Heterogeneous monetary transmission process in the Eurozone: Does banking competition matter?

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Выполнила:

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- Цель: оценить влияние конкуренции в банковском секторе на эффективность процентного канала денежной трансмиссии монетарной политики
- Период с января 2003 года по декабрь 2010 года (96 месяцев)
- 11 стран: Австрия, Бельгия, Германия, Франция, Ирландия, Италия, Нидерланды, Португалия, Испания, Греция, Финляндия.

Источники данных:

статистика ЕЦБ, статистика Мирового банка

Данные:

1. розничные ставки процента: ставки по потребительским кредитам, ипотеке, краткосрочным депозитам

2. ставки денежного рынка: средняя ставка по кредитам overnight (EONIA)

3. мера банковской конкуренции: индекс Лернера

$(P_{i,t}-Mc_{i,t})/P_{i,t,}$ где Pi,t – отношение общего операционного дохода к общим активам, Mci,t –предельные издержки.

Эконометрические модели:

1. VAR (Vector Auto Regressive)
2. ECM (Error Correction Model)
3. ARDL (Autoregressive Distributive Lags)
4. Westerlund cointegration test

$$\Delta br_{i,t} = \gamma_i (br_{i,t-1} - \beta mr_{t-1}) + \rho_i \Delta mr_{t-j} + \mu_i + \varepsilon_{i,t}$$

- $br_{i,t}$ - отношение долгосрочных ставок по кредитам к ставкам по депозитам
- mr_t – краткосрочная ставка денежного рынка (EONIA)
- β – отношение долгосрочных ставок ($br_{i,t}$ и mr_t)
- γ_i – показатель коррекции ошибок
- ρ_i – эффект влияния ежемесячного изменения ставки денежного рынка на банковские ставки

$$\Delta br_{i,t} = \gamma_i (br_{i,t-1} - \beta mr_{t-1} - \varphi Lerner_{i,t-1} - \lambda(Lerner_{i,t-1} * mr_{t-1})) + \rho_i \Delta mr_t + \psi_i \Delta Lerner_{i,t} + \delta_i \Delta(Lerner_{i,t} * mr_t) + \mu_i + \varepsilon_{i,t}$$

Table 1
Average bank retail rates in euro area countries over the 2003–2010 period.

	Consumer loans	Real estate loans	Household deposits	Loans to firms < 1 m €	Loans to firms > 1 m €	Firm deposits
AUT	5.47	4.03	2.43	3.93	3.35	2.42
BEL	7.94	4.2	2.3	–	–	2.22
DEU	6.68	4.6	2.37	4.78	3.83	2.28
ESP	8.61	3.84	2.78	4.43	3.44	2.6
FIN	4.67	3.43	2.59	4.03	3.39	2.25
FRA	6.57	4.18	2.56	4.31	3.33	2.4
GRC	9.29	4.34	3.08	–	–	2.77
IRL	6.41	3.86	2.36	4.97	4.4	2.37
ITA	8.63	4.16	1.86	4.4	3.41	2.39
NLD	–	4.56	2.93	4.42	3.4	2.37
PRT	9.05	3.77	2.47	6.21	4.28	2.6
St. dev.	1.37	0.28	0.24	0.47	0.35	0.13

Source: ECB, European Central Bank.

Table 4

Global effect of banking competition and economic effect of competition on pass-through.

	Consumer loans	Real estate loans	Household deposits
Global effect of banking competition	−7.481*** (1.515)	4.082*** (0.765)	7.816*** (1.356)
Pass-through with Lerner index p25	0.776	0.887	1.36
Pass-through with Lerner index p75	0.406	0.835	1.078
Difference (in %)	90.9	6.2	26.1
	Loans to firms < 1 m €	Loans to firms > 1 m €	Firm deposits
Global effect of banking competition	2.264*** (0.453)	5.243*** (0.66)	0.026 (0.126)
Pass-through with Lerner index p25	0.871	0.927	1.018
Pass-through with Lerner index p75	0.75	0.779	1.001
Difference (in %)	16.1	18.9	1.7

Note: Standard errors are reported between brackets and are given by the following equation: $SE = [Var(\varphi) + mr^2 Var(\lambda) + 2cov(\varphi,\lambda)]^{1/2}$.

