A LEGAL AND FISCAL ANALYSIS OF THE AGYAPA INVESTMENT MODEL

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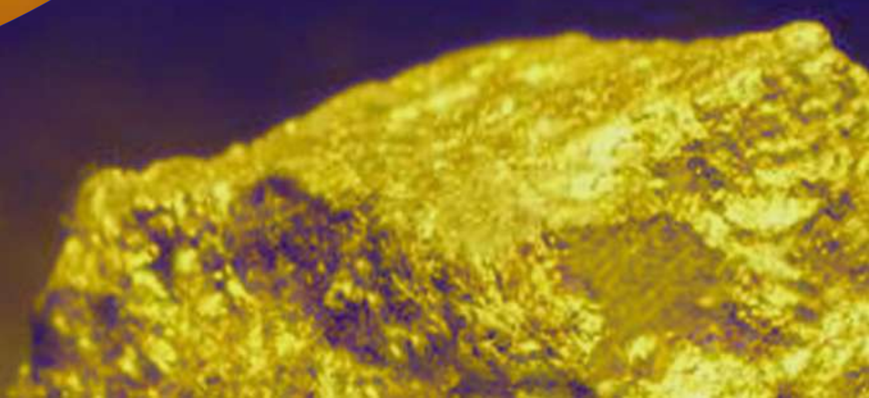


Table of Contents

List of abbreviations

BAU	Business-As-Usual
CAGR	Compound Average Growth Rate
CSO	Civil Society Organisation
GoG	Government of Ghana
GRA	Ghana Revenue Authority
IFRS	International Financial Reporting Standards
IPO	Initial Public Offering
MDF	Minerals Development Fund
MIIF	Minerals Income Investment Act
NAV	Net Asset Value
PV	Present Value
SPV	Special Purpose Vehicle

List of tables

List of figures

List of boxes

Executive summary

In 2018, the Parliament of Ghana passed the Minerals Income Investment Fund (MIIF) Act to allow the fund to invest part of the country's mineral income in a Special Purpose Vehicle (SPV) in line with meeting the Act's objective of monetising Ghana's income from its mineral wealth. As part of the implementation of the Act, Government of Ghana (GoG) decided to engage in a gold royalty monetisation transaction by selling part of the future royalty flows on the London Stock Exchange and later on the Ghana Stock Exchange. This led to the incorporation of Agyapa Royalties Limited (Agyapa), an SPV, as a first step to achieving the object of the MIIF Act.

The Government seeks to raise about $500 million from the sale of 49 per cent of Agyapa's shares. Consequently, GoG has capitalised Agyapa with royalties from 48 mineral producing and prospecting leases, constituting about 95 per cent of government income from mineral royalties. Parliament of Ghana approved the assignment of rights to royalties from the leases to Agyapa at a value of $1 billion.

The analysis of the Agyapa investment model raises concerns about the legal structure of the relationship between Ghana and Agyapa, and the financial valuation of the assets assigned to the company. This paper provides an assessment of two parameters; (1) how the letter of the agreements protects the interest and rights of Ghana and (2) the value assigned to the 48 leases in the transaction.

The relevant agreements used for the assessment were the Mineral Royalties Investment Agreement, the Amended and Restated Investment Agreement, the Relationship Agreement and the Assignment Agreement. Per the letter of the agreements, the analysis shows that:

a. Beyond the 48 leases assignment, the agreement provides Agyapa with a right of first refusal for future royalty assignments on other leases other than the assigned leases, which shall be on the terms similar to the 48 leases. Therefore, the country is denied any better options for mineral royalties, unless Agyapa shows no interest in future royalty rights assignments.
b. Contrary to the Government's communication that the value of $1 billion assigned to the agreement is not the actual net asset value for the listing on the stock market, the agreement recognises the figure as the agreed consideration for the allocated mineral royalties. This recognition makes the $1 billion value an important number with legal ramifications to which the Government must pay attention. Assuming that the $1 billion is an arbitrary number, it is worrying that there is no evidence of the

Government's assessment of the actual value of the 48 leases assigned to Agyapa, neither did Parliament of Ghana require same before approval.

c. The transaction duration is for an indefinite period as long as it is economically viable to mine and the possibility of reserve appreciation through exploration on the allocated mining leases is high. The maximum of 15 years reserve life used by the Ministry of Finance for its analysis does not account for such possibility of reserve appreciation, which is characteristic of many of the allocated mines.
d. The agreement contains some fiscal stability clauses which are not consistent with existing mining agreements and therefore render those clauses not actionable in practice.
e. The agreement neutralises Ghana's right as a majority shareholder. The relationship agreement limits its right on significant votes that shape the governance architecture of Agyapa, further restricting the Government's control of the company and raising considerable doubt about its aspirations for monetising royalties.
f. The agreement grants Agyapa tax exemption on the basis that royalty constitutes a tax, hence cannot be taxed. This assertion is contrary to the MIIF act (Section 28(5)), which reclassify royalty as revenue for investment. The investment agreement recognises the transfer of assets to Agyapa as a sale of rights at a consideration which becomes revenue to Agyapa. It must therefore be taxed just as all royalty companies are taxed.

The paper highlights that royalties from gold have been relatively stable compared to royalty streams from other commodities such as oil. This relative stability is contrary to the Government's fears of the impact of volatilities which is the thrust of the Agyapa investment model. The analysis also shows that government royalties are distinct from typical royalty streaming companies. Government obtains royalty because of its ownership of the resources and not its investment, as is typical of royalty companies. Therefore, if additional investments influence production, government royalty correspondingly increases. In royalty streaming companies, additional investment by the mining company dilutes the streaming company's shares. This requires that Government accounts for the distinctiveness in any attempt to subject the low-risk government royalty to investment risk, especially where the World Bank predicts gold prices to average about $1500 in the medium term.

Modelling the Agyapa scenario against the prevailing context (Business-As-Usual (BAU) scenario) shows that the BAU scenario provide greater stability to government revenue at a reduced risk. The 48 leases hold much promise for Ghana's gold production in the foreseeable future. Exchanging this significant prospect for an upfront payment of $500 million for a substantial share of Ghana's gold royalty (on the face of the agreement) creates a disadvantage for Ghana. Therefore, the Government is required to simultaneously recalibrate the minimum upfront receipts and the volume of gold assigned to the company.

The legal and fiscal deficiencies of the Agyapa investment model weakens any argument in favour of the transaction. More importantly, the Government is the owner and promoter of policy that governs the extractive industry. The sector's governance requires significant flexibility that allows the Government to shape policy to promote its growth and development. Therefore, any agreement that freezes the Government's flexibility to adapt to the industry's changing trends as the Agyapa agreements seek to do is inimical to the industry's sustainability. The Government must rethink the Agyapa investment model and consider other investment models that can generate a better value and maintain the flexibility to control the industry's policy evolution.

1.0 Introduction

The Government of Ghana's decision to engage in a gold royalty monetisation transaction has raised concerns among various stakeholders. The Government intends to sell part of the future royalty flows on the London Stock Exchange and later on, Ghana Stock Exchange. This sale is part of implementing the Minerals Income Investment Fund (MIIF) Act (Act 987) which the Parliament of Ghana passed in 2018. The Act permits the Fund to invest part or all of its mineral royalties in a Special Purpose Vehicle (SPV) in any jurisdiction in furtherance of the object of the fund.

