

## Daftar Pustaka

- \_\_\_\_\_ (2013) Peraturan Perbankan Bank Indonesia. [www.ojk.go.id](http://www.ojk.go.id). (diakses tanggal 4 Februari 2021)
- Aaker, D., Keller, K., (1990). Consumer evaluations of brand extensions. *Journal of Marketing*. Vol. 54 No. 1, pp. 27–41.
- Asia Dealroom, Finch Capital, and MDI Ventures (2020). *The Future of Fintech in South-East Asia*.
- Arslanian, Henri and Fabrice Fischer (2019). *The Future of Finance: The Impact of Fintech, AI, and Crypto in Financial Services*. London: Palgrave Macmillan.
- Boot, A., & Schmeits, A. (2005). The Competitive Challenge in Banking. *Working paper*. Amsterdam Centre of Law and Economics.
- Brandl, Barbara and Lars Hornuf (2017). Where did FinTech Come from and Where did They Go? The Transformation of the Financial Industry in Germany After Digitalization. *Working paper University of Jena and University of Bremen*.
- Casu, B, and C. Girardone (2009). Testing the relationship between competition and efficiency in banking: A Panel Data Analysis. *Economics Letters*. Vol 105, pp 134-137
- CCAF, ADBI, FinTechSpace (2019). *ASEAN FinTech Ecosystem Benchmarking Study*. Cambridge, UK.
- CCAF, World Bank and World Economic Forum (2020). *The Global Covid-19 Fintech Market Rapid Assessment Report*. University of Cambridge, World Bank Group and the World Economic Forum.
- Chalons, Christophe, and Nicole Dufft (2017). The Role of IT as An Enabler of Digital Transformation. *The Drivers of Digital Transformation*. Pp 13-22.
- Chisti, Susanne and Janos Barberis (2016). *The Fintech Book: The Financial Technology Handbook for Investors, Entrepreneurs, and Visionaries*. New Jersey: Wiley
- Christensen, C., (1997). The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail. *Harvard Business Review Press*, Boston.
- Google, Temasek, and Bain & Company (2019). *E-Conomy SEA 2019*. Singapura

- IMF and Worldbank (2005). *Financial Sector Assessment: A Handbook*. Washington DC.
- Jagtiani, J., Lemieux, C., (2018). Do Fintech Lenders Penetrate Areas that are Underserved by Traditional Banks?. *Journal of Economics and Business*. Vol 100, pp. 43–54.
- Jhon Pennington (2020). COVID-19: Catalyst or Cataclysm for Southeast Asia's Fintech Sector?. <https://www.aseantoday.com>. (diakses pada tanggal 4 Februari 2021)
- Junger, M., and M. Mietzner (2019). Banking goes digital: The Adoption of FinTech Services by German Households. *Finance Research Letters*.
- King, Andrew (2017). The Theory of Disruptive Innovation: Science or Allegory?. *Entrepreneur & Innovation Exchange*. Tuck School of Business.
- Levin, Jonathan and Paul Milgrom (2004). Theory of Consumer
- Li, Y., Spigt, R., Swinkels, L., (2017). The Impact of FinTech Start-ups on Incumbent Retail Banks' Share Price. *Financial Innovations*
- Mercedes Ruehl (2020). Pandemic Opens the Door to A New Fintech Era in Asia. <https://www.asia.nikkei.com>. (diakses pada 4 Februari 2021)
- Otero, Luis., et al (2019). What Determines Efficiency in MENA Banks?. *Journal of Research Business*.
- Phan, Dinh Hoang Bach. Paresh Kumar Narayan, R. Eki Rahmanc & Akhis R. Hutabarat. (2019). Do Financial Technology Firms Influence Bank Performance?. *Pacific-Basin Finance Journal*.
- Puschmann, T (2017). Fintech. *Business and Information Systems Engineering*. Vol. 59, No. 1, pp. 69-76
- Rivai, Veithzal dkk (2013). *Commercial Bank Management: Manajemen Perbankan dari Teori ke Praktik*. Jakarta: PT RajaGrafindo Persada
- Roman, Angela and Alina Camelia Sargu (2013). Analysing the Financial Soundness of the Commercial Banks in Romania: An Approach Based on the Camels Framework. *Procedia Economics and Finance*. Vol.6 pp. 703-712
- Tan, Yong., and Christos Floros (2018). Risk, competition and efficiency in banking: Evidence from China. *Global Finance Journal*. Vol. 35 pp. 223-236
- Tan, Yong., and John Anchor (2017). The Impacts of Risk-taking Behaviour and Competition on Technical Efficiency: Evidence from the Chinese Banking Industry. *Research in International Business and Finance*. Vol. 41 pp. 90-104

UOB, PwC, and SFA (2019). [\*FinTech in ASEAN: From Start-up to Scale-up. Singapore: workingpaper.\*](#)

Villeroy de Galhau (2016). Constructing the Possible Trinity of Innovation, Stability, and Regulation for Digital Finance. *Financial Stability Review*. Vol 20, pp. 7-16

