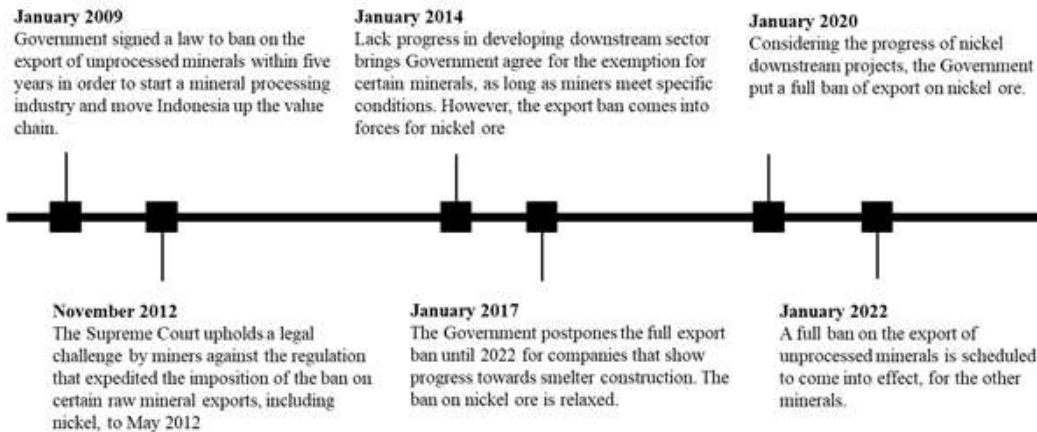


## Chapter 1 Introduction

### 1.1 Background

The Government of Indonesia is conducting a ban on the export of unprocessed mineral resources by establishing Indonesia's Law on Mineral and Coal Mining No. 4/2009 and Implementing Regulation No. 7/2012 issued by the Ministry of Energy and Mineral Resources (MEMR). This regulation applies to metal-based minerals, nonmetal-based minerals, and rocks and sets out minimum processing requirements for various minerals. The stated purpose of this mandatory in-country processing requirement is to increase the value of the minerals for export and preserve the country's resource supplies.



*Figure 1.1 Timeline of ban on the export of unprocessed minerals in Indonesia*

Observing the timeline, in 2017, the Government postpones the introduction of a full export ban until 2022 for companies that hold a mining license and show a commitment to constructing downstream smelters, including nickel. The relaxation purpose is to allow them to gather investment funding from the ore export.

However, at the end of 2019, the Government through MEMR announced that the relaxation of nickel ore export planned to be ended in 2022, will be rescheduled into 1st January 2020. The Government expedited the relaxation because low-grade nickel ore was already processed in domestic due to the rapid investment in nickel downstream smelters. Currently, 11 nickel smelters are operated and 25 nickel smelters are under construction. Those smelters will need a massive supply of domestic ore nickel to sustain. The other reason is that the demand for electric vehicles is increasing and promising in

the future. Since nickel is the main component of electric vehicle batteries, it became a strategic resource maintained by the country.

The Government's spirit in developing a downstream sector to increase the mineral's value is also supported by the State-Owned Enterprises (SOE) Ministry. To the SOE's mining industry holding that consists of ANTAM, BUKIT ASAM, TIMAH and INALUM, they give three mandates; reserves ownership, downstream business, and market leadership. Especially in the downstream business, SOE is mandated to contribute 30-40% of EBITDA.

World Class Company		
<ul style="list-style-type: none"> <li>Achieve <b>Fortune 500 status</b> with revenue of <b>USD 21–23 Bn</b> by 2028 (<b>USD 10–13 Bn</b> by 2023) ...</li> <li>... and <b>profitability</b> in line with <b>top performers</b> in the Mining &amp; Metals industry (<b>EBITDA margin above 35%</b>)</li> <li>Develop <b>best-in-class capabilities</b> across the value chain in both the upstream and downstream segments</li> <li><b>Attract, develop</b> and <b>retain the best talent</b> in Indonesia to enable operations</li> </ul>		
Reserve Ownership	Downstream Business	Market Leadership
<ul style="list-style-type: none"> <li>Secure <b>15–20% share</b> in <b>domestic reserve</b> and / or <b>resource</b> through:               <ol style="list-style-type: none"> <li>Targeted <b>exploration activities</b></li> <li>Strategic <b>acquisitions</b></li> </ol> </li> <li>Sustainably <b>manage</b> and <b>monetise reserves</b></li> <li>Continuously assess <b>portfolio composition</b>—which <b>commodities (of the future)</b> to invest in and which to divest</li> </ul>	<ul style="list-style-type: none"> <li><b>Insulate against cyclicity</b> by operating a <b>sizeable, high value-add</b> and <b>sustainable</b> downstream business</li> <li>Secure <b>cheap energy sources</b> and <b>strategic partnerships</b> to attain <b>cost leadership</b></li> <li>Achieve <b>contribution</b> from <b>downstream business</b> of <b>40–50%</b> towards <b>revenue</b> and <b>30–40%</b> towards <b>EBITDA</b></li> </ul>	<ul style="list-style-type: none"> <li>Selectively pursue <b>ambitious</b> and <b>untapped opportunities</b> globally</li> <li>Ensure '<b>out-of-the-box</b>' initiatives contribute to <b>5-10%</b> of <b>overall revenue</b> and / or <b>EBITDA</b></li> <li>Build <b>differentiated capabilities</b> and harness <b>cross-business synergistic opportunities</b> to enhance value</li> <li>Drive the <b>industry forward</b> through <b>innovation / R&amp;D, collaboration</b> and <b>partnerships</b></li> </ul>

