



# Challenges and Opportunities in Shipyard Industry Financing in Indonesia: A SWOT Analysis Comparing Batam and Non-Batam Clusters

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Article Info	Abstrak
<p><i>Keywords:</i> <i>Indonesian maritime industry;</i> <i>Shipyards;</i> <i>Interest rates;</i> <i>SWOT analysis</i></p>	<p>Indonesia's maritime sector plays a crucial role in the national economy, particularly through shipyard activities spread across both Batam and non-Batam areas. This research examines the financial landscape of the shipbuilding industry in these regions, assessing the challenges, opportunities, strengths, and weaknesses that shape its development. Given its strategic location in Southeast Asia and abundant natural resources, Indonesia has the potential to become a key player in the global maritime industry. However, significant barriers such as high interest rates and limited banking services continue to hinder growth. In Batam, the presence of local policy support and Islamic financing mechanisms from institutions like Bank Mandiri and Bank Permata Syariah offers notable benefits, despite the inherent risks associated with reliance on regional policies. Conversely, non-Batam areas benefit from financial backing by international entities like the Mizuho Group, providing a broader range of long-term funding options. Nevertheless, these regions still face challenges related to infrastructure constraints and elevated interest rates. A SWOT analysis highlights the necessity of implementing adaptable financing strategies and maintaining consistent policy support to ensure sustainable expansion of the shipyard industry across both regions.</p>

## 1. INTRODUCTION

Indonesia holds a strategically significant position at the intersection of the Pacific and Indian Oceans, with over half of global shipping passing through its waters. As the world's largest archipelagic nation, covering 5.45 million square kilometers—two-thirds of which consists of water—and featuring a 95,181-kilometer-long coastline, maritime transportation is essential for interregional connectivity. With a population of 265 million, accounting for 40% of ASEAN's total population, Indonesia represents a major market for the maritime sector. According to INSA data, by 2020, the country's commercial fleet comprised approximately 33,000 vessels, with 5% dedicated to passenger and ferry services and 95% to cargo transport, creating an annual potential ship repair market of 14,190 units.

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Indonesia’s shipbuilding industry is divided into two primary clusters: the Batam cluster and the non-Batam cluster. The Batam cluster is heavily influenced by foreign investment, geared toward international markets, and aligned with Singaporean standards, with a focus on offshore oil and gas, container vessels, and bulk carriers. In contrast, the non-Batam cluster serves a more diverse market, ranging from small shipyards specializing in barge repairs and fishing boats to larger facilities handling container ships, large tankers, and military vessels. The industry’s growth depends on strong collaboration between industry players and educational institutions, particularly in adapting to the advancements of Industry 4.0. as close collaboration among maritime stakeholders to achieve a sustainable shipyard industry.

Table 1.1 National Shipyard Clusters Based on Location and Primary Activities.

