Performance Of The Mining Industry In 2019
Review of Global and Domestic Economic Developments in 2019

The deceleration in global economic activity, which commenced in 2018, persisted on the back of a confluence of economic and political setbacks as well as natural disasters. The prolonged trade dispute between the United States and China as well as uncertainties emanating from the United Kingdom’s exit from the European Union combined with an escalation in geopolitical tensions and adverse weather conditions to slowdown growth in measured economic output in advanced economies from 2.2 per cent in 2018 to 1.7 per cent in 2019. The spill over effects of the hikes in trade tariff between United States and China as well as country-specific systemic problems dampened economic growth in emerging markets and developing economies (EMDEs). The economies’ gross domestic product (GDP) growth rate reduced from 4.5 per cent in 2018 to 3.7 per cent in 2019. On account of the concurrent contraction in output in both advanced economies and EMDEs, the growth rate of the world’s value of final goods and services decreased from 3.6 per cent in 2018 to 2.9 per cent in 2019.

A string of synchronized lower-than-anticipated economic growth outturns in the major advanced countries counterbalanced the modest expansion in the economies of Japan and United Kingdom. For instance, the world’s largest economy, United States, recorded a downturn in the growth rate of measured economic output from 2.9 per cent in 2018 to 2.3 per cent in 2019. According to the Bureau of Economic Analysis, the country’s GDP growth slowed down on account of declines in non-residential fixed investments, exports and private consumption expenditure, which were partly offset by growth in state and federal government spending.

In the same vein, the European Commission’s statistical authority, Eurostat, reported that the growth rate of the area’s economic output decreased from 1.9 per cent in 2018 to 1.2 per cent in 2019. The reduction in the Area’s output was largely a reflection of the decline in economic activities of its dominant member states; Germany, France, Italy and Spain. The contraction of Germany’s economy, from 1.5 per cent in 2018 to 0.6 per cent in 2019, was occasioned by aftershocks of the trade dispute between the United States and China, uncertainty arising from the procedures related to the United Kingdom’s departure from the European Union and transition of its automotive industry from fossil fuel to electric powered vehicles. On the other hand, protracted industrial dispute over pension reforms as well as lower consumer and investment spending culminated in a consecutive year-on-year decline in growth rate of economic activities in France. The country’s GDP growth rate reduced from 1.7 per cent in 2018 to 1.3 per cent in 2019. In the case of Italy, which experienced a recession, persistent budget overruns as well as reduced personal and investment expenditures were the primary factors for the slump in its GDP growth rate from 1.7 per cent in 2018 to 1.3 per cent in 2019. Further, political unrests and weak consumer spending contributed partly to the nosedive in Spain’s GDP growth rate from 2.4 per cent in 2018 to 2.0 per cent in 2019.

Although the uncertainties brought in the wake of the United Kingdom’s withdrawal from the European Union was expected to have an adverse impact on economic activities, the country rather recorded an upturn in GDP growth rate. Data from the United Kingdom’s Office of National Statistics shows that GDP growth rate improved marginally from 1.3 per cent in 2018 to 1.4 per cent in 2019. The unanticipated expansion in output was mainly attributable to an increase in government expenditure, net exports and gross capital formation, which outweighed the decline in household expenditure. Similarly, the economy of Japan expanded from 0.3 per cent in 2018 to 0.7 per cent in 2019 in spite of the curtailment in economic activities that was induced by the battery of natural disasters that pummelled the island in 2019. According to the country’s Cabinet Office, the acceleration in GDP growth rate was due to an increase in private spending, net private inventories and government expenditure, which compensated for the decline in net exports.

Output growth in emerging markets and developing economies (EMDEs) retreated on the back of broad-based low economic growth outturns in the leading countries. The EMDEs largest country, China, recorded a contraction in net exports and private investments. These developments, which were partly the consequences of China’s trade dispute with the United States, resulted in a decline in GDP growth from 6.6 per cent in 2018 to 5.6 per cent in 2019. Likewise, economic activities in Sub-Saharan Africa reduced from 3.3 per cent in 2018 to 3.1 per cent in 2019. The region’s lethargic growth outturn was primarily attributable to the contraction in output of its dominant economies such as South Africa, which...
outweighed the modest improvements in GDP growth rate recorded by some countries such as Nigeria and Ghana.

The outlook for global economic growth in 2020 remains tilted southwards due to the outbreak of the new strain of Coronavirus in the latter part of 2019. The pandemic, which started in the city of Wuhan in the Hubei province of China, has also evolved into a global economic conundrum due to the restrictions in mobility that were imposed on impacted countries to help curb the spread of the virus. However, the economic impact of the health crisis is expected to vary across countries depending on parameters such as number of infected population, quality of healthcare infrastructure as well as timeliness and appropriateness of government response.

In the advanced economies, most governments have outlined fiscal incentives and expansionary monetary measures to neutralize the contractionary impact of the health crisis on firms and household expenditures. Notwithstanding, the relatively higher rates of infection and mortality in advanced economies suggest that the curtailment in economic activities will persist longer, with its associated deleterious impact on growth. As result, the International Monetary Fund (IMF) projects that GDP growth in advanced countries will contract to -6.1 per cent in 2020 as shown in Figure 1.0.

**Figure 1.0: Growth Rates of Gross Domestic Product in Selected Economic Blocs and Countries**

Similarly, the governments of EMDEs have also rolled out quantitative easing policies such as direct fiscal support to small businesses and reduction in interest rates to ameliorate the economic cost of the health pandemic. The scale of infection and cases of mortality associated with the outbreak of the Coronavirus are generally projected to be lower in EMDEs than in advanced countries. Accordingly, economic activities in EMDEs would reduce at a relatively slower pace. Specifically, the IMF’s data suggests that the GDP growth rate in EMDEs will shrink to -1 per cent in 2020. On account of the analogous growth trajectory of both advanced economies and EMDEs, the global economy is expected to contract by -3 per cent in 2020.

In a departure from the slow growth path that characterized the global economy in 2019, Ghana recorded a significant upturn in its GDP. The country’s total value of final goods and services increased from a real value of GH 154,548 billion in 2018 to GH 164,560 billion in 2019 (in 2013 constant prices). This represents a growth rate of 6.5 per cent in 2019 and it compares favourably with the outturn of 6.3 per cent in 2018. The primary driver for the increment in GDP was the significant expansion in the information and communication, mining and quarrying as well as real estate sub-sectors of the economy. In turn, the growth in the information and communication sub-sector was mainly caused by increase in consumption of data and that of the mining and quarrying sub-sector was largely attributable to an increase in oil and gas production. More so, the improvement in the real estate sub-sector was due to the higher level of transactions in 2019 relative to 2018.

On the back of the growth in the information and communication as well as real estate sub-sectors, the services sector recorded the highest growth rate of 7.6 per cent in 2019 as compared to its outturn of 2.7
per cent in 2018. The industrial and agricultural sectors followed with growth rates of 6.4 per cent and 4.6 per cent in 2019 respectively. In 2018, the comparable outturn for the agricultural sector was 4.8 per cent while that of the industrial sector, which comprises mining and quarrying, manufacturing, construction, electricity as well as water and sewerage sub-sectors, was 10.6 per cent. The slowdown in the industrial sector’s growth was due to the negative growth rates recorded by water and sewerage (-4.4%) and construction (-4.4 per cent) sub-sectors, which moderated the increase in output of the electricity, manufacturing and the mining and quarrying sub-sectors. The latter sub-sectors’ growth rates in 2019 were an improvement over their corresponding outturns in 2018, except for the mining and quarrying sub-sector. Specifically, the growth rate of the mining and quarrying sub-sector, which consists of the mining, oil and gas as well as quarrying activities, reduced from 23.3 per cent in 2018 to 12.6 per cent in 2019. The sub-sector’s relatively slow pace of growth could be attributed to levelling out of the effect of the inclusion of contract mining support services as a component of the mining sub-sector in the national accounts in 2018. This is evinced in the sharp decline of the sub-sector’s growth rate from 48.5 per cent in 2018 to 10.3 per cent in 2019.

With regard to contribution to GDP, the services sector consolidated its position as the largest economic activity in the country. Its share improved from 46.3 per cent in 2018 to 47.2 per cent in 2019. Similarly, the contribution of industrial sector to GDP increased marginally from 34.0 per cent in 2018 to 34.2 per cent in 2019. The mining and quarrying sub-sector (excluding oil and gas) continued to lag behind manufacturing as the most valuable economic activity in the industrial sector. Further, it was also the third largest sub-sector by value (in current prices) in 2019 with a share of 10 per cent in GDP as shown in Table 1.0. In contrast, the agricultural sector’s contribution to GDP declined from 19.7 per cent in 2018 to 18.5 per cent in 2019.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sectoral Growth Rate (%) (at constant prices)</td>
<td>48.6</td>
<td>10.4</td>
</tr>
<tr>
<td>Share in Value of Industrial Sector (%) (at current prices)</td>
<td>28.9</td>
<td>30.1</td>
</tr>
<tr>
<td>Contribution to Gross Domestic Product (at basic prices)</td>
<td>9.8</td>
<td>10.3</td>
</tr>
</tbody>
</table>

Ghana’s growth trajectory in 2020 would potentially deviate from the pattern of year-on year increases recorded in the last two years. The outbreak of Coronavirus in the country is expected to not only disrupt local economic activities but potentially trigger a reversal of capital inflows as non-resident investors reorganize their portfolios away from treasury securities to hedge against the uncertainty induced by the pandemic. This may exert depreciatory pressure on the local currency, which could also culminate in an increase in the general price level and elevate the debt service burden. Moreover, the steep decline in the traded price of oil on the international market could exacerbate the growth-curtiling effect of the global health crisis. However, the accommodative fiscal and monetary measures announced by the government are expected to palliate the economic impact of the Coronavirus outbreak. Against this backdrop, the IMF projects Ghana’s GDP growth rate to drop sharply to 1.5 per cent in 2020.

Overview of the Global Gold Industry in 2019

Outturn of Gold Price in 2019

Generally, the price outturn of gold in 2019 mirrored the pulse of the global economy and geopolitical developments as well as the underlying supply and demand conditions. In the first half of the year, the stable growth of the global economy partly drowned the uncertainties emanating from the draw-out procedural requirements related to the United Kingdom’s withdrawal from the European Union as well as the trade tensions between the United States and China. Consequently, the traded price of the yellow metal was largely bearish as it oscillated between a band of US$ 1,269 per ounce and US$ 1,439 per ounce. Contrastingly, the other half of the year was characterized by heightened geopolitical tensions and sluggish economic growth. These developments, which reinforced the allure of gold as a safe haven asset, led to a sustained surge in its price. Within this period, the lowest and highest price of gold on the London Metals Exchange (LME) were US$ 1,317 per ounce and US$ 1,546 per ounce respectively.

Similar to the trend observed in recent years, the upturn in gold price in the end-of-year trading sessions
of 2018 spilt over to January 2019. The yellow metal opened 2019 with a spot price of US$ 1,283 per ounce on the LME and sustained the rebound in price until the end of January when the Federal Open Market Committee (FOMC) of the United States announced its decision to maintain the Federal Funds Rate at a range of 2.25 per cent to 2.5 per cent. As expected, investors interpreted the retention of the Federal Funds Rate as a sign of subdued downside risk to the US and global economy. This development therefore occasioned a transient decline in the price of gold as investors diversified their portfolio away from bullion to other near-money assets. The price of gold recovered in February on the back of counter threats of imposition of tariffs by the US and Chinese governments and inability of the Conservative government of the United Kingdom to secure victory in the ballot on the withdrawal agreement with the European Commission. Following the grant of the United Kingdom’s request for an extension of the departure date from the European Union and maintenance of the Federal Funds Rate in the second and third meetings of the FOMC, the price of gold trended downwards between March and early May with sporadic surges in price.

After recording its lowest level of US$ 1,270 per ounce in the latter part of April, the yellow metal’s price rebounded and maintained a bullish momentum till it peaked at US$ 1,546 per ounce in September as shown in Fig 2.0. The trough and crest of price in 2019 compares favourably with the levels of US$ 1,178 per ounce and US$ 1,354 per ounce recorded in 2018 respectively.

**Fig 2.0: Trends in Gold Price in 2019**

![Fig 2.0: Trends in Gold Price in 2019](https://www.kitco.com)

Source: Kitco Metals Incorporated (2020)²

The underlying currents for the sustained increase in price between May and September bordered mainly on geopolitical factors which also had a knock-on effect on the outlook of the global economy. Firstly, the inability of United States and China to resolve their trade dispute and subsequent introduction of tariffs heralded a potential slowdown in the world’s two largest economies with its associated contagion effect on the global economy. Further, the United Kingdom dithered in its quest to secure approval for the withdrawal agreement and eventual departure from the European Union. As well, the United States was unable to conclude an agreement on non-proliferation of nuclear weapons with the Democratic People’s Republic of Korea (North Korea). This led to the resumption of testing of long-range missiles by North Korea and military drills between the United States and South Korea. In addition, the political tension between the United States and Iran escalated following the counter designation of each country’s military as a terrorist organization.