Figure 1.2 MIND ID's mandates

To fulfill the mandates, ANTAM is conducting an integrated and diversified portfolio of processed metals strategy. Integrated means that ANTAM undertakes all mining and processing stages from upstream to downstream, including exploration, mining, smelting, refining and marketing. ANTAM also diversified its products into three main commodities that are Gold, Bauxite, and Nickel. It makes ANTAM exist in almost all over Indonesia following the existence of the deposits, such as Gold in West Java, Bauxite in West Kalimantan, and Nickel in east Indonesia (Southeast Sulawesi and North Maluku).

In terms of development, ANTAM has an abundance of nickel and bauxite resources that can be further monetized. It could be a chance to improve ANTAM's current performance that has much room for improvement, especially in EBITDA and net income. By that, the shareholder and stakeholder aspiration can be satisfied.

## **1.2 Company Profile**

Incorporated in 1968, ANTAM was a state-owned company resulting from a merger of several state-owned mining companies and projects. They are the State General Mining Company, the State Bauxite Mining Company, the Tjikotok State Gold Mining Company, the State Precious Metals Company, PT Nickel Indonesia, the Diamond Project and other projects under the Bapetamb.

ANTAM is a vertically integrated, export-oriented, diversified mining and metals company. With operations spread throughout the mineral-rich Indonesian archipelago, ANTAM undertakes all activities from exploration, excavation, and processing to the marketing of nickel ore, ferronickel, gold, silver, and bauxite and coal.

The company has long term loyal blue-chip customers in Europe and Asia. Due to the vastness of the company's licensed exploration areas and its known extensive holdings of high-quality reserves and resources, ANTAM has formed several joint ventures with international partners to develop geological ore bodies into profitable mines profitably.

### ***1.2.1 Vision and Mission***

#### **Vision 2030**

To become a leading global corporation through diversification and integrated natural-resource based business.

#### **Mission 2030**

1. To provide high quality products with a view of achieving maximum added value through best industry practices and competitive operational performance;
2. To optimize resources with emphasis on sustainability, occupational safety and environmental conservation;
3. To maximize the shareholder and stakeholder value;
4. To improve the employee's competency and welfare as well as the independency of the communities in the vicinity of the operational areas.

*Cultures and Values*

ANTAM adopts corporate values known as **PIONEER** (Professionalism, Integrity, Global Mentality, Harmony, Excellence, Reputation). It is actualized from leadership with **SENSE** (Speed, Energize, Respect, Courage) that will lead ANTAM workforce to a Human Capital excellence level that meets the **BEST** (Beyond Expectations, Environment Awareness, Synergized Partnership) criteria.

