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The Impact of Financing of the Agricultural Business by Sharia Bank and Work Motivation to Increase the Exchange Rate of Farmers in West Java Province

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Abstract

This quantitative study examines the impact of Islamic bank financing, social media marketing, and work motivation on farmers' exchange rates in West Java from 2017 to 2021. The farmer exchange rate, which measures purchasing power by comparing income to expenses, serves as the key welfare indicator (dependent variable). The research tests specific hypotheses using a conclusive design and a mixed-methods approach. Data collection combines secondary data on financing amounts from Islamic banks with primary data gathered via surveys and questionnaires. These instruments measure farmers' perceptions of social media advertising effectiveness and their levels of work motivation, ensuring representative and reliable inputs. The analysis employs a robust statistical procedure. After descriptive statistics, the data undergoes validity, reliability, and classical assumption testing. The core analysis uses multiple linear regression to measure the individual and combined influence of the three independent variables on changes in the exchange rate. The anticipated results are poised to contribute significantly to both theory and practice. Academically, the study integrates Islamic finance and digital marketing into agribusiness literature. Practically, it offers evidence-based insights. Islamic banks can optimize their agricultural financing and outreach, while local governments can formulate targeted policies to enhance sustainability and directly improve farmer prosperity in West Java.

Keywords : Total Amount Financing, Islamic Banks, Farmer Exchange Rates, West Java. Work Motivation, 2017-2021.

1. Introduction

The agricultural sector plays a strategic role in supporting the Indonesian economy. However, the development of this industry is often hampered by difficult access to funding sources [4]. Given the vital role of financing in spurring agricultural sector growth, optimizing funding sources from the financial industry is imperative. In this context, Islamic banking institutions exist as an alternative funding source. Functioning as intermediary institutions, Islamic banks make a significant contribution to driving the dynamics of the national economy, one of which is through the distribution of financing to the agricultural sector. As an implementation of Islamic economics, Islamic banking operations must be based on Islamic principles in all economic activities. Furthermore, the characteristics of Islamic financing are considered highly suitable for application in the livestock industry [10][14].

As previously stated [12], agricultural financing is generally allocated for the procurement of various production inputs, such as seeds, fertilizers, pesticides, labor, and water and electricity needs. The diversity of Islamic financing schemes provides flexibility for agribusinesses to choose the funding model that best suits the characteristics and scale of their businesses. This is recognized through Law No. 21 of 2008 concerning Islamic Banking is expected to strengthen this sector's contribution to improving public welfare.

However, Indonesia's position in global Islamic financial development remains in the top ten. Therefore, the development of the Islamic financial industry, particularly banking, must be able to provide a tangible impact on improving welfare, including for farmers in Sumatra. Working capital is crucial for farmers to carry out the production process. A study conducted by the Center for Agricultural Studies and Rural Development, Bogor Agricultural University [4] confirmed that capital availability is a significant determinant of farmer productivity

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levels. This means that the scale of production is greatly influenced by the amount of available funds. [10] In this regard, Islamic banks have significant opportunities to play a role as capital providers. [15] added that Islamic banks have room to innovate in various financing systems designed specifically for the agricultural sector.

Sharia-compliant financing schemes for the agricultural sector can be designed to align with communal agricultural production patterns. For example, for financing agricultural machinery, Ijarah (rental), Mudharabah (profit-sharing), or Musyarakah (partnership) contracts can be used. Farmers' welfare can be measured using the Farmer Exchange Rate (NTP) indicator. This opinion aligns with [2], which also states that financial transactions, including taxation aspects, can be an indicator of farmer welfare.

In the business world, productivity reflects the level of efficiency and effectiveness of a business in managing its resources to produce valuable goods or services [3]. This aspect is a key component of business performance, as it aims to optimize resource utilization without sacrificing service quality. Work motivation is the driving force that drives employees to carry out their tasks with full awareness, enthusiasm, and a sense of responsibility to achieve organizational goals. [1] Meanwhile, [7] argues that employee engagement directly impacts their productivity levels and is key to an organization's success and profitability. High engagement not only improves individual performance but also helps retain quality employees and creates a positive work climate for company progress. Therefore, this study aims to analyze the influence of employee motivation and engagement on business productivity.

