

Appendix C

Appendix C.1

Numbers of shocks of stocks in liquidity beta sorted portfolios

Panel A: Results of proportional spread portfolios

PORT	5%	-5%	10%	-10%	20%	-20%
Port1	2383	2219	685	675	202	219
Port2	1852	1724	536	552	161	197
Port3	1967	1836	555	556	190	178
Port4	1991	1821	618	591	191	199
Port5	1975	1803	646	622	235	236
Port6	2152	1865	734	663	272	274
Port7	2079	1790	708	670	318	302
Port8	2493	2125	877	827	351	331
Port9	2933	2528	1001	933	358	356
Port10	4092	3793	1701	1532	641	620
Total	23917	21504	8061	7621	2919	2912

Panel B: Results of turnover rate portfolios

PORT	5%	-5%	10%	-10%	20%	-20%
Port1	3928	3546	1380	1313	403	435
Port2	2796	2574	860	872	291	306
Port3	2452	2204	728	674	228	257
Port4	2135	1908	666	627	208	201
Port5	1870	1635	561	532	210	198
Port6	1935	1694	638	631	264	261
Port7	1908	1721	644	633	269	273
Port8	1910	1745	729	661	293	275
Port9	2017	1763	706	632	283	266
Port10	2969	2717	1150	1047	470	440
Total	23920	21507	8062	7622	2919	2912

Panel C: Results of illiquidity ratio portfolios

PORT	5%	-5%	10%	-10%	20%	-20%
Port1	3405	3112	1082	1032	315	326
Port2	2767	2411	825	786	249	256
Port3	2276	2065	737	721	275	280
Port4	1966	1803	631	623	228	230
Port5	1771	1580	614	550	273	234
Port6	1783	1591	578	575	240	242
Port7	1816	1529	590	566	234	240
Port8	2184	1896	763	686	274	290
Port9	2473	2237	878	816	319	313
Port10	3479	3283	1364	1267	512	501
Total	23920	21507	8062	7622	2919	2912

Appendix C.2

S-GARCH-based CAARs of stocks in proportional spread portfolios following positive shocks

Panel A: S-GARCH-based CAARs following shocks of 5% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.0974 ^a	-0.0012	0.0026	-0.0006	0.0027	0.0066	0.0075	0.0026	0.0051	0.0091	0.0089
PORT2	0.0939 ^a	-0.0076 ^b	-0.0124 ^a	-0.0164 ^a	-0.0177 ^a	-0.0143 ^a	-0.0123 ^b	-0.0163 ^a	-0.0158 ^a	-0.0131 ^b	-0.0148 ^b
PORT3	0.0953 ^a	-0.0033	-0.0074 ^a	-0.0093 ^a	-0.0070 ^b	-0.0068	-0.0031	-0.0005	0.0028	0.0059	0.0059
PORT4	0.1123 ^a	-0.0062 ^b	-0.0108 ^b	-0.0137 ^b	-0.0143 ^b	-0.0124 ^b	-0.0115 ^b	-0.0116 ^c	-0.0113 ^c	-0.0124 ^c	-0.0138 ^b
PORT5	0.1055 ^a	0.0002	-0.0047	-0.0044	-0.0033	-0.0052	-0.0027	-0.0026	-0.0004	0.0044	0.0026
PORT6	0.1332 ^a	-0.0040	-0.1220	-0.1214	-0.1212	-0.1172	-0.1170	-0.1198	-0.1195	-0.1177	-0.1077
PORT7	0.1133 ^a	-0.0088 ^b	-0.0223 ^a	-0.0306 ^a	-0.0400 ^a	-0.0378 ^a	-0.0363 ^a	-0.0371 ^a	-0.0309 ^b	-0.0298 ^b	-0.0259 ^c
PORT8	0.1133 ^a	-0.0065 ^c	-0.0053	-0.0066	-0.0078	-0.0058	-0.0038	0.0001	0.0028	0.0004	-0.0004
PORT9	0.1039 ^a	-0.0007	0.0925	0.1136	0.1136	0.1220	0.1412	0.1393	0.1250	0.1303	0.1304
PORT10	0.1229 ^a	-0.0018	0.0125	-0.0100	-0.0109	-0.0101	0.0056	0.0234	0.0188	0.0096	0.0119

Panel B: S-GARCH-based CAARs following shocks of 10% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.2061 ^a	0.0094	-0.0106	0.0132	0.0123	0.0221	0.0259	0.0235	0.0328	0.0331	0.0411
PORT2	0.2124 ^a	-0.0149 ^a	-0.0509 ^a	-0.0643 ^a	-0.0600 ^a	-0.0484 ^a	-0.0457 ^b	-0.0524 ^a	-0.0475 ^b	-0.0404 ^b	-0.0426 ^b
PORT3	0.2194 ^a	0.0023	-0.0096	-0.0108	-0.0091	-0.0099	0.0000	0.0125	0.0246	0.0357	0.0422
PORT4	0.2289 ^a	-0.0171 ^a	-0.0361 ^a	-0.0427 ^a	-0.0250	-0.0256	-0.0244	-0.0293	-0.0247	-0.0217	-0.0234
PORT5	0.2252 ^a	-0.0041	-0.0116	-0.0163	-0.0072	-0.0057	0.0021	0.0228	0.0267	0.0170	0.0312
PORT6	0.2935 ^a	-0.0186	-0.0443 ^a	-0.0758 ^b	-0.0610 ^b	-0.0584 ^b	-0.0289	-0.0307	-0.0241	-0.0178	-0.0385
PORT7	0.2650 ^a	-0.0402 ^a	-0.0772 ^a	-0.0995 ^a	-0.1082 ^a	-0.1058 ^a	-0.1044 ^a	-0.1056 ^a	-0.0871 ^a	-0.0828 ^b	-0.0878 ^b
PORT8	0.2632 ^a	-0.0103	-0.0342 ^c	-0.0327 ^c	-0.0373 ^c	-0.0371 ^c	-0.0338	-0.0192	-0.0133	-0.0145	-0.0198
PORT9	0.2761 ^a	0.0013	0.2793	0.3553	0.3389	0.3522	0.3518	0.3458	0.3005	0.3121	0.3062
PORT10	0.2466 ^a	0.0623	0.1254	0.0558	0.0578	0.0616	0.0599	0.0592	0.0714	0.0635	0.0812

