Analysis of the Development of the National Payment Gateway (GPN) as a Symbol of Domestic Retail Transaction Sovereignty in Indonesia

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Abstract. This paper examines Indonesia's payment system development, particularly following the launch of the National Payment Gateway Programme (GPN) in 2017. The payment system is one of the supporters of a country's economic growth, particularly for facilitating inter-party transactions. The current payment system is grouped into 2 (two), namely high-value transactions organized by Bank Indonesia and retail value transactions organized by Bank Indonesia and banks and industry. Transactions conducted by Bank Indonesia are Bank Indonesia-Real Time Gross Settlement (BI-RTGS), Bank Indonesia-Scripless Securities Settlement System (BI-SSSS), and Bank Indonesia National Clearing System (SKNBI), while transactions are carried out by banking/industry can be in the form of fund transfer providers, card-based payment instruments (APMK) and electronic money. According to statistical data released by Bank Indonesia, from 2010 to 2020, transactions using the RTGS payment system dominated nominal transactions in Indonesia, reaching 92.94 percent of all existing transactions. Meanwhile, considering the frequency of transactions, most of them used ATM or debit cards, with an average of 78.20 percent of all transactions. The high frequency of ATM and debit card usage has resulted in a relatively extensive sector of payment system service providers, particularly those involved in the provision of payment gateway networks. Before the NPG program, payment gateway operators were dominated by foreign principals, namely Visa and Mastercard. This operation by foreign principals means that the transaction fees charged through the two foreign principals can reach 2.2% of the transaction value, making transaction fees in Indonesia one of the highest in Southeast Asia. Besides that, data processing by foreign principals also makes transaction data not a benefit for Indonesia and the potential for reduced tax revenue. On the banking side, it is not yet efficient to membership in interbank switching service providers, and the majority of settlements are carried out at commercial banks, which have significant liquidity risks. However, the performance of transactions using the GPN card has not been encouraging because, based on historical data, monthly transactions using the GPN card have never reached above 25%, with an average of only 18.16% of all transactions using ATM / Debit cards. On this basis, using a qualitative approach through analysis of the development of payment system transaction data, this research will describe the development of the GPN from its launch in 2017 to December 2020, and compare the GPN with foreign payment gateway operators and input to increase the volume of transactions using the GPN.

Keywords: National Payment Gateway, Transaction, Payment System, Debit Card

1 Introduction

The economic condition of a country can be reflected by the existence and condition of financial institutions in a country. In order for these financial institutions to have a quality capable of supporting the economy of a country, they need supporting infrastructures such as the quality of human resources (HR), support for information technology (IT), and adequate systems and procedures (SOP). Supporting economic development requires a mechanism that can connect multiple parties to economic activity or, in this case, a reliable payment system. The existence of a reliable payment system that can support the movement of the flow of funds from one party to another to be faster and more efficient. Based on the Bank for International Settlements [1] defines a payment system as a set of instruments, procedures, and rules for transferring funds to participant members, where the system also includes participants and governing institutions.

Under Act Number 23 of 1999, Bank Indonesia has the duty to achieve and maintain the stability of the Rupiah value. To achieve this objective, Bank Indonesia has the authority to regulate and maintain the smooth operation of the payment system. One of the powers of Bank Indonesia in the payment system is to implement and grant approvals and licenses for the operation of payment system services, as well as to require payment system service providers to submit reports on their activities. Based on the classification stipulated by Bank Indonesia, the payment system in Indonesia can be classified into 2 (two) parts, namely transactions with a high nominal value (high value) organized by Bank Indonesia and retail transactions (retail value) organized by Bank Indonesia and can be carried out. By banks and industry. Transactions conducted by Bank Indonesia are Bank Indonesia-Real Time Gross Settlement (BI-RTGS), Bank Indonesia-Scripless Securities Settlement System (BI-SSSS), and Bank Indonesia National Clearing System (SKNBI). Meanwhile, transactions that can be carried out by banks or industry are fund transfer providers, card-based payment instruments (APMK), and electronic money.
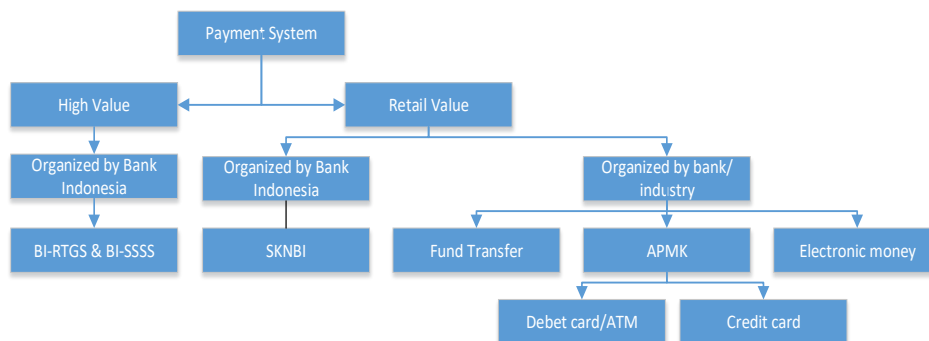