These developments weighed on the global economy and caused the FOMC to reduce its short-term target for the Federal Funds Rate by a quarter for the first time in the year. Similarly, the central bank of China (People’s Bank of China) also reduced its interest rate by one-half percentage point to bolster the growth of its economy. In response to the faltering outlook of the global economy, investors increased their demand for safe haven assets such as gold. The sudden increase in demand for the yellow metal gave rise to an upward movement in its traded price on the LME as shown in Fig 2.0.

In the last quarter of 2019, the seeming convergence of positions on a trade deal between the United
States and China as well as global concerted efforts to defuse the strained relationship between United States and Iran tempered the uncertain global climate. In response to these developments, the price of gold vacillated persistently till the end of November. Subsequently, weak economic data from the United States and China bolstered the yellow metal’s price and it remained on the path of ascendancy for the rest of the year. Its closing price on the LME was US$ 1,515 per ounce. Overall, the cumulative average spot price of gold in 2019 was US$ 1,393 per ounce. This represents a 9.7 per cent increase over the equivalent price of US$ 1,269 recorded in 2018.

The outlook of price in 2020 remains bullish as the Coronavirus induced global health pandemic is expected to provide tailwinds for year-on-year growth in the yellow metal’s price.

**Trends in Demand for Gold in 2019**

The outturn of price in 2019 had a mixed and disproportionate impact on the traditional classes of demand for gold. The application of gold in the fabrication of jewellery and technology as well as demand by central banks and other financial institutions, which tend to be inversely related to price, declined as the yellow metal became less affordable. In contrast, investment demand for gold, which varies indirectly with interest rates on the equity market, increased as investors took advantage of the price-driven profit opportunities in the bullion market. The expansion in investment demand was insufficient to offset the contraction in the other types of demand, leading to a year-on-year decline in aggregate demand for gold. Data from the World Gold Council suggests that global demand for gold decreased by a percentage to 4,335 tonnes in 2019 from 4,401 tonnes in 2018 as shown in figure 3.0.

Figure 3.0: Trends in Global Demand for Gold (2018 and 2019)

The demand for gold for fabrication of jewellery declined from 2,240 tonnes in 2018 to 2,107 tonnes in 2019 on the back of the twin problem of gold price induced decline in real income and slowdown in local economies. The 6 per cent fall in demand was mainly triggered by reduction in jewellery consumption in the product’s largest markets, China and India. In China, the rise in gold price and heightened inflationary pressure held back purchases of gold by 7 per cent, from 686 tonnes in 2018 to 637 tonnes in 2019. Similarly, the rise in gold price, which induced a decline in real income, and depreciation of the local currency abated demand for jewellery in India. The festival of lights, which is traditionally associated with high consumption of jewellery, could even not reverse the slump in demand on account of reasons of affordability. Overall, India’s demand for gold jewellery contracted from 598 tonnes in 2018 to 544 tonnes in 2019. This translates into a decline of 9 per cent.

Further, the rise in price of gold drove the demand for gold jewellery downwards in the Middle East, Turkey, East Asia and Europe. The general reduction in demand for gold jewellery was partly moderated...
by the growth in purchases by consumers in the United States and Japan. In the case of the former, which is the world’s third largest consumer of gold jewellery, the upturn in the economy and appreciation of real income were the primary reasons for the 2 per cent increase in demand, from 128 tonnes in 2018 to 131 tonnes in 2019. Likewise, demand for gold jewellery in Japan expanded by 3 per cent, from 16.5 tonnes in 2018 to 17 tonnes in 2019, on account of improvements in the economy. In spite of the contraction, jewellery continued to be the largest source of demand for gold. It accounted for 48 per cent of global demand for gold in 2019 as compared to 51 per cent in 2018.

Investment demand for gold, which comprises purchases of gold bars, gold coins, medals and exchange traded funds, respond differently to the hike in price of the yellow metals. Gold bars, coins and medals are generally considered as retail investments and tend to react to gold price movements in two distinct ways. Firstly, an increase in gold price creates profitable opportunities for holders of such assets to dispose them. More so, the rise in gold price often does not only impact adversely on the purchasing power of consumers but also makes it uneconomical for an investor to augment his or her stock of gold bars and coins. These rational responses generally claw back demand for gold bars and coins in periods of high prices of gold. Unsurprisingly, the demand for gold bars and coins declined to a ten year low of 870 tonnes in 2019 from 1,093 tonnes in 2018. The 20 per cent nosedive in demand for gold bars and coins was primarily instigated by a general decline in new purchases across all the major markets except for Turkey, Canada and South Korea.

On the other hand, demand for gold backed exchange traded funds (ETFs) tend to correlate positively with the price of gold. Generally, an appreciation in the yellow metal’s price presages a downturn in the global economy and therefore enhances the appeal of bullion as an investment asset. Moreover, ETFs tend to yield higher returns than traditional investment instruments when the bullion market is bullish. Investors react to such developments by increasing their demand for gold backed investment instruments such as the ETFs. Accordingly, demand for ETFs increased by 426 per cent, from 76 tonnes in 2018 to 401 tonnes in 2019. The main drivers of growth in demand for ETFs originated from the European and American markets, which account for 48 per cent and 50 per cent of the market share respectively. Specifically, the year-on-year demand for ETFs increased by 17 per cent in both the United States (1440 tonnes in 2019) and Europe (1322 tonnes in 2019). The upturn in the United States’ demand was largely a function of the reduction in the Federal Funds Rate whereas that of Europe reflected the heightened uncertainty associated with the departure of the United Kingdom from the European Union. Conversely, demand for ETFs in the Asian market was unchanged at 79 tonnes in 2019.

Overall, the significant growth in demand for ETFs displaced the decline in demand for gold bars and coins to increase total investment demand for gold from 1,169 tonnes in 2018 to 1,271 tonnes in 2019. The 9 per cent expansion in demand for ETFs also translated into a rise in its share of demand for gold, from 27 per cent in 2018 to 29 per cent in 2019 as shown in Figure 4.0.

**Figure 4.0: Distribution of Demand for Gold in 2019**

![Figure 4.0: Distribution of Demand for Gold in 2019](source: Author’s construct based on data from World Gold Council (2020))
The demand for gold as a reserve currency by central banks and other financial institutions reduced marginally from 656 tonnes in 2018 to 650 tonnes in 2019 as a result of the slowdown in purchases by China and Russia, which counterbalanced the increase in demand by other countries such as Poland and Turkey.

Although the year-on-year comparison of official demand for gold shows a percentage drop, the 2019 outturn represents the second highest purchases in more than fifty (50) years. This demonstrates the increasing importance of gold in the lenders of last resort tools in managing currency risks in the context of escalating geopolitical tensions and unilateralism. At the end of 2019, the United States, Germany and Italy were the countries with the largest holding of gold for reserve currency purposes. Their respective holdings of 8,133 tonnes, 3,364 tonnes and 2,451 was equivalent to 78 per cent, 74 per cent and 69 per cent of their reserve currency. With respect to Africa, South Africa (125 tonnes), Libya (116 tonnes), Nigeria (21 tonnes), Mauritius (12 tonnes) and Ghana (8 tonnes) had the highest stock of gold as reserve currency.

Finally, the consumption of gold in technology-related applications, which is a form of derived demand, correlates inversely with the price of gold. Against the backdrop of relatively high prices of gold and weak global economic growth, demand for gold in technological applications shrank from 334 tonnes in 2018 to 326 tonnes in 2019. The 2 per cent contraction in demand reflected the broad reduction in the various uses of gold in technology. Specifically, the application of gold in electronic devices such as light-emitting diode (LED), semi-conductors and memory devices declined while that of printed circuit board (PCB) increased. Likewise, the use of gold in dentistry and other residual applications also fell by 2 per cent.

In 2020, the Coronavirus health pandemic is expected to unsettle the global economy and lead to broad reduction in GDP growth in most countries. The forecasted weak global economic growth could provide momentum for an upswing in investment demand for gold. However, the slowdown in economic growth may also culminate in an escalation in the traded price of gold and curb the demand for gold based jewellery and technology. Further, central banks’ demand for gold is also anticipated to fall in response to the projected increase in price. Overall, the decline in the non-investment demand for gold is expected to result in a consecutive contraction in global demand.

Global Supply of Gold

The significant expansion in recycled and net producer hedged gold outperformed the marginal decline in mine production to elevate total supply of gold by 2 per cent to 4,776 tonnes in 2019 from 4,673 tonnes in 2018. The volume of recycled gold, which tends to respond positively to upward movements in gold price, increased from 1,176 tonnes in 2018 to 1,304 tonnes in 2019. The 11 per cent expansion in supply of recycled gold was mainly due to activities of consumers in India, Turkey and Iran who sought to take advantage of the favourable price of gold in the second half of 2019. Moreover, the depreciation of their respective currencies relative to the US Dollar provided an additional incentive for profit taking positions.

Furthermore, net producer hedging also responded to the increase in price of gold with an expansion, from -12.5 tonnes in 2018 to 8.3 tonnes in 2019. While this outturn was surprising, it somewhat reflected an incentive on the part of producers to wait and de-hedge when price reaches their projected long-run equilibrium.

Regarding mine production, unfavourable developments in China, Indonesia, South Africa and Mexico blighted the appreciable growth in output in the other major gold mining jurisdictions such as West Africa, which was the primary engine of growth in 2019. In China, producers continued to adjust to the stringent environmental regulatory reforms that were recently introduced by the government. Indeed, the country’s gold production has declined successively in the years following the introduction of the new environmental guidelines.

This trend persisted in 2019, with the country recording a 6 per cent contraction in gold output. In South Africa, the aftershocks of the industrial dispute between some gold producers and organized labour as well as suspension of production by some mines weighed on the country’s output. As a result, it continued to cede the position of leading producer of gold on the African continent to Ghana.
Whereas social conflicts between mines and host communities were the setback to production in Mexico, the depletion of the higher-grade ore and subsequent transition from surface to underground mining by the world’s second largest mine, Grasberg Mine, accounted for the fall in output of Indonesia. The contraction in output of the aforementioned countries plunged global mine production downwards to 3,463 tonnes in 2019 from 3,509 tonnes in 2018, a dip of 1 per cent.

**Global Production Cost of Gold**

Based on data from the World Gold Council and Metals Focus, the global cost of producing an ounce of gold, as measured by the all-in sustaining cost (AISC), increased from US$ 899 per ounce in 2018 to US$ 936 per ounce in 2019. The 4 per cent rise in the AISC mirrored the widespread increase in mining cost, which offset the moderation in production cost recorded by relatively smaller mining jurisdictions such as the Central America and the Caribbean, Middle East and Oceania. The AISC per ounce for these mining destinations decreased from US$ 702 in 2018 to US$ 664 in 2019, US$ 828 to US$ 592 and US$ 853 to US$ 847 over the same period, which represents a fall of 5 per cent, 29 per cent and 1 per cent respectively.

In Africa, the cost of producing an ounce of gold increased from US$ 1,008 to US$ 1,026. The 2 per cent year-on-year rise in AISC per ounce was ascribed to the elevation in cost of the continent’s main producers. Similarly, the AISC of Commonwealth of Independent States grew from US$ 714 per ounce in 2018 to US$ 720 per ounce in 2019. Producers in East Asia and Indian Subcontinent recorded a 17 per cent upturn in their average AISC, from US$ 769 per ounce in 2018 to US$ 903 per ounce in 2019. The surge in AISC was largely an outcome of environmental regulatory reforms in the world’s largest producer of gold, China.

With respect to Europe, which is the most expensive mining jurisdiction, the AISC rose by 33 per cent relative to the outturn of US$ 1,012 per ounce in 2018. The escalation in the continent’s cost to US$ 1,350 was mainly due to production related challenges. North and South America also recorded expansion in their AISC. While production cost in North America surged by 12 per cent, its comparative outturn in South America was 7 per cent. Specifically, the AISC of North American gold producers increased from US$ 923 per ounce in 2018 to US$ 1,034 per ounce in 2019 due partly to production related developments in the United States and Mexico. In South America, the AISC rose from US$ 888 per ounce in 2018 to 948 per ounce in 2019 as shown in figure 5.0. The expansion in the continent’s mining cost was on account of country specific structural problems.

**Figure 5.0: All-In Sustaining Cost of Global Gold Mining Jurisdictions**

Source: Author’s construct based on data from World Gold Council and Metals Focus (2020)
**Global Exploration Trends in 2019**

The expenditure on global mineral exploration, as measured by company exploration budget, plummeted by 11.5 per cent to US$ 4.293 billion in 2019 from US$ 4.852 billion in 2018. The decline in budgeted exploration expenditure was induced by a general cut down in spending across all the mining jurisdictions except Australia and South East Asia-Pacific regions. The total budgeted expenditure on mineral exploration in Australia increased from US$ 747.4 million in 2018 to US$ 852.8 in 2019 while that of South East Asia-Pacific region rose from US$ 156.6 million in 2018 to US$ 164.2 million in 2019. The respective expenditures translate into a growth rate of 14 per cent and 5 per cent as well as represent 19.8 per cent and 3.8 per cent of global exploration budget in 2019.

