**APPENDIX**

ANALYSIS OF EXTERNAL FACTORS AFFECTING NON ​​PERFORMING FINANCE (NPF) SHARIA BANKS IN INDONESIA (PERIOD 2009 Q1-2018 Q4)

Yahya Muqorrobin**1**, Shinta Maharani2\*

1Magister Ekonomi Syariah, IAIN Ponorogo

2 Faculties of Economics and Islamic Business,

The State Institue of Islamic Studies Ponorogo

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | TAHUN | K | NPF | PDB | KURS | INFLASI |
| 1 | 2009 | 1 | 5.14 | 2,050,781 | 11575 | 7.92 |
| 2 |  | 2 | 4.39 | 1,952,599 | 10225 | 3.65 |
| 3 |  | 3 | 5.72 | 1,849,758 | 9681 | 2.83 |
| 4 |  | 4 | 4.01 | 1,858,546 | 9400 | 2.78 |
| 5 | 2010 | 1 | 4.53 | 1642356.3 | 9115 | 3.43 |
| 6 |  | 2 | 3.89 | 1709132 | 9083 | 5.05 |
| 7 |  | 3 | 3.95 | 1775109.9 | 8924 | 5.8 |
| 8 |  | 4 | 3.02 | 1737534.9 | 8991 | 6.96 |
| 9 | 2011 | 1 | 3.6 | 1748731.2 | 8709 | 6.65 |
| 10 |  | 2 | 3.55 | 1816268.2 | 8597 | 4.79 |
| 11 |  | 3 | 3.5 | 1881849.7 | 8823 | 4.61 |
| 12 |  | 4 | 2.52 | 1840786.2 | 9068 | 3.79 |
| 13 | 2012 | 1 | 2.76 | 1855580.2 | 9180 | 3.97 |
| 14 |  | 2 | 2.88 | 1929018.7 | 9480 | 4.53 |
| 15 |  | 3 | 2.74 | 1993632.3 | 9590 | 4.31 |
| 16 |  | 4 | 2.22 | 1948852.2 | 9670 | 4.3 |
| 17 | 2013 | 1 | 2.75 | 1958395.5 | 9719 | 5.9 |
| 18 |  | 2 | 2.64 | 2036816.6 | 9929 | 5.9 |
| 19 |  | 3 | 2.8 | 2103598.1 | 11613 | 8.4 |
| 20 |  | 4 | 2.62 | 2057687.6 | 12189 | 8.38 |
| 21 | 2014 | 1 | 3.22 | 2506300.2 | 11404 | 7.32 |
| 22 |  | 2 | 3.9 | 2618947.3 | 11969 | 6.7 |
| 23 |  | 3 | 4.67 | 2746762.4 | 12212 | 4.53 |
| 24 |  | 4 | 4.33 | 2697695.4 | 12440 | 8.36 |
| 25 | 2015 | 1 | 5.49 | 2728180.7 | 13084 | 6.38 |
| 26 |  | 2 | 5.09 | 2867948.4 | 13332 | 7.26 |
| 27 |  | 3 | 5.14 | 2990645 | 14657 | 6.83 |
| 28 |  | 4 | 4.84 | 2939558.7 | 13795 | 3.35 |
| 29 | 2016 | 1 | 5.35 | 2929897.9 | 13276 | 4.45 |
| 30 |  | 2 | 5.68 | 3074804.8 | 13180 | 3.45 |
| 31 |  | 3 | 4.67 | 3206377.2 | 12998 | 3.07 |
| 32 |  | 4 | 4.42 | 3195694.2 | 13436 | 3.02 |
| 33 | 2017 | 1 | 4.61 | 3228034.6 | 13321 | 3.61 |
| 34 |  | 2 | 4.47 | 3366585.8 | 13326 | 4.37 |
| 35 |  | 3 | 4.41 | 3503568.6 | 13492 | 3.72 |
| 36 |  | 4 | 4.77 | 3490608.3 | 13548 | 3.61 |
| 37 | 2018 | 1 | 4.56 | 3511654 | 13756 | 3.4 |
| 38 |  | 2 | 3.83 | 3685273 | 14404 | 3.12 |
| 39 |  | 3 | 3.82 | 3841755 | 14929 | 2.88 |
| 40 |  | 4 | 3.26 | 3798675 | 14481 | 3.13 |

