiscal terms for the life of the project or for a defined time period. Even in cases in which the original fiscal terms are well-understood, well-negotiated, and acceptable to both parties, freezing them is not realistic in such long-term

20. Stabilization is provided by a variety of means, as explained in part B. Where ad hoc agreements are used, the stabilization provision is usually provided in the agreement. Some nations, such as Chile and Peru, provide stabilization for a set time period through the legislation.

contracts and licenses, with immense uncertainty, and volatile prices and market structure.[21] In many cases, however, the fiscal terms at the outset were *not* well-understood or balanced between investors and host countries. As described above, many of these terms were set while countries were trying to attract investors with very favorable terms, and by governments that were ill-equipped to match the lawyers, financial modelers, and geologists of the companies' negotiating teams, thus making the "stabilized" contracts even *less* stable from an economic and political perspective.

It is now generally acknowledged that many developing countries, particularly in Africa, have not received their fair share of the fiscal benefits of their resources. At the end of 2011, the *Financial Times* reported that "tax breaks and other incentives mean[t] that, of mining revenues totaling $2.1bn in 2009 [in Ghana], only $146m—or 7 per cent—was paid to the state in royalties, taxes and dividends, according to the Chamber of Mines."[22] In 2009, the *Financial Times* reported that "encouraged by donors, [Zambia] had decided that one of the world's most generous mining codes was unsuited to one of the planet's poorest countries."[23] As a senior analyst covering extractive industries at U.S.-based Calvert Investments acknowledged in response to a question about Zambia's proposed fiscal reforms, "Sub-Saharan African countries including Zambia have had lower mineral tax rates than other resource producers, such as Australia."[24] The International Monetary Fund (IMF) has recommended that both Ghana and Zambia adopt "additional tax policy measures, particularly in the area of natural resources, where taxation is low in comparison with peer countries."[25] The head of the World Bank's Zambian office is quoted in that article as saying "This is a perishable resource. Once it's gone the country has no more access to it. It should be benefiting from it more now."[26]

The case studies of fiscal reforms discussed in this chapter should usefully be considered against this backdrop. A host country's desire to review or revise the terms of long-term investments in uncertain and finite resource deposits that have more than doubled in price in recent years is understandable; the challenge is in balancing the needs of the government with the stability and assurance that the investors need to undertake risky investments.[27] How this balance can be approached so as to avoid contentious reforms is discussed in Section E of this chapter.

Chapter 7, pp. 313-314, 315

21. Delaume notes that "[. . .] their rigidity may prove both excessive and self-defeating since, in the long run, they may be incapable of achieving their objective." George R. Delaume, "The proper law of state contracts revisited," 12 *ICSID Review—Foreign Investment Law Journal* (1997), at 25–26. In his chapter of this volume, Cameron similarly describes how modern version of these clauses reflect "a climate of realism by investors about the limits they can impose upon future actions of a host state," and that they "[anticipate] a process of contract revision at some future date."[see page ___, chapter ___ *infra*]

"state" should be "country"

22. Wallis, "Mining: Growing backlash against groups who are 'minting it,'" *op. cit.*, note 2.

23. Tom Burgis, "Mining sector pressure forces Zambia into retreat on taxes," *Financial Times*, January 26, 2009.

24. Chris Mfula, "Zambia's Chamber of Mines fear copper royalty will hurt miners," *Reuters*, November 15, 2011, available at http://www.mineweb.co.za/mineweb/view/mineweb/en/page504?oid=139606&sn=Detail&pid=504 (last visited July 16, 2012).

25. "Statement at the conclusion of an IMF staff visit to Ghana," Press Release No. 11/380, October 25, 2011. See also, Tom Burgis, "Zambia likely to shelve minerals tax," *Financial Times*, January 27, 2009.

26. "Zambia likely to shelve minerals tax," *op. cit.*, note 25.

27. It is important to note that not all investors are alike in terms of their incentives and time frames. This chapter focuses on the interests of investors who plan to extract the resources over several decades. However, in many cases, it is entrepreneurial "junior" investors, willing to move quickly and take on more risk, who secure the initial

B. CASE STUDIES: DIFFERENT REFORM SITUATIONS

The trend in modern natural resource taxation is toward non-negotiable legislated fiscal terms designed to achieve the governments' revenue objectives. However, to varying degrees, some host countries allow aspects of the fiscal regime (and other terms) to be set out in a contract between the investor and the government or, in the case of some petroleum regimes, a state oil company authorized by the government to enter into such contracts.[28] Contractual arrangements are more common in developing countries, where the legislative framework is not as developed and where investors seek special terms to apply to their projects, or at least stabilization of the current statutory fiscal terms for a defined period of time.

In this chapter, we will examine cases of fiscal reform carried out under three different regulatory regimes: 1) where the natural resource authorization is governed solely under statutory law; 2) where the natural resource authorization is linked to a contractual arrangement which supersedes the statutory law; and 3) where a contractual arrangement complements the statutory law and stabilizes certain terms which the statutory law allows to be frozen.

1. NATURAL RESOURCE AUTHORIZATION GRANTED SOLELY UNDER THE STATUTORY LAW

Many countries (including most developed countries) set out the fundamentals of the fiscal package applying to the natural resource authorization in general tax legislation and in special legislation applying to the petroleum or mining sectors. Under this statutory regime, the investor is granted a license or a concession that is regulated under the legislation. The tax rates are set out in the legislation and all natural resource authorizations in the jurisdiction should therefore be subject to the same fiscal terms. The regulation of petroleum resources in Alberta, Canada and the United Kingdom are examples of such a regime.[29]

deals, especially when they are offered on a first-come-first-served basis. These junior mining companies are interested in securing the best deal at the outset and then "flipping" the deal to the "major" investors at substantial profit. Often this occurs in offshore transactions, so the country realizes none of the benefits. In such cases, clearly, the original deal is not negotiated between two parties with a shared interest in the long-term stability and shared profitability of the project. After several high-profile, lucrative deals on foreign stock exchanges, several African countries are beginning to raise red flags about this common practice. The presence of junior mining companies cannot be considered entirely negative per se, as in certain circumstances only these companies will take on the high risk of oil, gas, or mining exploration. However, these investments necessitate a robust legal and fiscal framework that includes regulation and oversight over any transfer of licenses (and transfer fees so that host governments benefit from any profit realized through such transactions) in order to avoid speculative transactions, as well as good geological information to allow for competitive bidding rounds rather than first-come-first-served dealings.

28. In the mining sector, the prevalent contractual regime is a royalty/tax concession, whereas in the petroleum sector it is a "production sharing contract" (PSC). The main difference between royalty/tax concessions and PSCs lies in the control over the production output: in the case of PSCs, the government retains the right to a proportion of the production output extracted, whereas in a royalty/tax concession the government receives payment based on agreed terms. Royalty/tax concession systems are either legislated or, similarly to PSCs, based on negotiated agreements that the government (or its representative) is authorized under legislation to make.

29. In such systems, the only variable "tax" may be a bonus payment made to the government as part of a tendering process.

Under a statutory regime the government may, at its discretion, change the legislation over time to respond to the relevant priorities of the country, primarily to take into account prevailing market conditions, but also, for example, to encourage particular types of exploration or to generally attract investment.[30] Investors must comply with the evolving tax and other laws that apply to the natural resource authorization.

The United Kingdom in particular has reformed its fiscal regime applying to hydrocarbons frequently, to accord with the country's policy objectives as they evolve. In 1975, when the structure of the current regime was first introduced, it consisted of a royalty, a petroleum revenue tax, and a corporate income tax.[31] Over time, the government has increased the petroleum revenue tax, introduced and then abolished a "supplementary petroleum duty" and an "advance petroleum revenue tax," gradually reduced the corporate income tax rate and abolished the royalty altogether. In 1993, the government reduced the petroleum revenue tax from 75 to 50 percent on existing fields that received approval before April 1993 and abolished it on all fields receiving development consent after that date, so that some fields are subject to the tax while others are not. In addition, in 2002 a "supplementary charge" was introduced, which is an additional tax applied on the same basis as corporate income tax (to the company's ring-fenced profits), except that there is no deduction of financing costs (i.e., interest payable on amounts borrowed to meet expenditure for the company's activities).[32] The supplementary charge was introduced at a rate of 10 percent, doubled to 20 percent in 2006, and further increased to 32 percent in 2011.[33] It has been suggested that the UK petroleum regime has gone through the highest number of fiscal changes in the world.[34]

In Canada, Alberta's statutory fiscal regime applicable to oil and gas, while largely unchanged between 1997 and 2007, has since undergone two major reforms in 2007 and 2010, with a number of minor adjustments between those years. The 2007 reforms[35] significantly increased royalty rates by around 20 percent for each of conventional oil, natural gas, and oil sands.[36] The ad-valorem royalty rate was determined on a sliding scale basis, sensitive to price and volume, with a price cap above which the royalty rate will not increase further. The price cap was also significantly increased because the previous price cap was so low that the royalty rate had ceased being progressive. According to the government,[37] revenues in 2010 would increase by 20 percent under

30. See Wälde, "Rule of law and the resource industries' cycles: Acquired rights versus the pressures inherent in the political economy of the international energy and resource industries," *op. cit*., note 18.

31. Carole Nakhle, "Can the North Sea still save Europe?," Surrey Energy Economics Discussion Paper Series (Surrey: Surrey Energy Economics Centre, Department of Economics University of Surrey, October 2007), available at http://www.seec.surrey.ac.uk/research/SEEDS/SEEDS119.pdf (last visited July 16, 2012).

32. See, for example, 34(1) *OPEC Bulletin* (January/February 2003); and H. Abdo, "The story of the UK oil and gas taxation policy: History and trends," 8(4) *Oil, Gas and Energy Law Intelligence* (2010).

33. See Oil and Gas UK, *2011 Economic Report* (London: The United Kingdom Offshore Oil and Gas Industry Association Limited trading as Oil and Gas UK, September 2011), pp. 56–57, available at http://www.oilandgasuk.co.uk/cmsfiles/modules/publications/pdfs/EC026.pdf (last visited July 16, 2012), pp. 56–57.

34. Nakhle, "Can the North Sea still save Europe?," *op. cit.*, note 31.

35. Government of Alberta, The New Royalty Framework, October 25, 2007 [hereinafter The New Royalty Framework], available at http://archive-2011.resources.revenuewatch.org/sites/default/files/Alberta%20-%20The%20New%20Royalty%20Framework.pdf (last visited July 16, 2012)

36. Government of Alberta, Mines and Mineral (New Royalty Framework) Amendment Act of 2008, amending the Mines and Minerals Act of 1998, Revised Statute of Alberta 2000.

37. The New Royalty Framework, *op. cit*., note 35, p. 2.

the new regime over royalty projections under the previous system. The reform was also said to simplify the regime,[38] with royalty rates to apply across all fields, rather than varying according to field maturity and other characteristics which applied under the previous regime. Existing fields were not grandfathered.

Unfortunately for the government, the implementation of the reforms coincided with the global financial crisis and drilling levels in fact decreased following the announcement of the reforms.[39] Noting that "the world has changed in recent months and we must respond,"[40] the government introduced three amendments to the royalty programs to provide incentives to investors to encourage particularly desirable activities.[41] All of the incentive programs decreased the government's take on the applicable projects.

In 2010, around one year following implementation of the 2007 reforms, the government announced another major review of the royalty regime for conventional oil and gas, "in response to a number of questions regarding how well the province's energy sector is positioned compared with other provinces."[42] The resulting reforms[43] reducing royalty rates at higher price levels by around 10 to 15 percent were intended to provide a better risk-reward balance to investors and to extend the existing incentive programs, and took effect one year later.[44] The new levels were, in the case of conventional oil, still higher at the top end of the royalty curve than the level before the 2007 reforms but in the case of natural gas, around the same level.

2. NATURAL RESOURCE AUTHORIZATION LINKED TO A CONTRACTUAL ARRANGEMENT SETTING UNIQUE TERMS

In countries where legislation is less comprehensively developed, investors sometimes enter into contracts with the government that set out unique fiscal (and other) terms to apply to the petroleum or mining authorization. These contracts, negotiated on a project-by-project basis, tend to address a broad range of issues and supersede statutory law. Reform of fiscal regimes in

38. The New Royalty Framework, *op. cit.*, note 35, pp. 7–9.

39. See National Energy Board, "Canadian Energy Overview 2008" (Calgary: National Energy Board, 2009), pp. 1, 4, 19, available at http://www.neb-one.gc.ca/clf-nsi/rnrgynfmtn/nrgyrprt/nrgyvrvw/cndnnrgyvrvw2008/cndnnrgyvrvw2008-eng.pdf (last visited July 16, 2012).

40. "Alberta offers royalty-rate discount to stimulate new oil drilling," *CBC News*, November 19, 2008, available at http://www.cbc.ca/news/canada/edmonton/story/2008/11/19/edm-transition-royalties.html (last visited July 16, 2012).

41. See Government of Alberta, Mines and Mineral (New Royalty Framework) Amendment Act of 2008, amending the Mines and Minerals Act of 1998, Revised Statute of Alberta 2000. The incentives included a US$200 per meter of well drilled credit on royalties (Alberta Drilling Royalty Credit Incentive Program) and a fixed maximum front end royalty rate of 5% for the first year of production (New Well Royalty Incentive Program), the first 50,000 barrels of oil equivalent or the first 500 million cf of natural gas equivalent, whichever is first, for new oil or gas wells beginning production after April 1, 2009, to encourage drilling of deep, high cost wells and to spur drilling of new wells (Natural Gas Deep Drilling Program).

