The Influence of Fintech and Monetary Policy on Financial Stability in Indonesia

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ABSTRACT

The decline in financial system stability has negative consequences for the economy as a whole, such as declining economic growth, increasing political and social instability, increasing poverty rates, and so on. Therefore, research is needed to determine the appropriate policies to improve the stability of the Indonesian financial system. This study aims to examine the influence of fintech and monetary policy on the stability of the Indonesian financial system from 1982-2019. The method used is Vector Autoregression (VAR). The results of this study conclude that shocks that occur in gross domestic product (GDP), inflation (INF), exchange rates (KURS) and service features (FL) have a positive and significant impact on the stability of the Indonesian financial system. Meanwhile, shocks that occur in the amount of money in circulation (JUB), real interest rates (SBR), ease of use (KP) and information security risk (RKI) have a negative and significant impact on the stability of the Indonesian financial system.

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INTRODUCTION

FinTechor Financial Technology is a term used to indicate companies that offer modern technology in the financial sector. These companies have been around since 2010. FinTech companies are mostly micro, small or medium-sized companies that do not have much equity, but have a clear idea of how to introduce new innovations or how to improve existing services in the financial services market (Svetlana and Iriana, 2017). The Indonesian Internet Service Providers Association (APJII) survey stated that the number of internet users is increasing from year to year.



Figure 1. Development of Fintech in Indonesia

Financial technology (Fintech) in Indonesia is growing rapidly, especially in digital payments reaching 93.51, followed by digital banks reaching 56.67, so that Indonesian people use digital payments and digital banks more often for daily transactions.

The existence of Fintech allows remote communities to use technology-based financial services, without having to travel long distances to obtain financial services. According to data from the World Bank's 2014 Findek, the number of Indonesians who have accounts at formal financial institutions is only around 36%, the remaining 64% of Indonesians do not have accounts and access to formal financial institutions or are often referred to as unbanked. This means that more than half of Indonesians have not been served by financial services such as banks. This is an opportunity for businesses engaged in the financial sector to utilize technology.

Not only in the field of funding and lending, other businesses engaged in Fintech are in transportation services such as Gojek which has issued GoPay, Uber and Grab which issued the Grab wallet product. Currently, Fintech players in Indonesia are still dominant in the payment business (43%), loans (17%) and the rest are in the form of aggregators, crowdfunding, and others (Hadad, 2017).

The Fintech industry in Indonesia continues to grow. This can be seen from the increase in the number of startups, the total investment in the sector, and the level of use of fintech solutions in society throughout 2018. The development of fintech in Indonesia is currently able to increase Gross Domestic Product or GDP by IDR 25.97 trillion both directly and indirectly. In addition, household consumption has increased by IDR 8.94 trillion. Both of these things show that the existence of fintech has been able to improve the Indonesian economy macroeconomically (Immawati and Dadang, 2019).

In macroeconomic perspective, money circulation in the community needs to be a condition of prudence carried out by Bank Indonesia as the monetary authority. This is a very important thought so that the monetary authority can maintain the level of monetary stability, so that a harmonious economic condition is created. The harmony of monetary conditions in the economy can be seen in how conditions in the business world can still produce high output. In a condition of very high inflation, when the amount of money in circulation is very large, of course monetary stability must be maintained optimally by absorbing money from the community by implementing a policy of raising interest rates so that funds can be absorbed from the community. Conversely, when the conditions faced are deflationary and sluggish economic levels, Bank Indonesia will implement a policy to distribute money in the community, namely by lowering interest rates, so that the real sector can move well. The importance of this monetary policy is also an important stimulus in the financial system in Indonesia.

Based on the problem of Fintech and monetary policy on financial stability in Indonesia, this study aims to change people's behavior in conducting financial transactions with the development of fintech, how the threat to conventional financial institutions, whether fintech transactions are able to contribute to increasing financial inclusion and the national economy and how the effectiveness of monetary policy will be able to influence the financial system in Indonesia.

THEORETICAL BASIS

Financial System Stability in Indonesia

In the Big Indonesian Dictionary (KBBI) the meaning of a system is a set of elements that are regularly interrelated to form a totality. While finance is the art of managing money that affects the lives of individuals and organizations. In addition to being interpreted as science and process, finance is also interpreted as asset management. So simply put, finance is the art of managing money and assets.

In a country's economy, the financial system is basically an order that has an important role in providing financial services facilities. Soemitra explained that the financial system is an economic order in a country that plays a role and carries out activities in various financial services organized by financial institutions.