**ARDL Model**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dependent Variable: NPF | | |  |  |
| Method: ARDL | |  |  |  |
| Date: 10/19/19 Time: 07:50 | | |  |  |
| Sample (adjusted): 2009Q3 2018Q4 | | | |  |
| Included observations: 38 after adjustments | | | |  |
| Maximum dependent lags: 1 (Automatic selection) | | | | |
| Model selection method: Akaike info criterion (AIC) | | | | |
| Dynamic regressors (2 lags, automatic): LOG(PDB) LOG(KURS) INF | | | | |
| Fixed regressors: C | | |  |  |
| Number of models evalulated: 27 | | | |  |
| Selected Model: ARDL(1, 2, 2, 1) | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| NPF(-1) | 0.467642 | 0.112354 | 4.162220 | 0.0003 |
| LOG(PDB) | -3.853562 | 1.841512 | -2.092607 | 0.0456 |
| LOG(PDB(-1)) | 0.095702 | 2.424247 | 0.039477 | 0.9688 |
| LOG(PDB(-2)) | -3.647725 | 2.090846 | 1.744617 | 0.0920 |
| LOG(KURS) | 0.237824 | 2.528304 | 0.094065 | 0.9257 |
| LOG(KURS(-1)) | -6.698888 | 3.086554 | -2.170345 | 0.0386 |
| LOG(KURS(-2)) | 9.354158 | 2.085092 | 4.486208 | 0.0001 |
| INF | -0.044889 | 0.075802 | -0.592191 | 0.5585 |
| INF(-1) | 0.243666 | 0.078816 | 3.091580 | 0.0045 |
| C | -24.06039 | 6.663339 | -3.610861 | 0.0012 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.835751 | Mean dependent var | | 3.953421 |
| Adjusted R-squared | 0.782957 | S.D. dependent var | | 0.977803 |
| S.E. of regression | 0.455538 | Akaike info criterion | | 1.486258 |
| Sum squared resid | 5.810409 | Schwarz criterion | | 1.917201 |
| Log likelihood | -18.23890 | Hannan-Quinn criter. | | 1.639584 |
| F-statistic | 15.83034 | Durbin-Watson stat | | 2.624337 |
| Prob(F-statistic) | 0.000000 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*Note: p-values and any subsequent tests do not account for model | | | | |
| selection. | | |  |  |

**Uji Bound Test**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ARDL Bounds Test | | |  |  |
| Date: 10/19/19 Time: 07:51 | | |  |  |
| Sample: 2009Q3 2018Q4 | | |  |  |
| Included observations: 38 | | |  |  |
| Null Hypothesis: No long-run relationships exist | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
| Test Statistic | Value | K |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| F-statistic | 8.546046 | 3 |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Critical Value Bounds | | |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Significance | I0 Bound | I1 Bound |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| 10% | 2.72 | 3.77 |  |  |
| 5% | 3.23 | 4.35 |  |  |
| 2.5% | 3.69 | 4.89 |  |  |
| 1% | 4.29 | 5.61 |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Test Equation: | |  |  |  |
| Dependent Variable: D(NPF) | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 10/19/19 Time: 07:51 | | |  |  |
| Sample: 2009Q3 2018Q4 | | |  |  |
| Included observations: 38 | | |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| DLOG(PDB) | -3.853562 | 1.841512 | -2.092607 | 0.0456 |
| DLOG(PDB(-1)) | -3.647725 | 2.090846 | -1.744617 | 0.0920 |
| DLOG(KURS) | 0.237824 | 2.528304 | 0.094065 | 0.9257 |
| DLOG(KURS(-1)) | -9.354158 | 2.085092 | -4.486208 | 0.0001 |
| D(INF) | -0.243666 | 0.078816 | -3.091580 | 0.0045 |
| C | -24.06039 | 6.663339 | -3.610861 | 0.0012 |
| LOG(PDB(-1)) | -0.110135 | 1.506523 | -0.073105 | 0.9422 |
| LOG(KURS(-1)) | 2.893094 | 2.121220 | 1.363882 | 0.1835 |
| INF | 0.198777 | 0.084548 | 2.351051 | 0.0260 |
| NPF(-1) | -0.532358 | 0.112354 | -4.738222 | 0.0001 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.581470 | Mean dependent var | | -0.029737 |
| Adjusted R-squared | 0.446942 | S.D. dependent var | | 0.612547 |
| S.E. of regression | 0.455538 | Akaike info criterion | | 1.486258 |
| Sum squared resid | 5.810409 | Schwarz criterion | | 1.917201 |
| Log likelihood | -18.23890 | Hannan-Quinn criter. | | 1.639584 |
| F-statistic | 4.322313 | Durbin-Watson stat | | 2.624337 |
| Prob(F-statistic) | 0.001332 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Uji Cusum of Square**