42. Alberta Energy Natural Gas and Conventional Oil Investment Competitiveness Study Project Frequently Asked Questions, available at http://www.energy.alberta.ca/Initiatives/1756.asp (last visited July 16, 2011).

43. Government of Alberta, Mines and Minerals (Coalbed Methane) Amendment Act of 2010, amending the Mines and Minerals Act of 1998, Revised Statute of Alberta 2000.

44. "Alberta offers royalty-rate discount to stimulate new oil drilling," *op. cit.*, note 40.

countries with this system is more difficult for the government to undertake as the contracts proscribe the government's ability to make unilateral changes without breaching the investment contract. Generally, the agreements also include stabilization clauses that freeze the fiscal terms set out in the agreement as an additional measure to curtail government action. Tanzania, Zambia, and Indonesia are examples of countries that have recently undertaken fiscal reform within this mixed regulatory system.

In both Tanzania and Zambia, mines were privatized in the mid-1990s leading in both countries to the introduction of mining legislation that dealt with some aspects of mining authorization but left key measures to be negotiated with individual investors. In particular, although tax rates were set out in the legislation, the governments were authorized to negotiate so-called "development agreements" with individual investors,[45] which set out the fiscal terms and incentives to apply to the particular project. In addition, the development agreements provided guarantees of fiscal stability over the life of the project in Tanzania and for 15 to 20 years in Zambia.[46] In Zambia, the privatization of copper mines was facilitated by the Mines and Minerals Act 1995 (Zambia 1995 Act) which permitted the government to enter into development agreements with specific companies, under which fiscal incentives beyond those granted in the Zambia 1995 Act may be applied.[47] Similarly, exploration and mining in Tanzania was governed by the Mining Act 1998, the Financial Laws (Miscellaneous Amendments) Act 1997 and the Investment Act 1997.[48] The Mining Act allowed the Minister for Energy and Minerals to enter into development agreements,[49] which among other things, set the tax rates applicable to each project.

Prior to reforms in 2009, Indonesia used a contractual system to govern the rights and obligations of mining companies. While legislation was in force,[50] it provided little detail of the terms and conditions to apply to mining authorizations. Rather, "Contracts of Work" covered all aspects of the mining project and set out the taxation regime to apply over the 30-year life of the Contact of Work. The terms of the Contract of Work applied regardless of any change in Indonesian law and overrode any legislation that dealt with overlapping subject matter.[51] Standardized Contracts of Work were amended from time to time providing a more or less uniform fiscal system for new entrants at any one point in time.[52]

Accordingly, in all three cases, the government bound itself to a long-term contract with investors, in each case superseding or stabilizing legislation. Each of these countries persisted with the contractual regime for a number of years, but recently sought reform of the fiscal terms

45. Tanzania Mining Act of 1998, section 10.

46. See Philip Daniel, Michael Keen, Charles McPherson, eds., *The Taxation of Petroleum and Minerals: Principles, Problems and Practice* (New York and Oxon: Routledge, 2010), pp. 414–15. For the specific review of mineral development agreements in Tanzania, see Policy Forum, *The Demystification of Mining Contracts in Tanzania* (Dar-es-Salaam: Policy Forum, 2008).

47. Zambia Mines and Minerals Act, section 9.

48. Tanzania Mining Act of 1998; Financial Laws (Miscellaneous Amendments) Act 1997; and Investment Act of 1997.

49. Tanzania Mining Act of 1998, section 10.

50. Indonesia Mining Law of 1967.

51. See Indonesia's Law No. 4 of 2009 on Minerals and Coal Mining of 2009, art. 169–172.

52. At least seven generations of mining contracts of work were introduced. An eighth generation contract was being discussed when policy makers made the decision to move to a pure licensing system. See Balbir Bhasin and Sivakumar Venkataramany, "Mining law and policy: Replacing the 'contract of work' system in Indonesia," *Center for Energy, Petroleum, and Mineral Law and Policy Internet Journal* (2008).

applicable to mining projects in response to unsustainably low government take.[53] Although the three countries had similar regulatory regimes, each has taken a different approach to the implementation of fiscal reform. Both Zambia and Indonesia have moved from a contract system to a pure licensing system, but Zambia cancelled all existing contracts while Indonesia has sought amendments through negotiation. Tanzania also introduced new legislation to govern mining authorizations, but has left open the ability of individual companies[54] to negotiate development agreements on a project-by-project basis which stabilize the project's fiscal terms by reference to legislation in force at the time the development agreement is signed.[55] As in Indonesia, Tanzania's new mining law does not apply retroactively to existing development agreements, but Tanzania sought to renegotiate these agreements on a case-by-case basis to increase the companies' tax contribution.

The following paragraphs consider the reform process in each of these three countries in more detail.

After initially embarking on the process of renegotiating all 11 development agreements, one by one, with support from the donor community and some goodwill on the part of the mining companies[56] to agree to an increase in royalty and corporate income tax rates, the process proved too cumbersome for the Zambian Government, and in 2008 it resorted to a direct legislative change[57] which cancelled all existing development agreements and applied a new licensing regime to all projects. Taxation rates are set out in the legislation rather than agreed with each investor. Accordingly, the Zambian fiscal regime now ensures that all mining companies are subject to the same fiscal terms, as set out in the legislation.

An important component of the reform was that in addition to the increase in royalty rate (from .6 to 3 percent) and corporate income tax rate (from 25 to 30 percent), the government introduced a copper price-based graduated windfall tax on earnings of up to 75 percent and decreased the capital allowance (from 100 percent to 25 percent annually).[58] The mining companies immediately expressed concern over the government reneging on the renegotiation process, and more strongly over the significant increase in the marginal tax rate, particularly opposing the windfall tax and deduction in capital allowance.[59] Pressured by the fall in copper prices, the government acted quickly in response to these concerns, ultimately announcing in 2009 that it would remove the windfall tax and restore the 100 percent capital allowance rate but otherwise

53. "Government take" is the total share of income that a host government receives from the extraction of oil, gas, or mining resources. This share can include taxes, royalty and government equity share, or other alternative taxation instruments, like resource rent taxes or production/profit share of the resource, according to those in place in a given country.

54. This only applies to companies with investments greater than US$100 million. See Tanzania Mining Act of 2010, section 10.

55. Tanzania Mining Act of 2010, section 10.4(a).

56. "IMF backs Zambia on raising mineral royalty," *Lusaka Times*, September 27, 2007, available at http://www.lusakatimes.com/2007/09/27/imf-backs-zambia-on-raising-mineral-royalty (last visited July 16, 2011); Christopher Adam and Anthony M. Simpasa, "Harnessing resource revenues for prosperity in Zambia," Oxford Centre for the Analysis of Resource Rich Economies Research Paper No. 36 (Oxford: University of Oxford, September 2009), p. 39, available at http://www.revenuewatch.org/sites/default/files/Zambia%20case%20study%20oxcarre.pdf (last visited July 16, 2011)

57. Zambia Mines and Minerals Development Act of 2008.

58. Zambia Income Tax (Amendment) Act of 2008, adding a new section 64B.

59. Adam and Simpasa, "Harnessing resource revenues for prosperity in Zambia," *op. cit*., note 56.

retain all of the reforms introduced in 2008.[60] In November 2011, the Zambian government introduced a plan to double the applicable royalty rate, from 3 to 6 percent,[61] which under the new regime will apply to all existing and new operations. Mining companies had feared a reintroduction of the windfall profits tax but the (newly elected) government announced, against a backdrop of volatile minerals prices, that Zambia will not reintroduce it for fear of harming mining operations and negatively impacting the economy.[62]

Indonesia too has replaced a contractual system with a licensing regime governed under statutory law. While the reform specifically allows existing Contracts of Work to continue until their expiry, the "transitional provisions" of the new mining law[63] stipulate that the Contracts of Work should be adjusted within one year to conform to the new mining law, except for provisions on state revenue.[64] This seemingly contradictory stipulation, which does not make it clear with which provisions of the new mining law the existing Contracts of Work will be required to conform, introduced much confusion that remains to be clarified. Two years later, the government is still seeking to renegotiate, on a case-by-case basis, existing contracts to align them with the new fiscal terms introduced under the legislation.

In contrast, Tanzania's regulatory system has not undergone such a radical shift following the reform. In fact, although the new legislation introduced in 2010 sets out a reformed fiscal regime, the government retained the ability for companies making large investments to negotiate individual development agreements with the government,[65] and Tanzania has kept in place existing development agreements, seeking to renegotiate their terms with the individual companies on a case-by-case basis.

The Tanzanian government first began renegotiations in 2006, supported by the findings of a review that concluded that the tax payments by mining companies to date were extremely low.[66] In fact, the review concluded that companies essentially paid no corporate income taxes, largely due to elements of the fiscal regime that allowed substantial deductions or deferrals.[67] These

60. Zambia Revenue Authority, "2010 Budget Address by Dr. Situmbeko Musokotwane, MP, Honourable Minister of Finance and National Planning Delivered to the National Assembly on Friday October 9, 2009," available at http://www.zra.org.zm/BudgetSpeech.pdf (last visited July 16, 2012).

61. Zambia Revenue Authority, "Budget Overview of Tax Changes" (2012), at 1.2.2, available at http://www.zra.org.zm/BudgetHighlights_2012.pdf (last visited July 16, 2012).

62. "Zambia won't bring back mining windfall tax: fin min," *Reuters*, March 22, 2012, available at http://af.reuters.com/article/investingNews/idAFJOE82L05320120322 (last visited July 16, 2012).

63. Indonesia Law on Mineral and Coal Mining No. 4 of 2009, art. 169.

64. PricewaterhouseCoopers, "Mining in Indonesia: Investment and taxation guide" (PwC, May 2011), p. 45, available at http://www.pwc.com/id/en/publications/assets/Mining-Investment-And-Taxation-Guide-2011.pdf (last visited July 16, 2012).

65. The investment must be US$100 million or its equivalent over the course of the development agreement. The new legislation provides increased oversight of the Minister concluding such development agreements, requiring that each agreement is provided to a Mining Advisory Board which comprises a range of stakeholders as well as an academic and an industry expert.

66. Government of Tanzania, "Review of mining development agreements and fiscal regime for the mineral sector" (Dodoma: Ministry of Energy and Minerals, September 2006), p. 10.

67. A "Presidential Mining Review Committee" appointed by the Tanzanian president in 2006 revealed that:

- There were no rules requiring ring-fencing of projects and companies were permitted to carry forward losses indefinitely to deduct against profits for the purpose of calculating corporate income tax.

renegotiations eventually led to the companies' making "voluntary" payments of US$200,000 directly to local governments in the areas where their mines were located as well as a 3 percent royalty on the net value of exports to the national government.[68] In addition, the 15 percent additional capital allowance on unredeemed qualifying capital expenditure was removed, which meant the companies would pay corporate income tax earlier. African Barrick Gold went further and agreed to pay the government US$7 million a year for five years.[69] However, the other fiscal terms in the development agreements remained unchanged. AngloGold Ashanti also agreed to start paying corporate income tax in 2011, four years earlier than projected.[70] The presidential mining review commission was reconstituted again in 2007,[71] with its 2008 report[72] leading to the implementation of the new legislation in 2010. The existing development agreements however were not affected by the new legislation. Rather, since then, the government has been seeking to renegotiate these contracts to have the mining companies agree to pay increased taxes in alignment with the new fiscal regime, as is set out in the legislation, despite the additional payments agreed by the companies in 2006. Indeed, African Barrick Gold announced in May 2012 that they would pay an additional 1 percent royalty.[73]

3. NATURAL RESOURCE AUTHORIZATION LINKED TO A CONTRACTUAL ARRANGEMENT COMPLEMENTING STATUTORY LAW

As countries' natural resource laws evolve, more of the regulation of the natural resource authorizations is covered in legislation, with agreements used to supplement legislation and, in some

- In addition to a depreciation allowance of 100% on capital expenditure, companies had additional capital allowances of 15% on unredeemed capital expenditure.
- Royalty reliefs were extensive, which deferred payment of royalties.
- Companies were 100% foreign owned and were able to fully repatriate capital and profits.
- Stabilization clauses required the government to compensate the investor if it enacts legislation or takes any administrative measure that increases the cost of the project.

68. Silas Olan'g, "Tanzania passes a new mining law and builds capacity for informed policy debate," *Revenue Watch Institute News*, May 21, 2010, available at http://www.revenuewatch.org/news/tanzania-passes-new-mining-law-and-builds-capacity-informed-policy-debate (last visited July 16, 2012). In December 2011, it was reported that the Tanzanian government was negotiating with mining companies to increase the tax to 4% from 3%, and to pay the royalty based on the gross export value of the gold rather than on the net export value. "Tanzania seeks higher gold royalties," *Business Day*, December 13, 2011, available at http://www.businessday.co.za/articles/Content.aspx?id=161051 (last visited July 31, 2012).

69. United Nations Economic Commission for Africa, "Promoting mineral clusters: The case of Tanzania" (Addis Ababa: UNECA, December 2008), p. 33, available at http://www.uneca.org/nrid/pubs/TanzaniaMineral_cluster_study.pdf (last visited June 16, 2012).

70. See, for example, "AngloGold starts paying 30 pct tax rate in Tanzania," *Reuters*, October 27, 2011, available at http://www.reuters.com/article/2011/10/27/tanzania-mining-anglogold-ashanti-idUSL5E7LR4KP20111027 (last visited July 16, 2012).

