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INVESTMENT ANALYSIS OF PTBA ASSET DEVELOPMENT IN PADANG, WEST SUMATRA

ANALISIS INVESTASI PENGEMBANGAN ASET PTBA DI PADANG, SUMATERA BARAT

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ABSTRACT

This study aims to analyze the feasibility of investing in a four-star hotel development in Wisma Ombilin, Padang, as an effort to optimize idle assets owned by PT Bukit Asam Tbk (PTBA). Through qualitative and quantitative approaches, this study includes market, financial, risk, and economic and social benefit analyses. The results of the analysis indicate that this project is feasible with a Net Present Value (NPV) of IDR188.38 billion, an Internal Rate of Return (IRR) of 16.38% (exceeding the hurdle rate of 11.13%), and a Payback Period of 10.94 years. The hotel is projected to generate revenue from rooms (50%), F&B (20%), and MICE (30%), with the potential for significant contributions to the local economy through job creation. However, this project also faces risks such as fluctuations in room rates, occupancy rates, and loan interest rates. Mitigation strategies such as dynamic pricing, market diversification, and fixed-rate loans are recommended to minimize risks.

Keywords : *Asset Optimization, Financial Feasibility, Hotel Investment, Risk Analysis, PTBA*

ABSTRAK

Penelitian ini bertujuan untuk menganalisis kelayakan investasi dalam pengembangan hotel bintang empat di Wisma Ombilin, Padang, sebagai upaya untuk mengoptimalkan aset idle yang dimiliki oleh PT Bukit Asam Tbk (PTBA). Melalui pendekatan kualitatif dan kuantitatif, penelitian ini mencakup analisis pasar, keuangan, risiko, serta manfaat ekonomi dan sosial. Hasil analisis menunjukkan bahwa proyek ini layak dengan Nilai Sekarang Bersih (NPV) sebesar IDR188,38 miliar, Tingkat Pengembalian Internal (IRR) sebesar 16,38% (melebihi tingkat ambang batas 11,13%), dan Masa Pengembalian Modal sebesar 10,94 tahun. Hotel ini diperkirakan akan menghasilkan pendapatan dari kamar (50%), F&B (20%), dan MICE (30%), dengan potensi kontribusi signifikan terhadap ekonomi lokal melalui penciptaan lapangan kerja. Namun, proyek ini juga menghadapi risiko seperti fluktuasi tarif kamar, tingkat okupansi, dan suku bunga pinjaman. Strategi mitigasi seperti penetapan harga dinamis, diversifikasi pasar, dan pinjaman dengan suku bunga tetap direkomendasikan untuk meminimalkan risiko.

Kata Kunci: Optimalisasi Aset, Kelayakan Finansial, Investasi Hotel, Analisis Risiko, PTBA

INTRODUCTION

Idle land assets in Indonesia are a significant problem, with much land not being optimally utilized. Research shows that many land assets are not managed properly, both by the government and private sectors, resulting in waste of resources and loss of economic potential (Ratmono & Rochmawati, 2018). Ineffective management is often triggered by a lack of understanding of the importance of asset inventory and maintenance (Wicaksana et al., 2021). This situation indicates an urgent need to increase awareness and knowledge regarding land asset management so that they can be utilized optimally.

This condition is further exacerbated by inconsistent regulations and a lack of adequate infrastructure support, which hinder the development of idle land assets (Murti & Sahara, 2019). Research states that optimizing the use of fixed assets, including land, can increase efficiency and productivity (Arifin et al., 2023). Thus, there is great potential to transform idle land assets into productive resources, contributing to economic growth at both regional and national levels.

PTBA's revenue and profit have historically relied on coal sales. However, the Glasgow Climate Pact (2021), which calls for phasing out coal use and reducing fossil fuel subsidies, poses significant threats. Commitments to renewable energy, shifting investor preferences toward sustainable sectors, stricter carbon emission policies, and market uncertainty due to energy transition pressures threaten coal demand and prices. While the pact is non-binding, it drives global momentum for clean energy, compelling PTBA to adapt. To ensure sustainability, PTBA must diversify beyond coal, including optimizing underutilized assets like land and buildings.

One such asset is Wisma Ombilin, a low-productivity accommodation facility in Padang City. With outdated infrastructure and low pricing (Rp 40,000–Rp 200,000/night), its Asset Turnover lags behind PTBA's other assets (e.g., mines and machinery). Napierała (2019) emphasizes that asset development can enhance value and stakeholder benefits. PTBA's land and buildings in Sumatra, Java, and Kalimantan also show low productivity, highlighting a broader need for optimization. Wisma Ombilin's strategic location in Padang and PTBA's scale make it a prime candidate for transformation.

Hotel investment is proposed for Wisma Ombilin due to its high ROI potential, alignment with PTBA's corporate capacity, and strategic advantages. Literature supports this: location near business centers/tourist attractions boosts occupancy and profitability (Liu & Hu, 2021; Yang et al., 2012; Puciato et al., 2017); PTBA's size enables economies of scale (Dimitrić et al., 2019); hotels offer flexible investment timing to mitigate risks (Ma & Zhai, 2016); and asset value appreciation (Napierała, 2019). Additionally, hotels create jobs, stimulate local economies (Doğru et al., 2020), and enhance corporate image (Tavitiyaman et al., 2012).

By repurposing Wisma Ombilin into a hotel, PTBA can diversify revenue, reduce coal dependency, and align with global sustainability trends. This project would leverage PTBA's existing assets to drive economic growth in Padang, improve stakeholder returns, and position the company as a forward-thinking industry leader. Such transformation is critical for PTBA's competitiveness amid declining coal demand and rising environmental pressures.

LITERATUR REVIEW

Idle land assets in Indonesia present a significant challenge, as substantial portions of land remain underutilized, leading to economic inefficiencies. According to Ratmono and Rochmawati (2018), numerous land assets across both public and private sectors are not being managed effectively, resulting in resource wastage and a loss of economic potential. Wicaksana et al. (2021) further argue that this mismanagement is often due to a lack of awareness regarding the importance of proper asset inventory and maintenance. Moreover, inconsistent regulations and inadequate infrastructure support have been identified as key obstacles to the development of idle land assets (Murti & Sahara, 2019). These factors underscore the urgent need for enhanced understanding and capacity in land asset management to unlock their full economic value.

