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Electronic Money Growth, Financial Inclusion and National Economic Resilience

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ABSTRACT

Indonesia has indeed made significant progress in improving digital financial inclusion in recent years, thanks to support from the government, private sector, and technological innovation. A step in the right direction toward enhancing financial inclusion and assisting in the reduction of poverty is the expansion of Digital Financial Services (DFS) to impoverished and rural families. This research aims to see how the development of digital finance and financial inclusion in Indonesia, and understand how it relates to national resilience in terms of economic stability. The research method is an exploratory descriptive analysis of the development of electronic money in each region, with a qualitative approach using secondary data obtained from the Bank Indonesia (BI) and from the Financial Services Authority (OJK) and other literature sources. The result shows that electronic money has a positive influence to increase financial inclusion which in turn will provide stability to the economy.

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1. INTRODUCTION

In the ever-evolving digital era, technology-based financial services are gaining popularity and influencing the way transactions are conducted in various countries. One form of digital financial service that is increasingly in demand is electronic money. Electronic money utilizes digital technology to provide an electronic payment method, replacing cash in making transactions. This Electronic money can be in a physical card similar to credit and debit cards or stored in the application, but in practice, transactions are not required to use an account. Isnu, et al (2006) mentioned that the Bank for International Settlement (BIS) defenis electronic money as prepaid goods in which a small quantity of money is kept in a person's possession electronic media. Hidayati et al, 2006 stated that the value of money will decrease when it is used to make various types of payment transactions.

In the early days, electronic money was only in the form of cards or chip-based issued by banks, but in its development electronic money developed into chip-based such as TapCash from BNI, Flazz from BCA, Brizzi from BRI, E-Money from Bank Mandiri, Multiple Trip Card (Multi trip) from PT MRT, TCash from Telkomsel and others. Also developing into server-based, better known as e-wallets in the form of apps including LinkAja, Dana, GoPay Ovo, and others. This is in accordance with the Bank Indonesia website, where the amount of chip-based and server-based electronic money in the last 5 years where in 2018 the amount of electronic money was 167.21 million, then grew to 730.70 million at the end of 2022 (Bank Indonesia, 2023). The rapid growth of 436.99% in the amount of electronic money shows how people's behavior has changed from traditional to digital.

As explained in the previous paragraph and quoting the Ministry of Communication and Information Technology (Kemenkominfo), there are differences between electronic money and e-wallets, namely cards with embedded chips that function as electronic money, while server-based e- wallets are in the form of applications. In addition, electronic money is issued by banks or fintechs under license from Bank Indonesia, while e-wallet issuers are fintechs. To top up the balance of electronic money, you usually have to go through the issuing bank and through its ATM machine, while topping up the e-wallet balance can be done through the e-banking application. However, researchers follow the main data source, namely from the Bank Indonesia website, which uses the term electronic money which combines chip-based and server-based electronic money.

The growth in the amount of electronic money is uneven. From Figure 1 taken from Bank Indonesia, it can be seen that the provinces that benefit the most from the use of electronic money are those located in Java or in densely populated big cities starting from DKI Jakarta province, West Java province, East Java province, Central Java province and Banten province. Meanwhile, the provinces that use electronic money the least are in small cities such as North Maluku province, Papua province, West Papua province, Maluku province and Gorontalo province. This can be seen from the growth in the use of electronic money from year to year in each province and also the uneven development of digital infrastructure. It is expected that the continuous development of digital infrastructure, especially in small towns, will be the main foundation to provide better digital services, so that the unbanked people who live there can continue to conduct financial transactions and reduce dependence on cash. With that, the security risks associated with storing cash are reduced.

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Figure 1: Growth in the amount of Electronic money by province in Indonesia Year 2018 to 2022 (Million Units)

Number of Cards By Region	2018	2019	2020	2021	2022
Bali	-	-	0,81	1,35	1,04
Banten	-	-	3,85	5,36	4,96
Bengkulu	-	-	0,1	0,37	0,48
D.I. Yogyakarta	-	-	3,05	4,09	4,35
DKI Jakarta	-	-	383,1	492,97	543,41
Gorontalo	-	-	0,05	0,26	0,31
Jambi	-	-	0,26	0,62	0,81
West Java	-	-	15,6	23,15	18,75
Central Java	-	-	5,52	10,38	8,88
East Java	-	-	6,73	13,75	10,89
West Kalimantan	-	-	0,35	0,79	0,95
South Kalimantan	-	-	0,28	0,8	1,03
Central Kalimantan	-	-	0,14	0,43	0,56
East Kalimantan	-	-	0,63	1,29	1,35
North Kalimantan	-	-	0	0	0
Kep Bangka Belitung	-	-	0,13	0,39	0,44
Riau Islands	-	-	0,4	0,73	0,73
Lampung	-	-	0,96	1,59	1,78
Maluku	-	-	0,11	0,25	0,29
North Maluku	-	-	0,04	0,15	0,15
Nanggroe Aceh Darussalam	-	-	0,6	1,09	1,3
West Nusa Tenggara	-	-	0,23	0,66	0,84
East Nusa Tenggara	-	-	0,14	0,44	0,52
Papua	-	-	0,09	0,19	0,18
West Papua	-	-	0,07	0,27	0,29
Riau	-	-	0,61	1,32	1,39
West Sulawesi	-	-	0,04	0,35	0,32
South Sulawesi	-	-	3,38	3,97	1,96
Central Sulawesi	-	-	0,1	0,41	0,49
Southeast Sulawesi	-	-	0,19	0,38	0,48
North Sulawesi	-	-	0,36	0,64	0,66
West Sumatra	-	-	0,69	1,33	1,21
South Sumatra	-	-	1,32	2,08	2,22
North Sumatra	-	-	2,35	3,47	3,58
More	-	-	0	0,01	0,02
Unspecified	-	-	-	-	114,05
Total	**167,21**	**292,3**	**432,28**	**575,33**	**730,7**