71. Called the Bomani Commission (discussed further in part D.3 below.)

72. Mark Bomani, "Report of the Tanzanian Presidential Mining Review committee to advise the Government of the mining sector" (Dodoma: Committee to advise the Government on Oversight of Tanzania's Mining Sector, April 2008).

73. "African Barrick to pay voluntary royalty payment," *Mining Journal*, May 18, 2012.

cases, to freeze certain terms that the legislation allows to be frozen.[74] The agreements, which run for a defined period of time, typically specify that the taxes payable and the company's tax rates and method of calculation are to apply as set out in the statutory law at a particular point in time regardless of any changes to the statute over the course of the agreement. Chile and Peru use such a system.

In Chile, Decree Law 600 of 1974, which deals with foreign investment, allows foreign investors to choose to enter into an invariability agreement, which provides for a set tax rate to apply for that investor, for a period of 10 or 15 years depending on the level of investment, regardless of the corporate income tax rate set out in subsequent income tax laws.[75] There is a premium for entering into the invariability agreement so that, at least at the outset, the investor pays a higher rate of corporate income tax. The investor may opt out of the invariability agreement, but once it does so it cannot re-enter the scheme. In addition, following the recent introduction of a mining royalty (further discussed below), the investor is able to enter into an invariability agreement which freezes the amount of royalty payable by the company, for a period of 15 years, but must choose between freezing the royalty amount or the corporate income tax amount.[76]

Similarly, in Peru an investor is permitted to enter into a stability agreement for either 10 or 15 years depending on the size of the investment.[77] The stability agreement freezes tax rates on corporate income to the rate in force at the date of the agreement plus a premium of 2 percent, as well as freezes rates on the transfer of profits, dividends and royalties. Stabilization agreements also guarantee benefits on export regimes, consumption tax, and accelerated depreciation on fixed assets.

Fiscal reforms were carried out in both Chile and Peru, in 2006 and 2004, respectively, to introduce royalty payments for the first time, by direct legislation.[78] In both countries, investors were already subject to agreements that froze tax rates over long periods of time, so they claimed exemption from the new regime.[79]

Chile initially proposed a new mining royalty of 3 percent on the annual net sale of metallic mineral substances in 2004.[80] The proposal applied the royalty to all private companies, including those with invariability agreements, but excluding Codelco (Chile's state-owned company) and small to medium enterprises. The argument made was that the royalty was not a tax, but rather a "fair compensation to the state."[81] The proposal was defeated by the congress, with the

74. James Otto and John Cordes, "The regulation of mineral enterprises: A global perspective on economics, law and policy," (Westminster, Colorado: Rocky Mountain Mineral Law Foundation, 2002), pp. 4–18–4–19.

75. Chile Decree Law No. 600, art. 7 and 11 *bis*.

76. Chilean Decree Law No. 600, art. 11 *ter*.

77. Peru's Legislative Decree No. 662, art. 2, 7, 9.

78. Chile's Law No. 20.026 of 2006 creating a specific tax on mining income, Title IV *bis*, Peru's Mining Royalties Law No. 28258 of 2004.

79. "Mining and tax: A right royal row," *The Economist*, July 1, 2004, available at http://www.economist.com/node/2878129 (last visited July 16, 2012).

80. Chile Bill No. 36–2004. See "Informe financiero: Proyecto de ley que establece regalia minera ad-valorem y crea fondo de innovación para la competitividad," Bulletin No. 126–351, available at http://www.dipres.gob.cl/574/articles-37365_doc_doc.doc (last visited July 16, 2012).

81. Elizabeth Bastida, Ricar do Irarrázabal and Ricardo Labó, "Mining Investment and Policy Development in Argentina, Chile and Peru," Paper originally presented at the Annual Mining Seminar organized by the Center for Energy, Petroleum and Mineral Law and Policy, University of Dundee, held on June 21, 2005, available at http://www.dundee.ac.uk/cepmlp/journal/html/Vol16/Vol16_10.pdf (last visited July 16, 2012).

opposition claiming it "would challenge the very basic constitutional and legal principles underpinning the fiscal system in Chile, namely non-discrimination between different economic actors, and neutrality, as the tax regime has been profit-related."[82]

A second proposal for the introduction of a mining royalty was put forward and passed by the congress in 2005 and implemented in 2006.[83] This time, investors with existing invariability agreements were exempt. However, the government sought to negotiate with these investors, offering incentives to move them to opt out of existing agreements and enter the royalty scheme. The incentives included a reduced royalty rate (4 rather than 5 percent) and a new 12-year invariability agreement. New investors were offered invariability agreements, at the prescribed 5 percent royalty rate.[84] When the government sought to introduce another increase in royalty rate in 2010,[85] in order to contribute to the costs of earthquake rebuilding,[86] it again sought to negotiate with the investors subject to the invariability agreements entered into during the 2006 reform. The investors were asked to pay the increased royalty rate for a period of two years before reverting to their previous rate (4 or 5 percent) up to the expiry of the invariability agreement in return for an additional period of invariability at the increased royalty rate (i.e., the sliding scale), starting at the expiry of the existing agreements.[87] In short, for each of the reforms, the key incentive proposed to the investor was a lengthening of the invariability agreement duration in exchange for the payment of increased royalty rates. At the end of this next period of invariability, in 2018, the government has stated that all investors will be subject to the same tax rates.[88] In the interim, the government must manage the multitude of different regimes governing investors, based on the different invariability agreements.

In Peru, however, when the new mining royalty legislation was passed in 2004,[89] the government did not propose to allow those investors with stability agreements to avoid the new royalty (a 1 to 3 percent royalty rate). The government instead claimed that royalties superseded the tax stabilization agreements.[90] Companies challenged this in Peru's courts[91] and, despite being unsuccessful, refused to pay.[92] Two years later, to compensate for this government revenue

82. Bastida, do Irarrázabal and Labó, "Mining Investment and Policy Development in Argentina, Chile and Peru," *op. cit*., note 80.

83. Chile's Law No. 20.026 of 2006 creating a specific tax on mining income.

84. Juan Carlos Guajardo, *Mineral Rents and Social Development in Chile. Project on Financing Social Policy in Mineral-Rich Countries* (Geneva: UNRISD, 2008).

85. Introducing a sliding scale royalty rate in the range of 5 to 14%.

86. "Factbox—Peru's proposed tax and royalty rates for miners," *Reuters*, September 20, 2012, available at http://af.reuters.com/article/metalsNews/idAFS1E78J0WD20110920 (last visited July 16, 2012).

87. Antofagasta, "Antofagasta's mining companies voluntarily accept changes to the Chilean mining tax," Press release, January 12, 2011, available at http://www.antofagasta.co.uk/pdf/press_releases/2011/AplcPressReleaseRoyalty20110112.pdf (last visited July 16, 2012).

88. Mike Godfrey, "Chile Studies Tax Reform," *Tax-News*, September 8, 2011, available at http://www.tax-news.com/news/Chile_Studies_Tax_Reform____51335.html (last visited July 16, 2012).

89. Peru's Mining Royalties Law No. 28.258 of 2004.

90. Peru's Mining Royalties Law No. 28.258 of 2004; modified by Law No. 28,323 of 2004.

91. Constitutional Court decision Exp0048–204-PI/TC of April 1, 2005 found "unfounded" claims by a group of some 5,000 citizens that the law was unconstitutional.

92. Claire Kumar, "Undermining the poor: Mineral taxation reforms in Latin America" (London: Christian Aid, September 2009), pp. 1–9, available at http://www.christianaid.org.uk/Images/undermining-the-poor.pdf (last visited July 16, 2012).

shortfall, President Garcia, backed by the civil society, promoted the imposition of a windfall tax at the core of his election campaign. However, in view of the industry backlash, President Garcia and his government took the path of negotiating with these companies, and eventually secured agreement from a majority of them to make "voluntary" lump sum payments totaling US$757.5 million in place of the missing royalties as well as to pay a new royalty of 3.75 percent imposed on net profits, considered by the companies as "extraordinary" and temporary, for up to 5 years.[93]

In 2011, under another new government, legislation was introduced overhauling the entire fiscal regime, bringing about an increase in royalty rates to between 1 and 12 percent of operating profits, as well as a "special mining tax"—a windfall profits tax of 2 to 8.4 percent of net profits.[94] Despite having taken a strong position during the election on reforming mining to make companies pay more, the new president's team negotiated with mining companies prior to announcing the new legislation. Stability agreements were respected and the reform provided instead for companies subject to these agreements to opt to pay a "special mining burden," a tax of between 4 and 13.12 percent of operating profit.[95] The special mining burden is set out in the new legislation with the regulations providing a standard form contract for these companies to voluntarily enter into with the government, confirming that they agree to pay the special mining burden. Companies that do not enter into this agreement will not be required to pay the "special mining burden."

C. INVESTORS' REACTIONS AND HOST COUNTRIES ATTRACTIVENESS

1. INVESTOR THREAT OF WITHDRAWAL AND LOSS OF ATTRACTIVENESS

In all of the cases above, regardless of the legal system or the level of development of the host country, the investor response was consistent: Investors repeatedly threatened to halt investment and claimed that the country would lose attractiveness for future investment. Commenting on Tanzania's new Mining Bill in 2010, African Barrick Gold's general manager said: "Clearly the changes are likely to impact the sector negatively from a growth point of view because investors are likely to look for other destinations with less stringent rules" and "the public should not be taken by surprise if they find that projects such as Kabanga Nickel and Mchuchuma Iron/Coal do not take off as a result of the stringent rules in the Bill."[96] In the United Kingdom, Oil & Gas

93. Milagros Salazar, "Peru: 'Voluntary payment' instead of taxes for mining firms," *Inter Press Service*, August 25, 2006; and Leslie Josephs, "Peru president apologizes to poor, vows increased anti-poverty aid," *Associated Press*, July 28, 2007.

94. Law No. 29.788 of 2011, modifying Law No. 28,258, amending the Mining Tax Law of 2004, and introducing a new "special mining tax" on companies that have signed legal stability agreements with the government under the General tax code, sections 31, 32 and 32A, and companies that have not signed such agreements.

95. Law No. 29.788 of 2011 modifying Law No. 28.258; Law No. 29.789 creating the "Special Mining Tax" (Impuesto Especial a la Minería); and Law No. 29.790 creating the "Special Mining Burden" (Gravamen Especial a la Minería).

96. Rodgers Luhwago, "Mining bill raises storm," *Guardian on Sunday*, April 25, 2010, available at http://www.ippmedia.com/frontend/?l=15959 (last visited July 16, 2012).

UK stated that "the unexpected increase in the rate of Supplementary Charge to Corporation Tax (SCT) in March 2011's Budget not only increased the fiscal burden on the industry, but it also undermined investors' confidence."[97] Following publication of the report which led to the 2007 reforms in Alberta, Canada, reaction from the investor community was particularly polemic. For example, a Deutsche Bank North America analyst wrote that: "[o]ur first reaction to the Alberta government's recent royalty review panel report is that it was authored by a visiting delegation from Venezuela"[98] and added, "Risk, risk and risk, and there's risk. Above all, be warned about risk."[99] Looking back on the reforms, Kim Davies, president and CEO of Terrex Energy Inc, reflected that "the petroleum world in Alberta tilted on its axis [. . .] One could hear the howls of shock as investors questioned how an apparently civilized place like Alberta could just change the rules without notice, like some developing world potentate."[100]

In Indonesia, following reforms in 2009, a manager of an exploration company warned that the "Mining industry in Indonesia is under pressure and [there is] no hope for development unless the regulation totally changes."[101] Upon the announcement in 2004 of the royalty to apply to operations in Peru, Mining Engineers Institute general manager, César Fuentes, commented that "it could favor Chile because there are lower taxes there [than in Peru]."[102] Similarly, in Chile when a royalty was proposed in 2004, investors strongly lobbied against the change. The chief executive of Antofagasta argued that the Chilean proposal "runs contrary to the letter and spirit" of existing mining concessions. The bill "would call into question the strong reputation which Chile has established as [. . .] the most stable and reliable investment destination in Latin America."[103] He added that mining firms continued to invest when prices were low and should not be penalized now.

Although it would merit a more in-depth review, it appears at first glance that despite the immediate outcry, companies do not often abandon their investments after the legal reform. First Quantum, which declared in 2008 that it would take Zambia to international arbitration for breaching its development agreement,[104] announced in October 2011 an unwavering commitment to Zambia: "we see ourselves as partners with the new administration as it strives to

97. Oil and Gas UK, *Economic Report 2011* (Aberdeen: Oil and Gas UK, 2011), available at http://www.oilandgasuk.co.uk/economic_report/expenditure_investment.cfm (last visited July 16, 2012).

98. "Governments seek oil spoils," *The Washington Times*, October 25, 2007, available at http://www.washingtontimes.com/news/2007/oct/25/governments-seek-oil-spoils/?page=all (last visited July 16, 2012).

99. "Royalty row divides Alberta," *National Post*, September 29, 2007, available at http://www.canada.com/nationalpost/financialpost/printedition/story.html?id=a620a776-d1cb-485e-b15a-be6cdfe808a0 (last visited July 16, 2012).

100. Kim Davies, "Industry needs different level of support in new oil age," *Alberta Oil*, October 31, 2011, available at http://www.albertaoilmagazine.com/2011/10/industry-needs-different-level-of-support-in-new-oil-age/ (last visited July 16, 2012).