## Lampiran

### 1. Daftar bank sampel penelitian

No	Nama Bank	Kode Bank	Negara
1	Bank Rakyat Indonesia Agroniaga Tbk PT	AGRO.JK	Indonesia
2	Bank IBK Indonesia Tbk PT	AGRS.JK	Indonesia
3	Bank Amar Indonesia PT	AMAR.JK	Indonesia
4	Bank Jago Tbk PT	ARTO.JK	Indonesia
5	Bank MNC Internasional Tbk PT	BABP.JK	Indonesia
6	Bank Capital Indonesia Tbk PT	BACA.JK	Indonesia
7	Bank Central Asia Tbk PT	BBCA.JK	Indonesia
8	Bank Harda Internasional Tbk PT	BBHI.JK	Indonesia
9	Bank Bukopin Tbk PT	BBKP.JK	Indonesia
10	Bank Mestika Dharma Tbk PT	BBMD.JK	Indonesia
11	Bank Negara Indonesia (Persero) Tbk PT	BBNI.JK	Indonesia
12	Bank Rakyat Indonesia (Persero) Tbk PT	BBRI.JK	Indonesia
13	Bank Tabungan Negara (Persero) Tbk PT	BBTN.JK	Indonesia
14	PT Bank Neo Commerce Tbk	BBYB.JK	Indonesia
15	Bank JTrust Indonesia Tbk PT	BCIC.JK	Indonesia
16	Bank Danamon Indonesia Tbk PT	BDMN.JK	Indonesia
17	Bank Pembangunan Daerah Banten Tbk PT	BEKS.JK	Indonesia
18	Bank Ganesha Tbk PT	BGTG.JK	Indonesia
19	Bank Ina Perdana Tbk PT	BINA.JK	Indonesia
20	Bank Pembangunan Daerah Jawa Barat dan Banten Tbk PT	BJBR.JK	Indonesia
21	Bank Pembangunan Daerah Jawa Timur Tbk PT	BJTM.JK	Indonesia
22	Bank QNB Indonesia Tbk PT	BKSW.JK	Indonesia
23	Bank Maspion Indonesia Tbk PT	BMAS.JK	Indonesia
24	Bank Mandiri (Persero) Tbk PT	BMRI.JK	Indonesia
25	Bank Bumi Arta Tbk PT	BNBA.JK	Indonesia
26	Bank CIMB Niaga Tbk PT	BNGA.JK	Indonesia
27	Bank Maybank Indonesia Tbk PT	BNII.JK	Indonesia
28	Bank Permata Tbk PT	BNLI.JK	Indonesia
29	Bank BRISyariah Tbk PT	BRIS.JK	Indonesia
30	Bank Sinarmas Tbk PT	BSIM.JK	Indonesia
31	Bank Of India Indonesia Tbk PT	BSWD.JK	Indonesia
32	Bank BTPN Tbk PT	BTPN.JK	Indonesia
33	Bank BTPN Syariah Tbk PT	BTPS.JK	Indonesia
34	Bank Victoria International Tbk PT	BVIC.JK	Indonesia
35	Bank Oke Indonesia Tbk PT	DNAR.JK	Indonesia

No	Nama Bank	Kode Bank	Negara
36	Bank Artha Graha Internasional Tbk PT	INPC.JK	Indonesia
37	Bank Mayapada Internasional Tbk PT	MAYA.JK	Indonesia
38	Bank China Construction Bank Indonesia Tbk PT	MCOR.JK	Indonesia
39	Bank Mega Tbk PT	MEGA.JK	Indonesia
40	Bank OCBC NISP Tbk PT	NISP.JK	Indonesia
41	Bank Nationalnobu Tbk PT	NOBU.JK	Indonesia
42	Bank Pan Indonesia Tbk PT	PNBN.JK	Indonesia
43	Bank Panin Dubai Syariah Tbk PT	PNBS.JK	Indonesia
44	Bank Woori Saudara Indonesia 1906 Tbk PT	SDRA.JK	Indonesia
45	Affin Bank Bhd	AFIN.KL	Malaysia
46	Alliance Bank Malaysia Bhd	ALLI.KL	Malaysia
47	AMMB Holdings Bhd	AMMB.KL	Malaysia
48	BIMB Holdings Bhd	BIMB.KL	Malaysia
49	CIMB Group Holdings Bhd	CIMB.KL	Malaysia
50	Hong Leong Bank Bhd	HLBB.KL	Malaysia
51	Hong Leong Financial Group Bhd	HLCB.KL	Malaysia
52	Malayan Banking Bhd	MBBM.KL	Malaysia
53	Public Bank Bhd	PUBM.KL	Malaysia
54	RHB Bank Bhd	RHBC.KL	Malaysia
55	DBS Group Holdings Ltd	DBSM.SI	Singapura
56	Oversea-Chinese Banking Corporation Ltd	OCBC.SI	Singapura
57	Singapura Finance Ltd	SBDS.SI	Singapura
58	Sing Investments & Finance Ltd	SINV.SI	Singapura
59	United Overseas Bank Ltd	UOBH.SI	Singapura
60	Bank of Ayudhya PCL	BAY.BK	Thailand
61	Bangkok Bank PCL	BBL.BK	Thailand
62	CIMB Thai Bank PCL	CIMBT.BK	Thailand
63	Kasikornbank PCL	KBANK.BK	Thailand
64	Kiatnakin Phatra Bank PCL	KKP.BK	Thailand
65	Krung Thai Bank PCL	KTB.BK	Thailand
66	LH Financial Group PCL	LHFG.BK	Thailand
67	Siam Commercial Bank PCL	SCB.BK	Thailand
68	TISCO Financial Group PCL	TISCO.BK	Thailand
69	TMB Bank PCL	TMB.BK	Thailand
70	Asia United Bank Corp	AUB.PS	Thailand
71	BDO Unibank Inc	BDO.PS	Filipina
72	Bank of the Philippine Islands	BPI.PS	Filipina
73	China Banking Corp	CHIB.PS	Filipina
74	Citystate Savings Bank Inc	CSB.PS	Filipina
75	East West Banking Corp	EW.PS	Filipina

No	Nama Bank	Kode Bank	Negara
76	Metropolitan Bank and Trust Co	MBT.PS	Filipina
77	Philippine Business Bank Inc A Savings Bank	PBB.PS	Filipina
78	Philippine Bank of Communications	PBC.PS	Filipina
79	Philippine National Bank	PNB.PS	Filipina
80	Philippine Savings Bank	PSB.PS	Filipina
81	Philtrust Bank	PTC.PS	Filipina
82	Rizal Commercial Banking Corp	RCB.PS	Filipina
83	Security Bank Corp	SECB.PS	Filipina
84	Union Bank of the Philippines	UBP.PS	Filipina
85	Bac A Commercial Joint Stock Bank	BAB.HNO	Vietnam
86	Joint Stock Commercial Bank for Investment and Development of Vietnam	BID.HM	Vietnam
87	Viet Capital Commercial Joint Stock Bank	BVB.HNO	Vietnam
88	Vietnam Joint Stock Commercial Bank for Industry and Trade	CTG.HM	Vietnam
89	Vietnam Export Import Commercial Joint Stock Bank	EIB.HM	Vietnam
90	Ho Chi Minh City Development Joint Stock Commercial Bank	HDB.HM	Vietnam
91	Kien Long Commercial Joint Stock Bank	KLB.HNO	Vietnam
92	Lien Viet Post Joint Stock Commercial Bank	LPB.HM	Vietnam
93	Military Commercial Joint Stock Bank	MBB.HM	Vietnam
94	National Citizen Commercial Joint Stock Bank	NVB.HN	Vietnam
95	Sai Gon Ha Noi Commercial Joint Stock Bank	SHB.HN	Vietnam
96	Saigon Thuong Tin Commercial Joint Stock Bank	STB.HM	Vietnam
97	Vietnam Technological And Commercial Joint Stock Bank	TCB.HM	Vietnam
98	Tien Phong Commercial Joint Stock Bank	TPB.HM	Vietnam
99	Vietnam Thuong Tin Commercial Joint Stock Bank	VBB.HNO	Vietnam
100	Joint Stock Commercial Bank for Foreign Trade of Viet Nam	VCB.HM	Vietnam
101	Viet Nam International Commercial Joint Stock Bank	VIB.HM	Vietnam
102	Vietnam Prosperity Joint Stock Commercial Bank	VPB.HM	Vietnam

