International Journal of Digital Entrepreneurship and Business (IDEB)
Vol. 3, No. 1, February 2022 ISSN 2723-5432
pp. 9 – 22 https://ejournal.jic.ac.id/ideb/

DIGITAL TRANSFORMATION OF PT BANK JAGO TBK FROM CONVENTIONAL BANK TO DIGITAL BANK

Restiana Ie Tjoe Linggadjaya*, Bontor Sitio, Patar Situmorang
Faculty of Economics and Business, Pelita Harapan University, Indonesia.
*Lecturer at STIE Jakarta International College, currently pursuing her Doctoral degree at Pelita Harapan University
*Corresponding Author: restiana.linggadjaya@gmail.com

ARTICLE INFO

Article History:
Received: December 04, 2021
Revised: January 09, 2022
Published Online: February 25, 2022

Keywords:
Digital Bank, Digital Transformation, Bank Jago, Five domains of digital transformation, Financial Services Authority

How to cite:
Linggadjaya, R. I. T., Sitio, B., & Situmorang, P. (2022). Digital Transformation of PT Bank Jago Tbk from Conventional Bank to Digital Bank. *International Journal of Digital Entrepreneurship and Business (IDEB)*, *3*(1), 9 – 22. https://doi.org/10.52238/ideb.v3i1.76

ABSTRACT

This research is to conduct a study on the Business Strategy Transformation of PT Bank Jago Tbk (Bank Jago); A transformation from a Conventional Bank (previously Bank Artos) to a digital bank, the current Bank Jago. This research carries a relatively new research topic, namely digital transformation at banks in Indonesia. The research population is all digital banks in Indonesia, with a total of 5 digital banks and 7 banks in the process of going digital. However, with the limitations of existing data regarding digital banks, discussions were conducted on Bank Jago from the financial side, five digital transformation domains according to Rogers (2016), and comparative studies of bank performance on a limited basis with Book III bank (of which Bank Jago is one of The Book III banks) and aggregate bank in general. The result of this research is that Bank Jago has carried out the right business strategy in accordance with the five domains of digital transformation according to Rogers (2016), where with digital transformation has achieved better business growth compared to Book III banks and aggregate banks in general. Practical implications: (1) the success of Bank Jago can be used as a role model for other digital banks and conventional banks that want to change the business model through digital transformation, (2) For OJK: make further regulations for digital bank reporting, which is separate from commercial bank reporting so that Indonesian banks have data on the development of digital banks.

INTRODUCTION

According to research by Choi et al. (2021), merely 13 out of 250 digital banks in the world are profitable. As an illustration, only 1 out of 3 digital banks in South Korea, including KakaoBank, and 4 out of 16 digital banks in China, including WeBank, are successful (Hutauruk, 2021). Of some 250 digital banks worldwide, 20% are in Asia Pacific countries, and only about 5% have so far crossed the line into profitability. Therefore, players need a strong knowledge of consumers and customs, possess the ability to navigate complex regulatory landscapes as well as persevere.

Kristiyana (2021), the Chief Executive of Banking Supervision from the Financial Services Authority (OJK), believes that digital transformation in the banking sector is a necessity. This is due to the demand for digital acceleration caused by changes in public expectations for fast, efficient, safe, secure financing and services that can be conducted at any location. Hence, digital transformation in banking is a priority and a strategy to increase bank competitiveness. Along with these developments, OJK has issued new regulations with a principle-based pattern that is adaptive to changes in the banking landscape and ecosystem (OJK, 2021).

King (2019) highlighted the development process of the bank as follows:

1. Bank 1.0 (1472-1980), the conventional bank, was born in 1472 as a place for savings and loan services, with a physical encounter required between the bank and the customer. Mainframe computers were used but not for direct communication with customers.
2. Bank 2.0 (1980-2007) started with ATMs, enabling customers to perform transactions without a physical encounter at the bank. The era of self-service banking had begun, and in 1995, the commercial internet emerged.
3. Bank 3.0 (2007-2017) is referred to as the internet and mobile banking generation, which allows customers to perform banking activities from anywhere. This started with the emergence of smartphones in 2007 and made mobile payments possible.
4. Bank 4.0 (2017-to-date), where banks have started to abandon the 'face to face' concept, branch office services, and derivatives of both methods. Technological resources, including artificial intelligence, big data, and blockchain technology, support the Bank 4.0 industry.

This research aims to analyze the business strategy employed by Bank Jago, previously known as Bank Artos, in its transformation from a conventional into a digital bank. It also aims to conduct limited comparative studies with Book III banks and aggregate banks, while offering a novel research topic, namely digital banks in Indonesia.

LITERATURE REVIEW

Digital Banks in Indonesia

The Deputy Commissioner of the OJK Institute and Digital Finance, Batunanggar, mentioned two forms of digital banking in Indonesia. First, a bank that transforms business models, strategies, and products. Second, one that was established as a digital bank since its inception. Batunanggar also stated that the digital bank operation in Indonesia is in the first pattern. Conversely, Tony, the OJK Deputy Director of Basel and International Banking, reported that several banks in Indonesia have been declared as fully digital, and others will transform as well. He also revealed that 12 digital banks will exist, 5 of which were established as digital banks, namely Jenius from Bank BTPN, Wokee from Bank Bukopin, Digibank from DBS Bank, TMRW from Bank UOB, and Jago from Bank Jago. The remaining 7 are in the process of going digital, including Bank BCA Digital, BRI Agroniaga, Bank Neo Commerce, Bank Capital, Bank Harda Internasional, Bank QNB Indonesia, and KEB Hana Bank. Tony argued that digital and pure banking differed, that is, BCA Digital, BRI Agro, Jenius BTPN, Digibank DBS, and others with fairly strong banking capital, especially those owned by large banks, could be compared to digital banks. These include Bank Jago, Line Bank, Sea Bank, and others with a more complete digital ecosystem and services (Ridhoi, 2021).

