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**STRATEGIC REPORT**

**FOR AMANGO**

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The Charter Quest Institute

**The CFO Case Study Competition 2017**

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**Executive Summary**

|  |  |
| --- | --- |
| **Terms of reference** | AMANGO GROUP MINING PLC (AMANGO) is a publicly listed multinational Mining and Metals giant based initially in South Africa but now in London. Team Eureka will evaluate, prioritise and provide strategic recommendations towards the urgent issues encountered for the Board of Directors. |

**PRIORITIZATION AND FOCUS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Issues** *(5 highest, 1 lowest)* | **Urgency** | **Financial Position** | **Ethical Implication** | **Score** | **Ranking** |
| JV in Canada | 3 | 4 | 3 | 3.3 | 4 |
| Strategic disposal in Brazil | 5 | 4 | 1 | 3.5 | 3 |
| Balance sheet de-leverage | 4 | 5 | 3 | 4.0 | 2 |
| Operational risk in Australia | 4 | 4 | 5 | 4.3 | 1 |
| Corporate reconstruction | 2 | 4 | 2 | 2.6 | 5 |
| *Weighting* | 40% | 30% | 30% | Out of 5 |  |
| *\* The issue regarding managing divisional performance group-wide is addressed in Ethical Issues.* |

**KEY RECOMMENDATIONS**

By considering factors such as financial impacts, socio-political environment, safety and, the key recommendations are listed below in order of priority.

1. Close down the problematic mine shaft and construct a new one nearby in Australia
2. De-lever the balance sheet better matches AMANGO’s goal of reducing debt and improving credit rating
3. Accept the final offer from CMOC and divest AMA-NP to streamline corporate structures and exit out of under-performing businesses with the pessimistic outlook
4. Adopt Design 2 for Quinta to secure their investment in Canada
5. Focus the portfolio on diamond, PGMs and copper in AMANGO’s long-term reconstruction

**Situation Analysis**

|  |  |  |  |
| --- | --- | --- | --- |
| **S** | * Dominant position in the global mining industry
* Leading position in diamond and platinum
 | **O** | * Expansion through joint ventures
* BRICS’s Friendly Policies
 |
| **W** | Capital structure* Credit rating downgraded to junk
* Excessive debts

Competitiveness* Loss of competitive edge for not being amongst the world’s top 10 miners
* Declining profits

Workforce* Increasing number of staff leaving and worsened redundancies

Operational safety risk and protests * Cutting corners on safety to meet increased production targets arouses stern protests from unions
 | **T** | * Heavy dependence on PIC, who poses threat of offloading the company’s shares
* Pessimistic global and Chinese market outlooks
* Depreciating commodity prices
* Exchange rate risk associated with AMANGO’s global presence
* Nullification of existing license
* Compliance of Mining Law and Charter
* Increased regulatory scrutiny
* Uncertainties of the BRICS’s Friendly Policies
 |

1. **Operational Risk and Industrial Action in Australia**

**SITUATION**

AMANGO is facing bad publicity and investor scrutiny due to a series of safety-related issues in its global supply chain, resulting in a daily loss of US$250,000 in its market value. In particular, the company has to decide on how to handle the closed-down mine shaft and the potential union action in 7 days in Australia.

**OBJECTIVES**

* To improve the company’s safety standard to avoid further workplace accidents
* To regain investor confidence in the company’s safety in order to prevent further reduction in market value and minimize the impact on the quarterly trading update

