

BANKING TRANSACTIONS USING FINANCIAL TECHNOLOGY EXPANDED DURING THE COVID 19 PANDEMIC

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ABSTRACT

This study was conducted to determine the growth of *Fintech* transactions in banking during the Covid-19 pandemic. As we all feel that the covid-19 pandemic outbreak is a serious threat to life and the economy. This has an impact on all business sectors which has a bad influence on world financial inclusion, especially in Indonesia. This impact is also felt by the banking sector. As a financial intermediary institution that prioritizes services to the community (customers), banks are increasingly aggressively carrying out their business activities on a *technological* basis. *Financial technology* is a base that continues to be rushed in its development and updating to support *cash less* transactions that allow transactions without cash and without face to face. The opening of payment channels through leading and well-known *start-ups* continues to be established so that it is possible to interlock in transactions. *Peer to peer* (P2P) is one of the right ways to help strengthen inclusiveness for businesses and customers. Creating convenience in every transaction is an obligation for every banking institution. Facilitating the reach of services to each individual is also an expectation that must be achieved and realized. *Financial technology* (*Fintech*) is the right tool to build an *image* in the eyes of the community as a partner / user.

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1. INTRODUCTION

The covid-19 pandemic has brought bad history to the health sector in Indonesia. But on the other hand, covid 19 brings good things/new habits to the world community, especially Indonesia. Until now, the implementation of health protocols continues to be carried out to minimize the transmission of the Covid-19 virus which continues to grow. Many public and private offices are still implementing a work from home system or what is known as WFH (Work Form Home).

During the covid-19 pandemic, fintech began to develop very rapidly, bringing its own role and blessings to banking institutions. Indirectly, fintech has changed the business model from conventional to moderate, which initially in paying must be face-to-face and carry a number of cash (cash), can now make remote transactions by making payments that can be made in just seconds (Pambudi 2019).

For most groups of individuals, fintech is a solution in conducting financial transactions. During the pandemic, the implementation of PSBB (Large-Scale Social Restrictions) rules hampered the pace of the economy in transactions. With the sophistication of artificial intelligence, fintech allows economic actors to transact peer to peer without meeting face to face (Raharjo et al., 2019). During the covid-19 pandemic, the role of fintech has helped a lot and fintech technology is the most rapidly and widely developing segment in offering the latest service features and its role in making it easier for people to get financial products and literacy (Marisa 2020).

Actually, the potential of digital banking has been seen from the past few years, we see it growing with promising prospects in Indonesia. The fact of the growth of this business potential can be seen from the statistics of the Financial Services Authority which shows that the value of e-banking transactions in 2017 has reached Rp. 7.8 trillion, up 5.8% compared to 2016. Even AG software, a software company for the financial industry, released that the digital banking trend will reach its peak in 2020. Accenture Indonesia research released a third of the market share of traditional banks will be eroded by 2020 if they do not transform to digital banking.

Table 1. Transformation to Digital Banking

Years	Outstanding	Number Of	Transaction
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	Amount (Million)	Transactions (Million Transaction)	Value (Rp. Trillion)
2012	21.87	100.62	1.97
2013	36.23	137.90	2.91
2014	35.74	203.37	3.32
2015	34.31	535.58	5.28
2016	51.20	683.13	7.08

Source: Bank Indonesia

Financial services *start-ups* (known as *fintech* companies) in Indonesia started to grow in 2006. This also marks Indonesia's entry into Fintech Generation 3.0. Even in the industrial revolution, especially in the evolution of payments, technology has been very renewable from time to time. Judging from its general development and progress, *fintech* has been present in the middle of the market from 1661 to 2014.