 * refers to statistical significance at the 10%.
 ** refers to statistical significance at the 5%.
 *** refers to statistical significance at the 1%.

Table 5
Banking competition and short-term interest rate pass-through for households.

		Consumer loans				Real estate loans				Household deposits			
		Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.
Mean	ECT	−0.136***	0.015	−0.176***	0.015	−0.089***	0.008	−0.116***	0.009	−0.051***	0.01	−0.076***	0.001
	EONIA	0.149*	0.045	0.166	0.273	0.312***	0.008	0.604***	0.112	0.614***	0.047	1.326***	0.176
	Lemer*EONIA			−0.537	1.338			−1.755**	0.575			−4.253***	0.909
AUT	ECT	−0.091*	0.052	−0.141***	0.037	−0.146***	0.027	−0.163***	0.028	−0.09***	0.027	−0.066***	0.027
	EONIA	0.311***	0.071	−0.357	0.532	0.103	0.084	−0.681	0.596	0.664***	0.161	1.204	0.886
	Lemer*EONIA			3.046	2.832			4.195	3.201			−3.159	4.193
BEL	ECT	−0.167***	0.046	−0.238***	0.07	−0.046***	0.012	−0.037**	0.017	−0.119***	0.035	−0.249***	0.066
	EONIA	0.007	0.146	1.226	1.559	0.263***	0.068	1.08**	0.450	0.78***	0.115	2.383***	0.682
	Lemer*EONIA			−5.622	7.635			−4.08*	2.151			−8.286***	3.289
DEU	ECT	−0.122***	0.051	−0.084**	0.032	−0.033***	0.010	−0.069**	0.037	−0.099***	0.033	−0.122***	0.03
	EONIA	0.095	0.144	1.381	0.881	0.25***	0.047	1.176***	0.215	0.663***	0.118	2.179***	0.438
	Lemer*EONIA			−8.236	5.846			−6.252***	1.442			−10.433***	3.026
ESP	ECT	−0.101*	0.052	−0.097*	0.051	−0.125***	0.034	−0.153***	0.033	−0.021	0.014	−0.029**	0.012
	EONIA	0.078	0.247	0.859	0.666	0.4***	0.146	0.599***	0.194	0.55***	0.121	0.861***	0.198
	Lemer*EONIA			−4.878	4.828			−2.282***	0.902			−2.804**	1.104
FIN	ECT	−0.07**	0.030	−0.011	0.009	−0.152***	0.042	−0.091**	0.028	−0.041	0.026	−0.006	0.004
	EONIA	0.609***	0.152	0.717***	0.159	0.673***	0.145	0.764***	0.164	0.85***	0.172	0.91***	0.193
	Lemer*EONIA			−1.298	1.064			−1.718	1.104			−1.406	1.302
FR	ECT	−0.095***	0.016	−0.08***	0.017	−0.053***	0.007	−0.055***	0.009	−0.04	0.024	−0.024	0.015
	EONIA	−0.032	0.054	0.416	0.515	0.049	0.056	0.456**	0.165	0.708***	0.128	1.213***	0.348
	Lemer*EONIA			−2.168	2.651			−2.276***	0.86			−2.756	2.033
GRC	ECT	−0.04**	0.020	−0.068***	0.024	−0.039***	0.016	−0.042**	0.018	−0.022	0.027	−0.033**	0.023
	EONIA	−0.195	0.121	−0.076	0.448	0.197*	0.104	−0.099	0.166	0.45***	0.233	0.002	0.283
	Lemer*EONIA			−0.393	2.547			1.539*	0.871			2.025	1.127
IRE	ECT	−0.425***	0.100	−0.884***	0.123	−0.031	0.028	−0.056*	0.03	−0.015	0.018	−0.13***	0.048
	EONIA	0.641**	0.215	−1.443	1.728	0.573***	0.095	1.46***	0.485	0.731***	0.098	1.52***	0.319