Panel C: S-GARCH-based CAARs following shocks of 20% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.4820 ^a	0.0145	-0.0419	0.0325	0.0230	0.0306	0.0393	0.0423	0.0715	0.0662	0.1016
PORT2	0.5038 ^a	-0.0181	-0.0971 ^b	-0.1269 ^b	-0.1033 ^c	-0.0938 ^c	-0.0942 ^c	-0.1083 ^b	-0.1126 ^b	-0.1064 ^c	-0.1041 ^c
PORT3	0.4749 ^a	0.0435	0.0308	0.0401	0.0408	0.0458	0.0394	0.0553	0.0555	0.0730	0.0765
PORT4	0.5872 ^a	-0.0467 ^b	-0.1135 ^b	-0.1241 ^b	-0.1194 ^b	-0.1214 ^b	-0.1234 ^b	-0.1173 ^b	-0.1144 ^b	-0.1077 ^b	-0.1029 ^c
PORT5	0.4799 ^a	0.0133	0.0093	0.0407	0.0179	0.0400	0.0326	0.0534	0.0426	0.0417	0.0427
PORT6	0.6288 ^a	-0.0331	-0.0756 ^c	-0.1299	-0.0855	-0.0775	0.0233	0.0171	0.0327	0.0332	-0.0053
PORT7	0.5294 ^a	-0.0531 ^b	-0.1233 ^a	-0.1570 ^a	-0.1366 ^a	-0.1363 ^a	-0.1528 ^a	-0.1620 ^a	-0.1637 ^a	-0.1579 ^a	-0.1677 ^a
PORT8	0.5341 ^a	0.0036	-0.0261	-0.0156	-0.0282	-0.0256	-0.0205	0.0083	0.0315	0.0283	0.0112
PORT9	1.4670 ^a	0.2013	0.0933	0.1037	0.1187	0.1202	-0.0014	0.0145	0.0165	0.0264	0.0235
PORT10	0.6474 ^a	0.1675	0.2736	0.1556	0.1264	0.1111	0.1187	0.1046	0.1381	0.1075	0.1448

Appendix C.3

S-GARCH-based CAARs of stocks in proportional spread portfolios following negative shocks

Panel A: S-GARCH-based CAARs following shocks of -5% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0964 ^a	0.0053	0.0070	0.0081	0.0140	0.0123	0.0230	0.0201	0.0220	0.0178	0.0189
PORT2	-0.1000 ^a	0.0043	0.0080 ^b	0.0086	0.0087	0.0005	-0.0033	-0.0013	0.0010	-0.0073	-0.0054
PORT3	-0.0954 ^a	-0.0042	-0.0019	-0.0050	0.0006	0.0053	0.0051	0.0083	0.0094	0.0080	0.0080
PORT4	-0.1059 ^a	0.0137	0.0176 ^c	0.0180	0.0173	0.0085	0.0043	0.0070	0.0102	0.0096	0.0091
PORT5	-0.1045 ^a	0.0084 ^c	0.0196 ^c	0.0150	0.0172	0.0125	0.0135	0.0163	0.0119	0.0106	0.0093
PORT6	-0.2466 ^c	-0.0017	-0.0077	-0.0052	0.0082	0.0028	0.0012	0.0024	-0.0002	-0.0040	-0.0005
PORT7	-0.1386 ^a	-0.0083	-0.0088	-0.0060	-0.0085	-0.0116	-0.0137	-0.0050	-0.0016	-0.0041	-0.0114
PORT8	-0.1162 ^a	0.0084	-0.0065	-0.0036	-0.0081	-0.0067	-0.0114	-0.0127	-0.0198	-0.0191	-0.0167
PORT9	-0.1403 ^a	0.0217	0.0215	0.0225	0.0243	0.0190	0.0194	0.0180	0.0107	0.1257	0.1648
PORT10	-0.1180 ^a	-0.0165 ^b	0.0003	0.0237	0.0057	-0.0223	-0.0095	-0.0189	-0.0162	0.0021	-0.0007

Panel B: S-GARCH-based CAARs following shocks of -10% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.2215 ^a	0.0096	0.0182	0.0192	0.0391	0.0368	0.0772	0.0649	0.0671	0.0648	0.0703
PORT2	-0.2327 ^a	0.0199 ^b	0.0295 ^b	0.0226	0.0265	0.0087	0.0042	0.0116	0.0112	-0.0042	0.0044
PORT3	-0.2185 ^a	0.0003	0.0244	0.03720	0.0327	0.0311	0.0318	0.0360	0.0349	0.0368	0.0413
PORT4	-0.2332 ^a	0.0263 ^c	0.0424 ^b	0.0357 ^c	0.0364	0.0144	0.0085	0.0126	0.0144	0.0148	0.0098
PORT5	-0.2208 ^a	0.0343	0.0382	0.0450	0.0511	0.0490	0.0493	0.0517	0.0393	0.0362	0.0261
PORT6	-0.2891 ^a	-0.0109	-0.0444	-0.0307	-0.3481	-0.3637	-0.3648	-0.3587	-0.3623	-0.3614	-0.3436
PORT7	-0.2901 ^a	0.0058	0.0046	-0.0023	0.0040	-0.0233	-0.0349	-0.0215	-0.0297	-0.0358	-0.0467
PORT8	-0.2498 ^a	-0.0184	-0.0292	-0.0317	-0.0263	-0.0222	-0.0162	-0.0252	-0.0289	-0.0219	-0.0247
PORT9	-0.2353 ^a	0.0036	0.0100	0.0069	0.0025	-0.0350	-0.0371	0.2234	0.2996	0.3001	0.3079
PORT10	-0.2564 ^a	-0.0377 ^b	0.0232	0.0803	0.0182	-0.0500	-0.0765	-0.0464	-0.0506	-0.0193	-0.0022