Thus, it can be concluded that an increase in the NTP indicates an improvement in farmers' welfare. Data shows that the national NTP fluctuated from January 2016 to August 2018. Among the five provinces on Java Island, West Java recorded the most stable NTP without significant fluctuations compared to other provinces. This condition indicates that farmer welfare in West Java is relatively under control. The availability of adequate credit from Islamic banking will facilitate access to financing for businesses in the agricultural sector. This ultimately helps farmers and agribusinesses obtain the necessary capital to increase production capacity, expand their businesses, or adopt more modern technology and equipment. [14]

2. Business Issues

This research aims to help business actors and policymakers better understand the factors influencing exchange rates in the agricultural sector. Agriculture is a vital economic sector for developing countries, including Indonesia. However, the agricultural industry is also highly vulnerable to exchange rate fluctuations, which can impact farmer welfare and the sustainability of agricultural businesses. [12]

This can impact farmers' exchange rates in West Java. However, there is still a gap in the literature and digital marketing expertise regarding how these variables influence farmers' exchange rates. Therefore, this research aims to fill this gap by providing a better understanding of the impact of these variables on farmers' exchange rates. [12]

Advertising is the activity of promoting a product or service through paid advertisements or personal presentations of ideas packaged in posters, TVCs, or print advertisements. One study stated that advertising helps audiences stay informed about market developments. Audiences tend not only to pay attention to advertisements but also to be persuaded by the information they contain. Advertising is an efficient promotional mix communication tool for increasing awareness in the target audience [9].

A model developed by [9] states that advertising influences high product demand because consumers tend to examine or learn about products from persuasive advertisements. This model demonstrates that advertising has a significant impact on consumer attention and recognition of products or information. In the implementation of Business, advertising will increase awareness through various media such as posters, banners, radio commercials, etc.

Motivation is a desire within a person that causes them to take action. A person takes action for the sake of achieving a goal. Therefore, motivation is a driving force that leads to a goal and is rarely futile. Motivation is a process that describes the intensity, direction, and persistence of effort to achieve a goal. Based on the definitions above, motivation can be defined as an action to influence others to behave in an orderly manner. The literature states that motivation can influence business performance, ultimately resulting in productivity [8].

Motivation is the driving force that creates a person's passion for work, encouraging them to cooperate, work effectively, and integrate with all efforts to achieve satisfaction. Therefore, there is a strong assumption that it can help someone run a business well [8].

Motivation can also be defined as the driving force that causes someone to be willing to sacrifice their abilities, expertise, energy, and time, which have become their responsibilities and obligations, to achieve predetermined organizational goals and objectives. In line with this, work motivation is a pattern for motivating and directing employees to carry out their respective tasks to achieve goals with full awareness, enthusiasm, and responsibility [1].

By understanding the influence of these variables on the farmer's exchange rate, business actors and policymakers can gain better insight into developing better business strategies in the agricultural sector, thereby accelerating business and promoting positive developments for agricultural actors. To begin this research, I reviewed the existing literature on this topic. This research reviewed studies that have explored the impact of these variables on exchange rates in general and identified gaps in the literature that this research could fill. [4]

Next, I collected data on financing provided to farmers and agricultural worker motivation from several reliable sources. The data was then analyzed using VAR analysis techniques to test the hypotheses formulated in this study.

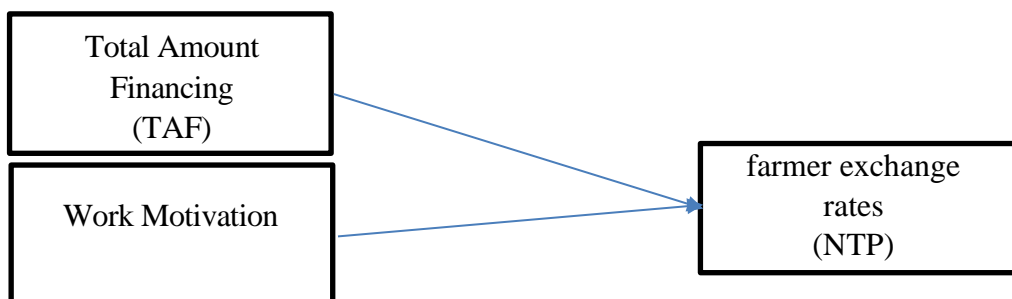
3. Methodology

The purpose of this study is to obtain information to solve the problem [5]. Based on the research objectives, the type of research used is explanatory. Explanatory research determines the relationship between one variable and another using a framework that is then structured in the form of a hypothesis [5].