The Commissioner Chairman of OJK, Wimboh Santoso, emphasized that Indonesia can possess the foremost digital economy in the Southeast Asian region by 2025 due to the presence of digital banks. Following the contribution of 124 billion US dollars (or equivalent to IDR 1.736 trillion) worth of digital transactions, several factors support Indonesia's potential for the development of the digital financial industry. First, the population of 272 million with a workforce of 137 million, 175 million (65.3% of the population) internet users, and 129 million people who made e-commerce transactions valued at IDR 266 trillion by the end of 2020 (Ramli, 2021).

Meanwhile, Fernando (2021) in CNBC emphasized several potentials and opportunities for digital banking in the OJK banking digital transformation blueprint. First, Indonesia's demographic structure is dominated by Generation Z (8-23 years), the Millennial Generation (24-39 years), and Generation X

(40-55 years), who are considered digitally literate. Second, the potential of Indonesia as a digital economy in Southeast Asia, which has the highest transaction value of US$44 billion in the ASEAN region and is predicted to increase to US$124 billion by 2025. Third, the potential for internet usage penetration. According to data from We Are Social and Hootsuite, the internet user penetration in Indonesia involved 202.6 million people (73.7% of the population) in January 2021, denoting a 15.5% increase from January 2020. Fourth, the ASEAN region has the highest number of people without bank accounts (unbanked) and with limited access to financial services (underbanked) at 92 million and 47 million, respectively. Fifth, digital behaviors are increasingly developing, as shown by the rising trend of e-commerce transactions and electronic money in recent years. Hence, the opportunities for digital banks are very promising in Indonesia in terms of the number of transactions. In fact, the Governor of Bank Indonesia, Perry Warjiyo, stated that digital banks have achieved a transaction value of IDR 28,685.48 trillion, which is equivalent to a 46.72% YoY increase by September 2021. This achievement is predicted to continue and reach IDR 39,130 trillion with a 43.04% YoY increase in 2021 (Hidayat, 2021).

On the other hand, operating a digital bank in Indonesia may be difficult due to several challenges, such as large investment costs, especially for technology, and a lacking digital workforce. Other challenges include digital bank regulations, which are still being evaluated by the government, unqualified data protection regulations, and the high potential for cybercrime. Therefore, digital banks should benefit from the existing potential by anticipating and overcoming various existing challenges. This will require the implementation of strategic steps in business development, risk management, human resource development, and customer management. From the analysis of existing potentials and challenges, various questions, and predictions regarding the future of digital banks in Indonesia may be answered. This includes the possibility of digital banks providing additional benefits or increasing costs, thereby reducing profits (Fernando, 2021).

Definition of Digital Bank

According to the Financial Services Authority Regulation Number 12/POJK.03/2021 concerning Commercial Banks, a digital bank is an Indonesian Legal Entity Bank (BHI Bank) that provides and conducts business activities primarily through electronic channels without a physical office other than a KP or via a limited physical office. These businesses can operate by establishing new BHI Banks or transforming into digital banks. Tony, the Deputy Director of Basel, and International Banking OJK, stated that banks will be divided institutionally into commercial and rural banks only. Hence, no separate license will be issued for digital banks, as they only involve a change in the business model and method of serving the public (Alfi, 2021).

Minimum Requirements of Digital Bank

POJK Number 12/POJK.03/2021 also stipulates that BHI banks operating digitally should meet and comply with six requirements while operating. These are (1) a business model that uses innovative and safe technology in serving customer needs; (2) The ability to manage a prudent and sustainable digital banking business model; (3) Adequate risk management; (4) Fulfilling governance positions, including directors who are competent in the field of information technology and other aspects, for the main parties of financial service institutions; (5) Protecting customer data security; (6) Contributing to the development of a digital financial ecosystem and inclusion.

According to Jahja Setiaatmadja, the President-Director of BCA in Kontan, there are five minimum

requirements for a bank to survive and operate digitally. They are (1) a large number of customers. (2) Cooperation with the existing digital ecosystem and having a large merchant network. (3) Developing user-friendly banking products. (4) Competent human resources, including programmers and data analysts, who can create competitive digital products. The intended products are needed by digital and traditional banks, as well as domestic and foreign Fintech institutions, which require large capital to use artificial intelligence and machine learning. Jahja analyzed that digital banks, unlike their traditional counterparts, have the option of not investing in call centers, which require large funds. Other digital banks use outsourcing per transaction, whose increase results in greater costs. Meanwhile, cash transactions cannot be eliminated in Indonesia. Digital banks owned by traditional banks can also use the parent company's ATM network at no cost (Hutauruk, 2021).

Digital Transformation of the Banking Industry in Indonesia

OJK does not define a digital bank as a novel institution bank because becoming digital is considered necessary for banks to survive and grow in the digital era. However, OJK set the basic requirements for becoming a digital bank and formulated a Digital Maturity Assessment for Banks (DMAB) to measure the condition of digitization and the achievement of transformation. It involves the measurement of six aspects, namely data, technology, risk management, collaboration, institutional arrangements, and customers. The Chief Executive of Banking Supervision at OJK, Mr. Heru Kristiyana, stated that higher DMAB values signify the customers' expectations. This implies the bank should manage data appropriately, use current technology, and manage risks effectively. Based on this assessment, lower values may cause the customer to punish the bank by withdrawing their patronage (Hutauruk, 2021). Banking observer Sidik (2021) mentioned that digital banks have advantages over their conventional counterparts due to their ability to reach a wide range of customers through information technology devices. These advantages provide wider opportunities for funding as well as potential fee-based income.