Optimizing fixed asset utilization, including land, has been shown to improve both efficiency and productivity (Arifin et al., 2023). This presents a substantial opportunity to transform idle

land into productive assets that contribute to regional and national economic growth.

PT Bukit Asam (PTBA) faces significant risks due to its historical dependence on coal-related revenue. The Glasgow Climate Pact (2021) and the broader global shift toward sustainable energy sources place pressure on coal demand and pricing. In response to these challenges, PTBA is encouraged to diversify its asset base, including the optimization of underutilized assets such as land and buildings. Napierała (2019) highlights that strategic asset development not only enhances financial value but also generates broader stakeholder benefits.

One such underutilized asset is Wisma Ombilin in Padang City, a low-productivity accommodation facility that suffers from outdated infrastructure and poor financial performance. Given PTBA's extensive land holdings in regions such as Sumatra, Java, and Kalimantan, the low productivity of these assets signals a broader opportunity for asset optimization. Literature supports hotel investment as a viable strategy for revitalizing such properties. Studies by Liu and Hu (2021), Yang et al. (2012), and Puciato et al. (2017) demonstrate that proximity to business centers and tourist attractions significantly enhances hotel occupancy and profitability. Furthermore, PTBA's corporate scale offers advantages such as economies of scale (Dimitrić et al., 2019), and hotel investments are noted for their flexible timing and risk mitigation benefits (Ma & Zhai, 2016). The potential for asset appreciation (Napierała, 2019) and contributions to local employment and economic stimulation (Doğru et al., 2020) further support the feasibility of this strategy. Additionally, hotel development can enhance corporate image and stakeholder perception (Tavitiyaman et al., 2012).

Thus, repurposing Wisma Ombilin into a hotel not only aligns with PTBA's diversification goals but also supports sustainable development objectives. This transformation can help the company mitigate coal-related risks, unlock economic value, and reposition itself as a forward-looking, sustainable enterprise.

RESEARCH METHOD

Research Design

This research aims to understand variables influencing hotel development, evaluate relationships between them, and assess the feasibility of hotel development on PTBA's land asset in Padang, West Sumatra. The study combines qualitative and quantitative methods. Qualitative research analyzes market data to identify opportunities and threats related to hotel development in Padang. Quantitative research evaluates economic viability using numerical data to build a financial model. Data collection includes primary and secondary sources, verified for accuracy. Market analysis of Padang's hotel industry informs the financial model, which calculates key parameters (NPV, IRR, Payback Period). Risk and sensitivity analyses follow to assess confidence and risk tolerance, concluding with feasibility recommendations.

Data Collection Method

Data is gathered systematically from published reports, journals, government publications, and financial statements to answer research questions and test hypotheses. Industry reports provide market size, growth trends, and competitive insights. Government data includes tourism statistics and regulatory frameworks. Academic literature offers

theoretical frameworks for hotel investment and asset optimization. Financial reports from existing hotels in Padang inform operational benchmarks. Collected data encompasses project scope, operational details, and economic parameters (interest, tax, depreciation). This ensures robust input for market viability and financial feasibility assessments.

Business Situation Analysis

A SWOT analysis evaluates internal strengths/weaknesses and external opportunities/threats impacting the hotel project. This strategic tool aligns project objectives with PTBA's asset optimization goals, identifying factors that support or hinder success. External analysis assesses market conditions, tourism trends, and regulatory impacts, while internal analysis reviews PTBA's resource capabilities and asset utilization.

Capital Budgeting Model

Quantitative analysis uses capital budgeting techniques to determine project feasibility. Key metrics include:

1. Net Present Value (NPV): Project accepted if NPV > 0.
2. Internal Rate of Return (IRR): Project accepted if IRR > hurdle rate.
3. Discounted Payback Period (DPP): Must occur within project lifetime.
4. Profitability Index (PI): Project accepted if PI > 1.

Sensitivity Analysis

Sensitivity analysis evaluates how input variations affect project outcomes. Thirteen parameters will be tested, including:

1. Inflation rates (impacting costs and demand).
2. Occupancy rates (hotel rooms, F&B, banquet events).
3. Pricing strategies (room rates, F&B, banquet fees).
4. Direct material/labor costs (rooms, F&B, events).
5. Interest rates (financing costs). The analysis identifies critical risks, guiding PTBA to optimize pricing, cost control, and demand forecasting for project resilience.

RESULTS AND DISCUSSION

Investment analysis of PTBA's asset development located in Padang City, namely Wisma Ombilin, was carried out because the asset was considered unproductive. Wisma Ombilin, inaugurated on September 19, 1987, currently functions as a guesthouse for PTBA employees, retirees, and their families for official purposes, medical treatment, and related activities in Padang City.

PTBA's assets in Wisma Ombilin consist of land assets, Antrasit Mess, Lignita Mess, Bituminusa Mess, generator houses, water towers, fences, and yard paving. Based on the appraisal conducted at the end of 2024, the fair value of all PTBA assets in Wisma Ombilin is Rp 15,682,500,000.

Wisma Ombilin has a total of 22 rooms available. Room rates at Wisma Ombilin vary depending on the room type and guest status. Bituminusa Room has the highest rate, especially for general guests, while Lignita Standard offers the lowest rate. 50% discounts applied to employees and retirees. Based on data obtained from rates and occupancy rates in the last 1 year, the income earned by Wisma Ombilin is Rp 297,516,000.

Based on the revenue and fair value data obtained, the Asset Turnover generated by Wisma Ombilin can be calculated as follows:

$$Asset\ Turnover = \frac{Revenue}{Asset\ Value} = \frac{297{,}516{,}000}{15{,}249{,}600{,}000} = 0{,}01951$$

In evaluating the productivity of company assets, a comparison is needed between the assets to be evaluated and the productivity of the entire company's assets. Based on the 2023 financial report, the productivity of PTBA's assets can be calculated by calculating asset turnover as follows:

$$Asset\ Turnover = \frac{Revenue}{Asset\ Value} = \frac{38{,}488{,}867}{\frac{38{,}765{,}189+45{,}359{,}207}{2}} = 0{,}91505$$

Due to the low asset turnover of PTBA's land and building assets in Padang City compared to the company's average, a property development analysis is conducted.