101. Fred McMahon and Miguel Cervantes, "Survey of Mining Companies 2010/2011" (Vancouver: Fraser Institute, March 2011), p. 49, available at http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/mining-survey-2010–2011.pdf (last visited July 16, 2012).

102. Harvey Beltrán, "Minister: Permanence of mining royalty should be evaluated," *Business News Americas*, August 9, 2004, available at http://www.bnamericas.com/news/mining/Minister:_Permanence_of_mining_royalty_should_be_Evaluated (last visited July 16, 2012).

103. "Mining and tax: A right royal row," *op cit*., note 79.

104. Shapi Shacinda, "Foreign copper mine owners may sue Zambia in tax row," *Reuters*, February 12, 2008.

deliver enhanced and tangible social and economic benefits to Zambians."[105] Despite the contrary predictions of its general manager, African Barrick Gold in 2012 has four operating mines, four feasibility studies, two scoping studies, and an ongoing mine life extension project in Tanzania.[106] In addition, African Barrick Gold has proceeded with a feasibility study and environmental and social impact assessment for the Kabanga nickel project in Tanzania, stating in its 2010 Annual Report that "Barrick will consider how to extract the best value from this high quality asset for its shareholders."[107] In Peru, although a number of companies boycotted an auction for the Las Bambas copper deposit which followed shortly after the government's introduction of a new royalty, the auction went ahead and was won by Xstrata with a bid four times the base price.[108] Las Bambas has since been described as "the star of Peru's copper boom."[109] In Chile, despite initial concerns about the proposed tax increase announced in 2010, all of the major mining companies operating in Chile, including BHP Biliton, Antofagasta Minerals SA, and Anglo American PLC, agreed in January 2011 to voluntarily adopt the new system.[110] In 2009, Indonesia experienced increased activity from both foreign and domestic investors[111] and by 2011, a PWC report stated that the terms of the new law are likely to encourage new investments.[112] Further, despite the ongoing negotiations regarding its Contract of Work, Freeport continued copper operations, and is pursuing several major capital projects to continue development.[113]

One could consider, incidentally, that if the investor's economic calculations when entering into the investment provided for profit in times of low prices, the prospects for profit remain healthy in times of increasing commodity prices even if excess profits are increasingly taxed. As Maniruzzaman notes, in cases of soaring oil prices from 2003 to 2008, investors realized that "it would be wise to [. . .] accept [the state's] claim for more control rather than to lose access to

105. Henry Lazenby, "First Quantum committed to Zambia—Pascall," *Mining Weekly*, October 14, 2011, available at http://www.miningweekly.com/article/first-quantum-committed-to-zambia-pascall-2011–10–14 (last visited July 16, 2012).

106. African Barrick Gold, Corporate Presentation, February 2012, available at http://www.africanbarrickgold.com/~/media/Files/A/African-Barrick-Gold/Attachments/pdf/reports-and-presentations/corporate-presentation-february-2012.pdf (last visited July 16, 2012).

107. Barrick Gold Corporation, "Building value in everything we do: Annual report 2010" (Toronto: Barrick, 2010), available at http://www.barrick.com/theme/barrick/files/Annual-Report-2010/PDF/Barrick-Annual-Report-2010.pdf (last visited July 16, 2012).

108. "Trends in U.S. domestic coal markets: Are higher prices and higher price volatility here to stay?," 58 *Pincock Perspectives* (2004), available at http://www.pincock.com/perspectives/Issue58-CoalMarkets.pdf (last visited July 16, 2012).

109. "Peru's large precious metals and copper producers," *Engineering and Mining Journal*, March 18, 2011, available at http://www.e-mj.com/index.php/features/877-perus-large-precious-metals-and-copper-producers.html (last visited July 16, 2012).

110. "BHP to pay higher Chile royalties on mining deal," *The Sydney Morning Herald*, January 20, 2011, available at http://www.smh.com.au/business/world-business/bhp-to-pay-higher-chile-royalties-on-mining-deal-20110120–19wx5.html (last visited July 16, 2012).

111. Sacha Winzenried (PricewaterhouseCoopers Indonesia), "Winds of change for Indonesian mining sector," 33 *Energy, Utilities and Mining News Flash* 2009, available at http://www.pwc.com/id/en/energy-utilities-mining-newsflash/assets/EUMNewsFlash33.pdf (last visited July 16, 2012).

112. Pricewaterhouse Coopers, "Mining in Indonesia: Investment and taxation guide," *op. cit*., note 64.

113. Freeport-McMoran Copper and Gold, "2010 Annual Report" (2010), available at http://www.fcx.com/ir/AR/2010/FCX_AR_2010.pdf (last visited July 16, 2012).

resources. The motivation for not invoking the rule of law was driven by the fact that despite the slimming of their shares in resources by governments, [international oil companies] still saw the prospect of making healthy profits through ever-increasing oil prices, which shot up to $147 per barrel in mid-2008 from $30 per barrel in 2003."[114] Therefore the benefits of staying in the country outweigh disputing an increase in taxes and giving up on the investment. In other words, the key factor affecting investor decisions about whether to invest or not is whether the fiscal system will allow an adequate level of profitability to be realized.[115]

2. COUNTRY ATTRACTIVENESS NOT TARNISHED AFTER FISCAL REFORMS

The Fraser Institute conducts and publishes an annual survey of mining companies to assess how government policies, including taxation, affect exploration investment and the companies' assessment of the attractiveness of mining in the respective countries. The authors reviewed the Fraser Institute's surveys of the mining host governments of our five case studies[116] over the years preceding, during, and after the fiscal reforms[117] to assess the impact of the reforms on host country attractiveness. The Fraser Institute contends that "the effects [. . .] of higher levels of taxation, and other policies that interfere with market conditions are rarely felt immediately, as they are more likely to deter companies looking for new projects than they are to shut down existing operations."[118] Our results are presented below.

Our key finding is that across the case studies, there is generally a decrease in the perceived attractiveness of each country's taxation regime during and immediately after the reform but one year later, the attractiveness returns to pre-reform levels. In addition, despite the recent spate of fiscal reforms, perception of the mineral potential (given current regulation)[119] of the sample countries is much higher after 2008 than before 2008 (see summary chart in Annex).

For our five sample countries, the year 2006/2007 was either a year of reform (Peru, Tanzania), of pre-reform but marked by acute social discontent with fiscal terms for the industry and calls for change (Zambia, Indonesia), or immediately post-reform (Chile). That year was the worst in terms of decline in the perceived attractiveness of countries' taxation regime and mineral

114. Maniruzzaman, "The issue of resource nationalism: risk engineering and dispute management in the oil and gas industry," *op. cit*., note 6, p. 88.

115. For example, Poland's mining law assesses a 10% ad valorem royalty on gold production, but there are no primary gold producers because that rate makes gold mines unprofitable.

116. The five mining countries from our case studies are Zambia, Indonesia, Peru, Chile, and Tanzania. The United Kingdom and Alberta, Canada, are hydrocarbon producers.

117. In general, 2 to 3 years prior to the reform and 2 to 4 years after the reform. A detailed table of the Fraser Institute survey results is included at Annex 1.

118. Miguel Cervantes and Fred McMahon, "Survey of mining companies 2008/2009" (Vancouver: Fraser Institute, 2009), p. 9.

119. "Mineral potential given current regulation" is the terminology used by the Fraser Institute: "it is based on respondents' answer to the question on whether a jurisdiction's mineral potential under the current policy environment encourages or discourages exploration." See Cervantes and McMahon, "Survey of mining companies 2008/2009," *op. cit*., note 118.

potential (given current regulation) since 2004. By the following year, however, the attractiveness of the countries in both of these respects had increased and by the time of the most recent survey (2010/2011), the levels of attractiveness had returned to, or surpassed, the levels prior to 2006/2007.

Although Zambia cancelled its development agreements while Indonesia and Tanzania maintained them, a higher number of investors considered uncertainty over future levels of taxation as a deterrent to investment in Tanzania (34 percent) and Indonesia (23 percent) than in Zambia (17 percent), according to the 2009/2010 mid-year survey.[120] In the same survey, for all countries examined in this chapter, a large majority[121] of those surveyed responded that they consider that the attitude towards mining in the country has either not changed or is becoming less hostile (although this survey was taken before the latest reforms in Peru and Zambia, and the question was not asked in the most recent survey).

It is worth noting that in Chile and Tanzania, where the reforms were the outcome of consultation with stakeholders, the decline in investor attractiveness during the reform process was less severe than the other reforms. However, the continued uncertainties in Tanzania appear more recently to be taking their toll on investors' perception of the taxation regime in Tanzania, with an increasing percentage of those surveyed considering the taxation regime to be a mild to strong (or absolute) deterrent to investment,[122] despite a positive perception of the country's mineral potential.[123]

Supporting the finding that investor attractiveness is not tarnished in the medium term, the flow of investments has increased in the five featured countries following reforms, indicating that investments have continued and investors have not been deterred, despite the global economic downturns:

- Tanzania has been placed among the countries in Africa with high prospects for attracting more foreign direct investment (FDI) in the mining sector over the next five years[124] by the Ernst & Young 2011 African Attractiveness Survey.[125]
- First Quantum announced ZK10 trillion additional investments in Zambia for 2011.[126]
- The FDI inflows in the mining sector in Chile and Peru have been on an upward trend since 2008 and are reaching their highest historical levels.[127]

120. Fred McMahon and Miguel Cervantes, "Survey of Mining Companies 2009/2010–2010: Mid-Year Update" (Vancouver: Fraser Institute, August 2010), p. 52–53, available at http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/miningsurvey-2010update.pdf (last visited July 16, 2012).

121. 64% for Zambia, Tanzania, Peru, 66% for Indonesia, and 81% for Chile.

122. 42% (mild), 9% (strong), and 2% (absolute) in 2009/2010 and 47% (mild), 15% (strong), and 3% (absolute) in 2010/2011.

123. 73% in 2009/2010 and 84% in 2010/2011 perceiving an encouraging or "not deterrent" mineral potential assuming current regulations and land use restrictions.

124. Polycarp Machira, "Special report: Gold to boost FDIs to Tanzania, survey establishes," *The Citizen Reporter*, July 31, 2011, available at http://www.thecitizen.co.tz/sunday-citizen/40-sunday-citizen-news/13305-gold-to-boost-fdis-to-tanzania-survey-establishes.html (last visited July 16, 2012).

125. Ernst and Young, "It's time for Africa: Africa attractiveness survey" (London: Ernst and Young, 2011), available at http://www.ey.com/ZA/en/Issues/Business-environment/2011-Africa-attractiveness-survey (last visited July 16, 2012).

126. Lazenby, "First Quantum committed to Zambia—Pascall," *op. cit*., note 105.

127. UNCTAD data, provided to the authors.

- In Indonesia, since 2009, after almost a decade of halted investment, there has been increased activity from both foreign and domestic players (particularly in the coal sector) indicating that investors might have adjusted to the new law instituting a licensing regime that no longer provides tax stability protection to new investors.[128]

This analysis shows that despite an initial outcry by investors, and perhaps an initial decrease in the perception of the country's attractiveness, within a short time frame the country recovers and investments continue. It therefore appears from the cases studied that despite the uproar, reform has not harmed the medium term investment appeal of the country. We can infer that those reforms still allow a reasonable profit to be realized.

D. OBSERVATIONS ABOUT THE DIFFERENT REFORM PROCESSES AND THEIR IMPLICATIONS

The case studies show a number of approaches to the introduction and implementation of fiscal reform when contracts are in place: unilateral cancellation of development agreements and transition to a licensing regime governing fiscal terms for all projects (Zambia); transition to a licensing regime for all prospective projects with grandfathering of existing projects (Indonesia); redesign of invariability agreements which are authorized by the licensing regime (Chile and Peru); renegotiation of existing contracts together with a new legal regime which allows for development agreements to supersede the law (Tanzania); as well as reform under a wholly legislative framework (Alberta, United Kingdom).

As Kahale notes, "Most of the renegotiations or industry transformations have ended in success, which says something about the reasonableness of the processes."[129] However, the differences in regimes, processes, and outcomes of the case studies in this chapter suggest some further areas of inquiry and analysis that may be instructive for policy makers:

1. SYSTEM OF REGULATION

Is a particular system of regulation (contractual, statutory, or mixed) inherently more (or less) stable and prone to contested reforms? Even if investors voice discontent about fiscal changes in statutory regimes (which implies no contractual breach), is the overall system perceived to be more stable in statutory systems versus contract-based systems? When a fiscal regime is governed solely by statute, such as in Alberta, Canada and the United Kingdom, investors enter into projects subject to the possibility that the fiscal regime may be changed unilaterally by the government. In these countries, companies make their investments without any guarantee of stability over the long term of the project. It is apparent that companies must therefore rely on "confidence that the fiscal and regulatory regime will be adjusted 'reasonably' and without too much surprise or predatory exploitation of tax opportunities."[130] The investors in both cases

128. Winzenried, "Winds of change for Indonesian mining sector," *op. cit.*, note 111.

129. Kahale, "The uproar surrounding petroleum contract renegotiations," *op. cit.*, note 10, p. 5.

130. Wälde, "Rule of law and the resource industries' cycles: Acquired rights versus the pressures inherent in the political economy of the international energy and resource industries," *op. cit.*, note 18.

still objected to the proposed reforms; but were expectations (and therefore reactions) in fact more tempered? Do legislated systems give more legitimacy to the changes, even if the investors object? Norway, "the model of stability," initially enticed companies to invest in their more risky reserves, but "was able nearly to double the maximum royalty rate…just 3 years after discovery,"[131] without tarnishing its reputation for stability, while several countries in Africa that have tried to do the same are accused of disrespecting the sanctity of contract.[132] Otto and Cordes suggest that "…contracts are viewed as a means to define and preserve the status quo while statutory law provides an avenue to change."[133] If that is the case, what are the implications for countries that are still developing their legal regimes?[134] Although the initial outcry was strong when Zambia moved to a legislative system for all investors, as shown in Section D2 above, Zambia's attractiveness to investors has recovered, and to a greater extent than those countries where contractual systems remain in place, such as Tanzania.