The specific objectives of the MIIF Act are to; (1) maximise the value of the income due to the Republic from the mineral wealth of the country for the benefit of its citizens; (2) monetise the minerals income accruing to the Republic in a beneficial, responsible, transparent, accountable and sustainable manner; and (3) develop and implement measures to reduce the budgetary exposure of the Republic to minerals income fluctuations.

These objectives imply that the action of Government in the management of mineral royalties should, at the barest minimum, commit to appropriate guarantees for the attainment of the stated objectives. Subsequently, GoG has incorporated a royalty streaming company in the Bailiwick of Jersey (Agyapa Royalties Limited[1], hereafter referred to as "Agyapa") as the SPV to pursue the object of the MIIF Act. Agyapa has also established its subsidiary, ARG Royalties Ghana Limited[2], incorporated in Ghana as the recipient of the assigned royalties on behalf of Agyapa Royalties Ltd.

The Government seeks to raise an upfront payment of about $500 million from the sale of 49 per cent while maintaining 51 per cent of Agyapa's shares. Consequently, GoG has capitalised Agyapa by transferring the ownership of future royalty flows from royalties from 48 mining producing and prospecting leases which substantially constitute the bulk (about 95 per cent) of government royalties from mineral resources. To give effect to this transfer of ownership, the Parliament of Ghana (Parliament) approved the assignment of Government's rights to royalties from the leases to Agyapa at the value of $1 billion.

However, a review of the Agyapa investment model raises important questions about how the Government can achieve the object of the MIIF Act with due recognition to the terms of the agreement and industry trends. This paper provides an assessment of two key parameters; (1) how the content of the agreements protect the interest of Ghana, and (2) the value of the resources assigned to the transaction.

[1] The Royalty Investment Agreement refers to this company as "ListCo"

[2] The Royalty Investment Agreement refers to this company as "RoyaltyCo"

2.0 Do the agreements protect Ghana's interest?

The agreements between GoG and Agyapa are essential in understanding the benefits that will accrue to the country and the long term protection of its interest. Thus, the letter of the agreements must clarify all doubts. This section presents a careful examination of specific terms of the agreement to test whether the Government could have negotiated better. It also seeks to examine some of the questions in the public domain concerning:

1. the number of mining leases assigned to Agyapa and its implication for Ghana
2. the significance of the valuation of $1 billion approved by Parliament
3. duration of the agreements
4. fiscal stability clauses in the agreements
5. government as a majority shareholder
6. tax exemptions granted to Agyapa

Box 1: Relevant agreements for the analysis

1. Mineral Royalties Investment Agreement
2. Amended and Restated Investment Agreement
3. Relationship Agreement
4. Assignment Agreement

2.1 The Number of Leases

The Mineral Royalties Investment Agreement (subsequently referred to as investment agreement) assigns 48 mining leases to Agyapa. These leases cover all major producing and prospecting gold concessions in the country. As stated earlier, these 48 leases are significant because they contribute about 95 per cent of royalties from all mining activities in Ghana. The Government of Ghana's explanation focused only on the number of projects on the leases. For the avoidance of doubt, point 4 of the statement from MIIF on 20th August 2020 is quoted as follows;

"Agyapa Royalties will receive 75.6% of royalties from a ***selected portfolio of underlying gold mines (12 producing mines and four development assets) under the current mining leases****. In addition to the initial capital raised, MIIF is expected to continue to receive dividends from Agyapa and will continue to receive the royalty revenue from other operating mines in Ghana that are not related to Agyapa Royalties... Agyapa will hold rights to receive 75.6% of the royalties from the 12 producing mines and four development assets in its portfolio. Agyapa is not acquiring the rights to all of Ghana's royalties."*

While it is true that 12 mining projects are currently in production on the leases, Agyapa is entitled to all future projects that will emerge on the leases and the resultant gold royalties. For example, the Newmont

Ahafo North mining project under development in Yamfo is not one of the 12 producing assets but will be subjected to the Agyapa agreements when it goes into production. Similarly, any other mining project on the 48 leases will be subjected to the agreement.

Beyond the 48 leases, the agreements further grant Agyapa the right of first refusal for any royalty disposal on all gold leases in the country under Clause 3.4 (a) of the investment agreement;

"Before assigning, granting, allocating, transferring or otherwise disposing of any of the Fund's rights, privileges, title, power and interest (of any kind, whether personal or proprietary) to receive any Gold Mineral Royalties (the "Optional Mineral Royalties") in respect of Mining Leases other than the Allocated Mining Leases (the "Optional Mining Leases") or agreeing to do so, the Fund shall follow the procedure set out in this Clause 3.4."

"(a) The Fund shall first send to RoyaltyCo, a notice of its intention (which shall include the specified royalty rate payable in respect of such Optional Mining Lease) and invite RoyaltyCo to submit offers for the Optional Mineral Royalties subject to the assignment, grant, allocation, transfer or other disposition, RoyaltyCo shall have thirty (30) days from the date of such notification to deliver a counter notification with an offer in accordance with Clause 3.4(c)"

"(c) If the Fund decides to proceed with negotiating a royalty purchase agreement in respect of the Optional Mineral Royalties with RoyaltyCo, the Fund and RoyaltyCo shall have sixty (60) days in which to negotiate in good faith and execute the terms and conditions of a mutually acceptable royalty purchase agreement which shall, among other matters, provide for the assignment, grant and allocation of the Optional Mineral Royalties to RoyaltyCo on terms and conditions ***identical*** *to those that apply to the Allocated Mineral Royalties and the applicable specified royalty rate payable in respect of such Optional Mining Lease. On the satisfaction of any conditions precedent and in accordance with the terms and conditions of the royalty purchase agreement, the relevant Optional Mineral Royalties shall be deemed to also constitute Allocated Mineral Royalties and the relevant Optional Mining Leases shall be deemed to also constitute Allocated Mining Leases for the purposes of this Agreement."*

The entire clause 3.4 makes it impossible for the Government to obtain better royalty transaction options from other leases (optional mining leases) if it decides to embark on similar royalty transactions in the future. The most worrying part of clause 3.4 is subsection (c) which claims that future royalty assignments must be on terms similar to the 48 leases assigned to Agyapa.

2.2. Significance of the $1 billion value of royalties approved by Parliament

The valuation of royalties at $1 billion is perhaps the most contested part of the whole transaction. However, the Government has failed to provide the variables that informed its valuation of the royalty stream. The Government has been vague and evasive in its communication of how it valued the future royalty flows from the 48 leases before assigning it to Agyapa. Instead, the Ministry of Finance assures the public that it used the best valuation approaches, including International Financial Reporting Standards (IFRS), to arrive at the $1 billion value. Further, Government asserts that the 1 billion dollar valuation is not the net asset value (NAV) for listing on the stock market, which they expect to generate through the book-building process. However, it is evident in the agreement that the $1 billion value is the agreed **consideration** for the "Allocated Mineral Royalties" between MIIF and Agyapa. In the definitions of terms in the agreements, it states;

"Agyapa Share Subscription" means ListCo's issuance of its shares to the Fund at an agreed consideration of US$ one billion (1,000,000,000) as contemplated in Recital (E) of the Assignment Agreement."