KLUSTER GALANGAN KAPAL NASIONAL BERDASARKAN LOKASI DAN AKTIVITAS UTAMA					
	Non-Batam (Sumatera, Jawa, Sulawesi, Maluku, Papua dan Nusa Tenggara)			Batam	
	Kecil (Kap <10K DWT)	Menengah (Kap 10K-40K DWT)	Besar (Kap > 40K DWT)	Kecil (Kap <10K DWT)	Menengah (Kap 10K-40K DWT)
Repair	<ul style="list-style-type: none"><li>Utamanya untuk kapal tongkang, kapal perikanan, penyeberangan dan general cargo</li><li>Dominan berada di Jawa dan Kalimantan</li><li>Dapat dibedakan untuk material baja dan kayu</li></ul>	<ul style="list-style-type: none"><li>Utamanya untuk kapal penyeberangan, general dan kapal penumpang, kapal tunda, perahu &amp; tanker</li><li>Dominan berada di Tanjung Perak dan Tanjung Priok</li></ul>	<ul style="list-style-type: none"><li>Utamanya untuk kapal kontainer, tanker menengah dan besar, kapal militer</li><li>Dominan berada di Tanjung Perak dan Tanjung Priok</li><li>Untuk kapal bendera asing</li></ul>	<ul style="list-style-type: none"><li>Utamanya untuk kapal kontainer, tanker menengah dan besar, kapal militer</li><li>Dominan dilakukan operator Indonesia</li><li>Namun pemilik asing</li></ul>	<ul style="list-style-type: none"><li>Orientasi kapal bendera asing</li><li>Banyak tipe kapal-kapal untuk operasi lepas pantai (AHTS, rig, tanker, offshore structures, tower yoke, penumpang dan lainnya)</li><li>Galangan berbentuk PMA dengan kepemilikan asing dominan d</li><li>Relasi kuat dengan partner atau jejaring di Singapura</li><li>Kemampuan sesuai dengan standar Singapura</li><li>Memiliki kontrak jangka panjang dengan pelayaran asing</li></ul>
Bangunan baru	<ul style="list-style-type: none"><li>Utamanya dua tipe yaitu tradisional untuk kapal berbahan kayu dan aluminium serta baja</li><li>Dominan di Indonesia Timur dan Kalimantan</li><li>Orientasi untuk kapal perikanan, penumpang, dan PELRA</li></ul>	<ul style="list-style-type: none"><li>Utamanya dimiliki oleh operator khusus galangan atau oleh perusahaan pelayaran</li><li>Ada dua tipe manajemen: galangan spesialis dan galangan umum (berbagai tipe kapal yang ditangani)</li></ul>	<ul style="list-style-type: none"><li>Utamanya untuk armada dengan order internasional</li><li>Utamanya galangan dimiliki atau dikelola dengan badan usaha milik negara</li><li>Berbagai tipe armada kapal</li></ul>	<ul style="list-style-type: none"><li>Orientasi pembangunan dominan untuk proyek-proyek offshore</li><li>Dominan menggunakan sumber pendanaan luar negeri</li><li>Dikelola oleh PMA internasional</li></ul>	<ul style="list-style-type: none"><li>Dominan untuk kontrak domestic dan internasional</li><li>Dengan fokus pada offshore oil and gas as well as containers, dry bulk and liquid bulk project for international orders</li><li>Galangan berbentuk PMA dengan kepemilikan asing dominan yang berkolaborasi dengan vendor Singapura dan domestik Indonesia</li><li>Dominan memakai standar internasional dan mendapatkan fasilitas fiskal yang lebih baik dari galangan non-Batam</li></ul>

Source: Gurning, S. (2023) 'Eksplorasi Pemetaan Kebutuhan Pengembangan Galangan Kapal Nasional', Kajian Pengembangan Galangan Kapal Nasional. Badan Kebijakan Transportasi Kementerian Perhubungan, Institut Teknologi Sepuluh Nopember, Surabaya.

The distinct characteristics between these two clusters have implications for the different financing schemes required for each cluster. This becomes crucial considering that each segment has different capital requirements, risks, and business prospects, thus necessitating specific and measurable financing approaches (Gurning, 2023). This research aims to comprehensively analyze the challenges and opportunities in shipyard industry financing in Indonesia by comparing the Batam and non-Batam clusters using a SWOT analysis approach.

2. LITERATURE REVIEW  
Shipyards in Indonesia

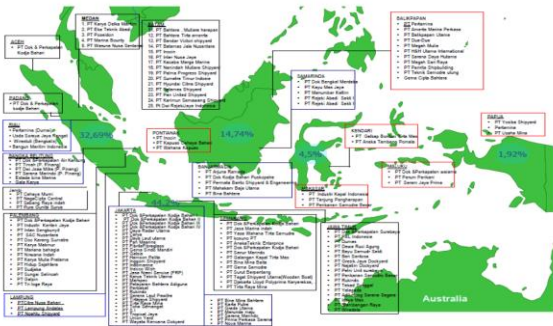


Figure 2.1 Distribution Map of Shipyards in Indonesia

Source: Indonesia shipyard association / IPERINDO (2009-2012); Gurning (2012 and 2014); Dok Kodja Bahari (2013)

Indonesia is home to 230 shipyards spread across the country from west to east, forming a strategically important and complex industrial sector. This industry is labor-intensive, demands substantial capital and investment, faces global competition, operates on long-term project cycles, and utilizes advanced technology, although the level of local content remains relatively low. With extensive multiplier effects across various sectors, the shipyard industry thrives within an ecosystem that includes strategic national industries, steel manufacturing, financial institutions, research organizations, and related sectors such as fisheries, defense, offshore operations,

power generation, transportation, logistics, and tourism. Its core business activities consist of three main areas: new ship construction, repair, and modification/general engineering, all of which adhere to SOLAS international standards.

The distribution of shipyards across Indonesia is concentrated mainly in the western region, with Sumatra accounting for 32.69% and Java for 44.2%, followed by Kalimantan at 14.74%. Meanwhile, shipyards in eastern Indonesia—including Sulawesi (4.5%) and Maluku and Papua (1.92%)—are fewer in number. Each region has developed specific industry specializations: Batam focuses on export markets and large-scale vessels, Java caters to a broad market range from small to large ships, while eastern Indonesia primarily serves the fishing and regional transportation sectors. This industrial diversity highlights its complexity, necessitating a comprehensive development strategy that aligns with international regulations such as SOLAS and IMO, alongside national policies from the Ministry of Transportation and Indonesian Classification Standards to ensure safety, efficiency, and long-term sustainability.