## 2. Statistik deskriptif

Date: 06/23/21

Time: 22:01

Sample: 2017 2019

	TRANS	USER	ENT	ROA	ROE	NIM	TOBBINSQ	DEA	BOPO	CAPITAL	SIZE	LLP	GDP	INF
Mean	19162.74	55.38441	362.1340	0.008837	0.071852	0.046216	1.078207	0.830327	1.215477	0.137013	12.86560	0.017886	0.052794	0.027601
Median	16307.44	35.75000	362.0000	0.010200	0.086400	0.039750	1.016250	0.837450	0.880850	0.120000	12.88265	0.009000	0.051500	0.031000
Maximum	39356.17	121.2300	1170.000	0.102100	0.348400	0.225200	3.286700	0.972300	5.548800	0.992000	15.17320	0.232000	0.071000	0.059000
Minimum	5928.860	2.150000	94.00000	-0.122800	-1.325300	0.004200	0.784800	0.495900	0.133600	0.032000	8.998700	0.003000	0.007000	0.003000
Std. Dev.	11131.96	38.59343	221.6506	0.017140	0.121333	0.044774	0.238112	0.052257	0.982985	0.084097	1.352383	0.030052	0.012287	0.013465
Skewness	0.597724	0.471347	1.176785	-2.093467	-5.650741	5.977692	5.037016	-1.723451	3.142027	4.630865	-0.336296	3.626911	-0.987373	-0.119867
Kurtosis	2.024199	1.836673	5.001903	27.38095	60.94056	47.69410	37.66931	10.04885	21.32078	40.19220	2.606468	18.51190	5.092333	2.890713
Jarque-Bera	30.36135	28.58551	121.7230	7802.508	44431.61	27291.30	16618.95	784.9852	4783.041	18730.26	7.742409	3738.770	105.5379	0.885050
Probability	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.020833	0.000000	0.000000	0.642412
Sum	5863798.	16947.63	110813.0	2.704100	21.98670	14.14210	329.9313	254.0801	371.9360	41.92600	3936.874	5.473000	16.15500	8.446000
Sum Sq. Dev.	3.78E+10	454283.1	14984344	0.089607	4.490124	0.611431	17.29266	0.832908	294.7089	2.157078	557.8267	0.275447	0.046048	0.055299
Observations	306	306	306	306	306	306	306	306	306	306	306	306	306	306

### 3. Hasil Uji Chow

#### TobbinsQ

Redundant Fixed Effects Tests

Equation: FEM\_TOBB

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.047914	(101,196)	0.0000
Cross-section Chi-square	344.815522	101	0.0000

Cross-section fixed effects test equation:

Dependent Variable: TOBBINSQ

Method: Panel Least Squares

Date: 06/23/21 Time: 17:33

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.867395	0.215767	4.020049	0.0001
TRANSACTION	4.40E-07	5.82E-06	0.075638	0.9398
USER	0.000657	0.001882	0.349075	0.7273
ENTERPRISE	-1.45E-06	8.73E-05	-0.016561	0.9868
SIZE	-0.002431	0.014765	-0.164629	0.8693
CAPITAL	0.769459	0.172962	4.448719	0.0000
LLP	1.450637	0.437774	3.313669	0.0010
GDP	1.194876	1.763889	0.677410	0.4987
INF	0.120640	1.561193	0.077274	0.9385
R-squared	0.170720	Mean dependent var		1.078207
Adjusted R-squared	0.148382	S.D. dependent var		0.238112
S.E. of regression	0.219737	Akaike info criterion		-0.163800
Sum squared resid	14.34046	Schwarz criterion		-0.054282
Log likelihood	34.06134	Hannan-Quinn criter.		-0.120000
F-statistic	7.642750	Durbin-Watson stat		0.716111
Prob(F-statistic)	0.000000			



## DEA

Redundant Fixed Effects Tests

Equation: FEM\_DEA

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.738831	(101,196)	0.0000
Cross-section Chi-square	328.599915	101	0.0000

Cross-section fixed effects test equation:

Dependent Variable: DEA

Method: Panel Least Squares

Date: 06/23/21 Time: 17:31

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.717052	0.043506	16.48188	0.0000
TRANSACTION	-1.75E-06	1.17E-06	-1.491508	0.1369
USER	0.000758	0.000380	1.997222	0.0467
ENTERPRISE	-5.01E-05	1.76E-05	-2.847922	0.0047
SIZE	0.010783	0.002977	3.621914	0.0003
CAPITAL	-0.056077	0.034875	-1.607965	0.1089
LLP	0.391943	0.088269	4.440317	0.0000
GDP	-0.249064	0.355656	-0.700294	0.4843
INF	-0.069795	0.314786	-0.221722	0.8247
R-squared	0.300023	Mean dependent var		0.830327
Adjusted R-squared	0.281168	S.D. dependent var		0.052257
S.E. of regression	0.044306	Akaike info criterion		-3.366425
Sum squared resid	0.583016	Schwarz criterion		-3.256907
Log likelihood	524.0630	Hannan-Quinn criter.		-3.322625
F-statistic	15.91244	Durbin-Watson stat		0.805458
Prob(F-statistic)	0.000000			