Panel C: S-GARCH-based CAARs following shocks of -20% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.5160 ^a	0.0896 ^c	0.0439	0.0399	0.0450	0.0532	0.0497	0.1341	0.1391	0.2058	0.1977
PORT2	-0.5433 ^a	0.0475 ^b	0.0731 ^b	0.0714 ^b	0.0732 ^b	0.0748 ^b	0.0777 ^b	0.0710 ^b	0.0682 ^b	0.0563	0.0723 ^b
PORT3	-0.5102 ^a	-0.0168	0.0459	0.0709	0.0859	0.1073	0.1424	0.1517	0.1473	0.1538	0.1604
PORT4	-0.5202 ^a	0.1326 ^c	0.1364 ^c	0.1293	0.1351	0.1136	0.1023	0.1091	0.1002	0.1011	0.0989
PORT5	-0.4744 ^a	0.1078 ^c	0.1121	0.1330	0.1230	0.1428 ^c	0.1529 ^c	0.1513 ^c	0.1256	0.1112	0.1125
PORT6	-0.5909 ^a	-0.8753	-0.8568	-0.8089	-0.8255	-0.8116	-0.8177	-0.8287	-0.8595	-0.8703	-0.8172
PORT7	-0.6322 ^a	-0.0115	-0.0289	-0.0115	-0.0101	-0.0040	-0.0144	-0.0145	-0.0214	-0.0291	-0.0589
PORT8	-0.5552 ^a	-0.0840	-0.1171	-0.1529	-0.1620 ^c	-0.1881 ^c	-0.1839 ^c	-0.1862 ^c	-0.1805 ^c	-0.1869 ^c	-0.1918 ^c
PORT9	-0.5166 ^a	0.9226	1.1255	1.0666	1.1231	1.0506	1.0610	0.9520	0.9595	0.9937	1.0034
PORT10	-0.6097 ^a	-0.0048	0.0319	-0.0143	-0.0827	-0.2197 ^c	-0.3238 ^b	-0.2381	-0.2507 ^c	-0.2245	-0.2216

Appendix C.4

S-GARCH-based CAARs of stocks in turnover rate portfolios following positive shocks

Panel A: S-GARCH-based CAARs following shocks of 5% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.0986 ^a	-0.0011	0.0011	0.0012	0.0051	0.0100	0.0146 ^b	0.0152 ^c	0.0179 ^b	0.0165 ^b	0.0134
PORT2	0.1033 ^a	-0.0048	-0.0067	-0.0086	-0.0127	-0.0142 ^c	-0.0146 ^c	-0.0178 ^b	-0.0128	-0.0127	-0.0133
PORT3	0.1000 ^a	-0.0070 ^c	-0.0127 ^b	-0.0152 ^b	-0.0205 ^a	-0.0196 ^b	-0.0196 ^b	-0.0192 ^b	-0.0204 ^b	-0.0158	-0.0178 ^c
PORT4	0.0957 ^a	-0.0039	-0.0084	-0.0165 ^a	-0.0165 ^a	-0.0167 ^a	-0.0145 ^b	-0.0152 ^b	-0.0139 ^c	-0.0130 ^c	-0.0103
PORT5	0.1059 ^a	0.0022	-0.0034	-0.0120	-0.0166	-0.0203 ^c	-0.0228	-0.0289 ^b	-0.0263 ^c	-0.0254 ^c	-0.0239 ^c
PORT6	0.1260 ^a	-0.0116 ^a	-0.0222 ^a	-0.0222 ^a	-0.0221 ^a	-0.0175 ^c	0.0101	0.0051	0.0025	0.0017	0.0119
PORT7	0.1087 ^a	-0.0083	-0.1419	-0.1472	-0.1419	-0.1402	-0.1366	-0.1386	-0.1353	-0.1333	-0.1323
PORT8	0.1310 ^a	-0.0088 ^c	0.0240	0.0300	0.0368	0.0385	0.0402	0.0391	-0.0053	0.0034	0.0088
PORT9	0.1165 ^a	0.0015	0.1345	0.1685	0.1556	0.1673	0.1690	0.1667	0.1675	0.1695	0.1716
PORT10	0.1271 ^a	0.0011	0.0014	-0.0261	-0.0300	-0.0253	-0.0036	0.0283	0.0383	0.0294	0.0301

Panel B: S-GARCH-based CAARs following shocks of 10% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.1997 ^a	0.0014	-0.0064	0.0008	0.0020	0.0095	0.0192	0.0282	0.0387	0.0389	0.0372
PORT2	0.2152 ^a	-0.0192	-0.0366	-0.0428 ^c	-0.0231	-0.0230	-0.0242	-0.0362	-0.0197	-0.0244	-0.0272
PORT3	0.2066 ^a	-0.0329 ^b	-0.0528 ^a	-0.0812 ^b	-0.0766 ^a	-0.0743 ^a	-0.0771 ^a	-0.0744 ^a	-0.0700 ^a	-0.0741 ^a	-0.0631 ^c
PORT4	0.2154 ^a	0.0007	-0.0189	-0.0248	-0.0177	-0.0210	-0.0247	-0.0236	-0.0243	-0.0203	-0.0219
PORT5	0.2330 ^a	-0.0030	-0.0184	-0.0717 ^c	-0.0801 ^c	-0.0754 ^c	-0.0642	-0.0581	-0.0563	-0.0515	-0.0460
PORT6	0.3754 ^a	-0.0356 ^b	-0.0634 ^a	-0.0707 ^a	-0.0706 ^a	-0.0746 ^a	-0.0368	-0.0450	-0.0520	-0.0432	-0.0431
PORT7	0.2458 ^a	-0.0220	-0.0735 ^b	-0.0854 ^b	-0.0828 ^b	-0.0875 ^b	-0.0828 ^b	-0.0749 ^b	-0.0655 ^c	-0.0582	-0.0749 ^b
PORT8	0.2632 ^a	0.0061	0.0960	0.0999	0.1140	0.1100	0.1161	0.1223	0.0581	0.0699	0.0693
PORT9	0.2756 ^a	-0.0145	0.3607	0.4593	0.4245	0.4528	0.4578	0.4537	0.4590	0.4630	0.4559
PORT10	0.2818 ^a	0.1089	0.1486	0.0712	0.0693	0.0801	0.0699	0.0751	0.0999	0.0912	0.1154