2. CONSULTATION WITH INVESTORS

To what extent was the outcome affected by the governments' consultation with the private sector? Anecdotally from our case studies, it would appear that in the regimes governed by contracts including fiscal stabilization provisions, the investors' immediate response to the proposed reforms seemed tempered when they were engaged and consulted in the reform process compared to those cases in which the reforms are announced unilaterally and said to supersede all existing contracts. When Zambia first announced its intention to renegotiate contracts in 2007, a president of an exploration company stated that "Zambia has a history of mining, and understands the risks involved. Even with new regulations, these will only take it to the similar levels to other African countries (re: taxation and royalties). Even then, [the government is] prepared to negotiate and discuss."[135] However, when the government finally opted for a unilateral change

131. Jenik Radon, "How to negotiate an oil agreement," in M. Humphreys, J.D. Sachs and J.E. Stiglitz, eds., *Escaping the Resource Curse* (New York: Columbia University Press, 2007), p. 95.

132. Although investors claim "sanctity of contract" in the case of government-led renegotiations, investors have also initiated renegotiations in their favor, for instance, in times of low prices. Investor-led renegotiations in infrastructure have been well documented by J. Louis Guash. See J. Luis Guash, Jean-Jacques Laffont, and Stephane Straub, "Renegotiation of concession contracts in Latin America," Policy Research Working Paper Series No. 3011 (Washington, D.C.: The World Bank, April 2003). While a similar analysis does not exist for the oil, gas and mining sectors, some of the conclusions seem transferable. For example, Guash et al. list the following factors as influencing the risk of investor-led renegotiations: the weakness of the regulation and monitoring capacity, the sensitivity of contracts to market shocks, exclusive private financing, and minimum income guarantees by the government. It would therefore be a useful area for further research to conduct a similar analysis of investor-led renegotiations in the oil, gas and mining sectors in order to understand the factors which trigger such renegotiations, to bolster attempts to build contractual relationships that are in both parties' interests and therefore more stable.

133. Otto and Cordes, "The regulation of mineral enterprises: A global perspective on economics, law and policy," *op. cit.*, note 74, p.4–22.

134. While not the main purpose of this article, it should be noted that contractual regimes can also be more difficult to enforce than legislated regimes. The administrative challenges are highlighted by the case of Chile, where investors are subject to different royalty rates and various periods of invariability depending on the size of their investment, the regime which they opt to enter and the time at which the agreement was entered into.

135. Fred McMahon and Cam Vidler, "Survey of mining companies 2007/2008" (Vancouver: Fraser Institute, 2008), p. 28, available at http://www.fraserinstitute.org/publicationdisplay.aspx?id=13453&terms=mining+survey+2007 (last visited July 16, 2012).

and a nullification of development agreements in 2008, several mining companies, including First Quantum Minerals and Mopani Copper Mines, threatened to go to international arbitration and to scale back their investment.[136] As discussed above, however, after this initial threat, First Quantum Minerals did not withdraw and its investments in Zambia have increased.[137] In Peru, companies were initially asked to pay the new mandatory royalty and proceeded to fight its introduction in the Peruvian courts. Although the government won the action, it remained incapable of enforcing the court's decision and the royalties remained unpaid until the government negotiated with the companies.[138]

In Tanzania[139] and Peru,[140] in 2006, companies agreed to increase their tax contribution after entering into negotiations with the government. In Chile, after the failed attempt in 2004 at unilateral legislative change, by negotiating with the companies and offering an alternative to those with invariability agreements, the government was able to obtain consent from the companies to start paying a royalty when it was introduced for the first time in 2006 and to pay increased royalties for a period of two years in 2010.[141] From the company's perspective in each of these cases, the new deal obtained was better than alignment with the new fiscal terms. For instance, in Peru, under the 2006 agreement, the government only captured a total of US$900 million, instead of the US$6 billion it would have received under a windfall tax from 2007 to 2011.[142]

The latter example is illustrative, however, of another important point: When countries are willing to negotiate with companies, the result often decreases the level of taxation that the host government originally announced. In 2009–2010, Zambia repealed the windfall tax introduced with the rest of the new fiscal package in 2008. In Alberta, Canada, the Royalty Framework instituted in 2007 was scaled back in 2010. In Tanzania, Indonesia, Peru, and Chile, the stabilized contracts, whether they are pre-existing contracts as in the former two cases or renegotiated as in the latter two, benefit from different and more attractive fiscal terms than the general regime. Are these compromised outcomes the best deals that the governments could get without losing investors? Would they have lost investors if they had pushed for the full package of reforms originally announced, or would the investors have been resilient, as the Fraser Institute results suggest?

3. EXPERT COMMISSIONS AND STUDIES

Could external commissions or reports usefully support an analysis of competitiveness and fairness and help lead to a mutually beneficial outcome? A high level commission led by Judge Mark Bomani, a well-respected figure in Tanzanian society, was tasked with reviewing the mining sec-

136. Shapi Shacinda, "Foreign copper mine owners may sue Zambia in tax row," *Reuters*, February 12, 2008.

137. Lazenby, "First Quantum committed to Zambia—Pascall," *op. cit.*, note 105.

138. Kumar, "Undermining the poor: Mineral taxation reforms in Latin America," *op. cit.*, note 91, pp. 1–9.

139. Siri Lange, "Land tenure and mining in Tanzania" (Bergen, Norway: Chr. Michelsen Institute, 2008), p. 22, available at http://bora.cmi.no/dspace/bitstream/10202/401/1/Report%20R%202008–2.pdf (last visited July 16, 2012).

140. Salazar, "Peru: 'Voluntary payment' instead of taxes for mining firms," *op. cit.*, note 93.

141. "Antofagasta's mining companies voluntarily accept changes to the Chilean mining tax," *Regulatory News Service (London Stock Exchange)*, January 12, 2011, available at http://www.londonstockexchange.com/exchange/news/market-news/market-news-detail.html?announcementId=10760872 (last visited July 16, 2012).

142. Felipe Bedoya, "Peru negotiates windfall profit tax," *Revenue Watch Institute News*, October 18, 2011, available at http://www.revenuewatch.org/news/blog/peru-negotiates-windfall-profit-tax (last visited July 16, 2012).

tor—including contracts—in Tanzania.[143] The Bomani Commission was constituted of political figures including two from opposition parties, senior civil servants, an official from the Dar es Salaam Stock Exchange, a PricewaterhouseCoopers (PwC) expert, and civil society representatives. The Bomani Commission met different stakeholders including mine owners, mineral traders, mine workers, mining sector experts, and the public at large, to seek input on the existing regime and summarized those views in the Bomani Commission's report, though the industry argued that they had not been sufficiently represented. In Alberta, Canada, both reform processes (2007 and 2010) were preceded by a report from a commission constituted to undertake a review of Alberta's competitiveness, in the first case compared to a number of countries worldwide and in the second compared to peers in the region. The first reform process consulted stakeholders broadly, but did not include industry on the review panel, whereas the second review process included industry representatives. In Israel, a study published in January 2011 that led to a reform of Israel's fiscal regime and the renegotiation of the gas contracts analyzed Israel's level of government take relative to a peer group, based on similar market, geological, and risk characteristics, among others.[144] What do these processes suggest about the usefulness of external reports, commissions, consultations, and stakeholder engagements in terms of rigorous analysis, determining the optimal fiscal terms, and engaging key stakeholders?

4. THREAT OF ARBITRATION

One might also consider how much the processes and outcomes are influenced by the threat of arbitration. The number of known cases[145] brought by foreign companies over natural resource rights has increased dramatically in the past few years. These cases have stemmed from alleged contractual breaches as well as breaches of investors' rights under bilateral investment treaties; in some cases, investors have sued countries twice, once under each legal instrument, in relation to the same incident.[146] Under the terms of both contracts and the treaties, investors have brought claims against countries, "demanding compensation for actions that significantly diminish the value of their investments,"[147] which include changes to the fiscal terms. For instance, in 2009, Maersk Oil and Anadarko each filed claims against the government of Algeria over a windfall profits tax on oil, introduced in 2006 and imposed on half of foreign operators' revenues whenever the oil price exceeds US$30 per barrel, similar to one that the U.S. had applied between 1980 and 1988.[148] The companies, which are partners in a joint venture, argued that the tax

143. See Bomani, "Report of the Tanzanian Presidential Mining Review committee to advise the Government of the mining sector," *op. cit.*, note 72.

144. Carried out by Professor Eytan Sheshinski, Hebrew University, Jerusalem, Israel.

145. Many arbitration cases are filed in forums that do not require disclosure of the case or the outcomes; only the International Centre for Settlement of Investment Disputes (ICSID) publishes its full docket of investment cases, so more cases likely exist.

146. For example, the Exxon Mobil Corporation initiated two arbitrations against Venezuela after Venezuela nationalized the Cerro Negro oil project in 2007, a contract case against the state-owned oil company pursuant to International Chamber of Commerce (ICC) rules, and an ICSID case against the state of Venezuela. "Exxon subsidiary awarded $907 million in ICC arbitration with Venezuelan state oil company; ICSID case still pending," International Investment Reporter, January 1, 2012.

147. Sarah Anderson, J. Alejandro Artiga-Purcell, Rebecca Dreyfus, and Manuel Perez-Rocha, "Mining for profits in international tribunals: How transnational corporations use trade and investment treaties as powerful tools in disputes over oil, mining, and gas" (Washington, D.C.: Institute for Policy Studies, November 2011), p. 3.

148. Anderson, Artiga-Purcell, Dreyfus, and Perez-Rocha, *op. cit.*, note 147, p. 9–10.

violated an agreement they signed with state-owned Sonatrach in 1989. In addition to the contract claims, MaerskOil filed a claim at the International Centre for Settlement of Investment Disputes (ICSID) based on a bilateral investment agreement between Algeria and Denmark. The Algerian government had explained at the time that "the tax was an effort to retain more of the benefits of the country's oil wealth, raise revenues to invest in diversifying its economy."[149]

As of November 2011, 43 of the 137 pending cases at ICSID were related to oil, mining, or gas, up from 3 such cases in 2000, and only 7 such cases filed during the 1980s and 1990s combined.[150] This surge in extractive industry-related cases has coincided with the boom in commodity prices over the same period.[151] These investor-state cases can be extremely costly for governments, not only in terms of the size of the potential awards but also in legal fees, regardless of the outcome of the case. In 2012, under the terms of the settlement between Anadarko and Algeria, Algeria agreed to supply Anadarko with $1.8 billion in crude oil over one year and extended the length of the contract in order for the company to get a higher volume of oil, worth about $2.6 billion over the life of the contract.[152] In 2009, the Commerce Group, a gold mining company, sued El Salvador for $100 million, and although the case was ultimately dismissed, El Salvador nevertheless incurred $800,000 in legal fees.[153]

Therefore, one might reasonably assume that the threat of arbitration, such as First Quantum's threat in the case of Zambia, has an impact on the outcome of the negotiations or fiscal reforms, or in the reluctance of governments to pursue fiscal reforms or renegotiations at all.

However, arbitration is also a "high risk, high cost option" from the investor's perspective.[154] The process is lengthy, costly, and unpredictable.[155] For instance, in the arbitration case against the government of Algeria, Anadarko and Maersk had been in litigation for over two years, and had been concerned, prior to settling, that any eventual arbitral decision would not have been enforceable in Algeria.[156] Thus, not all investors will pursue the litigation option. Those seeking access to supply might be less keen to go to courts than those seeking financial returns; similarly, support from (or connections to) an investor's home country may affect its inclinations to pursue arbitration.

Further analysis could usefully look at the types of situations that have triggered or could trigger arbitration filings, especially to give guidance on how to avoid such circumstances in the first place, including through improved drafting at the outset (as discussed below), an understanding of the policy space afforded in the legal framework, or through targeted selection of investors.

149. Anderson, Artiga-Purcell, Dreyfus, and Perez-Rocha, *op. cit*., note 147.

150. Anderson, Artiga-Purcell, Dreyfus, and Perez-Rocha, *op. cit*., note 147, p.1.

151. Anderson, Artiga-Purcell, Dreyfus, and Perez-Rocha, *op. cit*., note 147.

152. "Anadarko, Algeria set $4.4 bn deal on oil tax," *Reuters*, March 9, 2012, available at http://af.reuters.com/article/investingNews/idAFJOE82807020120309 (last visited July 16, 2012).

153. Anderson, Artiga-Purcell, Dreyfus, and Perez-Rocha, *op. cit*., note 147.

154. Otto and Cordes, "The regulation of mineral enterprises: A global perspective on economics, law and policy," *op. cit*., note 74, p. 15–16.

155. Wälde, "Rule of law and the resource industries' cycles: Acquired rights versus the pressures inherent in the political economy of the international energy and resource industries," *op. cit*., note 18.