**UJI ASUMSI KLASIK**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Heteroskedasticity Test: White** | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| F-statistic | 2.206278 | Prob. F(9,30) | | 0.0504 |
| Obs\*R-squared | 15.93092 | Prob. Chi-Square(9) | | 0.0683 |
| Scaled explained SS | 8.831843 | Prob. Chi-Square(9) | | 0.4529 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Test Equation: | |  |  |  |
| Dependent Variable: RESID^2 | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 10/22/19 Time: 08:17 | | |  |  |
| Sample: 2009Q1 2018Q4 | | |  |  |
| Included observations: 40 | | |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| C | 0.981183 | 7.066750 | 0.138845 | 0.8905 |
| PDB | -2.76E-06 | 6.99E-06 | -0.394490 | 0.6960 |
| PDB^2 | -1.04E-13 | 3.15E-12 | -0.032921 | 0.9740 |
| PDB\*KURS | 4.70E-10 | 1.94E-09 | 0.242209 | 0.8103 |
| PDB\*INFLASI | -7.16E-07 | 6.01E-07 | -1.191295 | 0.2429 |
| KURS | 0.000976 | 0.002159 | 0.452264 | 0.6543 |
| KURS^2 | -1.28E-07 | 3.00E-07 | -0.427199 | 0.6723 |
| KURS\*INFLASI | 0.000226 | 0.000184 | 1.224175 | 0.2304 |
| INFLASI | -1.037085 | 0.829153 | -1.250776 | 0.2207 |
| INFLASI^2 | 0.011596 | 0.058078 | 0.199658 | 0.8431 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.398273 | Mean dependent var | | 0.609720 |
| Adjusted R-squared | 0.217755 | S.D. dependent var | | 0.722446 |
| S.E. of regression | 0.638965 | Akaike info criterion | | 2.154383 |
| Sum squared resid | 12.24828 | Schwarz criterion | | 2.576603 |
| Log likelihood | -33.08767 | Hannan-Quinn criter. | | 2.307045 |
| F-statistic | 2.206278 | Durbin-Watson stat | | 2.132106 |
| Prob(F-statistic) | 0.050425 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dependent Variable: NPF | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 10/22/19 Time: 08:46 | | |  |  |
| Sample: 2009Q1 2018Q4 | | |  |  |
| Included observations: 40 | | |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| INFLASI | -0.192598 | 0.096669 | -1.992342 | 0.0540 |
| KURS | 0.000650 | 0.000223 | 2.921287 | 0.0060 |
| PDB | -1.38E-06 | 6.94E-07 | -1.987986 | 0.0545 |
| C | 0.925513 | 0.961353 | 0.962719 | 0.3421 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.339207 | Mean dependent var | | 3.994000 |
| Adjusted R-squared | 0.284141 | S.D. dependent var | | 0.972815 |
| S.E. of regression | 0.823083 | Akaike info criterion | | 2.543121 |
| Sum squared resid | 24.38879 | Schwarz criterion | | 2.712009 |
| Log likelihood | -46.86242 | Hannan-Quinn criter. | | 2.604186 |
| F-statistic | 6.159996 | **Durbin-Watson stat** | | **0.714722** |
| Prob(F-statistic) | 0.001723 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | INFLASI | KURS | PDB |
| INFLASI | 1.000000 | -0.116690 | -0.325595 |
| KURS | -0.116690 | 1.000000 | 0.937783 |
| PDB | -0.325595 | 0.937783 | 1.000000 |