The stated value is emphasised substantively in clause 4 of the investment agreement.

(a) *Subject to the satisfaction of the conditions set out in Clause 2.1 (Effective Date), RoyaltyCo shall acquire from the Fund, and the Fund shall assign to RoyaltyCo, the rights granted to RoyaltyCo under this Agreement, including for the avoidance of doubt, the Allocated Mineral Royalties to be received by RoyaltyCo in accordance with Clause 3.1(a) (Allocated Mineral Royalties Obligation) above, for the value of one billion US Dollars (USD 1,000,000,000) (the "Royalty Value").*

(b) *Further, in accordance with the Assignment Agreement, the Fund shall assign to ListCo **its right** to receive the Royalty Value in **consideration** for the Agyapa Share Subscription.*

Given that the Fund and RoyaltyCo have agreed to the consideration of $1 billion, this cannot be deemed illusory under principles of contracts. The consideration of $1 billion makes it the guaranteed value at which Ghana is granting the rights to its royalties to Agyapa, which required parliamentary approval as a condition precedent. The valuation at $1 billion may not be the net asset value of Agyapa; however, it is an essential benchmark for institutional investors who want to generate higher value after the Initial Public Offering (IPO). The closer the investors are to the $1 billion figure, the higher the propensity of capital appreciation. Therefore, GoG should on its own have a fair idea of the value of royalties it seeks to assign to RoyaltyCo, and by extension, the stock market. This primary exercise should have guided the expectation of Parliament from the transaction.

"Given that the Fund and *RoyaltyCo* have agreed to the consideration of $1 billion, this cannot be deemed illusory under principles of contracts. The consideration of $1 billion makes it the guaranteed value at which Ghana is granting the rights to its royalties to Agyapa, which required parliamentary approval as a condition precedent."

It is important also to point out that the Government has significantly scaled down its expectation in the listing on the stock exchanges. In the 2018 budget, Government expected to raise $750million from the listing on the stock market. In the final agreements, this expectation has reduced to $500million. This reduction occurred after the Ministry's engagement with potential investors for over two years. One can reasonably assume that the book building will not achieve a significant shift from the initial valuation, which has emanated from the potential investors.

The Government must therefore look beyond the listing on the stock market. It must deal with the implication of the valuation as the **transfer of a right from the sovereign country, Ghana, regulated by its laws,** to the subsidiary of a company registered in Jersey and operated under the laws of Jersey. It is not a question about how much the Government will sell shares of Agyapa on the stock market but the worth of royalties moving from one jurisdiction to another. However, the Government seems to trivialise this question by posturing that Ghana wholly owns Agyapa, and it does not matter what specific value is assigned to it by MIIF for which it sought parliamentary approval. This posture is not sustainable for the agreement between Ghana and Agyapa, particularly knowing that the country's 100 per cent ownership is transient to allow the ultimate sale of up to 49 per cent.

"It is not a question about how much the Government will sell shares of Agyapa on the stock market but the worth of royalties moving from one jurisdiction to another."

2.3 Duration of the transaction

The investment agreement does not set a definite timeframe for the royalty flow to Agyapa under the assigned leases. The Ministry of Finance estimates that reserve depletion under the leases ranges between three and 15 years for various leases under the agreement (See Box 2). However, by standard practice and the phrasing of the agreements, they last for an indefinite period. Under Clause 3.1 (b) in the investment agreement, it states;

*"the obligation to pay and transfer the Allocated Mineral Royalties continues, with respect to each Allocated Mining Lease, **for the full term of the Allocated Mining Lease**, including any **Successor Mining Lease** and **throughout the period that any gold** (including gold contained in ore, concentrate, doré or other material) can **lawfully be extracted** and recovered under the terms of such Mining Lease."*

Box 2: Reserve life of allocated mining leases

Asset	Operator	Reserve life (years)
Ahafo	Newmont	11-1.3
Obuasi	AngloGold Ashanti	15
Tarkwa	Gold Fields	14
Akyem	Newmont	6.5
Asanko	Gold Fields / Galiano Gold	10
Iduapriem	Anglogold Ashanti	6
Edikan	Perseus Mining	6
Wassa	Golden Star Resources	10
Damang	Gold Fields	6
Chirano	Kinross	3
Bogoso / Prestea	Golden Star Resources	4
Nzema / Nkroful*	BCM Group	n/a
Namdini*	Cardinal Resources	15
Wa Gold Project*	Azumah Resources	11
Bibiani*	Resolute Mining	6
Enchi Project*	Pinecrest Resources	n/a

* Development leases

This clause assigned the existing mining leases' geographic locations to the Agyapa transaction for as long as any mining company can extract gold from the leased area. Typically, the economics of a mining project defines the duration of its lease. Thus, for as long as any mining company can extract gold economically from a leased area, GoG is obliged to renew the lease. The general provision in mining agreements as provided in Box 3 shows that agreements are renewable, unless there are fundamental breaches in the agreement, or the mining company cannot extract economically in the leased area. Therefore, the Agyapa royalty's assignment is for an indefinite period primarily determined by the companies operating the leases, based on their estimation of the mines' economic viability and additional reserve appreciation as a result of further exploration.

Box 3: Extract from Newmont, Adamus and Xtra Gold mining agreements

"The Government hereby grants to the Company mining rights' to ALL that piece of land described in the schedule hereto and more particularly delineated on the Plan attached and shown edged rod (hereinafter called "the Lease Area") together with mines, beds seams, veins, channels and strata of gold lying and being wit and under the surface for a term of [X] years from the date of this Agreement. ***Such term shall be renewable from time to time in accordance with the Minerals and Mining Act,*** *2006, (Act 703)."*

Under extensions;

"If the Company, not less than six (6) months before the expiration of this Agreement, applies to the Minister for an extension of the term hereof and if the Company shall not be in default at that time in the performance of any of its obligations hereunder, ***the Company shall be entitled to an extension of the period of this Agreement*** *upon such terms and conditions as the parties may then agree."*

2.4 Fiscal Stability Clauses in the Agreement

The agreement provides stability for the undefined period, which has implications for the existing agreements with mining companies and the economic viability of mining projects. Countries and mining companies have good faith provisions in leases and development agreements that control projects' economic balance and allow the country to make more gains to account for the investment risks and shared value. It is for this reason that Ghana could renegotiate many of its mining agreements in 2013. Section 11.1 of the Newmont Akyem Agreement states;

"Profound Changes in Circumstances: For the purpose of considering Profound Changes in Circumstances from those existing on the effective Date or on the date of the most recent review of this Agreement under this Section 11.1, the Government and Golden Ridge shall at the request of the other consult together. ***The Parties shall meet to review the matter raised as soon after the request as is reasonably convenient for them both. In case Profound Changes in Circumstances are established to have occurred, the Parties shall effect such change in or clarification of this Agreement as they agree is necessary. For purposes of this Agreement, "Profound Changes in Circumstances" shall mean such changes in the economic conditions of the gold mining industry worldwide or in Ghana, or such changes in the economic, political or social circumstances existing in Ghana or elsewhere in the world at large as to result in such a material and fundamental"***

However, the Agyapa investment agreement seeks to isolate Royalties from future fiscal adjustments which could negatively impact the primary partners to the operations of the mine (Government and companies). If the Government becomes impervious to the fiscal regime's economic negotiations, it may hurt some mines' viability in the future. At the same time, it will be difficult for the Government to negotiate higher fiscal take during an unanticipated surge in gold prices if the fiscal regime is regimented the way

Agyapa seeks. The investment agreement states in clause 7.3 (b);

"It shall not agree to any amendments or waivers of (or permit any amendments or waivers of) the Fiscal Terms of any Allocated Mining leases or Relevant Agreements if such amendments or waivers could have a Material Adverse Effect on the Allocated Mineral Royalties to be paid to RoyaltyCo under the terms of this Agreement."