Location and Accessibility

Location and accessibility are two crucial factors that greatly determine the success of a hotel investment. Both are interrelated and affect various aspects of the hotel business, from attractiveness to guests, operational costs, to potential profits. Following is some information related to the location and accessibility of investment objects: a plot of land measuring 2,079 m² on which stands the Wisma Ombilin building located on Jalan HOS Cokroaminoto No. 95-97, Berok Nipah Village, West Padang District, Padang City. Wisma Ombilin has a strategic location, namely having several proximities to Padang Beach, Chinatown, several tourist attractions, the city center and government. The environment around Wisma Ombilin is dominated by the trade and service sectors such as business premises, cafes, restaurants, hostels/homestays, places of worship and the Berok Nipah Village Head Office. The location of the Property Subject is directly opposite the representative office of the Tzu Chi Buddhist Foundation, Padang Representative. The direct boundaries of the Property Subject are as follows: to the north is HOS Cokrominoto Street, to the south are residential houses, to the east is a café, and to the west is also a café. Details are shown in the following **Figure 1** and **Figure 2**.

Figure 1. Wisma Ombilin location in map

Figure 2. Wisma Ombilin Accessibility

HOS Cokroaminoto street is a Secondary Arterial Road and all road accesses to the Wisma Ombilin on Jalan HOS Cokroaminoto street are 2-way roads or traffic directions with a main road width of ±14 m. The main access to the Property Subject can be reached via: from the direction of Padang Beach or the roundabout in front of the Al-Hakim Mosque towards Jalan HOS Cokroaminoto; from the direction of Siti Nurbaya Bridge or Jalan Nipah towards Jalan HOS Cokroaminoto; and from the direction of the Padang six-way intersection towards Jalan HOS Cokroaminoto.

The accessibility of the Wisma Ombilin location to nearby tourist destinations can be seen in the following **Table 1**.

Table 1 Location and Accessibility of Wisma Ombilin

No.	Distance	Travel Time	Description
1	-	-	Tzu Chi Buddhist Foundation
2	± 90 m	± 2 minutes	Berok Nipah Ward Office

3	± 200 m	± 3 minutes	Warman Buddhist Temple
4	± 210 m	± 3 minutes	Al-Hakim Mosque
5	± 250 m	± 5 minutes	Padang Beach

Legality and Development Limitations

In carrying out development within the Wisma Ombilin area, several legal limitations are imposed by both central and regional government regulations, particularly those outlined in the Building Use Rights (Hak Guna Bangunan or HGB). The HGB for Wisma Ombilin is valid for 20 years, commencing in 2005 and expiring in 2025. However, pursuant to Article 37 of Government Regulation (PP) Number 18 of 2021, HGB on state land or land with management rights may be granted for a maximum of 30 years, extended for 20 years, and renewed for another 30 years. For Wisma Ombilin, this suggests a possible renewal for up to 30 years. The current HGB is registered under PT Tambang Batubara Bukit Asam (Persero), issued on May 21, 2005, with a measurement letter drawing No. 00151/200.2003 and covering a land area of 2,079 m².

According to the Padang City PUPR Service and Mayoral Regulation No. 5 of 2023 regarding the Detailed Spatial Plan (RDTR) for Padang City 2023–2043, the Wisma Ombilin area falls within the Trade and Services Zone (sub-zoning K3), situated along a secondary arterial road. The development parameters include a maximum building coefficient of 60%, a maximum building floor coefficient of 6, and a maximum building height of 10 floors. Additionally, the minimum green base coefficient is set at 20%, and the basement coefficient is 60%. Furthermore, development for Star Hotel functions is permitted within this zone, provided that it complies with environmental regulations through the preparation of required environmental documents such as AMDAL, UKL, UPL, or SPPL.

SWOT Analysis

1. Strengths

The strengths of the Property Subject include a very strategic location and its close proximity to several tourist attractions such as Padang Beach, Siti Nurbaya Bridge, Adityawarman Museum, and the Chinatown area, as well as its closeness to the city center and government center. It also benefits from good accessibility and is easily reachable from various accesses and roads. With land use in the surrounding environment that is quite varied—ranging from restaurants and cafes, banking offices, and representative offices of social foundations, to several worship facilities like the Warman Buddhist Temple and Al-Hakim Mosque, government offices such as the Berok Nipah Village Head Office, and other commercial activities—supported by the K-3 zoning pattern (Trade and Services), the Property Subject has the flexibility to accommodate property functions in the Star Hotel sector.

2. Weaknesses

On the other hand, the weaknesses of the property include its proximity to Padang Beach (±250 m), which based on Regional Regulation No. 3 of 2019 concerning Amendments to the RDTR of Padang City 2010–2030 (Article 58B), places Padang Barat District in an area prone to tidal waves and tsunamis with a very high risk. Additionally, the land elevation is below the surface of the highway (Jalan HOS Cokroaminoto) by approximately 50–75 meters. Therefore,

increasing the elevation to be free from flooding must be taken into account in the planning of the hotel construction budget. Even though it is relatively close to the beach, Wisma Ombilin does not have direct access or a direct view of the beach, so there are no sea view rooms that can be offered at a price that is relatively higher than the standard city view room.

3. Opportunities

The opportunities presented include optimizing assets owned by PT Bukit Asam Tbk against fixed assets owned through cooperation with partners or credible and well-known brand hotel operators. The supply of 3 and 4-star hotels in Padang City that are managed by national or international hotel chain operators and are equipped with adequate facilities is still quite limited. Padang City also has great tourism potential, especially with its natural beauty and rich culture. Hotels can take advantage of this tourism growth to increase occupancy and revenue. Furthermore, PTBA can work with local governments and local stakeholders to promote hotels and attract major events. This collaboration can increase hotel visibility and encourage business growth. In addition to rooms, hotels can offer additional services such as F&B, spa, and meeting rooms to increase revenue. Diversifying revenue can reduce dependence on room revenue.