**EVALUATION OF STRATEGIC OPTIONS**

|  |  |  |  |
| --- | --- | --- | --- |
| Option | Financial Impact | Operational Impact | Risk |
| Strategy 1Resume production immediately and attribute the shutdown to a temporary minor operational problem | Remain stable at current financial position | * Continue operation without production loss
* Alleviate current public disgrace of unsatisfactory safety standards
* Avoid loss of investor confidence
 | * Inadequate inspection may lead to a total collapse of the shaft – resulting injuries and stoppages lead to deteriorated community relations and productivity loss; while the underlying cover-up of issue further reduces investor confidence
* Negligence of workplace safety may accelerate industrial action – increased public attention on the issue lowers consumer and investor confidence
 |
| Strategy 2Conduct thorough safety inspection before resuming operation | Incurs costs of inspection and repair | * Production loss due to suspension of operation
* Ability to prevent further accidents
* Possibly avoid union action
 | * Uncertain outcome – geotechnical design may be unfixable that the shaft will eventually have to be closed down
* Loss of investor confidence in the company’s safety
 |
| Strategy 3Close down the shaft and construct a new one nearby | Delivers a NPV of US$56.54 million | * Suspend production for 1 year
* Deliver pre-tax cash flows of US$30.43million per year
* Ability to prevent further accidents
* Possibly avoid union action
 | * Another faulty geotechnical design of mine shaft
* Loss of investor confidence in the company’s safety
 |

**RECOMMENDATIONS AND IMPLEMENTATION**

We recommend AMANGO to adopt **Strategy 3** – to close down the current shaft and construct a new one nearby, which is profitable to the company with a NPV of US$56.64 million. Given the high probability of further accidents of Strategy 1, the short-term alleviation of public disgrace is insufficient to account for the bad publicity and production loss associated with the accidents. The lower initial cost of Strategy 2 is also inadequate to justify its highly uncertain capability to fix the problem.

Strategy 3 allows AMANGO to improve workplace safety while deriving a positive NPV. Adoption of Strategy 3 in conjunction with a series of public relations actions could regain investor confidence and hold back union actions.

*Step 1: Establish a comprehensive safety management mechanism*

|  |  |
| --- | --- |
| Preparation | * Follow the International Labour Organization C176 Safety and Health in Mines Convention to ensure workplace health and safety
* Organize safety drills to facilitate a better traffic management and safety
 |
| Response | * Establish standardized response system for branches to ensure timely response to public concerns
* Establish compensation scheme to standardize compensation for each type of injuries
 |
| Supervision | * Assign inspectors to inspect and publish quarterly reports on shaft safety conditions
* Establish employee complaint system to report safety concerns and workplace failures
* Ensure accurate and timely data input on the online group-wide safety incident information system to track shaft safety conditions
 |

*Step 2: Compensate for deaths and injuries in the accident according to the guideline*

*Step 3: Issue public statement about initial inquiries of the controlled shutdown and future plans*

Indicate solutions to problematic shaft design and labour practice – constructing a new shaft and establishing a safety management mechanism – to declare its commitment to workplace safety

*Step 4: Conduct regular safety inspections of mine shafts and publish the results in quarterly reports*

**RISK AND MITIGATION**

*Another faulty geotechnical design of mine shaft*

Only contractors with work up to safety standards should be selected. Thorough safety inspections should also be conducted during construction and before the systems become operational to avoid similar accidents.

*Loss of investor confidence in the company’s safety*

AMANGO’s can publicly declare its commitment to worker protection by improving the safety management practice in order to rebuild investor confidence and industry relations.

1. **Balance Sheet De-leverage or Share Buy-Back**

**SITUATION**

The board is discussing on the possible challenge of disposing its coal and iron ore mines and have come up with an alternative due to the negative impacts. The alternative option, unbundling part of the residential property, further develops two choices on how to use the sale proceeds, which are paying down the current debts and buying back the company shares.