Therefore, clause 7.3 (b) under the investment agreement is not consistent with allowable negotiations under *Profound Changes in Circumstances* prescribed in the mining agreements. This inconsistency immediately subjects the Agyapa investment agreement and the mining agreements to future contestations as to which is superior, thus, rendering parts of the Agyapa investment agreement not binding on existing agreements. Locking the fiscal terms of a mining agreement is not the sole discretion of Government, but subject to the terms of the agreement between the Government and mining companies or future changes as may be dictated by the project's economics.

2.5 Ghana as a majority shareholder in the Agyapa transaction

The Government has repeatedly pointed out that Ghana will continue to hold a majority interest in Agyapa Royalties Limited (ListCo) after divesting shares on the stock market. However, the Government has not been forthright with the majority shareholding's significance within the agreement's context. The agreement emphatically neutralises Ghana's rights as a majority shareholder on the governance of Agyapa, while handing the governance powers to independent directors and the management. Ghana's voting rights are only relevant to the extent that the minority interest aligns with the country's interest. In clause 3 of the relationship agreement, MIIF and Government of Ghana undertake not to;

1. *vote to seek the sole interest of the state*
2. *vote to prevent the elections of an independent director*
3. *vote to remove the chairman or an independent director*
4. *vote against any shareholder resolutions, though a majority shareholder*

Under these undertakings, the only unrestricted rights are the right to sell or procure more shares and the right to vote on resolutions proposed by other shareholders. These restrict the Government's control of the company and raise significant doubt about its royalty monetisation aspirations. Government has minority representation on the board, hence grants the independent directors the ultimate responsibility for the company's direction, especially on specific investment portfolios that may differ from Ghana-specific investments it has promised by the Government.

2.6 Tax Exemption

The Investment agreement exempts Agyapa from taxes on the revenues from the assignment of royalty rights. The defence put forth by Government to justify the exemptions granted is that the royalty constitutes a tax, therefore, ***there cannot be***

a tax on tax. This argument is, however, not supported by the MIIF Act. Section 28 (5) of the MIIF act states;

"Income accruing to the Republic from minerals paid to the Fund by a mining company shall:
a) not be classified as taxes paid by the mining companies and shall not be expended as conventional tax revenue paid to the Government."

This provision reclassifies the assigned royalties to Agyapa from tax to revenues and further contradicts the reasoning behind granting of exemptions under the same act. Attempts not to tax Agyapa are simply a protection of investors' interest and not that of Ghana. As an independent company, Agyapa becomes a participant in the mining sector with a guaranteed revenue stream. Therefore, the Government should tax RoyaltyCo, operating in Ghana, just as any participant in the mining sector is taxed, whether or not the Government is a party to the operations.[3]

3.0 Valuation of Royalties under the Agyapa investment model

This section assesses the value of the Agyapa model based on facts available in the contract and some information provided by the Ministry of Finance. The assessment also compares the Agyapa model with the Business-As-Usual (BAU) scenario where there is no investment of mineral income in a SPV.

The analysis recognises that the amount of royalties obtained from gold is a function of production and price, similar to other extractive commodities prone to price volatilities. However, the trend shows that unlike other extractive commodities such as crude oil, the price of gold has been relatively stable. Gold maintained a steady rise in price between 2000 and 2012. The price declined between 2013 and 2015 and has since recovered to an average of about $1700 as at September 2020. On the other hand, the price of crude oil has oscillated significantly over the period, with substantial plummets in 2009, between 2013 to 2016, and a record decline in 2020 (See Figure 1).

[3] Government owns 10 per cent in all large-scale mining operations.

Figure 1: Gold and crude oil price trends from 2000 to 2020 (USD)

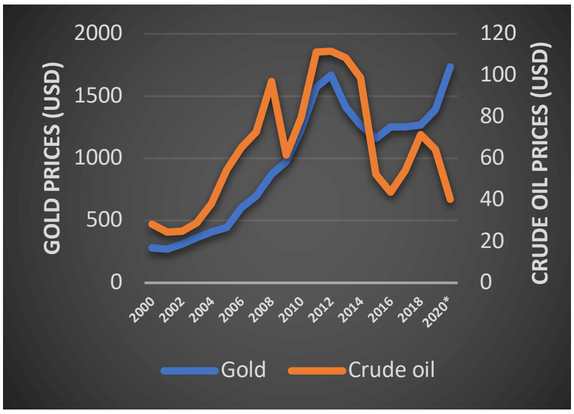
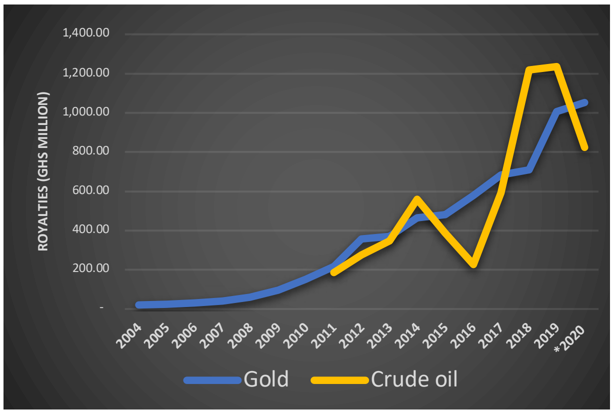


Figure 2: Royalties obtained from gold and crude oil from 2004 to 2020* (GHS)



*** 2020 figures are based on government projections. However, with an unanticipated surge in gold prices (from $1600 in January to $1900 in October), royalty receipts are likely to be higher. While oil royalty was revised due to falling oil prices, gold prices were not adjusted in the Government's mid-year budget review.**

Evidence from GoG data shows that royalties from gold have provided a stable contribution to the Government's revenue. Gold royalties have experienced a steady increase over the past two decades. Comparatively, royalties from petroleum have been more unpredictable with a sharp decline between 2015 and 2016 and possibly the worst to occur in 2020 (See Figure 2).

Therefore, gold royalty is a comparatively low-risk revenue source and exaggerates Government's fears of the impact of gold price volatilities, which underpins the decision to subject the royalties to the Agyapa investment model. It also represents an interesting contradiction; while the Government intends to mitigate price risks in an industry, it seeks to invest in the same industry.

"Gold royalty is a comparatively low-risk revenue source and exaggerates Government's fears of the impact of gold price volatilities, which underpins the decision to subject the royalties to the Agyapa investment model. It also represents an interesting contradiction; while the Government intends to mitigate price risks in an industry, it seeks to invest in the same industry."

