

Supply Chain Financing Business Model for Maritime Logistics Financing with Financial Technology Integration in Indonesia

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1. INTRODUCTION

Supply Chain Financing relates to the movement of funds throughout the Supply Chain activity. The process has been traditionally facilitated by related institutions such as banks, international funds, or joint ventures. However, over 70% Micro Small Medium Enterprises (MSMEs) in Indonesia has limited access to capital to support their operations and Supply Chain Activity. With challenges over bankability of MSMEs in Indonesia, another source of capital should be identified, with financial technology and peer-to-peer financing as a potential solution.

1.1 Research Aim and Central Thesis

We set the research aim as follows: a) to estimate Financial Technology capital potential for Maritime Logistics activity in Indonesia, b) to design potential Business Model for Maritime Logistics Supply Chain Financing with Financial Technology in Indonesia, and c) to analyze potential Cost & Revenue of integrating Financial Technology with Maritime Logistics Activity in Indonesia.

Based on the above research aim, the central thesis of this research is set as follows:

Peer-to-peer Lending as a form of Financial Technology could benefit Micro Small Medium Enterprises (MSMEs) as another source of capital, therefore, a business plan should be designed to connect the gap.

1.2 Hypothesis

We set hypotheses as follows: a) non-banking capital resource in Indonesia is distributed towards retail, providing opportunity to bridge untapped demand for MSMEs, b) to consolidate retail capital, borrowing and lending premium could be higher considering risks of MSMEs financing, and c) financing business returns tend to have faster return, however, comes with a high risk to be mitigated.

1.3 Methodology

Primary data is retrieved from literature study and available public data (e.g., World Bank, ADB MSME monitor), and Secondary data is evaluated from public corporate financial report and related resources from Indonesia Stock Exchange.

2. THEORY AND LITERATURE REVIEW

2.1 Stakeholders in Supply Chain Financing

According to Zhao (2018), involved stakeholders are suppliers who sell products to buyers where transactions involving monetary flows are intermediated by a financial institution while those involving material flows are intermediated by a Logistics Service Provider (LSP). LSP are known as stakeholders providing services for logistic activities such as Freight Forwarders, Transporters and Warehousing. Supplier and Buyer are indicated as entities acting as seller and buyer, initiated supply chain activities, initiating flow of goods, transaction, and information. The adoption of supply chain finance instruments affects the capital that is employed—in other words, the fixed assets and net working capital of both supplier and buyer.

2.2 Stakeholders in Peer-to-Peer Lending

This research will focus on integration of financial technology of peer-to-peer financing, a flow of capital financing from retail investors, aggregated throughout digital platform to consolidate and distribute capitals to borrowers. Process and Stakeholders within the peer-to-peer financing are as following: a) Lender is identified as subjects who provide source of capital, it could be individuals or institution, and expecting returns on capital with interest. b) Borrower is identified as subjects who request for loans and obligated to return the loan with interest. c) Loan Disbursement is identified as a process to distribute agreed loan and interest rate through methods. d) Repayment and Withdrawal Channel is identified as a window for Lender to receive the return and Borrower to pay their loan. Typically, the interaction between lender and borrower is overseen and bridged through Credit Bureau.

Following stakeholders are chosen as research observations: a) Supplier – Domestic (MSMEs), b) Buyer – Domestic (MSMEs), c) LSP – Domestic Maritime LSPs, and d) Financial Institution – Indonesian Authority for Monetary Services.

3. LOAN PERFORMANCE, CAPITAL OPPORTUNITY AND RETURN

The Asian Development Bank MSME Monitor (2020) indicates that MSMEs credit absorption in Indonesia, from 2011 to

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2019, there is a growing demand for credit in Indonesia, over \$83.1 Billion USD is observed in 2019 and \$27.51 Billion USD is still untapped. Another perspective to be taken as an approach to providing capital loan services, is the perspective of possibility of default in Indonesia, this is done to anticipate risks of provided loan not being able to be returned and impact loss of capital financing in Indonesia.