**EVALUATION OF STRATEGIC OPTIONS**

|  |  |  |
| --- | --- | --- |
|  | Strategy 1Disposal of coal mines | Strategy 2Unbundle property portfolio |
|  | **Option 1**Repaying debts | **Option 2**Share buy-back  |
| Financial Management |
| Cash Flows(US$ millions) | NPV = 14,296.14 (Fig. 2.1) | 3-Year Rental Forgone = - 2,508.96  |
| Interests saved = 1,030.86 | Dividend saved = 1,055.07 |
| Capital Structure | Change in equity:Uncertain extent of decrease due to potential shares offloading by PIC and other investorsChange in debts: UnchangedDebt-to-equity ratio: Increase | Change in equity: UnchangedChange in debts:- US$6,400.65 millionDebt-to-equity ratio: Decreased to 1.14 | Change in equity: - US $6,400.65 millionChange in debts: UnchangedDebt-to-equity ratio:Increased to 2.05 |
| Beta | N/A | Ungearing: 0.9294Gearing: 1.6586 | Ungearing: 0.9294Gearing: 2.2457 |
| Cost of Finance | N/A | New WACC = 7.56% | New WACC = 7.54% |
| Market Value | Uncertain extent of decrease | - US$6,400.65 million | - US$6,400.65 million |
| Credit Rating | N/A | Improved | Not affected |
| Business Ethics – Socio-economic Development |
|  | * Disinvestment hindering country development
* May fail to fulfil the ‘new black economic empowerment champions’
 | * Proper treatment of retrenched employees
* Deem the right to eventually own the property as a benefit
* Have lived there from 1 generation to another
* Hamper the organizational culture
 |
| Industrial and Community Relations |
|  | * PIC’s threat of offloading intensifying the industrial relations
* Group employees shrunk from 160,000 to under 60,000
* Hamper employee morale in the group
 | * Impair a well-constructed community
* Worsen community relationships with staff
* Need of further measures to mitigate the dissatisfaction
* May have to deal with the accommodation problem of the employees after the unbundling
 |
| Management of Government Relations |
|  | Worsen relationship due to the stern opposition of PIC, who is keen to support “new black economic empowerment champions” | N/A | * Increase bargaining power against PIC yet may hinder social-political development
* May hamper government relations
 |
| Political Risk |
|  | Restricted by the law and mining charter  | Fulfil the requirement of the law and charter |

*Assumptions*

|  |  |  |
| --- | --- | --- |
| Issue | Item | Assumption |
| Disposal | Operating cost of AMANGO | Change according to previous growth rate |
| Unbundling | Rental forgone | Constant rental rate in 3-year period |
| Sales proceeds | Full amount of sales proceeds used to pay down debt or buy back shares |
| Repaying debt | Paying down debt saves equal proportion of interests |
| Share buy-back | There are sufficient amount of equity available for buying back |
| Share buy-back | Constant dividend yield as in 2016 for the dividend saved |
| Financial Figures | Use the representative portfolio of commercial property to calculate gearing and un-gearing beta |

**RECOMMENDATIONS AND IMPLEMENTATION**

We recommend AMANGO to adopt **Strategy 2**, which could generate US$6,400.65 million for AMANGO (Fig. 2.2). Strategy 1 is not recommended due to PIC’s threat to offload its shares, which may violate the Mining Law and Charter requiring AMANGO must at all times be at least 26% black-owned. AMANGO’s relations with the South African government will also be worsened after the disposal due to the stern opposition from PIC, who is keen to support the “new black economic empowerment champions”.

**EVALUATION OF OPTION 1 – REPAYING DEBT**

|  |  |  |
| --- | --- | --- |
| Types of Debt | Due in | Interest payment |
| Medium-term | 2018 | A floating LIBOR rate plus 70 basis point |
| Long-term | 2022 | A fixed swap rate of 5.5% plus 70 basis point |
| Assumption: The swap rate for the long-term loan is fairly priced. |

AMANGO should repay one of the two loans above. As the LIBOR rate is projected to increase for the next few years (Fig. 2.3), interest saved from repaying medium-term loan is estimated to be larger than that from long-term loan. Therefore, **medium-term loan** should be chosen. If the sales proceeds of US$6400.65 million is entirely used to repay the loan, interest saved will be amounted to US$1,030.86 million.

**EVALUATION OF OPTION 2 – SHARE BUY-BACK**

To tackle the depressed shares prices and PIC’s threat, AMANGO could use the entire proceeds to buy back their shares for dividends saved of US$1,055.07 million (assumed the change in dividend policy).

**CONCLUSION**

We recommend AMANGO to choose **Option 1** – repaying debt, as it better matches AMANGO’s goal and results in better solvency for the company. Both options generate the same decrease in firm value and similar impacts on WACC and social-economic environment. Yet, Option 1 lowers the debt-to-equity ratio, which is favourable to AMANGO’s KPI of decreasing the significance of debt. It also generates larger cash flows with a lower gearing beta, implying a smaller risk of AMANGO’s shares.