**Fig 1.** Overview of the Payment System in Indonesia
(Bank Indonesia)

Based on statistics from 2010 to 2020, nominal transactions using the BI-RTGS method still dominate usage in the payment system, as reflected in the average transactions reaching 92.94% of all payment system transactions. Transactions with debit cards and SKNBI lagged behind only 4.15% and 2.66%, while transactions with credit cards and electronic money were below 1%.

Graph 1. Nominal Series of Payment System Transactions 2010 - December 2020

Payment System Transaction IDR Bio
SKNBI   RTGS   Debet Card

(Bank Indonesia)
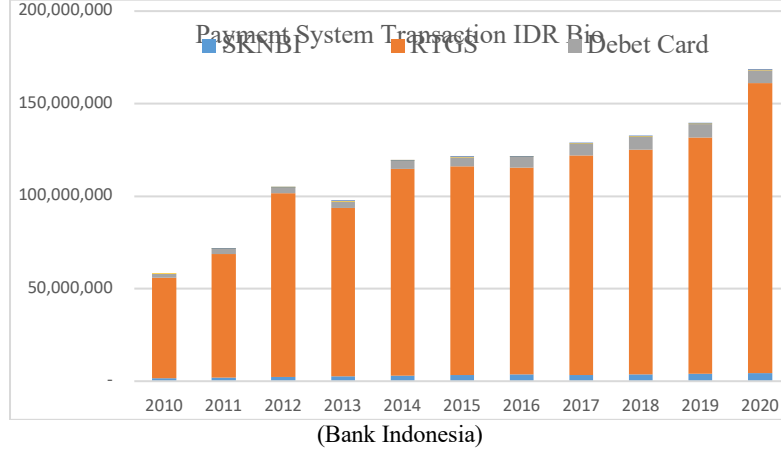
Meanwhile, in terms of frequency of use of the ATM / Debit card in the payment system, it dominated usage in the period 2010 to 2020. The average frequency of ATM/debit card usage reached 78.20% of the total frequency of existing transactions. Meanwhile, electronic money, credit cards, SKNBI and RTGS were only 13.78%, 5.35%, 2.36%, and 0.31%, respectively.

Graph 2. Payment System Transaction Frequency Series 2010 - December 2020

Payment System Transaction Frequency (million transactions)
SKNBI   RTGS

(Bank Indonesia)
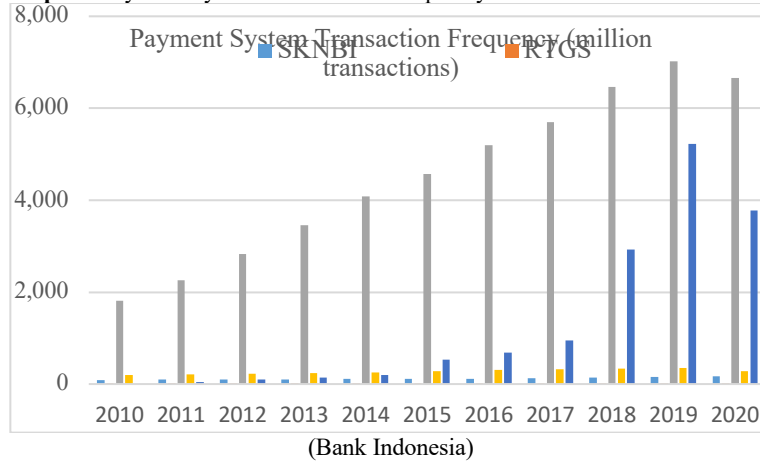
The large frequency of use of debit / ATM cards also supports the existence of an industry that supports the implementation of a payment system using a debit card / ATM. Several parties connected to the payment system service using ATM / Debit cards include issuers (instrument issuers), acquirers (terminal providers), principals, clearing operators, and settlement operators. Prior to the launch of the National Payment Gateway (GPN) program in 2017, the condition of payment system infrastructure in Indonesia was quite diverse, as reflected in the number of actors and instruments used, inadequate and inadequate and integrated payment system infrastructure, inefficient membership in the interbank switching service, settlement transactions are carried out at commercial banks which may create liquidity risk, and transaction costs are quite high because the transaction process is carried out by

foreign principals. On the basis of these problems, in 2017, Bank Indonesia launched the National Payment Gateway (GPN) program, which aims to improve retail transaction efficiency, increase transaction security, and a symbol of national payment system transaction data sovereignty.