Consequently, banks need a digital culture as a strong foundation to change the mindset and understanding of bank management staff and employees and promote an orientation towards supporting the company's digital transformation. Digital culture includes innovation, data-driven decision-making, collaboration, open culture, a digital-first mindset, agility, flexibility, and customer-centricity. In addition, digital transformation requires banks to change management and operational processes by adjusting business strategies, reorganizing distribution networks, and providing the latest digital channels to improve customer experience (OJK, 2021).

Digital Bank Survey in Indonesia

In 2018, Pricewaterhouse Coopers (PwC) surveyed digital banks in Indonesia which has the following objectives:

1. To determine the current state of digital banks in Indonesia,
2. To understand the ambitions and aspirations of banks in Indonesia,
3. To provide overview of the risks and challenges faced by the industry regarding digital talent, culture, and competition from Fintech.

From the survey, there are various interesting observations as follows:

1. The main driver is technology. It is important to note that this survey was conducted before the COVID-19 pandemic era.
2. More than 90% of transactions are digital.

3. 66% of respondents stated that they have developed a digital strategy.
4. 44% of respondents affirmed that the main goal of digital strategy is to improve customer experience.
5. 72% indicated that Gojek is an emerging serious competitor, with changes in customer needs.
6. Only 8% of respondents agreed that their digital bank strategy was the same as 18 months ago, while almost 50% mentioned a significant change in strategy.
7. 64% of respondents revealed that the IT environment was quite effective for digital strategy.
8. 76% disclosed plans to implement agile development processes in the coming years.
9. Cyber Security was determined to be a big risk in the digital business.

The Domain of Digital Transformation

Rogers found that business rules have changed due to the development of digital technology in every industry and the emergence of disruptive challenges that have transformed existing business models and processes. The distinction between a successful and failed business in every industry depends on five important domains, namely Customers, Competition, Data, Innovation, and Value, which have been transformed by digital technology (Rogers, 2016).

Table 1: Changes in Strategic Assumptions from the Analog to the Digital Age

5 Domains	From	To
Customers	• Firm is the key influencer. • Marketing to persuade purchase.	• Customers are the key influencer. • Marketing to inspire purchase, loyalty & advocacy.
Competition	• Competition is a zero-sum game • A few dominant competitors per category.	• Partnership with direct and indirect competitors. Winner takes all due to network effects.
Data	• Data is a tool for optimizing processes. • Make use only of structured data.	• Data is a key intangible asset for value creation. • Unstructured data increasingly valuable.
Innovation	• Decisions made based on intuition and seniority • Challenge of innovation is to find the right solution • Failure is avoided at all cost • Focus on the finished product	• Decisions made based on testing and validating • Challenge of innovation is to solve the right problem • Failures are learned from, early and cheaply • Focus on minimum viable prototypes and iteration after launch.
Value	• Value proposition defined by industry • Execute unique value proposition • Optimize business model as long as possible • Market success allows for complacency	• Value proposition defined by changing customer needs • Uncover next opportunity for customer value • Evolve before you must, to stay ahead of the curve • Only the paranoid survives

Source: Rogers (2016).

1. Customer

Rogers' research showed that in the efforts to develop, companies have employed mass-marketing tools to persuade customers to buy. Companies should view customers as a dynamic network and the key influencers. Hence, a deeper understanding of customer requirements from the multiple available sources is required. There are efforts to increase customer loyalty by understanding and

providing their important needs (“what matters for our customers”). Some marketing efforts that a company can implement are an inspiration to purchase, alongside loyalty, and advocacy, though the relationship between customers and businesses has changed very dramatically (Rogers, 2016).

2. Competition

Rogers called for rethinking the competition, while the previous view on competition is zero sum game, and Roger’s research proved that competitors collaborate altogether with the winner takes all due to network effects. Consequently, competition turns into a coopetition with the cooperation with direct or indirect competitors (Rogers, 2016). Previously, Brandenburger & Nalebuff (1996) stated that every newcomer will face disadvantages. As a challenger, if you go head-to-head with an incumbent, you are likely to lose.

3. Data

Rogers stated that the development of a company in the digital age requires a change of fundamental assumptions regarding the meaning and importance of data (“rethinking data”), where companies can convert data into intangible assets that can provide or create value. Data is obtained from novel data sources, applied to new subjects, and is the key driver of innovation. Previously, traditional companies used structured data, which are usually contained in a customer database, such as customer addresses, product inventory, costs, and debts from financial figures. However, Rogers described a shift, where unstructured data, comprising information that cannot be easily presented in a database, such as those on social media platforms like Facebook, Twitter, and Weibo, are more frequently used in this big data era (Rogers, 2016). According to the Boston Consulting Group, digital banks strive to serve customers with diversified and personalized offerings, as well as key features, such as comprehensive digital infrastructure and 100% digital delivery (Choi et al., 2021). Therefore, companies can cross-sell and up-sell by striving to obtain the right information in providing their customers' needs. Through the new technology capabilities in data management, especially unstructured data, artificial intelligence, and machine learning can be exploited in determining the behavior and preferences of customers, alongside obtaining new data. Furthermore, the advent of cloud computing and the latest technological developments can enable the processing of data at a very high speed, accuracy, and affordability. Data analysis and application can also provide invaluable digital value added to companies and customers (Rogers, 2016).

4. Innovation with fast experiments

Rogers explained that Google, in attempting to improve its product offering on search engines, did not use a focus group to learn about customers' experiences or form a committee to determine the new features to be implemented. However, Google is constantly experimenting, testing new ideas, measuring customer response, and iterating the obtained and learned information. Rogers stated that innovation is a change in strategic assumptions, where decisions are not based on intuition and the seniority of the company's officials but testing and validating. Although testing an idea was previously expensive, long, and difficult, the process should be viewed as cheap, fast, and easy. The previous focus should be avoided at all costs and replaced by early and affordable learning. Also, the focus on "finished products" should change to “Minimum Viable Prototypes – MVP” and be iterated after launch (Rogers, 2016). After 5 years from Rogers' research in 2016, in the year of 2021, several researchers have introduced the concept of Exploration from Technology Infrastructure that presented Innovation & Agility, with the role of technology to enable new digital offerings (“Digitalize”) with Customer-Centric focus and digital-based platform technology with

modularization through an iterative and agile development methodology, alongside fast and responsive DevOps (Sia et al., 2021).