Source: Bank Indonesia (data processed by the author in 2023)

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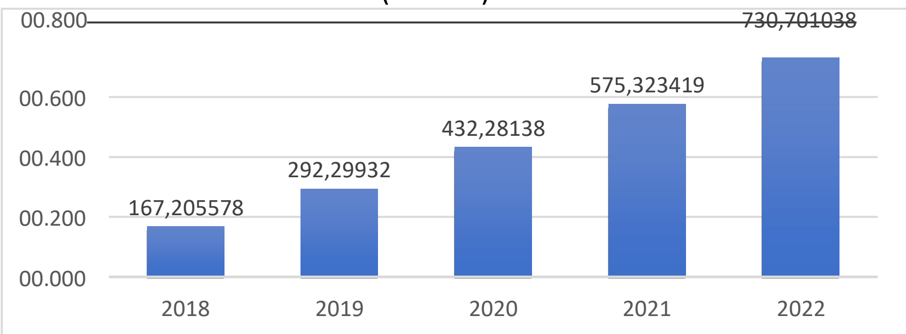
The application of Electronic money has several advantages over traditional cash transactions, such as ease of access and use, transaction speed, ease of online shopping, security and transaction traces. According to Mensah and Jumah's 2021 publication, Electronic Money and Consumer Spending Behavior: Evidence from Ghana (Mensah & Jumah, 2021). In addition, Electronic money can also be used for various purposes such as purchases on e-commerce platforms, payment of electricity bills, cell phone recharges, and others. Electronic money was introduced to society with the aim of reducing the growth rate and dependence on cash and facilitating more efficient transactions, especially in micro and retail payments, such as the purchase of everyday goods, public transportation and parking payments. However, while electronic money offers benefits in terms of efficiency and convenience, its adoption in Indonesian society is uneven.

The digital industry in Indonesia continues to show its development. According to data from the Central Statistics Agency (BPS) in the March 2021 Susenas, around 85.55% of the population aged 5 years and over accessed the internet in the last 3 (three) months and 90.56% of this was used to access social media networks. People are becoming more adaptable as a result of the convenience, speed, and security that electronic payment systems provide. This is evident from the notable growth in the past five years in both the volume of electronic money transactions and the corresponding rise in literacy. According to the figure above, until December 2022, there were 730.70 million electronic money in circulation. This easy access to finance through Electronic money gives people the ability to manage their personal finances, plan for the future and engage in economic activities.

Figure 2. Development of the amount of electronic money in Indonesia Year 2018 to 2022 (Million)



Source: Bank Indonesia (data processed by the author in 2023)

The value of electronic money transactions also grew by 142.13% (yoy) or Rp 22.13 trillion from Rp 786.45 trillion to Rp 1,117.78 trillion in December 2022. According to the Bank Indonesia data below, 6,925 million electronic money transactions were made in Indonesia in 2022—a huge increase of 236.8% over the preceding five years. This increase is in line with the increasing use of electronic transaction modes supported by various features and financial technologies available. By giving small and medium-sized businesses financial help, this convenience promotes entrepreneurship. It has been demonstrated in Indonesia during multiple past economic crises that small and medium-sized businesses are the foundation of the country's economy.

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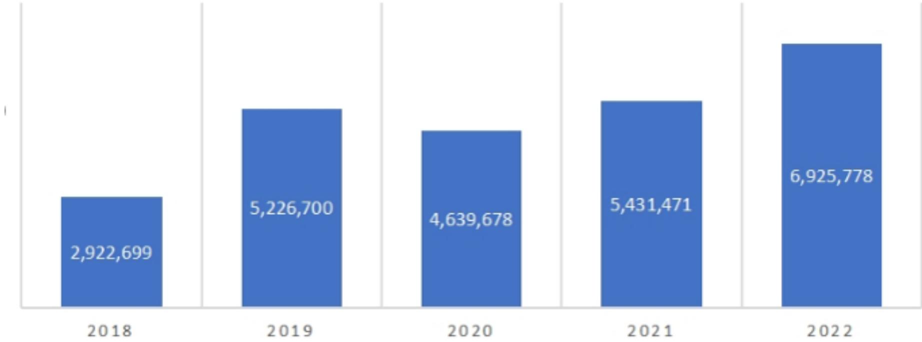
Figure 3. Development of e-Money Shopping Transaction Volume in Indonesia From 2018 - 2022 (Thousand Transactions)



Source: Bank Indonesia (data processed by the author in 2023)

While the shift to centralized electronic money has its advantages, Mensah and Jumah, 2021, argue that it also brings undeniable risks. The absolute reliance on the technological infrastructure that supports the real-time registration of every transaction and the fluctuating value in each bank account creates unprecedented risks. This infrastructure cannot be guaranteed to be fully functional and in the event of a crash or data loss in the registration of values and transactions, it can cause countless social disruptions. In addition, not all merchants or businesses can accept payments using electronic money, so it is still necessary to carry cash or credit cards.