The legal basis for implementing the NPG is regulated in Bank Indonesia [2]. Bank Indonesia Regulation Number 19/8 / PBI / 2017 concerning National Payment Gateway dated 21 June 2017, Bank Indonesia Regulation (PBI) No.14 / 2 / PBI / 2012 concerning Amendments to PBI No.11 / 11 / PBI / 2009 concerning the Implementation of Card-Based Payment Instrument Activities (APMK). The provisions stipulate regarding NPG administrators consisting of (1) Standard Agencies, namely institutions that compile and manage standards in the NPG; (2) Switching Agencies, namely institutions that administer switching in the NPG; (3) Services Agency, which is an agency that manages the services function in the NPG. In addition, there are parties connected to the NPG, consisting of (1) Issuers, namely Banks or Non-Bank Institutions that issue card-based payment instruments (APMK); (2) Acquirer, namely a Bank or an Institution other than a Bank that cooperates with merchants so that traders can process transactions from APMK issued by parties other than the acquirer concerned, and are responsible for settlement of payments to merchants; (3) Payment Gateway Operators, namely Banks or Non-Bank Institutions conducting Payment Gateway activities.

2 Literature Review

Based on research conducted by the World Bank [3] it is known that the retail payment system plays an important role in the smooth functioning of the economy and if there is inefficiency in the retail payment market it will cause a tiered effect in the economy of a country. To overcome these problems, it is necessary to migrate from less cost-effective retail payment instruments (cash) to more cost-effective instruments (electronic), because efficiency in the payment system can provide high impact changes to a country's economy. The same opinion was also expressed by Den Butter and Mallekoote [4] which stated that innovations made in the payment system aimed at reducing transaction cost so that they could contribute to social and economic welfare and must be supported by adequate regulations and collaboration between related agencies.

Based on research conducted by Hasan et al. [5], the results of the initiative to integrate and harmonize the retail payment system to encourage trade and consumption have a beneficial effect on the economy as reflected in the effects of aggregate macroeconomic growth and growth in consumption and trade. This is also supported by Zhang et al. [6], who argue that transactions made using debit cards also contribute to increased tax revenue because the use of electronic debit cards has a stimulating effect and facilitates higher economic activity. From these two studies, payment system integration can support aggregate economic growth.

Based on a study conducted by Carbonell et al. [7], security is one of the main factors in transferring funds (payments) from buyers to sellers using electronic payments (electronic payment systems), most of which still focus on the traditional two-party business model. models) that is between the consumer and the provider. With the adaptation of the 3D SecureTM protocol, consumers can still make transactions with sellers whose security has not been verified by VISA, by involving many providers but at a lower cost. Meanwhile, the

imposition of transaction fees has also become a highlight in managing payment system transactions. Rochet and Tirole [8] highlighted the imposition of additional fees (interchange fees) for transactions using cards from the merchant bank (acquirer) to the cardholder (customer), resulting in additional costs for the transactions made. With this increase in costs, the profits earned by merchants are reduced because they have to bear transaction fees that are not regulated by the local authorities. However, Li et al. [9], who have a different opinion regarding the imposition of additional costs that can marginally maximize consumer welfare in static conditions and the regulation of limiting additional costs to merchants, can also improve consumer welfare without causing many dynamic inefficiencies.

The potential use of distributed ledger technology in the payment system makes it possible to eliminate the role of switching institutions (intermediaries) to minimize transaction costs while prioritizing the security factor in the use of electronic payments [10]. The development of retail payment systems will be increasingly electronic and the role of the Federal Reserve (Central Bank) is to develop a safe and efficient payment system with implications for adjustments to operational and legal aspects [11].

The use of debit / ATM cards in transactions also provides benefits to the economy. David et al. [12] found that the use of an ATM/debit card can help banks reduce the processing costs of cash used for sending money to the Central Bank, sending money to bank offices / ATMs, and increasing revenues for banks, especially the fees charged to customers and traders. This is also supported by research conducted by Wang and Wolman [13], which argues that technological advances and changes in public perceptions are factors that encourage an increase in transactions using debit cards rather than the use of cash. In the use of transactions using a debit card, the factors that influence a debit card are availability, open-mindedness, and trust, as Goczek and Witkowski [14] stated.