#### 4. Hasil Uji Hausman

Correlated Random Effects - Hausman Test

Equation: REM\_DEA

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	
Cross-section random	14.130775	8	0.0784	
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
TRANSACTION	-0.000003	-0.000002	0.000000	0.2318
USER	0.001529	0.000942	0.000000	0.1246
ENTERPRISE	-0.000013	-0.000041	0.000000	0.4246
SIZE	-0.071331	0.009149	0.001146	0.0174
CAPITAL	-0.066591	-0.056479	0.000430	0.6259
LLP	0.375188	0.346306	0.004919	0.6805
GDP	-0.690104	-0.202329	0.175783	0.2447
INF	-0.151556	-0.113918	0.018004	0.7791

Cross-section random effects test equation:

Dependent Variable: DEA

Method: Panel Least Squares

Date: 06/23/21 Time: 17:35

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.770649	0.440986	4.015199	0.0001
TRANSACTION	-3.10E-06	1.31E-06	-2.364184	0.0190
USER	0.001529	0.000518	2.950659	0.0036
ENTERPRISE	-1.34E-05	4.11E-05	-0.326417	0.7445
SIZE	-0.071331	0.034037	-2.095701	0.0374
CAPITAL	-0.066591	0.038406	-1.733896	0.0845
LLP	0.375188	0.113376	3.309227	0.0011
GDP	-0.690104	0.549146	-1.256687	0.2104
INF	-0.151556	0.284245	-0.533189	0.5945

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.760826	Mean dependent var	0.830327
Adjusted R-squared	0.627816	S.D. dependent var	0.052257
S.E. of regression	0.031881	Akaike info criterion	-3.780150
Sum squared resid	0.199210	Schwarz criterion	-2.441606
Log likelihood	688.3629	Hannan-Quinn criter.	-3.244820
F-statistic	5.720061	Durbin-Watson stat	2.284956
Prob(F-statistic)	0.000000		

Correlated Random Effects - Hausman Test

Equation: REM\_TOBB

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.518240	8	0.7010

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
TRANSACTION	-0.000005	-0.000002	0.000000	0.4387
USER	0.002606	0.001292	0.000003	0.4689
ENTERPRISE	-0.000183	-0.000034	0.000000	0.3722
SIZE	0.060253	-0.002701	0.026703	0.7000
CAPITAL	0.796675	0.777258	0.009412	0.8414
LLP	2.687217	2.106434	0.107780	0.0769
GDP	0.046135	0.817982	3.948596	0.6977
INF	-0.670153	-0.297044	0.398486	0.5545

Cross-section random effects test equation:

Dependent Variable: TOBBINSQ

Method: Panel Least Squares

Date: 06/23/21 Time: 17:36

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.178881	2.129901	0.083986	0.9332
TRANSACTION	-4.97E-06	6.33E-06	-0.784886	0.4335
USER	0.002606	0.002503	1.041048	0.2991
ENTERPRISE	-0.000183	0.000199	-0.918282	0.3596
SIZE	0.060253	0.164392	0.366520	0.7144
CAPITAL	0.796675	0.185493	4.294897	0.0000
LLP	2.687217	0.547592	4.907339	0.0000
GDP	0.046135	2.652294	0.017394	0.9861
INF	-0.670153	1.372863	-0.488143	0.6260

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.731269	Mean dependent var	1.078207
Adjusted R-squared	0.581822	S.D. dependent var	0.238112
S.E. of regression	0.153979	Akaike info criterion	-0.630517
Sum squared resid	4.647069	Schwarz criterion	0.708027
Log likelihood	206.4691	Hannan-Quinn criter.	-0.095187
F-statistic	4.893163	Durbin-Watson stat	2.135581
Prob(F-statistic)	0.000000		

## 5. Hasil Uji Lagrange Multiplier DEA

Lagrange Multiplier Tests for Random Effects

Null hypotheses: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided  
(all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	62.13265 (0.0000)	0.470615 (0.4927)	62.60327 (0.0000)
Honda	7.882427 (0.0000)	-0.686014 --	5.088633 (0.0000)
King-Wu	7.882427 (0.0000)	-0.686014 --	0.419069 (0.3376)
Standardized Honda	8.193142 (0.0000)	-0.092512 --	-1.621634 --
Standardized King-Wu	8.193142 (0.0000)	-0.092512 --	-2.153329 --
Gourieriou, et al.*	--	--	62.13265 ( $< 0.01$ )

\*Mixed chi-square asymptotic critical values:

1%	7.289
5%	4.321
10%	2.952

## TobinsQ

Lagrange Multiplier Tests for Random Effects

Null hypotheses: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided  
(all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	75.15048 (0.0000)	0.697187 (0.4037)	75.84767 (0.0000)
Honda	8.668938 (0.0000)	-0.834977 --	5.539447 (0.0000)
King-Wu	8.668938 (0.0000)	-0.834977 --	0.381156 (0.3515)
Standardized Honda	8.982950 (0.0000)	-0.330324 --	-1.070598 --
Standardized King-Wu	8.982950 (0.0000)	-0.330324 --	-2.213444 --
Gourieriou, et al.*	--	--	75.15048 ( $< 0.01$ )

\*Mixed chi-square asymptotic critical values:

1%	7.289
5%	4.321
10%	2.952

## 6. Hasil Uji Hipotesis, Uji t, dan Uji F dengan GLS ROA

Dependent Variable: ROA

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:08

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.042486	0.021248	1.999546	0.0469
TRANSACTION	4.58E-08	1.87E-08	2.452666	0.0150
CAPITAL	0.001320	0.001616	0.816710	0.4151
GDP	-0.022657	0.008269	-2.739902	0.0067
LLP	-0.149995	0.012744	-11.77001	0.0000
INF	-0.042281	0.005067	-8.344050	0.0000
SIZE	-0.002283	0.001655	-1.379250	0.1694

### Effects Specification

Cross-section fixed (dummy variables)

### Weighted Statistics

R-squared	0.988457	Mean dependent var	0.088148
Adjusted R-squared	0.982219	S.D. dependent var	0.114814
S.E. of regression	0.008942	Sum squared resid	0.015831
F-statistic	158.4581	Durbin-Watson stat	2.589951
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.759615	Mean dependent var	0.008837
Sum squared resid	0.021540	Durbin-Watson stat	2.423143