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### **Batam Shipyards**

The shipyard industry in Batam has distinct characteristics that set it apart from other regions in Indonesia. Shipyards in this area are classified into three categories based on capacity: small (<10K DWT), medium (10K-40K DWT), and large (>40K DWT). Small shipyards primarily focus on container ships, while medium and large shipyards specialize in tankers and military vessels. Although many shipyards are foreign-owned, most operations are conducted by Indonesian entities. The industry's growth is largely oriented toward offshore projects, relying on foreign funding sources and being managed by international foreign investment companies (Gurning, 2023; Maritime Industry Directorate, 2022).

Medium and large shipyards in Batam exhibit greater complexity, focusing on servicing foreign-flagged vessels and specializing in offshore operation vessels such as AHTS, rigs, tankers, offshore structures, tower yokes, and passenger ships. These shipyards are predominantly owned by foreign investors, maintaining strong ties with Singaporean partners and adhering to Singaporean standards. They operate under long-term contracts with foreign shipping companies, with a primary emphasis on offshore oil and gas, container shipping, and both dry and liquid bulk transport for international markets (Saragih & Prasetyo, 2023; INSA, 2020).

The financial and operational framework of Batam's shipyards provides key competitive advantages. The industry benefits from foreign investment dominance, enabling access to international funding, as well as special fiscal incentives exclusive to the Batam region. Additionally, strong collaboration with both Singaporean and domestic Indonesian vendors, along with the application of internationally recognized management systems, enhances their competitive edge. These characteristics necessitate strict adherence to international standards, the development of a highly skilled workforce, robust infrastructure and regulatory support, and financing schemes tailored to the industry's unique demands (Ministry of Industry, 2021; Gurning, 2023).

### **Non-Batam Shipyards**

The shipyard industry outside Batam, covering regions such as Sumatra, Java, Sulawesi, Maluku, Papua, and Nusa Tenggara, showcases diverse characteristics based on capacity and function. These shipyards are categorized

into three main groups: small (<10K DWT), which primarily focus on barge repairs, fishing boats, and general cargo vessels, with a strong presence in Java and Kalimantan; medium (10K-40K DWT), which specialize in ferry vessels, general cargo, and passenger ships, particularly in Tanjung Perak and Tanjung Priok; and large (>40K DWT), which are engaged in the construction and maintenance of container ships, large tankers, and military vessels (Gurning, 2023; Maritime Industry Directorate, 2022).

In the field of new ship construction, small shipyards primarily use traditional methods to build wooden and aluminum vessels, particularly in Eastern Indonesia and Kalimantan, focusing on fishing boats, passenger ships, and traditional shipping vessels (PELRA). Medium-sized shipyards are typically managed by specialized operators or shipping companies, with operations split between dedicated shipyards and general-purpose facilities. Meanwhile, large shipyards cater to international fleet demands, are often managed by state-owned enterprises, and are equipped to handle a wide range of vessel types while adhering to global industry standards (INSA, 2020; Ministry of Industry, 2021).

The unique characteristics of non-Batam shipyards shape the industry's development needs, including the standardization of processes and quality, improvement of local workforce capabilities, technological and infrastructure modernization, and financial strategies aligned with industry demands. Recognizing the specific attributes of each segment is crucial for formulating effective policies and strategies to support the sustainable growth of shipyards in non-Batam regions (Saragih & Prasetyo, 2023; Maritime Industry Directorate, 2022).

### Maritime Financing Models

#### Multi-Finance Technical Works (KTU Finance) – Sale & Leaseback

The sale and leaseback financing model offers an ideal solution for businesses requiring vessels for operational needs. All vessels are sourced directly from Karya Teknik Utama, a parent company specializing in logistics vessel construction. This approach ensures high quality and competitive pricing while maintaining efficiency in the procurement process. Additionally, should any challenges arise during the sale and leaseback process, a dedicated team provides a clear and structured exit plan to address any issues effectively. (KT Multifinance, 2024)

#### Factoring

Factoring is a financial service involving the purchase or transfer of receivables, helping businesses manage credit risk (credit insurance) and enhance working capital liquidity. At Karya Teknik Multifinance, the factoring process is executed through a legally structured arrangement involving three parties, managed by an experienced team. This facility is available to all clients of Karya Teknik Multifinance, offering a reliable financial solution for maintaining cash flow. (KT Multifinance, 2024)