The data types in this study are secondary and time series. Secondary data comes from company records or documents, industry analyses, government publications, media, websites, and others [15]. According to [6], time series data is observational data arranged chronologically. Using data obtained over 60 months from January 2017 to December 2021, respondent responses and data collection were collected using questionnaires from 44 target audiences of Agricultural Entrepreneurs in West Java. [15] Data sources came from government institutions in the economic and non-economic fields, such as Bank Indonesia, the Financial Services Authority (OJK), the Central Statistics Agency (BPS), the sample, and respondents. Sims explained that there are no intrinsic or extrinsic variables because if there is a simultaneous or causal relationship between the observed variables, all variables must be treated equally. In the VAR concept, all variables are endogenous. [13]

Meanwhile, the concepts of cointegration and error correction were developed. Furthermore, in 1990, Johansen and Juselius developed the Vector Error Correction Model (VECM). VECM has a simple process for identifying long-run and short-run components. [13] What will be analyzed from the data processing in this study using VAR/VECM? VAR analysis is used when the observed data is stationary but does not exhibit cointegration. VECM analysis is used when the cointegration and stationarity of the data are known. Data processing and analysis use e-views software. [13]

Table 1 Research Model (Author, 2025)



Hypothesis 1 (H1): **The total amount of funds positively impact the farmers' exchange rate (NTP).** Theories of investment and economic growth support the above claims. This theory states that sufficient investment in the agricultural sector can improve farmers' productivity and income. With enough money, farmers can get the money they need to buy modern equipment, better seeds, fertilizers, and other farming techniques. In this situation, the more credit available to farmers, the higher their exchange rate. [12]

Hypothesis 2 (H2): **Work Motivation** acts as a driving force that awakens a person's enthusiasm for work. This driving force not only encourages individuals to be active, but also encourages them to collaborate, work efficiently, and align all their efforts to achieve satisfaction. Based on this, a strong belief has emerged that motivation is an essential supporting factor for a person's success in managing their business [8]. From another perspective, motivation can be seen as a force that makes a person relate to competence, expertise, energy, and timeframe—all of which are part of their responsibilities and obligations—to achieve the organization's predetermined targets and goals. In line with this understanding, work motivation is essentially a framework designed to provide encouragement and direction to employees so that they can carry out their tasks with full awareness, enthusiasm, and a sense of responsibility, so that organizational goals can be achieved [1].

4. Result and Discussion

A. Statistical Analysis

1) Descriptive Statistics

Descriptive statistics are statistics that provide an overview or description of a data seen from the average value, standard deviation, maximum, minimum, sum, range, kurtosis and skewness (distribution skewedness). Descriptive statistics describe data as information that is clearer and easier to understand [6]

Table 2 Descriptive Analysis Result (Eviews-11,2025)

	NTP	TAF	Work Motivation	Advertising
Mean	5245.158	12304.19	5.350130	4.350130
Median	5122.220	12175.00	4.215786	4.310300
Maximum	5706.432	16034.00	5.87422	6.246900
Minimum	5780.664	1358.000	3.976542	3.504690
Std. Dev.	456.9775	2574.321	0.895313	0.738907

Based on the results of the descriptive analysis above, the mean, median, maximum, minimum and standard deviation values for all research variables were obtained.

B. Vector Error Correction Model Estimation

1) Data Stationarity Test

Before forming a VECM (Vector Error Correction Model), the thing that must be done is to test the stationarity of the data to avoid spurious regression or spurious regression. This is because spurious regression can make the statistical test for each coefficient invalid and difficult to use as a guideline. If the dependent variable is not stationary at the level, then the VECM can be formed. To test whether the time series data is stationary or not, a unit roots test is used. Stationarity Test results are as follows:

Table 3 Unit Root Test (Eviews-11,2025)

Variabel	Unit root test			
	Level		1st Difference	
	ADF	Prob	ADF	Prob
NTP	-2.457	0.025	-6.589	0.0000
TAF	-6.125	0.000	-7.892	0.0000
Work Motivation	-2.134	0.077	-9.042	0.0000

Based on the results of the unit root test (Unit Root Test) listed in Table 4.2. shows if at the level of the BI Rate variable, and NPF is not stationary. This indicates that the BI Rate and NPF variables at the level have a unit root. To prove whether the data is stationary, a degree of integration test is then carried out, namely at the 1st Difference level. In Table 4.2, all variables from the test, it was found that all variables were stationary with a significant probability level at $\alpha = 5\%$. The two variables were stationary, meaning they did not show a clear trend or temporal pattern in the data. If both variables are present, this indicates a possible long-term relationship.