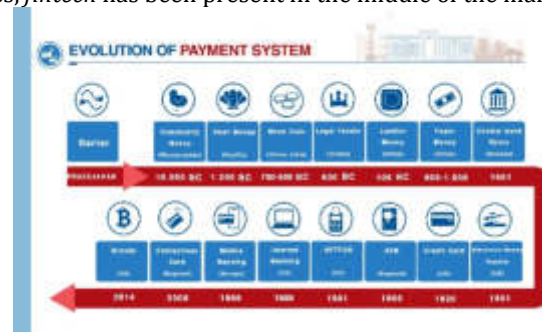


Figure 1. Evolution of Payments
Source: Finpay data

But at a time when the *fintech* pandemic is growing so fast and rapidly, it is also reported that 33% of *fintechs* in Indonesia posted transactions of more than IDR 80 billion in 2020. In addition, the total transactions of all Indonesian fintechs during 2020 reached more than Rp 4.6 trillion. This value sounds astonishing, but there is still plenty of room for growth.



Figure 2. Respondents Participants
Source: Indonesian Fintech Association

2. LITERATURE REVIEW

2.1. Definition of Financial Technology (Fintech)

Financial technology (Fintech) is a financial technology innovation. Taken from the large Indonesian dictionary; financial which means financial is a specific thing that takes care (affairs) of finance, technology which means technology is; i) scientific methods to achieve practical goals (applied science). ii) the overall means of providing goods necessary for the survival and comfort of human life. From the description of the two words above, it can be interpreted that financial technology is a means / scientific method that takes care of (affairs) finance, to achieve practical goals in providing goods needed for survival and comfort of life (Rizal et al, 2018).

For now, there is no standardized definition of fintech. However, the National Digital Research

Center or (NDRC) defines Fintech as a term that can be used to refer to innovations in the field of financial or financial services (Basya et al 2020).

Fintech (Financial Technology) is an artificial intelligence that collaborates information technology and finance and creates innovative financial products, which facilitate, accelerate, and expand access to financial products in the community. In recent years, we can witness the rapid growth of online fintech in Indonesia (Marginingsih 2019).

2.2. Types of financial technology (fintech) payment Banking Institutions QR Code Indonesian Standart (QRIS)

QR Code Indonesian standard or commonly referred to as QRIS, is one of the latest payment media that can make it easier for merchants (traders) and consumers to make payments (Zaborovskaya 2021).

QRIS is a unification of various QRs from various Payment System Service Providers (PJSF) using the QR Code. QRIS was developed by the payment system industry together with Bank Indonesia so that the transaction process with QR Code can be easier, faster, and safer. All Payment System Service Providers that will use the QR Code Payment must implement QRIS (Kshetri). With the advantages of this system, QRIS provides many benefits to users of this payment application and for merchants who join this payment channel.

In supporting each region's policy in launching micro-scale restrictions, synergy and coordination with the Government also continues to be strengthened through the use of QRIS in the Bangga Buatan Indonesia (BBI) National Movement QRIS expansion by local governments is also expanded as part of the implementation of the Regional Digitalization Expansion and Acceleration Team (TP2DD). As of November 1, 2021, the target of 12 million merchants (fig. 3) connected to QRIS has been achieved, exceeding the target of 12 million by the end of 2021. Moreover, the use of QRIS is also increasing both in terms of volume and nominal which indicates the increasing acceptance of QRIS by the public (fig. 4).

Kriteria Merchant	22/03/2020	05/11/2021	Pertumbuhan (%)
Usaha Besar	129.834	449.311	246%
Usaha Menengah	265.077	928.005	250%
Usaha Kecil	304.420	3.203.652	952%
Usaha Mikro	2.378.026	7.532.134	217%
Donasi/Sosial	3.996	124.484	3015%
TOTAL	3.081.353	12.237.586	297%

Figure 3 Registered Merchants (QRIS)