1. **Strategic Disposal in Brazil**

**SITUATION**

AMANGO has received a final offer of US$1.5 billion from China Molybdenum Co. LTD (“CMOC”) on AMA-NP in Brazil. The board has 7 days to evaluate the offer by conducting financial and strategic analyses.

**EVALUATION OF STRATEGIC OPTIONS**

*Assumptions*

CMOC is used as a proxy to evaluate the US$1.5 billion offer from CMOC. The spot rate on 1/3/2017 is used as the foreign exchange rate to compute the 3-year NPV.

|  |  |  |
| --- | --- | --- |
| Factors | Option 1Accept the offer from CMOC | Option 2Reject the offer from CMOC |
| Financial Impact | * Receive US$1.5 billion to settle AMA NP’s intra-group debt
* Decrease net debt by US$450.12 million
* Credit rating is expected to improve with less net debt
 | * Operational maintenance of AMA-NP gives a positive 3-years NPV of US$9.58 million

(Fig. 3.1)  |
| Political Risk | * Not exposed to the political risk in Brazil
 | * Uncertainty over the AMANGO friendly policies in Brazil due to the change of presidency
* Pending fiscal austerity, exchange controls and tough repatriation laws are **unfavourable** to AMANGO with increasing operational tax risk and volatility risk
 |
| Exchange Rate Risk | * Not exposed to the exchange rate risk in Brazil
 | * The trend showing the Brazilian Real is depreciating against US Dollar further lowers the NPV in US Dollar
* The political risk may further weaken Brazilian Real, lowering AMA-NP’s NPV in US Dollar
 |
| Macro-Environment  | * Not exposed to the risks in Brazil’s macro-environment
 | * High probability of austerity policy in Brazil is **unfavourable** to AMANGO with Brazil’s ailing economy and further stagnant economic growth
* Tougher repatriation laws are **unfavourable** to AMANGO with a lower financial incentive to repatriate money to the headquarter
 |

**RECOMMENDATIONS AND IMPLEMENTATION**

We recommend AMANGO to adopt **Option 1** – to accept the offer from CMOC and divests AMA-NP to streamline corporate structures and exit out of under-performing businesses with the pessimistic outlook. Apart from the economic recession in Brazil[[1]](#footnote-1) being unfavourable to business operations, Option 2 entails a high degree of management risks in the following aspects:

* AMANGO’s financial performance is worsening due to the declining demand in China and globally.
* Rejecting the final offer exposes AMANGO to non-diversifiable political and exchange rate risks.
* AMANGO is unlikely to achieve the same outstanding performance as CMOC, which has a promising P/E ratio. However, AMANGO has a strong bargaining power against CMOC as CMOC could achieve economies of scale with BRL 303.15 million after merging with AMA-NP.
1. **Strategic Joint Venture Decision in Canada**

**SITUATION**

The stern protest movement in Canada led by Idle No More poses an operational risk to AMANGO Canada’s business. To mitigate the risk, AMANGO set up a 50-50% Joint Venture (JV) with Cephas.

**EVALUATION OF POTENTIAL BENEFITS OF JOINT VENTURE**

|  |  |
| --- | --- |
| Potential Benefits | Likeliness  |
| Ceasing ProtestsSetting up a JV with Cephas as an international mining law practice is unlikely to establish an effective communication channel with Idle No More like other JVs, as representatives of the movement are not included. Even if they are included, the effectiveness remains uncertain in light of the little centralised leadership of Idle No More.  | https://lh5.googleusercontent.com/DexbCRWWraIwyb_qbNeD0kxM0fRK2PGobx3uKhZEyjjVLS5lvCEcFN9qU1fPi70FvSmqQ3C85igbpDA0KiQBmeRvoWu7CjGFsZYJcJ6syFZj80FwRv2FLPJ9cXQhB8cR1rcXzmqshttps://lh5.googleusercontent.com/DexbCRWWraIwyb_qbNeD0kxM0fRK2PGobx3uKhZEyjjVLS5lvCEcFN9qU1fPi70FvSmqQ3C85igbpDA0KiQBmeRvoWu7CjGFsZYJcJ6syFZj80FwRv2FLPJ9cXQhB8cR1rcXzmqs |
| Applying and Securing PermitsAs Cephas’s focus is applying and securing coal mining permits globally, it is conducive to solving the risk of nullification of existing licenses.  | https://lh3.googleusercontent.com/gipkHlog8OanIsCLfrpSc2abfK7FMExcB6KWh5Hwo1TfjI_ORjbOfY84nZZaYa-1N1ALGrwgjo4aKjvVV01zONyqqM9sCa2OofQu5KrrkGNJRa2oT0J-kvNP4fj1DtWW71R4KwM1 |