5. ***Adapting value proposition adaptation and implementation***

   Rogers stated that how the business adapt its value propositions before they are needed, with identifying its key customer types, defining elements of the value proposition for each customer types, identifying the potential threats, and developing new beneficial offerings in a dynamic environment. Business to offer value to every type of customer by providing digital products and services that not only meet customer needs but can predict customer needs and are offered in the form of convenience, cost transparency, and speed (Rogers, 2016). Equity Partnership of Gojek to Bank Jago has enabled a much wider digital ecosystem linkage with stronger digital interconnectedness ecosystem than just merely a business partnership.

METHOD

This research used secondary data from public bank financial reports and statistics via the internet, books, and other scientific works.

Population and Sample Selection

To date, there are 5 digital banks in Indonesia, namely Jenius, a part of Bank BTPN, Wokee from Bank Bukopin, Digibank from DBS Bank, TMRW from Bank UOB, and Jago from Bank Jago. From the 5 digital bank, it turns out that the data for the digital bank from the first four banks, could not be separated from each respective overall bank reporting, hence it is not possible to conduct a comprehensive comparison. Therefore, this research only discussed Bank Jago, which has transformed from conventional bank to digital bank with a good business growth.

Bank jago, previously known as Bank Artos Indonesia (Bank Artos), created on December 14, 1992. In 2016, Bank Artos became public on the Indonesian Stock Exchange with the issuer code ARTO. In December 2019, it was acquired by Metamorfosis Ekosistem Indonesia (MEI) and Wealth Track Technology Limited (WTT) companies at a value of IDR 243 billion, thereby becoming the Controlling Shareholder (PSP) of 51%. On June 11, 2020, the company name was officially changed to Bank Jago.

Financial Services Authority Regulation

Banking is a highly regulated industry, and in this discussion, the relevant regulations were POJK No. 12/POJK.03/2021 concerning commercial banks, POJK No. 18/POJK.03/2016 concerning the implementation of risk management for commercial banks and POJK No. 55/POJK.03/2016 regarding the implementation of corporate governance.

Assessment of Bank Soundness Level (PTKB) based on Bank Jago's 2020 Annual Report:

1. ***Risk Profile:*** According to the results of the assessment, Bank Jago's risk profile rating in 2020 was low to medium, denoting the satisfactory quality of the company's risk management implementation. The 2020 OJK assessment also produced similar results.

Table 2: Risk Profile Self-Assessment, 2020

Risk Type	Inherent Risk	Quality of Risk Management Implementation	Rating Risk	OJK Scale (1-5)
Credit	Low to Medium	Satisfactory	Low to Medium	2
Market	Low	Satisfactory	Low	1
Liquidity	Low	Satisfactory	Low	1
Operational	Low to Medium	Satisfactory	Low to Medium	2
Law	Low	Satisfactory	Low	1
Strategic	Low to Medium	Satisfactory	Low to Medium	2
Compliance	Low	Satisfactory	Low	1
Reputation	Low	Satisfactory	Low	1
Total	**Low to Medium**	**Satisfactory**	**Low to Medium**	**2**

Source: Annual Report 2020

2. ***Governance:*** The Governance Implementation Self-Assessment Report recorded a rank of 2 (good) due to the application of transparency, accountability, responsibility, independence, and fairness.

Table 3: Governance Implementation Self-Assessment Report

Rank	Definition
2	good

Source: Annual Report 2020

3. ***Profitability:*** The profitability ratio of a bank is measured by four ratios, namely Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM), and Operating Expense to Operating Income Ratio. Subsequently, the NIM increased by 5% in the 2021 half-time, improving from 4.74% in 2020 and 2.05% in 2019. Although still negative, the ROA and ROE experienced a significant increase to -1.3% and – 1.7% from -11.27% and -18.03% in 2020 as well as -15.89% and – 89.03% in 2019. The improvement in profitability is visible from the increased Operating Expense to Operating Income Ratio in the 2021 half-time, which decreased by 124.22% from 261.10% in 2020 and 258% in 2019. This was due to the high operational costs required during the bank's digital transformation process.

4. ***Capital:*** Capital Adequacy Ratio (CAR) is the ratio of capital to Risk-Weighted Assets (RWA). The CAR as of June 30, 2021, was 342.8%, an increase from 91.38% in 2020 and 148.28% in 2019. Consequently, this value exceeded the CAR determination by OJK (10%).

RESULT AND DISCUSSION

Financial Analysis

The analysis of Bank Jago's financial data in less than 2 years (Dec 2019 – Sep 2021) showed that:

1. Savings soared by 1,116% from IDR 85 billion to IDR 652 billion.
2. Current accounts increased by 374% from IDR 24 billion to IDR 332 billion.
3. Disbursed loans and financing increased by 316% from IDR 284 billion to IDR 3.7 trillion.
4. Along with additional capital and rights issues, equity jumped 414% from IDR 681 billion to IDR 8.1 trillion.
5. Total assets increased by 302% from IDR 1.3 trillion to IDR 10.9 trillion through organic growth as well as the contribution of the success of rights issues, where many investors were attracted to invest in Bank Jago.
6. Along with the increase in assets and capital, the net interest income jumped 492% from IDR 11.5 billion to IDR 317.5 billion.

7. Loss per share decreased by 98% from IDR (101) to IDR (2).

The detailed data can be found in Appendix 1.