Box 4: The distinctiveness of government royalty from royalties from a streaming company

Government royalty	Royalty streaming companies
Royalties result from ownership of resources	Royalties result from investment by streaming companies
With additional investment in a mine, the share of government royalty remains undiluted.	If additional investment is procured on the mine, it dilutes the streaming company's share of royalty.
If a mining company goes bankrupt, the resources of the state remains. It can be reassigned to a different company to produce the resource on similar different terms as may be agreed.	The streaming company loses its investment upon bankruptcy of the mining company.
At the expiration or termination of the lease, the area can be reassigned to a different company if there are still proven reserves.	At the expiration or termination of the lease, the royalty agreement expires.

Given such a relatively stable outlook for gold, if Government invests the royalties, the returns on the investment should, in the worst-case scenario, be the same as the BAU case. For this analysis, we compare the cash flows over 25 years with the understanding that the agreement itself is in perpetuity. We stabilise the output, even though the trend shows increased investment and new projects on the assigned leases, leading to a potential increase in royalties.

Box 5: Assumptions used in valuation

1. **Gold production:** We assume a stabilized production of 3.2 million ounces. This conservative estimate is smoothened by upcoming projects such as the Newmont Ahafo North project, and other projects from prospecting and producing projects within the 48 leases.
2. **Gold price:** Gold price forecast from 2020 to 2030 by the World Bank is averaged at about $1565 per ounce. This study uses a conservative estimate of gold price of $1500 per ounce, ignoring the current price of about $1900.
3. **Royalty rate:** Ghana operates a sliding scale royalty rate from three to six per cent of gross production, based on the price of gold for some mining agreements. For other mining agreements, a royalty rate of five per cent is applied. This study estimates an average royalty rate of 4.5 per cent.
4. **Royalty amount:** Based on the estimated gold price, production volume and royalty rate, an amount of $216 million is assumed and stabilized over a 25-year period for the 48 assigned leases.
5. **Discount rate:** The gold industry's cost of capital averages about 5 per cent. This is adapted for the analysis.
6. **MIIF's share:** MIIF takes 2 per cent of assigned royalties as provided by the Ministry of Finance.
7. **GRA's share:** GRA takes 2.4 per cent of assigned royalties as provided by the Ministry of Finance.
8. **MDF's share:** MDF takes 20 per cent of assigned royalties as prescribed by the MDF act.
9. **Agyapa's share:** Agyapa therefore takes the remaining 75.6 per cent of revenues from the assigned royalties.
10. **Agyapa's operating expense:** We assume an average operating expense of 25 per cent of Agyapa's revenue. This is based on the average operating expense of benchmarked gold royalty companies presented by the Ministry of Finance.
11. **Net revenue:** Agyapa's net revenue is the difference between Agyapa's royalty receipts and its operating expense.
12. **Dividend pay-out rate:** According to Ministry of Finance's presentation to Civil Society, a dividend pay-out of 50 per cent net revenue is anticipated.
13. **Ghana's share of dividend:** Ghana's share of the dividend pay-out is 51 per cent assuming the disposal of 49 per cent of the shares in Agyapa.
14. **Reinvested amount:** 50 per cent of net revenue will be reinvested.
15. **Return on Agyapa investment:** We assume a return of 18 per cent on the investments made by Agyapa. This is based on upper tier of yields from similar gold streaming companies.

3.1 Business-as-usual (BAU) scenario

The BAU case represents the *do-nothing scenario* (without the Agyapa investment model). In this scenario, the only beneficiaries are Ghana Revenue Authority (GRA), Minerals Development Fund (MDF), and the Government. In effect, all the revenues from royalties of the assigned leases are invested directly for the country's socio-economic development. For this analysis, we isolate the component that goes to the Central Government, which is currently being assigned to MIIF and by extension, Agyapa. Therefore, the annual royalty from the assigned leases to the Central Government is $167.62 million[4], with a present worth of about $2.36 billion over the 25 years (See Table 1).

[4] The BAU scenario ignores the practice of disbursing less than 20 per cent of royalty revenue to the MDF which is influenced by the Earmarked Funds Capping and Realignment Act. The Act currently caps MDF at 12 per cent while actual disbursement is about 8 per cent.

Table 1: BAU estimation of central government revenue from royalties for the 48 leases

Description	Amount ($ Million)
Total royalty	216
o/w 2.4% GRA's share	5.18
o/w 20% MDF's share	43.2
o/w 77.6% Central government's share	**167.62**

3.2 The MIIF scenario

MIIF absorbs the share of the Central Government's royalties for investment and assigns the equivalence of 75.6 per cent of total royalty from the assigned leases to Agyapa. Thus, out of the estimated $167.62 million allotted to MIIF annually, it retains $4.32 million for its operational expense and allocates the remaining ($163.3 million) to Agyapa. The allocation to Agyapa is analysed to ascertain the value of dividend flows from Agyapa to Government based on the proposed dividend payout rate of 50 per cent and an average operating expense of 25 per cent of Agyapa's revenue. This operating expense indicates that the Agyapa transaction introduces significant costs which were hitherto not associated with royalties. The operating cost is the top line deduction from the BAU scenario, which would have gone to the budget.

Based on the assumptions in Box 4, the average annual operating expense of Agyapa will amount to about $40.82 million, with net revenue of about $122.47 million. Consequently, Agyapa's dividend payout amounts to about $68 million based on the proposed dividend policy, translating to an annual dividend share of about $31.23 million to the Central Government. The remaining 50 per cent of net revenue ($61.24 million) is what Agyapa is supposed to reinvest in gold producing companies to achieve the object of MIIF. The analysis also recognises that as part of the Agyapa transaction, the Government seeks an upfront benefit of $500 million to dispose of 49 per cent of Agyapa's shares (See Table 2).

Table 2: MIIF scenario estimation of central government revenue from royalties for the 48 leases

Description	Amount ($ million)
Upfront (one-off) payment	500
Royalty revenue for the year	216
MIIF	4.32
GRA	5.18
MDF	40.82
Agyapa's revenue	163.30
Agyapa's operating expense	40.82
Agyapa's net revenue	122.47
Total dividend payout	61.24
Ghana's share of the dividend	31.23
Reinvested amount	61.24

In estimating the total returns of Agyapa, the analysis accounted for the 48 leases and dividend from other investments assuming an interest rate of 18 per cent and holding dividend payout rate constant at 50 per cent. These assumptions are also premised on freezing Government's share in Agyapa at 51 per cent over the period.

The dividends from the assigned leases yield a present value of about $440.16 million. Also, the return on other investments by Agyapa yields a present value of $562.66 million. The upfront receipt, the annual dividends from the assigned leases and the dividends from other investments cumulatively generate a total present value of about $1.5 billion over the 25 years, corresponding to an equivalent annual worth of about $106.63 million. This value makes the value of the Agyapa royalty investment option about $61 million worse than the BAU scenario on a yearly basis (See Table 3).