2) Optimal Lag Test

Optimal lag test to overcome autocorrelation problems in research model systems. The selection of delays is based on the Akaike Information Criterion (AIC), Schwartz Information Criterion (SC), and Hannan Quinn (HQ) criteria. The delay is determined by the minimum AIC and SC values and the maximum HQ value.

Table 4 Optimal Lag Test (Eviews-11,2025)

VAR Lag Order Selection Criteria
 Endogenous variables: D(WM) D(NTP) D(TAF)
 Exogenous variables: C
 Date: 05/13/25 Time: 13:21
 Sample: 2017M01 2021M12
 Included observations: 54

Lag	LogL	LR	FPE	AIC	SC	HQ
0	153.8085	NA	4.58e-08	-5.548464	-5.401132*	-5.491644*
1	174.1752	36.96170*	3.90e-08*	-5.710192*	-4.973531	-5.426091
2	188.3866	23.68576	4.21e-08	-5.643950	-4.317960	-5.132568
3	200.9882	19.13564	4.90e-08	-5.518080	-3.602762	-4.779417

* indicates lag order selected by the criterion
 LR: sequential modified LR test statistic (each test at 5% level)
 FPE: Final prediction error
 AIC: Akaike information criterion
 SC: Schwarz information criterion
 HQ: Hannan-Quinn information criterion

Determination of the optimal lag length can be seen from the minimum Akaike Information Criteria (AIC) value. Based on table 4.3, the optimal lag length results are obtained The results of the optimal lag test show that lag 3 gives the lowest AIC value of -4.779. AIC is one of the information criteria used when comparing statistical models. A lower AIC value indicates that the model with lag five better explains the data than the models with other lags.

3) Var Stability Test

Stability test by considering the value of the reciprocal root property of the AR polynomial. This can be seen from the module value in the AR Roots table. If less than 1, the research model is stable

Table 5 Var Stability Test (Eviews-11,2025)

Roots of Characteristic Polynomial	
Endogenous variables: D(WM) D(NTP) D(TAF)	
Exogenous variables: C	
Lag specification: 1 5	
Date: 05/13/25 Time: 13:47	
Root	Modulus
0.871915	0.871915
0.495018 + 0.751886i	0.849336
0.295018 - 0.751886i	0.849336
-0.421613 - 0.656583i	0.803188
-0.263613 + 0.656583i	0.803188
0.682600 - 0.414339i	0.799530
0.681600 + 0.415339i	0.799530
-0.086039 - 0.713357i	0.758255
-0.086019 + 0.733357i	0.758255
-0.463390 + 0.511516i	0.746537
-0.444390 - 0.524516i	0.746537
0.159420 - 0.657962i	0.711941
0.174120 + 0.656962i	0.711941
-0.335101 + 0.511613i	0.668209
-0.345501 - 0.565713i	0.668209
No root lies outside the unit circle.	
VAR satisfies the stability condition.	

Based on Table 5 In this context, if the modulus values of all eigenroots are less than 1, the VAR system is stable. This means that the VAR model variables do not vary uncontrollably or deviate from each other in the long run. In this case, it is important to ensure the stability of the VAR model because if there are roots with a modulus value greater than 1, the VAR model can produce results that cannot be interpreted or are insufficient to express the relationship between analytical variables.

4) Granger Causality Test

Engle-Granger Causality Test, which aims to see the relationship between the variables contained in the model. In addition, the test was carried out to determine whether an independent variable increases the forecasting of a dependent variable.

Table 6 Granger Causality Test (Eviews-11,2025)

Pairwise Granger Causality Tests			
Date: 05/13/25 Time: 13:58			
Sample: 2017M01 2021M12			
Lags: 5			
Null Hypothesis:	Obs	F-Statistic	Prob.
TAF does not Granger Cause NTP	55	0.72975	0.6049
NTP does not Granger Cause TAF		0.89267	0.4943

WM does not Granger Cause NTP	55	0.57437	0.6377
NTP does not Granger Cause WM		0.68627	0.5783
WM does not Granger Cause TAF	55	3.34382	0.0193
TAF does not Granger Cause WM		0.31560	0.7385

The causality test was conducted to find out whether an endogenous variable can be treated as an exogenous variable. This stems from ignorance of the influence between variables. If the prob value <0.05 , there is no causality relationship. Table 6. shows only NPF to TAF which shows a causal relationship with a prob value of $0.018 <0.05$.