In less than 2 years (Dec 2019 vs Jun 2021), the business growth has also been followed by improvements in financial ratio as follows:

1. Improvement in CAR from 148% to 342%, an increase in 194%
2. Improvement in gross Non-Performing Loan (NPL) from 2% to 0%
3. No change in NPL Net 0%
4. Improvement in ROA from - 15.89% to - 1.3%, an increase in 14%
5. Improvement in ROE from - 89% to -1.7%, an increase in 87%
6. Improvement in NIM from 2% to 5%, an increase in 2.95%
7. Improvement in Operating Expense to Operating Income from 258% to 124%, decreased by 133%
8. Improvement in Cost to Income Ratio (CIR) from 170% to 129%, decreased by 41%
9. Improvement in Loan to Deposit Ratio (LDR) from 47% to 125%, an increase of 77%

The detailed data can be found in Appendix 2.

Comparative performance of Bank Jago vs Book III banks vs aggregate banks

Currently, Bank Jago is one of the Book III banks, as it possesses a core capital between IDR 5 trillion to 30 trillion. In 2021, the OJK issued regulation POJK Number 12/POJK.03/2021 on bank grouping based on core capital. It comprises Kelompok Bank Berdasarkan Modal Inti (KBMI) 1 with a core capital of up to IDR 6 trillion, KBMI 2 with above IDR 6 trillion to 14 trillion, KBMI with over IDR 14 trillion to 70 trillion, and KBMI 4 with above IDR 70 trillion. Appropriate with the POJK, Bank Jago is included in KBMI 2. However, as of November 2021, Bank Indonesia's Statistik Sistem Keuangan Indoinesia (SSKI) reporting for financial data from all commercial banks is still based on the bank book, and there is no reporting based on the KBMI. There are also comparative limitations of reporting for Book III banks compared to aggregate banks.

Comparative results of Bank Jago performance vs Book III banks vs aggregate banks on 30 June 2021:

1. A CAR of 342%, which is far above the 15.62% CAR of aggregate banks.
2. 0% Gross NPL, below the 2.96% NPL of aggregate banks.
3. 0% Net NPL and no comparison with Book III and aggregate banks.
4. -1.3% ROA, which is still far below the 1.35% and 1.88% values of Book III banks and aggregate banks, respectively.
5. -1.7% ROE, far below the aggregate bank's ROE of 12.73%.
6. 5% NIM, better than the 3.49% and 4.66% of Book III banks and aggregate banks.
7. Operating Expense to Operating Income of 124%, higher than the 89.66% and 84.59% values of Book III banks and aggregate banks, respectively.
8. 129% CIR with no comparison for Book III banks and aggregate banks.
9. Bank Jago's LDR at 125% was much higher than the 80.39% of aggregate banks

Detailed data can be found in Appendix 3.

Analysis of Five Digital Transformation Domains at Bank Jago according to Rogers

The strategy executed by Bank Jago turned out to be in line with Rogers (2016). In the public exposure of Bank Jago for the performance of Sep 2021, there was an increase of 470,000 new customers within three months. The increase is equivalent to 156,000 new customers within 1 month, or the average addition of new customers as many as 5200 new customers/day. Due to data limitations, we cannot

know exactly the increase in new customers, who are new customers from Bank Jago, or from each partner of Bank Jago. The increase in the number of new customers is inseparable from the partnership of Bank Jago with other digital ecosystems.

Bank Jago's partnerships grouped into those with financial institutions, such as financing through channeling schemes with Peer-to-Peer lending and jointly with multi-finance companies. It also uses partnerships with value chains, including cooperation, with finance suppliers or agents, distributors, or merchants. By September 2021, Bank Jago had 19 partners, including 3 ecosystem partners, namely Go To (Digital Lifestyle Services), Amaan (Syariah), and Bibit (Wealth management), alongside 3 security companies (Indopremier, Trimegah Securities, Stockbit), and 13 lending institutions.

Innovation with MVP is considered the Life Focus Solution (LFS) in April 2021, with continuous innovation for the past, present, and future. Bank Jago claims to be the bank that issues the first tool to partition customers' funds and provide selective access to family and friends, such as spending, saving, locking pockets, various levels of access within the given limit, requesting money, splitting the bill. In 2021, the launch of LFS was followed by a series of launches, including debit cards in May and the Bibit partnership in July. Other programs included the seamless integration of Bank Jago with Gojek registration at the end of July through linking Jago Pocket (Gojek) and referral registration from the Gojek application. At the end of September 2021, the Bank Jago application had been installed by over 750,000 with a rating of 4+. The application consists of the main pocket, food, renovation, vacation, emergency, and a pocket, which customers can add (Bank Jago, 2021). Bank Jago announced future releases by increasing the integration of payments and financial management, registering the Gopay and Jago customers' profiles (KYC) in one convenient channel, paying from Kantong Jago at all merchants through GoPay. Also, customers can access other Jago features (such as savings and linked cards) and manage digital funds/money on Gopay through the application.

The business growth was the result of Bank Jago's business strategy that established several key success factors (KSF), including Absolute Customer Centricity. This translates to Life Focus Solution (LFS), Customer Experience, Ecosystem Partnerships with other digital ecosystems in Indonesia, and future technology capabilities with microservice-based, asynchronous, loosely coupled event & data streaming, using secure and standard open API (Application Programming Interface). Therefore, digital integration with Advanced Analytics & AI will become easier (Bank Jago, 2021).