Table 3: Returns on Agyapa transaction to the Government

Revenues	Amount (Million)
Present Value (PV) of dividend on 48 leases	$ 440.16
PV of dividend on reinvested returns	$ 562.66
Upfront receipt	$ 500.00
PV of total receipts by GoG	$ 1,502.82
Annual worth of receipts	$ 106.63
Annual shortfall on BAU scenario	**$60.99**

3.3 Sensitivity Analysis

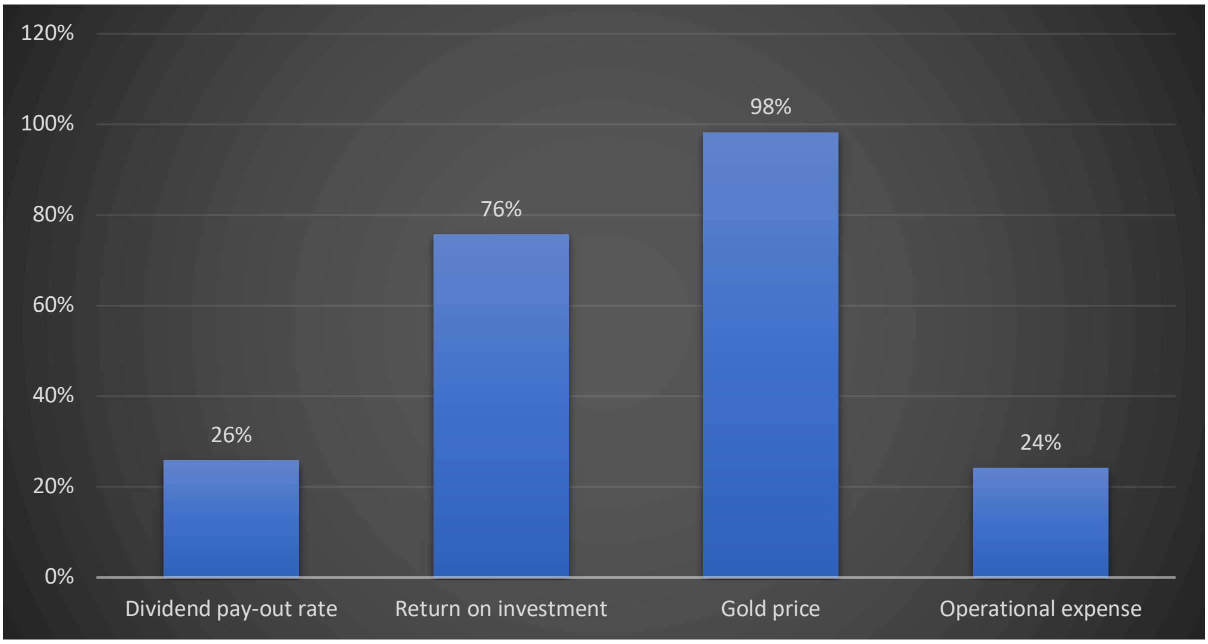
Based on the above assumptions, the analyses show that the Agyapa investment model provides lower returns to the Government compared to the BAU scenario. However, some changes in the input parameters can bring the two scenarios at par. The sensitivity analysis examined changes in input parameters and their impact on Ghana's benefit from the Agyapa model. Ghana's benefits is the difference between the returns form Agyapa and the receipts from the BAU scenario (described as net gains). A positive net gain implies higher returns from the Agyapa model than the BAU scenario, whereas a negative net gain implies lower returns from Agyapa. The Agyapa investment is at par with the BAU scenario at a zero net gain.

The analysis points out seven input parameters that influence net gains; the operational expense, dividend payout rate, shareholding structure, the return on investments, the value of upfront receipts to Government, amount of gold assigned to Agyapa and the price of gold. Out of the seven parameters, four are outside the control government, while the remaining three are within the Government's control.

3.3.1 Input parameters outside the Government's control

The four input parameters outside the Government's control include; operational expense, dividend payout rate, return on investment, and gold price. For each input parameter, the coefficient of variation (CoV) of the net gains expressed as a percentage was determined to show how changes in the parameter values influence net gains. Increasing CoV values represent higher sensitivities of input parameters. The analyses show that the four input parameters have high sensitivity values of at least 24 per cent. However, the net gain is extremely sensitive to changes in the gold price and return on investment (See Figure 3).

Figure 3: Coefficient of variation of input parameters that cannot be controlled by the Government



Dividend payout rate

Government has proposed a dividend policy of a 50 per cent dividend payout ratio. While this is an assumption, it will not be within Government's control after the listing, because the independent directors will have the power to change the policy based on the agreements. The proposed dividend policy suggests that 50 per cent of the Agyapa's net revenue will not be available for reinvestment. The sensitivity analysis shows that net gains remain negative for all possible values of the dividend payout rates, holding all other parameters constant. Payment to the Government at 50 per cent dividend payout ratio represents the best dividend ratio in the transaction. However, the BAU scenario is still significantly better than the Agyapa model at a 50 percent dividend payout, representing an annual shortfall of approximately $61 million.

Return on investment

Generally, royalty companies have a Compound Average Growth Rate (CAGR) of about 16 per cent.[5] However, this analysis uses an optimistic CAGR adjusted by a 2 percentage point increment to obtain a CAGR of about 18 per cent. This adjustment accounts for a surge in returns of the royalty company. At the optimistic rate of 18 per cent, the investment generates an annual shortfall of about $61 million. Lower returns on investment also worsen the Agyapa transaction compared to the BAU scenario.

To achieve a positive net gain, the return on the investment over the period should

[5] https://www.usglobaletfs.com/insights/etf-targeting-smart-money-gold-mining/ ; http://www.usfunds.com/investor-library/frank-talk/franco-nevada-royalty-of-the-gold-industry/#.X5bAFVP7RQJ

average at least about 31.74 per cent, holding all other factors constant. This shows that the optimistic CAGR of 18 per cent should increase by about 76 per cent to bring the Agyapa model at par with the BAU scenario. However, this increase is subject to market determinations and does not lie within the Government's control to achieve the optimal rate of return.

Gold price

Gold price is the most sensitive parameter among the input parameters outside government control. The adoption of a gold price of $1500 per ounce ignores the current gold price of about $1900 per ounce.[6] Increasing gold price weakens the Agyapa option and increases the superiority of the BAU scenario. For example, at a sustained gold price of $1700 per ounce, the Agyapa investment model worsens from a negative annual net gain of about $61 million (at $1500) to $74 million. Similarly, this worsens to about $86.5 million at $1900 per ounce. A gold price of about $550 brings the value of the Agyapa investment model at par with the BAU scenario, holding all other factors constant. This is the maximum gold price that can justify an upfront payment of $500 million for the sale of 49 per cent of royalties from the 48 mining leases.