The total budgetary allocation to mineral exploration projects in Canada and United States declined by 21 per cent and 22 per cent respectively. While planned exploration expenditure in Canada reduced from US$ 929.7 million in 2018 to US$ 733.2 million in 2019, the equivalence in the United States also nosedived from US$ 483.6 million in 2018 to US$ 376.9 million in 2019. On account of the significant paring of expenditure, the share of Canada and United States in global exploration budget reduced from 19.2 per cent in 2018 to 17.1 per cent in 2019 and 10.0 per cent in 2018 to 8.8 per cent in 2019.

In a similar fashion, the projected exploration spending in Latin America, Africa and the residual mining jurisdictions (rest of the world) also plunged from US$ 1.152 billion in 2018 to US$ 992.7 million, US$ 687 million to US$ 615.9 million and US$ 695.9 million to US$ 557.4 million within the same period. In terms of share of budgeted expenditure, Latin America and the residual countries accounted for 23.1 per cent and 13.0 per cent in 2019 respectively. The corresponding outturns in 2018 were 23.7 per cent and 14.3 per cent. With respect to Africa, its share of the global exploration budget increased from 14.1 per cent to 14.3 per cent in 2019 as shown in figure 6.0. This was on account of the fact that the continent’s budgetary allocation fell at a slower rate than the other jurisdictions. In Africa, Burkina Faso was the largest recipient of planned exploration capital in 2019. The country was earmarked to receive US$ 132.0 million in 2019, which represents 3.08 per cent of global budget for exploration. Ghana and Mali trailed Burkina Faso with a budget of US$ 98.6 million and US$ 91.9 million in 2019 respectively.

**Figure 6.0: Global Distribution of Mineral Exploration Budget**

- Africa: 20%
- Australia: 17%
- Canada: 14%
- Latin America: 13%
- Pacific/South East Asia: 14%
- Rest of World: 23%
- USA: 4%

Source: Based on data from S&P Global (2020)

In line with recent trends, brown field projects received the largest allocation of exploration capital in 2019 with a budget of US$ 1,852 million (43.2%). This was followed by projects in their feasibility or late stage of development and at grass root. Specifically, grass root projects were earmarked to receive US$ 1,083 million while the year’s remaining funds of US$ 1,377.7 million was allocated to feasibility or late stage projects. With respect to spending by companies, Newmont, Barrick, AngloGold Ashanti and Gold Fields had the largest exploration budget in 2019.
The Performance of Ghana’s Mining Industry in 2019

The production, purchases and shipment outturns of Ghana’s main minerals were mixed in 2019. Whereas the production of gold attributable to the large-scale sector expanded by 6 per cent that of the small-scale sector contracted by 20 per cent. Consequently, Ghana’s total gold output fell by 4 per cent. Likewise, purchases of diamond continued its inexorable decline with a 41 per cent plunge in output. On the contrary, the bulk minerals sector recorded improvements in shipment. Specifically, shipments of manganese and bauxite increased by 18 per cent and 10 per cent as shown in Table 2.0.

Table 2.0: Mineral Production, Assay and Shipments

<table>
<thead>
<tr>
<th>Mineral</th>
<th>2018</th>
<th>2019</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Gold Produced by Large-Scale Mines</td>
<td>2,807,918</td>
<td>2,989,446</td>
<td>6%</td>
</tr>
<tr>
<td>**Gold Assayed by PMMC (Small-Scale Sector)</td>
<td>1,984,370</td>
<td>1,588,191</td>
<td>-20%</td>
</tr>
<tr>
<td>Total In-Country Gold Production</td>
<td>4,792,287</td>
<td>4,577,637</td>
<td>-4%</td>
</tr>
<tr>
<td>**Trans-Shipment of Gold</td>
<td>269,565</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>*Manganese</td>
<td>4,551,754</td>
<td>5,383,014</td>
<td>18%</td>
</tr>
<tr>
<td>**Bauxite</td>
<td>1,011,302</td>
<td>1,116,334</td>
<td>10%</td>
</tr>
<tr>
<td>**Diamond (Carats)</td>
<td>57,531</td>
<td>33,789</td>
<td>-41%</td>
</tr>
</tbody>
</table>


On the back of significant growth in production from Newmont’s Ahafo, Gold Fields’ Damang and Asanko Gold Mines, the large-scale sector’s gold output increased from 2.807 million ounces in 2018 to 2.989 million ounces in 2019. The expansion in output from the afore-mentioned mines outweighed the steep contraction in production recorded by other large-scale mines such as Golden Star Bogoso Prestea Ltd and Adamus Resources Ltd’s Nzema Mine.

On the other hand, the quantum of gold assayed by the Precious Minerals Marketing Company (PMMC) on behalf of Licensed Gold Exporting Companies (LGECs) decreased from 1.984 million ounces in 2018 to 1.588 million ounces in 2019. The fall in the sub-sector’s activities, which is used as a proxy for production by small-scale mines, was mainly a reflection of the reduced purchases of gold by major firms such as A.A. Minerals Ltd., RG Resources and Sahara Royal Gold Refinery. Further, the volume of gold exported by LGEC on behalf of foreign producers, which is also referred to as trans-shipment, reduced by 100 per cent from its 2018 value of 0.269 million ounces. In other words, the LGECs did not undertake any transactions related to trans-shipment in 2019. This outturn is unsurprising as the main firms involved in trans-shipment of gold, A.A. Minerals and Sahara Royal Gold Refinery, did not undertake any purchases of gold in 2019 (see appendix 4).

In view of the contrasting performance of the large and small-scale sectors, Ghana’s total gold production declined from 4.792 million ounces in 2018 to 4.577 million ounces in 2019. Notwithstanding the fall in output, the outturn in 2019 was the third highest level of production in more than three decades. In terms of share of production, the small-scale sector accounted for 35 per cent of national gold production in 2019 relative to 41 per cent in 2018. This also implies that the large-scale sector improved on its contribution to national gold production, from 59 per cent in 2018 to 65 per cent in 2019, as shown in figure 7.0.
The shipment of manganese by the country’s monopoly producer, Ghana Manganese Company, increased from 4.551 million tonnes in 2018 to 5.383 million tonnes in 2019. The upturn in production was consistent with the firm’s objective of ramping up production to meet global demand for its premium output. In the same vein, Ghana Bauxite Company recovered from the recent slump in production to record a year-on-year growth in output. Its shipments of bauxite improved from 1.011 million tonnes in 2018 to 1.116 million tonnes in 2019. The increment in output was primarily due to improvements in operational activities.

On the downside, purchases of diamond by PMMC fell from 0.057 million carats in 2018 to 0.033 million carats in 2019. The persistent decline in purchases of diamond largely reflects low recoveries from small-scale winners and the continued suspension of production by the only large-scale producer of diamonds, Great Consolidated Diamond Company. The latter was still under “care and maintenance” at the end of 2019.

Macroeconomic Contributions of the Mining Sector in 2019

Fiscal Revenue Performance

Data from the Ghana Revenue Authority (GRA) suggests that total direct domestic fiscal receipts attributable to the mining and quarrying sector improved from GH¢ 2.36 billion in 2018 to GH¢ 4.02 billion in 2019. The 70 percent increase in fiscal payments by firms in the sector was occasioned by the simultaneous increase in production and price, particularly, gold. As well, the expiration of the stability agreement between the Government of Ghana and AngloGold Ashanti Iduapriem Limited resulted in the alteration of the fiscal terms of the latter to the generic regime applicable to the mining industry. In essence, the lapsing of the stability agreement thrust the firm into a higher tax paying position.

In the year under review, the various mining sector fiscal streams mobilized by the GRA recorded year-on-year growth as shown in Table 3.0. Specifically, corporate tax receipts from the minerals sector increased by 89 per cent to GH¢ 2.27 billion in 2019 from GH¢ 1.20 billion in 2018. The sector’s corporate tax payments was equivalent to 19.01 per cent of aggregate corporate tax fiscal receipts collected by the GRA. Moreover, the income tax (PAYE) receipts of mining sector employees rose from GH¢ 457.16 million in 2018 to GH¢ 736.26 in 2019, which represents a growth rate of 61.1 per cent.

The PAYE payments of the mining sector translates into 6 per cent of the aggregate national payroll taxes. Likewise, mineral royalty payment and residual taxes, which is officially classified as self-
employed, also expanded by 42.7 per cent and 277.8 per cent respectively. While mineral royalty receipts, which was 99.4 per cent of total non-oil royalty payments, increased from GH¢ 705.26 million in 2018 to GH¢ 1.01 billion in 2019, the residual taxes surged from GH¢ 0.18 million to GH¢ 0.67 million in the same period.

### Table 3.0: Fiscal Contributions of the Mining and Quarrying Sector

<table>
<thead>
<tr>
<th>Type of Fiscal Payment (GH¢)</th>
<th>2018</th>
<th>2019</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Income Tax [Pay-As-You-Earn]</td>
<td>457,156,177</td>
<td>736,256,367</td>
<td>61.1%</td>
</tr>
<tr>
<td>Corporate Income Tax</td>
<td>1,199,597,591</td>
<td>2,269,768,470</td>
<td>89.2%</td>
</tr>
<tr>
<td>Royalty</td>
<td>705,262,160</td>
<td>1,006,668,500</td>
<td>42.7%</td>
</tr>
<tr>
<td>Other (Self-Employed)</td>
<td>178,498</td>
<td>674,312</td>
<td>277.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,362,194,425</strong></td>
<td><strong>4,013,367,650</strong></td>
<td><strong>69.9%</strong></td>
</tr>
</tbody>
</table>

Source: Ghana Revenue Authority (2020)

In view of the significant growth in fiscal payments, the share of the mining and quarrying sector in total direct domestic receipts mobilized by the GRA improved from 14.2 per cent in 2018 to 18.3 per cent in 2019. The sector’s total fiscal contribution in 2019 was the second highest after that of the financial and insurance sector and translates into 7.7 per cent of domestic revenue. In the previous year, the mining and quarrying sector was the largest contributor to direct domestic receipts and accounted for 5.0 per cent of domestic fiscal revenue. In terms of total government revenue, the mining and quarrying sector’s contributions increased from 4.3 per cent in 2018 to 7.6 per cent in 2019 as shown in figure 8.0.

**Figure 8.0: Share of Mining and Quarrying Sector in Fiscal Receipts**

Source: Author’s construct based on data from GRA (2020)

### Merchandise Exports and Balance of Payments

In a relatively small and import dependent economy as Ghana’s, volatility in exchange rates has significant ramifications on the standard of living of the population via its pass-through effect on the price level and interest rates. In order to abate such inflationary pressures, which have the potential of deepening poverty, it is a sine qua non for the financial intermediation system to have regular and unimpeded access to forex. The minerals and mining sector has been the mainstay of the country in providing liquidity to the foreign exchange market to meet the import demands of households and firms in the country.

Data from the country’s lender of last resort, Bank of Ghana, indicates that proceeds from the export of minerals rose from US$ 5.760 billion in 2018 to US$ 6.678 billion in 2019. The 16 per cent expansion in mineral revenue was occasioned by improvements in receipts from gold, manganese and bauxite, which outweighed the decline in proceeds from the export of diamond. Receipts from the export of gold increased from US$ 5.436 billion in 2018 to US$ 6.230 billion in 2019, representing a growth rate of 15 per cent. The expansion in export receipts of gold was largely driven by an increase in the traded price of
the yellow metal. Similarly, the growth in shipments of manganese combined with an increase in its traded price to increase export proceeds by 39 per cent, from US$ 297 million in 2018 to US$ 412 million in 2019. In spite of the stagnation in the average price of bauxite, the upswing in shipments raised export proceeds from US$ 25 million in 2018 to US$ 36 million in 2019. This denotes a 42 per cent expansion in receipts from the export of bauxite. On the downside, revenue from the export of diamond plummeted by 56 per cent. Its reduction from US$ 1.90 million in 2018 to US$ 0.83 million in 2019 was partly due to the contraction in its production.

On account of the difference in export receipts performance, the shares of the respective minerals in total mineral revenue were altered from their 2018 level. Gold retained its dominance as the leading contributor of mineral export receipts with a share of 93 per cent in 2019. This was relatively lower than its corresponding outcome of 94 per cent in 2018. The bulk minerals, manganese and bauxite, improved their respective contribution to mineral export revenue, from 5 per cent in 2018 to 6 per cent in 2019 and 0.4 per cent to 1 per cent, in the same period. Conversely, the share of diamond in total mineral export receipts fell to 0.01 per cent in 2019 as compared to 0.03 per cent in 2018.