Dependent Variable: ROA

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:26

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.034886	0.015056	2.317059	0.0215
USER	8.13E-06	6.57E-06	1.236972	0.2176
CAPITAL	0.002384	0.002076	1.148568	0.2521
GDP	-0.025687	0.006113	-4.201885	0.0000
LLP	-0.158837	0.012165	-13.05700	0.0000
INF	-0.050230	0.005448	-9.220614	0.0000
SIZE	-0.001627	0.001167	-1.395049	0.1646

#### Effects Specification

Cross-section fixed (dummy variables)

#### Weighted Statistics

R-squared	0.990191	Mean dependent var	0.092883
Adjusted R-squared	0.984891	S.D. dependent var	0.122492
S.E. of regression	0.008960	Sum squared resid	0.015897
F-statistic	186.8058	Durbin-Watson stat	2.607155
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.760096	Mean dependent var	0.008837
Sum squared resid	0.021497	Durbin-Watson stat	2.425970

Dependent Variable: ROA

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:27

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.039992	0.009872	4.051031	0.0001
ENTERPRISE	5.45E-06	5.96E-07	9.135184	0.0000
CAPITAL	0.003262	0.002045	1.595248	0.1123
GDP	0.013957	0.004306	3.241401	0.0014
LLP	-0.195719	0.005893	-33.20974	0.0000
INF	-0.053407	0.005635	-9.478268	0.0000
SIZE	-0.002251	0.000750	-3.003192	0.0030

#### Effects Specification

Cross-section fixed (dummy variables)

#### Weighted Statistics

R-squared	0.993273	Mean dependent var	0.110916
Adjusted R-squared	0.989638	S.D. dependent var	0.242157
S.E. of regression	0.009365	Sum squared resid	0.017364
F-statistic	273.2250	Durbin-Watson stat	2.613880
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.762865	Mean dependent var	0.008837
Sum squared resid	0.021249	Durbin-Watson stat	2.444262

## ROE

Dependent Variable: ROE

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:28

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.155864	0.140323	-1.110751	0.2680
TRANSACTION	8.75E-07	9.42E-08	9.284042	0.0000
CAPITAL	0.102854	0.032370	3.177426	0.0017
GDP	0.397615	0.061195	6.497545	0.0000
LLP	-0.547791	0.053974	-10.14922	0.0000
SIZE	0.014969	0.010765	1.390465	0.1659
INF	-0.212771	0.032584	-6.529877	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

### Weighted Statistics

R-squared	0.991233	Mean dependent var	0.875554
Adjusted R-squared	0.986496	S.D. dependent var	1.429678
S.E. of regression	0.085917	Sum squared resid	1.461580
F-statistic	209.2295	Durbin-Watson stat	2.462933
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.628718	Mean dependent var	0.071852
Sum squared resid	1.667100	Durbin-Watson stat	2.445951



Dependent Variable: ROE

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:29

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.180736	0.104948	-1.722149	0.0866
USER	0.000231	3.70E-05	6.238868	0.0000
CAPITAL	0.094298	0.034376	2.743121	0.0066
GDP	0.164974	0.059586	2.768648	0.0062
LLP	-0.494268	0.065143	-7.587476	0.0000
SIZE	0.018405	0.007852	2.343956	0.0201
INF	-0.320115	0.015079	-21.22962	0.0000

#### Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics			
R-squared	0.989164	Mean dependent var	0.957533
Adjusted R-squared	0.983308	S.D. dependent var	2.046533
S.E. of regression	0.085583	Sum squared resid	1.450236
F-statistic	168.9185	Durbin-Watson stat	2.451123
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.627673	Mean dependent var	0.071852
Sum squared resid	1.671794	Durbin-Watson stat	2.443856

Dependent Variable: ROE

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:31

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.054721	0.108758	-0.503144	0.6154
ENTERPRISE	2.91E-05	8.51E-06	3.421087	0.0008
CAPITAL	0.057022	0.041923	1.360169	0.1753
GDP	0.199264	0.078671	2.532891	0.0121
LLP	-0.515232	0.092167	-5.590212	0.0000
SIZE	0.009092	0.008038	1.131118	0.2594
INF	-0.328634	0.032446	-10.12879	0.0000

#### Effects Specification

Cross-section fixed (dummy variables)

#### Weighted Statistics

R-squared	0.988405	Mean dependent var	0.807908
Adjusted R-squared	0.982139	S.D. dependent var	1.211331
S.E. of regression	0.081190	Sum squared resid	1.305168
F-statistic	157.7436	Durbin-Watson stat	2.454052
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.626387	Mean dependent var	0.071852
Sum squared resid	1.677568	Durbin-Watson stat	2.444610

## NIM

Dependent Variable: NIM

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:31

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.019772	0.037612	-0.525694	0.5997
TRANSACTION	-4.13E-07	2.07E-08	-19.94163	0.0000
CAPITAL	-0.011219	0.005713	-1.963644	0.0510
GDP	-0.029145	0.010604	-2.748543	0.0065
LLP	-0.010745	0.006483	-1.657464	0.0990
SIZE	0.005919	0.002938	2.014569	0.0453
INF	-0.089961	0.010377	-8.669123	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

### Weighted Statistics

R-squared	0.997290	Mean dependent var	0.183910
Adjusted R-squared	0.995826	S.D. dependent var	0.382890
S.E. of regression	0.007533	Sum squared resid	0.011237
F-statistic	681.0744	Durbin-Watson stat	2.470818
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.937979	Mean dependent var	0.042696
Sum squared resid	0.012412	Durbin-Watson stat	2.069124

Dependent Variable: NIM

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:31

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.028803	0.024828	-1.160112	0.2474
USER	-0.000144	9.26E-06	-15.53374	0.0000
CAPITAL	-0.010158	0.006781	-1.498033	0.1357
GDP	0.054223	0.008257	6.567110	0.0000
LLP	-0.019936	0.008658	-2.302571	0.0223
SIZE	0.006162	0.001977	3.116358	0.0021
INF	-0.032450	0.007639	-4.248244	0.0000