4. Threats

However, several threats may impact the investment. The price of a hotel room per night or ARR (Average Room Rate) is quite competitive for 3-star and 4-star hotels because existing hotels are often used for MICE activities for ministries, agencies, and local governments. Padang City may already have several established 4-star hotels, which can be strong competitors. New hotels will have to compete with competitors who already have a loyal customer base. A recession or rising fuel prices can affect the purchasing power of potential guests. Reduced demand can reduce occupancy and revenue. Moreover, Padang City is located in an area prone to natural disasters such as earthquakes and tsunamis. Natural disasters can affect hotel operations and reduce demand.

Product and Market Analysis

1. Hotel Supply

The hotel supply in Padang City in 2023 is still dominated by non-star hotels with a percentage of 62%. Meanwhile, for the supply of star hotels, 3-star hotels have the largest percentage of supply with a percentage of 12% of the total hotel supply.

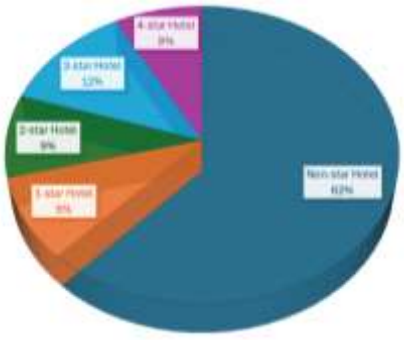

Figure 3. Hotel Room Supply in Padang City (2023)

2. Occupancy Rate

Room Occupancy Rate (ROR) of starred hotels in Padang City in Q1 2024 reached an average of 36.78%. Meanwhile, the average Room Occupancy Rate of Non-Starred Hotels was lower at around 17.71%. Although the occupancy rate of starred hotels in Padang City decreased in 2020, after Covid-19, the market recovery trend in 2021-2023 can be seen from the occupancy rate of starred hotels which generally began to increase.

Figure 4. Occupancy Rate of Star and Non-Star Hotels (2019–Q1 2024)

The low occupancy rate of non-star hotels, including Wisma Ombilin at present, when compared to the occupancy rate of star hotels is one of the considerations for selecting star hotels as a promising asset development option.

3. Price Trends

ARR prices at 4-Star hotels in year 2023 has returned to the previous price Pandemic or prices in 2019, meanwhile for 3-Star hotels ARR has not returned yet 2019 prices. The graph of changes in prices of 3-star and 4-star hotels in Padang City for the period 2019-2023 can be seen in following **Figure 5**.

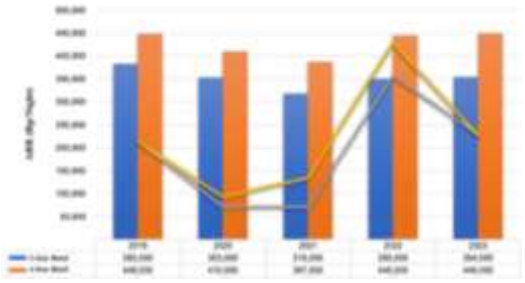

Figure 5. ARR Trends of 3 and 4-Star Hotels in Padang City (2019-2023)

The ARR trend above shows that 4-star hotels tend to show stable prices when a crisis occurs such as COVID-19 in 2020 and 2021, as well as a sharp increase in ARR again after the crisis subsides in 2022. Because the facilities offered are better, the average ARR of 4-stars is also automatically higher than that of 3-star hotels, which provides greater revenue potential for the company.

4. Occupancy Trends

In 2023, both 3-star and 4-star hotels have reached occupancy levels at pre-pandemic levels in 2019. This occupancy trend continues to increase at 4-star hotels. However, at 3-star hotels, this trend has decreased slightly due to the large number of government events at 4-star hotels. The occupancy rate graph for hotels in Padang City in 2019-2023 can be seen in following **Figure 6**.

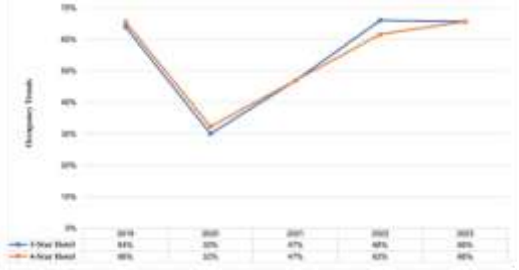

Figure 6. 3 and 4-Star Hotel Occupancy Trends in Padang City (2019-2023)

The approach used to determine occupancy growth, in addition to using historical hotel data, is by referring to data on the growth of the number of tourists in Padang City, obtained from BPS Indonesia. Based on data obtained from the BPS website, the number of tourists in Padang City in 2011 was 2,299,945 people, and the number of tourists in 2023 was 3,660,947 people. Based on this information, it is known that the growth in the number of tourists in Padang City each year is 3.95%.

5. Supply Analysis

There are 7 3-star hotels and 9 4-star hotels in Padang City, the oldest of which has been operating since 1971 and the newest has been operating since 2021. In following **Table 2** and **Table 3**, we can see data from 3-star hotels and 4-star hotels in Padang City, including its number of rooms.

Table 2. Competitive Hotel Supply – 3-Stars

No.	Hotel	Number of Room
1	Ibis	168
2	Whiz Prime	136
3	d'Ox Ville	29
4	Daima Hotel	93
5	Fave Hotel Olo	91
6	Ocean Beach	88
7	Pangeran City	97

Table 3. Competitive Hotel Supply – 4-Stars

No.	Hotel	Number of Room
1	Truntum	168
2	Mercure	146
3	Santika Premiere	250
4	Pangeran Beach	181
5	The ZHM Premiere	208
6	Bumi Minang	102
7	Rocky Plaza	171
8	Grand Basko	180
9	The Axana	139

Based on the criteria mentioned previously, it has been identified that within a radius of 1-10 km there are 9 4-star hotels and 7 3-star hotels that will be competitors for hotels that will be developed in the Wisma Ombilin area with a total of 1,545 rooms for 4-star hotels and 702 rooms for 3-star hotels.