Concerning previous research that discusses GPN, there are not many published research references. Nurfahrohim and Aprilianty [15] argue that using the GPN as a means of payment is influenced by several factors, including convenience, knowledge of the NPG, the conditions provided for the facilitation, and the suitability of the product services provided. When viewed from a legal aspect, there is no aspect of customer protection in the legal basis governing GPN, namely in Bank Indonesia Regulation no.19 / 8 / PBI / 2017 concerning National Payment Gateway [16]. This is one of the issues raised by Worthington [17], who found that in countries that are more dominant in using debit cards as a means of payment that can also be used abroad, the rate of fraud on debit card abuse is as high as the level of fraud on credit card misuse, so it is necessary to improve aspects of customer protection.

3 Method

The strategy used by the author in compiling this research is to use a case study strategy and empirically explained by describing and comparing the data obtained. According to Yin [18], research that uses case and empirical studies is carried out by deepening an event or event in everyday life. However, there is no explicit limit to the incident or event. The strategy used in the case study method includes all design logic, data collection techniques, and data analysis using a specific approach.

The approach used by the author in this study is qualitative. According to Creswell [19], in qualitative research, a problem must be explained in detail and comprehensively because the available data sources are quite limited, while in quantitative research on a problem, there are

already some data that can be combined in a structured manner between the causes and the accompanying variables. The qualitative analysis consists of three parts: the data reduction process, the data display process, the conclusion drawing, and the verification process [20]. Primary data and secondary data are data that the author will use in conducting this research. Cooper and Schindler [21] argue that the use of primary data is used because it has closeness to the actual conditions and can be used as a control tool for an event/error, while the use of secondary data is used as a reference between events and the results of documentation. The primary data used in this research is monthly GPN transaction data in the period October 2017 to December 2020. Meanwhile, secondary data is the monthly transaction data of the payment system in an aggregate manner, as well as data and information that can be accessed by the public.

4 Results and Discussion

The GPN program launched by Bank Indonesia aims to improve retail transaction efficiency, increase transaction security, and a symbol of national payment system transaction data sovereignty, particularly in relation to domestic payment transactions, which include switching interconnection, interconnection, and interoperability of payment channels in the form of ATM channels, electronic data capture (EDC), agents, payment gateways and other payment channels as well as interoperability of payment instruments in the form of ATM cards and/or debit cards, credit cards, electronic money, and other payment instruments. According to BIS [22], interoperability is a payment instrument with a specific scheme that can be used in systems with different schemes. As for interconnection, BIS [22] defines interdependency, namely the interconnection between payment systems, clearing, and settlement based on direct relationships with the system, indirect relationships between financial institutions in various systems, and broader similarities.

4.1 NPG administrators

NPG operators in Indonesia are divided into three parts, namely Switching Agencies, Standard Agencies, and Services Agencies. The Switching Agency as the NPG manager is a combination of 4 (four) companies, namely PT Artajasa Pembayaran Elektronis (Artajasa) [23], PT Rintis Sejahtera (Rintis) [24], PT Alto Network (ALTO) [25] and PT Jalin Pembayaran Nusantara [26]. This institution has the function and duty of processing data on domestic payment transactions for interconnection and interoperability.

The standard institution for NPG management is the Indonesian Payment System Association (ASPI), which already has 160 members (banks and financial institutions) consisting of 138 regular members and 22 affiliated members. ASPI is in charge of compiling, developing, and managing Standards for interconnection and interoperability of payment instruments, payment channels, and switching and security. For Services Agencies managed by the National Electronic Transaction Settlement (PTEN), which has several tasks, namely maintaining the security of payment transactions and the confidentiality of customer data and conducting clearing and settlement reconciliations.

4.2 Development of Supporting Facilities

To support the GPN program, the existence of infrastructure in the form of EDC machines, the number of merchants, and the number of cards in circulation are inseparable parts of the

GPN program. Based on the Payment System Statistics (SSP) published by Bank Indonesia, the number of EDCs and the number of merchants have increased in trend since the GPN was launched in 2017.