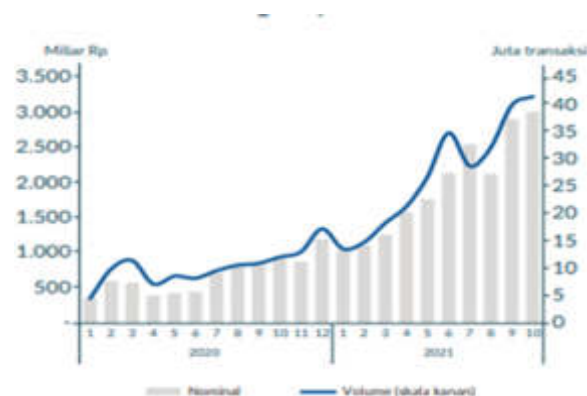


Figure 4. QRIS development

2.3. Electronic (Digital) Wallet

Electronic Wallet is an electronic service to store payment instrument data, including payment instruments using cards and/or electronic money, which can accommodate funds to make payments. The Electronic Wallet Operator is one of the Payment System Service Providers that must obtain prior authorization from Bank Indonesia. The limit of funds that can be stored in the Electronic Wallet is Rp10,000,000.00 (Ten Million Rupiah).

Funds deposited in the Electronic Wallet can only be used for payment purposes which include; a). Payment of shopping transactions, b). Bill payments. Funds deposited in the Electronic Wallet cannot be transferred to another Electronic Wallet. Addition of funds to the Electronic Wallet can be done, among others, by cash deposit, transfer, or auto debit of deposit accounts or electronic money. Withdrawal of funds can only be done by transferring funds to the user's deposit account at the Bank that has been registered or withdrawing funds in cash in order to redeem. Provisions regarding Electronic Wallets are regulated in Bank Indonesia Regulation No.18/40/PBI/2016 and Bank Indonesia Circular Letter No.18/41/DKSP regarding the Implementation of Payment Transaction Processing.

The social change in society towards the use of money from cash and slowly switching to electronic money or commonly called e-money cannot be separated from the role of digital wallet developers. Even in the covid-19 pandemic situation, digital economic and financial transactions continue to grow. Restrictions on activities during the pandemic actually encourage people to shop online (Safitri and Diana 2020).

The increasing trend of online shopping has a positive impact on the expansion of digital payments and the acceleration of digital banking. Bank Indonesia data shows that the value of electronic money transactions in February 2021 was recorded at IDR 19.2 trillion, growing 26.4 percent year on year. Likewise, the volume of digital banking transactions reached 464.8 million transactions with a transaction value that exceeded IDR 2,547.5 trillion or grew 22.9 percent year on year in February 2021. Referring to this impressive growth, Bank Indonesia predicts that this digitalization trend will continue to expand along with the rapid development of technology, innovation, and the expansion and strengthening of the digital ecosystem.

From Neurosensus's research in digital wallet usage trends through 100 respondents in 8 major cities for 3 months, from November 2020-January 2021, the results of 5 digital wallets were presented as follows:

Table 2. Growth of E-commerce Market Penetration

NO	Digital Wallet Name	Market Presentation	Transaction Frequency per month	Service available
1	ShopeePay	68	14,4 times	COD (Cash On Delivery)
2	OVO	62	13,5 times	Services On a number of partners, application providers of transportation and delivery services
3	Dana	54	13,1 times	Electronic payment systems, electronic money payment systems, fund transfers and smartphone cellular-based transaction services
4	Gopay	53	12,2 times	Gocar, godrive, gofood payments and other services available on the Gojek application
5	LinkAja	23	8,2 times	To save electronic money as well as a number of payment service payments available in the application

Source: Tempo.com

2.4. Payment Gateway

Payment Gateway is an electronic service that allows merchants to process payment transactions using payment instruments using cards, electronic money, and/or Proprietary Channel. Payment Gateway Operator is one of the Payment System Service Providers that must obtain prior permission from Bank Indonesia. The provisions regarding Payment Gateway are regulated in Bank Indonesia Regulation No.18/40/PBI/2016 and Bank Indonesia Circular Letter No.18/41/DKSP on the Implementation of Payment Transaction Processing.

One of the most prominent payment gateways during the covid-19 pandemic is the e-commerce trade channel. In the language literature, e-commerce comes from English which means electronic commerce. In Indonesian e-Commerce means the distribution, buying, selling, marketing of goods and services through electronic systems such as the internet, television, and other computer networks. E-commerce can involve electronic fund transfers, electronic data exchange, automated inventory management systems, and automated data collection systems (Lingasari 2021). Currently, transactions

through e-commerce are widely used, we can see and feel such as internet banking, SMS banking TV subscrip ti on internet providers and online buying and selling transactions available in the marketplace.