The upturn in mineral receipts expanded the sector’s share in gross merchandise export receipts from 39 per cent in 2018 to 43 per cent in 2019, consolidating its status as the foremost source of foreign exchange from export earnings. This compares favourably with the equivalent outturns of 29 per cent and 15 per cent for crude oil and cocoa respectively in 2019. In 2018, cocoa accounted for 14 per cent of aggregate export receipts while that of crude oil was 31 per cent. As can be inferred from figure 9.0, the share of gross mineral receipts in the basket of export revenue in 2019 was the approximate equivalence of the sum of shares of the country’s other two major export commodities, cocoa and crude oil.

**Figure 9.0: Share of Commodity in Gross Merchandise Export Receipts in 2019**

![Figure 9.0: Share of Commodity in Gross Merchandise Export Receipts in 2019](source: Author’s construct based on data from Bank of Ghana (2020))

Coupled with the modest increase in receipts from cocoa and non-oil exports, the growth in revenue from the export of minerals was partly responsible for improving the country’s trade balance. Data from the Bank of Ghana shows that the country’s merchandise exports exceeded merchandise imports by US$ 2.282 billion in 2019 relative to US$ 1.778 billion in 2018. The 28.3 per cent growth in the trade balance was the third consecutive year the country recorded a surplus in its merchandise trade account.

Notwithstanding the widening of the deficit in the current account, which was attributable to unfavourable developments in the services and investment components of the account, the country ended 2019 with a positive balance of payments (BOP) of US$ 1.341 billion as compared to a deficit of
US$ 0.671 billion in 2018. The surplus position was a consequence of the excess of the capital and financial account over the current account. The surplus BOP partly culminated in an improvement in the country’s Gross International Reserves from US$ 7.025 billion in 2018 to US$ 8.418 billion in 2019, a year-on-year growth of 20 per cent. In terms of import cover, the Gross International Reserves increased from 3.6 months to 4 months. The expansion in the Gross International Reserves had a moderating influence on the volatility of the exchange rate between the local currency and convertible currencies such as the United States Dollar as well as its associated impact on the stability of the general price level.

Local Impact of Mining in 2019
Repatriation of Mineral Export Proceeds to Ghana by Producing Member Companies

Although mineral export revenue is an important component of the country's balance of payments, it is the in-country repatriation of these receipts that lubricate the foreign exchange market and contribute to stabilizing the general price level. This is explained by the fact that the plough back and retention of mineral export proceeds with local financial firms deepen their intermediation functions as well as reinforce their foreign exchange reserves to meet the import demands of the country. In essence, the liquidity provided by the mining companies contributes significantly in bridging the gap between demand and supply of forex and thereby slowdown the rate at which the country’s currency loses value to other traded currencies. Such outcomes have important implications for the general price level through its interaction with the import market.

Akin to last year, the average share of mineral export receipts returned to the country was in excess of the statutory threshold prescribed by the Minerals and Mining Act, 2006 (Act 703) as well as above the disparate limits prescribed in the various Investment Agreements between some mining companies and the Government of Ghana. Out of their realized mineral export revenue of US$ 4.5 billion in 2019, the producing member companies returned US$ 3.3 billion. This translates into 73 per cent of export proceeds, which is marginally lower as compared to its level of 74 per cent in 2018. In consonance with a directive of the Bank of Ghana, the entire US$ 3.3 billion was ploughed back into the country through the various commercial banks. The Bank of Ghana ceded its share of forex under the mandatory surrender requirements to the commercial banks in 2016. This measure, which was part of policy recommendations by the International Monetary Fund, was intended to deepen the foreign exchange market.

Expenditure of Mineral Revenue

It is generally proven that a critical pathway through which the minerals and mining sector influences economic development in its host country and community is through expenditure on locally sourced inputs. Accordingly, the Ghana Chamber of Mines and its producing member companies prioritized the local inputs market in their procurement decisions. In 2019, the producing member companies of the Chamber spent US$ 1.88 billion on the purchase of non-energy goods and services from in-country manufacturers and suppliers. This represents 42 per cent of aggregate mineral revenue, which is slightly lower than the comparable outturn of 44 per cent in 2018. Further, the producing member companies expended US$ 316.35 million on electricity and US$ 342.05 million on diesel. In terms of proportion of mineral receipts, the expenditure on electricity and diesel translate into 7 per cent and 8 per cent respectively. Their corresponding outturns in 2018 were 8 per cent and 6 per cent respectively.

Further, the total emolument of employees engaged directly by the producing member companies represented 10 per cent of mineral revenue in 2019 as compared to 12 per cent in the preceding year. In nominal terms, however, the compensation payment of US$ 463.35 million in 2019 was relatively higher than the expenditure of US$ 450.07 million in 2018. As well, the fiscal payments to the state by the producing member companies of the Chamber stood at US$ 701.81 million in 2019. This translates into 16 per cent of mineral revenue, similar to the outturn in 2018.

With respect to expenditure on corporate social investments (CSI), the producing member companies invested US$ 24.45 million in a variety of projects that were aimed at improving socio-economic infrastructure and services in their respective host communities in 2019. The expenditure, which amounts to 1 per cent of mineral revenue, was marginally higher than the equivalent share of 0.5 per cent in 2018. In figure 10.0, we present a summary of the various sectors that the funds were
Moreover, the proportion of mineral receipts expended on imported consumables by the producing member companies in 2019 was unchanged from its 2018 level of 5 per cent while that of capital expenditure declined from 19 per cent in 2018 to 12 per cent. In monetary terms, the expenses on imported consumables and capital expenditure in 2019 were US$ 544.22 million and US$ 203.70 million respectively. As well, the producing member companies spent US$ 165.50 million and US$ 103.51 on amortization of loans and payments to other shareholders respectively. These expenditures were equivalent to 4 per cent and 2 per cent of mineral receipts in 2019 as compared to their outturns of 5 per cent and 1 per cent in 2018 respectively.

On the whole, producing member companies of the Chamber expended US$ 3.73 billion of their mineral revenue in-country in 2019 relative to US$ 2.51 billion in 2018. In proportionate terms, the 2019 and 2018 expenditures represent 83 per cent and 87 per cent of mineral revenue respectively. The distribution of mineral revenue realized by the producing member companies in 2019 is summarized in figure 11.0.
Direct Employment by Producing Member Companies in 2019
In 2019, the total workforce engaged directly by the producing member companies of the Chamber was 11,899 as compared to 10,109 in 2018. The 18 per cent growth in employment was primarily due to the expansion in employment at Newmont’s Ahafo Mine, Asanko Gold Mine and Golden Star Resources’ Wassa Mine as well as AngloGold Ashanti’s Obuasi Mine, which offset the significant contraction in labour force at the Damang Mine of Gold Fields and Golden Star Resources’ Bogoso Mine. 144 persons out of the direct workforce population in 2019 were expatriates and the remaining were Ghanaian nationals. The expatriate category of employees represents 1.2 per cent of the work force in 2019, which is marginally lower than the 1.6 per cent recorded in the previous year.

Revenue and Output Performance of Producing Member Companies in 2019
Against the backdrop of a simultaneous growth in production and price of both gold and manganese, the total mineral receipts attributable to producing member companies of the Chamber increased by 18 per cent to US$ 4.572 billion in 2019 from US$ 3.858 billion in 2018. Specifically, the proceeds from the production of gold rose by 17 per cent, from US$ 3.561 billion in 2018 to US$ 4.156 billion in 2019. On the other hand, receipts from the shipment of manganese improved from US$ 297 million in 2018 to US$ 415.19 million in 2019, representing an increment of 40 per cent as shown in figure 12.0.

The upturn in the receipts of gold was occasioned by a 9.7 per cent increase in the average realized price of gold and a 6.5 per cent rise in production as shown in figure 13.0. Total gold output of the producing member companies of the Chamber grew from 2.81 million ounces in 2018 to 2.99 million ounces in 2019. The latter translates into 65 per cent of national gold production.

Production at the Newmont Ghana Ahafo Mine increased by 47 per cent to 643,067 ounces in 2019 from its outturn of 436,106 in 2018. The steep rise in production was basically due to higher mill throughput and higher ore grade. In turn, the improvement in mill throughput was partially explained by the completion of the Ahafo mill expansion project in the last quarter of 2019 which increased the plant’s capacity by an additional 3.5 million tonnes per year.

Overall, the plant is expected to process about 10 million tonnes of materials per year. As well, the mill recovery rate improved slightly from 94 per cent in 2018 to 94.1 per cent in 2019. Furthermore, the improvement in ore grade was mainly driven by the relatively higher quantum of material mined from both the surface and underground pits. Owing to the growth in its production, Ahafo Mine displaced Tarkwa Mine of Gold Fields as the largest mine in the country. Its share in total gold output of the producing member companies of the Chamber improved from 15 per cent in 2018 to 22 per cent in 2019.

In a similar vein, the output of Newmont’s Akyem Mine rose from 414,427 ounces in 2018 to 422,099 ounces in 2019. The 2 per cent expansion in output was largely a reflection of the modest increase in the mill throughput which was sufficient to offset the output curtailing effect of a decrease in the mill recovery rate from 91.2 per cent in 2018 to 90.8 per cent in 2019. The production outturn in 2019 was equivalent to 14 per cent of total gold output of producing member companies, which was relatively lower than its share of 15 per cent in 2018. On account of the concurrent expansion in the output of its Akyem and Ahafo Mines, the contribution of Newmont to total gold production of producing member companies grew from 30 per cent in 2018 to 36 per cent in 2019.

The output of Gold Fields’ Tarkwa Mine declined from 524,869 ounces in 2018 to 519,072 ounces in 2019, representing a dip of 1 per cent. On the other hand, production at its Damang Mine increased by 15 per cent to 208,381 ounces in 2019 relative to 180,844 ounces in 2018. Whereas the marginal fall in Tarkwa Mine’s output was mainly caused by a reduction in the mill throughput, the expansion in Damang Mine’s production was due to the growth in the volume of ore processed and mill throughput. However, the production outturn at Damang Mine was impacted negatively by lower head grade as mining activities transiently encountered the Huni sandstone lithology in the second half of 2019. The mine is expected to revert to the more consistent and higher grade Tarkwa phyllites by the mid-year of 2020.

As a result of the contrasting production performance, the share of Tarkwa Mine in aggregate gold output of producing member companies waned by 2 percentage points to 17 per cent in 2019 while that of Damang Mine appreciated from 6 per cent in 2018 to 7 per cent in 2019. This also implied that Gold Fields accounted for 24 per cent of gold output attributable to producing member companies of the Chamber in 2019.
Although unstable power supply from the national grid in the first half of 2019 as well as fault with a component of the processing plant reduced the quantum of ore processed by the AngloGold Ashanti owned Iduapriem Mine, its output increased by 8 per cent. The growth in output from 253,487 ounces in 2018 to 274,665 in 2019 was driven by improved grade control and access to the higher grade area of the Teberebie pit where stripping commenced in 2017. The average head grade increased from 1.47 grammes per tonne in 2018 to 1.67 grammes per tonne in 2019. Notwithstanding the upswing in its production, the share of Iduapriem Mine, which was the only producing mine of AngloGold Ashanti, was largely unchanged at 9 per cent in 2019.

With respect to Obuasi Mine of AngloGold Ashanti, the redevelopment programme progressed in line with the stated timelines and budget. In 2019, the mine completed the first phase of its redevelopment strategy which involved the setting up of a plant with a daily processing capacity of 2,000 tonnes. It also undertook its first underground and stope blasting in February and October 2019 respectively. The latter was indicative of the commencement of ore production and the mine poured its first gold in December 2019.

The Golden Star Resources’ managed mines in Ghana, Wassa and Prestea, recorded mixed production outturns in 2019. Whereas year-on-year production at the Wassa Mine rose by 4 per cent, the corresponding outturn at the Bogoso Prestea Mine slumped by 37 per cent. The growth in Wassa Mine’s output from 149,698 ounces in 2018 to 156,168 ounces in 2019 was occasioned by an increase in the quantum of tonnage mined and processed. The quantum of fresh ore mined, which originated exclusively from the underground deposits, improved by 32 per cent while the volume of ore processed also rose by 29 per cent. The ore from the underground deposits was supplemented with supplies from its open pit stockpile as the mine ceased surface operations in the first quarter of 2018. At the end of 2019, the share of Wassa Mine in total gold output of producing member companies of the Chamber was not significantly different from its level of 5 per cent recorded in 2018.

With respect to the Bogoso Prestea Mine, the decline in production from 75,087 ounces in 2018 to 47,533 ounces in 2019 was as a result of the planned reduction in supply of ore from the open pits and slower than expected ramp up in production at the underground mine. The open pits were anticipated to be depleted in 2018 but their end of life extended into 2019, albeit with a reduced contribution to the mine’s total production. Likewise, gold output from the underground operations plummeted by 35 per cent due to a steep decline in the average head grade from 10.12 grammes per tonne in 2018 to 5.58 grammes per tonne in 2019. The fall in the head grade was mainly caused by unplanned dilution and encountering of unanticipated waste zones within the stopes. However, the 24 per cent growth in processed ore was the primary moderating influence on the Mine’s output. Against this backdrop, the share of Bogoso Prestea Mine in the volume of gold produced by member companies of the Chamber shrank from 3 per cent in 2018 to 2 per cent in 2019. On the whole, Golden Star Resources accounted for 7 per cent of total gold output of producing member companies in 2019 relative to 8 per cent in the preceding year.