In May 2021, the merger of Gojek with Tokopedia to form the Go To Group with e-commerce, on-demand, and financial services in 1 digital ecosystem positively impacted Bank Jago's business growth. Go To's Total Gross Transaction Value (GTV) reached over $22 billion in 2020, with more than 1.8 billion transactions in 2020, over 2 million driver-partners and more than 11 million business partners by December 2020, and more than 100 million monthly active users. The Go-To group's digital ecosystem was 2% of Indonesia's gross domestic product, and besides serving 270 million Indonesians, it will assist consumers from other developing countries in Southeast Asia. The Go To company is supported by the main investors of the two companies (Nabila, 2021). Equity partnership from Gojek with Bank Jago has enabled a much wider interconnectedness digital ecosystem than a business partnership.

Apart from implementing the five domains in digital transformation, Bank Jago's business success is inseparable from leadership with a capable digital track record and capable human resources, especially in the banking, risk management, and digital aspects.

CONCLUSION

Bank Jago has succeeded in growing its business through the digital transformation of conventional banks. This is evidenced by significant business growth, including the number of customers, funding (savings, demand deposits, deposits), and lending. It is also accompanied by improved financial performance, particularly the net interest income and operating profit (loss), as well as performance ratios, including profitability (ROA, ROE, NIM), efficiency (operating expense to operating income, CIR), LDR management, asset quality (gross NPL, net NPL) and capital (CAR).

In conducting its business as bank digital, Bank Jago has employed the right strategy in accordance with the research by Rogers (2016). The bank has focused its business on customers through a digital ecosystem with Life Focus Solution, beneficial partnerships with direct and indirect competitors for customers, partners, and the business. Hence, data are used to develop the business, innovate products and services, and constantly create added value to provide a new value proposition for customers and relevant stakeholders. Equity partnership from Gojek with Bank Jago has enabled a much wider interconnectedness digital ecosystem than a business partnership.

Suggestion

1. For other commercial banks: Bank Jago's success can be used as a benchmark for other digital and conventional banks that wish to digitally transform their business model.
2. For Financial Services Authority:
   a) Although OJK has regulated digital banks through POJK No. 12 of 2021, however, to date, there is no category for bank digital and no measurement standards for digital banks. Those available limited to measurement for commercial banks. The absence of digital bank category causes a comparison between 1 digital bank to another digital bank can not be done by focusing on the performance of digital banks. This can be used as the basis for future proposals.
   b) Making regulations for performance reporting for conventional banks with a digital bank business unit, so that the performance of the digital bank unit could be obtained. This will provide OJK with data for the development of digital banks in Indonesia.

Research Limitations

1. Limited sample of digital banks due to the newness of the phenomenon in Indonesia. Until now, there have been 5 digital banks in the country, with 4 having data that are inseparable from the overall bank report, precluding the performance of a comprehensive comparison. Therefore, this research was only able to discuss Bank Jago.
2. Since there is no comparative data with competing digital banks and Bank Jago is included in the category of Book III banks with core capital between IDR 5 trillion to IDR 30 trillion, comparisons were generally with these groups of companies.
3. Although OJK has regulated digital banks through POJK No. 12 of 2021, there is still no measurement standard for these businesses. The regulations issued by the OJK are the measurement standards for commercial banks, leading to difficulty comparing, as not all banks will undergo digital transformation. Therefore, OJK can issue digital bank standards to facilitate a more focused measurement and supervision of the business performance.

Recommendations for Further Research

1. Increased research sample to enable a generalization of the results.
2. Comparison of performance for each type of digital bank, including the purely digital companies and conventional banks with digital business units.
3. Research on each digital transformation domain and its impact on the success of a digital bank.

REFERENCES

Alfi, A. N. (2021). Terungkap, Bocoran OJK Bakal ada 12 Bank Digital, https://finansial.bisnis.com/read/20210610/90/1403840/terungkap-bocoran-ojk-bakal-ada-12-bank-digital-berikut-daftarnya

Bank Jago. (2020). Laporan Tahunan. https://jago.com/en/transparency/hubungan-investor/laporan-tahunan/15

Bank Jago. (2021). Informasi Kuantitatif Eksposur Risiko. https://jago.com/public/en/transparency/hubungan-investor/informasi-kuantitatif-eksposur-risiko/7

Bank Jago. (2021). Laporan Keuangan. https://jago.com/en/transparency/hubungan-investor/laporan-keuangan/6

Bank Jago. (2021). Presentasi Korporasi. https://jago.com/public/en/transparency/hubungan-investor/presentasi-korporasi/14

Brandenburger, A. M. & Nalebuff, B.J., Co-opetition. (1996), A revolutionary mindset that combines competition and cooperation. The Game Theory strategy that's changing the game of business, Currency Doubleday, pp 236-237.

Choi, J., Erande, Y., & Yu, Y. (2021), Winning the Digital Banking Battle in the Asia Pacific, Boston Consulting Group. https://www.bcg.com/publications/2021/digital-banking-asia-pacific

Fernando, A (2021). Hati-hati, ini Risiko Mengintai Bank Digital di Masa Depan. CNBC Indonesia. https://www.cnbcindonesia.com/market/20211103113315-17-288645/hati-hati-ini-risiko-mengintai-bank-digital-di-masa-depan

Hidayat, Khomarul. (2022). BI Catat Nilai Transaksi Digital Banking Capai Rp 39.841,4 Triliun di 2021. https://keuangan.kontan.co.id/news/bi-catat-nilai-transaksi-digital-banking-capai-rp-398414-triliun-di-2021

Hutauruk, D. M. (2021). Menerawang Prospek Fundamental Bank Digital di Indonesia. Kontan. https://keuangan.kontan.co.id/news/menerawang-prospek-fundamental-bank-digital-di-indonesia

King, B. (2019). Bank 4.0: Banking Everywhere, Never at a Bank. 1st Edition. Chichester, West Sussex: Wiley.