Table 3. Percentage of e-commerce businesses and the impact of the covid-19 pandemic

No E-commerce	Increased	Same	Decreased	Total	Description	
1.	Impact of the covid-19 pandemic on income business	4,589	,5985	,83	100,00	1. A sharer is an e-commerce business that accepts orders in 2020.
2.	Impact of the covid-19 against volume	4,6210,	3685	,01	100,00	2. Figures is the accumulated result of
	19 against volume	4,6210,	3685	,01	100,00	is the accumulated result of

2.5. Proprietary Channel

Proprietary Channel is a payment channel developed and owned by the Bank exclusively for the benefit of its own customers, which among others uses technology based on short message service, mobile, web, subscriber identity module tool kit, and/or unstructured supplementary service data. The implementation of Proprietary Channel conducted by Payment System Service Provider in the form of Bank must obtain approval from Bank Indonesia. Provisions regarding Proprietary Channel are regulated in Bank Indonesia Regulation No.18/40/PBI/2016 and Bank Indonesia Circular Letter No.18/41/DKSP regarding the Implementation of Payment Transaction Processing.

During the covid-19 pandemic, Proprietary Channel was in great demand by government and private institutions to carry out internal institutional financial transactions such as making payments for office operational expenses and accessing other financial information related to the institution's cooperation with banking institutions.

The benefits of using Proprietary Channel are the same as the types of fintech previously mentioned as well as payment channel applications in general found on smartphones. It's just that the ownership of this payment channel (Proprietary Channel) is more about the privacy of institutional financial transactions (Sulyman et al., 2019). CMS (Cash Management System) is one example offered by banking institutions to user partners in managing finances in government and private institutions CMS Service is a non Individual online application, which CMS is intended for institutions in order to meet the needs of banking transactions. In its use, CMS presents almost the same information, except that each bank has its own identity and interface in representing their brand (Chuk et al., 2021).

Quoted from the Kontan.co.id page - Jakarta, there is an increase in the CMS service business amid the co-19 pandemic, the following is a summary of the growth of the 3 big banks in CMS services during the co-19 pandemic released from the page:

Table 4. Cash Management System User Growth

No.	Cash Management System	User	As of September 2020 (Yoy)	
			Frequency volume Usage	Average transaction average
1.	Bank Central Asia	16%	35 Million	500 T
2.	Bank Negara Indonesia	10%	-	Rp. 2500 T

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3.	Bank Rakyat Indonesia	9%	26 Thousand	Rp. 2,765 T
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Source: Kontan.co.id

3. METHODS

In writing this research, the method used is a qualitative descriptive analysis technique, where all data generated and presented are in the form of descriptions, namely in the form of a description of the results of the research. The data collection techniques used include online and printed literature study approaches, and literature related to this research.

4. RESULTS AND DISCUSSION

This research is motivated by the covid-19 pandemic which threatens the real sectors, especially in the economic sector. Back to the main problem where consumption is the main goal that will be achieved to meet the needs of human life. PSBB (Large-Scale Social Restrictions) is also a major issue on this topic which also hampers the pace of the economy during the covid- 19 pandemic. Against this problem, the government as a decision maker, provides advice to carry out activities through the home or what is known as WFH (Work Form Home).

From the above statement, the bank in this case as a financial intermediary institution also supports the decisions made by the decision maker (government) by providing easy transaction services through financial technology known as fintech (financial technology).

When it comes to fintech, the revolution and evolution of payments is nothing new. It has been around since 1661 with electronic fund transfer services. The same thing continued to develop in 1960 the UK began to develop by providing services to withdraw money without having to go through a teller in the bank, namely by using withdrawals through an ATM machine (Automatic Teller Machine). In 1999 there was a significant upgrade, fintech evolved into a more modern one with the launch of mobile banking products that allowed users to transact anywhere within a certain network connection on a smartphone device.