6. Demand Analysis

Average Room Rate and Occupancy rate of 4-star hotels in Padang City in the Q2 2024 period can be seen in following **Table 4**.

Table 4. Average Room Rate and Occupancy Rate of 4-Star Hotels (Q2 2024)

No	Hotel	Room	Est ARR (Rp)	OR
1	Truntum	168	529,000	78%
2	Mercure	146	554,000	83%
3	Santika Premiere	250	558,000	80%
4	Pangeran Beach	181	532,000	70%
5	The ZHM Premiere	208	543,000	80%
6	Bumi Minang	102	440,000	30%
7	Rocky Plaza	171	444,000	40%
8	Grand Basko	180	455,000	60%
9	The Axana	139	428,000	40%

The Average Room Rate (ARR) of the supply of 4-star hotels in 2024 ranges from Rp 428,000 to Rp 558,000 per night (excluding taxes and breakfast). The average room rate (ARR) for the entire supply of 4-star hotels is Rp

505,300 per night (excluding taxes and breakfast), with an average occupancy of 65.24%.

Table 5. Average Room Rate and Occupancy Rate of 3-Star Hotels (Q2 2024)

No	Hotel	Room	Est ARR (Rp)	OR
1	Ibis	168	415,000	80%
2	Whiz Prime	136	313,000	65%
3	d'Ox Ville	29	405,000	40%
4	Daima Hotel	93	384,000	50%
5	Fave Hotel Olo	91	381,000	55%
6	Ocean Beach	88	517,000	50%
7	Pangeran City	97	386,000	55%

The ARR of the supply of 3-star hotels in 2024 ranges from Rp 313,000 to Rp 517,000 per night (excluding tax and breakfast). The average room rate (ARR) for the entire supply of 3-star hotels is Rp 395,000 per night (excluding tax and breakfast), with an average occupancy of 61%.

The demand generators for competing hotels located in the Padang city area are mostly driven by MICE (Meeting, Incentives, Conferences, Exhibitions) activities carried out by government agencies and business actors and corporations around the city of Padang. The MICE market is quite large in the city of Padang with government guests who routinely hold meetings at hotels until the end of the year. According to information obtained from hotel sales marketing, this is due to the meeting activities of government guests which will start to increase from April (or after the Eid al-Fitr celebration) until the end of the year.

Based on the comparison of occupancy rates and average room rates between 3-star and 4-star hotels in Padang City, as well as the analysis of potential income from the existing MICE conditions in Padang City, 4-star hotels show better performance than 3-star hotels both in terms of ARR and occupancy rates. This can be influenced by better quality services, more complete and premium facilities, brands and reputations of well-known international/national operators, more profitable market segmentation, and higher value perception. On the other hand, 3-star hotels may rely more on affordable prices, but are less able to compete in terms of overall guest experience. Therefore, the analysis of the 4-star hotel development plan for this final project was chosen compared to 3-star hotels.

Project Data

The analysis of the HGB Wisma Ombilin enabled the calculation of the permitted Gross Floor Area (GFA) and the maximum allowable number of hotels building levels. To address parking requirements, the design incorporates basement planning, including the number of basement floors required. Furthermore, adhering to 4-star hotel standards necessitated allocating a portion of the GFA to a ballroom facility for MICE (Meetings, Incentives, Conferences, and Exhibitions) activities, with the remaining area designated for hotel rooms and ancillary facilities.

By applying the international hotel industry's minimum GFA-per-room standard, the total number of rooms feasible for PTBA's hotel investment plan was determined. This approach ensures compliance with 4-star

operational benchmarks while optimizing spatial efficiency. The integration of a ballroom aligns with market demand for event spaces in Padang City, enhancing the hotel's revenue diversification potential. These calculations demonstrate the project's alignment with both regulatory constraints and industry best practices, ensuring operational viability and competitive positioning.

The data for this hotel development plan can be seen in the following **Table 6**.

Table 6. Hotel Development and Area

Allocation	Area (m^2)	Allocation	Area (m^2)
Building	1,247.4	Meeting Room	150
GFA (m^2)	9,979.2	Suite Room	900
Floor	8	Deluxe Room	1,800
Lobby	200	Superior Room	1,800
Restaurant	747.4	Basement Area (m^2)	3,742
Office	150	Basement Floor	3
Gym	150	Other Area	3,081.8
Ballroom (m^2)	1,000		

The Suite room that will be provided in this hotel is 18 rooms with each room area of 50 m^2. The Deluxe room that will be built has 60 rooms, with each room's area of 30 m^2, while the Superior room will be built as many as 78 rooms with each area of 25 m^2. The Other areas are used for Hotel Corridors, Service Areas, Lifts, and space for emergency stairs.

Capital Analysis

Based on information obtained from Property Consultants, the percentage of capital costs commonly used for a company's capital for hotel construction is 65% of Debt and 35% of Equity. Since the hotel investment is not a carbon project, banks would be accepted to fund this hotel investment project for long-term loans. Based on data obtained from banks, the average long-term interest rate given to corporations is at 10.05%. The short-term loan interest rate obtained by PTBA and usually used to cover operational deficiencies is 7.27%. On the other hand, the average Cost of Equity of PTBA is 8.67%. An important parameter used in investment calculations is the Weighted Average Cost of Capital (WACC), which can be calculated using the following formula:

$$WACC = (Wd\ x\ Cd\ x\ (1 - TR)) + (We\ x\ Ce)$$

$$WACC = (65\%\ x\ 10.05\%\ x\ (-22\%)) + (35\%\ x\ 8.67\%) = \mathbf{8.13\%}$$

In addition to the WACC calculation, there are also requirements from MIND ID as the parent holding of PTBA. An high-value investments must have a Return of at least 3% above WACC. Based on the data obtained above, as well as the requirements from MIND ID, the Required Return for PTBA hotel project investment in Padang is 9.72%.

$$Required\ Return = WACC + 3\% = \mathbf{11.13\%}$$

Based on the Hotel Development and Area Plan mentioned earlier as well as historical data obtained from professional property consultants, the capital cost of hotel construction can be calculated using the Rp/Room Key

approach, including FF&E. In addition, there are also estimates of basement construction costs, business licensing costs, data on annual construction cost increases, and VAT. The data used as the basis for calculating the capital cost of hotel construction can be seen in following **Table 7**.