5) Cointegration Test

Cointegration Test, which aims to determine whether there is an error correction model in the research model, represents a long-term balance relationship, indicating that the data are cointegrated. Suppose the value of the trace statistic or the max eigen statistic is greater than the critical values. In that case, the data is not cointegrated, so what can continue with VAR analysis.

Table 7 Cointegration Test (Eviews-11,2025)

Date: 05/13/25 Time: 14:50				
Sample (adjusted): 2017M06 2021M12				
Included observations: 55 after adjustments				
Trend assumption: Linear deterministic trend				
Series: D(NTP) D(TAF) D(WM)				
Lags interval (in first differences): 1 to 3				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.513075	86.55469	47.85613	0.0000
At most 1 *	0.367514	45.82420	29.79707	0.0002
At most 2 *	0.256527	19.16421	15.49471	0.0132
At most 3 *	0.083134	4.496685	3.841466	0.0302
Trace test indicates 4 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

The cointegration test is used to find out whether there will be a balance in the long term, namely whether there is a similarity in movement and stability of the relationship between the variables in this study or not. The cointegration test was carried out using the Johansen's Cointegration Test method. If the probability value is <0.05 , it means that there is a cointegration equation, which means it has a long-term balance. Table 4.6 shows a probability value of $0.000 <0.05$, so the model has a long-term balance. Because the formed model has cointegration, the model used is VECM.

6) VECM Model (Vector Error Correction Model)

A good and valid VECM model must have a significant ECT. The significant ECT (Error Correction Term) can be seen from the t-statistic value which is then compared with the t-table, can also be seen from the probability. If the t-statistic value is greater than the t-table, it means that the coefficient is significant. If the ECT probability is smaller than α , it means that the ECT coefficient is significant.

Table 8 VECM Results (Long Term Effect) (Eviews-11,2025)

Vector Error Correction Estimates	
Date: 05/13/25 Time: 14:52	
Sample (adjusted): 2017M08 2021M12	
Included observations: 53 after adjustments	
Standard errors in () & t-statistics in []	
Cointegrating Eq:	CointEq1
D(NTP(-1))	1.000000
D(TAF(-1))	-1.322315 (0.24720) [-5.35803]
D(WM(-1))	-0.714556 (0.21315) [-3.41399]
C	0.016165

Based on Table 8, the results of the long-term influence are obtained, namely the TAF variable with a t-count value of -5.3580 > the t-table value of 2.003 ($\alpha = 0.05$; $df = -56$) so that there is an influence of the TAF variable on NTP. The WM variable with a t-count value of -3,413 > a t-table value of 2,003 ($\alpha = 0.05$; $df = -56$) so that there is an influence of the TAF variable on NTP.

Table 9 Regression Result of Vector Error Correction Model (Short Term Estimation) (Eviews-11,2025)

Error Correction:	D(NTP,2)	D(TAF,2)	D(NPF,2)	D(BIRATE,2)
CointEq1	-0.116651 (0.10565) [-1.10415]	2.389406 (0.54695) [4.36862]	1.431675 (0.38645) [3.70466]	-0.010922 (0.04816) [-0.22680]
D(NTP(-1),2)	-0.450408 (0.21039) [-2.14079]	-4.165164 (1.08923) [-3.82395]	-0.789460 (0.76961) [-1.02579]	0.001124 (0.09590) [0.01172]
D(NTP(-2),2)	-0.526232 (0.24886) [-2.11461]	-3.101010 (1.28836) [-2.40695]	-0.128837 (0.91030) [-0.14153]	-0.220839 (0.11344) [-1.94683]
D(NTP(-3),2)	-0.210487 (0.28372) [-0.74188]	-4.866304 (1.46885) [-3.31300]	0.390277 (1.03784) [0.37605]	-0.096919 (0.12933) [-0.74941]
D(NTP(-4),2)	-0.021003 (0.25568) [-0.08215]	-2.459537 (1.32368) [-1.85810]	-0.116272 (0.93527) [-0.12432]	-0.037666 (0.11655) [-0.32318]
D(NTP(-5),2)	0.076424 (0.21070) [0.36271]	-2.767421 (1.09083) [-2.53700]	-0.003701 (0.77074) [-0.00480]	0.021486 (0.09604) [0.22371]
D(TAF(-1),2)	-0.156648 (0.12520) [-1.25117]	1.511864 (0.64818) [2.33247]	1.763303 (0.45798) [3.85017]	-0.016740 (0.05707) [-0.29332]