Table 5 (continued)

		Consumer loans				Real estate loans				Household deposits			
		Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.
	Lemer*EONIA			8.374	7.769			−4.176**	2.098			−4.089***	1.305
ITA	ECT	−0.089***	0.032	−0.129***	0.0511	−0.144***	0.016	−0.159***	0.017	−0.054**	0.027	−0.04***	0.019
	EONIA	0.028	0.120	−0.734	1.255	0.311***	0.054	0.797	0.562	0.342	0.241	2.621**	1.096
	Lemer*EONIA			3.86	6.255			−2.374	2.674			−11.111**	5.330
NLD	ECT					−0.023***	0.007	−0.018**	0.009	−0.05***	0.022	−0.037	0.024
	EONIA					0.184***	0.056	0.067	0.421	0.43***	0.157	1.101	0.799
	Lemer*EONIA							0.863	2.655			−4.334	4.742
PRT	ECT	−0.162***	0.045	−0.031	0.033	−0.191***	0.062	−0.434***	0.077	−0.02	0.029	−0.101***	0.034
	EONIA	−0.052	0.149	−0.322	0.975	0.436***	0.168	1.025***	0.284	0.589***	0.129	0.592	0.313
	Lemer*EONIA			1.945	3.30			−2.75***	0.974			−0.43	1.272

Table 6

Banking competition and short-term interest rate pass-through for firms.

		Loans to firms < 1 m €				Loans to firms > 1 m €				Firm deposits			
		Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.
Mean	ECT	−0.131***	0.012	−0.192***	0.016	−0.233***	0.022	−0.194***	0.020	−0.189***	0.023	−0.228***	0.024
	EONIA	0.471***	0.016	1.123***	0.170	0.593***	0.040	1.532***	0.235	0.803***	0.023	1.497***	0.157
	Ler*EONIA			−4.01***	0.864			−4.616***	1.287			−3.698***	0.796
AUT	ECT	−0.31***	0.065	−0.376***	0.095	−0.244***	0.075	−0.204***	0.076	−0.148***	0.055	−0.141***	0.053
	EONIA	0.348**	0.155	−0.56	1.040	0.56***	0.140	0.557	0.889	0.773***	0.134	1.424*	0.783
	Ler*EONIA			4.764	5.087			−4.749	4.43			−3.901	4.155
BEL	ECT									−0.443***	0.100	−0.537***	0.109
	EONIA									0.986***	0.050	2.242***	0.336
	Ler*EONIA											−6.158***	1.615
DEU	ECT	−0.173***	0.044	−0.404***	0.052	−0.143***	0.057	−0.319***	0.066	−0.207***	0.075	−0.28***	0.082
	EONIA	0.488***	0.105	2.609***	0.253	0.573***	0.117	2.718***	0.362	0.886***	0.072	1.749***	0.236
	Ler*EONIA			−14.874***	1.738			−15.194***	2.623			−5.844***	1.581
ESP	ECT	−0.039**	0.014	−0.053***	0.017	−0.077**	0.036	−0.092***	0.036	−0.024	0.021	−0.032	0.024
	EONIA	0.52***	0.129	0.793***	0.193	0.747***	0.109	1.019***	0.202	0.771***	0.086	0.902***	0.160
	Ler*EONIA			−2.501***	0.945			−2.583**	1.292			−1.182	1.231
FIN	ECT	−0.176***	0.050	−0.026	0.019	−0.45***	0.094	−0.025	0.015	−0.212***	0.064	−0.258***	0.076
	EONIA	0.652***	0.101	0.788***	0.117	0.586***	0.122	0.853***	0.157	0.95***	0.048	0.975***	0.053
	Ler*EONIA			−1.081	1.110			0.196	1.89			−0.503	0.576
FR	ECT	−0.112***	0.019	−0.101***	0.019	−0.167***	0.056	−0.165***	0.053	−0.219***	0.062	−0.27***	0.048
	EONIA	0.267***	0.069	0.69	0.599	0.726***	0.099	1.387***	0.580	0.777***	0.115	1.718***	0.419
	Ler*EONIA			−2.315	3.02			−3.622	3.10			−5.282**	1.757
GRC	ECT	−0.022	0.034	−0.035	0.038					−0.007	0.048	−0.014	0.026
	EONIA	0.667***	0.099	0.909***	0.302					0.725***	0.248	0.252	0.326
	Ler*EONIA			−1.357	1.51							2.389**	1.44