Kristiyana, Heru. (2021). Jalan Menuju Digitalisasi adalah Keniscayaan. https://finansial.bisnis.com/read/20210908/90/1439411/jalan-menuju-digitalisasi-perbankan-adalah-keniscayaan

Nabila, M. (2021). Gojek dan Tokopedia resmi merger umumkan entitas Go To. https://dailysocial.id/post/gojek-dan-tokopedia-resmi-merger-umumkan-entitas-goto

Otoritas Jasa Keuangan (2016). Peraturan Otoritas Jasa Keuangan Nomor 18/POJK.03/2016 tentang Penerapan Manajemen Risiko bagi Bank Umum. https://www.ojk.go.id/id/kanal/perbankan/regulasi/peraturan-ojk/Pages/POJK-Nomor-18.POJK.03.2016.aspx

Otoritas Jasa Keuangan (2016). Peraturan Otoritas Jasa Keuangan Nomor 55 /POJK.03/2016 tentang Penerapan Tata Kelola Perusahaan. https://www.ojk.go.id/id/kanal/perbankan/regulasi/peraturan-ojk/Pages/POJK-tentang-Penerapan-Tata-Kelola-bagi-Bank-Umum.aspx

Otoritas Jasa Keuangan (2021). Cetak Biru Transformasi Digital Perbankan, hal 8-48. https://www.ojk.go.id/id/berita-dan-kegiatan/info-terkini/Pages/Cetak-Biru-Transformasi-Digital-Perbankan.aspx

Otoritas Jasa Keuangan (2021). Peraturan Otoritas Jasa Keuangan Nomor 12/POJK.03/2021 tentang Bank Umum. https://www.ojk.go.id/id/regulasi/Pages/Bank-Umum.aspx

Otoritas Jasa Keuangan (2021). Peraturan Otoritas Jasa Keuangan Nomor 13/POJK.POJK03/2021 tentang Penyelenggaraan Produk Bank Umum. https://sikepo.ojk.go.id/SIKEPO/DatabasePeraturan/PeraturanUtuh/2eaacb02-936e-499f-a024-df906ad5f418

Putra, D. P. (2021). Sepak Terjang Bank Jago dari Bank Konvensional Bertransformasi ke Bank Digital. https://selular.id/2021/09/sepak-terjang-bank-jago-dari-bank-konvensional-bertransformasi-ke-bank-digital/

Ramli, R. R. (2021). Bank Digital Terus Tumbuh, Ekonomi Digital Indonesia Diproyeksi Jadi Terbesar Se-Asia Tenggara pada 2025. https://money.kompas.com/read/2021/07/01/175703526/bank-digital-terus-tumbuh-ekonomi-digital-indonesia-diproyeksi-jadi-terbesar?page=all

Ridhoi, M. A. (2021). Selamat Datang Era Bank Digital di Indonesia, Prospek & Tantangannya. https://katadata.co.id/muhammadridhoi/analisisdata/5fe2d448aca0a/selamat-datang-era-bank-digital-di-indonesia-prospek-tantangannya

Riyanto, G. P. (2021). 3 Keuntungan Bank Digital untuk Pengguna. https://tekno.kompas.com/read/2021/04/22/14000087/3-keuntungan-bank-digital-untuk-pengguna-?page=all

Rogers, D. L. (2016). The Transformation Digital Playbook – Rethink Your Business for The Digital Age, 2016, Columbia Business School Publishing, pp 20-169. DOI: 10.7312/roge17544.

Sia, S., Weill, P., & Zhang, N. (2021). Designing a Future-Ready Enterprise: The Transformasi Digital of DBS Bank, Berkeley Haas, University of California Berkeley, California Management Review. *Sage Journal*, pp 18-20. DOI: 10.1177/0008125621992583.

Sidik, S. (2021). Bakal Sengit, Ini Peta Persaingan Bisnis Bank Digital di RI. https://www.cnbcindonesia.com/market/20211018192706-17-284818/bakal-sengit-ini-peta-persaingan-bisnis-bank-digital-di-ri

Statistik Sistem Keuangan Indonesia Bulan Oktober 2021. (2022). https://www.bi.go.id/id/statistik/ekonomi-keuangan/sski/Pages/SSKI_Oktober_2021.aspx

APPENDICES

Appendix 1. Analysis of Financial Statement
PT Bank Jago Tbk
Period of 30 Sep 2021, 31 Des 2020, 31 Des 2019
(in Million Rupiah)

No	Account	30 Sep 2021	31 Des 2020 (Audited)	31 Des 2019 (Audited)	30 Sep 2021 vs 31 Des 2019	FY Growth Rate 2021/2020 *)	Growth Rate 2020/2019	Avg Growth Rate 2021/2019
1	Total Asset	10,978,255	2,179,873	1,321,057	9,657,198	538%	65%	302%
2	Total Loans & Financings	3,727,237	907,956	284,795	3,442,442	414%	219%	316%
3	Minus Loan Impairment Losses	-164,965	-81,753	-33,124	-131,841	136%	147%	141%
4	Loans (Net)	3,562,272	826,203	251,671	3,310,601	442%	228%	335%
5	Current Account	332,446	182,787	24,721	307,725	109%	639%	374%
6	Savings	652,368	35,881	85,829	566,539	2291%	-58%	1116%
7	Time Deposits	1,558,524	585,278	488,534	1,069,990	222%	20%	121%
8	Total Third Party Liabilities	2,543,338	803,946	599,084	1,944,254	288%	34%	161%
9	Total Liabilities	2,845,504	947,540	639,878	2,205,626	267%	48%	158%
10	Total Equity	8,132,751	1,232,333	681,179	7,451,572	747%	81%	414%
11	Net Interest Income	317,546	64,644	11,500	306,046	522%	462%	492%
12	Other Operating Income and Expense	-348,477	-250,375	-103,223	-245,254	52%	143%	97%
13	Operating Income (Loss)	-30,931	-185,731	-91,723	60,792	-111%	102%	-4%
14	Profit (Loss)	-32,605	-189,657	-109,782	77,177	-110%	73%	-19%
15	Profit (Loss) Per Share	-2.49	-22.49	-101.11	99	-119%	-78%	-98%