D(TAF(-2),2)	-0.140536 (0.10438) [-1.34219]	0.889764 (0.54039) [1.64653]	1.625426 (0.38182) [4.25707]	-0.006793 (0.04758) [-0.14277]
D(TAF(-3),2)	-0.104337 (0.08280) [-1.24011]	0.686692 (0.42866) [1.60193]	1.303730 (0.30288) [4.30447]	-0.018909 (0.03774) [-0.50100]
D(TAF(-4),2)	-0.061727 (0.05746) [-1.08424]	0.415814 (0.29748) [1.39779]	0.942369 (0.21019) [4.48345]	-0.033262 (0.02619) [-1.26993]
D(TAF(-5),2)	-0.018150 (0.02781) [-0.67270]	0.199251 (0.14396) [1.38403]	0.476634 (0.10172) [4.68575]	-0.021800 (0.01268) [-1.71982]
D(WM(-1),2)	-0.081015 (0.08005) [-1.05200]	0.870383 (0.41445) [2.10010]	0.064291 (0.29283) [0.21955]	-0.010562 (0.03649) [-0.28945]
D(WM(-2),2)	-0.067764 (0.06598) [-1.05708]	0.866473 (0.34157) [2.53671]	-0.043336 (0.24134) [-0.17956]	-0.038351 (0.03007) [-1.27519]
D(WM(-3),2)	-0.040030 (0.05742) [-0.68717]	0.338684 (0.29726) [1.13936]	0.016739 (0.21003) [0.07970]	-0.004727 (0.02617) [-0.18061]
D(WM(-4),2)	-0.023832 (0.04667) [-0.53061]	0.419583 (0.24164) [1.73643]	-0.297797 (0.17073) [-1.74424]	-0.015247 (0.02128) [-0.71667]
D(WM(-5),2)	-0.026736 (0.04168) [-0.65151]	-0.019051 (0.21576) [-0.08830]	-0.190113 (0.15245) [-1.24705]	-0.005958 (0.01900) [-0.31363]
C	0.000296 (0.00933) [0.03169]	0.004514 (0.04829) [0.09348]	0.004164 (0.03412) [0.12205]	-5.23E-05 (0.00425) [-0.01229]
R-squared	0.424866	0.880770	0.755203	0.582583
Adj. R-squared	0.035260	0.800002	0.589373	0.299816
Sum sq. resids	0.142736	3.825703	1.909913	0.029658
S.E. equation	0.067856	0.351297	0.248214	0.030931
F-statistic	1.090501	10.90489	4.554076	2.060296
Log likelihood	81.59802	-5.547174	12.86196	123.2369
Akaike AIC	-2.248982	1.039516	0.344832	-3.820261
Schwarz SC	-1.431125	1.857373	1.162689	-3.002404
Mean dependent	0.000717	0.001570	0.000117	0.000000
S.D. dependent	0.069085	0.785529	0.387349	0.036964
Determinant resid covariance (dof adj.)		2.55E-08		
Determinant resid covariance		2.98E-09		
Log likelihood		219.3926		
Akaike information criterion		-4.807270		
Schwarz criterion		-1.387140		

Based on Table 9, the results of the short-term effect are obtained, namely where all variables have a t-count value < t-table value of 2.003 ($\alpha = 0.05$: $df = -56$) so that there is no influence of the TAF, WM and variables on NTP.

7) Impulse Respons

Impulse response function (IRF). This aims to ascertain the response of endogenous variables to specific shocks.