Panel C: S-GARCH-based CAARs following shocks of 20% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.4740 ^a	0.0682	0.0751	0.1189	0.1092	0.1095	0.1198	0.1305	0.1353	0.1395	0.1476
PORT2	0.5615 ^a	-0.0836	-0.1226 ^c	-0.1382 ^b	-0.1203 ^c	-0.1261 ^c	-0.1316 ^c	-0.1458 ^b	-0.1518 ^b	-0.1583 ^b	-0.1639 ^b
PORT3	0.4471 ^a	-0.0376	-0.1008 ^c	-0.1376	-0.1033	-0.0715	-0.0818	-0.0871	-0.0804	-0.0953	-0.1068
PORT4	0.4707 ^a	-0.0197	-0.0498	-0.0559	-0.0508	-0.0537	-0.0545	-0.0448	-0.0398	-0.0392	-0.0376
PORT5	0.5279 ^a	-0.0464 ^c	-0.0528 ^c	-0.0958 ^c	-0.1095 ^c	-0.0707	-0.0864	-0.0930	-0.0976	-0.1861 ^c	-0.1886 ^c
PORT6	0.8082 ^a	-0.0498 ^c	-0.1119 ^b	-0.1381 ^a	-0.1429 ^a	-0.1496 ^a	-0.0625	-0.0642	-0.0753	-0.0609	-0.0622
PORT7	0.4719 ^a	-0.0612	-0.1872 ^a	-0.2026 ^b	-0.2026 ^a	-0.1987 ^a	-0.1852 ^b	-0.1788 ^b	-0.1582 ^b	-0.1437 ^c	-0.1702 ^b
PORT8	0.7487 ^a	0.0612 ^c	0.0916	0.0697	0.0882	0.0855	-0.0709	-0.0347	-0.0214	-0.0217	0.0051
PORT9	1.5718	0.2846	0.1437	0.1346	0.1457	0.1411	0.1539	0.1912	0.1960	0.2127	0.2129
PORT10	0.6193 ^a	0.2293	0.3498	0.2417	0.2071	0.1908	0.1962	0.1697	0.2284	0.2258	0.2541

Appendix C.5

S-GARCH-based CAARs of stocks in turnover rate portfolios following negative shocks

Panel A: S-GARCH-based CAARs following shocks of -5% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0987 ^a	0.0009	-0.0077	-0.0040	-0.0002	0.0044	0.0101	0.0090	0.0105	0.0101	0.0097
PORT2	-0.1035 ^a	0.0050	0.0024	-0.0012	-0.0025	-0.0018	-0.0026	-0.0074	-0.0077	-0.0094	-0.0081
PORT3	-0.1091 ^a	-0.0009	-0.0048	-0.0026	0.0005	-0.0104	-0.0103	-0.0111	-0.0110	-0.0163	-0.0177
PORT4	-0.0980 ^a	-0.0043	-0.0051	-0.0089	-0.0097	-0.0107	-0.0134	-0.0126	-0.0123	-0.0152	-0.0159
PORT5	-0.1061 ^a	0.0047	0.0155 ^c	0.0112	0.0123	-0.0025	-0.0054	-0.0015	-0.0123	-0.0138	-0.0168
PORT6	-0.1272 ^a	0.0232	0.0183	0.0193	0.0315	0.0228	0.0185	0.0227	0.0242	0.0195	0.0158
PORT7	-0.2689 ^c	0.0087 ^b	0.0124 ^c	0.0159 ^c	0.0187 ^c	0.0095	0.0040	0.0078	0.0052	0.0000	0.0021
PORT8	-0.1430 ^a	0.0054	0.0090	0.0118	-0.0113	-0.0153	-0.0082	0.0029	0.0042	0.0339	0.0399
PORT9	-0.1342 ^a	0.0051	0.0104	0.0109	0.0034	0.0033	0.0026	0.0063	0.0001	0.1685	0.2203
PORT10	-0.1175 ^a	-0.0158 ^c	0.0121	0.0453	0.0340	0.0040	0.0189	0.0042	0.0078	0.0130	0.0123

Panel B: S-GARCH-based CAARs following shocks of -10% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.1973 ^a	-0.0138	-0.0049	-0.0016	0.0033	0.0049	0.0239	0.0119	0.0166	0.0126	0.0197
PORT2	-0.2263 ^a	0.0091	-0.0029	-0.0094	-0.0109	-0.0304	-0.0364	-0.0318	-0.0394	-0.0438	-0.0428
PORT3	-0.2504 ^a	0.0129	-0.0256	-0.0090	-0.0017	-0.0260	-0.0317	-0.0275	-0.0390	-0.0408	-0.0482
PORT4	-0.2137 ^a	-0.0075	-0.0100	-0.0168	-0.0158	-0.0261	-0.0299	-0.0221	-0.0229	-0.0260	-0.0332
PORT5	-0.2505 ^a	0.0236	0.0564	0.0416	0.0500	0.0071	0.0061	0.0066	-0.0056	-0.0056	-0.0226
PORT6	-0.2928 ^a	0.0000	-0.0052	-0.0072	0.0198	-0.0041	-0.0172	-0.0136	-0.0199	-0.0202	-0.0236
PORT7	-0.2866 ^a	0.0302 ^a	0.0398 ^a	0.0368 ^b	-0.3344	-0.3640	-0.3672	-0.3613	-0.3616	-0.3614	-0.3598
PORT8	-0.2533 ^a	0.0030	0.0125	0.0183	-0.0388	-0.0439	-0.0337	-0.0791	-0.0673	0.0143	0.0328
PORT9	-0.2835 ^a	0.0039	0.0138	0.0174	0.0297	0.0157	0.0187	0.4724	0.5806	0.5862	0.5895
PORT10	-0.2621 ^a	-0.0463 ^c	0.0465	0.1303	0.0847	0.0037	-0.0305	0.0058	-0.0028	-0.0076	0.0233