Ken Research (2021) indicates an opportunity of \$81.3 Billion USD of capital financing for MSMEs in Indonesia with \$27.5 Billion anticipating for absorption, this capital could potentially be targeted for financing MSMEs in supply chain activity tapping \$67 Billion USD market of Freight Forwarding and Warehousing businesses.

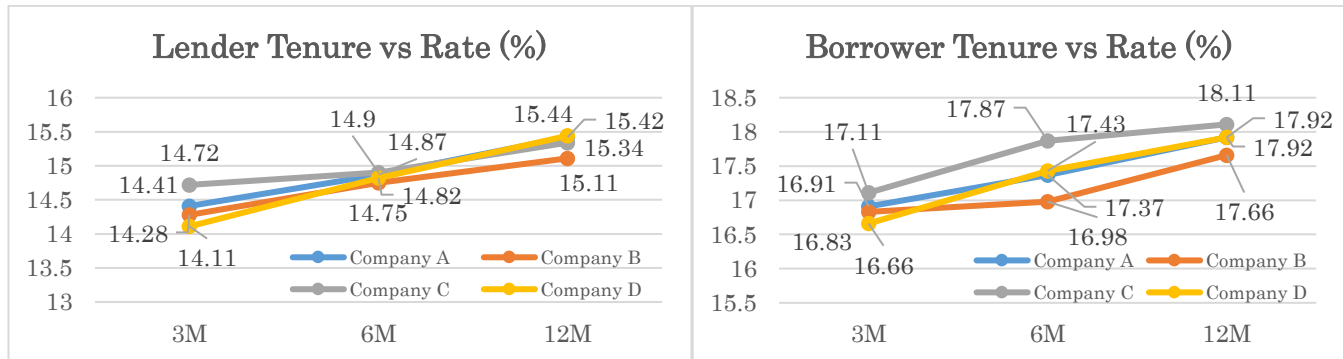


Fig. 1 Lender Tenure vs Rate 3 – 12 Months

Fig. 2 Borrower Tenure vs Rate 3 – 12 Months

Figure 1 and 2 indicates benchmarking from common practices of peer-to-peer financing in Indonesia, 3 to 12 months financing period is the range applicable within the industry. A premium rate is observed to be relatively higher compared to bank as a matter of higher risk of MSMEs and spread to attract retail investors.

Table 1 Internal Rate of Return Simulation

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Terminal Value
Operating Cash Flow (USD)	585,000	602,550	620,627	639,245	658,423					
Capital Expenditure (USD)	710,000	573,140	586,674	600,614	614,973					
Free Cash Flow (USD)	-125,000	29,410	33,952	38,631	43,450	47,795	52,574	57,832	63,615	869,403
Present Value (USD)		29,410	32,336	35,039	37,534	39,321	41,193	43,155	45,210	588,446
IRR	26.24%									
WACC	10.00%									

4. CONCLUSION

Based on the above survey and estimation, the answers to the hypothesis are as follows:

- A total of around \$81.3 Billion USD of Potential Capital Financing from Indonesia Logistics Market Share 2020, major proportion comes from Freight Forwarding (\$57 Billion USD) and Warehousing (\$10.8 Billion USD).
- P2P Financing for Supply Chain Business Model in Indonesia should follow capital risks measure from OJK Indonesia and revenue premium is benchmarked from market competition. It is observed from market benchmark, potential premium scenario for Lender scales from 14.65% whilst premium for Borrower scales around 17.53%, with common practice of tenure between 3 to 12 Months financing scenario.
- Financial Model Indicates Potential Return on 2nd Year of Operations as a turnover during seed phase, profitability relies on amount of capital being able to be consolidated and distributed, higher distribution equals to higher profitability.

This research provides an estimate of potential capital financing for MSMEs in Indonesia to support their business through Supply Chain Financing, and information of common practices of peer-to-peer financing companies in Indonesia, in terms of product spread for lenders and borrowers. These are the added values to the existing research.

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