The ratification of Bank Indonesia Regulation (PBI) Number 11/12/PBI/2009 on Electronic Money was carried out by the Payment System Regulator, in this case Bank Indonesia. There have been three revisions of PBI, namely Bank Indonesia Regulation Number 16/8/PBI/2014 and PBI Number 18/17/PBI/2016 and PBI Number 20/6/PBI/2018 concerning Electronic Money (PBI Electronic money). With reference to the previous PBI, electronic money is defined as a payment instrument that satisfies multiple requirements: it must be issued based on the value of money deposited, stored electronically via servers or chip media, and have a value that is not a deposit. PBI Electronic money also regulates Digital Financial Services related to Issuance, namely electronic money issued must be equal to the value of money deposited with the issuer or electronic money is prohibited from being greater or prohibited from being smaller than the value of money deposited with the issuer, this ensures that electronic money users have an equivalent value to the money they have deposited. Issuers are required to record and manage the value of electronic money must be separated from recording and managing the equivalent value of other money Article 13, this is to ensure transparency and accountability in the management of funds deposited by users. Issuers are prohibited from setting a minimum, withholding or unilaterally blocking the worth of electronic money, aimed at protecting the rights of electronic money users and preventing abuse of power by issuers. Issuers are prohibited from using electronic money termination fees Article 13A, to prevent issuers from charging users additional fees for terminating their use of electronic money.

The idea of the digital economy itself has been proposed by researchers in the last two decades. However, in the last five years, researchers have begun to intensely study the digital economy. Starting from studies on competitive advantages in the digital economy (Koch & Windsperger, 2017); Savina's research, 2018, on the challenges, opportunities and prospects of the digital economy as a novel approach to growth; Afanosova et al's research, 2019 on

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how social and economic processes are affected by digital economic innovation; studies on commodity integration in the digital economy conducted by Athique, 2020; to studies on legal thinking in the digital economy by Giraudo, 2021. From the description presented above, the author is interested in researching the digital economy through Electronic money and financial inclusion in Indonesia. From the description above, the purpose of this research is to see how the development of digital finance through Electronic money and financial inclusion, and understand how it relates to national resilience in terms of economic stability in Indonesia.

Nizam in According to the impact of electronic money on the money supply, research conducted in Bangladesh shows that the growing number of active mobile phone users is distributed fairly evenly; specifically, 85.20% of rural and nearly 94.10% of urban households are seamlessly connected to the mobile network. Mobile financial service (MFS) providers are becoming more and more well-liked among retail customers and micro merchants due to the widespread use of mobile phones and the accessibility of data networks throughout the nation. Since its launch in March 2011, more than 15 MFS providers have served over 39 million active customers with over a million agent points. These providers are presently utilized for inward remittance, utility bill payment, merchant payment, salary disbursement, P2P transactions, deposit, withdrawal, and P2P transactions. He said that research by the UN Capital Development Fund (UNCDF) observed that about 30% of micro merchants, a large number of whom are women, tend to use MFS to run their businesses, which is quite an achievement. He stated that Bangladesh has demonstrated remarkable accomplishment in this area, citing numerous studies conducted in emerging and least developed nations that demonstrate how the absence of an inclusive banking system can exacerbate the ongoing income disparity and impede economic growth. Due to mobile carriers' extensive market penetration, MFS is a useful instrument for advancing financial inclusion in Bangladesh's slum and rural areas. Therefore, by somewhat empowering women, MFS is not only having a significant impact on financial inclusion in Bangladesh's rural areas but also significantly eliminating gender disparity in the country's financial sector. The Central Bank of Bangladesh since 2017 has been continuously urging Banks to also open branches in rural areas through Bank agents to reach out to the unbanked. Since then, agent banking in Bangladesh has grown quickly, particularly in peri-urban and rural areas. As of May 2021, there were 12,643 agent banking points and 16,807 agent banking outlets, respectively. But of course, opening a banking agent is not easy because it must take into account the cost and benefit. MFS, on the other hand, can be more easily opened to remote areas, so the number of MFS agents is much higher than the number of banking agent points and banking agent outlets or 1,086,108 and the combination of banks and MFS adds significantly to the ongoing process of financial inclusion. Since MFS operations contribute significantly to monetary indicators, MFS electronic money is considered to have the potential to increase or decrease interest rates. The researcher does concede, though, that no comprehensive study has looked at how Bangladesh's MFS providers' electronic money affects the country's total money supply. (Nizam, 2022).

Using a sample of 253 banks from four ASEAN nations, Banna investigates the connection between banking stability and Digital Financial Inclusion (DFI) between 2011 and 2019. More DFI adoption appears to be positively correlated with ASEAN banking stability, which lowers the chance of bank failure and improves the region's financial stability, according to empirical data. Because of this, the ASEAN banking sector's integrated digital financial inclusion guarantees sustainable economic growth, which supports the maintenance of financial sustainability during emergencies like the Covid-19 Pandemic. According to the

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report, banks should use barcodes to extend their agent networks and enable other digital financial services, such as online account opening and mobile phone-to-ATM connections, in order to draw customers from a wide range of socioeconomic backgrounds. Governments and regulators should provide people in the region, particularly those in middle age, with appropriate digital financial literacy since it is stated that people in the Philippines, Indonesia, and Thailand, in particular, lack financial and digital literacy especially for middle-aged people. Furthermore, this study shows governments and regulators that DFIs and financial stability are positively correlated, and that their implementation is urgently needed since they have the potential to significantly advance the ASEAN banking sector even during economic shocks (Banna & Alam, 2021).

Omodero conducted research in the Nigerian financial sector that highlighted the lack of recognition and adoption of Electronic money products. The tendency to opt for physical cash transactions and resistance to modern is still evident among individuals in Nigeria. The purpose of this study is to highlight the financial benefits of electronic payment methods and offer statistical proof of their value. Bank-offered electronic money items were taken into account as independent variables in the study, and GDP was employed as a stand-in for the total economy. The results of the study indicate that, with the exception of the Point of Sale (POS) system, which has not acquired traction, all bank electronic money products have a considerable and favorable impact on the economy. This implies that the implementation and utilization of Electronic money products can contribute positively to the country's economic growth and development. Based on the results, the study recommends the full implementation of cashless policies, which encourage electronic transactions and reduce dependence on cash. It also points out the need for proper education for the public to increase awareness and understanding of Electronic money products and their benefits. In addition, guidelines and measures to combat electronic fraud should be established to ensure the security and integrity of electronic transactions (Omodero, 2021).