Fintech transactions experienced a high spike in mid-2020, where the pandemic brought a new lifestyle in transactions. For businesses, fintech seems to bring blessings in difficult times. With applications offered by various start-ups and leading platforms, fintech comes with easy service features that accommodate the needs during the covid-19 pandemic. For this reason, fintech is believed to be increasingly in demand because on the other hand fintech has provided many solutions in managing financial transactions, which is likely that in the following years the fintech industry will increase.

Of the 4 types of fintech that are payment systems in banking institutions, there are 3 types of payment systems that experienced a spike in numbers during the Covid-19 pandemic.

4.1. QR Code Indonesian Standard (QRIS)

QRIS is a payment aid, a system that makes it easy to make transactions. Since it was first launched on August 17, 2019, there has been a significant increase during the pandemic of 297% on November 05, 2021.

Table 5. QRIS User Growth

Merchant Criteria	22/03/2020	05/11/2021	Growth
Large Business	129.834	449.311	246%
Medium Business	265.834	928.005	250%
Small Business	304.420	3.2003.652	952%
Micro Business	2.378.026	7.532.134	217%
Social Donation	3.996	124.484	3015%
TOTAL	3.081.353	12.237.586	297%

From the table above, it can be seen that the increase in numbers is quite significant in the use of QRIS during the pandemic. This can be seen from the merchant criteria which show growth and an increase in the level of need.

4.2. Electronic Wallet

Electronic Wallet is an electronic service to store payment instrument data, including payment instruments using cards and/or electronic money, which can accommodate funds to make payments.

From the data obtained, the trend of using digital wallets through 100 respondents in 8 major cities

for 3 months, from November 2020-January 2021, the results of 5 digital wallets were presented, namely;

- a) Shoope Pay experienced a market penetration of 68% with a transaction frequency of 14.4 times through its flagship service, COD (*Cash On Delivery*).
- b) OVO ranked second with a market penetration of 62% in the frequency of transactions recorded 13.5 times per month, with services on a number of partners, transportation and delivery service provider applications such as Grab.
- c) DANA has a market penetration of 54% with a transaction frequency of 13.1 times per month, the services offered are in the form of electronic money payment systems, fund transfers, and other transaction services based on smartphone cellular.
- d) Gopay, has a penetration of 53% with 12.2 times the frequency of transactions each month. The services provided are in the form of payments for Gocar, godrive, gofood and other services available on the gojek application.
- e) LinkAja with 23% market penetration or 8.2 times the frequency of transactions each month. The services provided are in the form of payment services available in the application.

4.3. Payment Gateway

Payment Gateway is an electronic service that allows merchants to process payment transactions using payment instruments using cards, electronic money, and/or Proprietary Channels (Mustaqor and Winanto 2022).

Trade transactions have increased quite significantly, judging from the growth of the impact of the co-19 pandemic on business income of 4.58%, on the volume of transactions the increase reached 4.62% and on the smooth distribution only reached 3.51%. Although the distribution of goods during the pandemic is less smooth, the growth of trade transactions is still increasing. This can be seen from the enthusiasm of most citizens using fintech as a solution to meet economic needs.

4.4. Proprietary Channel

Proprietary Channel is a payment channel developed and owned by the Bank exclusively for the benefit of its own customers, which, among others, uses technology based on short message service, mobile, web, subscriber identity module tool kit, and / or unstructured supplementary service data (Arigawati and Cahyaningsih 2021).

From the observed findings, to support the government in implementing PSBB, agencies and institutions affected by this WFH regulation have taken the initiative to use CMS. From the observation of 3 large banks in Indonesia, BCA bank users amounted to 16% with a transaction volume of Rp. 500 Trillion, BNI with an average user of 10% with a transaction volume of Rp. 2500 Trillion, BRI total average user 9% and transaction volume of Rp. 2,765 Trillion. This calculation is made based on year on year growth figures in September 2020.

5. CONCLUSION

Pandemic covid -19 is not all bad things. The pandemic we are experiencing brings its own blessings to the development of *fintech* in Indonesia. When people are overshadowed by economic uncertainty, *fintech* brings solutions to digital finance. With *fintech*, transactions are easier, people can also fulfill their economic needs without having to meet physically. The development of fintech in Indonesia still provides considerable opportunities and is wide open, but it must be followed by easier regulation, adequate infrastructure, and socialization of a broader understanding of fintech so that fintech can be more developed and minimize the rapid growth of illegal fintechs.