**1.2.2 Organization Structure**

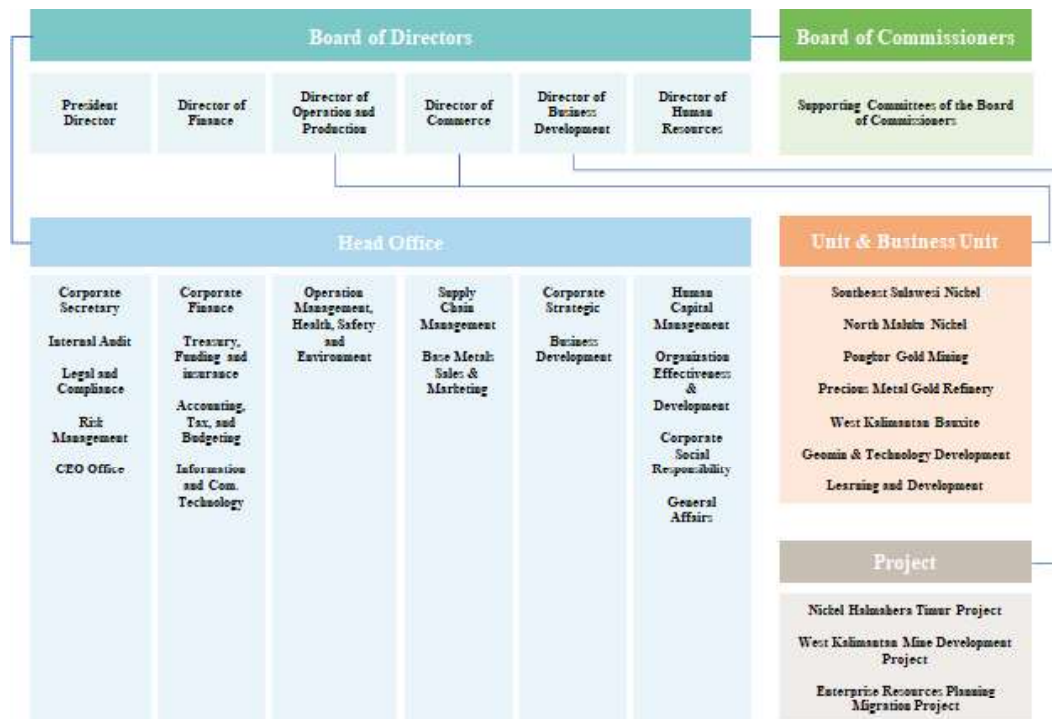


Figure 1.3 ANTAM's Organization Structure (2019 Annual Report, 2020:174)

**1.2.3 Product and Services**

ANTAM makes its cash by exploring and discovering mineral deposits, extracting them and processing them as economically and correctly as possible and selling them to long term loyal customers in Europe and Asia. ANTAM has been doing this profitably since its inception in 1968. Now, ANTAM still plans to continue doing this for many years ahead.

ANTAM's main products are high-grade nickel ore, also known as saprolite, low-grade nickel ore, also known as limonite, ferronickel, gold, silver, and bauxite. ANTAM's primary services are precious metal refining and geological services.

Focusing on nickel, ANTAM's nickel operating segment comprises ferronickel and nickel ore sales, contributing 30% of the company's net sales in 2018. Ferronickel production originated from the company's Southeast Sulawesi Nickel Mining Business Unit. In 2018, the production of nickel ore derived from the nickel mine in Pomalaa, Southeast Sulawesi conducted by the Southeast Sulawesi Nickel Mining Business Unit, Pakal, North Maluku which was operated by the North Maluku Nickel Mining Business Unit, and Gag Island, West Papua nickel mine, operated by ANTAM's sub-subsidiary, PT Gag Nikel. At the same time, the ferronickel produced by ANTAM has high or low carbon content, depending on consumer demand.

#### ***1.2.4 Nickel Business Field***

##### ***Nickel Ore Mining***

Nickel ore is one of ANTAM's important products. ANTAM produces and exports high-grade nickel ores with a minimum 1.8% nickel content and a maximum 25% iron content (sapolite) and low-grade nickel ore with a 1.2% minimum nickel content (limonite) and minimum 25% iron content.

ANTAM's nickel ore mines are at Pomalaa, Tanjung Buli and Gag Island. Pomalaa, Southeast Sulawesi, is ANTAM's oldest nickel mine and is nearly depleted. Tanjung Buli nickel mine is located in North Maluku. Gag Island Mine is operated by ANTAM's subsidiary, PT Gag Nikel in West Papua.

ANTAM conducts open pit mining method with a selective mining to produce high grade and low grade nickel ore. Nickel ore is used for ore feed for Pomalaa ferronickel plants and sold to the domestic market. ANTAM sundries its mined nickel ore before being screened to be crushed into the desired size. Ore is transported using a belt conveyor to the stockpile area before the end of being used in ferronickel processing or transported to domestic and export customers.

##### ***Ferronickel Processing***

One of ANTAM's core strategies is to move downstream to produce higher added value processed products. The processed product currently made by ANTAM in its nickel business line is ferronickel, which contains about 80% iron and 20% nickel. ANTAM's ferronickel, differentiated as having high or low carbon levels, is sold in the form of shots (pellets) to stainless steel producers, mainly in Asia. About more than 60% of nickel is consumed for stainless steel production. At the same time, the rest is used for various

industrial purposes such as batteries, electronics, aerospace applications and land-based gas turbines.