Panel C: S-GARCH-based CAARs following shocks of -20% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.4120 ^a	-0.0261	-0.0151	-0.0203	-0.0333	-0.0360	-0.0508	-0.0268	-0.0247	0.0047	0.0080
PORT2	-0.4695 ^a	0.0735	0.0450	0.0481	0.0495	-0.0205	-0.0052	0.0098	-0.0172	-0.0629	-0.0506
PORT3	-0.5880 ^a	0.0088	-0.0927	-0.0321	-0.0366	-0.0439	-0.0433	-0.0424	-0.0476	-0.0601	-0.0511
PORT4	-0.5231 ^a	0.0194	-0.0008	-0.0143	-0.0073	0.0004	-0.0043	0.0009	0.0017	-0.0027	0.0005
PORT5	-0.5295 ^a	-0.0127	0.0522	0.0383	0.0023	-0.1035	-0.1173	-0.1232	-0.1452	-0.1393	-0.1455
PORT6	-0.6593 ^a	0.2005	0.2870	0.2936	0.2763	0.2841	0.2861	0.2674	0.2660	0.2652	0.2649
PORT7	-0.6303 ^a	-0.8163	-0.8116	-0.7961	-0.7927	-0.7768	-0.7736	-0.7743	-0.7933	-0.7949	-0.7926
PORT8	-0.5384 ^a	0.0130	0.0159	0.0202	0.0191	0.0259	0.0333	-0.1304	-0.1002	-0.0327	0.0076
PORT9	-0.6359 ^a	1.0746	1.3385	1.2394	1.2993	1.2932	1.2867	1.3136	1.3091	1.3661	1.3625
PORT10	-0.6353 ^a	-0.0033	0.0378	-0.0210	-0.0810	-0.2404	-0.3642 ^c	-0.2323	-0.2561	-0.2512	-0.2648

Appendix C.6

S-GARCH-based CAARs of stocks in illiquidity ratio portfolios following positive shocks

Panel A: S-GARCH-based CAARs following shocks of 5% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.1037 ^a	-0.0017	0.0023	-0.0031	-0.0005	0.0018	0.0042	0.0045	0.0138	0.0147	0.0135
PORT2	0.1069 ^a	-0.0042 ^c	-0.0110 ^b	-0.0136 ^b	-0.0114 ^b	-0.0062	-0.0054	-0.0059	-0.0021	-0.0030	0.0054
PORT3	0.1083 ^a	-0.0080 ^b	-0.0105 ^b	-0.0122 ^b	-0.0159 ^b	-0.0167 ^b	-0.0202 ^b	-0.0231 ^b	-0.0185 ^b	-0.0125	-0.0160
PORT4	0.1206 ^a	-0.0177 ^c	-0.0237 ^b	-0.0249 ^b	-0.0249 ^a	-0.0198 ^c	-0.0183 ^c	-0.0202 ^b	-0.0198 ^c	-0.0206 ^c	-0.0238 ^b
PORT5	0.1207 ^a	-0.0048	-0.0077	-0.0109	-0.0112	-0.0176 ^c	-0.0142	-0.0178	-0.0392	-0.041 ^c	-0.0319 ^c
PORT6	0.1133 ^a	-0.0031	-0.0089	-0.0067	-0.0072	-0.0075	-0.0098	-0.0156	-0.0129	-0.0132	-0.0148
PORT7	0.1041 ^a	-0.0019	0.1516	0.1926	0.1783	0.1821	0.2108	0.2084	0.2102	0.2122	0.2149
PORT8	0.1072 ^a	-0.0065	-0.0148 ^b	-0.0122	-0.0133 ^c	-0.0115	0.0281	0.0734	0.0726	0.0759	0.0707
PORT9	0.1055 ^a	0.0060	-0.0753	-0.0777	-0.0770	-0.0765	-0.0774	-0.0717	-0.0717	-0.0694	-0.0722
PORT10	0.1166 ^a	-0.0001	0.0011	-0.0267	-0.0297	-0.0207	-0.0242	-0.0266	-0.0393	-0.0447	-0.0383