A stable financial system is a financial system that is strong and resistant to various economic disturbances so that it is still able to perform the intermediary function, carry out payments and spread risks well. This stable financial system can encourage the performance of the real sector through the intermediary role of financial institutions to increase economic growth and assist the government in efforts to control inflation rates through the transmission of monetary policy to maintain people's purchasing power and the competitiveness of products produced by a country (Blot, et al. 2015).

A stable financial system will create trust and a supportive environment for depositors and investors to invest their funds in financial institutions including guaranteeing the interests of the community, especially small customers. Generally, countries that have succeeded in becoming world economic leaders are countries that have succeeded in developing a relatively more advanced and well-functioning financial system (Soemitra, 2009).

Financial Technology(Fintech)

Financial Technology is derived from the term Financial Technology or abbreviated as Fintech. According to the National Digital Research Center (NDRC), in Dublin, Ireland, Fintech is characterized as "Development Monetary Administration" or "advancement in Fintech monetary administration" which is an advancement in the monetary field that gets the latest innovation instructions. In short, Fintech can be interpreted as the use of technology to further develop administration in the financial business. Another definition is a variety of action plans and mechanical advancements that may be able to further develop the financial administration industry.

Bank Indonesia also provides an understanding of Financial Innovation. Fintech is regulated in Article 1 Number 1 of Bank Indonesia Guidelines Number 19/12/PBI/2017 Concerning the Implementation of Financial Innovation that Monetary Innovation is an innovation customer within a monetary framework that produces administrative items, innovations or action plans that are potentially new and can affect the health of money, the stability of the monetary system, as well as the performance, perfection, security, and coordinated operations of the payment system.

Monetary Policy

Monetary policy is a policy of the central bank or monetary authority in the form of controlling monetary amounts to achieve the desired development of economic activities, namely maintaining price stability (low inflation rate), improving the development of real output (economic growth) and sufficient employment opportunities available.

In its development, the economy can run not as expected. Therefore, to control these conditions, monetary policy can be classified into 2 types, namely Expansionary Monetary Policy and Contractive Monetary Policy.

In implementing monetary policy, Bank Indonesia uses various tools as instruments to achieve targets. Instruments used to influence the amount of money in circulation include Open Market Operations (OPT), BI Rate interest rates, discount facilities, minimum reserve requirements or moral appeals. OPT instruments are carried out through auctions of securities. Discount facilities are credit facilities provided to commercial banks by the central bank with a set interest rate. The BI Rate interest rate is a reference for determining other interest rates, such as for credit, deposit and savings interest rates. Minimum reserve requirements are mandatory reserves from the percentage of Third

Party Funds (DPK) that must be fulfilled by commercial banks to the central bank. And then the moral appeal used by Bank Indonesia with the aim that commercial banks can follow the monetary policy steps set by Bank Indonesia.

METHOD

This research is secondary data, so the researcher obtained data through a second party or source, namely the World Bank. http://www.worldbank.org. International Monetary Fund. Http://www.imf.org and CEIC.http://www.ceicdata.com. The data used in the study is Time series data used in this study is time series data from 1982-2019. Meanwhile, the cross section data used is data on the territory of Indonesia. Time series data is a collection of data from certain phenomena obtained in certain time intervals such as weeks, months and years (Sunyoto, 2011).

In this study, the data analysis technique used is the VAR (vector autoregression) method with the help of SPSS 25 and Eviews 10 software. Based on the VAR concept that was built, the model equation that can be formed is as follows:

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\begin{split} & GDPt = \beta 10INFt-p + \beta 11JUBt-p + \beta 12SBRt-p + \beta 13KURSt-p + \beta 14KPt-p + \beta 15FLt-p + \beta 16RKIt-p + et1\\ & INFt = \beta 10GDPt-p + \beta 11JUBt-p + \beta 12SBRt-p + \beta 13KURSt-p + \beta 14KPt-p + \beta 15FLt-p + \beta 16RKIt-p + et1\\ & SBRt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KPt-p + \beta 15FLt-p + \beta 16RKIt-p + et1\\ & COURSE = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KPt-p + \beta 15FLt-p + \beta 16RKIt-p + et1\\ & KPt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16RKIt-p + et1\\ & FLt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16RKIt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16RKIt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FKIt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FKIt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FKIt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FKIt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FLt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FLt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FLt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FLt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FLt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FLt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 11INFt-p + \beta 12JUBt-p + \beta 13SBRt-p + \beta 14KURSt-p + \beta 15FLt-p + \beta 16FLt-p + et1\\ & RKIt = \beta 10GDPt-p + \beta 15FLt-p +
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Where:

- GDP = Gross Domestic Product (USD billion)
- INF = Inflation (%)
- JUB = Money Supply (USD billion)
- SBR = Real Interest Rate (%)
- KURS = Exchange Rate (number)
- KP = Ease of Use (number)
- FL = Service Features (number)
- RKI = Information Security Risk (number)

Stationarity Test

Stationary test is done because non-stationary time series data will produce a biased or doubtful regression analysis. The condition where the regression coefficient is significant and the determination number is high, but in the variable model there is no relationship is called a biased condition. Therefore, it is necessary to do a stationary test, one of which is through the unit root test and the one commonly used is the Dickey Fuller test because this test is very simple. If the augmentation probability value of the Dickey-Fuller test statistic is <0.05, and the t-statistic value is greater than the Mc Kinnon value at a 1% confidence level, then the data can be said to be stationary. When the stationary test of data at the level is not stationary, this can be overcome by continuing the test at the first different level, and if at this level the data is not stationary, then it can be continued to the second different level.

Cointegration Test

Cointegration test is conducted to see, after stationary data, whether there is a long-term equilibrium relationship between the variables studied. A data from a number of variables studied is said to be cointegrated if the maximum calculated value of eigenvalue and trace statistic is greater than its critical value, with a probability value smaller than 0.05.

VAR Structure Lag Stability Test

The lag length test is used to see and determine the optimal lag used. This test is done by comparing the AIC (akaike information criterion) value of the VAR analysis at lag 1 and lag 2. A lower AIC value indicates that the lag is more optimal for use in the VAR analysis.

VAR Stability Test

This test is conducted to see how the simultaneous relationship, namely interrelated and mutually contributing between the variables studied, as exogenous variables and endogenous variables by including the lag or time element. Through this VAR analysis, it is known that the variables that show the largest contribution one and two to each of the variables studied.

RESULT

Stationary Test

The results of the stationary test by looking at the first difference level as in Table 1 below:

Table 1. Station	nary Test	
Null Hypothesis: D(GDP) has a unit root		
Exogenous: Constant		
Lag Length: 0 (Automatic - based on SIC, r	naxlag=9)	
Augmented Dickey-Fuller test statistics	t-Statistic	Prob.*
GDP	-9.063046	0.0000
INF	-7.461850	0.0000
JUB	-7.558543	0.0000
SBR	-9.749717	0.0000
EXCHANGE RATE	-5.048204	0.0002
KP	-7.243778	0.0000
FL	-7.933907	0.0000
RKI	-5.590435	0.0000
*MacKinnon (1996) one-sided p-valu	ies.	·

Source: Processed data

Based on Table.1 shows that each variable (GDP, INF, JUB, SBR, KURS, KP, FL and RKI) has an average probability value of Dickey-Fuller augmentation test statistic of 0.0000 <0.05. and the t-Statistic value is greater than the Mc Kinnon value at a confidence level of 1%, then the data above is said to be stationary.

Cointegration Test

Dynamic panel data regression has been carried out on the cointegration test model with the results as in Table 2 below:

Table 2. Cointegration Test Results

Date: 10/28/24 Time: 19:15 Sample (adjusted): 1982 2016 Included observations: 35 after adjustments Trend assumption: No deterministic tren Cointegration Rank Test (Trace) Series: GDP, INF, JUB, SBR, KURS, KP, FL and RKI

Hypothesized	Eigenvalue	Trace Statistics	0.05	Prob.**
No. of CE(s)			Critical Value	
None *	0.897801	260.7051	143.6691	0.0000
At most 1 *	0.756590	180.8758	111.7805	0.0000
At most 2 *	0.733116	131.4205	83.93712	0.0000
At most 3 *	0.644473	85.18765	60.06141	0.0001
At most 4 *	0.533898	48.99224	40.17493	0.0052
At most 5	0.305731	22.27499	24.27596	0.0875
At most 6	0.212350	9.503637	12.32090	0.1418
At most 7	0.032298	1.149090	4.129906	0.3306

Source: Processed data

Based on Table 2, it is obtained that the variables gross domestic product (GDP), inflation (INF), money supply (JUB), real interest rate (SBR) and exchange rate (KURS) have eigenvalue and trace statistic values that are greater than their critical values with probability values of each variable <0.05, so that each variable is said to be cointegrated. While the variables ease of use (KP), service features (FL) and information security risk (RKI) have eigenvalue and trace statistic values that are smaller than their critical values with probability values of each variable is said to be non-cointegrated.

VAR Structure Lag Stability Test

The lag length test is used to see and determine the optimal lag used. A lower AIC value indicates that the lag is more optimal for use in VAR analysis.