Table 7. Construction and Development Costs of 4-Star Hotels

Building Construction including FF&E (Rp/room key)	1,050,000,000
Basement Construction Cost (Rp/m^2)	6,000,000
Business licensing costs (% of total construction cost)	1,00%
Construction Cost Increase (% per year)	2,50%
VAT (effective from January 1, 2025)	12%

Based on the data obtained above, as well as the PTBA hotel development plan that has been explained previously in the Project Data, it can be obtained that the costs that will be incurred in 2026 and 2027 are Rp 213,868,439,744.

The hotel is planned to start construction in 2026 and 2027, with the target realization in 2026 being the construction of the basement and 40% of the building construction. The target realization of the construction in 2027 is the remaining 60% of the building construction and licensing. In addition, the increase in VAT in 2025 to 12% must also be taken into account in capital costs. To anticipate the increase in construction prices in 2027, contracts will be made in 2026 so that construction in 2027 will still use 2026 prices.

Cashflow Analysis

In this final project, cash flow analysis conducted over a 2-year construction period and a 30-year investment utilization period. This analysis also helps in calculating financial metrics such as Net Present Value (NPV), Internal Rate of Return (IRR), and payback period.

Cash Inflow is the sum of the projections of room, F&B, and Banquet income, while Cash Outflow is the sum of the projections of COGS, Selling Expense, G&A Expense, Basic Management Fee & Incentive Fee, Interest Expense, and Tax Expense.

After obtaining Cash Inflow and Cash Outflow, the calculation of Free Cash Flow to the Firm is carried out which is the sum of Cash Inflow and Cash Outflow. In the 30^{th} year, there is also a Terminal Cashflow that can be calculated as final income. In conducting financial analysis, the value of Free Cash Flow to the Firm each year will be changed to Present Value to determine the financial feasibility of this hotel development project.

Based on the calculations that have been carried out for 2 years of construction and 30 years of utilization, the financial feasibility analysis parameters are obtained in the form of NPV of Rp 188.38 billion, IRR of 16.38%, payback period of 10.94 years, and Profitability Index of 1.31.

Risk Assessment

Risk assessment of PTBA's hotel investment project was carried out using sensitivity analysis and Monte Carlo simulation. Sensitivity analysis in project investment aims to identify the key variables that have the most influence on the success of the project. By analyzing how changes in these variables can affect the outcome of the project, the company can: (1) make more informed investment decisions by understanding which variables are most

sensitive, allowing the company to focus efforts on obtaining accurate estimates for these variables; (2) manage project risk by identifying the variables with the greatest impact on project profitability, so risk mitigation can be prioritized; (3) develop contingency plans by anticipating how changes in key variables can affect the outcome of the project; and (4) improve communication with stakeholders by using sensitivity analysis to communicate potential risks and uncertainties to investors and creditors.

The ranges used in this sensitivity analysis are +20%, +10%, -10%, and -20%. Sensitivity analysis in this case is used to determine the effect of changes in each variable on the Net Present Value of PTBA Hotel investment in Padang. Based on the results of the sensitivity analysis that has been carried out, information is obtained that the most sensitive variable is Price per Unit Realization for Hotel Room, followed by Quantity Sold Realization for Hotel Room and Long-term Debt Interest Rate.

Table 8. Category with the highest level of sensitivity to NPV

Category	Highest Swing Percentage
Price per Unit Realization for Hotel Room	54.45%
Quantity Sold Realization for Hotel Room	44.97%
Long-Term Debt Interest Rate	45.64%
Price per Unit Realization for Banquet Event	21.88%
Quantity Sold Realization for Banquet Event	12.60%
Price per Unit Realization for F&B	10.89%
Direct Material for Hotel Room	10.50%
Inflation Rate	10.56%
Direct Material for Banquet Event	6.96%
Quantity Sold Realization for F&B	6.27%
Direct Material for F&B	3.46%
Direct Labor for Hotel Room	2.82%
Direct Labor for F&B	1.80%

Table 9. Monte Carlo Simulation

Descriptive Statistics	
Min (in million)	(Rp 274,674.02)
Max (in million)	Rp 1,140,062.56
Mean (in million)	Rp 210,920.82
Standard Deviation (in million)	Rp 185,670.14
Median (in million)	Rp 191,617.17
Kurtosis	0.75
Skewness	0.60
Prob NPV<0	12.80%
Prob NPV>0	87.20%
Prob NPV> average	44.95%

Based on the Monte Carlo simulation results outlined in the Descriptive Statistics above, the following analysis was carried out:

1. Minimum NPV (in million): -Rp 274,674.02, This means that in the worst case scenario, this hotel project could experience a loss of Rp 274,674.02. Maximum NPV (in million): Rp 1,140,062.56, This means that in the best case scenario, this project could generate a profit (positive NPV) of Rp 1,140,062.56. The wide NPV range indicates that this project has a fairly high level of uncertainty.
2. Mean or average NPV (in million): Rp 210,920.82. On average, this project is estimated to generate a positive NPV. Median NPV (in million): Rp 191,617.17: The middle value of all simulation results also shows a positive NPV. Although there is a possibility of loss, in general the investment in PTBA's Hotel project tends to be profitable.
3. Prob NPV < 0: 12.80% This means that there is a 12.80% chance that this project will generate a negative NPV (loss). Prob NPV > 0: 87.20% This means that there is a 87.20% chance that this project will generate a positive NPV. Prob NPV > average: 44.95% This means that there is a 44.95% chance that the project's NPV will be higher than the average NPV, Rp 210,920.82. The probability of getting a positive NPV is greater than the probability of a negative NPV. However, the risk of loss still needs to be considered.
4. Kurtosis: 0.75 indicates that the data distribution has more extreme values and higher peaks compared to the normal distribution. Skewness: 0.60 Indicates that the distribution is slightly skewed to the right or positive. This means that there is a slight tendency to produce higher NPVs.