Asanko Gold Mines, which is jointly owned by Asanko and Gold Fields, recorded its highest production since it achieved commercial production in spite of the setback induced by a wall failure at one of its pits, Nkran. The mine’s production increased by 12 per cent, from 223,152 ounces in 2018 to 251,044 ounces in 2019 (see figure 14.0), on the back of an expansion in the quantum of ore mined and milled. In the year under consideration, the mine obtained its fresh ore from Nkran and Esaase pits, with supplementary supplies from its run-on-mine stockpile. As well, its share in the total gold output of producing member companies of the Chamber in 2019 was unchanged from the previous year’s rate of 8 per cent.

With regard to Chirano Gold Mines, a subsidiary of Kinross, production fell from 226,370 ounces in 2018 to 201,037 in 2019. The 11 per cent nosedive in output was partly brought about by a decline in volume of ore processed, average head grade and mill recovery rate. The 1 percentage point fall in tonnes of ore processed was a consequence of the metallurgical characteristics of the ore mined while the 9 per cent dip in the head grade was due to the lower grade ore mined at the underground deposits of Paboase and Akoti. However, the volume of ore mined improved by 28 per cent following the resumption of surface mining in the first quarter of 2019. The increment in ore mined was the main moderating factor on the downturn in the previously cited processing metrics. Despite the contraction in production, the mine maintained its share in the total gold output of member companies of the Chamber at 8 per cent in 2019.
Figure 14.0: Gold Produced by Member Companies of the Chamber of Mines

Source: Ghana Chamber of Mines (2020)

Figure 15.0: Gold Production Revenue of Member Companies of the Chamber of Mines

Source: Ghana Chamber of Mines (2020)
The Edikan Gold Mine of Perseus Mining (Ghana) Limited altered its mining strategy and life of mine in January 2019 to enhance the sustainability of its operations. The changes involved using a single mining contractor, Rocksure International, and lowering total ore and waste mined to satisfy planned mill throughput. In the light of this development, production at the Edikan Mine plunged from 217,219 ounces in 2018 to 179,574 ounces in 2019. Coupled with the planned reduction in total ore mined, the 17 per cent plunge in output was also elicited by a fall in the mill recovery rate and head grade. While the decrease in the mill recovery rate was triggered by the processing of relatively hard rocks from one of its pits (Esuajah North), the drop in head grade could be attributed to the processing of fine grained carbonaceous material from another pit (Fetish). The fall in production also resulted in a 2 percentage point reduction in the mine’s share of gold output of member companies of the Chamber to 6 per cent in 2019.

At the Nzema Mine of Adamus Resources, which is owned by BCM International, production fell by 19 per cent to 84,197 ounces in 2019 from 103,731 ounces in 2018. The decline in production, which translated into a contraction in its contribution to the total gold output of producing member companies from 4 per cent in 2018 to 3 per cent in 2019 (see figure 16.0), was an outcome of the delayed mining from its primary pit, Bokrobo, and challenges with reserve reconciliation. The planned cutback of the Bokrobo pit to expose the high grade area exceeded the projected timelines and therefore impacted adversely on production.

Figure 16.0: Share in Gold Output of Member Companies of the Chamber

Output of the country’s sole producer of manganese, Ghana Manganese Company, increased at a slower rate of 18 per cent in 2019 as compared to 52 per cent in 2018. The lower than anticipated expansion in output of the TMI owned mine was as a result of the regulatory impasse with the Ministry of Lands and Natural Resources, which led to prolonged periods of inactivity at the Nsuta Mine.

Outlook of Mineral Production in 2020

With the commencement of production at the Obuasi Mine of AngloGold Ashanti and planned organic growth in production of most producing members, the outturn of gold output is expected to be higher in 2020 than the preceding year. On the contrary, the production and shipments of manganese by Ghana Manganese Company is expected to record a year-on-year decline. This is due to the protracted regulatory impasse that compelled the mine to suspend operations in the first quarter of 2020.
Production Cost Profile of Gold Producing Member Companies in 2019

Similar to other mining jurisdictions, Ghana uses the all-in sustaining cost (AISC) of producing an ounce of gold as the metric for assessing production cost. The AISC, which is a proprietary metric of the World Gold Council, measures capital expenditure, production and other costs related to sustaining current gold production. The average AISC of the gold producing member companies of the Chamber increased by 4 per cent to US$ 1,029 per ounce in 2019 from US$ 984 per ounce in 2018. The rise in the AISC per ounce, which exceeded the global equivalent of US$ 936 per ounce, depicted the general elevation in production cost of producing members.

The cost of producing an ounce of gold at the Ahafo Mine of Newmont declined from US$ 864 in 2018 to US$ 820 in 2019. The 5 per cent fall in AISC was attributable to the growth in revenue associated with increase in production and lower stockpile inventory, which culminated in a decrease in cost applicable to sales. However, the mine recorded year-on-year growth in sustaining capital expenditure and payments of royalty to the state, which partially counterbalanced the fall in AISC. On the other hand, the AISC of Akyem Mine increased by 2 per cent to US$ 718 per ounce in 2019 as compared to US$ 705 per ounce in 2018. The rise in production cost was due to the upturn in cost applicable to sales and reclamation expenditure, which were somewhat offset by lower sustaining capital spend.

Gold Fields recorded contrasting production cost at its Tarkwa and Damang Mines. The decline in production at the Tarkwa Mine culminated in a marginal rise in its AISC, from US$ 951 per ounce in 2018 to US$ 958 per ounce in 2019. Conversely, Damang Mine’s cost of producing an ounce of gold decreased from US$ 813 in 2018 to US$ 809 in 2019. The 0.5 per cent fall in AISC was realized on the back of an increase in gold revenue which was occasioned by a rise in output and price. In the same period, the cost associated with sale of gold also increased. However, this development was insufficient to raise the year-on-year cost of producing an ounce of gold.

The contraction in output of Golden Star Resources’ Prestea Mine triggered a 24 per cent increase in its AISC, from US$ 1,558 per ounce in 2018 to US$ 1,937 per ounce in 2019. In a similar vein, the AISC per ounce of gold for the other mine operated by Golden Star Resources, Wassa Mine, rose by 4 percentage points. The upturn in AISC from US$ 886 per ounce in 2018 to US$ 922 per ounce in 2019 was on account of an increase in sustaining capital expenditure, which outweighed the reduction in cost applicable to sales.

With respect to Kinross’ Chirano Gold Mines, the AISC per ounce of gold increased from US$ 889 per ounce in 2018 to US$ 1,082 per ounce in 2019 due to an increase in production cost of sales. The rise in production cost of sales was brought about by the decision to engage a contractor to restart the surface mining operations.

At the Iduapriem Mine of AngloGold Ashanti, the AISC per ounce of gold continued its downward descent. It reduced from US$ 977 per ounce in 2018 to US$ 890 per ounce in 2019 following an initiative to optimize consumption of reagents, which was part of its Operational Excellence Programme. The savings on reagents was also bolstered by the increase in production.

The AISC per ounce of the joint venture mine of Asanko and Gold Fields, Asanko Gold Mines, increased by 4 per cent, from US$ 1,072 in 2018 to US$ 1,112 in 2019. The modest growth in the AISC per ounce was primarily caused by an increase in cost applicable to sales and mining as well as a rise in the cost of hauling ore from Esaase to the process plant. However, the increase in production cost was mitigated by growth in mineral production.

Following a revision in its mining strategy, the AISC per ounce of the Edikan Mine of Perseus Mining Ghana Limited declined by 13 per cent to US$ 985 per ounce in 2019 from US$ 1,129 per ounce in 2018. The drop in production cost was driven mainly by a decrease in its mining cost, which was also partly offset by the contraction in production.

Similar to the previous year, the AISC per ounce of Nzema Mine of Adamus Resources Limited grew from US$ 981 per ounce in 2018 to US$ 1,089 per ounce in 2019 as shown in figure 17.0. The 11 per cent increment in AISC was largely due to the high cost associated with the cutback of its primary pit,
Bokrobo.

**Health and Safety Performance of Ghana’s Mining Industry in 2019**

Data from the Minerals Commission shows that the safety metrics of Ghana’s mining industry recorded non-homogenous outcomes in 2019. Whereas the incidence of near miss and fatal injuries declined on a year-on-year basis, the count of first aid and serious injuries deteriorated in 2019 relative to the preceding year. Specifically, the incidence of first aid injuries, which is statutorily considered as the class of injuries that does not result in loss of shift, increased by 4 percent.

The case count of first aid injuries grew from 189 in 2018 to 197 in 2019. Likewise, the number of serious injuries rose by 8 per cent to 28 in 2019 from 26 in 2018. Serious injuries are incidents that involve loss of shift for more than 14 days. Conversely, incidents that result in death of a casualty, which is formally referred to as fatal injuries, declined from 7 in 2018 to 3 in 2019. This translates into 57 per cent reduction in the incidents of fatal injuries as shown in figure 18.0. As well, the incidence of near miss cases fell by 20 per cent, from 407 in 2018 to 326 in 2019. The Minerals Commission defines near miss incidents as occurrences that do not culminate in loss of shift, injury, death or damage to equipment.
Challenges Confronting Operations of Member Companies in 2019

In the next section, we present the key issues that impacted the activities of member companies in 2019. The challenges will be discussed in three broad themes; fiscal, advocacy and operational issues.

Fiscal Issues

Price Build-Up of Petroleum Products

The Chamber is of the view that some of the elements in the price build-up of diesel supplied to the mines have little or no bearing on the cost of supplying the fuel to the mines. The specific elements are as follows:

- **Ex-Refinery Price**
  Unlike the retail market, the ex-refinery price of diesel supplied to the mines is largely determined by the National Petroleum Authority (NPA). In a sense, the mining industry and other consumers in the export segment of the petroleum market do not benefit from the gains associated with deregulation. Clearly, a decision to extend the government’s deregulation policy to the export market would not only enhance competition, which could exert downward pressure on prices, but also improve the service delivery of the suppliers of diesel to the mines. The Chamber therefore proposes that the government should allow market forces to autonomously determine the ex-refinery price of diesel supplied to the mines as it obtains in the retail market.

- **Taxes, Levies and Margins**
  a. **Energy Debt Recovery Levy**
     The Chamber acknowledges the debilitating impact of the legacy debts on the sustainability and viability of the energy sector as well as commends government for its efforts to retire them through the Energy Sector Levy Act, 2015 (Act 899). However, the mining sector has historically paid a fair market tariff for electricity supplied to it by the Volta River Authority (VRA) or Electricity Company of Ghana (ECG). Indeed, the tariffs are typically above the fair value in the case of the latter as the Public Utilities
Regulatory Commission (PURC) pricing formula for the mining industry is based on perceived ability-to-pay rather than cost of service. The spread between the cost of service and tariff paid by the mines, which could aptly be described as a premium, is used in cross-subsidizing the consumption of electricity by other consumers.

It is therefore patent that the mining industry was not a beneficiary of the subsidies that led to the accumulation of debts in the energy sector. Accordingly, it is unfair to impose a levy on mining companies to recover debts that they were neither beneficiaries of nor a contributing party to. Accordingly, the Chamber strongly recommends the exclusion of the Energy Debt Recovery Levy from the price build-up of diesel supplies to the mines as it obviously weighs heavily on the uncompetitive price of diesel to the mines, which additional cost can hardly be justified.

b. Price Stabilization and Recovery Levy
The inclusion of Price Stabilization and Recovery Levy (PSRL) in the price build-up of petroleum products serves the purpose of neutralizing the adverse effects of movements in the exchange rate on the price of fuel. In the retail market, where the ex-refinery price of the imported diesel is quoted in the local currency, the levy fulfils its function of offsetting shocks induced by volatility in the exchange rate.