Table 10 Impulse Respons (Eviews-11,2025)

Response of D(NTP): Period	D(NTP)	D(TAF)	D(WM)
1	0.067856	0.000000	0.000000
2	0.029850	0.000257	0.002354
3	0.006694	0.003473	0.005531
4	0.023365	0.008224	0.006782
5	0.029797	0.010338	-0.001851
6	0.025558	0.011543	-0.006080
7	0.014033	0.000425	0.001321
8	0.020428	-0.003898	0.005614
9	0.027267	0.007547	0.001869
10	0.023349	0.007753	-0.001268
11	0.022116	0.003606	-0.000433
12	0.023546	0.002799	0.000509

Response of D(TAF): Period	D(NTP)	D(TAF)	D(WM)
1	0.013554	0.351036	0.000000
2	-0.057370	-0.154259	-0.249822
3	0.026945	-0.044469	0.145512
4	-0.087746	0.073291	-0.054415
5	0.100397	-0.002346	-0.010622
6	-0.061676	0.038975	-0.051229
7	0.052966	0.045222	-0.022838
8	0.017609	0.067881	-0.040981
9	-0.073388	-0.080950	-0.038117
10	0.050071	0.119714	0.054909
11	-0.031757	0.023934	-0.116991
12	0.029118	-0.000435	0.001397

Response of D(WM): Period	D(NTP)	D(TAF)	D(WM)
1	-0.057078	-0.051646	0.235976
2	0.040197	-0.050176	-0.003530
3	0.075108	-0.019390	0.006780
4	0.036256	-0.082519	0.034744
5	0.031829	-0.062952	0.005102
6	0.016824	-0.059019	0.067601
7	0.044955	-0.090290	0.128095
8	0.066389	0.076144	0.063456
9	0.036201	-0.022486	-0.026894
10	0.030217	-0.065421	0.063262
11	-0.008726	-0.041479	0.015469
12	0.046234	-0.083841	0.063530

Response of D(AF): Period	D(NTP)	D(TAF)	D(WM)
1	-0.005514	-0.008185	0.007262
2	-0.003998	-0.005773	0.003999
3	-0.015455	0.002718	-0.004320
4	-0.013385	-0.006641	0.004426
5	-0.000923	-0.011029	0.004784
6	-0.004604	0.000845	0.004928
7	-0.009571	0.001182	0.004339
8	-0.010397	-0.006858	-0.001732
9	-0.007608	-0.003166	0.002471
10	-0.006538	-0.005582	0.003792
11	-0.008858	-0.005160	0.003809
12	-0.008951	-0.002656	0.003501

Cholesky
Ordering:
D(NTP)
D(TAF)
D(WM)
D(AF)

Estimation of the impulse response function is carried out to examine the shock response of the NTP variable to the TAF and WM. The estimation uses the assumptions that each NTP variable is not correlated with each other so that tracing the effect of a shock can be direct. Table 10 shows the fluctuating responses of TAF and WM to NTP.

8) Forecast Error Variance Decomposition (FEVD)

Forecast Error Variance Decomposition (FEVD) aims to predict changes in one variable indicated by changes in the error variance influenced by other variables.

Table 11 Forecast Error Variance Decomposition (FEVD) (Eviews-11,2025)

Variance Decomposition of D(NTP): Period	S.E.	D(NTP)	D(TAF)	D(WM)	D(AF)
1	0.067856	100.0000	0.000000	0.000000	0.000000
2	0.074310	99.51942	0.001369	0.009224	0.469988
3	0.074994	98.50933	0.214212	0.547188	0.729269
4	0.079200	97.02599	1.277873	1.003425	0.692714
5	0.085300	95.84755	2.570481	0.912103	0.669869
6	0.090346	93.44300	3.923835	1.265897	1.367272
7	0.091504	93.44542	3.827339	1.254925	1.472316
8	0.094107	93.05839	3.790110	1.542310	1.609189
9	0.098291	93.00039	4.063924	1.449951	1.485739
10	0.101359	92.76185	4.406752	1.379145	1.452253
11	0.103859	92.88426	4.317728	1.315284	1.482731
12	0.106547	93.14054	4.171607	1.252036	1.435814

Variance Decomposition of D(TAF):					
Period	S.E.	D(NTP)	D(TAF)	D(WM)	D(AF)
1	0.351297	0.148859	99.85114	0.000000	0.000000
2	0.469602	1.575769	66.66876	28.30107	3.454405
3	0.495372	1.711958	60.71849	34.06162	3.507933
4	0.517586	4.442187	57.62353	32.30588	5.628402
5	0.527372	7.903027	55.50677	31.15861	5.431591
6	0.537247	8.933098	54.01138	30.93299	6.122529
7	0.542263	9.722651	53.71220	30.54071	6.024430
8	0.549950	9.555282	53.74475	30.24824	6.451722
9	0.562038	10.85364	53.53221	29.42102	6.193130
10	0.579485	10.95650	54.62505	28.57392	5.844522
11	0.592902	10.75313	52.34373	31.18880	5.714337
12	0.594273	10.94367	52.10265	31.04567	5.908005