**EVALUATION OF CONFIGURATION FOR JV MINING INFRASTRUCTURE**

The board has to select the design of long wall panels for the first coal mining project of the JV. The following evaluation steps are carried out to decide the best configuration out of 3 designs.

*Step 1: Compute expected coal demand for each design (Fig. 4.1)*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Design 1  | Design 2 | Design 3 |
| Projected Demand (US$ million) | 5.5 | 7.5 | 7.75 |

*Step 2: Compute profit for each design with different coal prices*

Due to uncertainties in future coal prices, different coal prices are used to compute the corresponding profit brought by each design. Cost of capital of 7.5% is used to project the value of fixed cost paid after two years. The original coal price $50.26 is first used to compute the profit (Fig. 4.2).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Design 1 | Design 2 | Design 3 |
| Coal Price (US$)(Assume coal price stays the same) | 50.26 | 50.26 | 50.26 |
| Profit (US$ million) | 44.56 | 77.84 | 69.36 |

The relationship between coal price and choice of design is then deduced using different prices (Fig. 4.3).

|  |  |  |  |
| --- | --- | --- | --- |
| Coal Price (US$) | P > 84.16 | 39.86 < P < 84.16 | P < 39.86 |
| Choice of Design | Design 3 | Design 2 | N/A (Loss on any design) |

*Step 3: Conduct maximax and minimax regret analysis for decision making (Fig. 4.4)*

With reference to business data regarding the coal price forecast (Fig. 4.5), it is discovered that coal price is expected to decline in the coming years. A lower coal price is expected in 2019.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Design 1 | Design 2 | Design 3 |
| Maximax |  | **✓** |  |
| Minimax Regret |  | **✓** |  |

|  |
| --- |
| *Assumptions* |
| Sensitivity Analysis  | 3 sets of coal prices are used for bull, normal and bear cases |
| Change in Coal Price | Increases by US$15 for bull case and decreases by US$20 for bear caseDifference due to pessimistic view of economist towards the coal price |

**RECOMMENDATION**

Constant price drop is recorded in Canada due to its environmental impact and depletion in near future[[2]](#footnote-2). Combining the pessimistic outlook with the maximax and minimax regret analyses, we recommend Quinta to adopt **Design 2** as it is the most suitable design in terms of cost efficiency and financial profitability.

1. **Corporate Reconstruction and Reorganization**

**SITUATION**

The restructuring of the company have been concerned by its largest investor PIC and aroused heated debate among Board members. The company has to decide on which strategic option to adopt:

**Strategy 1** – To focus the portfolio on diamonds, nickel and copper

**Strategy 2** – To maintain and broaden the current portfolio of eight segments

**OBJECTIVE**

To improve long-term financial performance and deliver sustainable returns to shareholders.

**STRATEGIC EVALUATION OF PORTFOLIO SEGMENTS**

Internal capability

Ashridge Portfolio Display Analysis is adopted to evaluate the fit between the segment’s critical success factors and the parenting opportunities with AMANGO (Fig. 5.1).

|  |  |  |
| --- | --- | --- |
| Portfolio Segment | Classification | Analysis |
| Diamonds;PGMs | Heartland business | AMANGO should consider diamonds and PGMs as the core of its portfolio due to the **favourable** fit between the company’s capability and these sectors.  |
| Copper | Value trap business | With sufficient capacity to capture market opportunities, it would be **profitable** for AMANGO to continue its business in the copper segment if it improves the fit between the CSFs and its capability. Focus should be placed on safety and health, environment and reclamation. With a high fit of 80% between sector opportunities and supports in terms of health and safety and environmental management, it is likely for AMANGO to improve the mentioned condition. |
| Others | Alien business | AMANGO does not possess the essential skills and resources to capture opportunities and excel in segments other than diamonds, PGMs and copper. These sectors only add **minimal value** to the company. |