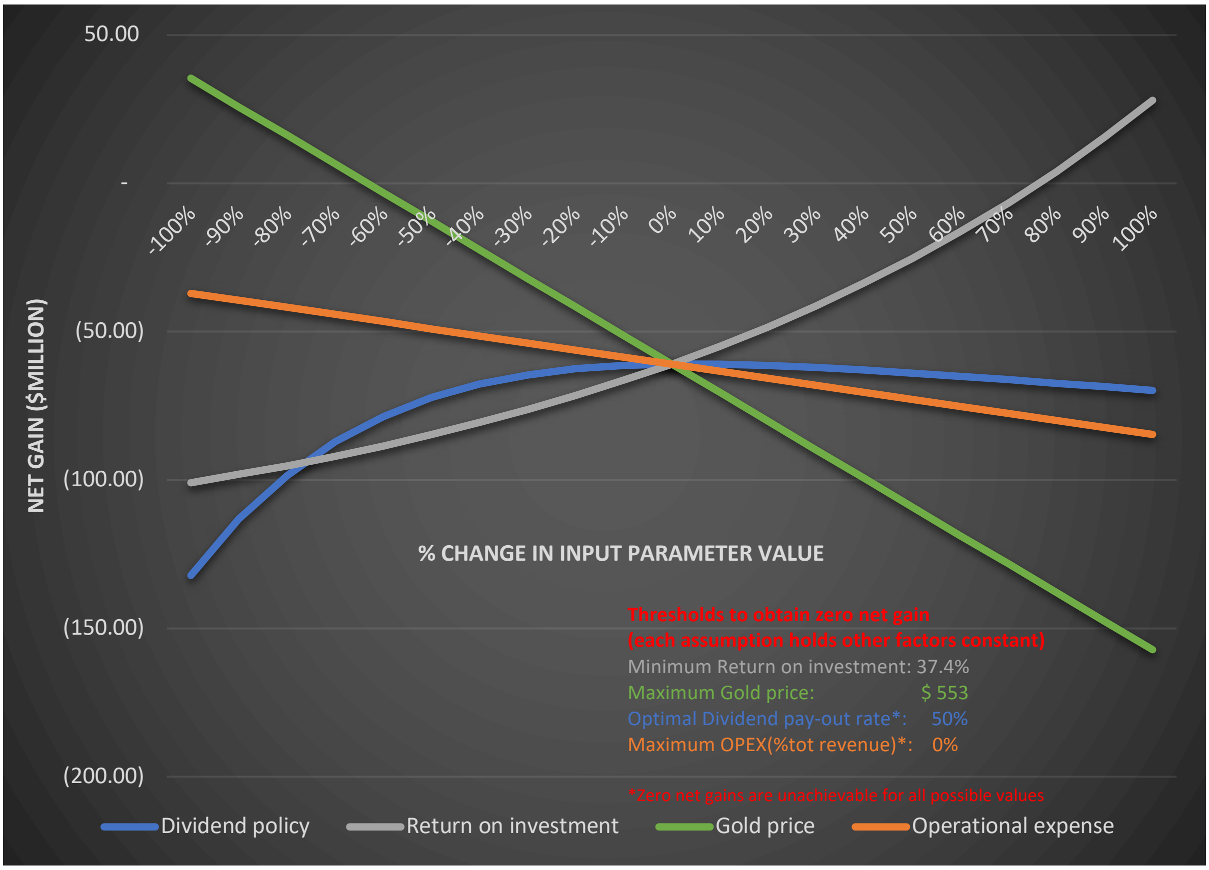
Operating expense

Even though the operating expense introduces substantial costs to the management of Ghana's royalties (about $41 million annually), it is the least sensitive input parameter among the parameters that do not lie within the Government's control. Returns from the BAU scenario and that of the Agyapa model will not achieve parity even if there is a complete waiver of the assumed operating expense.

Figure 4 presents a summary of the sensitivities of the impact of changes in the various input parameters outside the Government's control on the net gains. The horizontal axis represents the percentage increase or decrease in each of the input parameters' original values.

[6] As of 26th November 2020, the spot price of gold was about $1906 per ounce.

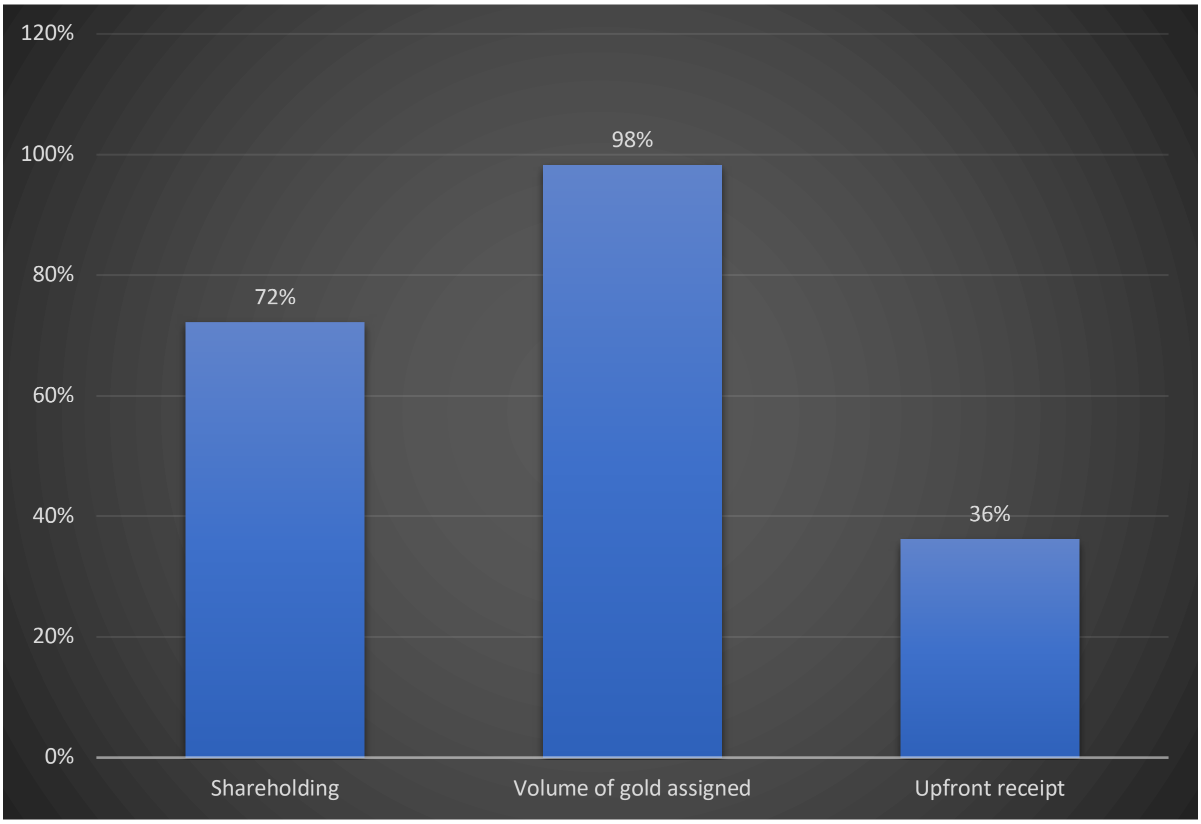
Figure 4: Summary on sensitivities of the impact of changes in input parameters outside the control of the Government



3.3.2 Input parameters within the Government's control

The input parameters within the Government's control are; the volume of gold assigned to Agyapa, the shareholding structure, and the upfront receipt by Government. The net gains are highly sensitive to changes in each of the three input parameters under the Government's control, with a minimum CoV of 36 per cent for upfront receipt. The volume of gold assigned to Agyapa exhibits the highest sensitivity of 98 per cent, followed by the shareholding structure (See Figure 5).