Graph 3. Number of EDC and Merchant 2013 –2020

(Bank Indonesia)
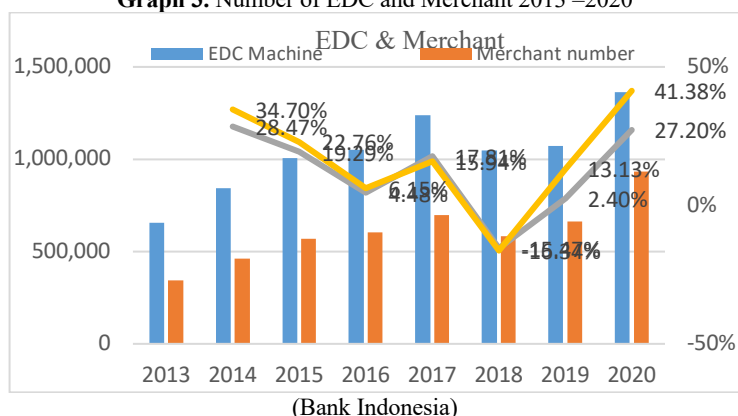
Based on graph 3, it is known that the number of EDC machines and the number of merchants in 2017 was 1.23 million EDC machines and 698 thousand merchants, respectively. The number of EDC machines and merchants decreased drastically in 2018 after the implementation of the GPN in October 2017, which decreased by 15.47% and 16.34%, respectively, to 1.04 million EDC machines and 584 merchants. The decrease was due to the implementation of GPN, which allows merchants to use only 1 EDC machine to serve all transactions using debit cards from all banks, and there is cost efficiency for merchants considering that each EDC installation in their business location is subject to fees determined by each bank providing the EDC in question.

In the period of 2019 and 2020, the number of EDCs and merchants increased again in line with the program launched by Bank Indonesia, namely the National Non-Cash Movement (GNNT), which was launched in 2014 and promoted socialization of the program in 2019, which resulted in the number of EDCs and merchants increased because people have started to switch to using APMK in making transactions.

Graph 4. Number of Debet Card/ATM 2013 – 2020
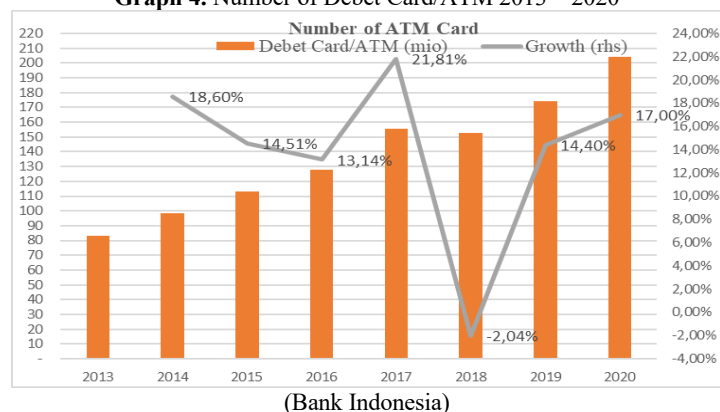
(Bank Indonesia)

The number of ATM + Debit cards in circulation is also one way to support the development of a payment system in a country. As of December 2020, the number of ATM + Debit cards circulating in Indonesia had reached 204.1 million ATM + Debit cards, which experienced a growth of 17.00% compared to the achievement in December 2019, which only grew by 14.40%.

4.3 GPN Transaction

Graph 5. GPN Transactions Oct 2017 – December 2020

(Bank Indonesia)
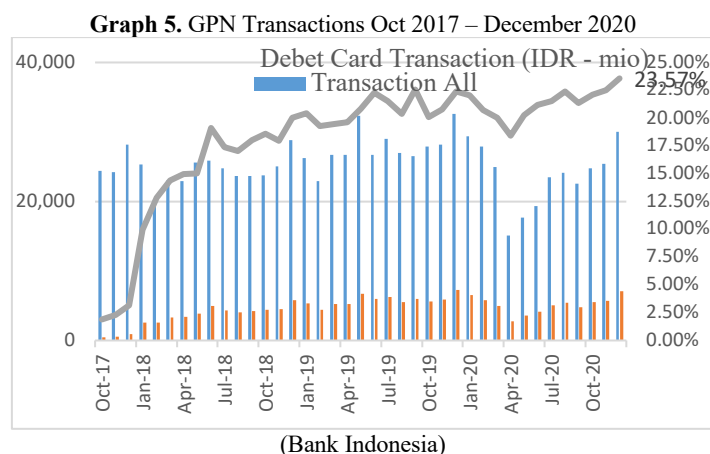
Based on the chart above, for the 2017 period, total NPG transactions reached Rp1.91 trillion or 2.50% of all transactions using cards. In 2018 and 2019, total NPG transactions increased to Rp47.95 trillion and Rp69.4 trillion, respectively, or 16.38% and 20.85% of all transactions using cards. However, in 2020, NPG transactions experienced a decline compared to the previous year's achievement to Rp61.28 trillion or 21.52% of the total transactions using cards as a whole. When viewed on a monthly average basis, transactions using the NPG card were only 18.16% of all transactions using the card, so there are still many opportunities to increase the use of the NPG card.