REFERENCES

- [1] D. Arigawati and I. Cahyaningsih, "Pengaruh sistem e-payment terhadap peningkatan motivasi belanja online dan aktivitas sektor riil," *Goodwill*, vol. 3, no. 2 Desember, pp. 392-398, 2021.
- [2] M. Mazza Basya, R. Setya Iqbal Pratama, and M. Iqbal Surya Pratikto, "Strategi Pengembangan Fintech Syariah Dengan Pendekatan Business Model Canvas di Indonesia," *OECONOMICUS J. Econ.*, vol. 4, no. 2, 2020, doi: 10.15642/oje.2020.4.2.180-196.
- [3] E. Chuk, B. Lourie, and I. S. Yoo, "The check is in the mail: Can disclosure reduce late payments to suppliers?," *Available SSRN 3775656*, 2021.
- [4] N. Kshetri, "China's emergence as the global fintech capital and implications for southeast asia," *Asia Policy*, vol. 27, no. 1, pp. 61-81, 2020.
- [5] N. Linggasari, "Analisis Faktor-Faktor yang Mempengaruhi Minat Penggunaan Dompot Elektronik *Banking Transactions Using Financial Technology Expanded During The Covid 19 Pandemic*, **Hardi Ferdiansyah, et.al**

- dalam Transaksi Keuangan.” STIE YKPN, 2021.
- [6] R. Marginingsih, “Analisis SWOT technology financial (fintech) terhadap industri perbankan,” 2019.
 - [7] O. Marisa, “Persepsi Kemudahan Penggunaan, Efektivitas, Dan Risiko Berpengaruh Terhadap Minat Bertransaksi Menggunakan Financial Technology,” *J. Adm. Kant.*, vol. 8, no. 2, pp. 139–152, 2020.
 - [8] A. Mustaqor and S. Winanto, “Pengaruh Payment Gateway dan Kemudahan Transaksi Terhadap Keputusan Pembelian Dengan Etika Konsumsi Islam Sebagai Variabel Moderasi: Studi Kasus Produk Mukenah Dalanova, Widiping,” *J. Ilm. Wahana Pendidik*, vol. 8, no. 1, pp. 748–758, 2022.
 - [9] R. D. Pambudi, “Perkembangan fintech di kalangan mahasiswa UIN Walisongo,” *Harmon. J. Pembelajaran IPS Dan PKN*, vol. 4, no. 2, pp. 74–81, 2019.
 - [10] B. Rahardjo, K. Ikhwan, and A. K. Siharis, “Pengaruh financial technology (fintech) terhadap perkembangan UMKM di Kota Magelang,” 2019.
 - [11] M. Rizal, E. Maulina, and N. Kostini, “Fintech As One Of The Financing Solutions For SMEs,” *J. Pemikir. dan Penelit. Adm. Bisnis dan Kewirausahaan*, vol. 3, no. 2, pp. 89–100, 2018.
 - [12] A. I. Sulyman, T. J. Montano, and J. E. Post, “Experimental data on connecting proprietary IoT systems to cellular networks,” in *2019 IEEE International Conference on Communications Workshops (ICC Workshops)*, 2019, pp. 1–5.
 - [13] A. Zaborovskaya, K. Gruzdeva, M. Borzemska, E. Kniazeva, and M. Klimenko, “Russian Banking Sector Under the Influence of Fintech Innovations,” in *XV International Conference “Russian Regions in the Focus of Changes”(ICRRFC 2020)*, 2021, pp. 49–57.
 - [14] F. Sampe, M. Yusuf, D. L. Pakiding, A. Haryono, and S. Sutrisno, “Application Of Digital Marketing In Maintaining Msmes During The Covid-19 Pandemic,” *J. Darma Agung*, vol. 30, no. 2, pp. 663–676, 2022.