Source: Financial Statements of PT Bank Jago Tbk
*) Prediction for full year 2021 with exrapolation from 3Q 2021 figures

Ideally, the analysis for asset and liabilities is based on the average balance data, however due to the limitation of data availability, such analysis uses the ending balance.
In less than 2 years (Dec 2019 vs Sep 2021), in line with the growth in the number of customers, we noted the significant growth in the following:

1 Savings soared by 1116% from IDR 85 billion to IDR 652 billion.
2 Current Accounts increased by 374% from IDR 24 billion to IDR 332 billion.
3 Loans and Financings increased by 316% from IDR 284 billion to IDR 3,7 trillion.
4 Along with additional capital and rights issues, equity jumped 414% from IDR 681 billion to IDR 8.1 trillion.
5 Total Assets increased 302% from IDR 1.3 trillion to IDR 10.9 trillion through organic growth as well as the contribution of the right issues.
6 Along with the increase in assets and capital, net interest income jumped 492% from IDR 11,5 billion to IDR 317,5 billion.
7 Loss per share decreased by 98% from IDR (101) to IDR (2).

Appendix 2. Analysis of Performance Key Ratios
PT Bank Jago Tbk
30 Jun 2021, 31 Des 2020 & 31 Des 2019

No	Akun	30 Jun 2021	30 Des 2020	31 Des 2019 (Audited)	30 Jun 2021 vs 31 Des 2019
	Capitalization				
1.	Capital Adequacy Ratio (CAR)	342.80%	91.38%	148.28%	194.52%
	Asset Quality				
2.	Non Performing Loan - Gross	0.00%	0.00%	2.05%	-2.05%
3.	Non Performing Loan - Net	0.00%	0.00%	0.00%	0.00%
	Profitability				
4.	Return on Asset (ROA)	-1.30%	-11.27%	-15.89%	14.59%
5.	Return on Equity (ROE)	-1.70%	-18.03%	-89.03%	87.33%
6.	Net Interest Margin (NIM)	5.00%	4.74%	2.05%	2.95%
	Efficiency				
7.	Operating Expense to Operating Income	124.22%	261.10%	258.09%	-133.87%
8.	Cost to Income Ratio (CIR)	129.00%	357.40%	170.48%	-41.48%
	Liquidity				
9.	Loan to Deposit Ratio (LDR)	125.00%	111.07%	47.54%	77.46%

Source: Financial Statements PT Bank Jago Tbk
*) Prediction for FY Growth Rate 2021/2020 used extrapolation from 9 months to 12 months

In less than 2 years (Dec 2019 vs Jun 2021), the business growth has also been followed by improvements in financial ratio:
1 Improvement in Capital Adequacy Ratio from 148% to 342%, an increase by 194%.
2 Improvement in gross Non Performing Loan from 2% to 0%.
3 No change in Net Non Performing Loan 0%.
4 Improvement in Return on Asset from - 15.89% to - 1.3%, an increase by 14%.
5 Improvement in Return on Equity from - 89% to - 1.7%, an increase by 87%.
6 Improvement in Net Interest Margin from 2% to 5%, an increase by 2.95%.
7 Improvement in Operating Expense to Operating Income from 258% to 124%, a decrease by 133%.
8 Improvement in Cost Income Ratio from 170% to 129%, a decrease by 41%.
9 Improvement in Loan Deposit Ratio from 47% to 125%, an increase by 77%

Appendix 3. Comparative Analysis of Performance Key Ratios
PT Bank Jago Tbk vs Book III Banks vs Aggregate Banks
For the period of June 30, 2021

No	Account	Bank Jago	Book III Banks**)	Aggregate Banks **)
	Capitalization			
1.	Capital Adequacy Ratio (CAR)	342.80%	Not Available	15.62%
	Asset Quality			
2.	Non Performing Loan - Gross	0.00%	Not Available	2,96%
3.	Non Performing Loan - Net	0.00%	Not Available	Not Available
	Profitability			
4.	Return on Asset (ROA)	-1.30%	1.35%	1.88%
5.	Return on Equity (ROE)	-1.70%	Not Available	12.73%
6.	Net Interest Margin (NIM)	5.00%	3.49%	4.66%
	Efficiency			
7.	Operating Expense to Operating Income	124.22%	89.66%	84.59%
8.	Cost to Income Ratio (CIR)	129.00%	Not Available	Not Available
	Liquidity			
9.	Loan to Deposit Ratio (LDR)	125.00%	Not Available	80.39%

Source: Financial Statement of PT Bank Jago Tbk
**) Indonesia Financial System Statistics (SSKI) Bank Indonesia November 2021

Comparative results of the perfomance of Bank Jago vs Book III Bank vs Aggregate Banks on 30 June 2021
1 Capital Adequacy Ratio of 342%, which is far above the 15.62% CAR of aggregate banks.
2 0% Gross NPL below the 2.96% NPL of aggregate banks.
3 0% Net NPL and no information available in the SSKI for Book III and aggregate banks.
4 Return on Asset (1.3%) which is below ROA of Book III Banks and aggregate banks of 1.35% and 1.88% respectively.
5 Return on Equity (1.7%) which is below ROA of aggregate banks of 12.73%.
6 5% Interest Margin, better than 3.49% of Book III Bank and 4.66% of aggregate banks.
7 Operating Expense to Operating Income 124% is higher compared to Book III Banks of 89.66% and aggregate banks of 84.59%.
8 Cost Income Ratio of 129% with no available data in the SSKI for Book III and aggregate banks.
9 Loan Deposit Ratio 125% is much higher than aggregate banks of 80.39%.