#### Working Capital Financing

Working capital is essential for maritime businesses, given the industry's high operational costs. Karya Teknik Multifinance provides working capital financing as a temporary and emergency funding solution to help businesses sustain operations during financial difficulties. With straightforward requirements and an easy-to-follow process, this facility ensures that companies can continue functioning optimally. Key requirements include fixed assets as collateral, a well-operating business, and a clearly defined exit strategy with measurable targets. (KT Multifinance, 2024)

#### Interest Rates and Financing Terms

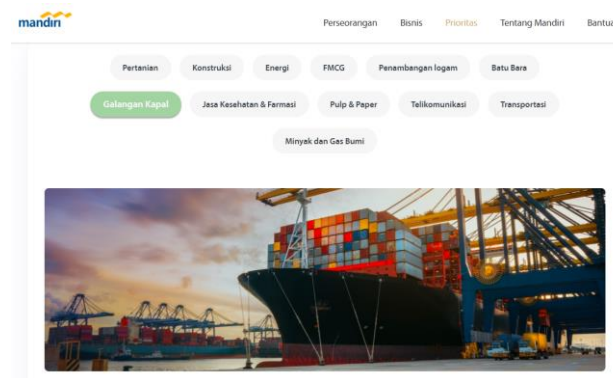
According to maritime financing data, KT Multifinance offers flexible financing terms ranging from 6 months to 60 months, with interest rates between 13% and 18% (KT Multifinance, 2024). These flexible payment schemes allow maritime businesses to align their financial obligations with cash flow availability, while interest rates are determined based on industry risks and prevailing market conditions. (KT Multifinance, 2024)



Figure 2.2: Interest Rates and Sale & Leaseback Terms at KT Multifinance

Source: KT Multifinance, 2024

## Bank Mandiri



**Figure 2.3 Bank Mandiri Website Display**

Source: Bank Mandiri (2024) 'ESG Shipyard', Bank Mandiri [online]. Tersedia di: <https://www.bankmandiri.co.id/esg-shipyard> (Accessed: October 27, 2024, 10:15 Western Indonesia Time)

### Bank Mandiri's Shipyard Financing Model

Bank Mandiri provides shipyard financing through Working Capital Credit (KMK), which is categorized into two types: Revolving Working Capital Credit and Non-Revolving Working Capital Credit.

#### Revolving Working Capital Credit

Based on a literature review, Bank Mandiri's Revolving Working Capital Credit is designed to align with business needs, offering several key advantages. This financing product provides high flexibility, with credit limits ranging from IDR 500 million to IDR 25 billion, available in both Rupiah and foreign currencies. The collateral system is structured to balance risk, utilizing inventory and receivables as primary collateral, while immovable assets can serve as additional collateral.

A notable feature of this credit facility is its flexible disbursement and repayment structure, allowing businesses to access funds as needed throughout the credit period. The product also operates on a floating and effective interest rate system, with a maximum one-year term, renewable upon review. These features highlight the adaptability of the product to evolving business demands, ensuring that companies receive financing solutions that align with the dynamic nature of the maritime and shipyard industries. (Bank Mandiri, 2024)

#### Non-Revolving Working Capital Credit

A review of the literature highlights that Bank Mandiri's Non-Revolving Working Capital Credit serves as an alternative financing option with distinct characteristics compared to revolving credit, particularly in its structured disbursement and repayment mechanisms. This facility provides credit limits ranging from IDR 500 million to IDR 25 billion, available in both Rupiah and foreign currencies. The collateral structure includes financed inventory and/or receivables as primary collateral, with additional collateral options such as land or land and buildings.

Unlike revolving credit, disbursement is made in a lump sum, with repayment options either through periodic installments or a single payment at maturity, making it suitable for more permanent working capital needs. With a maximum tenure of five years and no extension options, this facility is designed for medium-term financing, particularly for businesses with longer production or operational cycles. The structured interest payment schedule ensures both credit risk management for the bank and financial predictability for debtors. These features demonstrate that Non-Revolving Working Capital Credit is tailored for businesses requiring structured, long-term financing solutions, complementing Bank Mandiri's working capital credit offerings. (Bank Mandiri, 2024).