2. RESEARCH METHODOLOGY

The research to be conducted is exploratory descriptive research with a qualitative approach. According to Umar, 2011, exploratory descriptive research aims to describe the state of a phenomenon or the nature of something that is ongoing when research is conducted and examine the causes of a particular symptom. The phenomenon in question is the development of digital finance and financial inclusion in Indonesia, and understanding its relationship with national resilience in the right of economic stability. According to Arikunto's (2012) statement, the goal of exploratory descriptive research is to characterize a variable, symptom, or circumstance rather than test specific hypotheses. This is in line with the purpose of this research is to provide a complete and understandable picture of the phenomenon under study. This research does not aim to test certain hypotheses, but rather to describe what variables, symptoms or conditions are ongoing. The analysis method is carried out on the data from the preliminary study which will be used to determine the focus of the research. The focus of this research is still temporary and develops during the research process. Qualitative approach to describe data and interpret data obtained through literature review and other supporting data from Bank Indonesia, Central Bureau of Statistics, journals, and other literature sources. Data collection is carried out as a preliminary study and literature review. then further analyzed so that a complete picture that can be understood and understood is the hope that will be obtained from this research.

3. DISCUSSION

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Development of Electronic money

Indonesia has enormous digital potential. According to a We Are Social article titled Digital 2021, there were only 72.7 million internet users in Indonesia in 2015. The number grew very significantly in 2022 by 178.68% or to 202.6 million people, showing that internet access is increasingly evenly distributed in Indonesian society. This is in line with data from the Central Statistics Agency (BPS) on internet penetration that continues to grow in Indonesia. Along with this, the number of active social media users in Indonesia has also increased significantly. This report said that active social media users in the country were recorded at 72 million accounts in 2015. The figure then increased by 136.11% to 170 million accounts in 2021. It is very clear that social media has an important role in the digital life of the Indonesian people. Not only social media, people are also increasingly adaptive to electronic-based payments. This is reflected in Bank Indonesia's data on the number of electronic money in circulation of 730.7 million in December 2022. This shows that more and more people are shifting from cash payments to more practical and efficient digital payments.

In alignment with the aforementioned discussion, Pertiwi et al. (2021) conducted an analysis of the growth, obstacles, and challenges concerning electronic money as a novel payment instrument in Indonesia, focusing on empirical studies involving the millennial demographic. With paper money being identified as a potential medium for Covid-19 transmission, the demand for touchless alternatives surged, with electronic money emerging as the most viable option. The study employed data collection techniques such as interviews with electronic money issuing company managers and 18 millennial customers. Utilizing qualitative approaches, the research concluded that the strategic direction for electronic money's development lies in fostering innovations that prioritize user security, particularly in the context of post-Covid daily transactions. Furthermore, enhancing promotional activities and offering cashback incentives at collaborating merchants emerged as the preferred strategy among customers. Challenges encountered by electronic money users encompassed security concerns, limited merchant acceptance, network instability, and socio-cultural factors such as ingrained habits favoring conventional cash payments. Meanwhile, electronic money issuers faced competition from similar products as a significant challenge. Additionally, the study revealed a preference among the majority of middle and upper-class individuals for non-cash transactions due to their perceived effectiveness and efficiency in conducting transactions.

In the developing country of Nigeria, Omodero (2021) examined the impact of electronic money on economic growth, noting a lack of sufficient recognition for FinTech innovations in electronic money products within the financial sector. Despite the numerous economic advantages associated with this innovation, traditional cash-based transactions remain prevalent. Many individuals still opt for physical cash withdrawals and deposits, showing resistance to modern technology. The study underscores the significance of electronic payment channels in the current economic landscape, providing statistical evidence of the substantial economic benefits offered by various electronic money products available today. However, the analysis shows that not all bank e-money products have a significant positive impact on the economy. Specifically, the study found that except for point of sales (POS), other bank e-money products made significant positive contributions to the economy. This suggests that while some products have managed to attract interest and widespread use, payment platforms such as POS are still not gaining enough momentum to have a significant economic impact. In order to strengthen the economic benefits of electronic payment channels, this study suggests several policy measures that can be taken. First, full implementation of cashless policies can help accelerate the adoption and use of e-money

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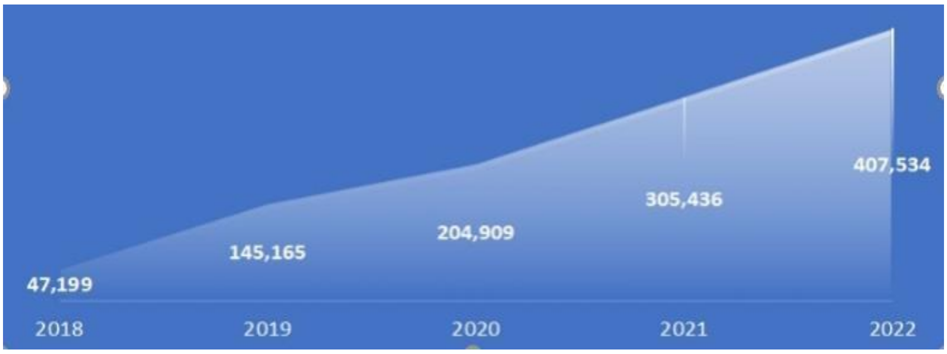
products. Second, proper education of the public on the benefits and usage of electronic payment channels can help increase adoption rates. Finally, guidelines and mechanisms to check electronic fraud are needed to maintain security and trust in the use of electronic payment channels. By taking these steps, it is hoped that the economic benefits of electronic payment channels can be enhanced overall, which in turn will support the growth and stability of the broader economy.