Transactions using an ATM + debit card can be categorized into two transactions, namely on-us and off us. On-us transactions are transactions that use the same bank card and payment channel. Meanwhile, off-us transactions can be divided into two, namely off-us and off-us on the net. Off-us transactions are transactions that use different bank cards and payment channels. Off-us on-net transactions are transactions using cards and payment channels from different banks, but the two banks are under 1 (one) membership of the same switching network.

Table 1. on-us, off-us and off-us on net transaction

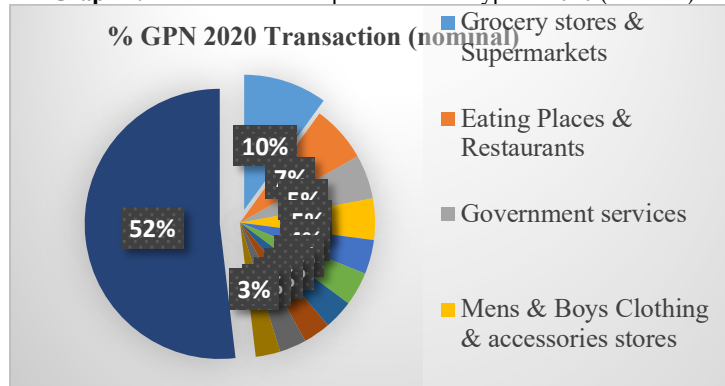|	Transaction		
	on-us	off-us	off-us on net
Issuer bank	Same bank	Different bank	Different bank
EDC	Same bank	Different bank	Different bank
Switching Network	Same network	Different network	Same network

(Bank Indonesia)

GPN was launched by Bank Indonesia to minimize transaction costs with the off-us and off-us on net schemes where prior to the existence of GPN for off-us and off-us on net transactions, the settlement was carried out by principal foreign institutions such as Visa and Mastercard with transaction fees (merchant discount rate / MDR) averaged between 1.6% to 2.2% per transaction. So that at that time, the transaction costs incurred were quite high because debit transactions were dominated by foreign principals, so that the costs that had to be paid by merchants (traders) to acquirer banks were quite expensive. The process for debit transactions is carried out overseas so that most retail financial transactions in Indonesia must be carried out abroad so that the data referred to will not be an advantage for Indonesia, and there is a potential for loss of tax revenue.

Graph 6. GPN Transaction October 2017– December 2020

(Bank Indonesia)
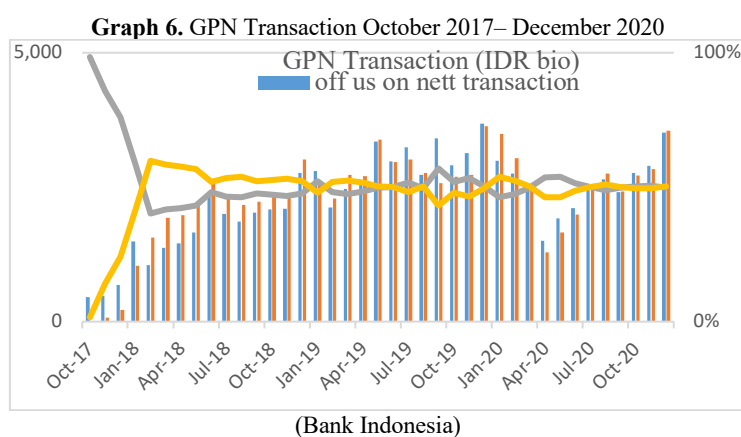
In the first 3 (three) months, GPN transactions were dominated by off us on net transactions, which reached more than 75% of all transactions using GPN. However, over time, the percentage of GPN card usage for off us transactions with off us on net transactions was relatively balanced in aggregate terms. In April 2020, GPN transactions decreased sharply by 44.22% to Rp2.78 trillion compared to transactions in March 2020 which reached Rp.4.99 trillion, the decrease in transactions was due to the large-scale social restrictions that were promoted by the government at the time this is to anticipate the COVID-19 pandemic. On average, from October 2017 to December 2020, the average monthly growth of transactions using the GPN card was 11%, with the largest increase in January 2018 of 182.5% and the largest decrease in March 2020 of 44.22 %.