On the other hand, the ex-refinery price of diesel supplied to the mines is quoted in United States Dollars at the full parity price and companies pay their suppliers in the aforementioned currency. This pricing regime and mode of payment imply that mining companies and other consumers in the export market have inherently insulated the state from the currency induced movements in the price of diesel. Hence, the inclusion of another levy, PSRL, in the price build-up of diesel supplied to the mines was not only superfluous but also analogous to double taxation. In that regard, we strongly recommend that government should expunge PSRL from the price build-up of diesel supplied to the mines.

c. Primary Distribution Margin
The Primary Distribution Margin (PDM) compensates operators in the primary market of fuel products for their investments in infrastructure in that segment of the market. Basically, these investors provide depots for holding fuel discharged from vessels before they are transported to their final destination or facilities of Bulk Oil Storage and Transportation Company (BOST). In the retail market, the inclusion of the PDM in the price build-up of diesel has an economic justification as the fuel is stored in such facilities before being transferred to the various outlets. However, the process for handling diesel destined to the mines does not mimic that of the retail market. The various Oil Marketing Companies (OMCs) that supply diesel to the mines have their own storage facilities and reflect such investments in their prices to the mines. It is therefore inappropriate to request the mining companies to pay twice for the same service. Accordingly, the PDM should be removed from the price build-up of diesel supplied to the mines.

d. Bulk Oil Storage and Transportation Company Margin
The Bulk Oil Storage and Transportation (BOST) Company was set up to among others, provide infrastructure for holding strategic fuel reserves for the country as well as depots for storing fuel. In most cases, fuel supplied to the retail market would have been stored in a BOST facility prior to being transferred to the final destination. It is however instructive to note that fuel supplied to the mines is not comingled with that of the retail market, which is stored in a BOST facility. Indeed, the higher fuel specifications of the mining companies make it imprudent for their suppliers to mix their product with that destined for the retail market. It would therefore be unfair to request an entity to pay for a service that it does not consume or demand. Accordingly, we appeal for the exclusion of the BOST Margin from the price build-up of diesel supplied to the mines.

e. Fuel Marking Margin
On account of some historical antecedents, including a mechanism to avoid the adulteration of petroleum products, the Government of Ghana decided to mark the various fuels that are supplied to the retail market. Since this procedure was necessarily associated with cost, it was apposite that the state recovered its expenditure by introducing a margin in the price build-up of fuel supplied to the generic market. In the “export market”, however, diesel supplied to the mines is not marked. Thus, the need to include a dedicated margin to recoup costs associated with marking of diesel supplied to the mines would not be warranted. It is in that regard that we kindly request for the removal of the fuel marking margin from the price build-up of diesel consumed by mining companies.
f. Road Fund Levy

As part of the state's efforts to raise revenue to finance the construction of roads in Ghana, beneficiaries of the infrastructure were requested to bear part of the cost through the inclusion of a levy in the price build-up of fuel products. The imposition of the levy on fuel products meant that persons who buy fuel for use in their private vehicles or indirectly for use in a public bus will be commuting on a public road. This supposition also implied that persons who neither own private vehicles nor use public buses would not be required to pay for the construction of public roads through the medium of a levy on fuel products. In other words, they would not have demand for fuel and by extension, public roads. The latter typifies case of the mining industry where operations are usually undertaken in remote areas that do not require the use of public roads. As a matter of fact, mining companies operate in situ and their earth moving equipment are also not used on public roads.

Furthermore, most mining companies contribute directly to improving the country’s road network by underwriting the cost of road construction in their catchment areas. In 2019, for instance, the 13 mining member companies of the Chamber spent USD 14.46 million on enhancing the road networks in their operational footprint. It is therefore economically unjustifiable to request an entity that does not use public roads for its operations but voluntarily contribute to the maintenance of same to pay another levy for such infrastructure. It is our request that the road fund levy would be excluded from the price build-up of diesel supplied to the mines.

It is obvious that the mining industry straddles the pure export or foreign market and the commercial retail market. The Chamber suggests that rather than merely layering its ex-refinery price in US$ and passing on all retail price elements to the mining industry, the government should reconsider the elements of the price build-up of diesel to the mines to ensure that it reflects relevant cost elements only. It is our considered view that this approach will not only improve the business environment for mining firms but also position them to operate more competitively.

Mineral Revenue Retention Policy

The Ministry of Finance has informed the Chamber of its intention to standardize mineral revenue retention regimes in the mining industry. It is contemplating a three-tiered retention regime where a defined proportion of mineral export proceeds will be retained in offshore or local account (at the company’s discretion), local account and the remaining sold to commercial banks under the mandatory surrender requirement.

The Chamber’s preferred model is to retain the existing general practice where mining companies have binding retention agreements based on their forex requirements. This arrangement allows the mining companies to honour their external and internal obligations which are usually denominated in foreign currency. More so, mining companies effectively repatriate foreign currency when they transfer funds from offshore accounts to settle liabilities to in-country suppliers and manufacturers of inputs. In the last five years, the share of mineral revenue returned by the Chamber averaged 70 per cent. Obviously, this is far in excess of the statutory maximum of 25 per cent of realized mineral revenue anticipated under the Minerals and Mining Act, 2006 (Act 703).

Apart from disrupting the commercial arrangements between the mines and their suppliers, a variation in the mineral revenue retention regime will also saddle them with additional transaction costs and potential delays. Most mines are already operating forex accounts in offshore jurisdictions to meet their operational and in some cases, debt raising and general financing requirements. It would therefore be duplicative if a company is required to open and maintain another forex account in-country. Moreover, the bureaucracy associated with transfers from the local forex account will delay payments to vendors and result in tardy supply of critical spares and equipment. This could ultimately result in unplanned cessation of mining operations.

Furthermore, the proposal to vary the mineral revenue retention regime could lead to a situation where the mining companies will queue to access forex to honour their obligations. This will particularly be the case if mineral receipts from the mining companies are not sequestered but added to the pool of forex reserves. The ensuing glut in demand may hamper the ability of financial intermediaries to meet the large forex requirements of the mining industry in a timely manner. More so, the additional demand from the
mining industry may exert depreciative pressure on the local currency. In other words, the proposal to vary the current mineral revenue retention agreement may have the unintended consequence of triggering a loss in the value of the country’s currency relative to other external currencies.

Since the existing regime allows for seamless and cost effective transactions, the Chamber requests the Ministry of Finance to retain same. This would not only allow the companies to operate efficiently and cost competitively but also guarantee steady supply of forex to the local financial intermediaries.

**Issues with Income Tax Act, 2015 (Act 896)**

The government passed the Income Tax Act, 2015 (Act 896) with the overriding objective of expanding its tax base and enhancing tax payments as well as revenue collection. Following the passage of the Act, the Chamber identified a number of concerns and raised them directly with the Minister of Finance. The specific concerns of the Chamber are as follows:

- **Ring Fencing**

  Ring fencing is one of the major and fundamental concepts underlying the entire Act 896. In addition to the general provisions on ring fencing in the Act, there are specific provisions pertaining to the mining industry. Section 78 (1) provides that subject to this section, the following shall constitute a separate mineral operation:
  - A mineral operation pertaining to each mine, and
  - A mineral operation with a shared processing facility.

  Key to the provisions on ring fencing is the concept of “Shared Processing Facility”. In 2013, the Chamber, the Ghana Revenue Authority and the Minerals Commission had a workshop to discuss the implementation of the ring fencing provisions contained in the Internal Revenue (Amendment) Act, 2012 (Act 839). The Chamber outlined key operational reasons why the concept of ring fencing as contained in Act 592 was not practicable. The concept of “Shared Processing Facility” was introduced and it was defined to mean “a cluster of processing plants in close proximity”. This was the consensus reached at the workshop subject to holding subsequent discussions to fine-tune its implementation.

  Based on the current wording of Act 896, however, it appears that if a single mine has two processing facilities, each processing facility shall be ring fenced separately. This raises difficulties on the ground where ore from different pits is trucked to these facilities. The provision in the Act is not consistent with the consensus reached at the afore-mentioned workshop. Further, the current wording of the law artificially creates separate mineral operations and makes it difficult for mining companies to comply with it from a cost allocation perspective. The law suggests that the mining firm should separately account for income and expenses for its unnaturally segregated business.

  Another key challenge in respect of the ring fencing provisions under Act 839 is the requirement that each “mining area” be treated as a separate mineral operation and the definition of “mining area” as “the area designated from time to time by the holder of a mining lease with the approval of the Minerals Commission,” which is consistent with the definition of mining area in the Minerals & Mining Act, 2006 (Act 703). This Mining Act’s definition envisages the routine practice of progressively declaring mining areas within the mining lease as part of the ongoing plan to develop a single mining operation. In essence, it recognizes that areas within a mine can be developed over time, but it does not follow that they should be treated as artificial separate mining operations for tax purposes as required by section 78 (3). To do so is an impractical and completely uncommercial imposition on mining companies.

  For instance, how will ground rent be determined for the various mining areas within the mining lease? Assuming the determination of the rent is based on area of operation, then a deduction will only be available for the small proportion of the fees relating to the declared active mining area. The firm will not be able to offset the ex-mining area costs since there is no income attributable to those areas. More so, tax deductions could be lost in some declared mining areas if those areas are unprofitable. Of more importance is the requirement in section 77(5) that “arm’s length transaction” pricing rules be applied between each artificial “mineral operation”. This will create serious tax anomalies. In most cases the “arm’s length” price for toll treating ore is much higher than what could be sustained in an integrated mining operation comprising multiple pits. For most mines, the feasibility of the entire operation is dependent on ore from a number of pits being processed through a central processing facility. An “arm’s
length” processing price will likely result in losses being recorded by each of the artificial “mineral operations” containing pits and a profit and tax being payable by the “mineral operation” which contains the processing plant. That scenario is not sustainable.

In the light of the serious and hopefully unintended commercial implications resulting from the definition of “mining area” and the requirement to treat each mining area as a separate operation for tax purposes, together with the practical challenges with the concept of ring fencing, we propose that the GRA suspend the enforcement of these provisions as it dialogues with the Chamber to find a common position. In the petroleum industry, it is comparatively easier to ring-fence on a well by well basis. However, the same practice cannot practically be transferred to the mining industry, especially surface mines, where there is transferability of ore from different pits.

- **Limitations on Deductibility of Payment for Services to Non-Residents**

Under the erstwhile tax laws, non-resident persons were effectively taxed under the withholding tax system. However, the new income tax appears to deny a deduction for expenditure where the income for the service provider is not sourced from Ghana. Specifically, section 81 (2) (b) (ii) provides that “the Commissioner-General shall not allow a deduction for an amount unless that amount is wholly, exclusively and necessarily incurred in acquiring services or facilities for the mineral operation and is income of the recipient which has a source in Ghana”. Section 105 (i), also defines an income to have a source in Ghana “if it relates to payments for or attributable to employment, service rendered or forbearance from exercising employment or rendering a service in the country, regardless of the place of payment”.

These are the unintended consequences of the current wording of the law which the Chamber believes should not be the case. In its current state, the law is acutely detrimental to the mining industry, which is also the tax payer.

It is also unclear whether the restrictions in section 81 (2) have the effect of denying deductions for expenditure such as:

- Consumables such as fuel or chemicals acquired for use in the mining process (which is the case unless their purchase is accepted as the acquisition of a valuable asset)
- Wages of employees (unless they are classified as services of mining operation)
- Electricity costs, rent, telephone, among others.
- In view of the nebulous nature of the law, we request the GRA to take a second look at the wording of the law and address the concerns raised.

- **Thin Capitalization**

The Income Tax Act extends thin capitalization provisions to restriction of deductions for interest and foreign exchange losses incurred by a foreign controlled company to all debt from any source. This is a clear departure from the familiar practice of associating thin capitalization with related party transactions. In its current form, the Act raises a number of practical questions:

- What constitute debt since debt has not been defined?
- At what point during the year of assessment should reference be made to in determining debt for thin capitalization purposes?
- What is the make-up of exempt equity? Act 896 is silent on retained earnings and other reserves in determining what constitutes equity for thin capitalization purposes.
- At what point during the year of assessment should reference be made in determining equity for thin capitalization purposes?

The effect of the legislation would stifle the development of new mines or expansion of existing mines since the non-deductibility of interest and foreign exchange losses will be built into financial models used in the bank’s credit decisions. We therefore request the GRA to provide clarity on the interpretation and application on the provisions of thin capitalization.

- **Artificial deemed Profits or Loss of deductions on change in shareholdings**

Shares held directly or indirectly in a mining company by publicly listed companies should be exempted from the “look-through” provisions in sections 81 (8) and 62. This is on account of the fact that publicly listed companies have no control over the sale of their shares and may not be able to trace the beneficial
owners of those shares. In most cases, the Ghanaian mining company, which is the subject of these provisions may not have the requisite information to comply with the Act.

We recommend that shareholders of a firm listed on a recognized stock exchange should be treated as an individual rather than attempting to look through to its individual shareholders. In fact, this “look-through” provision will stifle exploration and development in the Ghanaian mining industry if not removed entirely, since it has the effect of creating an artificially determined tax profit for, or denying tax deductions to, a Ghanaian company when the company inevitably has to source new funds for exploration or development of a mine.

Certainly, it is not intended that if a foreign shareholder of a Ghanaian mining or exploration company issues shares to a new shareholder to raise exploration funds for the Ghanaian company in which it has invested, it will either create a taxable profit or deny future deductions under the market value provisions of section 83 (2). There is no disposal of an asset and no profit made by any entity, so how can the Ghanaian exploration or mining company be taxed on the transaction? What should be noted is that these provisions seek to create a deemed disposal for the Ghanaian company even where the investment in that company is only a minor part of the investment portfolio of the international investor which has a change of shareholding. Any investor investing in Ghana would be looking at a perceived triple layer of tax which would have to be factored into purchase prices, thereby increasing transactional costs.