External opportunities

Shell Directional Policy Matrix Analysis is adopted to evaluate the segment’s profitability and the company’s competitive capability (Fig. 5.2).

|  |  |  |
| --- | --- | --- |
| Portfolio Segment | Classification | Analysis |
| Diamonds | Leader | The high market profitability in conjunction with the AMANGO’s competitive position justifies its strategy to focus resources on the diamonds segment. |
| PGMs | Try harder | Despite a relatively lower CAGR, the segment maintains a profitable market outlook while AMANGO continues its competitive position. In spite of the vulnerability of the business in the long run, it creates value in the short run. Considering the company’s abundant skills and resources (90%) to exploit the opportunities in the sector, it suggests that AMANGO is able to derive profits from the PGMs segment. |
| Copper;Nickel;Iron ore and Manganese | Custodial | With average market outlook and company position in each of these segments, AMANGO is advised not to commit any more resources to these units. However, given the company’s capability favourable to capturing opportunities in the copper sector, it may gradually transform into a growth leader with further investment.  Hence, copper could still be considered as one of the core segments. |
| Coal;Nobium phosphate | Phased withdrawal | The unattractive profitability and the company’s lack of competitiveness suggests that resources in these units should be reallocated to segments with higher profitability. |

**RECOMMENDATIONS AND IMPLEMENTATION**

We recommend AMANGO to adopt **Strategy 1** – to focus the portfolio on diamonds, PGMs and copper. In view of AMANGO’s abundant capability and attractive market opportunities, it is clear that diamonds and PGMs are two of its core businesses. With further investment to enhance its competitive position, the profitability of copper segment will also be attractive to the company. On the other hand, the portfolio of Strategy 2 consists of business segments that are less profitable due to the mismatch of company capability and market opportunities. Given poor global performance, streamlined production reallocates resources to more value-adding segments, which improves AMANGO’s financial performance.

*Step 1: Allocate additional funds to marketing and improvement of core segments*

|  |  |
| --- | --- |
| Marketing | With a demand shift from infrastructure to consumer-driven, commercial marketing effort should be placed on diamonds and PGMs segments, targeting at mid-to-high-income consumers of luxury goods. |
| Improvement | Budget for the copper segment should first be allocated to workforce and environmental conditions enhancement to improve its competitiveness before investing in commercial marketing. |

*Step 2: Restructure company portfolio*

AMANGO should look for opportunities to dispose its non-core assets.

*Step 3: Expand and develop subsidiaries in South Africa*

AMANGO could invest in the country with the proceeds and additional cost savings to support the country’s socio-political development.

**RISK AND MITIGATION**

*Threat of PIC’s offloading*

The disposals of coal and iron ore mines in South Africa may lead to PIC’s offloading of shares. We recommend AMANGO to commit to reinvest in the country using the proceeds and additional cost savings. The proceeds can be used to expand its platinum subsidiary and develop other subsidiaries in support of the “new black economic empowerment champions”. Such commitment reveals the company’s care for the country’s socio-political development, fulfilling PIC’s rationale of investment.

*Inability to divest assets due to depressed commodity price environment*

Downward expectation on commodity prices may affect AMANGO’s ability to find buyers. We recommend AMANGO to close down unprofitable coal and nobium phosphate mines and maintain the operations of nickel and iron ore mines for cash generation if it is unable to sell off the businesses.

**Ethical Issues**

**OPERATIONAL RISK AND INDUSTRIAL ACTION IN AUSTRALIA**

The restructuring of AMANGO places heavy emphasis on the costs of each segment, prompting subsidiaries to minimize expenses. With an increased production target and reduced workforce, AMANGO Copper Australia Limited has reduced spending related to workers’ safety.

