

Supplementary Appendix

Market reaction to bank liquidity regulation

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Table A.1. Market reaction for individual announcements.

Panel A: MSCI World				
Event	CAR(-1,1) EW	CAR(-1,1) MW	CMAR(-1,1) EW	CMAR(-1,1) MW
1	-0.0026	-0.0255	-0.0049	-0.0281
2	-0.0074	-0.0255	-0.0099	-0.0256
3	-0.0074	-0.0043	-0.0091	-0.0059
4	-0.0025	-0.0030	0.0030	-0.0062
5	-0.0182	-0.0313	-0.0150	-0.0408
6	-0.0058	-0.0210	-0.0062	-0.0293
7	-0.0256	-0.0213	-0.0245	-0.0189
Total	-0.0696	-0.1319	-0.0666	-0.1548
Panel B: MSCI Europe				
Event	CAR(-1,1) EW	CAR(-1,1) MW	CMAR(-1,1) EW	CMAR(-1,1) MW
1	0.0001	-0.0203	0.0004	-0.0228
2	-0.0081	-0.0269	-0.0107	-0.0263
3	0.0026	0.0137	0.0044	0.0077
4	0.0013	0.0049	0.0150	0.0058
5	-0.0219	-0.0374	-0.0134	-0.0393
6	0.0004	-0.0101	0.0087	-0.0144
7	-0.0271	-0.0242	-0.0275	-0.0218
Total	-0.0527	-0.1003	-0.0230	-0.1112

This table presents event study evidence separately for the seven BCBS announcements about the effect of bank liquidity regulation for a sample of banks from the EU and Switzerland. We present CARs (equally-weighted, EW, and market-weighted, MW) and CMARs (both EW and MW). Panel A uses the MSCI World as a proxy for the market portfolio and Panel B uses the MSCI Europe as a proxy for the market portfolio. The CARs and CMARs are estimated according to equations (1)-(4). The CAR and CMAR for Events #5 and #7 are multiplied by minus one.

Table A.2. Determinants of CARs and CMARs without banks with confounding events.

Panel A: Market portfolio proxy: MSCI World		
<i>Dependent variable</i>	CAR(-1,1)	CMAR(-1,1)
Core funding ratio	-0.059*** (-2.949)	-0.054** (-2.162)
Liquid assets ratio	0.011*** (4.810)	0.010*** (3.501)
Market-to-book ratio	-0.000 (-0.007)	-0.000 (-0.120)
Customer deposits to total assets ratio	0.090*** (3.661)	0.093*** (3.156)
Interbank ratio	0.091*** (2.810)	0.082** (2.480)
Debt-to-GDP ratio	-0.007 (-0.987)	-0.006 (-0.837)
Eurozone	-0.000 (-0.117)	-0.001 (-0.304)
GIIPS	0.004 (0.612)	0.002 (0.287)
Liquidity regulation	-0.004 (-1.489)	-0.003 (-0.859)
Constant	-0.033*** (-3.713)	-0.034*** (-3.389)
R-squared	0.0361	0.0446
Observations	719	719
Number of banks	121	121
Panel B: Market portfolio proxy: MSCI Europe		
<i>Dependent variable</i>	CAR(-1,1)	CMAR(-1,1)
Core funding ratio	-0.064*** (-3.292)	-0.063** (-2.275)
Liquid assets ratio	0.012*** (4.630)	0.011*** (3.425)
Market-to-book ratio	0.000 (0.185)	-0.001 (-0.423)
Customer deposits to total assets ratio	0.092*** (3.741)	0.103*** (3.159)
Interbank ratio	0.101*** (3.153)	0.099*** (2.591)
Debt-to-GDP ratio	-0.007 (-0.999)	-0.008 (-1.087)
Eurozone	-0.001 (-0.491)	-0.001 (-0.330)
GIIPS	0.005 (0.792)	0.003 (0.393)
Liquidity regulation	-0.006** (-2.340)	-0.004 (-1.179)
Constant	-0.029*** (-3.522)	-0.028*** (-2.778)
R-squared	0.0350	0.0450
Observations	719	719
Number of banks	121	121