#### Effects Specification

Cross-section fixed (dummy variables)

#### Weighted Statistics

R-squared	0.996241	Mean dependent var	0.187514
Adjusted R-squared	0.994210	S.D. dependent var	0.350869
S.E. of regression	0.007496	Sum squared resid	0.011125
F-statistic	490.4874	Durbin-Watson stat	2.467588
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.938017	Mean dependent var	0.042696
Sum squared resid	0.012404	Durbin-Watson stat	2.071077

Dependent Variable: NIM

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:32

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.137467	0.032248	4.262857	0.0000
ENTERPRISE	-8.24E-06	2.04E-06	-4.031134	0.0001
CAPITAL	-0.013254	0.009843	-1.346494	0.1797
GDP	0.001368	0.017430	0.078472	0.9375
LLP	-0.011511	0.004472	-2.573864	0.0108
SIZE	-0.006972	0.002497	-2.792332	0.0057
INF	-0.004293	0.006434	-0.667286	0.5054

#### Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics			
R-squared	0.996617	Mean dependent var	0.162688
Adjusted R-squared	0.994789	S.D. dependent var	0.173286
S.E. of regression	0.007860	Sum squared resid	0.012233
F-statistic	545.1700	Durbin-Watson stat	2.401369
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.932363	Mean dependent var	0.042696
Sum squared resid	0.013536	Durbin-Watson stat	2.078140

## Tobbins Q

Dependent Variable: TOBBINSQ

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:32

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.264837	0.402163	0.658533	0.5110
TRANSACTION	-1.53E-06	3.28E-07	-4.680254	0.0000
CAPITAL	0.595780	0.104495	5.701524	0.0000
GDP	1.372953	0.181283	7.573518	0.0000
LLP	0.306612	0.231768	1.322927	0.1874
SIZE	0.053674	0.030562	1.756227	0.0806
INF	-0.289209	0.084244	-3.432976	0.0007

### Effects Specification

Cross-section fixed (dummy variables)

### Weighted Statistics

R-squared	0.949974	Mean dependent var	6.755455
Adjusted R-squared	0.922940	S.D. dependent var	9.330264
S.E. of regression	0.125256	Sum squared resid	3.106423
F-statistic	35.13989	Durbin-Watson stat	2.404486
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.693866	Mean dependent var	1.078207
Sum squared resid	5.293872	Durbin-Watson stat	2.092734

Dependent Variable: TOBBINSQ

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:33

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.795016	0.402690	1.974266	0.0497
USER	-0.000297	0.000140	-2.123132	0.0350
CAPITAL	0.530463	0.109211	4.857231	0.0000
GDP	1.494604	0.192800	7.752094	0.0000
LLP	0.358005	0.235729	1.518716	0.1304
SIZE	0.011334	0.030507	0.371526	0.7106
INF	-0.175568	0.084802	-2.070324	0.0397

#### Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics			
R-squared	0.943105	Mean dependent var	6.664840
Adjusted R-squared	0.912359	S.D. dependent var	8.918916
S.E. of regression	0.129348	Sum squared resid	3.312741
F-statistic	30.67407	Durbin-Watson stat	2.342523
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.693944	Mean dependent var	1.078207
Sum squared resid	5.292528	Durbin-Watson stat	2.089896

Dependent Variable: TOBBINSQ

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:33

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.363535	0.374940	3.636675	0.0004
ENTERPRISE	-8.96E-05	2.10E-05	-4.261861	0.0000
CAPITAL	0.321461	0.111945	2.871592	0.0045
GDP	0.883939	0.194523	4.544145	0.0000
LLP	0.310520	0.244527	1.269878	0.2056
SIZE	-0.026659	0.028160	-0.946695	0.3449
INF	-0.244840	0.072881	-3.359465	0.0009

#### Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics			
R-squared	0.960056	Mean dependent var	7.427964
Adjusted R-squared	0.938470	S.D. dependent var	14.26770
S.E. of regression	0.130423	Sum squared resid	3.367989
F-statistic	44.47588	Durbin-Watson stat	2.162265
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.684415	Mean dependent var	1.078207
Sum squared resid	5.457304	Durbin-Watson stat	2.060395



## DEA

Dependent Variable: DEA

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:34

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.353219	0.088139	15.35332	0.0000
TRANSACTION	5.46E-07	7.59E-08	7.184468	0.0000
CAPITAL	-0.064996	0.016611	-3.912827	0.0001
GDP	0.138221	0.083826	1.648902	0.1008
LLP	0.177555	0.038504	4.611331	0.0000
SIZE	-0.041901	0.006782	-6.178694	0.0000
INF	0.138815	0.077437	1.792618	0.0746

### Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics			
R-squared	0.990855	Mean dependent var	3.755595
Adjusted R-squared	0.985913	S.D. dependent var	4.084237
S.E. of regression	0.031391	Sum squared resid	0.195106
F-statistic	200.4993	Durbin-Watson stat	2.603432
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.742989	Mean dependent var	0.830327
Sum squared resid	0.214066	Durbin-Watson stat	2.202412

Dependent Variable: DEA

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:35

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.457240	0.122480	11.89775	0.0000
USER	0.000304	3.86E-05	7.861678	0.0000
CAPITAL	-0.068511	0.019946	-3.434876	0.0007
GDP	0.033548	0.082595	0.406178	0.6851
LLP	0.197771	0.038171	5.181226	0.0000
SIZE	-0.050024	0.009510	-5.260163	0.0000
INF	0.129167	0.064245	2.010532	0.0457

#### Effects Specification

Cross-section fixed (dummy variables)

#### Weighted Statistics

R-squared	0.984564	Mean dependent var	3.298526
Adjusted R-squared	0.976222	S.D. dependent var	2.965047
S.E. of regression	0.031242	Sum squared resid	0.193264
F-statistic	118.0259	Durbin-Watson stat	2.530000
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.747926	Mean dependent var	0.830327
Sum squared resid	0.209954	Durbin-Watson stat	2.216589