**Table 2.1 Comparison between Revolving Working Capital Credit & Non-Revolving Working Capital Kredit**

No	Aspect	Revolving Working Capital Credit	Revolving Working Capital Kredit
1	Credit Limit	IDR 500 Million – IDR 25 Billion	IDR 500 Million – IDR 25 Billion
2	Currency	Rupiah and foreign currencies	Rupiah and foreign currencies
3	Primary Collateral	Financed inventory and/or receivables	Financed inventory and/or receivables
4	Additional Collateral	Land or land and buildings	Land or land and buildings
5	Disbursement Mechanism	Flexible, available for use at any time	Simultaneously
6	Principal Payment System	It can be done at any time during the loan period.	Periodic installments or a lump sum payment at maturity.
7	Interest Payment	Periodic, according to the bank's regulations, floating, and effective.	Periodic, in accordance with the bank's regulations.
8	Loan Term	A maximum of 1 year.	A maximum of 5 year.
9	Extension Option	Can be extended.	Cannot be extended.
10	Key Characteristics	High flexibility in disbursement and repayment.	A more structured and planned payment system.
11	Targeted Needs	Working capital with fluctuating needs.	Permanent medium-term working capital.

Source: Bank Mandiri (2024)

**Table 2.2 Example of Loan Interest Calculation Simulation**

No	Loan Facility/Type	Loan Term	Interest Rate
1	<b>Revolving Working Capital Loan</b>	12 Months	8%-11% effective per annum.

2	<b>Non-Revolving Working Capital Credit</b>	36 Months	8%-11% effective per annum
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Source: Bank Mandiri (2024)

### News and Announcements

PT Bank Mandiri (Persero) continues to reaffirm its commitment to supporting the shipyard industry through credit facilities. According to Bank Mandiri Kepri Vice President, Brian A Nugroho, in 2018, the bank does not impose stricter credit procedures for shipyard companies, as long as they have secured ship orders, particularly from domestic government institutions. This commitment remains strong, as demonstrated by the IDR 66 billion working capital credit provided to PT Citra Shipyard for the construction of two Indonesian Navy vessels, the AL Sembulungan Ship and the AL Hinako Ship. Bank Mandiri's SEVP Commercial Banking, Totok Priyambodo, emphasized the bank's ongoing role in providing financing support and facilitating financial transactions in the maritime industry, contributing to the national economy. The launch ceremony for the 28-meter-long vessels took place on December 4 in Batam, Riau Islands, attended by Indonesian Navy Chief of Staff Admiral Muhammad Ali, PT Citra Shipyard President Director Jovan, and Totok Priyambodo. Bank Mandiri hopes these vessels will enhance Indonesia's defense capabilities and strengthen maritime sovereignty, reinforcing the bank's role as a development agent supporting national defense equipment beyond State Budget (APBN) allocations.

### Mizuho Group (Ship Finance)

Ship financing is a financial arrangement where charter fees from vessels serve as the primary repayment source, while various security measures tied to shipbuilding and charter agreements help mitigate credit risks. Leveraging extensive experience and a proven track record, Mizuho Bank assists clients in obtaining long-term funding for both new and used vessel purchases. (Mizuho Bank, 2024).

### Common Ship Financing Arrangement Structures

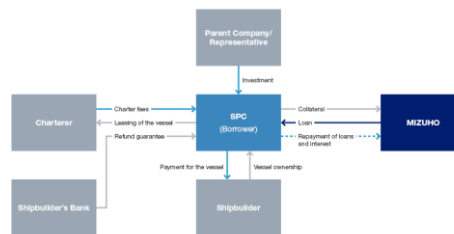


Figure 2.3: Mizuho Bank Financial Scheme

Source: Mizuho Bank (2024)

Mizuho Bank's ship financing structure involves multiple key entities, including the Parent Company/Representative, Special Purpose Company (SPC) as the borrower, Mizuho as the lending bank, Charterer, Shipbuilder, and Shipbuilder's Bank. Within this framework, the SPC serves as the central entity handling transactions, with the Parent Company investing in the SPC, Mizuho providing secured loans, and the SPC repaying the loan along with interest. This financing model is designed to mitigate risks by separating the parent company's liabilities from the ship financing project, ensuring a dedicated cash flow for loan repayment, and offering protection through various guarantees. The comprehensive security structure includes ship mortgages, shipbuilding contracts, hull insurance receivables, and charter fee receivables. The financing covers a wide range of cargo vessels, such as bulk carriers, container ships, chemical tankers, product tankers, car carriers, LPG tankers, and wood chip carriers.

To ensure financial prudence, the loan amount does not exceed the vessel's acquisition cost. The loan term is aligned with the charter contract duration, including the construction period, while considering depreciation factors as per legal regulations. This structured approach reflects the evolution of maritime financing, addressing the specific needs of the shipping sector while maintaining rigorous risk management and regulatory compliance. (Mizuho Bank, 2024).