This table presents tests that explain the effect of the bank-specific variables *Core funding ratio*, *Liquid assets ratio*, *Market-to-book ratio*, *Customer deposits to total assets ratio*, and the country-specific variables average *Interbank ratio*, *Debt-to-GDP ratio*, *Eurozone membership*, location in *GIIPS*, and *Liquidity regulation* on the cross-sectional variation of CARs and CMARs. These tests are identical to those shown in Table 4, except for the fact that we exclude bank-specific confounding events. Panel A uses the MSCI World as a proxy for the market portfolio and Panel B uses the MSCI Europe as a proxy for the market portfolio. The CARs and CMARs are estimated according to equations (1)-(4). We use random effects regressions with robust standard errors clustered at the country level. All bank-level variables, CARs and CMARs are winsorized at the 1st and 99th percentile. *t*-Statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.3. Determinants of CARs and CMARs without banks with confounding events for *Liquidity only* bucket**Panel A: Market portfolio proxy: MSCI World**

<i>Dependent variable</i>	CAR(-1,1)	CMAR(-1,1)
Core funding ratio	-0.076** (-2.343)	-0.076** (-2.086)
Liquid assets ratio	0.009** (2.420)	0.007* (1.886)
Market-to-book ratio	-0.001 (-0.500)	-0.000 (-0.221)
Customer deposits to total assets ratio	0.098** (2.453)	0.096** (2.151)
Interbank ratio	0.059 (1.555)	0.046 (1.278)
Debt-to-GDP ratio	-0.003 (-0.290)	0.000 (0.028)
Eurozone	-0.005 (-1.391)	-0.005 (-1.251)
GIIPS	0.005 (0.929)	0.004 (0.624)
Liquidity regulation	-0.008** (-2.261)	-0.007* (-1.862)
Constant	-0.020** (-2.353)	-0.020** (-2.270)
R-squared	0.0280	0.0256
Observations	378	378
Number of banks	117	117

Panel B: Market portfolio proxy: MSCI Europe

<i>Dependent variable</i>	CAR(-1,1)	CMAR(-1,1)
Core funding ratio	-0.086*** (-2.705)	-0.083** (-2.090)
Liquid assets ratio	0.010** (2.497)	0.009** (2.042)
Market-to-book ratio	-0.001 (-0.275)	0.000 (0.058)
Customer deposits to total assets ratio	0.105*** (2.702)	0.105** (2.172)
Interbank ratio	0.069* (1.793)	0.071* (1.736)
Debt-to-GDP ratio	-0.006 (-0.567)	-0.004 (-0.391)
Eurozone	-0.006* (-1.882)	-0.005 (-1.217)
GIIPS	0.007 (1.079)	0.005 (0.793)
Liquidity regulation	-0.010*** (-3.890)	-0.008** (-2.424)
Constant	-0.015* (-1.796)	-0.018** (-1.960)
R-squared	0.0354	0.0323
Observations	378	378
Number of banks	117	117

This table presents tests that explain the effect of the bank-specific variables *Core funding ratio*, *Liquid assets ratio*, *Market-to-book ratio*, *Customer deposits to total assets ratio*, and the country-specific variables average *Interbank ratio*, *Debt-to-GDP ratio*, *Eurozone* membership, location in *GIIPS*, and *Liquidity regulation* on the cross-sectional variation of CARs and CMARs. The tests focus on the *Liquidity only* bucket. These regressions are identical to those shown in Table 5, except for the fact that we exclude bank-specific confounding events. Panel A uses the MSCI World as a proxy for the market portfolio and Panel B uses the MSCI Europe as a proxy for the market portfolio. The CARs and CMARs are estimated according to equations (1)-(4). We use random effects regressions with robust standard errors clustered at the country level. All bank-level variables, CARs and CMARs are winsorized at the 1st and 99th percentile. *t*-Statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.4. Determinants of CAR estimated using an AR(1)-GARCH(1,1) Model.