Figure 4. Development of Shopping Transaction Value With Electronic Money in Indonesia from 2018 - 2022 (IDR Billion)



Source: Bank Indonesia (data processed by the author in 2023)

The performance of electronic money seen in the Bank Indonesia (BI) data above where the value of shopping transactions with electronic money continues to increase despite the large-scale social restrictions (PSBB) that began in April 2020. It can be seen that shopping transactions with electronic money in 2020 grew by 41.15% (year on year / yoy) to Rp 204.90 trillion, continued to grow by 49.06% yoy to Ro 305.43 trillion and the latest data in 2022 grew by 33.4% yoy to Rp 407.53 trillion. The convenience provided to the public by electronic money makes the circulation of money faster, people can transact anytime and anywhere, 24 hours a day. Indirectly, public consumption increases, especially with additional promos and cashback.

Electronic money can contribute to increased transaction efficiency, reduced use of cash, financial inclusion and improved transaction tracking. Improved transaction efficiency by using e-money enables faster and more efficient transactions compared to traditional payment methods such as cash or checks. This increases overall economic productivity and reduces transaction costs. Reduced reliance on cash can help reduce the risk of theft, fraud and other illegal activities. This can result in a more secure and stable economic environment. electronic money can help provide access to financial services for those who were previously inaccessible to traditional financial institutions (financial inclusion). This can help improve financial inclusion and economic empowerment of underprivileged communities. With electronic data on transactions, governments can more effectively monitor economic flows and take necessary actions to prevent illegal activities and money laundering.

However, there are also some potential risks or challenges associated with Electronic money to national economic security as the use of Electronic money can also carry risks related to data security and user privacy. Its vulnerability to cyber attacks and data breaches can have a negative impact on the economy and public confidence. In addition, the reliance on technology can carry risks in the event of technical disruptions that can hamper transactions and economic activity. Also, inadequate regulation or lack of oversight of Electronic money systems can lead to misuse, fraud or other activities.

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The Indonesian banking industry has experienced rapid development in adopting digital technology to improve services to the public. Numerous internet-based services, including internet banking, electronic money, mobile payment (M-Payment), and mobile banking (M-Banking), have become indispensable in people's daily life. Transactions that can be done through these services are also increasingly diverse, not only limited to money transfers, but also in- cluding bill payments such as credit cards, electricity tokens, purchases on e-commerce sites, toll payments, public transportation such as busways and trains, as well as hotel reservations, and many more. It should be noted that before the term Digital Financial Institution (LKD) was used, Bank Indonesia had used the term branchless banking in 2011, which was later changed to Mobile Payment Service (MPS) in early 2014. The concept of LKD includes various facili- ties such as electronic money, e-wallet, mobile banking, digital savings, and online loans. For consumers, the adoption of LKD technology brings various benefits. They can conduct finan- cial transactions more efficiently, safely, and quickly. The risk of loss also tends to be lower with an integrated security system. On the service provider side, LKD opens up opportunities to enter new markets and launch new services at relatively lower costs compared to traditional business models. These developments show that the Indonesian banking industry continues to innovate and adapt to technological developments to meet the needs and demands of an in- creasingly digitalized market. This is also a positive indication of the potential for more inclu- sive and sustainable economic growth in the future.

The link between digital finance and financial inclusion

The financial services sector is essential to the survival of the economy. From this fact, the term "financial inclusion" became popular to measure the success of the financial industry in a country. The term began to trend after the global financial crisis in 2008, mainly based on the impact of the crisis on the lower middle class who are generally unbanked and are very numerous in developing countries. After the crisis, various efforts were made to strengthen the economy, with the financial inclusion index as one of the main targets. One of them was agreed at the Pittsburgh G20 Meeting in 2009, members agreed on the need to increase access to finance for low-income groups, as one of the main targets in strengthening the post-crisis economy. This marked the important role of financial inclusion in the global development agenda. At the Toronto Summit in 2010, the "9 Principles for Innovative Financial Inclusion" were issued as guidelines for the development of financial inclusion. The goals of the principles are to direct international initiatives aimed at enhancing financial services accessibility for all, particularly those living in remote or economically disadvantaged locations.

Financial inclusion, as defined by a number of organizations, including the G20 Global Partnership for Financial Inclusion (GPFI), is an endeavor to increase people's wellbeing by granting them access to financial services. The main segment that is usually seen in the assessment of the inclusion index is the productive age group that has an income. The scope of financial products ranges from credit, savings, payments, insurance and others. The goal of financial inclusion is to ensure all individuals and community groups, especially the disadvantaged and vulnerable, have safe, convenient and affordable access to a wide range of financial services. Such groups include low-income earners, rural residents, and those underserved by the formal financial sector. The objective of financial inclusion is to ensure that all individuals and households have adequate access to financial services necessary to meet their needs, as well as to help them manage financial risks, build assets, and improve their overall well-being. Thus, financial inclusion is not only about bank account ownership, but also about providing broader and more comprehensive access to financial services that

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enable all people to actively participate in economic activities, reduce financial inequality, and increase opportunities for inclusive economic growth. In accordance with the findings of Banna's research, which examined a sample of 253 individuals across four ASEAN nations over a period of nine years, the study highlights the constructive correlation between Development Financial Institutions (DFIs) and banking stability. It emphasizes the potential for significant advancements within the ASEAN banking sector, particularly in times of economic turbulence. Therefore, the study recommends swift implementation of these insights to relevant governmental bodies and regulatory authorities.