**Table 2.3 Struktur Pembiayaan Kapal**

No	Components	Description
1	Borrower	Special Purpose Company (SPC) established outside Japan
2	Investor	Parent company/representative
3	Form of Collateral	Mortgage - Shipbuilding contract/purchase agreement - Hull insurance receivables - Rental fee receivables Payment Mechanism: Through rental fee income, Terms Determined on a case-by-case basis.
4	Payment Mechanism	Through rental income
5	Determination of Terms	On a case-by-case basis.

Source: Mizuho Bank (2024)

**Table 2.4 Eligible Vessels**

No	Jenis Kapal	Kategori
1	Cargo Ship	- Bulk carrier - Container ship
2	Tanker Ship	- Chemical tanker - Product tanker - LPG tanker
3	Specialized Vessel	- Car carrier ship - Log carrier ship

Source: Mizuho Bank (2024)

**Table 2.5 Loan Terms**

No	Aspect	Terms
1	Loan Amount	- Based on transaction profitability - Does not exceed the acquisition cost of the vessel
2	Loan Term	- Throughout the lease term - Including the construction period
3	Payment Period	- Within the depreciation period as prescribed by law - Example: 15 years for a new bulk carrier ship.

Source: Mizuho Bank (2024)



### Bank Permata Syariah's Contribution to Maritime Financing

Bank Permata Syariah has made notable progress in advancing the national maritime sector, particularly through shipyard financing in Batam. According to its Director, Achmad K. Permana, Batam holds substantial potential as an Islamic financial market, aligning with President Joko Widodo's maritime vision. The bank has introduced an innovative financing solution through the Ijarah Muntahiyah Bittamlik (IMBT) scheme, which functions similarly to conventional leasing while adhering to Islamic financial principles. A key advantage of this system is that installments can be classified as operational expenses, making it especially beneficial for vessel ownership financing. To enhance its service offerings, Bank Permata Syariah has expanded its presence by opening branches in Batam and Tanjungpinang. The bank adopts an integrated business model, leveraging both Islamic and conventional banking systems, allowing for the optimization of existing infrastructure to improve service efficiency for a broader customer base (*Aktual.co*, 2014).

### Ijarah Muntahiyah Bittamlik (IMBT) in Islamic Financing

Ijarah Muntahiyah Bittamlik (IMBT) has developed into an innovative Shariah-compliant financing model, integrating leasing with an ownership option. Rahmawati & Rokhman (2020) highlight that IMBT allows lessees to benefit from asset utilization while also securing ownership rights at the end of the lease term.

For IMBT to remain Shariah-compliant, Wulandari & Subagio (2019) emphasize three essential elements:

1. Clear and well-defined leasing contracts
2. Transparency in ownership transfer
3. A clear distinction between rental and purchase pricing

In practical applications, IMBT has been widely adopted in various industries, including real estate, transportation, heavy machinery, and infrastructure (*Al-Bashir & Al-Amine*, 2021). Hassan & Lewis (2018) highlight IMBT's key benefits, such as payment flexibility, tax efficiency, and asset protection. However, Ascarya & Yumanita (2021) point out challenges, particularly concerning documentation complexity and regulatory alignment. On a global scale, IMBT financing has seen significant growth, especially in Southeast Asia, the Middle East, and North Africa (*Abdullah & Omar*, 2019). Ismail & Ahmad (2020) stress that successful IMBT implementation requires comprehensive documentation, stringent due diligence, continuous monitoring, and independent asset valuation.

### Financing Support for Small Shipyards (Case Study: 30GT Fishing Vessels)

The implementation of interest subsidy policies requires a structured mechanism to minimize risks in the shipbuilding process. This process involves five key stakeholders, namely shipyards, government agencies (such as the Ministry of Marine Affairs and Fisheries - KKP), guarantee institutions (such as PT Askrindo for Small Business Credit - KUR), executing banks, and the Program Credit Information System (SIKP) (*Fauzi, M.R.R., 2016*).

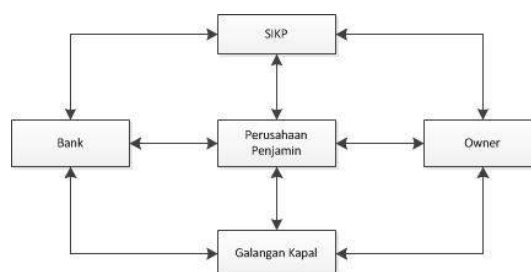


Figure 2.4: Credit Mechanism

Source: Fauzi, M.R.R., 2016

### Roles of Key Entities in Shipyard Financing

- Shipyards act as subsidy recipients and are responsible for the construction of fishing vessels.
- Implementing banks serve as fund providers and creditors, supplying capital to support shipyard operations.