If the aim of Section 83 is to tax benefits received by the sale of shares in non-Ghanaian entities which hold indirect interests in Ghanaian mineral assets as their major investment, then the state should consider replacing Section 83 with a provision which specifically taxes the sale of those indirect shareholdings. Keeping in mind that if Section 83 is replaced by such a provision, the tax should only apply where the investment in the Ghanaian mining company forms a major part of the underlying assets of the non-resident enterprise whose shares are sold, and should not apply to the sale of shares which are listed on a recognized stock exchange.

- **Taxation of Dividends**
  Section 85(1) excludes Ghanaian corporate company shareholders of mining companies from receiving dividends tax free under section 59 (3) where they own at least one-quarter of the shares in the company. This provision has the potential of creating double taxation, particularly, in the event that the dividend paid by the mining company will be taxed by its immediate shareholder and then again when that shareholder pays a dividend to its shareholder(s). Against this background, we request the GRA to provide clarity on the appropriate interpretation of this provision.

- **Guidelines for Approved Rehabilitation Funds**
  In line with section 84 of Act 896, mining companies are eligible for upfront deductions for rehabilitation payments into an approved rehabilitation fund. The upfront deduction is especially relevant for cash flow and sustainability of mining operations. However, the GRA disallows the provisional rehabilitation payments. With this practice, there will be no profits to offset the payments against them by the time a mine approaches its end of life. The Chamber urges GRA to develop the relevant guidelines to make the provision effective.

- **Repairs and Improvement (Section 12 Act 896)**
  The income of a person is calculated by deducting from that income, any expense that is incurred by that person for the repair or improvement of a depreciable asset of that person, where the repair or improvement cost:
  1. Is for a depreciable asset of that person;
  2. Must be wholly, exclusively and necessarily incurred in the production of income from investment or business in satisfaction of the requirement;
  3. Maybe of a capital nature.

However, a deduction granted for a year of assessment with respect to a depreciable asset in a particular pool of depreciable assets of a person should not exceed 5% of the written down value of the pool at the end of the year. Any excess for which a deduction is not allowed as a result of the limitation shall be added to the depreciation basis of the pool to which it relates.
The implication of the section 12 of Act 896 is basically asking tax payers to pay more taxes now by restricting the deductible amount for repairs and improvement cost of depreciable assets by carrying forward any excess of 5 per cent on the written down value of the pool at the end of the year to which the repairs and improvement cost relates to. Thus, to restrict cost in a particular year and carrying forward any excess will result in huge amount in tax liability which members’ cash flows cannot sustain.

- **Value Added Tax (VAT) Flat Rate Scheme**
  Unlike the earlier Value Added Tax (VAT) policy which was applicable to suppliers within a defined threshold, the new 3% VAT flat rate scheme applies to all suppliers, including companies within the Large Tax Payers Unit. Since all suppliers to the mining companies have been classified as wholesalers or retailers, the law will impact on the mining sector directly.

Most of the companies that supply products to the mining companies import more than 97% of their wares and consumables. Already, these companies pay duties and 17.5% VAT paid on the imported items. With the passage of the new VAT law, companies cannot claw back the 17.5% import VAT as input VAT. Consequently, the mining companies will bear the 3% VAT in addition to the 17.5% VAT which cannot be reclaimed, which would be treated as output VAT without any input VAT.

We therefore request that companies should be given the opportunity to claim input VAT suffered regardless of whether or not they fall within the 3% VAT scheme or alternatively revert to the historical basis where revenue levels determined the applicability or otherwise of the 3% VAT scheme.

- **Value Added Tax (VAT) on Mining Companies for the Supply of Power**
  The VAT Act, 2013 (Act 870) stipulates in section 27 that the supply of any form of power heat, refrigeration or ventilation is a supply of goods. This provision also existed in the now repealed VAT Act, 1998 (Act 546).

The GRA suggests that, as our member companies make their mining facilities/operations available to service providers, to the extent that these service providers consume electricity on the mine site, that consumption of electricity should be regarded as a supply of power and should be subject to VAT accordingly.

We believe that the supply of power issue should be looked at in various applicable contexts depending on the arrangements entered into between the member mining company and its service provider. This is on account of the following reasons:

1) **Usage of the mine’s electricity supply available to all stakeholders**
   Given the nature of mining (remote location, size of equipment etc.), certain technical and other service providers must transfer their equipment and specialist staff to the mine site to facilitate service delivery. In return, the mine makes available to them its facilities, supervisory staff and dedicated space amongst others. This is a recognized industry practice and the service providers’ contractual arrangements and invoices to the mine take cognizant of this.

As the mine does not generate or supply electricity, all mine staff, contractors and service providers make use of the same electricity supply and there is no additional charge for electricity consumption. In such an instance, there has not been a separate supply of power. All service providers (caterers, transportation services, leisure services, among others) make use of the same electricity supply and the amount that is billed to the mine takes cognizance of this.

As stated earlier, this is a business wide practice which is prevalent in other industries such as manufacturing, fabrication, among others.

2) **Additional Contractual Charge for electricity consumed by stakeholders**
   As in the earlier example, service providers transfer their equipment and specialist staff to the mine site however the mine also makes available to them, a dedicated electricity supply. Such a dedicated electricity supply is contractually agreed to and chargeable as such and so should be subject to VAT.

In this instance, we would not disagree with the GRA’s position that a supply of power has taken place in accordance with Act 870. We are of the view that the contractual arrangements underpinning dealings
between a mine and its service providers should be thoroughly reviewed in order to determine whether a supply of power has indeed taken place.

For example:
- Does the service provider need a certain quantum of uninterrupted power in order to operate?
- Does the contract stipulate that there will be an additional charge for electricity consumed?
- Does the mine make the same electricity available to all of its service providers to enable them deliver on their obligations?
- Does the mine profit from there being a separate charge for electricity?

Whilst these are not exhaustive, they do attempt to distinguish whether electricity is available to all or whether indeed a separate supply of power has taken place. In the case of the former, VAT is not applicable. For the latter, VAT is duly applicable.

**Publication of Tenth Edition of Mining List**

The Chamber liaised with the Sector Ministry, Minerals Commission, Customs Division of GRA and Ministry of Finance to review the Mining List to conform to technological advancements and ECOWAS Common External Tariff Regime. After thorough consultative stakeholder engagements, the parties firmed up the Mining List and forwarded same to the Ministry of Finance and the Sector Ministry through the Minerals Commission. The Chamber courts the support of the Sector Ministry in facilitating the expeditious consideration and publication of the tenth edition of the Mining List.

In a related matter, the Chamber would like to draw the Sector Ministry’s attention to the Ministry of Finance’s intention to exclude consumables from the Mining List. According to the Ministry of Finance, the statutes governing exemptions regime in the mining sector do not provide for the inclusion of consumables on the Mining List. Consequently, the Ministry of Finance will disallow exemptions on consumable items imported by mining companies. Clearly, this intention, which is premised on a strict interpretation of the law, would invariably culminate in additional cost for the mines and service providers. It is a well-known fact that expenditure on consumables constitute a major outgoing in the mining industry. For such reasons, consumables have traditionally been considered as part of the Mining List. More so, expenditure on consumables have been factored into the economic viability of the mines. Clearly, a variation in the exemptions regime will impact on a company’s life of mine. Accordingly, the Chamber solicits the government’s support in retaining consumables on the Mining List.

**Advocacy Issues**

- **Incentives for Exploration Companies**

The relevance of exploration in ensuring a pipeline of future viable projects cannot be over-emphasized. It is the single most critical activity that guarantees continuous production of mineral and discovery of new mineral resources to supplement production from existing mines or replace output of mines whose economic ore body is exhausted. However, exploration investment in Ghana has declined significantly in recent years. This is alarming for a country to which mining is critical for forex and fiscal revenue generation among others.

Given that exploration is capital intensive and associated with high risk, it would be prudent for the government to relieve exploration companies from the payment of upfront costs. This would facilitate effective exploration and consequent commercial finds. Accordingly, it is crucial to put in place an incentive scheme that will reduce the cost associated with exploration and therefore attract the required critical investments into this high risk business of mineral exploration.

As a first step, we request government to exempt exploration companies from payment of VAT on big ticket cost items such as Drilling and Laboratory Services. In Ghana, VAT is payable on exploration expenditure and it cannot be recovered by the exploration companies unless they make a commercial find and commence production. This implies that where exploration is unsuccessful, VAT would not be recoverable. Effectively, the extent of actual exploration activity is diminished by upfront costs such as VAT on inputs. Thus, relieving the usually illiquid exploration companies from the payment of VAT would not only improve their cash flow and reduce their operational costs but also enhance the country’s image as a competitive destination for exploration investment. In the longrun, this will guarantee continuous mineral production and flow of fiscal and forex receipts as well as other benefits from the minerals sector.
Harmonization of Royalty Regime

Following consultations with stakeholders of the mining industry, section 25 of the Minerals and Mining Act, 2006 (Act 703) was amended by the repeal of the Mining (Amendment) Act, 2010 (Act 794) and substituted with a provision that gives discretionary powers to the Minister responsible for mining to prescribe the rate and manner for payment of royalty to the Republic. These amendments are contained in the Minerals and Mining (Amendment) Act, 2015 (Act 900). Although, the Minister is yet to publish regulations on the rate and manner for the payment of royalty almost two years after the passage of Act 900, some mining companies continue to pay an amount equivalent to 5% of mineral revenue as required in the amended Act while others are required to pay a variable royalty rate as shown in Table 4.0. The latter are mines that have investment agreements with the state and are relatively large gold producers.

Operational Issues

- Delays in Issuance of Environmental Permits
  The lack of adequate personnel at the Environmental Protection Agency (EPA) to review permit applications causes long delays in approval of same. The unpredictable lead times for issuing permits by the EPA adversely affect project planning and execution. It also impacts negatively on raising of investment capital for projects since it creates uncertainty regarding cash flows and other project metrics. A survey by the Fraser Institute in 2017 showed that most investors were concerned about the long lead time for the approval of environmental permits for both mining and exploration firms. We therefore urge government to improve the human resource capacity of EPA.

- Withdrawal of Troops from Mining Companies
  Over the years, the Chamber and its producing member companies have received the support of the security agencies in protecting assets at the mines. In particular, the Chamber’s relationship with the

### Table 4.0: Renegotiated Royalty Rates in Investment and Development Agreements

<table>
<thead>
<tr>
<th>Royalty Rate (%)</th>
<th>Gold Price (USD per ounce)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>Less than $1,300</td>
</tr>
<tr>
<td>3.5</td>
<td>$1,300 - $1,449.99</td>
</tr>
<tr>
<td>4.0</td>
<td>$1,450 - $2,299.99</td>
</tr>
<tr>
<td>5.0</td>
<td>$2,300 and above</td>
</tr>
</tbody>
</table>

Source: JSE, 2016
Ghana Armed Forces was formalized through a Memorandum of Understanding (MoU) which was first signed in 2014. Under this arrangement, some military personnel were deployed to the mines to provide a range of high level and strategic services to support the operations of mining companies. Generally, this excludes guard duties or any other activities that bring the officers in close proximity with civilians. As a matter of fact, the presence of military personnel on the mines is basically to deter crime and complement the mining companies’ internal security arrangements.

However, the government decided to withdraw military officers from the concessions of mining companies on 31st January, 2019. This measure ushered in serious security challenges for the operating mines. Firstly, the Minerals and Mining (Explosives) Regulations, 2012 (L.I. 2177) provides that magazines for storing explosives should be manned by highly competent security persons.

The civilian guards who used to undertake such duties were unable to ward off armed intruders from stealing explosives. In view of the risk the development posed to the country’s security, an agreement was reached among National Security, Minerals Commission and mining companies for armed military persons to permanently protect explosives magazines.

Thus, the pull-out of troops from the mines would lead to a situation where the mines may not be able to effectively safeguard such critical installations. In the context of recent happenings in the sub-region, this development could even be a fertile ground for coordinated attacks on the mines.

Further, the mine sites and their host communities are usually targets for sophisticated crimes which cannot be easily repelled by internal security officers. Indeed, the severity of the situation led to the deployment of military persons in mining communities under “Operation Calm Life” several years ago. The military personnel were accommodated at the mines at the behest of government due to the inability of local government authorities to provide the required logistics.

In essence, the presence of military officers at the mines was in service to the nation even as they protected a natural resource which was owned by the good people of Ghana. The level of crime in such areas have not remarkably improved to warrant a withdrawal of military officers. Accordingly, the Chamber urges the state to deploy police officers to complement private security personnel to protect life, limb and property at the various mines.

- **Deplorable State of Railway Infrastructure**

The Western railway line, which was the primary mode of hauling bulk minerals to the Takoradi port, has deteriorated over the years as a result of obsolescence and limited investments. Consequently, the bulk mining companies, like the other producers of bulk export commodities, have had to make use of the more expensive road system.