Risk Analysis

Based on the ranking order of categories with the highest sensitivity levels that can be seen in the table above, it can be concluded that the top 3 most sensitive categories are Price per Unit Realization for Hotel Room, Quantity Sold Realization for Hotel Room, and Long-Term Debt Interest Rate, with NPV swing percentage above 45%.

Meanwhile, those included in the middle category are Price per Unit Realization for Banquet Event, Quantity Sold Realization for Banquet Event, Price per Unit Realization for F&B, Direct Material for Hotel Room, Inflation Rate, Direct Material for Banquet Event, and Quantity Sold Realization for F&B with swing percentages between 6% and 22%.

On the other hand, the categories with the lowest sensitivity levels are Direct Material for F&B, Direct Labor for Hotel Room, and Direct Labor for F&B with swing percentages of less than 4%.

Risk Mitigation

In this hotel investment, high-sensitivity risks such as room rates, number of rooms sold, and long-term debt interest rates require special attention because of their significant impact on NPV. Mitigation strategies for these risks include implementing dynamic pricing, increasing marketing, diversifying target markets, and prudent debt management.

Medium-sensitivity risks, such as ballroom rates, direct materials, and inflation, also need to be addressed with selective strategies, such as supplier contract negotiations, menu price analysis, and operational efficiency. Although their impact is not as great as

high-sensitivity risks, proper mitigation can help maintain profitability.

Meanwhile, low-sensitivity risks, such as F&B direct materials and labor, can be accepted without significant mitigation measures because their impact is minimal on NPV. However, they still need to be monitored to ensure that there are no significant changes that affect costs.

1. Top Risk

This risk has a significant impact on NPV and requires proactive mitigation measures. Several risk mitigation steps as anticipation for top risks can be seen in following **Table 10**.

Table 10 Top Risk Mitigation

Risk Category	Risk Mitigation Alternatives	Risk Mitigation
Price per Unit Realization for Hotel Room	• Implement dynamic pricing • Conduct competitive analysis • Offer special packages or loyalty programs	Implementing dynamic pricing to adjust prices based on seasonal demand, holidays, or market trends.
Quantity Sold Realization for Hotel Room	• Improve digital marketing strategies • Diversify target markets • Improve the quality of services and facilities	Diversify target markets, such as business guests, family travelers, or special events, to reduce dependence on one segment.
Long-Term Debt Interest Rate	• Secure a fixed-rate loan • Hedging interest rates • Evaluate alternative financing options, terms.	Secure a fixed-rate loan to avoid interest rate fluctuations.

2. Medium Risk

This risk has a moderate impact on NPV and requires selective mitigation actions. Several risk mitigation steps as anticipation for medium risks can be seen in following **Table 11**.

Table 11. Medium Risk Mitigation

Risk Category	Risk Mitigation Alternatives	Risk Mitigation
Price per Unit Realization for Banquet Event	• Competitive pricing • Offer special packages or discounts	Offer special packages or discounts for big events or repeat customers.
Quantity Sold Realization for Banquet Event	• Increase marketing to attract more events • Offer additional amenities and services	Increase marketing to attract more events, such as weddings, conferences, or seminars.
Price per Unit Realization for F&B	• Analyze menu prices regularly • Offer package deals or promotions	Analyze menu prices regularly to ensure optimal profits.

Risk Category	Risk Mitigation Alternatives	Risk Mitigation
Direct Material for Hotel Room	• Find more cost-effective suppliers • Buy in bulk to get discounts.	Find more cost-effective suppliers or alternative materials without reducing quality.
Inflation Rate	• Adjust prices periodically • Make operational efficiencies	Implement operational efficiency policies to reduce the impact of inflation on costs.
Direct Material for Banquet Event	• Negotiate long-term contracts with suppliers • Look for more cost-effective materials.	Negotiate long-term contracts with suppliers to secure stable prices.
Quantity Sold Realization for F&B	• Improve the quality and service • Offer special promotions or packages.	Improve the quality of menu and service to attract more customers.

3. Low Risk

This risk has minimal impact on NPV and can be accepted without significant mitigation measures. Several notes related to the Low Risk mitigation in question can be seen in following **Table 12**.

Table 12 Low Risk Mitigation

Risk Category	Risk Mitigation Alternatives	Risk Mitigation
Direct Material for F&B	• No special action is required, unless there is a significant increase in costs.	Conduct regular monitoring in anticipation of significant cost increases.
Direct Labor for Hotel Room	• No special action is necessary, unless there is a significant wage increase.	Conduct regular monitoring in anticipation of significant wage increases.
Direct Labor for F&B	• No special action is necessary, unless there is a significant wage increase.	Conduct regular monitoring in anticipation of significant wage increases.

Feasibility Analysis

The feasibility analysis for PTBA's 4-star hotel investment in Padang employs the Benefit Cost Analysis (BCA) method, which evaluates a project by comparing its total monetary benefits to total costs. This approach determines project viability by converting all relevant costs and benefits to present value. Additionally, Capital Budget Analysis (CBA) is applied, emphasizing Net Present Value (NPV) as a key metric, calculated to ensure that future cash flows are accurately assessed in present-day terms. The project demonstrates strong financial feasibility with an NPV of Rp 188.38 billion, surpassing the required return rate of 11.13%. Revenue projections include 50% from room bookings, 20% from food and beverage (F&B), and 30% from MICE (Meetings, Incentives, Conventions, and Exhibitions). The Internal Rate of Return (IRR) is 16.38%, exceeding the hurdle rate, while a Payback Period of 10.94 years and a

Profitability Index (PI) of 1.31 affirm investment viability.

Despite its profitability, the project faces significant risks. Sensitivity analysis identifies room pricing (ARR), occupancy rates, and interest rates as the most volatile variables, with respective impacts of 54.45%, 44.97%, and 45.64% on NPV under ±20% fluctuations. Given that 65% of funding is sourced from long-term debt, changes in interest rates pose a substantial risk. Monte Carlo simulation supports a generally positive outlook with an 87.2% probability of positive NPV, but reveals a 12.8% chance of loss, with worst-case NPV reaching –Rp 274.67 billion.