According to the information provided above by Bank Indonesia regarding the effectiveness of electronic money, coupled with the conditions of the Covid-19 pandemic that forced economic transactions of all levels of society to shift faster to the digital economy, demonstrates the substantial advancements made by Indonesia in the area of financial inclusion. The proliferation of fintech companies allows people, including those who were previously hard to reach by traditional banks, to more easily access digital financial applications, be it digital banking applications, digital wallets or online loan services. Many traditional banks are now innovating to switch to digital, allowing customers to conduct banking transactions without having to come to the bank office. It can be said that the development of financial inclusion in Indonesia is strongly linked to the progress of the digital economy and the development of LKD is expected to continue to expand access to financial services for the entire community.

Expanding access to finance plays an important role in improving the efficiency of the financial intermediation function, which can boost economic expansion. By improving access to financial services, such as savings, investment and credit, people can more actively participate in economic activities, which in turn can promote more inclusive and sustainable economic growth. To be more inclusive, financial services must be made available to all segments of society, including the underprivileged, people living in remote areas, and other vulnerable populations. Sustainable means encouraging economic growth that takes into account the sustainability of the environment and the preservation of natural resources. At the G20 Summit in Los Cabos, Mexico in 2012, the President of Indonesia emphasized his country's commitment to inclusive finance. This shows awareness of the importance of expanding access to finance to improve people's welfare and strengthen the economy as a whole. In line with this commitment, Indonesia set a financial inclusion target in the Seventh Nawa Cita, which is to build a strong, inclusive and sustainable economy by strengthening strategic economic sectors, developing reliable infrastructure, and improving competitiveness and people's welfare. This shows the government's determination to increase access to financial services for all levels of society, especially those previously underserved by the formal financial sector.

Figure 5. Development of Financial Inclusion Index and Financial Literacy Index from 2013 - 2022.

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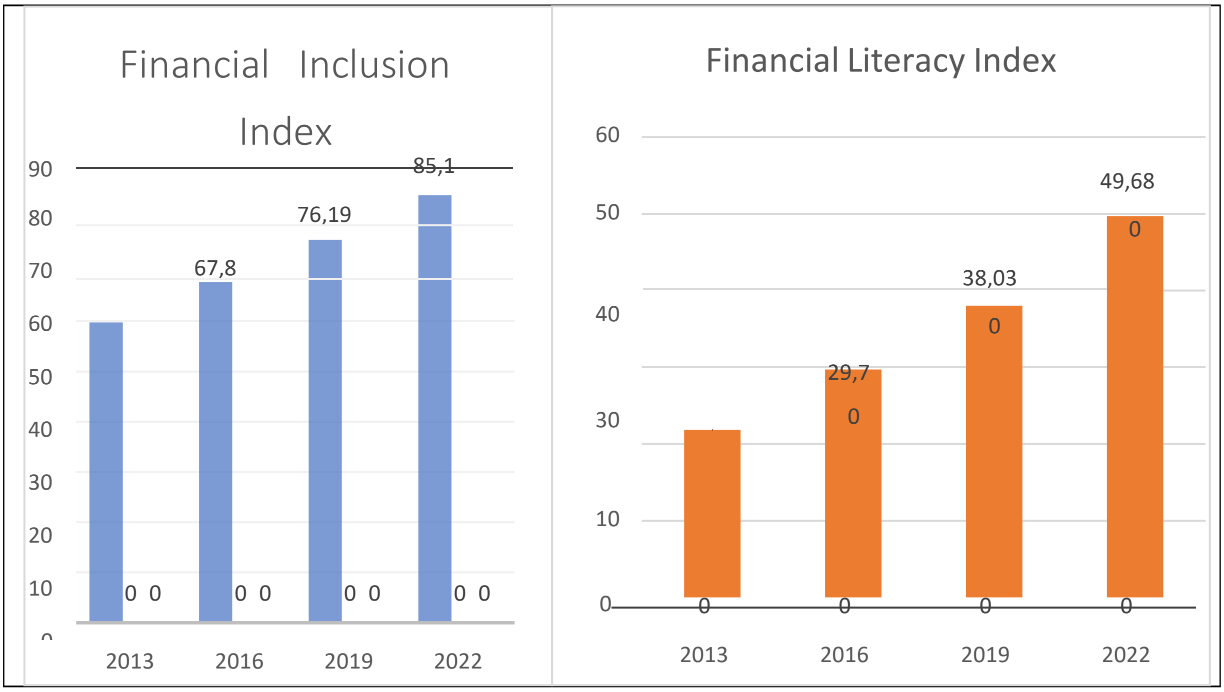

Source SNLIK OJK 2022

The 2022 National Survey on Financial Literacy and Inclusion (SNLIK) conducted by OJK shows the growth of the Indonesian people's financial literacy index of 49.68 percent and financial inclusion of 85.10 percent. In comparison to the 2019 SNLIK results, where the financial inclusion index was 76.19 percent and the financial literacy index was 38.03 percent, these two indices indicate an increase. This increase shows that the efforts made by the government, regulators, and various other related parties in improving financial literacy and inclusion have given positive results. Counseling, education, and promotion on the importance of good financial management, as well as efforts to expand access to financial services, seem to have had a significant impact in increasing public awareness and participation in the financial system. With the existing conditions in terms of economy, education, and geography, Indonesia presents a challenge in improving financial inclusion. Therefore, continuous innovation is needed to provide more affordable and accessible financial products/services. The development of fintech has contributed to the limited reach of traditional financial institutions. Existing financial institutions can collaborate with each other to provide a more relevant financial ecosystem for Indonesians as a whole. For this reason, a bridging mechanism is needed, so that traditional institutions (such as banking, multifinance, etc.) can synergize with new players (fintech). Ultimately, the goal of financial inclusion is to provide cheap and accessible financial products/services for all levels of society, especially through the digital medium. Hopefully, with more equitable accessibility, it will help increase the financial inclusion index in Indonesia and indirectly contribute to the welfare of the nation's life.