*Figure 1.4* ANTAM's FeNi III Smelter Plant at Pomalaa, Southeast Sulawesi

To produce ferronickel, saprolite nickel ore – which contains a minimum of 1.8% nickel and maximum of 25% iron - were first treated to become calcine through a process that crushes, dries, heats and adds certain consumables to reduce acidity, using various machines. The treated nickel ore is then fed into ANTAM's smelters at a ratio of about 70-80 tonnes of nickel ore – depending on the nickel ore grade - for every tonne of nickel contained in ferronickel. This heat base pyrometallurgical technology is hugely energy intensive and requires an assured power source.

There are three ferronickel plants owned by ANTAM that already operate and produce: FeNi II, FeNi III and FeNi IV. Those plants are located in Pomalaa, Southeast Sulawesi. The FeNi Pomalaa plant's total capacity is 27,000 ton nickel and using nickel ore with 1.8% Ni up content as feed. It is supported by 8x17 MW Diesel Engine Power Plant (DEPP) and 3x30 MW Coal Fired Power Plant (CFPP) of electricity supply, and jetty for material shipment.

ANTAM also constructed a new ferronickel plant that is located in North Maluku. The technology that is being used is similar to the FeNi Pomalaa. The capacity FeNi North Maluku plant is 13,500 ton nickel and uses surrounding nickel ore. Nevertheless, for

reserves conservation, ANTAM usually uses ore feed with a content range between 1.8% and 2.0%.

The locations of nickel resources and reserves, operated FeNi plants, and under development FeNi plant are described in Appendix A2.

### 1.3 Problem Formulation

Reviewing ANTAM’s performance in the past four years, it described that ANTAM has stable revenue growth. However, there is much room for improvement in EBITDA and annual net income that showed a slight trend compared to revenue.

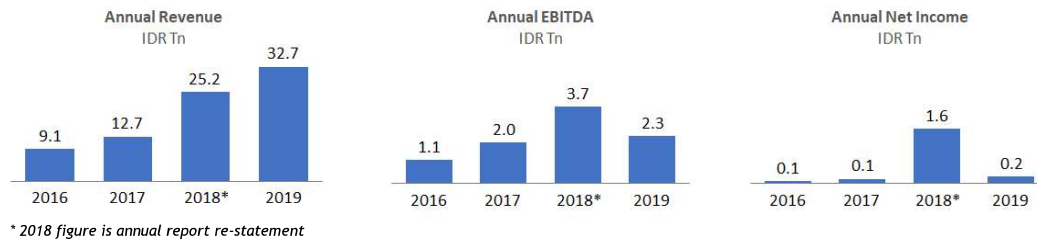


Figure 1.5 ANTAM's past financial performance

The proportion and contribution of each commodity to the revenue and EBITDA margins demonstrate a specific trend. Nickel commodity creates high growth and relatively good margin. The export of nickel ore mostly contributes the growth. However, a challenge ahead is coming because our government banned nickel or export this year. Gold commodity showing a better growth that generated from the trading business. However, trading businesses typically give thin margins compared to nickel portfolios. This kind of business model pushes them to trade more volume and as a result, their revenue is high but the total margin is not helpful. Furthermore, it affects the EBITDA and net income. And the third commodity, Bauxite, also still does not give a much positive contribution to revenue and income.



Figure 1.6 ANTAM's past financial contribution for each commodity

Among three commodities, the nickel stream is the most promising commodity to support this aim. The business creates growth in revenue and good EBITDA margin and

is also supported by the huge nickel resources that ANTAM's has. Considering that, ANTAM should focus on the nickel stream to improve its business performance in the future and sustain the business by formulating a new strategy in the nickel business stream.

#### **1.4 Research Question**

The final project will focus on the nickel business strategy for ANTAM to achieve the company's important purpose to get a better business performance in the future and sustain the business by conducting in- depth internal and external analysis. Given the aims of the project, the research question is as follows:

1. What are the best options for ANTAM to monetize their abundant nickel resources?
2. How could ANTAM realize the downstream strategy with their limited capabilities?
3. What is the best strategy in the nickel business to create a better growth in EBITDA and Net Profit of the company?

#### **1.5 Research Objective**

The objective of this final project is as follows:

1. To formulate the best options to monetize their abundant nickel resources.
2. To identify the downstream strategy by considering the limitation that ANTAM has.
3. To propose the best strategy in the nickel business to create a better growth in EBITDA and Net Profit of the company.

#### **1.6 Research Limitation**

Research limitations are applied to achieve the objectives of this final project as is expected. This research will analyze from the external environment of business and the market research will be focused on ANTAM's nickel commodity. Some data is not shared or attached to this final concept because of the confidentiality of company data. Financial discussion is not carried out from research but will be analyzed to understand its condition broadly. For a more detailed analysis, the available secondary data will be used.