Panel A: Market portfolio proxy: MSCI World		
<i>Specification</i>	All events	Liquidity only events
<i>Dependent variable</i>	CAR(-1,1)	CAR(-1,1)
Core funding ratio	-0.058*** (-2.930)	-0.082** (-2.262)
Liquid assets ratio	0.012*** (4.501)	0.010*** (2.695)
Market-to-book ratio	0.001 (0.307)	-0.001 (-0.528)
Customer deposits to total assets ratio	0.088*** (3.592)	0.106** (2.378)
Interbank ratio	0.088*** (2.961)	0.049 (1.296)
Debt-to-GDP ratio	-0.008 (-1.227)	-0.004 (-0.466)
Eurozone	-0.001 (-0.254)	-0.006** (-1.978)
GIIPS	0.004 (0.714)	0.006 (0.983)
Liquidity regulation	-0.003 (-1.521)	-0.008*** (-3.900)
Constant	-0.033*** (-4.616)	-0.017** (-2.084)
R-squared	0.0295	0.0245
Observations	754	401
Number of banks	121	117
Panel B: Market portfolio proxy: MSCI Europe		
<i>Specification</i>	All events	Liquidity only events
<i>Dependent variable</i>	CAR(-1,1)	CAR(-1,1)
Core funding ratio	-0.060*** (-3.086)	-0.089** (-2.512)
Liquid assets ratio	0.012*** (4.297)	0.011*** (2.879)
Market-to-book ratio	0.001 (0.565)	-0.000 (-0.177)
Customer deposits to total assets ratio	0.087*** (3.480)	0.109** (2.562)
Interbank ratio	0.094*** (3.147)	0.057 (1.455)
Debt-to-GDP ratio	-0.009 (-1.306)	-0.007 (-0.697)
Eurozone	-0.000 (-0.090)	-0.006* (-1.890)
GIIPS	0.004 (0.709)	0.007 (1.105)
Liquidity regulation	-0.005* (-1.884)	-0.009*** (-4.687)
Constant	-0.029*** (-4.217)	-0.014 (-1.602)
R-squared	0.0293	0.0310
Observations	754	401
Number of banks	121	117

We present tests that explain the effect of the bank-specific variables *Core funding ratio*, *Liquid assets ratio*, *Market-to-book ratio*, *Customer deposits to total assets ratio*, and the country-specific variables average *Interbank ratio*, *Debt-to-GDP ratio*, *Eurozone* membership, location in *GIIPS*, and *Liquidity regulation* on the cross-sectional variation of CARs and CMARs. Tests are identical to those shown in Table 4, except for the fact that we estimate the market model according to an AR(1)-GARCH(1,1) model instead of a Prais-Winsten model. We employ random effects regressions with robust standard errors clustered at the country level. All level variables are winsorized at the 1st and 99th percentile. t-Statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.5. Market reaction to liquidity regulation: national stock market indices.