Objectives and Benefits of Financial Inclusion Based on Several Previous Research Reviews

According to research by Arnesh Telukdarie & Mungar (2023), South Africa's economy is one of the continent's fastest-growing. In spite of this, a sizable section of the populace suffers from poverty and economic inequality, which has an effect on the expansion of the economy as a whole. The majority of people in developing nations, like South Africa, reside in

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rural areas, which limits their access to financial services. The developing world has been considered as a potential beneficiary of digital financial technologies. Because financial inclusion has the ability to enhance low-income people's lives, this research indicates that it is still an issue that receives a lot of attention. Accelerating the transition to financial inclusion may benefit the economy, according to the literature consulted for the study. From the research above, we find that the objective of financial inclusion is to ensure that all individuals and community groups have equal opportunities to obtain the required financial services and are capable of making use of them in accordance with their requirements and financial situation. In addition, the research also shows that the benefit of financial literacy is to reduce inequality in society, as individuals who are more knowledgeable about finance tend to have more access and opportunities to utilize available financial services. By reducing inequality and increasing participation in the financial system, financial literacy can contribute to improving the overall welfare of society. Thus, it is expected that financial inclusion and financial literacy efforts will not only improve individual welfare, but also have the potential to reduce overall poverty levels, creating a more stable and prosperous society.

The study by Eva Maria et al., 2021, which was carried out in Mexico, looked at the associations between ownership of digital banking, the type of service, and the reasons people don't use it, and demographic characteristics (gender, age, and area). His research's findings are linked to a gender-specific digital bank account. There may be a gender difference in access to digital banking accounts since women are more marginalized than men. Furthermore, a bank account with digital banking may vary by location. Compared to less developed countries, people in more developed regions employ a wider range of digital banking services. Considering the region's size, rural areas and small towns are more likely to lack digital banking access, which suggests that these populations are excluded. The findings may be taken into consideration in developing nations that are comparable to this one in order to encourage financial inclusion for vulnerable populations including women, those who live in underprivileged areas, rural areas, small towns, and the elderly. The results might offer guidelines for government organizations and financial firms to concentrate their efforts on integrating financially excluded populations via digital banking. Despite the fact that this study was carried out in poor nations, the findings can also help with strategies for addressing exclusionary practices in other kinds of nations. This article is relevant because it's widely acknowledged that a lack of financial inclusion limits everyone's access to economic freedom and a high standard of living. It demonstrates how the Human Development Index can be improved with the help of financial inclusion.

Consistent with the aforementioned research, Banna & Alam, 2021 carried out a study in developing Asean nations, specifically in Indonesia, Malaysia, the Philippines, and Thailand, to examine how digital financial inclusion may play a role in preserving the stability of ASEAN banks and whether this relationship may have an effect on the pandemic that may arise after COVID-19. The adoption of digital financial inclusion, according to the findings, fully accelerates the stability of ASEAN's banking system, reducing the danger of bank failure and boosting the region's financial mobility. The findings also indicate that ASEAN banks are probably going to encounter this if digital financial inclusion is implemented. Accelerating digital finance in ASEAN nations is therefore seen as one of the crucial initiatives for the stability of the banking sector, which subsequently promotes financial and economic resilience even in the face of a crisis.

The development of the digital economy and financial inclusion in Indonesia in terms of economic stability and its relation to national resilience.

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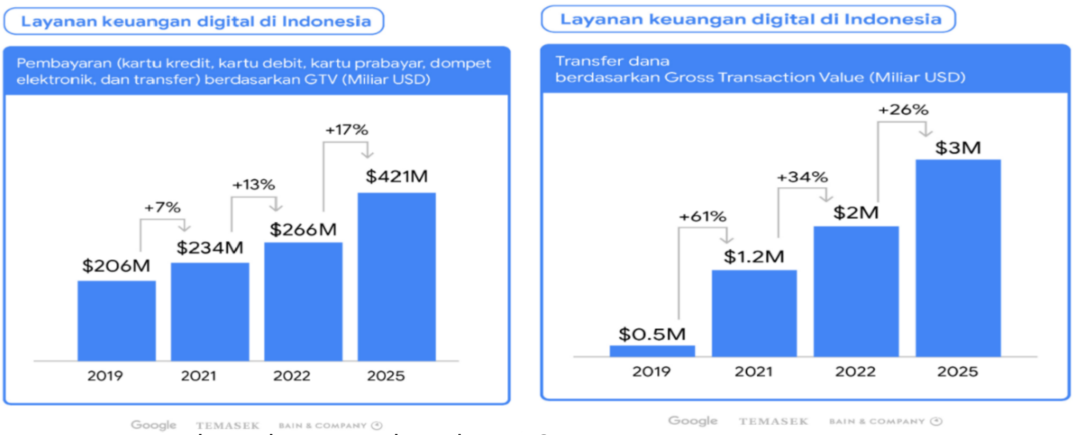
The development of the digital economy through Electronic money and financial inclusion in Indonesia has a very significant link to national resilience including economic stability. Financial inclusion through the development of digital financial services can help increase people's access to formal financial services. With more people having access to bank accounts or electronic payment services, the potential for financial inclusion increases. Financial inclusion through LKD can help reduce economic inequality. By providing access to those who were previously marginalized, such as rural or low-income residents, it can help improve their well-being and reduce social and economic disparities in society. Low inequality can have a positive impact on social and political stability, contributing to national resilience.