During 2020, 10 (ten) merchant types controlled 48% of the total transactions using the GPN card, while 52% covered 285 types of merchants. GPN cards were traded at supermarket merchants by 10.02%, restaurants and eating places by 6.81%, government services by 5.29%, men's clothing stores by 4.94%, minimarkets by 4.10%, department stores by 4. , 02%, workshops by 3.53%, hospitals by 3.26%, fast food restaurants by 3.22% and hotels by 2.95%.
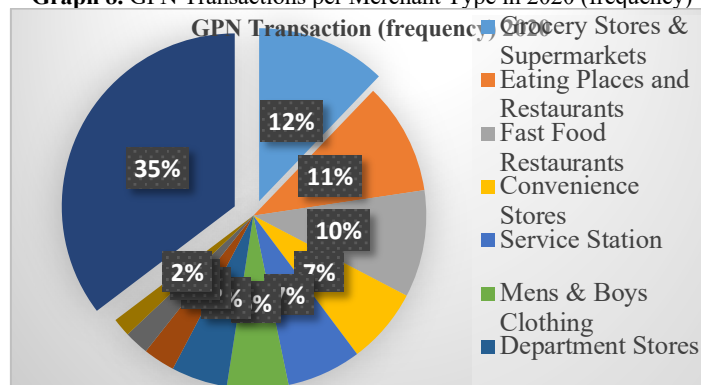
Graph 7. GPN Transactions per Merchant Type in 2020 (nominal)

% GPN 2020 Transaction (nominal)

- Grocery stores & Supermarkets
- Eating Places & Restaurants
- Government services
- Mens & Boys Clothing & accessories stores

(52%, 10%, 7%, 5%, 5%, 3%)

(Bank Indonesia)

As for the frequency of transactions using the GPN card in 2020, there were 307.9 million transactions, with the top 10 transactions at certain types of merchants controlling 64.68% of all transactions using the GPN card. The top 10 merchants with the highest transaction frequency were supermarkets at 12.17%, restaurants and eating places by 10.47%, fast food restaurants by 10.01%, minimarkets by 7.10%, workshops by 6.97. %, men's clothing stores 5.73%, Department Stores 5.24%, Pharmacies 2.97%, Shoe Stores 2.28% and Hotels 1.73%.

Graph 8. GPN Transactions per Merchant Type in 2020 (frequency)

GPN Transaction (frequency)

- Grocery Stores & Supermarkets
- Eating Places and Restaurants
- Fast Food Restaurants
- Convenience Stores
- Service Station
- Mens & Boys Clothing
- Department Stores

(35%, 12%, 11%, 10%, 7%, 2%)

(Bank Indonesia)

If the distribution of transactions using the NPG card is based on four-time categories, namely 00:00 to 05:59, 06:00 to 11:59, 12:00 to 17:59, and 18:00 to 23:59, automatically average transactions using the GPN card in 2020 were mostly carried out at 12:00 to 17:59 with an average of 53.06% of transactions followed by transactions from 18:00 to 23.59 with an average of 26, 59%. The high frequency of GPN card usage from 12:00 to 17:59 reflects that GPN card owners use the GPN card for transactions related to daily necessities such as food and other necessities.

4.4 Transaction Cost

Based on the Regulation of Members of the Board of Governors of Bank Indonesia (PADG BI) Number 19/10 / PADG / 2017, Bank Indonesia has determined the amount of the

transaction cost (Merchant Discount Rate / MDR) for the use of the GPN network. MDR is a fee charged to merchants for every transaction made through the GPN network. The MDR amounts that have been determined by Bank Indonesia are as follows.

Table 2. Pricing Schemes for Transactions on GPN

Merchant type	Categories	MDR	
		On Us	Off Us
Regular		0,15%	1%
Special	Education	0,15%	0,75%
	Gasoline	0,15%	0,50%
	G2P, P2G (tax, passport) Social donation	0,00%	0,00%

(Bank Indonesia)

If the calculation of the number of transaction costs that have occurred since the GPN was launched until December 2020 with a focus on the calculation of off us transactions which have been the core of the GPN program and by taking the same MDR rate of 1% for each transaction, the following results will be obtained:

Table 3. GPN Transaction Cost Calculation

Year	Total transaction (a) (Rp mio)	MDR Rate (b)	Transaction Fee (a)*(b) (Rp mio)
2017	1.917.860	1%	19.178,60
2018	47.951.721	1%	479.517,21
2019	69.414.512	1%	694.145,12
2020	61.282.535	1%	612.825,35
Total			1.805.666,28

Based on table 3, it is known that the amount of transaction cost that has occurred since the GPN program was launched from October 2017 to December 2020 is IDR 1.8 trillion. This amount also contributes to state revenue through taxes imposed on the transaction fee income. If a simulation is carried out if the GPN program was not launched by Bank Indonesia in 2017, and the conditions for off us debit transaction settlement are still carried out by foreign principals such as Visa and MasterCard, which have MDRs of between 1.6%, The transaction cost that occurred at that time was IDR 3.92 trillion with the following calculations (assuming an MDR of 2.2%):

Table 4. Simulation of Transaction Cost Calculation When performed by a foreign principal