To mitigate these risks, PTBA is advised to adopt dynamic pricing strategies, secure fixed-interest loans, and diversify income sources through MICE and F&B services. Partnering with a reputable international hotel operator may increase credibility but necessitates cost control to avoid overdependence. Environmental risks, especially Padang's vulnerability to earthquakes, also demand resilient construction and insurance coverage. In conclusion, the project is both financially and strategically sound, aligning with PTBA's diversification goals. Project approval is recommended, contingent on the execution of key risk mitigation measures.

CONCLUSION

The feasibility evaluation of PT Bukit Asam Tbk's (PTBA) investment in constructing a 4-star hotel on the Wisma Ombilin asset land in Padang, West Sumatra, concludes that the project is viable and aligns with PTBA's strategic goal of diversifying beyond the coal mining sector. The analysis encompasses four dimensions: market, financial, risk, and socio-economic impact.

From a market perspective, Padang's strategic location and tourism appeal, particularly in the MICE (Meetings, Incentives, Conventions, and Exhibitions) segment, present strong demand for 4-star accommodations. Despite existing competition, PTBA can position itself competitively by partnering with globally recognized hotel operators. Current market data indicate a 65.24% occupancy rate and an ARR of IDR 505,300 per night, supported by a 3.95% annual growth in tourist arrivals.

Financially, the investment shows high potential with a projected Net Present Value (NPV) of Rp 188.38 billion and an Internal Rate of Return (IRR) of 16.38%, exceeding the required return of 11.13%. The project has a payback period of 10.94 years and a Profitability Index (PI) of 1.31, signaling strong profitability relative to investment costs.

Risk analysis identifies key challenges including fluctuating market demand, rising interest rates, inflation, and the area's vulnerability to natural disasters. These risks can be mitigated through dynamic marketing strategies, fixed-rate financing, disaster-resilient infrastructure, and comprehensive insurance.

On a socio-economic level, the hotel project is anticipated to generate employment, increase local tax revenue, and stimulate growth in supporting sectors such as tourism and transportation. Additionally, PTBA's corporate social responsibility (CSR) goals will be advanced through job creation, community training, and regional infrastructure development.

REFERENCES

Arifin, S. N., Perseveranda, M. E., Niha, S. S., Manafe, H., Bibiana, R. P, & Man, S. (2022). *Pengaruh*

Manajemen Aset terhadap Optimalisasi Pengelolaan Aset Daerah dengan Pengawasan dan Pengendalian Sebagai Variabel Mediasi pada Pemerintah Daerah Provinsi Nusa Tenggara Timur. Jurnal Manajemen Pendidikan dan Ilmu Sosial, 4(1). https://doi.org/10.38035/jmpis.v4i1

Dimitrić, M., Tomas Žiković, I., & Arbula Blecich, A. (2019). *Profitability Determinants of Hotel Companies in Selected Mediterranean Countries*. Economic Research-Ekonomska Istraživanja, 32(1), 1977–1993. https://doi.org/10.1080/1331677X.2019.1642785

Doğru, T., McGinley, S., & Kim, W. G. (2020). *The Effect of Hotel Investments on Employment in the Tourism, Leisure and Hospitality Industries*. International Journal of Contemporary Hospitality Management, 32(5), 1941-1965. https://doi.org/10.1108/ijchm-11-2019-0913

Liu, K. and Hu, C. (2021). *Critical Success Factors of Green Hotel Investment in Taiwan*. International Journal of Contemporary Hospitality Management, 34(3), 951-971. https://doi.org/10.1108/ijchm-03-2021-0368

Ma, R. and Zhai, P. (2016). A Jump-Diffusion Real Option Approach for Hotel Investment Under Uncertain Lodging Demand. *Kybernetes*, *45*(10), 1604-1616. https://doi.org/10.1108/k-02-2016-0025

Murti, T. H., & Sahara. (2019). Pengaruh Investasi terhadap Pertumbuhan Ekonomi Regional di Indonesia. *Jurnal Ekonomi dan Kebijakan Pembangunan*, *8*(2), 163–181. https://doi.org/10.2944/jekp.8.2.2019.163-181

Napierała, T. (2019). Polycentric Intra-Urban Development of Hotels: Evidence from Budapest. Geographia Polonica, 92(4), 429-442. https://doi.org/10.7163/gpol.0157

Puciato, D., Słaby, T., Goranczewski, B., & Gawlik, A. (2017). Conditions of Business and Holiday Hotels Location. Dolnośląskie, Opolskie and Śląskie Voivodships Case Studies. *Barometr Regionalny. Analizy I Prognozy*, *15*(1), 77-87. https://doi.org/10.56583/br.452

Ratmono, D., & Rochmawati, A. (2018). Determinan Optimalisasi Penggunaan Aset Tetap Pemerintah Daerah. *Jurnal Akuntansi Multiparadigma*, *9*(2), 236–247. https://doi.org/10.18202/jamal.2018.04.9014

Tavitiyaman, P., Zhang, H. Q., & Qu, H. (2012). The Effect of Competitive Strategies and Organizational Structure on Hotel Performance. *International Journal of Contemporary Hospitality Management*, *24*(1), 140-159. https://doi.org/10.1108/09596111211197845

Wicaksana, A., Harmono, H., & Yuniarti, S. (2021). Pengaruh Inventarisasi Aset, Penggunaan Aset, Pengamanan dan Pemeliharaan Aset terhadap Optimalisasi Aset Tetap Tanah Melalui Pemanfaatan Aset pada Pemerintah Kabupaten Malang. *Publisia: Jurnal Ilmu Administrasi Publik*, *6*(1), 1–14. https://doi.org/10.26905/pjiap.v6i1.5514

Yang, Y., Wong, K. K. F., & Wang, T. (2012). How Do Hotels Choose Their Location? Evidence from

Hotels in Beijing. *International Journal of Hospitality Management, 31(3), 675-685.* https://doi.org/10.1016/j.ijhm.2011.09.003