Micro, small, and medium-sized businesses can benefit from the digital economy and financial inclusion (MSMEs) by providing access to capital and resources necessary for their growth and development. Strong MSMEs can be an important pillar in a country's economic stability by creating jobs, boosting economic growth and diversifying sources of income. Technological developments enable real-time monitoring of the economy through financial transaction data. In a digital economy, it is important to ensure transaction security. Effective efforts to mitigate cybersecurity and fraud risks will support financial system stability and public trust in LKD. In the context of national resilience, economic stability is one of the important pillars. The development of an inclusive digital economy can play a role in strengthening economic stability by increasing access to finance, reducing inequality and providing tools to address economic risks. However, it is important for the government and regulators to design appropriate regulations, ensuring careful balancing of the digital economy.

Figure 6. Development of Indonesia's Digital Financial Services



Source Google with Temasek and Bain & Co.

Significant expansion in the digital financial services sector, including Digital Financial Institutions (LKD), has been observed in Indonesia, according to data from Google's report with Temasek and Bain & Co. A number of subsectors, including financial transfers, digital insurance, Buy Now, Pay Later services, and cashless payments, are expected to see this increase. By 2022, non-cash payments are predicted to have a gross transaction value of US$266 billion, an increase of 13% over the previous year. In reality, growth of up to 17% to US$ 421 billion is projected by 2025. The usage of credit cards, debit cards, prepaid cards, e-wallets, and account transfers are examples of these non-cash payment methods. One of the areas of digital financial services that is expanding the fastest in the insurance industry is digital insurance. It grew by 64% year on year (YoY).

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Projections show that digital insurance could reach a value of US$400 million in 2022 and is expected to grow to US$1 billion by 2025. These growth forecasts show the huge potential for digital financial inclusion to drive innovation across various sectors of the economy. This includes digital banking, insurance, financial technology (fintech) and other sectors. Strong growth in Buy Now, Pay Later and funds transfer financial services reflects the strong trend in digital financial inclusion in Indonesia also saw remarkable growth, rising by 66%.

The projected market value of US$5 billion by 2022 indicates widespread adoption by consumers. It is estimated that by 2025 the market value of these services will reach US$16 billion, showing an increasing growth rate with a CAGR of 51%. Funds transfer is also becoming an increasingly popular service with significant growth in transaction value. In 2022 the value of funds transfers increased by 34% to US$ 2 billion. Projected growth to 2025 shows an increase of 26% to US$3 billion. This shows that fund transfer services are increasingly becoming the main choice for people in conducting financial transactions. The COVID-19 pandemic and technological developments play an important role in increasing the potential for digital financial inclusion in Indonesia. Restrictions on physical interaction and mobility during the pandemic have encouraged people to turn to digital financial services as an alternative solution. Increased public access to various financial products is also a positive impact of digital financial inclusion. The potential to enhance financial inclusion and the general well-being of society increases with the number of individuals having digital access to financial services.

According to research by Khera et al. (2021), infrastructural accessibility, financial and digital literacy, and institution quality are some of the variables that can influence digital financial inclusion. Furthermore, in order to fulfill the overarching objective of financial inclusion, Bank Indonesia (BI) emphasized in 2019 the significance of combining the country's payment system with monetary policy, financial system stability, and digitally based financial inclusion. Research by Khairul and Amri (2017) shows that financial inclusion contributes positively to the increase in Indonesia's Gross Domestic Product (GDP). This shows the importance of financial inclusion in supporting more inclusive and sustainable economic growth. Overall, these data and studies show that inclusion of digital finances has great potential to drive economic expansion, reduce inequality and improve the welfare of Indonesians. Therefore, efforts to continue expanding access and improving dig- ital financial literacy should continue to be encouraged to achieve the goal of broader and more sustainable financial inclusion.

According to the Economist's Global Financial Inclusion Index 2023 published by the Economist Intelligence Unit, assesses the extent to which an individual has access to finance and uses financial services, covering 174 countries. The overall score of the Global Financial Inclusion Index ranges from 0 to 100 with higher scores indicating higher levels of financial inclusion. In 2023, the average score of the index is 63.4, up from 62.5 in 2022. There has been a slight improvement in financial inclusion over the past year. However, there is still a significant gap between developed and developing countries, where in developed countries the score is 78.6, while in developing countries the average score is 58.1, indicating that there is still much work to be done to ensure that everyone has access to and uses financial services.

In this chapter, researchers feel the need to compare the value of Indonesia's electronic money shopping transactions in 2022 according to BI data with the projected value of payment transactions in 2022 according to Google data with Temasek & Bain Co, the amount of electronic money transactions has a share of 10.21% or a significant enough influence in the digital economy. Therefore, I think it's important to look at how electronic money has

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grown when talking about how the digital economy is developing and its contribution to economic stability that will form national resilience.

4. CONCLUSION

The growth of financial institutions in Indonesia has been greatly impacted by the development of the digital economy, which is facilitated by the usage of electronic money instead of cash to help the unbanked and remote populations that are difficult to reach by traditional financial institutions. This makes financial services accessible to all societal levels and contributes to greater financial inclusion and economic empowerment of the poor.

Increasing financial accessibility through LKD development does offer a lot of potential to enhance the role of financial intermediation and support equitable and long-term economic growth. Growing savings, bolstering domestic investment, and establishing financial system stability are just a few of the ways that digital financial inclusion can be a catalyst for a wide range of beneficial economic effects. These factors eventually fuel economic expansion. Financial inclusion contributes positively to national resilience, creating an economically stable society that reduces social instability. It also requires collaboration between the government, e-money service providers and other sectors to create an ecosystem that supports sustainable growth. However, e-money can also carry risks related to data security and user privacy. Its vulnerability to cyber-attacks and data breaches can have a negative impact on the economy and public trust,

With these aspects in mind, the implementation of e-money and the development of financial inclusion can be one of the strategies to enhance national resilience through economic stability. The government and relevant stakeholders need to work together to create an enabling environment for innovation and inclusive economic growth.

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