Panel B: S-GARCH-based CAARs following shocks of 10% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.2252 ^a	0.0068	-0.0014	-0.0072	-0.0089	-0.0059	0.0021	0.0108	0.0398	0.0382	0.0406
PORT2	0.2353 ^a	-0.0101	-0.0302 ^b	-0.0552 ^b	-0.0384 ^b	-0.0270 ^c	0.0039	0.0036	0.0155	0.0198	0.0165
PORT3	0.2478 ^a	-0.0260 ^b	-0.0429 ^a	-0.0506 ^a	-0.0564 ^b	-0.0647 ^a	-0.0761 ^a	-0.0753 ^a	-0.0623 ^b	-0.0570 ^c	-0.0456
PORT4	0.2575 ^a	-0.0538 ^c	-0.0789 ^b	-0.0844 ^a	-0.0546	-0.0470	-0.0421	-0.0459	-0.0363	-0.0292	-0.0329
PORT5	0.2574 ^a	-0.0043	-0.0058	-0.0074	-0.0024	-0.0116	-0.0138	-0.0086	0.0005	0.0021	0.0063
PORT6	0.2642 ^a	-0.0143	-0.0360	-0.0273	-0.0348	-0.0468	-0.0446	-0.0599 ^c	-0.0622 ^b	-0.0633 ^b	-0.0687 ^b
PORT7	0.3221 ^a	-0.0222 ^c	0.4419	0.5571	0.5217	0.5290	0.5310	0.5322	0.5366	0.5415	0.5326
PORT8	0.2297 ^a	0.1239	0.1758	0.1521	0.1624	0.1617	0.1609	0.1788	0.1867	0.2021	0.2035
PORT9	0.2273 ^a	0.0220	0.0616	0.0661	0.0660	0.0656	0.0728	0.0679	0.0725	0.0753	0.0665
PORT10	0.2456 ^a	0.0050	-0.0078	-0.0816	-0.0853	-0.0601	-0.0587	-0.0559	-0.0956	-0.1082	-0.0910

Panel C: S-GARCH-based CAARs following shocks of 20% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.5341 ^a	0.0381	0.0441	0.0619	0.0468	0.0500	0.0516	0.0606	0.1447	0.1373	0.1427
PORT2	0.5632 ^a	-0.0319	-0.0706 ^c	-0.1225	-0.0730	-0.0615	0.0332	0.0351	0.0396	0.0318	0.0230
PORT3	0.5360 ^a	-0.0255	-0.0798 ^b	-0.0796	-0.0908	-0.0798	-0.0986	-0.0959	-0.0857	-0.0745	-0.0912
PORT4	0.5780 ^a	-0.0858	-0.1419 ^c	-0.1551 ^b	-0.1430 ^c	-0.1373 ^c	-0.1328 ^c	-0.0900	-0.0878	-0.0602	-0.0553
PORT5	0.4969 ^a	0.0221	0.0144	0.0083	0.0075	0.0093	0.0199	0.0403	0.0364	0.0351	0.0461
PORT6	0.5453 ^a	-0.0669 ^b	-0.1010 ^b	-0.0988 ^b	-0.1016 ^b	-0.1057 ^b	-0.1239 ^b	-0.1311 ^b	-0.1305 ^b	-0.1316 ^b	-0.1338 ^b
PORT7	1.8970	0.2837	0.1522	0.1560	0.1717	0.1707	0.1831	0.1754	0.1622	0.1747	0.1643
PORT8	0.5610 ^a	0.3217	0.5210	0.4775	0.4865	0.4833	0.4904	0.4953	0.5260	0.5443	0.5492
PORT9	0.6469 ^a	0.0600	0.0171	0.0128	0.0226	0.0293	0.0428	0.0314	0.0405	0.0467	0.0296
PORT10	0.5909 ^a	0.0317	-0.0066	-0.1093	-0.1430	-0.1548	-0.2406	-0.2484	-0.2502	-0.2996 ^c	-0.2595

Appendix C.7

S-GARCH-based CAARs of stocks in illiquidity ratio portfolios following negative shocks

Panel A: S-GARCH-based CAARs following shocks of -5% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0993 ^a	-0.0023	-0.0018	-0.0011	0.0041	0.0081	0.0231	0.0203	0.0195	0.0150	0.0169
PORT2	-0.0974 ^a	0.0098	-0.0098	-0.0052	0.0045	0.0050	0.0048	0.0087	0.0096	0.0072	0.0077
PORT3	-0.1105 ^a	-0.0053	0.0003	-0.0069	-0.0065	-0.0124	-0.0177	-0.0140	-0.0140	-0.0160	-0.0179
PORT4	-0.1129 ^a	0.0113	0.0116	0.0072	0.0060	-0.0022	-0.0022	-0.0054	-0.0050	-0.0047	0.0010
PORT5	-0.1285 ^a	-0.0003	0.0054	0.0055	-0.0162	-0.0208	-0.0119	-0.0034	-0.0095	-0.0124	-0.0111
PORT6	-0.1201 ^a	-0.0067	-0.0038	-0.0064	-0.0082	-0.0172 ^c	-0.0213 ^b	-0.0163	-0.0198	-0.0211	-0.0276 ^c
PORT7	-0.1336 ^a	0.0389	0.0360	0.0392	0.0373	0.0342	0.0320	0.0338	0.0268	0.2076	0.2587
PORT8	-0.1188 ^a	-0.0035	0.0404	0.0908	0.0791	0.0587	0.0603	0.0574	0.0577	0.0559	0.0611
PORT9	-0.2150 ^b	-0.0003	0.0040	0.0039	0.0072	0.0014	-0.0007	-0.0014	-0.0017	0.0287	0.0277
PORT10	-0.1281 ^a	-0.0073	-0.0098	-0.0064	-0.0093	-0.0321	-0.0304	-0.0396	-0.0361	-0.0330	-0.0334

Panel B: S-GARCH-based CAARs following shocks of -10% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.1976 ^a	-0.0172	-0.0137	-0.0110	-0.0024	-0.0056	0.0166	0.0275	0.0198	0.0135	0.0218
PORT2	-0.2053 ^a	-0.0024	-0.0221	-0.0113	0.0240	0.0135	0.0129	0.0148	0.0160	0.0100	0.0210
PORT3	-0.2491 ^a	0.0030	-0.0049	-0.0108	-0.0036	-0.0201	-0.0318	-0.0233	-0.0342	-0.0342	-0.0435
PORT4	-0.2594 ^a	0.0361 ^c	0.0255	0.0260	0.0406	-0.0080	-0.0061	0.0172	0.0144	0.0127	0.0153
PORT5	-0.2922 ^a	0.0210	0.0329	0.0343	-0.0420	-0.0357	-0.0204	-0.0189	-0.0295	-0.0255	-0.0246
PORT6	-0.2831 ^a	-0.0278	-0.0180	-0.0236	-0.0262	-0.0435	-0.0444	-0.0447	-0.0437	-0.0475	-0.0606
PORT7	-0.2648 ^a	0.0006	0.0173	0.0127	0.0178	0.0040	-0.0012	0.4988	0.6232	0.5778	0.5838
PORT8	-0.2586 ^a	0.0023	0.1392	0.2771	0.2384	0.1832	0.1861	0.1749	0.1765	0.1734	0.1801
PORT9	-0.2509 ^a	0.0070	0.0145	0.0039	-0.2890	-0.3021	-0.3005	-0.2928	-0.2920	-0.2037	-0.2020
PORT10	-0.2508 ^a	-0.0211	-0.0162	-0.0160	-0.0361	-0.0952 ^c	-0.1329 ^b	-0.1476 ^b	-0.1496 ^b	-0.1433 ^b	-0.1252 ^c