Table 3. Lag Stability Test

VAR	Lag Order Sel	ection Criteria				
Endog	genous variable	es: GDP, INF, .	JUB, SBR, KU	JRS, KP, FL ai	nd RKI Exoger	ous variables: C
Date:	01/28/21					
Time:	19:12					
Samp	le: 1982 2019					
Incluc	led observation	ns: 35				
Lag	LogL	LR	FPE	AIC	SC	НО
0	-487.1682	NA	268.3884	28.29533	28.65084	28.41805
1	-253.0660	347.8091	0.017715	18.57520	21.77477*	19.67969
2	-154.4688	101.4142*	0.004565*	16.59822*	22.64185	18.68448*

Source: Processed data

Based on the test results carried out in table 4.4, it is known that lag 1 and lag 2 show lower AIC (akaike information criterion) values, thus indicating that these lags are more optimal for use in VAR analysis.

VAR Stability Test

Panel data regression has been carried out which shows the largest contribution of one and two to each of the variables studied with the results as in Table 4 below:

Table 4. VAR Roots				
Roots of Characteristic Polynom	ials			
Endogenous variables: GDP, IN	F, JUB, SBR, KURS, KP, FL and RKI)			
Exogenous variables: C				
Lag specification: 1 1 Date: 01/2	28/21 Time: 20:45			
Root	Modulus			
-0.396088 - 0.463116i	0.609395			
-0.396088 + 0.463116i	0.609395			
-0.547444	0.547444			
-0.340370 - 0.347329i	0.486301			
-0.340370 + 0.347329i	0.486301			
0.103865 - 0.390980i	0.404540			
0.103865 + 0.390980i	0.404540			
0.399696	0.399696			

Source: Processed data



Figure 2. InverseRoots of AR Characteristic Polynomials Source: Processed data

Based on the test resultsIn table 4 and figure 1, it can be seen that the relationship between each variable is interrelated and contributes to each other, so that the data is suitable for use in the VAR test.

Interpretation of Results

Based on the results of research that has been conducted using the Vector Utoregression (VAR) model:

1. Inflation (INF) Against Gross Domestic Product (GDP)

Inflation (INF)has a positive impact on the level of stability of the Indonesian financial system. Shocks to inflation are responded positively by the stability of the Indonesian financial system, which means that a change of one standard deviation has an impact on increasing the stability of the Indonesian financial system. In theory, inflation is a condition where there is an increase in the general price level. The meaning of this definition indicates a state of weakening people's purchasing power which is followed by a decrease in the real (intrinsic) value of a country's currency. The results

of this study contradict the results of research conducted by Nisaulfathona (2019) which states that inflation (INF) has a negative impact on finances in Indonesia.

2. AmountMoney Supply (JUB) Against Gross Domestic Product (GDP)

The money supply (JUB) has a negative impact on the stability of the Indonesian financial system. Shocks to the money supply are responded negatively by the stability of the Indonesian financial system, which means that a change of one standard deviation has an impact on the decline in the stability of the Indonesian financial system. In theory, currency in circulation is the total amount of money that has been issued and circulated by the Central Bank. The currency consists of two types, namely coins and paper money. The results of this study contradict the results of research conducted by Sugiyanto (2019) which states that the money supply (JUB) has a positive impact on gross domestic product (GDP).

3. Real Interest Rate (SBR) Against Gross Domestic Product (GDP)

Real interest rates (SBR) have a negative impact on the stability of the Indonesian financial system. Shocks to real interest rates are responded negatively to the stability of the Indonesian financial system, which means that a change of one standard deviation has an impact on the decline in the stability of the Indonesian financial system. In theory, interest rates are interest rates expressed in percent with a certain period of time (per month or per year). Interest rates can be divided into two, namely: nominal interest rates and real interest rates. Nominal interest rates are the ratio between the amount of money paid back and the amount of money borrowed. While real interest rates are the difference between nominal interest rates and the inflation rate. The results of this study contradict the results of research conducted by Rusdianasari (2018) which states that interest rates are unable to influence the stability of the financial system in Indonesia.

4. Exchange Rate (KURS) Against Gross Domestic Product (GDP)

The exchange rate (KURS) has a positive impact on the stability of the Indonesian financial system. Shocks to the exchange rate are responded positively by the stability of the Indonesian financial system, which means that a change of one standard deviation has an impact on increasing the stability of the Indonesian financial system. In theory,Exchange Rate (or known as Exchange Rate) is an agreement known as the exchange rate of a currency against current or future payments, between two currencies of each country or region. The results of this study support the results of research conducted by Nisaulfathona (2019) which states that the exchange rate (EXCHANGE RATE) has a positive impact on the financial system in Indonesia.