156. Martin Arnold, "Anadarko considers Algeria asset seizure," *Financial Times*, March 10, 2011, available at http://www.ft.com/intl/cms/s/0/c74801f6–4b39–11e0-b2c2–00144feab49a.html#axzz20KGKZyWs (last visited July 16, 2012).

5. EXTERNAL PARTY INVOLVEMENT

How has the voice of the international community affected the processes and outcomes? In some cases of fiscal reform, international organizations, such as the World Bank, IMF, Commonwealth Secretariat, and others have been outspoken, sometimes in favor of the reform and sometimes on the side of the investors.

How powerful have outside players been in shaping the ensuing debate and in the acceptability of the outcome? In Tanzania, for example, heated public debate was sparked by a report published by a consortium of non-governmental organizations,[157] as well as an IMF analysis published in 2008 that proclaimed that the tax incentives in Tanzania not only were not an important factor in attracting investment, but could be counterproductive, resulting in a loss of revenue or economic distortions for the country.[158] In Zambia, a number of reports published in Zambia by non-governmental organizations and disseminated widely provided the government with the basis to take the bold move of unilaterally introducing legislation rather than renegotiating existing contracts one –by one.[159] When Liberia announced its intention to renegotiate an early contract, the successful renegotiation of the contract (including improved terms for Liberia while maintaining the profitability for the industry) was bolstered by national and international support, with proponents of the change criticizing the original terms as being out of line with good practice in the mining industry.[160] How can civil society or academia usefully support a transparent and fair reform or renegotiation process? Are there benefits to these external voices? Finally, to what extent are fiscal reforms triggered by a response to discontent among a public that is dissatisfied with a perceived lack of benefits flowing from the mining, oil, or gas operations? How may the public better engage in the process of negotiating deals, and reviewing their terms?

E. POLICY CONSIDERATIONS: ACHIEVING STABILITY

As discussed above, natural resource extraction is inherently among the most risky types of investment from the investor perspective. The capital investment costs are very high and are front-loaded in the project; it can be many years before the project becomes profitable. Therefore, for the investors undertaking the extraction, the profitability of the project is directly correlated

157. Mark Curtis and Tundu Lissu, "A golden opportunity: How Tanzania is failing to benefit from gold mining" (Christian Council of Tanzania, National Council of Muslims in Tanzania and Tanzania Episcopal Conference, October 2008), available at http://www.kirkensnodhjelp.no/Documents/Kirkens%20N%C3%B8dhjelp/Publikasjoner/Temahefter/A%20Golden%20Opportunity%202ndEd.pdf (last visited July 16, 2012).

158. Kevin Cheng, Greetje Everaert, Jiri Jonas, Axel Palmason, Richard Podpiera, and Yuri Sobolev, "Kenya, Uganda, and United Republic of Tanzania: Selected issues," IMF Country Report No. 08/353 (Washington, D.C.: IMF, October 2008), available at http://www.imf.org/external/pubs/ft/scr/2008/cr08353.pdf (last visited July 16, 2012).

159. See Abi Dymond, "Undermining development, copper mining in Zambia" (Action for Southern Africa, Christian Aid and Scottish Catholic International Aid Fund, October 2007), available at http://www.actsa.org/Pictures/UpImages/pdf/Undermining%20development%20report.pdf (last visited July 16, 2012).

160. One such report was Global Witness's report called "Heavy Mittal." See Global Witness, "Heavy Mettal? A state within a state: The inequitable mineral development agreement between the Government of Liberia and Mittal Steel Holdings NV" (Washington, D.C.: Global Witness Publishing Inc., October 2006), available at http://www.globalwitness.org/sites/default/files/pdfs/mittal_steel_En_oct_2006_high_res.pdf (last visited July 16, 2012).

with its long-term stability. Likewise, the potential revenues for the government depend on the stability of the project as well; if the project is cut short, the foregone revenues for the government can be as considerable as the losses to the investor.

Since there are many factors affecting the investment and its potential profitability for both companies and governments that cannot be controlled, including resource values, geology, technology, and natural disasters, among others, a predictable, durable, and equitable legal framework is important to lay the foundation for a stable natural resource sector. As we have seen over time, and from our case studies, a framework that is frozen in time does not guarantee stability. Instead, a framework should allow for an efficient and mutually beneficial sharing of the resource wealth, mechanisms for mitigation, and adaptation in the case of exogenous shocks to the sector, and clarity to the company, government and the public about how the risks and benefits of the investment are being shared among the three. Fairness, flexibility, and transparency are therefore core to the stability that is in the mutual interest of both investors and host countries.

1. FAIRNESS OF THE LEGAL AND FISCAL TERMS

> *"[B]ad deals spell trouble. The worse the deal, or the more imbalanced the deal, the more likely it is to be renegotiated. That goes for both sides. One might say that the best form of stabilisation is an equitable deal."*[161]

In the majority of the case studies discussed above, the fiscal reforms were redressing an unfair balance in fiscal terms created by the pro-investment contracts and legal systems of the mid-1980s and 1990s, bringing the respective fiscal regimes more in line with international standards. For example, the Zambian tax regime reforms of 2008 increased the effective tax rate from what was considered very low by international standards (31.7 percent) to a more moderate rate (47 percent).[162] The 2004–2006 reforms in Peru and Chile instituted a royalty that neither country had applied before; they had relied instead on corporate income tax that had been offset for years by tax deductions such that the countries received very little return. In Alberta, Canada, the reforms in 2007 increased the government take from a low percentage by international standards to a level placing it ninth in a list of 20 comparable jurisdictions (therefore approximately in the middle).

In developing countries, one of the greatest contributing factors to the spate of bad, and therefore unstable, deals in the natural resource sector is the asymmetry in negotiating power between the country and investor negotiating teams. Designing a robust fiscal regime, whether in contract or in law, requires extensive knowledge of the sector, the investor, costs, and price forecasts, and the interactions of various fiscal tools. Each side should have the capacity to prepare independent financial models to assess the level of government take, the internal rate of return of the project, and what the fiscal outcome would be for both the investor and the country under various scenarios. Moreover, a robust fiscal regime relies on good information about the

161. Kahale, "The uproar surrounding petroleum contract renegotiations," *op. cit.*, note 10, p. 5.

162. An additional important concern in Zambia is that some copper producers may have used abusive transfer pricing practices to substantially minimize their tax burden. A major auditing program was commenced in 2010, which may yield billions of dollars for the Zambian national treasury in back taxes which have not been paid by the companies.

underlying geology, to ensure that the terms of a deal are properly accounting for the size and quality of the reserves.

In developing countries, natural resource companies possess far more resources, knowledge, and experience in all aspects of their industry, including the negotiation of contracts, than their government counterparts. Many developing countries lack both geological data and the tools and information to design a robust financial model, which are necessary to adequately design a proper legal framework for investment. Because little was known about the underlying geology, many countries awarded concessions on a first-come-first-served basis, as it is difficult to hold a competitive bidding round based on unknown geology.

Countries do not have access to other countries' or companies' contracts to compare like terms, whereas investors have access to contracts and fiscal regimes from around the world through either their own network of experts and databases or external databases, consultants, and law firms that regularly do mining work and use their own agreements as templates for negotiations. Without their own independent financial models or model contracts, many of these countries accepted the models and contracts presented by the investors, without the capacity to independently verify the assumptions. Indeed, investors, who have access to far more information about the underlying geology and economics of the project, will often claim that the project is "marginal" and requires substantial incentives in order to make the project viable. Without the independent capacity to verify these claims, several countries end up agreeing to excessively favorable fiscal and other terms for the investor. Moreover, in order to attract investors in the absence of a solid track record as stable investor destinations, many of these countries granted tax exemptions and subsidies to investors,[163] with the result that countries received very little share in the benefits of exploitation of their resources.

Historically, some companies have been able to use these negotiating advantages to achieve more favorable terms that they attempt to freeze in stabilization agreements, as discussed below, which we now know to be limited in effectiveness. Short-term advantages in negotiation are not a substitute for long-term trust in a relationship that has to span for decades in order to maximize benefits for all parties. As Halina Ward writes, "From a dispute avoidance perspective, it is clearly in the interests of foreign investors to be able to negotiate investment arrangements with host country negotiators with high levels of capacity and expertise. To some extent, a robust contract negotiated between equally skilled negotiating teams can help to minimize against the risk that a contract will subsequently be considered 'unfair' by an incoming government…No doubt some investors base their business models on their ability to do deals in such circumstances, but for a mainstream of investors there is real benefit in doing business with host state negotiators who have equal bargaining power."[164]

As countries are renegotiating their current contracts, revising their legal and fiscal regimes, and designing new regimes for newly discovered deposits, the international community, including investors, donors, international organizations, and others, could usefully explore how developing countries could be more effectively supported in designing effective legal and fiscal regimes, whether in law or contract. Support could include financing for proper geological mapping, tools and training for robust financial modeling, and access to expertise in business

163. James Otto, Craig Andrews, Fred Cawood, Michael Doggett, Pietro Guj, Frank Stermole, John Stermole, and John Tilton, "Mining Royalties: A global study of their impact on investors, government, and civil society" (Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank, 2006), available at http://www.ibram.org.br/sites/1300/1382/00000742.pdf (last visited December 21, 2011).

164. Ward, "Resource nationalism and sustainable development: a primer and key issues," *op. cit.*, note 4, p. 31.

strategy, engineering, fiscal mechanisms, and negotiation, as a start. There are already several cases in which the World Bank, IMF, Commonwealth Secretariat, international organizations and a host of independent consultants are providing advisory services. Creating the basis for a strong deal at the outset both minimizes the risk that the deal will be subsequently revisited, as Ward notes, but also creates the foundation of mutual trust and long-term partnership that is necessary to maximize the mutual benefits of long-term natural resource investments.

2. FLEXIBILITY OF THE LEGAL AND CONTRACTUAL ARRANGEMENTS

While a well-informed and fair arrangement at the outset of an investment may create the basis for a mutually beneficial, and therefore stable, relationship between the company and the country, there are more "unknowns" than "knowns" in natural resource extraction, as discussed extensively above, and a number of variables can subsequently affect the balance of risks and benefits agreed to at the outset. The "unknowns" are often greater in developing countries, with a high degree of perceived "political risk,"[165] with incomplete legal frameworks, and without a track record as a stable investment destination. In such countries, especially where the fiscal terms are set out in contract and not in law, many natural resource companies have sought investment protection through stability clauses, which "effectively freeze the 'chaotic' present, not for a few short years . . . to permit recovery of an oil company's investment, but for the life of the contract . . . by making tax, financial and commercial concessions . . . as well as other contractual provisions, permanent for a 20-, if not a 40- to 60-year period."[166]

These stabilization guarantees have come under scrutiny in the past decade, as they are often far overreaching, both in their duration and in their coverage.[167] Moreover, as the case studies above show, they often do not serve the stabilizing purpose that the companies intend; a change in circumstances, such as the recent surge in resource prices or new large discoveries, have generated substantial political pressure such that governments "may have to take unilateral actions . . . to increase its take, even by violating stabilization clauses to the contrary."[168]

As is evident in these case studies, the principle of "sanctity of contract" is at the core of the debate when a fiscal reform occurs. However, even in the first wave of fiscal reforms in the 1970s, Tocher alluded to the "myth" of the sanctity of contract and its demise: "there are no signs that in the event of real or alleged conflict between the national interest and the rights of a foreign company, most governments will treat sanctity of contract as important. Respect for contract today does not extend beyond national interest, real, or construed, even in countries with a tradition of respect for contractual rights."[169] Despite this early realization, mechanisms that seek to reinforce

165. Wälde, "Rule of law and the resource industries' cycles: Acquired rights versus the pressures inherent in the political economy of the international energy and resource industries," *op. cit*., note 18.

166. Radon, "How to negotiate an oil agreement," *op. cit*., note 131, at 95–96.

167. See Andrea Shemberg and Motoko Aizawa, "Stabilization clauses and human rights," Research project conducted for the International Finance Corporation and the United Nations Special Representative on Business and Human Rights, March 11, 2008), available at http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/p_StabilizationClausesandHumanRights/$FILE/Stabilization+Paper.pdf (last visited July 16, 2012).

168. Maniruzzaman, "The issue of resource nationalism: risk engineering and dispute management in the oil and gas industry," *op. cit*., note 6, pp. 97–98.

169. J. Tocher, "Patterns and Trends in Agreements with Foreign Countries," in *International Minerals Acquisitions and Operations*—3. (Denver: Rocky Mountain Mineral Law Foundation, 1974).

the principle of the inviolability of contracts, namely stabilization clauses and compensation schemes, are pervasive in extractive industry contracts, especially in developing countries.