|  |  |  |
| --- | --- | --- |
| Factor | Analysis | Recommended actions |
| Safety in Australia | Reduced expense on safety precaution and the company’s refusal to adopt an accident reduction practice lead to frequent accidents. | Establish Safety Standards for supply chain with regular inspections to ensure the standards are met |
| Employees’ benefits | The company seeks to reduce wages and basic condition, leading to a decline in employees’ living standard. | Maintain wage and basic conditions at a level that secures a basic living |
| The company continues the practice to terminate employment of injured workers. These laid-off workers would experience difficulties to look for other employment opportunities. | Implement a new practice that offers paid leaves to workers with work-related injuries and non-paid leaves to those with non-work injuries |

**STRATEGIC JOINT VENTURE DECISION IN CANADA**

The board concerns about the inadequacy of current accounting system to reflect AMANGO’s accurate environmental performance.

|  |
| --- |
| Characteristics of Traditional and Modern Accounting Systems |
| Traditional Accounting System | * Ignore non-financial performance such as environmental costs
* Difficult to trace the environmental cost back to functional costing such as sales and marketing, manufacturing
 |
| Modern Accounting System | * The use of more non-financial measures
* Environmental cost and impact could be allocated more easily under process- or activity-based costing
 |

The difference in evaluation criteria of the two systems reveals the validity of the board’s concern regarding its current system is valid. Switching to the modern system could generate the following ethical benefits.

|  |  |  |
| --- | --- | --- |
| Factors | Analysis | Recommended action |
| Investor relations  | Switching to the modern system better reflects AMANGO’s environmental performance, which reveals corporate social responsibility and improves transparency to investors. | Implement the modern system after considering its associated costs – time and effort required to set up the complex system, which demands numerous assumptions and estimates for subjective measurement |

**MANAGING DIVISIONAL PERFORMANCE GROUP-WIDE**

The current bonus system of evaluating and rewarding Divisional Managers have led to the following ethical questions.

|  |  |  |
| --- | --- | --- |
| Factors | Analysis | Recommended action |
| Employees’ safety  | Cutting expenditure on training and postponing standard service schedule for safety critical equipment reduces the cost of investment and boost the ROI. Yet, employees’ safety is neglected. | Maintain all safety expenditure and penalize managers who disregard employees’ safetyas reducing accidents is the way to boost ROI instead of cutting expenditure on training and postponing standard service [[3]](#footnote-3) |
| Investor relations | Ramping up production towards year end in hope of declaring better closing stocks results is unethical as it manipulates the company’s financial statements for the benefit of investors relations, which hampers AMANGO’s credit worthiness. | Ramped up production should be terminated immediately and maintain integrity and accountability to the shareholders |
| Organizational efficiency | Since bonus is a substantial part of their earnings, the pursuit of self interest by Divisional Managers leads to transfer pricing, plunging AMANGO’s efficiency in resources allocation. | * Appoint supervisors to monitor the managers to avoid unnecessary adjustment of charges for a higher bonus in the short run
* Modify bonus system by adding ethics criteria and investigate the inefficient resource allocation in the long run
 |

**Conclusion**

The above strategic evaluation, recommendation and implementation take AMANGO’s 7 pillars of value into account and prioritise principal risks that are outside and at the limit of the Board’s risk appetite. From the urgent operational risk in Australia to long-term corporate reconstruction and reorganisation, we recommend comprehensive commercial and ethical solutions to reduce net debt and improve credit rating in financial performance as well as maintain business ethics which value employees’ safety and socio-political development in Australia, South Africa, Brazil and Canada. Lastly, the report is also in line with the 3-year viability statement the Board has committed to deliver returns to its global base of shareholders.

**APPENDICES**

Fig. 2.1 NPV of Disposal of Coal Mine

|  |  |  |  |
| --- | --- | --- | --- |
| US$ (millions) | **2016** | **2017** | **2018** |
| Operating Cost | (24,567) | (22,407.18) | (20,437.25) |
| - Assume Constant Yearly Change as in 2015 to 2016 | -8.79% | -8.79% | -8.79% |
| Operating Cost Saved | 6141.75 | 5601.80 | 5109.31 |
| Cost to be Paid | -1500.00 |  |  |
| Total CFs | 4641.75 | 5601.80 | 5109.31 |
| Discounting rate (7.50%) | 1.00 | 1.07 | 1.15 |
| Discounted Cash Flows | 4641.75 | 5211.18 | 4443.21 |
| **NPV** | **14296.14** |