5. Ease of Use (KP) on Gross Domestic Product (GDP)

Ease of use (KP) has a negative impact on the stability of the Indonesian financial system. Shocks to ease of use are responded negatively by the stability of the Indonesian financial system, meaning that a change of one standard deviation has an impact on the decline in the stability of the Indonesian financial system. In theory, ease of use as a level where someone believes that the computer can be easily understood. With this ease of use, it will help the stability of the Indonesian financial system. The results of this study support the results of research conducted by Yolands, et al. (2017) which stated that the ease of use (KP) instrument has a significant effect on the Indonesian financial system.

6. Service Features (FL) Against Gross Domestic Product (GDP)

Featureservice (FL) has a positive effect on the stability of the Indonesian financial system. Shocks to service features are responded positively by the stability of the Indonesian financial system, which means that a change of one standard deviation has an impact on increasing the stability of the Indonesian financial system. In theory, features or also called attributes are all measurement results that can be obtained and are distinguishing characteristics of feature objects that can be symbols such as color, numeric such as weight, or a combination of both. The results of this study

support the results of research conducted by Sugiyanto (2019) which states that service features (FL) have a negative impact on the financial system in Indonesia.

7. Information Security Risk (ISC) to Gross Domestic Product (GDP)

Information security risk (IKR) has a negative impact on the stability of the Indonesian financial system. Shocks to information security risk are responded negatively by the stability of the Indonesian financial system, meaning that a change of one standard deviation has an impact on the decline in the stability of the Indonesian financial system. In theory,Information Security Risk is defined as the potential for unexpected output from a breach of information security by an Information Security Threat. All risks represent unauthorized actions. The results of this study contradict the results of a study conducted by Rahmanto (2019) which stated that security risks have no effect on the financial system in Indonesia.

CONCLUSION

The conclusion that can be drawn from the results of this study is that the time series data model that is more appropriate to use to see the influence of fintech and monetary policy on financial stability in Indonesia is the VAR model. The results of the study show thatInflation, exchange rate and service features have a positive impact on the stability of the Indonesian financial system, while the amount of money in circulation, real interest rates, ease of use and information security risks have a negative impact on the stability of the Indonesian financial system.

Therefore, each shock impact has positive and negative value in stabilizing the financial system in Indonesia.

REFERENCES

- [1] Adianto, & Sugiyanto. (2019). Pengaruh Pelatihan Dan Pengembangan Kerja Terhadap Kinerja Karyawan PT Bank Negara Indonesia (Persero) Tbk. Prosiding Seminar Nasional Humanis, 499–509.
- [2] Blot, C., Creel, J., Hubert, P., dan Labondance, F. (2015). Assessing The Link Between Price and Financial Stability. Journal of Financial Stability. 71- 88.
- [3] Danang Sunyoto. (2011). Analisis Regresi dan Uji Hipotesis, PT. Buku Seru, Yogyakarta.
- [4] Immawati, S. A. dan Dadang (2019). Minat Masyarakat Bertransaksi Menggunakan Financial Technology (Fintech) Di Kota Tangerang. Jurnal Ekonomi dan Bisnis, Universitas Muhammadiyah Tengerang.
- [5] Ninda Nastiti Lintangsari. Nisaulfathona Hidayanti. Yeni Purnamasari. (2016). Analisis Pengaruh Instrumen Pembyaran Non-Tunai Terhadap Stabilitas Sistem Keuangan Di Indonesia.
- [6] Rahmanto, D. N. A., dan Nasrulloh, (2019). Risiko dan Peraturan: Fintech Untuk Sistem Stabilitas Keuangan. Jurnal Inovasi. 15 (1). Vol. 44. No. 52.
- [7] Rusdianasari, F. (2018). Peran Inklusi Keuangan melalui Integrasi Fintech dalam Stabilitas Sistem Keuangan Indonesia. Jurnal Ekonomi Kuantitatif Terapan. Vol. 11. No. 2. 244-253.
- [8] Soemitra, A. (2009). Bank dan Lembaga Keuangan Syariah. Prenada Media, Jakarta.
- [9] Svetlana Saksonova and Iriana Kuzmina-Merlino (2017), Fintech as Financial InnovationThe Possibilities and Problems of Implementation European Research Studies Journal Volume XX Issue 3A, 2017, pp.961-973
- [10] Yolanda, A. D., Kimberly., dan Driveny, E. E (2017). Stabilitas Keuangan: Financial Technology dan Sektor Perbankan Sebagai Indikator Sistem Pembayaran Di Indonesia. Jurnal Ekonomi. Universitas Katholik Indonesia Atma Jaya.