While stability of a project is in the mutual interest of both parties, freezing fiscal terms over the life of the contract is an undesirable, and often unsuccessful, means to achieve this goal. A more effective way to build stability into projects that are inherently uncertain and subject to various changing conditions is to "make sure that contracts are more responsive to changing conditions,"[170] including changes that favor either the country or the investor. Even though a good agreement should "specify as clearly and extensively as possible what happens in various contingencies," it is still the case that "no contract can be fully complete,"[171] accounting for all possible exogenous shocks in price, geology, politics, and markets. As Moran explains, "although there may be popular emotion and even hysteria accompanying the renegotiations, the adjustment process itself has an underlying logic and rationality that render it inevitable."[172]

Below, we suggest at least two mechanisms to build flexibility into the legal and fiscal regime for natural resources, so that investors, countries, and communities can weather the inevitable changes over the course of the investment without leaving "a deep scar in the relationship."[173]

a. Periodic review as a necessary mechanism of contractual flexibility

Rather than viewing contracts as a strict means to enforce obligations and rights, contracts should be considered more as mutually agreed blueprints to establish guidelines for cooperation over long-term, changing circumstances.[174] This approach recognizes that no contract or legal framework can fully anticipate the important variables that will undoubtedly change over the life of the project, and lays the foundation for a cooperative, ongoing engagement between the company and the country to make sure that both are "maintaining a flow of benefits from the investment."[175] As Bakken and Gormley argue, "dynamic contract clauses also serve to maintain stability because such clauses assist in maintaining the agreed commercial balance. Thus (...) such clauses therefore would be for the benefit of both parties."[176]

Building periodic reviews of the legal and fiscal terms into the contract or law can provide the basis for countries and companies to cooperate on adapting the terms to changed circumstances in a mutually beneficial way, as both have an interest in ensuring the project continues. The agreement to revisit the terms periodically may also create an incentive for both parties to

170. Radon, "How to negotiate an oil agreement," *op. cit.*, note 131, p. 95.

171. Joseph E. Stiglitz, "What is the role of the state?," in M. Humphreys, J.D. Sachs, and J.E. Stiglitz, eds., *Escaping the Resource Curse* (New York: Columbia University Press, 2007), p. 44.

172. Theodore H. Moran, "Mining companies, economic nationalism, and third world development in the 1990s," in John E. Tilton, ed., *Mineral Wealth and Economic Development* (Washington, D.C.: Resources for the Future, 1992), pp. 19–38.

173. Maniruzzaman, "The issue of resource nationalism: risk engineering and dispute management in the oil and gas industry," *op. cit.*, note 6, p. 81.

174. Otto and Cordes, "The regulation of mineral enterprises: A global perspective on economics, law and policy," *op. cit.*, note 74, p.4–25–4–27.

175. Otto and Cordes, "The regulation of mineral enterprises: A global perspective on economics, law and policy," *op. cit.*, note 74, p 5–16.

176. Erlend Bakken and Tonje P. Gormley, "Using dynamic contract clauses to manage risk in volatile markets," in Karl P. Sauvant, ed., *Yearbook on Investment Law and Policy* 2009/2010 (Oxford University Press, 2010), pp. 177–213.

set realistic and mutually beneficial terms at the outset, since an imbalanced deal at the outset would likely be corrected (and perhaps compensated for) at a later review. A periodic review mechanism has been introduced in Tanzania as part of the 2010 Mineral Act. This requires that every development agreement be "subject to periodic performance review by parties after every five years."[177] Since 2000, Liberia has required that development agreements be "subject to periodic review… every five (5) years in order to consider any modifications of these terms that, due to substantial changes in circumstances during the preceding five (5) years the parties agree are warranted."[178]

A subsequent analysis should examine how successful the implementation of these mechanisms has been to date. Why have robust periodic review mechanisms not been more widely adopted?[179] Where they have been adopted, can any lessons be drawn from the reviews that have already taken place under these mechanisms? Do all mechanisms specify a fixed timeline for review (such as every five years), or are there examples of mechanisms that specify other factors that would trigger a review?[180] Is there clarity about which issues are to be reviewed? Are there thresholds of changed circumstances that would merit a revision to the agreed terms? Is there a specified process for review, including which stakeholders should be involved and how? Are there protocols for how to proceed if the investor and government cannot agree about whether or which terms to review?

b. Progressive taxation regimes as a mechanism for contractual self-adaptation

In addition to providing for periodic reviews of the contractual terms, another way to promote flexibility in the contract is to incorporate "progressive fiscal regimes"[181] that "operate as a built-in fiscal mechanism without needing the parties… to renegotiate the deal."[182] Progressive fiscal regimes automatically adjust the government's take depending on various levels of profitability, such that the government "does not need to take any unilateral action to increase its take when windfall profits accrue. It gives the fiscal regime the needed flexibility in changed circumstances for the viability of the project."[183] Importantly, Bryan Land notes that "[i]n principle, progressive taxation has the flexibility to induce investment in high-risk ventures yet still assure

177. Tanzania Mining Act 2010, section 12.

178. Liberia Minerals and Mining Law, section 6.6(c).

179. Periodic review mechanisms in mineral agreements were suggested as early as the 1970s. See David N. Smith and Louis T. Wells Jr., *Negotiating Third World Mineral Agreements, Promises as Prologue* (Cambridge, Mass.: Ballinger Pub. Co., 1975).

180. Joseph Stiglitz has suggested that "the parameters under which a renegotiation can occur should be identified ex ante so that agreements can be reached with less hostility than others." Joseph E. Stiglitz, "What is the role of the state?," in M. Humphreys, J.D. Sachs, and J.E. Stiglitz, eds., *Escaping the Resource Curse* (New York: Columbia University Press, 2007), p. 41.

181. As opposed to a "regressive" fiscal regime, in which the share of government take out of total revenue decreases as profitability increases.

182. Maniruzzaman, "The issue of resource nationalism: risk engineering and dispute management in the oil and gas industry," *op. cit.*, note 6, pp. 97–98.

183. Maniruzzaman, "The issue of resource nationalism: risk engineering and dispute management in the oil and gas industry," *op. cit.*, note 6, p. 99.

the Government a significant share of profits, if and when they occur, [making it] well suited to take into account the uncertainties inherent in extractive industry investment."[184] Such systems should therefore eliminate the need for contested renegotiations of fiscal terms when prices and profitability increase.

Progressive regimes are driven by taxes called either a "resource rent tax" or "return-based" and "revenue-to-cost (R-Factor) based taxes."[185] These taxes do not replace other traditional taxes. They are additional taxes that kick in only when a certain level of profitability has been reached. Economic theory states that a well-designed progressive regime should be perceived as being neutral by the investor for the simple reason that the tax applies only to the resource rent (excess profit), that is, the profit which is above the profit required by the investor to obtain a satisfying return on investment (and therefore after the capital costs of establishing the resource project have been paid). It is not a tax on profit as such. Generally, a satisfying return consists of a rate of interest on risk-free long-term borrowing plus a margin required by the investor to compensate for technical, commercial, and political risks associated with the investments.[186] The return to the investor should not be higher than the return expected on comparable projects.

Despite their virtues, progressive regimes are rarely applied. Bryan Land has noted that "cross country studies have repeatedly shown that a high proportion of fiscal regimes are either neutral or mildly regressive and that very few are clearly progressive."[187] As early as 1976, the United Kingdom implemented the "Petroleum Revenue Tax," an example of a progressive regime aimed at capturing a fairer share of profits from North Sea Oil by capturing the resource rent: an additional tax of 50 percent on profits was triggered once the project achieved a rate of return of 15 percent.[188] In our case studies, however, this is an isolated example, and it is no longer even applicable as this tax was repealed in 1993.[189] Tanzania did not take advantage of the 2008–2009 fiscal reform to implement a progressive regime. The country's official gold exports have since risen in value, from US$890 million in 2007 to US$1626.4 million in April 2011 (7 percent of GDP) while government revenues have remained steady at around US$100 million per year (.5 percent of GDP).[190] The government is now discussing the possibility of imposing a "super-profit" tax on earnings which would, of course, require another process of fiscal reform and renegotiation of existing development agreements.[191] Indonesia's 2009 reform did not lead to a progressive regime either.

Even when countries intend to implement progressive regimes, often the regime actually introduced only approximates the economic theory. In its 2008 reforms, Zambia designed and introduced a "variable profit tax," an additional income tax of 15 percent once the taxable income goes beyond a threshold, defined by a net profit-to-sales ratio of 8 percent.[192] This means

184. Land, "Capturing a fair share of fiscal benefits in the extractive industry," *op. cit*., note 16.

185. In the case of Profit Sharing Contracts, one can find return-based or R-factor based profit sharing.

186. Land, "Capturing a fair share of fiscal benefits in the extractive industry," *op. cit*., note 16.

187. Land, "Capturing a fair share of fiscal benefits in the extractive industry," *op. cit*., note 16.

188. United Kingdom Oil Taxation Act of 1975.

189. The Petroleum Revenue Tax was abolished on March 16, 1993.

190. Fumbuka Ng'wanakilala, "Tanzania in talks with miners to raise royalties on gold," *Reuters*, August 15, 2011, available at http://www.reuters.com/article/2011/08/15/tanzania-gold-idUKL5E7JF0RM20110815 (last visited December 21, 2011).

191. David Malingha Doya, "Tanzania may introduce 'super profit tax' on minerals to increase revenue," *Bloomberg*, June 8, 2011, available at http://www.bloomberg.com/news/2011–06–08/tanzanian-government-plans-super-profit-tax-on-minerals-to-boost-revenue.html (last visited July 16, 2012).

192. Zambia Income Tax (Amendment) Act of 2008.

that beyond this profitability threshold, the government take will rise to a higher level but then will stop being progressive despite further increases in project profitability. In Peru and Chile, the new progressive taxes imposed during the reforms relied on a proxy of profitability to trigger higher royalty rates, such as price and production levels, rather than a direct measure of it: The Peruvian Mining Royalty Act of 2004 imposed a sliding-scale *ad valorem* royalty, rising with revenues,[193] and the Chilean mining laws instituted a net profits tax, escalated in 2006 on the basis of production[194] and in 2010 on the basis of sales.[195] Alberta's reforms of 2007 also introduced production and price-based sliding scale *ad valorem* royalties.[196]

However, using the rise in prices as a proxy for profitability overlooks the fact that prices alone do not determine the level of profitability and deters the development of costly projects as companies seek to minimize costs to hold on to more profit. Using a rise in production as a proxy for profitability assumes that an increase in production is associated with scale economies, which might not always prove correct.

With the reform of 2011, Peru improved its approach and both of the new fiscal elements, the royalty and the windfall profits tax, are to be imposed on operating profit and are set to rise with rises in operating margin (that is, operating profit/operating revenue). These new fiscal elements therefore achieve a much better degree of progressivity than the other examples examined, but they still fail to target the resource rent (excess profit) at project level. It is only by capturing the resource rent that a progressive regime increases the government take while remaining "neutral" for the investor. As explained above, a progressive regime does not target profits per se, but only the resource rent—the return above what has been deemed a satisfactory return for the project. Peru's progressive profits tax does not capture the resource rent since the scale of the escalating tax rate depends on profit performance on a yearly tax accounting basis. The resource rent can only be assessed on a cumulative basis over the course of the project and therefore it only emerges several years after first production.

These examples highlight the following policy question: why are progressive regimes, which follow the economic theory, so seldom applied? There are several possible explanations.

First, as explained above, the economic theory stipulates that a progressive tax regime should target the resource rent that arises only after a required rate of return is achieved by the investor. This rate of return is hard to define and varies based on project costs of capital and the company's risk diversification strategy. This therefore makes it difficult for governments to anticipate an acceptable rate of return for the investor, especially for those countries inexperienced with extractives and exploration.

Second, designing a progressive tax requires an understanding of the fiscal regime as a system where the fiscal elements interact with and offset each other. Thus, even if progressive taxes are put in place, they can be offset by regressive fiscal components included in the system, such as royalties, cost recovery limits (used in the petroleum sector), production bonuses, export taxes, and free state equity. Therefore, when evaluating a fiscal regime, the targeted objectives of progressivity, fairness, and competitiveness must be assessed looking at the full fiscal package and not at isolated fiscal elements.

193. Peru Mining Royalty Act of 2004.

194. Law No. 20.026 of 2006 creating a specific tax on mining income, Title IV *bis*.

195. Law No. 20.469 of 2010 modifying the taxation of mining activities, art. 64 *ter*.

196. See Government of Alberta, Mines and Mineral (New Royalty Framework) Amendment Act of 2008, amending the Mines and Minerals Act of 1998, Revised Statute of Alberta 2000.

Third, managing and enforcing a fiscal package that is really progressive in accordance with economic theory requires strong auditing and monitoring capacity within the government. These profit-based taxes require tax administrators to understand, monitor, and prevent transfer pricing or wasteful expenditure that inflates costs for tax avoidance purposes. This requirement for careful monitoring often deters a government from adopting the sophisticated flexible progressive tax.[197]

Finally, in many cases in which a progressive tax has been proposed, investors have objected, and governments have backed down; however, it is not clear whether investors are simply resistant to *any* new taxes, or whether they are specifically opposed to progressive taxes in view of keeping potential "windfall profits" to themselves in times of high prices. They may also be reacting to governments' difficulty in implementing a truly progressive regime, such that proposed regimes, once implemented, would actually not be neutral from the investors' perspective. In addition, politicians or political parties may be more focused on the immediate gains (to themselves or to the country) of a new deal, such as through the implementation of bonuses and/or royalties, that they are less inclined to push for a mechanism that would potentially yield larger profits many years down the line, especially in the face of investors' threats to walk away from investments. These motivations and perceptions are difficult to disentangle, but the result has been that there has been limited uptake of progressive regimes, and those that have been proposed have often been defeated as part of the negotiations with investors.

Progressive regimes are more widespread in the petroleum sector that has enjoyed profitable margins since the 1970s, far longer than the mining sector. As of December 2011, of the mining countries, only Zimbabwe, Madagascar, Malawi, Liberia, and recently, Australia include a resource rent tax in their mining fiscal regimes. It would be instructive to assess the long-term effect of progressive fiscal regimes on the stability of the investment climate to inform policy-makers about the relative merits of adopting such a new, but admittedly complicated, approach to taxation.