Figure 5: Coefficient of variation of input parameters under the control of Government



Shareholding

On the assumption that Ghana retains a majority shareholding of 51 per cent of Agyapa, there will be an annual shortfall of about $61 million compared to the BAU scenario. Thus, the upfront payment of $500 million to Government is less than the value of 49 per cent of Agyapa's share at a production volume of 3.2 million tonnes and a gold price of $1500 per ounce. The sensitivity analysis shows that increasing the shareholding in Agyapa reduces the negative net gain. At an upfront payment of $500 million and holding all other factors constant, the value of Government's share of Agyapa that brings the transaction at par with the BAU scenario is about 97 per cent, which is also not attractive to an investor. This exposes the transaction and makes it unacceptable to subject low risk royalty to investment risks.

The volume of gold assigned

The value of the royalty company is highly sensitive to gold production. Recognising that production increase is more probable as a result of new projects on existing production leases and prospective leases, the agreement worsens for Ghana. Thus, an increase in gold production creates a higher value in the BAU scenario than the Agyapa investment model. At an upfront payment of $500 million to Government and 51 per cent shareholding, the amount of gold relevant for the Agyapa investment model to be at par with the BAU scenario is about 1.18

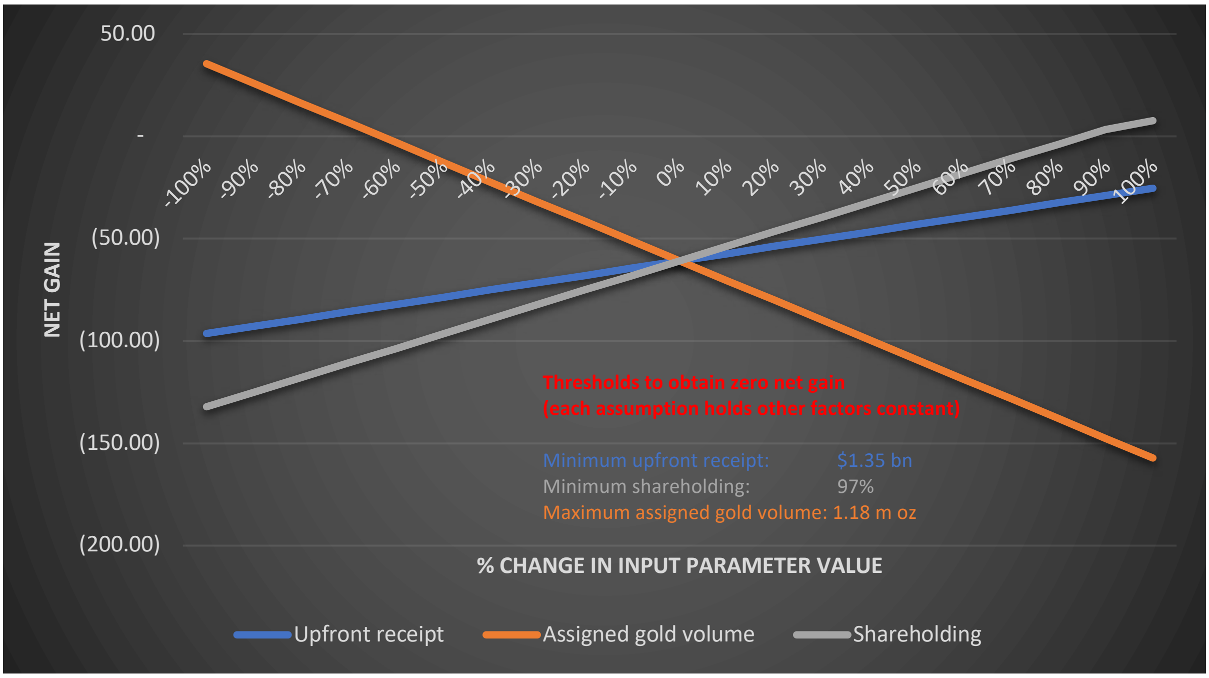
million ounces. Assigning the total volume from the assigned leases have a greater propensity to worsen Ghana's case beyond the results presented in this analysis.

Upfront receipts

The upfront payment parameter has a coefficient of variation of about 36 per cent. A higher upfront payment of about 1.35 billion is required to bring the Agyapa transaction at par with the BAU scenario, holding all other factors constant.

Figure 6 presents a summary of the sensitivities of the impact of changes in the various input parameters within the Government's control on the net gains.

Figure 6: Summary of sensitivities of the impact of changes in input parameters within the control of the Government



4.0 Conclusions and recommendations

The decision to monetise Ghana's mineral royalties is not necessarily wrong. However, given that royalty receipts for a resource owner have limited risks, investment options should be thorough to ensure that the assumptions and the structure of the investment provide significant comfort or guarantee for the state. In the worst case, these options must be such that the investment will not be worse than the BAU scenario. A careful examination of the structure of the transaction raises significant legal and fiscal deficiencies that undermine the object of the transaction.

The agreements that establish the relationship between the Government of Ghana and Agyapa raise significant concerns about the number of leases assigned to Agyapa (assigned leases and optional leases). The company is assigned 48 leases with the right of first refusal for any other royalty disposal on the same terms as the 48 leases. This right has far-reaching implications on future royalty transactions; particularly, if Government realises that it could get a better deal for the assignment of other leases. Further, the agreement's fiscal stability clauses introduce substantial conflicts with existing mining agreements and have implications for the industry's overall performance and investment attraction.

The agreement neutralises Ghana's rights on the company's governance as a majority shareholder, while the independent directors manage and control the company's affairs. The Government is disabled from taking decisions that may be of the country's interest, except decisions supported by the company and independent directors.

Other legal deficiencies relate to the duration of the agreement which in all material understanding is in perpetuity. Also the valuation of the revenue stream is contractually set at $1 billion in spite of the Government's communication that it is not the net asset value. Government's reasoning behind the exemption of Agyapa and its subsidiary from tax commitments again creates a conflict with provisions in the MIIF Act which reclassifies royalties as revenues.

The financial valuation of Agyapa indicates that for an upfront payment of $500 million, the assignment of royalties from the 48 mining leases for shares of 49 per cent of Agyapa has an annual shortfall of about $61 million compared to the business as usual scenario. The Agyapa model is further worsened at lower rate of returns on reinvestment, high price of gold and increased operating costs of the business as analysed in Section 3.3.1 above. These factors, however, do not lie within the control of the Government.

On the other hand, other factors lie within the Government's control to improve the transaction's fiscal benefits; Ghana's share in Agyapa, the volume of gold assigned to Agyapa, and the minimum upfront payment to Government. Simultaneous recalibration of these factors can provide optimal fiscal benefits for Ghana.

The legal and fiscal deficiencies of the Agyapa investment model weakens any argument in favour of the transaction. More importantly, the Government is the owner and promoter of policy that governs the extractive industry. This position of government requires significant flexibility that allows it to shape policy to promote the growth and development of the industry.

Therefore, any agreement that freezes the Government's flexibility to adapt to the industry’s changing trends as the Agyapa agreements seek to do is inimical to the industry's sustainability. The Government must rethink the Agyapa investment model and consider other investment models that can generate a better value and maintain the flexibility to control the industry's policy evolution.

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