Panel A: CAR(-1,1)																			
Event	Greece	Ireland	Italy	Portugal	Spain	Austria	Belgium	Cyprus	Denmark	Finland	France	Germany	Luxembourg	Malta	Netherlands	Sweden	Switzerland	UK	
Total (all events)	0.0246	-0.0373	-0.0397	-0.0427	-0.0370	-0.0346	-0.0611	0.0064	-0.0032	-0.0289	-0.0097	-0.0118	0.0902	0.0569	-0.0283	-0.0471	0.0010	-0.0450	
Average (all events)	0.0035	-0.0053	-0.0057	-0.0061	-0.0053	-0.0049	-0.0087	0.0009	-0.0005	-0.0041	-0.0014	-0.0017	0.0129	0.0081	-0.0040	-0.0067	0.0001	-0.0064	
BS P-value (all events)	0.8200	0.3200	0.2300	0.2700	0.3000	0.4050	0.0850	0.8650	0.8700	0.4400	0.7600	0.6500	0.0600	0.1700	0.3000	0.1250	0.9050	0.0700	
Total (liquidity only bucket)	-0.0465	-0.0310	-0.0290	-0.0266	-0.0331	-0.0354	-0.0437	-0.0676	-0.0269	-0.0449	-0.0111	-0.0208	0.0181	0.0339	-0.0347	-0.0178	-0.0148	-0.0456	
Average (liquidity only bucket)	-0.0116	-0.0078	-0.0072	-0.0066	-0.0083	-0.0089	-0.0109	-0.0169	-0.0067	-0.0112	-0.0028	-0.0052	0.0045	0.0085	-0.0087	-0.0044	-0.0037	-0.0114	
BS P-value (liquidity only bucket)	0.4400	0.2750	0.3100	0.3750	0.2900	0.3050	0.1200	0.5850	0.3550	0.1100	0.6500	0.3150	0.5250	0.2000	0.1400	0.4050	0.5800	0.0250	
Panel B: CMAR(-1,1)																			
Event	Greece	Ireland	Italy	Portugal	Spain	Austria	Belgium	Cyprus	Denmark	Finland	France	Germany	Luxembourg	Malta	Netherlands	Sweden	Switzerland	UK	
Total (all events)	-0.0760	-0.0114	-0.0538	-0.0191	-0.0604	-0.0461	-0.0566	-0.1279	0.0179	-0.0201	-0.0127	0.0004	0.1713	0.0610	-0.0085	0.0050	0.0076	-0.0185	
Average (all events)	-0.0109	-0.0016	-0.0077	-0.0027	-0.0086	-0.0066	-0.0081	-0.0183	0.0026	-0.0029	-0.0018	0.0001	0.0245	0.0087	-0.0012	0.0007	0.0011	-0.0026	
BS P-value (all events)	0.4400	0.8100	0.1850	0.7150	0.1750	0.3500	0.1250	0.5700	0.7650	0.6150	0.7300	0.9550	0.0000	0.2950	0.8100	0.9550	0.7450	0.3050	
Total (liquidity only bucket)	-0.0490	-0.0425	-0.0321	-0.0308	-0.0319	-0.0403	-0.0493	-0.0667	-0.0311	-0.0435	-0.0134	-0.0235	0.0195	0.0303	-0.0374	-0.0228	-0.0181	-0.0450	
Average (liquidity only bucket)	-0.0122	-0.0106	-0.0080	-0.0077	-0.0080	-0.0101	-0.0123	-0.0167	-0.0078	-0.0109	-0.0034	-0.0059	0.0049	0.0076	-0.0093	-0.0057	-0.0045	-0.0112	
BS P-value (liquidity only bucket)	0.5200	0.2200	0.3250	0.3750	0.3550	0.2750	0.0800	0.7200	0.2500	0.1500	0.6000	0.2300	0.4650	0.4900	0.1300	0.2650	0.5550	0.0250	

This table presents event study evidence for the total and average effect of all seven BCBS announcements about the effect of bank liquidity regulation for a sample of 18 national indices for the 18 countries under examination. We present CARs and CMARs. The CARs and CMARs are estimated according to equations (1)-(4). Panel A uses the MSCI World as a proxy for the market portfolio and Panel B uses the MSCI Europe as a proxy for the market portfolio. BS P-value is the p -value for the average CAR and CMAR calculated according to 400 bootstrap simulations for the period 1/2/2008 – 28/2/2013. For each simulation we estimate the average CAR and CMAR according to equations (1)-(4) for seven (or four, for the liquidity-only events 1, 2, 3, and 7) randomly selected trading days. To consider only non-events trading days, we excluded days which fall in the three-day window for the seven events. We randomly choose seven non-overlapping placebo events for the period 1 February 2008 to 28 February 2013 – this step is repeated 400 times. We compute the sum of the CAR and CMAR over all seven events for each of the 400 samples of placebo events. These steps ensure that the simulated data represent the distribution of CAR and CMAR under the null hypothesis, because they have been estimated for non-events trading days (for which, therefore, announcements related to bank liquidity regulation did not occur). The p -values are computed on the basis of the number of cases for which the CAR or CMAR is larger or smaller than the estimated value (two-tail tests).