- Guarantee companies offer collateral protection, ensuring security for banks in case shipyards fail to fulfill contractual obligations.
- Vessel owners work closely with banks to oversee construction and function as implementation guarantors if issues arise. They also have the option to subcontract work to other shipyards. Additionally, vessels must comply with BKI (Indonesian Classification Bureau) standards to facilitate guarantee approvals.
- SIKP (Program Credit Information System) acts as a centralized database, integrating all information related to interest subsidy policies.

### **Financing Patterns in Wooden Shipyards**

Wooden shipyards in **Batang and Rembang** follow **different financing models** depending on the type of customer:

- Private customers make upfront payments, eliminating the need for additional working capital.
- Government projects use a term-based or end-payment system, requiring extra working capital to sustain operations.

### **Challenges in Shipyard Financing**

The primary financial obstacles faced by shipyards include **limited collateral, insufficient capital to meet bank credit requirements, and high commercial interest rates**.

### **30GT Fishing Vessel Financing Schemes**

A simulation for 30GT fishing vessel construction financing identified four different schemes:

1. Scheme I (5 term payments @20% each)
  - Shipyards bear 14% interest and only require a guarantee.
2. Scheme II (10% down payment, 90% final payment)
  - Shipyards bear 6.4% interest, requiring a 7.6% interest subsidy and a guarantee.
3. Scheme III (20% down payment, 80% final payment)
  - Shipyards bear 9.13% interest, requiring a 4.87% interest subsidy and a guarantee.
4. Scheme IV (10% down payment, 90% final payment)
  - Shipyards bear 13.03% interest, requiring a 0.97% interest subsidy and a guarantee (*Fauzi, M.R.R., 2016*).

### **Shipyard Financing Challenges and Requirements**

According to IPERINDO Chairperson Anita Puji Utami, the national shipbuilding industry continues to struggle due to insufficient government support. To remain competitive, the sector requires various incentives, including tax reductions, lower banking interest rates, electricity subsidies, and workforce development programs. Given that shipbuilding is a labor-intensive, technology-driven, and capital-intensive industry, it plays a critical role in national transportation and logistics, supporting an estimated 42,000 vessels across Indonesia. One of the key financial hurdles is Indonesia's high banking interest rates, which currently stand at 13%, significantly higher than those in Korea, China, and Japan, where rates are much lower. Eddy Kurniawan Logam, Chairman of IPERINDO, highlights the need to recognize shipbuilding as a strategic industry requiring specialized policies. He advocates for long-term financing options ranging from 15 to 20 years with affordable interest rates of around 6-7%, considering that vessels typically have an operational lifespan of up to 25 years. Another major obstacle is the short loan tenor, currently limited to 5-10 years, and the inability to use vessels under construction as collateral. Although the Financial Services Authority (OJK) does not impose regulations restricting loan tenors, banks continue to implement these limitations, thereby constraining the industry's growth. Indonesia currently has 250 domestic shipyards serving approximately 29,000 Indonesian-flagged vessels. The market outlook remains promising, as 1,684 vessels are expected to reach 25 years of age soon, in line with the government's maritime tourism development initiatives.

## **3. METHODS**

### **SWOT ANALYSIS**

#### **SWOT Analysis of Shipyard Financing 2015-2023**

**Tabel 3.1 SWOT Terhadap Pembiayaan Galangan Kapal 2015-2023**

No	STRENGTHS	WEAKNESSES
1.	<b>Strategic Industry:</b>	<b>Financial Constraints:</b>
	- Labor-intensive, capital, and technology.	- High interest rates (13%) vs competitors (3-6%).
	- Supporting national transportation and logistics.	- The loan term is limited to 5-10 years.
	- 250 active shipbuilding companies	- The credit portfolio is only 3% of 6,000 trillion.
2.	<b>Market Potential:</b>	<b>Limited Facilities:</b>
	- Serving 29,000 Indonesian-flagged vessels.	- Limited production facilities.
	- The fleet growth has reached 18,000 units.	- There has not yet been a mapping of long-term needs.
	- Iperindo's membership increased from 154 to over 200.	- The limitations in maintaining ALKI vessels.