Variance Decomposition of D(WM):					
Period	S.E.	D(NTP)	D(TAF)	D(WM)	D(AF)
1	0.248214	5.287975	4.329353	90.38267	0.000000
2	0.257088	7.373862	7.844817	84.26972	0.511604
3	0.268634	14.57086	7.705958	77.24494	0.478244
4	0.287421	14.31954	14.97431	68.93830	1.767852
5	0.297649	14.49582	18.43597	64.31107	2.757138
6	0.311396	13.53612	20.43640	63.47120	2.556275
7	0.352053	12.22082	22.56632	62.89660	2.316253
8	0.372210	14.11437	24.37326	59.17516	2.337211
9	0.375945	14.76250	24.24905	58.51679	2.471669
10	0.387982	14.46732	25.61102	57.60096	2.320693
11	0.391594	14.25134	26.26274	56.69939	2.786534
12	0.408408	14.38362	28.35911	54.54658	2.710693

Based on Table 11, the results show that the higher the period, the fluctuation count for Periods 1 - 12 in the Variance Decomposition (FEVD) calculation. Analysis can be carried out; the TAF variable has a greater influence on the NTP variable and the WM variables, indicating that the higher the period, the WM variables tend to have a greater influence on the NTP variable. The TAF variable also shows the greatest influence on NPT compared to the WM and AF variables.

5. Conclusion

Analysis shows that Total Agricultural Financing (TAF) has a long-term effect on the Farmer's Exchange Rate (NTP). However, in the short term, the relationship between TAF and NTP is insignificant. The primary function of agricultural financing is to provide farmers with access to capital to increase production capacity. This flow of funds enables farmers to acquire inputs such as superior seeds, fertilizers, pesticides, and supporting equipment and infrastructure. With adequate capital, farmers can increase output and income, while simultaneously strengthening their bargaining position in the market, ultimately contributing positively to an increase in the NTP. Furthermore, financing also acts as a catalyst for innovation and technology adoption in the agricultural sector. However, in the short term, the impact of agricultural financing on the NTP is limited. NTP fluctuations are more influenced by market supply and demand mechanisms, commodity price volatility, climate conditions, government policy interventions, and the macroeconomic situation. While work motivation does not directly impact the NTP in the short term, it has indirect financial implications. High motivation can boost productivity, but on the other hand, financial institutions often apply a principle of prudence in disbursing new funds. This policy can limit

farmers' access to financing, impacting their ability to obtain optimal agricultural inputs. This situation has the potential to create financial instability and limit the scope for agricultural business development. Based on these findings, it can be concluded that Sharia financing has made a significant contribution to increasing the NTP in West Java. Several key factors, such as financing volume, non-performing loan levels, and advertising intensity, also influence the dynamics of the NTP in the region. Recommendation: a). *Additional Variables Influencing Farmers' Terms of Exchange*. Beyond the variables already analyzed, several other contributing factors influence the Farmers' Terms of Exchange (NTP) in West Java. Several aspects, such as environmental changes, government policy interventions, and the socio-cultural dynamics of the local community, play a crucial role. To gain a comprehensive understanding of the determinants of the NTP, this study is recommended to expand the scope of the analysis by including these additional variables. b). *Comparative Analysis of Financing Institutions*. This research would gain added value by including a comparative study between Islamic agricultural financing schemes and financing patterns from conventional financial institutions. Such a comparative analysis would reveal the relative strengths and weaknesses of each financing model, while also providing a clear picture of the specific contribution of Islamic financing to increasing the NTP in West Java. c). *Formulating Strategic Recommendations*. Based on the findings of the data analysis and hypothesis testing, this study is expected to formulate applicable policy recommendations to optimize the role of Islamic financing in increasing the NTP. Some strategic recommendations that can be considered include developing financial products that are more adaptive to the farming business cycle, implementing financial literacy and business management programs for farmers, integrating digital marketing training and adopting the latest agricultural technology, and developing competitive and equitable interest rate schemes.

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