Dependent Variable: DEA

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:35

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.325771	0.072278	18.34260	0.0000
ENTERPRISE	4.20E-05	5.77E-06	7.278792	0.0000
CAPITAL	-0.066529	0.016839	-3.950885	0.0001
GDP	0.215535	0.053232	4.048954	0.0001
LLP	0.229856	0.023626	9.728880	0.0000
SIZE	-0.040407	0.005473	-7.383281	0.0000
INF	0.087218	0.054883	1.589161	0.1136

#### Effects Specification

Cross-section fixed (dummy variables)

#### Weighted Statistics

R-squared	0.987267	Mean dependent var	4.024752
Adjusted R-squared	0.980386	S.D. dependent var	4.770417
S.E. of regression	0.031688	Sum squared resid	0.198815
F-statistic	143.4746	Durbin-Watson stat	2.687741
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.744107	Mean dependent var	0.830327
Sum squared resid	0.213136	Durbin-Watson stat	2.220645

## BOPO

Dependent Variable: BOPO

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:35

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.414669	0.988311	2.443228	0.0154
TRANSACTION	3.22E-06	5.63E-07	5.718074	0.0000
CAPITAL	-1.336809	0.151554	-8.820664	0.0000
GDP	-2.849366	0.731407	-3.895733	0.0001
LLP	-0.533554	0.411618	-1.296235	0.1964
SIZE	-0.076917	0.076564	-1.004599	0.3163
INF	1.618242	0.275411	5.875741	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

### Weighted Statistics

R-squared	0.995238	Mean dependent var	5.850347
Adjusted R-squared	0.992665	S.D. dependent var	8.478833
S.E. of regression	0.402259	Sum squared resid	32.03884
F-statistic	386.7715	Durbin-Watson stat	2.711709
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.844426	Mean dependent var	1.187247
Sum squared resid	34.88892	Durbin-Watson stat	2.809689

Dependent Variable: BOPO

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:36

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.539254	1.036142	1.485563	0.1390
USER	0.000615	0.000198	3.101304	0.0022
CAPITAL	-1.342234	0.132067	-10.16331	0.0000
GDP	-3.052066	0.782017	-3.902814	0.0001
LLP	-0.716627	0.418832	-1.711012	0.0886
SIZE	-0.004247	0.079990	-0.053093	0.9577
INF	1.007484	0.342715	2.939713	0.0037

#### Effects Specification

Cross-section fixed (dummy variables)

#### Weighted Statistics

R-squared	0.995448	Mean dependent var	5.792131
Adjusted R-squared	0.992987	S.D. dependent var	8.650165
S.E. of regression	0.403916	Sum squared resid	32.30325
F-statistic	404.6304	Durbin-Watson stat	2.698580
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.844391	Mean dependent var	1.187247
Sum squared resid	34.89656	Durbin-Watson stat	2.810792

Dependent Variable: BOPO

Method: Panel EGLS (Cross-section weights)

Date: 07/23/21 Time: 18:36

Sample: 2017 2019

Periods included: 3

Cross-sections included: 102

Total panel (balanced) observations: 306

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.778457	1.106730	-1.606947	0.1097
ENTERPRISE	-0.000217	5.02E-05	-4.316892	0.0000
CAPITAL	-1.443630	0.093793	-15.39170	0.0000
GDP	-4.531533	0.887197	-5.107697	0.0000
LLP	-0.630720	0.422124	-1.494158	0.1367
SIZE	0.269979	0.085154	3.170463	0.0018
INF	0.732647	0.274614	2.667919	0.0083

#### Effects Specification

Cross-section fixed (dummy variables)

#### Weighted Statistics

R-squared	0.995902	Mean dependent var	5.219181
Adjusted R-squared	0.993688	S.D. dependent var	6.736465
S.E. of regression	0.397732	Sum squared resid	31.32175
F-statistic	449.7410	Durbin-Watson stat	2.741575
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.845020	Mean dependent var	1.187247
Sum squared resid	34.75570	Durbin-Watson stat	2.801581

## 7. Hasil *Robustness Check* dengan GMM

### ROA

Dependent Variable: ROA

Method: Panel Generalized Method of Moments

Transformation: First Differences

Date: 06/23/21 Time: 20:02

Sample (adjusted): 2019 2019

Periods included: 1

Cross-sections included: 102

Total panel (balanced) observations: 102

White period instrument weighting matrix

White period standard errors & covariance (d.f. corrected)

Instrument specification: @DYN(ROA,-2) TRANSACTION(-1) USER(-1)

ENTERPRISE(-1) SIZE(-1) CAPITAL(-1) LLP(-1) GDP(-1) INF(-1)

Constant added to instrument list

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA(-1)	0.066935	1.650891	0.040545	0.9677
TRANSACTION	4.49E-05	0.000308	0.145505	0.8846
USER	-0.015174	0.103642	-0.146409	0.8839
ENTERPRISE	0.000211	0.001396	0.150963	0.8803
SIZE	-0.170534	1.347741	-0.126533	0.8996
CAPITAL	-1.190425	8.275767	-0.143845	0.8859
LLP	0.744472	6.413127	0.116086	0.9078
GDP	4.489207	30.37537	0.147791	0.8828
INF	10.14405	70.39884	0.144094	0.8857

### Effects Specification

Cross-section fixed (first differences)

Mean dependent var	-0.000286	S.D. dependent var	0.011917
S.E. of regression	0.106549	Sum squared resid	1.055808
J-statistic	9.22E-17	Instrument rank	9

## ROE

Dependent Variable: ROE

Method: Panel Generalized Method of Moments

Transformation: First Differences

Date: 06/23/21 Time: 20:24

Sample (adjusted): 2019 2019

Periods included: 1

Cross-sections included: 102

Total panel (balanced) observations: 102

White period instrument weighting matrix

White period standard errors & covariance (d.f. corrected)

Instrument specification: @DYN(ROE,-2) TRANSACTION(-1) USER(-1)

ENTERPRISE(-1) SIZE(-1) CAPITAL(-1) LLP(-1) GDP(-1) INF(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROE(-1)	0.115752	0.970826	0.119230	0.9053
TRANSACTION	0.000504	0.002157	0.233470	0.8159
USER	-0.169125	0.722784	-0.233991	0.8155
ENTERPRISE	0.002311	0.009985	0.231392	0.8175
SIZE	-2.249084	10.15300	-0.221519	0.8252
CAPITAL	-13.37848	58.08224	-0.230337	0.8183
LLP	9.354766	45.58868	0.205199	0.8379
GDP	49.89002	212.7036	0.234552	0.8151
INF	114.4637	493.0177	0.232170	0.8169