No	OPPORTUNITIES	THREATS
1.	<b>Market Potential:</b>	<b>Regional Competition:</b>
	- 1,684 vessels will reach 25 years of age.	- Competitive interest rates in neighboring countries.
	- Marine tourism development program.	- Batam has access to Singapore's interest rates of 3-5%.
	- The demand in the oil and gas sector, from upstream to downstream.	- The gap in facilities compared to competitors.
2.	<b>Policy Opportunities:</b>	<b>Structural Challenges:</b>
	- OJK opens opportunities for tenors > 10 years	- US\$1 billion/year deficit from ship imports
	- Ships can be used as collateral	- Dependence on government orders
	- Potential for fiscal & non-fiscal incentives	- Decrease in government orders

#### 4. RESULT AND DISCUSSION

##### SWOT Analysis of Maritime Financing in Batam

**Table 3.2 SWOT Analysis of Maritime Financing in Batam**

<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<b>Focus on Maritime Financing in Batam</b>	<b>Dependence on Local Policies</b>
Special support from Bank Mandiri and Bank Permata Syariah for shipyards in Batam accelerates funding access for the maritime sector, supporting the industry ecosystem in the region.	Financing in Batam, especially involving interest subsidies and cooperation with local governments, relies on the sustainability of regional policies, which can change at any time.
<b>Supporting Banking Infrastructure</b>	<b>Limited Access for Small Industries Not Meeting Credit Criteria</b>
Special branches in Batam for Islamic financing (Bank Permata Syariah) provide easy access and fast fund disbursement, addressing the needs of the growing maritime market in Batam	Small shipbuilding industries in Batam face difficulties in meeting high collateral requirements and additional working capital for government projects, hindering the development of small and medium industries (IKM).
<b>OPPORTUNITIES</b>	<b>THREATS</b>
<b>Large Maritime Market Potential</b>	<b>Competition Among Financial Institutions for Shipyards in Batam</b>
Batam's vision as a national maritime industry hub creates significant growth opportunities for shipbuilding and logistics services, supported by government policies to attract investors to the region.	The presence of large banks such as Bank Mandiri, Bank Permata Syariah, and the potential entry of international banks increases competition, which could affect interest rates and other credit conditions for customers in Batam.
<b>Development of Shipyard Infrastructure and Support for Islamic Financing Ecosystem</b>	<b>Local Economic Risks That Could Impact Maritime Financing in Batam</b>
The availability of Islamic finance schemes, such as Ijarah Muntahiyah Bittamlik (IMBT) from Bank Permata Syariah in Batam, offers financing flexibility for customers requiring Shariah-compliant products.	Batam's economic dependence on the maritime sector makes it vulnerable to changes in demand or export policies, which could affect cash flow and the timely repayment of loans by

	shipyards in the region.
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### SWOT Analysis of Maritime Financing in Non-Batam Areas

Table 3.3 SWOT Analysis of Maritime Financing in Non-Batam Areas

STRENGTHS	WEAKNESSES
<b>Product Diversification in Financing</b>	<b>High Interest Rates on Some Financing Products</b>
Financial institutions such as Mizuho Group and Bank Mandiri offer comprehensive financing with various ship financing schemes (e.g., revolving and non-revolving working capital loans), catering to the needs of different segments.	Commercial interest rates, particularly for non-Batam schemes, limit accessibility for small shipyards outside Batam, especially those that do not meet collateral requirements.
<b>Strong Collateral Structure</b>	<b>Limited Branch Infrastructure and Islamic Financing Services</b>
Strict collateral systems, including receivables and inventories, help maintain credit portfolio stability and reduce default risks outside Batam.	Not all regions have branches offering Islamic financing, as in Batam, limiting access for customers outside Batam who require Shariah-based financing.
OPPORTUNITIES	THREATS
<b>Increased Demand for Logistics and Exports</b>	<b>Changes in Government Credit Policies and Subsidies</b>
Regions outside Batam, such as other coastal areas, have the potential to develop shipyard businesses as demand for logistics and exports increases.	Changes in government subsidy or credit policies for shipyards outside Batam could reduce incentives and make financing more expensive for maritime entrepreneurs in other regions.
<b>International Financing Support for Shipyards</b>	<b>Ketergantungan pada Kondisi Pasar Internasional</b>

<b>and Large Maritime Projects</b>	
The presence of Mizuho Group and international financing schemes for the purchase of large ships supports access to stable long-term financing, covering various types of ships for export and domestic markets.	Global economic fluctuations could affect the demand for ship exports and logistics from shipyards outside Batam, leading to an increase in the risk of credit defaults in those regions.

## 5. CONCLUSION

Maritime financing in Batam and non-Batam regions is shaped by local policies, infrastructure, and financial institution support. Batam benefits from quick access to funding and Sharia-compliant services, reinforcing its role as a maritime hub, though small shipyards struggle with strict collateral requirements. Non-Batam regions offer diverse financing options through international institutions but face high interest rates and limited Sharia-compliant funding. Both regions have unique strengths and challenges, requiring effective risk management to ensure sustainable maritime sector growth.

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