3. TRANSPARENCY IN THE SECTOR

Fiscal reforms are often implemented in response to a growing discontent among the public who are dissatisfied with the benefits flowing from the mining, oil, or gas operations and sense that the deal negotiated between the company and the government was disproportionately favorable for the company and/or did not adequately account for community concerns. Of course, the actual terms of the deal, when they are included in contracts and not in legislation, are most often kept confidential, certainly from the public and often from parliamentarians and other ministries as well, adding to the mistrust and dissatisfaction of the public. Companies and governments who believe that keeping the terms of the deal confidential is in the interest of the companies and governments are necessarily taking a short-term approach; one of the greatest contributing factors to the stability of a contract is its legitimacy among the affected parties, and that requires that the parties know the terms, and ideally are consulted during the negotiation process. As Radon writes, "…openness or public disclosure, notwithstanding that it lengthens the period of negotiation, benefits the oil companies with increased long-term stability as the public becomes a stakeholder, an integral part of the negotiation process."[198]

197. We note, however, that increasingly, governments, like that in Zambia, are more aggressively enforcing existing transfer pricing protection provisions or introducing them.

198. Radon, "How to negotiate an oil agreement," *op. cit.*, note 131, p. 98.

Disclosing how much companies contribute to the local economy by the taxes paid to the government is essential to maintaining important stakeholders' relationships and a license to operate. Running the risk of losing this license results in increasing the political risk associated with the investment, including the risk that the fiscal terms will be renegotiated. The MIGA-EIU 2011 survey identified political risk as a top concern of multinational enterprises, and identifies the *instability* of the regulatory regime as the key concern, rather than the regulatory regime itself. The survey even mentioned that "transparency is vital for the extractive sector" when it comes to risk reduction."[199] Therefore, it is in the mutual interest of governments and companies, both of which benefit from decreased political risk, to disclose the fiscal terms (and payments made) in the extractive sector, to decrease mistrust and the resulting political pressure to change the regulatory regime. Uganda, for instance, is said to have oil contracts that provide a good rate of return for the country according to various independent analysts.[200] However, the government has consistently refused to disclose the contracts, and calls for renegotiation continue to grow amid mistrust of both the government and the company.[201] On the other hand, the government of Liberia now publishes all of its natural resource contracts, and investment has not been deterred.[202] Since renegotiating its contract with Mittal Steel, several more multi-million dollar mining contracts have been concluded.[203]

Another mechanism for increasing transparency is to include more of the fiscal terms in legislation instead of in bilaterally negotiated contracts. In addition to being easier to administer than contractual terms, since the same rules apply to all operations, legislated terms also necessarily involve the deliberation of parliament, which creates greater long-term stability for the regime, as it minimizes the distrust and political calls for change among the parliament. Legislated terms also decrease the risk of political corruption in bilaterally negotiated deals, which is another root cause of unstable deals. Including public participation in the legislative process further increases stability by helping to ensure that the legislated terms address community concerns. Since moving from contracts to legislation can be a long process, an intermediate step can be the preparation of model contracts that limit the number of variables in a negotiation.

199. MIGA, *World Investment and Political Risk* (Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank, 2011), available at http://www.miga.org/documents/WIPR11.pdf (last visited July 16, 2012), pp. 18–20.

200. Keith Myers, "African democracy and oil: A combustible mix," *Revenue Watch News*, February 4, 2011, available at http://www.revenuewatch.org/news/news-article/international/african-democracy-and-oil-combustible-mix (last visited July 16, 2012). See also, Professor Jacqueline Lang Weaver, Discussion on "Confidentiality of petroleum contracts" at the International Conference on Extractive Industries Contracts, September 23, 2009 in Washington, D.C. Transcript on file with authors.

201. Taimour Lay, "Uganda oil contracts give little cause for optimism," *The Guardian*, January 18, 2010, available at http://www.guardian.co.uk/katine/katine-chronicles-blog/2010/jan/18/uganda-oil-profits (last visited July 16, 2012).

202. Marie Chêne, "Overview of corruption and anti-corruption in Liberia," Anti-Corruption Resource Center U4 Expert Answer (Bergen, Norway: Transparency International and U4 Anti-Corruption Research Center at the Chr. Michelsen Institute, 2012).

203. See, for example, "Exxonmobil to pay over US$40m for Block 13," *The Inquirer*, July 11, 2012, available at http://theinquirer.com.lr/content1.php?main=news&news_id=535 (last visited July 16, 2012).

CONCLUSIONS

A 2011 report by Oxford Policy Management cautioned that the number of resource-dependent countries has risen sharply over the past 15 years, alongside increasing commodity prices, and noted that the trend is unlikely to change soon.[204] As Kahale notes, the economic importance of the natural resource sectors to these countries "cannot be overstated. With the stakes that high, a mistake in [fiscal] policy can have devastating consequences for the host state concerned."[205] And as Lauterpacht noted, "the scale, complexity and duration of the projects, coupled with the fact that they related to a resource that is often a major, if not the major, element in the host country's economic situation, means that mineral development contracts are amongst the most sensitive targets of governmental or public concern."[206] It is clear, then, that necessary changes to the fiscal arrangements for a large and centrally important investment are both natural and appropriate. As Otto and Cordes explain, "In this context an assertion that any change in a government's mineral investment law and policy is an abuse of discretion or violates acceptable standards of stability is unrealistic. What is important is an assessment of the motives and effects of the change."[207]

The recent and continuing wave of fiscal reforms in natural resource sectors, unlike the earlier waves of "resource nationalism," are not intended "to exclude private participation from the petroleum industry or to make it economically non-viable, but rather to put it on a sound legal and economic footing."[208] This is especially true in light of the hike in prices for natural resources since most of the original terms were set, and given the low government takes that were negotiated in earlier contracts due to both interest in attracting early investors to new countries and new investments and to the asymmetrical negotiating power between companies and developing countries. In such cases, "the country loses twice—first from the unfair contract…and second from political turmoil and adverse international attention from the investment community when an attempt is made to set things right."[209]

Fortunately, there are sufficient profits to be shared between governments and industry, so the challenge is designing a durable yet flexible regime to continuously calibrate the allocation of profits in the sector, while decreasing political risk and avoiding contentious renegotiations or unilateral fiscal regime changes that sit poorly with all parties. Of course, maximizing profits is not the end-goal; governments and industry have a shared interest in the public investment of resources revenues into priority sectors, such as infrastructure and human capital, especially

204. Dan Haglund, "Blessing or curse? The rise of mineral dependence among low- and middle-income countries" (Oxford: Oxford Policy Management: December 2011), available at http://www.opml.co.uk/sites/opml/files/Blessing%20or%20curse%20The%20rise%20of%20mineral%20dependence%20among%20low-%20and%20middle-income%20countries.pdf (last visited May 21, 2012).

205. Kahale, "The uproar surrounding petroleum contract renegotiations," *op. cit*., note 10, p. 3.

206. Elihu Lauterpacht, "Law and policy in international resource development," 11 *Journal of Energy and Natural Resources Law* 145 (1993).

207. Otto and Cordes, "The regulation of mineral enterprises: A global perspective on economics, law and policy," *op. cit.*, note 74, p. 5–10.

208. Kahale, "The uproar surrounding petroleum contract renegotiations," *op. cit.*, note 10, p. 5.

209. Joseph E. Stiglitz, "What is the role of the state?," in M. Humphreys, J.D. Sachs, and J.E. Stiglitz, eds., *Escaping the Resource Curse* (New York: Columbia University Press, 2007), p. 41.

in developing countries that lack basic public goods that are critical for development. Therefore, as Ward suggests, host countries ought to be "more active in shaping the terms of discussion about resource nationalism, so that the focus of critique goes beyond charges of rent-seeking to examining more deeply whether individual approaches make sense in terms of sustainable development,"[210] couching the question of increased profits into a broader discussion about translating resource wealth into development outcomes.

210. Ward, "Resource nationalism and sustainable development: a primer and key issues," *op. cit.*, note 4, p. 23.

Fraser Institute results	1: Encourages investment 2: Not a deterrent to investment 3: Mild deterrent 4: Strong deterrent 5: Would not pursue investment due to this factor

Mineral Potential Assuming Current Regulations and Land Use Restrictions						Taxation Regime					
1	2	3	4	5	Chile	1	2	3	4	5	Summary of reforms
43%	51%	3%	3%	0%	2004/5	25%	53%	19%	3%	0%	(2004) Introduction of mining royalty (failed)
43%	54%	4%	0%	0%	2005/6	12%	45%	36%	6%	0%	(2005) Re-introduction of mining royalty (exempting invariability agreements)
40%	43%	11%	0%	6%	2006/7	19%	48%	19%	3%	10%	
54%	34%	7%	4%	2%	2007/8	25%	56%	18%	2%	0%	
51%	43%	6%	1%	0%	2008/9	28%	61%	10%	1%	0%	
53%	43%	3%	1%	0%	2009/10	21%	62%	13%	3%	1%	
55%	44%	2%	0%	0%	2010/11	21%	62%	18%	0%	0%	(2010) Increased royalty (to apply for 2 years), after negotiations

					Peru						
17%	57%	21%	2%	2%	2004/5	8%	61%	21%	8%	3%	(2004) Mining royalty introduced (to apply to stabilized agreements). Companies take the government to Peruvian courts
11%	32%	41%	16%	0%	2005/6	3%	41%	41%	15%	0%	
13%	33%	30%	20%	5%	2006/7	26%	26%	19%	15%	15%	(2006) Negotiations with companies, leading to voluntary payments
25%	51%	14%	7%	4%	2007/8	17%	46%	22%	11%	4%	
46%	37%	17%	0%	0%	2008/9	17%	55%	26%	2%	0%	
36%	52%	9%	1%	1%	2009/10	15%	58%	22%	5%	1%	
36%	45%	14%	3%	2%	2010/11	8%	58%	31%	3%	0%	(2011) Royalty Reform: Not captured by the 2010/2011 Fraser Institute Survey

1	2	3	4	5	Tanzania	1	2	3	4	5	Summary of reform
23%	54%	23%	0%	0%	2004/5	9%	55%	9%	18%	9%	
20%	30%	40%	10%	0%	2005/6	0%	30%	50%	10%	10%	
19%	48%	19%	3%	10%	2006/7	4%	44%	24%	20%	8%	(2006) Release of initial review committee report, re-negotiations start

Tanzania											
29%	41%	29%	0%	0%	2007/8	12%	65%	12%	12%	0%	(2007) Bomani Commission constituted
33%	46%	17%	2%	2%	2008/9	17%	45%	32%	4%	2%	(2008) Release of Bomani Commission report
22%	51%	25%	2%	0%	2009/10	13%	34%	42%	9%	2%	(2009) Announcement of intended reform of Mining Act and fiscal regime
31%	53%	9%	6%	0%	2010/11	3%	32%	47%	15%	3%	(2010) New Mining Act passed, only applies to new licenses

Zambia											
20%	33%	47%	0%	0%	2004/5	17%	42%	17%	17%	8%	
18%	9%	45%	27%	0%	2005/6	0%	27%	55%	9%	9%	
21%	39%	14%	14%	11%	2006/7	17%	30%	26%	13%	13%	(2007) Announcement of process of renegotiations with individual companies
28%	44%	28%	0%	0%	2007/8	26%	42%	26%	5%	0%	
24%	54%	15%	5%	2%	2008/9	9%	40%	28%	14%	9%	(2008) Introduction of new mining law and cancellation of all contracts
25%	56%	14%	3%	3%	2009/10	5%	33%	38%	10%	15%	(2009) Removal of windfall profits tax
26%	41%	30%	4%	0%	2010/11	4%	50%	35%	12%	0%	

Indonesia											
11%	42%	32%	11%	5%	2004/5	6%	44%	19%	19%	13%	
5%	40%	20%	25%	10%	2005/6	0%	32%	42%	21%	5%	
19%	22%	34%	19%	6%	2006/7	12%	28%	24%	20%	16%	
10%	39%	32%	19%	0%	2007/8	3%	42%	32%	19%	3%	
26%	40%	18%	12%	3%	2008/9	1%	57%	31%	9%	1%	(2009) Introduction of new mining law
21%	38%	33%	8%	0%	2009/10	4%	44%	29%	18%	5%	(2010) Promulgation of regulations under new mining law
21%	29%	37%	8%	5%	2010/11	5%	53%	32%	5%	5%	(2010/2011) Ongoing uncertainty over existing Contracts of Work

2009/10 Mid-Year Survey										
Uncertainty over Taxation Regimes and Regarding Future Tax Levels						Attitude toward the Mining Regime				
1	2	3	4	5		1	2	3	4	5
16%	59%	23%	3%	0%	Chile	4%	15%	19%	9%	53%
13%	47%	30%	8%	2%	Peru	8%	28%	18%	3%	43%
14%	24%	29%	24%	10%	Tanzania	14%	21%	19%	5%	40%

2009/10 Mid-Year Survey										
Uncertainty over Taxation Regimes and Regarding Future Tax Levels						Attitude toward the Mining Regime				
1	2	3	4	5		1	2	3	4	5
9%	30%	43%	13%	4%	Zambia	12%	24%	24%	3%	37%
5%	43%	30%	15%	8%	Indonesia	1%	32%	17%	6%	43%

1: Encourages investment	1: Considerably more hostile
2: Not a deterrent to investment	2: Somewhat more hostile
3: Mild deterrent	3: Less hostile
4: Strong deterrent	4: Considerably less hostile
5: Would not pursue investment due to this factor	5: No change