### Effects Specification

Cross-section fixed (first differences)

Mean dependent var	0.002489	S.D. dependent var	0.058121
S.E. of regression	1.213353	Sum squared resid	136.9170
J-statistic	4.28E-20	Instrument rank	9



## NIM

Dependent Variable: NIM

Method: Panel Generalized Method of Moments

Transformation: First Differences

Date: 06/23/21 Time: 20:27

Sample (adjusted): 2019 2019

Periods included: 1

Cross-sections included: 102

Total panel (balanced) observations: 102

White period instrument weighting matrix

White period standard errors & covariance (d.f. corrected)

Instrument specification: @DYN(NIM,-2) TRANSACTION(-1) USER(-1)

ENTERPRISE(-1) SIZE(-1) CAPITAL(-1) LLP(-1) GDP(-1) INF(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NIM(-1)	-5.539481	238.8541	-0.023192	0.9815
TRANSACTION	0.000200	0.009321	0.021494	0.9829
USER	-0.068976	3.189686	-0.021625	0.9828
ENTERPRISE	0.001208	0.055247	0.021860	0.9826
SIZE	-0.176635	11.27270	-0.015669	0.9875
CAPITAL	-5.400371	252.8907	-0.021355	0.9830
LLP	4.565795	206.1413	0.022149	0.9824
GDP	21.65973	999.4107	0.021673	0.9828
INF	46.29390	2151.293	0.021519	0.9829

## Effects Specification

Cross-section fixed (first differences)

Mean dependent var	-0.002971	S.D. dependent var	0.007638
S.E. of regression	0.495953	Sum squared resid	22.87515
J-statistic	1.19E-14	Instrument rank	9

## Tobbins Q

Dependent Variable: TOBBINSQ

Method: Panel Generalized Method of Moments

Transformation: First Differences

Date: 06/23/21 Time: 20:52

Sample (adjusted): 2019 2019

Periods included: 1

Cross-sections included: 102

Total panel (balanced) observations: 102

White period instrument weighting matrix

White period standard errors & covariance (d.f. corrected)

Instrument specification: @DYN(TOBBINSQ,-2) TRANSACTION(-1) USER(-1) ENTERPRISE(-1) SIZE(-1) CAPITAL(-1) LLP(-1) GDP(-1) INF(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOBBINSQ(-1)	20.86968	647.9281	0.032210	0.9744
TRANSACTION	0.000100	0.001656	0.060582	0.9518
USER	-0.050097	1.164189	-0.043032	0.9658
ENTERPRISE	0.001957	0.054704	0.035770	0.9715
SIZE	13.58070	471.5579	0.028800	0.9771
CAPITAL	-3.232787	55.13668	-0.058632	0.9534
LLP	0.702729	37.66370	0.018658	0.9852
GDP	8.475438	156.5936	0.054124	0.9570
INF	8.156279	259.3973	0.031443	0.9750

### Effects Specification

Cross-section fixed (first differences)

Mean dependent var	0.029819	S.D. dependent var	0.256833
S.E. of regression	2.575390	Sum squared resid	616.8351
J-statistic	6.79E-23	Instrument rank	9

## DEA

Dependent Variable: DEA

Method: Panel Generalized Method of Moments

Transformation: First Differences

Date: 06/23/21 Time: 20:54

Sample (adjusted): 2019 2019

Periods included: 1

Cross-sections included: 102

Total panel (balanced) observations: 102

White period instrument weighting matrix

White period standard errors & covariance (d.f. corrected)

Instrument specification: @DYN(DEA,-2) TRANSACTION(-1) USER(-1)

ENTERPRISE(-1) SIZE(-1) CAPITAL(-1) LLP(-1) GDP(-1) INF(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEA(-1)	0.331110	2.518716	0.131460	0.8957
TRANSACTION	-3.95E-05	7.20E-05	0.548855	0.5844
USER	0.012666	0.024304	-0.521134	0.6035
ENTERPRISE	0.000350	0.000446	0.784748	0.4346
SIZE	-0.261746	0.481204	-0.543941	0.5878
CAPITAL	-1.114585	2.377416	-0.468822	0.6403
LLP	1.076270	2.017813	0.533385	0.5950
GDP	4.300080	7.150846	0.601339	0.5491
INF	9.569267	16.28667	0.587552	0.5583

## Effects Specification

Cross-section fixed (first differences)

Mean dependent var	0.002992	S.D. dependent var	0.039451
S.E. of regression	0.105306	Sum squared resid	1.031304
J-statistic	6.51E-20	Instrument rank	9

## BOPO

Dependent Variable: BOPO

Method: Panel Generalized Method of Moments

Transformation: First Differences

Date: 06/23/21 Time: 20:56

Sample (adjusted): 2019 2019

Periods included: 1

Cross-sections included: 102

Total panel (balanced) observations: 102

White period instrument weighting matrix

White period standard errors & covariance (d.f. corrected)

Instrument specification: @DYN(BOPO,-2) TRANSACTION(-1) USER(-1)

ENTERPRISE(-1) SIZE(-1) CAPITAL(-1) LLP(-1) GDP(-1) INF(-1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BOPO(-1)	-0.622239	1.199313	-0.518830	0.6051
TRANSACTION	0.002340	0.010199	0.229465	0.8190
USER	-0.776157	3.401810	-0.228160	0.8200
ENTERPRISE	0.012371	0.046480	0.266148	0.7907
SIZE	-10.80138	53.04119	-0.203641	0.8391
CAPITAL	-62.85052	282.9900	-0.222094	0.8247
LLP	55.76776	220.6050	0.252795	0.8010
GDP	236.4559	997.4603	0.237058	0.8131
INF	537.9778	2329.433	0.230948	0.8179

### Effects Specification

Cross-section fixed (first differences)

Mean dependent var	0.168690	S.D. dependent var	0.831411
S.E. of regression	5.858571	Sum squared resid	3192.025
J-statistic	3.30E-18	Instrument rank	9