Table 6 (*continued*)

		Loans to firms < 1 m €				Loans to firms > 1 m €				Firm deposits			
		Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.	Coef.	St.err.
	EONIA	0.544***	0.137	1.97***	0.541	0.503***	0.108	1.494**	0.587	0.77***	0.078	1.309***	0.326
	Ler*EONIA			−7.297***	2.287			−3.79	2.543			−2.51**	1.44
ITA	ECT	−0.199***	0.044	−0.324***	0.059	−0.25***	0.060	−0.389***	0.074	−0.298***	0.093	−0.39***	0.100
	EONIA	0.433***	0.139	2.251***	0.718	0.55***	0.111	2.912**	1.295	0.709***	0.136	3.35***	1.159
	Ler*EONIA			−9.325**	3.696			−11.959*	6.639			−13.024**	5.882
NLD	ECT	−0.036*	0.019	−0.037*	0.020	−0.245***	0.087	−0.259***	0.08	−0.485***	0.132	−0.516***	0.13
	EONIA	0.45***	0.108	1.014*	0.562	0.704***	0.111	1.354	0.959	0.695***	0.118	0.939***	0.421
	Ler*EONIA			−3.633	3.445			−4.5	6.302			−1.741	2.562
PRT	ECT	−0.094***	0.040	−0.319***	0.053	−0.089*	0.049	−0.47***	0.064	−0.002	0.106	−0.03	0.125
	EONIA	0.341***	0.142	0.772*	0.362	0.395**	0.172	1.653**	0.478	0.8***	0.171	1.618***	0.546
	Ler*EONIA			−2.482*	1.233			−6.179***	1.632			−2.923	2.055

Note: Constant terms and the Lerner index are included but not reported. Full results are available upon request. Standard errors refer to HAC standard errors.

Table 7
Speed of adjustment (in months).

	Consumer loans	Real estate loans	Household deposits	Loans to firms < 1 m €	Loans to firms > 1 m €	Firm deposits
Pool	6.257	7.73	7.56	4.038	1.746	1.042
Austria	7.571	6.143	3.73	2.103	1.803	1.533
Belgium	5.946	16.021	1.848	–	–	0.0316
Germany	7.418	22.727	3.404	2.959	2.986	0.55
Spain	9.128	4.8	–	12.307	3.285	-
Finland	5.585	2.15	3.658	1.977	0.92	0.235
France	10.363	17.94	7.3	6.544	1.64	1.018
Greece	29.875	20.589	–	15.136	–	-
Ireland	0.844	–	–	2.941	1.145	6.052
Italy	10.921	4.784	12.185	2.849	1.8	0.9765
Netherlands	–	35.478	11.4	15.277	1.208	0.628
Portugal	6.493	2.952	20.55	7.01	6.7977	-

Note: We report only speeds of adjustment for which the coefficient associated with the error correction term is statistica
significant.

Результаты

1. Конкуренция оказывает прямое воздействие на уровень банковских процентных ставок

2. Конкуренция повышает эффективность монетарной политики

3. Конкуренция остается важным фактором ценовой политики розничных банков