Fig. 2.2 Value of Property Portfolio

|  |  |
| --- | --- |
| (US$ million) | Residential Apartment |
| Land and buildings | 16,780 | Up for sale (71%) | **6,400.65** |
| Asset under construction  | 1,250 | Remained for continued use (29%) | 2,614.35 |
|  |  | Non-residential (Office, land, main buildings) | 9,015 |
|  | **18,030** |  | **18,030** |

Fig. 2.3 Forecast of LIBOR Rate



Fig. 3.1 NPV of future operation of AMA-NP using CMOC as a proxy

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2017** | **2018** | **2019** |
| Operating Cash Flow with 6% growth | BRL 11.60m | BRL 12.30m | BRL13.04m |
| Discounting rate/WACC (9.29%) | 1.09 | 1.19 | 1.31 |
| Discounted Cash Flows | BRL 10.62m | BRL 10.30m | BRL 9.99m |
| NPV in BRL | BRL 30.91m |
| -Assume exchange rate is the spot rates | BRL 1 = US$ 0.3100 |
| **NPV in US$** | **US$ 9.58m** |

Fig. 4.1 Expected Coal Demand for Each Designs

|  |  |
| --- | --- |
| Coal Demand (million) | Probability |
| **Design 1**  | **Design 2** | **Design 3** |
| 5 | 85% | 25% | 20% |
| 7.5 | 10% | 50% | 50% |
| 10 | 5% | 25% | 30% |
| Projected Demand (million) | **5.5** | **7.5** | **7.75** |

Fig. 4.2 Profit for Each Design

|  |  |  |  |
| --- | --- | --- | --- |
| (US$) | Design 1 | Design 2 | Design 3 |
| Price (Assume coal price stays the same) | 50.24 | 50.24 | 50.24 |
| Less: Variable Cost | 26.38 | 26.38 | 26.38 |
| Contribution / tonne | **23.86** | **23.86** | **23.86** |
| Multiply: Projected Demand (million) | 5.5 | 7.5 | 7.75 |
| Total Contribution | **131.23** | **178.95** | **184.915** |
| Less: Future Value of Fixed Cost | 86.67 | 101.11 | 115.56 |
| Profit (US$ million) | **44.56** | **77.84** | **69.36** |

Fig. 4.3 Relationship between Coal Price and Choice of Design

|  |  |  |  |
| --- | --- | --- | --- |
| Coal Price (US$) | Choice |  | Profit (US$ million) |
| **Coal Price (US$)** | **Design 1** | **Design 2** | **Design 3** |
| P > 84.16 | Design 3 | 100 | 318.24 | 451.04 | **455.00** |
| 39.86 < P < 84.16 | Design 2 | 84.16 | 231.12 | **332.24** | **332.24** |
| P < 39.86 | N/A | 50 | 43.24 | **76.04** | 67.50 |
|  |  | 39.86 | -12.5 | **0.0** | -11.1 |

Fig. 4.4 Maximax and Minimax Regret Analysis

|  |  |
| --- | --- |
|  | Profit (US$ million) |
| Coal Price (US$) | **Design 1** | **Design 2** | **Design 3** |
| P = 60.31 (Bull Case, 20% increase) | 99.96 | 153.38 | 147.41 |
| P = 50.26 (Normal Case) | 44.67 | 77.99 | 69.51 |
| P = 30.16 (Bear Case, 40% decrease) | -65.90 | -72.79 | -86.30 |
| Regret of (P = 60.31) | 53.42 | 0.00 | 5.97 |
| Regret of (P = 50.26) | 33.32 | 0.00 | 8.48 |
| Regret of (P = 30.16) | 0.00 | 6.89 | 20.39 |
| Analysis |  |  |  |
| Maximax | 99.96 | **153.38** | 147.41 |
| Minimax Regret | 53.42 | **6.89** | 20.39 |

Fig. 4.5 World Coal Price Forecast



Fig. 5.1 Ashridge Portfolio Display Analysis of AMANGO’s Segments



Fig. 5.2 Shell Directional Policy Matrix Analysis of AMANGO’s Segments



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