For instance, Ghana Manganese Company hauled only 15.6 per cent of its shipment via the western railway line and a large part by road. It is estimated that the cost of road haulage is 50 per cent more expensive than the alternative of using the railway lines. This erodes the bottom line of the bulk mineral producers and could compel them to fold up prematurely if a solution is not found sooner.

Successive Budget Statements and Economic Policies point out the intention of government to rehabilitate the western rail network. Unfortunately, this is yet to happen, even though the benefits of a well-functioning railway system will not be a preserve of the mining industry but the entire economy. It could also serve as an alternative means of transporting life, foodstuff and other commodities across the country.

The Chamber is therefore pleased at government’s efforts to rehabilitate the country’s railway network, particularly, the western railway line. We urge government to expedite action in that regard since it has the inherent potential to generate revenue to pay back the initial investment cost.
## Statistical Appendix

### Appendix 1: Output and Shipments of Producing Member Companies

<table>
<thead>
<tr>
<th>Company</th>
<th>2018</th>
<th>2019</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gold (Ounces)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newmont Ghana Gold Limited</td>
<td>436,106</td>
<td>643,067</td>
<td>47%</td>
</tr>
<tr>
<td>Gold Fields Ghana Limited</td>
<td>524,869</td>
<td>519,072</td>
<td>-1%</td>
</tr>
<tr>
<td>Newmont Golden Ridge Limited</td>
<td>414,427</td>
<td>422,099</td>
<td>2%</td>
</tr>
<tr>
<td>AngloGold Ashanti Iduapriem Limited</td>
<td>253,487</td>
<td>274,665</td>
<td>8%</td>
</tr>
<tr>
<td>Asanko Gold Mines Limited</td>
<td>223,152</td>
<td>251,044</td>
<td>12%</td>
</tr>
<tr>
<td>Abosso Goldfields Limited</td>
<td>180,844</td>
<td>208,381</td>
<td>15%</td>
</tr>
<tr>
<td>Chirano Gold Mines</td>
<td>226,370</td>
<td>201,037</td>
<td>-11%</td>
</tr>
<tr>
<td>Perseus Mining (Ghana) Limited</td>
<td>217,219</td>
<td>179,574</td>
<td>-17%</td>
</tr>
<tr>
<td>Golden Star Wassa Limited</td>
<td>149,698</td>
<td>156,168</td>
<td>4%</td>
</tr>
<tr>
<td>Adamus Resources Limited</td>
<td>103,731</td>
<td>84,197</td>
<td>-19%</td>
</tr>
<tr>
<td>Golden Star Bogoso Prestea Limited</td>
<td>75,087</td>
<td>47,533</td>
<td>-37%</td>
</tr>
<tr>
<td><strong>Total Gold Production</strong></td>
<td>2,804,990</td>
<td>2,986,837</td>
<td>6%</td>
</tr>
</tbody>
</table>

**Manganese (Tonnes)**

<table>
<thead>
<tr>
<th>Company</th>
<th>2018</th>
<th>2019</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana Manganese Company</td>
<td>4,551,754</td>
<td>5,383,014</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: Ghana Chamber of Mines (2020)

### Appendix 2: Mineral Revenue of Producing Member Companies (US$)

<table>
<thead>
<tr>
<th>Name of Company</th>
<th>2018</th>
<th>2019</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newmont Ghana Gold Limited</td>
<td>552,814,514</td>
<td>889,522,223</td>
<td>61%</td>
</tr>
<tr>
<td>Gold Fields Ghana Limited</td>
<td>666,903,612</td>
<td>720,369,121</td>
<td>8%</td>
</tr>
<tr>
<td>Newmont Golden Ridge Limited</td>
<td>525,562,745</td>
<td>594,777,021</td>
<td>13%</td>
</tr>
<tr>
<td>AngloGold Ashanti Iduapriem Limited</td>
<td>322,611,642</td>
<td>390,021,741</td>
<td>21%</td>
</tr>
<tr>
<td>Asanko Gold Mines Limited</td>
<td>285,008,422</td>
<td>343,187,228</td>
<td>20%</td>
</tr>
<tr>
<td>Abosso Goldfields Limited</td>
<td>228,953,694</td>
<td>288,346,709</td>
<td>26%</td>
</tr>
<tr>
<td>Chirano Gold Mines</td>
<td>285,981,659</td>
<td>281,559,113</td>
<td>-2%</td>
</tr>
<tr>
<td>Perseus Mining (Ghana) Limited</td>
<td>276,642,909</td>
<td>245,169,396</td>
<td>-11%</td>
</tr>
<tr>
<td>Golden Star Wassa Limited</td>
<td>190,015,785</td>
<td>217,382,101</td>
<td>14%</td>
</tr>
<tr>
<td>Adamus Resources Limited</td>
<td>131,032,157</td>
<td>119,272,938</td>
<td>-9%</td>
</tr>
<tr>
<td>Golden Star Bogoso Prestea Limited</td>
<td>95,837,297</td>
<td>66,820,357</td>
<td>-30%</td>
</tr>
<tr>
<td>Ghana Manganese Company Limited</td>
<td>297,006,753.99</td>
<td>415,194,770.23</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,858,371,189</td>
<td>4,571,622,718</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: Ghana Chamber of Mines (2020)
### Appendix 3: All-In Sustaining Cost of Gold Producing Member Companies (US$/Ounce)

<table>
<thead>
<tr>
<th>Company</th>
<th>2018</th>
<th>2019</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newmont Ghana Gold Limited</td>
<td>864</td>
<td>820</td>
<td>-5%</td>
</tr>
<tr>
<td>Gold Fields Ghana Limited</td>
<td>951</td>
<td>958</td>
<td>1%</td>
</tr>
<tr>
<td>Newmont Golden Ridge Limited</td>
<td>705</td>
<td>718</td>
<td>2%</td>
</tr>
<tr>
<td>AngloGold Ashanti Iduapriem Limited</td>
<td>977</td>
<td>890</td>
<td>-9%</td>
</tr>
<tr>
<td>Asanko Gold Mines Limited</td>
<td>1,072</td>
<td>1,112</td>
<td>4%</td>
</tr>
<tr>
<td>Abosso Goldfields Limited</td>
<td>813</td>
<td>809</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Chirano Gold Mines</td>
<td>889</td>
<td>1,082</td>
<td>22%</td>
</tr>
<tr>
<td>Perseus Mining (Ghana) Limited</td>
<td>1,129</td>
<td>985</td>
<td>-13%</td>
</tr>
<tr>
<td>Golden Star Wassa Limited</td>
<td>886</td>
<td>922</td>
<td>4%</td>
</tr>
<tr>
<td>Adamus Resources Limited</td>
<td>981</td>
<td>1,089</td>
<td>12%</td>
</tr>
<tr>
<td>Golden Star Bogoso Prestea Limited</td>
<td>1,558</td>
<td>1,937</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>984</strong></td>
<td><strong>1,029</strong></td>
<td><strong>4%</strong></td>
</tr>
</tbody>
</table>

Source: Ghana Chamber of Mines (2020)

### Appendix 4: Volume of Gold Assayed by Precious Minerals Marketing Company for Licensed Gold Exporting Companies

<table>
<thead>
<tr>
<th>NAME OF COMPANY</th>
<th>2018</th>
<th>2019</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In-Country Purchases</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. A. MINERALS LTD</td>
<td>409,933</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>ABLE GRAND RESOURCES CO. LTD</td>
<td>-</td>
<td>1,400</td>
<td></td>
</tr>
<tr>
<td>ARIMA INTRA GHANA LTD</td>
<td>-</td>
<td>5,267</td>
<td></td>
</tr>
<tr>
<td>ASANSKA JEWELLERY LTD</td>
<td>11,529</td>
<td>22,459</td>
<td>95%</td>
</tr>
<tr>
<td>ASAP VASA COMPANY LTD</td>
<td>30</td>
<td>2,875</td>
<td>9,373%</td>
</tr>
<tr>
<td>ATHENA INTERNATIONAL LTD</td>
<td>-</td>
<td>74,698</td>
<td></td>
</tr>
<tr>
<td>AU RESOURCES GHANA LTD</td>
<td>10,757</td>
<td>96,286</td>
<td>795%</td>
</tr>
<tr>
<td>BGC INTRNATIONAL</td>
<td>4,409</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>BLAZE METALS</td>
<td>-</td>
<td>41,655</td>
<td></td>
</tr>
<tr>
<td>BRENLEY QUARTZ CO. LTD</td>
<td>-</td>
<td>19,001</td>
<td></td>
</tr>
<tr>
<td>BULLIONS RESOURCES LTD</td>
<td>470</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>COVENANT MINERALS LTD</td>
<td>-</td>
<td>89,760</td>
<td></td>
</tr>
<tr>
<td>E.A.R LOGISTICS</td>
<td>-</td>
<td>14,233</td>
<td></td>
</tr>
<tr>
<td>FIORE INTERNATIONAL LTD</td>
<td>-</td>
<td>178</td>
<td></td>
</tr>
<tr>
<td>GEOSPENCE GHANA LTD</td>
<td>96,471</td>
<td>853</td>
<td>-99%</td>
</tr>
<tr>
<td>GOLD COAST REFINERY LTD</td>
<td>57,519</td>
<td>176,905</td>
<td>208%</td>
</tr>
<tr>
<td>GOLD RECOVERY GHANA LTD</td>
<td>2,241</td>
<td>815</td>
<td>-64%</td>
</tr>
<tr>
<td>GOLDEN EMPIRE LEGACY LTD</td>
<td>-</td>
<td>123,273</td>
<td></td>
</tr>
<tr>
<td>GOLDRIDGE GHANA LTD</td>
<td>-</td>
<td>26,351</td>
<td></td>
</tr>
<tr>
<td>GRAND EXCHANGE GHANA LTD</td>
<td>45</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>GULDREST RESOURCES CO. LTD</td>
<td>290</td>
<td>2,971</td>
<td>924%</td>
</tr>
<tr>
<td>ITALTEC GHANA LTD</td>
<td>272,395</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>Company Name</td>
<td>Shares</td>
<td>Value</td>
<td>% Change</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>JORLY MINERALS LTD</td>
<td>-</td>
<td>12,001</td>
<td></td>
</tr>
<tr>
<td>KYEI &amp; AMANKWA CONSULTING LTD</td>
<td>-</td>
<td>37,451</td>
<td></td>
</tr>
<tr>
<td>M &amp; C LOGISTICS AND TRADING CO. LTD</td>
<td>30</td>
<td>778</td>
<td>2514%</td>
</tr>
<tr>
<td>MENZGOLD GHANA</td>
<td>50,960</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>MICROGOLD TRUST LTD</td>
<td>-</td>
<td>95,579</td>
<td></td>
</tr>
<tr>
<td>MONEX MINING COMPANY LTD</td>
<td>23,951</td>
<td>238,933</td>
<td>898%</td>
</tr>
<tr>
<td>NAPARI COMPANY LTD</td>
<td>-</td>
<td>99,864</td>
<td></td>
</tr>
<tr>
<td>O. M MINERALS GHANA LTD</td>
<td>233,441</td>
<td>1,617</td>
<td>-99%</td>
</tr>
<tr>
<td>PREMETEX GHANA LTD</td>
<td>-</td>
<td>31,317</td>
<td></td>
</tr>
<tr>
<td>RAFMOH GOLD LTD</td>
<td>-</td>
<td>9,527</td>
<td></td>
</tr>
<tr>
<td>RG RESOURCES</td>
<td>457,273</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>RINGMEAD GOLD</td>
<td>3</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>SAHARA ROYAL GOLD REFINERY</td>
<td>302,863</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>SAMASKA COMPANY LTD</td>
<td>-</td>
<td>122,633</td>
<td></td>
</tr>
<tr>
<td>STELNA SOLUTIONS LTD</td>
<td>21,257</td>
<td>955</td>
<td>-96%</td>
</tr>
<tr>
<td>SWB4 COMPANY LTD</td>
<td>575</td>
<td>6,335</td>
<td>1002%</td>
</tr>
<tr>
<td>VIMSTAR LTD</td>
<td>29,159</td>
<td>231,917</td>
<td>695%</td>
</tr>
<tr>
<td><strong>SUB - TOTAL</strong></td>
<td><strong>1,985,600</strong></td>
<td><strong>1,587,888</strong></td>
<td><strong>-20%</strong></td>
</tr>
</tbody>
</table>

**Trans-shipment**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Shares</th>
<th>Value</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.A MINERALS</td>
<td>269,285</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td>SAHARA ROYAL</td>
<td>279</td>
<td>-</td>
<td>-100%</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td><strong>269,564</strong></td>
<td>-</td>
<td><strong>-100%</strong></td>
</tr>
</tbody>
</table>

Source: PMMC (2020)
Appendix 5

Box 1.0: Composition of All-In-Sustaining Cost

Source: Based on formula of World Gold Council (2019)