Panel C: S-GARCH-based CAARs following shocks of -20% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.4374 ^a	0.0442	0.0171	0.0216	-0.0064	-0.0111	-0.0202	0.0324	0.0022	0.0406	0.0493
PORT2	-0.4639 ^a	-0.0074	0.0198	0.0487	0.0616	0.0662	0.0974	0.1009	0.1047	0.0939	0.1041
PORT3	-0.5595 ^a	-0.0092	-0.0329	-0.0222	-0.0242	-0.0121	-0.0246	-0.0328	-0.0326	-0.0692	-0.0577
PORT4	-0.5844 ^a	0.0854	0.0748	0.0786	0.0818	-0.0078	0.0003	0.0367	0.0300	0.0310	0.0353
PORT5	-0.6179 ^a	0.0525	0.0791 ^c	0.0946 ^c	0.0791	0.0981 ^c	0.1056 ^c	0.0542	0.0509	-0.0952	-0.0889
PORT6	-0.5953 ^a	-0.0661	-0.0726	-0.0673	-0.0738	-0.0991	-0.1096	-0.1102	-0.1069	-0.1167	-0.1188
PORT7	-0.5822 ^a	1.4589	1.7560	1.6358	1.6596	1.6556	1.6490	1.6640	1.6661	1.6547	1.6605
PORT8	-0.6194 ^a	0.0106	0.0050	-0.0547	-0.1151	-0.1503	-0.1846	-0.1650	-0.1581	-0.1544	-0.1694
PORT9	-0.5632 ^a	-0.7348	-0.7473	-0.7417	-0.6959	-0.6961	-0.6984	-0.6976	-0.7199	-0.5371	-0.5234
PORT10	-0.5752 ^a	-0.0337	0.0308	0.0117	-0.0246	-0.1782	-0.2747 ^c	-0.2571	-0.2712	-0.2463	-0.2471

Appendix C.8

Liquidity-adjusted S-GARCH-based CAARs of stocks in proportional spread portfolios following positive shocks

Panel A: S-GARCH-based CAARs following shocks of 5% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.1008^a	-0.0084 ^b	-0.0083	-0.0125 ^c	-0.0109	-0.0058	-0.0057	-0.0051	-0.0052	-0.0008	0.0016
PORT2	0.0908 ^a	-0.0036	-0.0053	-0.0094 ^b	-0.0120 ^a	-0.0106 ^b	-0.0093 ^c	-0.0111 ^b	-0.0073	-0.0071	-0.0097
PORT3	0.0977 ^a	-0.0042 ^b	-0.0092 ^a	-0.0153 ^a	-0.0172 ^a	-0.0123 ^b	-0.0106	-0.0107	-0.0116	-0.0079	-0.0079
PORT4	0.0993 ^a	-0.0035	-0.0061	-0.0089 ^b	-0.0096 ^c	0.0113	0.0116	0.0116	0.0115	0.0128	0.0108
PORT5	0.1067^a	-0.0026	-0.0073	-0.0100	-0.0100	-0.0086	-0.0049	-0.0044	-0.0029	-0.0030	0.0005
PORT6	0.1275 ^a	-0.0009	-0.1013	-0.1149	-0.1096	-0.1033	-0.1053	-0.1051	-0.1031	-0.1047	-0.0975
PORT7	0.1188^a	-0.0084	-0.0220 ^a	-0.0215 ^a	-0.0269 ^a	-0.0250 ^a	-0.0293^a	-0.0314^a	-0.0261^b	-0.0256^b	-0.0270 ^b
PORT8	0.1221 ^a	-0.0016	0.0019	-0.0032	-0.0025	-0.0071	-0.0043	0.0021	0.0096	0.0079	0.0068
PORT9	0.1133 ^a	-0.0073	0.0624	0.0773	0.0825	0.0839	0.0864	0.0841	0.0761	0.0984	0.0978
PORT10	0.1328^a	0.0109	0.0292	0.0080	0.0059	0.0023	0.0240	0.0450	0.0458	0.0454	0.0439