Year	Total Transaction (a) (Rp mio)	MDR Rate (b)	Transaction Fee (a)*(b) (Rp mio)
2017	1.917.860	2,2%	42.192,92
2018	47.951.721	2,2%	1.054.937,86
2019	69.414.512	2,2%	1.527.119,26
2020	61.282.535	2,2%	1.348.215,77
Total			3.972.465,82

The simulation result of the calculation of a transaction cost of Rp3.97 trillion is the income obtained by foreign principals for settlement for off us transactions in Indonesia and is not subject to tax. So that with the emergence of the GPN program from October 2017 to December 2020, there was a saving of IDR 2.12 trillion, which can also be interpreted as the nominal amount of Indonesia's foreign exchange out (out money) and also the existence of state revenue in the form of taxes calculated from a transaction cost of IDR 1. 8 trillion.

Transaction cost simulation with foreign principals	: IDR 3.92 trillion
Transaction cost with GPN	: IDR 1.8 trillion -
Savings in transaction costs	: IDR 2.12 trillion

4.5 Differences in GPN services with foreign principals

The operation of payment system services is one of the most profitable businesses, and this is reflected in the existence of 2 (two) large companies that have gone global and control most of the payment system transactions that use cards, both debit cards + ATMs and credit cards, namely Visa and MasterCard. Realizing this condition, in 2017, Bank Indonesia launched the GPN program, which aims to reduce transaction costs, increase tax revenues, and protect domestic transaction data.

However, since the GPN program was launched until December 2020, the market share of transactions using Debit + ATM cards with the GPN logo compared to all transactions using Debit + ATM cards has never exceeded 25% in the utilization of interconnection and interoperability (off us transactions). So that to achieve the sovereignty of domestic retail transactions at least 50%, there are still many aspects that must be improved in the development of the NPG card, especially for the use of interconnection and interoperability.

Table 5. Comparison of GPN Card Services with Visa / MasterCard

No	Scope	GPN	Visa and MasterCard
1.	MDR on us	0% - 0,15%	0%
2.	MDR off us	0% - 1%	1,6% - 2,2%
3.	Transaction Location	Domestic	Foreign and Domestic
4.	Cash Withdrawal	All ATMs that have the GPN logo.	All ATMs that have a Visa / MasterCard logo
5.	Transaction	All EDCs that have the GPN logo.	All EDCs that have a Visa / MasterCard logo
6.	Switching Agency	A combination of Artajasa, ALTO, Rintis and Prima	Visa International / MasterCard International
7.	Transaction data processing	Domestic	Overseas according to the Visa / MasterCard server is located
8.	Service	Only Debet Card+ATM	Debet Card+ATM and Credit Card
9.	Card security	Chip based	Chip based
10.	Online Transaction	Not support	Can be used for online transactions with a security feature using a one time password (OTP).
11.	Card Fee	It depends on the issuing bank	It depends on the issuing bank
12.	Contactless payment	Not support	Support

Based on the table above, the use of the NPG card has a fairly dominant advantage when it is used for domestic transactions, namely the imposition of a lower MDR fee when compared to using a debit card with the Visa / MasterCard logo. However, there are significant weaknesses in using the NPG card; namely, the NPG card cannot be used for transactions overseas, and the NPG card cannot be used for online transactions.

5 Conclusion

There is still a lack of public knowledge about the Debit Card with the National Logo and its benefits, which causes public interest in owning and using the National Logo Debit Card (GPN) to be relatively low. Currently, the implementation of interconnection and interoperability in the GPN ecosystem is still limited to Debit Card and Chip Based Electronic Money services at toll gates, unable to serve digital transactions (e-commerce). In addition, the NPG card can currently only be used to process domestic transactions made domestically. The current COVID-19 pandemic, which has led to the increasing demands of the public for the need for digital transactions, while these needs have not been fulfilled by Debit Cards with the National Logo, triggered a decrease in the number of exchanges/ownership of Debit Cards with National Logo by the public.

Several efforts can be made to increase NPG transactions, especially the capabilities and features of the ATM + Debit Card with the GPN logo, which in turn can provide transaction cost savings (merchant discount rate / MDR); the NPG manager can do the following:
a) Improved Online Transaction Features
b) Improvement of Transaction Features Abroad
c) Improved Contactless Payment Features
d) Utilization of Government Social Assistance Programs
e) Socialization and Education

To develop the GPN into one of the symbols of domestic retail transaction sovereignty requires cooperation from all parties, and there is no way to rule out cooperation with foreign principals, namely Visa, MasterCard, JCB, and UnionPay. The implication of developing features on the ATM + Debit card with the GPN logo requires a lot of money because it involves many parties, so that GPN must choose between increasing transaction fees (MDR) or sharing existing transaction fees with cooperating parties.

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