Panel B: S-GARCH-based CAARs following shocks of 10% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.2082 ^a	-0.0073	-0.0069	-0.0226	-0.0147	0.0043	0.0033	0.0086	0.0119	0.0158	0.0166
PORT2	0.2039 ^a	-0.0165	-0.0297 ^b	-0.0438 ^a	-0.0392 ^b	-0.0284	-0.0259	-0.0371 ^b	-0.0357 ^b	-0.0300 ^c	-0.0326 ^c
PORT3	0.2135 ^a	-0.0104	-0.0257 ^a	-0.0317^a	-0.0289 ^b	-0.0284 ^b	-0.0155	-0.0121	0.0003	0.0130	0.0118
PORT4	0.2902^a	-0.0162 ^b	-0.0277 ^b	-0.0409 ^a	-0.0511 ^a	-0.0498 ^a	-0.0454 ^a	-0.0498 ^a	-0.0486 ^a	-0.0445 ^a	-0.0457 ^a
PORT5	0.2379 ^a	-0.0035	-0.0110	-0.0119	-0.0096	-0.0087	-0.0090	-0.0017	0.0060	0.0061	0.0232
PORT6	0.2841 ^a	-0.0096	-0.0350 ^b	-0.0551 ^c	-0.0391 ^c	-0.0276	-0.0300	-0.0247	-0.0195	-0.0161	-0.0100
PORT7	0.2773^a	-0.0537 ^a	-0.0794 ^a	-0.0817 ^a	-0.0934 ^a	-0.0898 ^a	-0.0873 ^a	-0.0820 ^a	-0.0742 ^a	-0.0740 ^a	-0.0761 ^a
PORT8	0.2464 ^a	-0.0179	-0.0316	-0.0388 ^c	-0.0374 ^c	-0.0401 ^c	-0.0352	-0.0051	0.0249	0.0259	0.0187
PORT9	0.2553 ^a	-0.0240	0.1635	0.2158	0.2056	0.2249	0.2252	0.2277	0.2059	0.2400	0.2292
PORT10	0.2758^a	0.0067	0.0252	-0.0346	-0.0343	-0.0355	0.0351	0.0808	0.0959	0.0899	0.1040

Panel C: S-GARCH-based CAARs following shocks of 20% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.5774 ^a	0.0103	-0.0257	0.0128	0.0018	0.0139	0.0142	0.0486	0.0791	0.0677	0.0691
PORT2	0.4967 ^a	0.0347	-0.0018	-0.0422	-0.0216	0.0158	0.0153	0.0090	0.0051	0.0066	0.0157
PORT3	0.4611 ^a	0.0171	-0.0072	0.0155	0.0311	0.0388	0.0434	0.0561	0.0520	0.0793	0.0870
PORT4	0.7036 ^a	-0.0594 ^b	-0.1094 ^b	-0.1171 ^b	-0.1161 ^b	-0.1120 ^b	-0.1096 ^b	-0.1047 ^b	-0.0996 ^b	-0.0978 ^b	-0.1017 ^b
PORT5	0.4786 ^a	0.0030	-0.0006	0.0313	0.0092	0.0374	0.0562	0.0695	0.0691	0.0693	0.0728
PORT6	0.6020 ^a	-0.0128	-0.0506	-0.1000	-0.0666	-0.0609	0.0170	0.0127	0.0282	0.0299	0.0036
PORT7	0.5427 ^a	-0.0841 ^a	-0.1399 ^a	-0.1495 ^a	-0.1321 ^a	-0.1281 ^a	-0.1281 ^a	-0.1231 ^a	-0.1075 ^b	-0.1188 ^b	-0.1055 ^b
PORT8	0.5904 ^a	0.0069	-0.0251	-0.0356	-0.0415	-0.0363	-0.0310	0.0418	0.0531	0.0443	0.0256
PORT9	1.2745 ^b	0.1130	-0.0304	-0.0334	-0.0184	-0.0095	-0.0975	-0.0760	-0.0540	-0.0444	-0.0553
PORT10	0.7018^a	0.2149	0.3489	0.1860	0.1709	0.1385	0.1312	0.1243	0.1684	0.1876	0.2236

Appendix C.9

Liquidity-adjusted S-GARCH-based CAARs of stocks in proportional spread portfolios following negative shocks

Panel A: S-GARCH-based CAARs following shocks of -5% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.1019^a	0.0099	0.0064	0.0101	0.0164	0.0169	0.0211	0.0238	0.0260	0.0254	0.0226
PORT2	-0.0998^a	-0.0018	-0.0018	-0.0007	0.0024	-0.0015	-0.0040	-0.0007	-0.0008	-0.0071	-0.0090
PORT3	-0.0999 ^a	-0.0038	-0.0039	-0.0050	-0.0069	-0.0063	-0.0061	0.0020	0.0052	0.0040	0.0023
PORT4	-0.1063 ^a	0.0239	0.0244	0.0253	0.0249	0.0211	0.0193	0.0203	0.0246	0.0252	0.0225
PORT5	-0.1059^a	0.0046	0.0127	0.0103	0.0088	0.0068	0.0067	0.0105	0.0068	0.0038	0.0022
PORT6	-0.2205 ^a	-0.0091	-0.0080	-0.0121	-0.0098	-0.0088	-0.0086	-0.0085	-0.0126	-0.0173	-0.0143
PORT7	-0.1326^a	-0.0118	-0.0165 ^b	-0.0128	-0.0167 ^c	-0.0183 ^c	-0.0151	-0.0088	-0.0085	-0.0148	-0.0256 ^c
PORT8	-0.1253^a	0.0048	0.0011	0.0033	-0.0008	0.0037	-0.0023	-0.0041	-0.0056	-0.0041	-0.0046
PORT9	-0.1182^a	-0.0065	0.0084	0.0065	-0.0118	-0.0199	-0.0212	-0.0194	-0.0194	0.0712	0.1043
PORT10	-0.1278^a	-0.0155 ^b	-0.0050	-0.0073	-0.0408 ^c	-0.0280	0.0149	0.0013	0.0131	0.0207	0.0150

Panel B: S-GARCH-based CAARs following shocks of -10% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.2142 ^a	0.0153	0.0024	0.0085	0.0151	0.0083	0.0211	0.0216	0.0389	0.0432	0.0570
PORT2	-0.2178 ^a	0.0094	0.0184	0.0151	0.0223	0.0064	0.0024	0.0110	0.0142	0.0032	0.0031
PORT3	-0.2139^a	-0.0226 ^c	-0.0232	-0.0234	-0.0102	-0.0079	-0.0030	0.0021	-0.0046	-0.0049	-0.0035
PORT4	-0.2271 ^a	0.0316 ^b	0.0284 ^b	0.0276	0.0303 ^c	0.0194	0.0125	0.0159	0.0170	0.0202	0.0140
PORT5	-0.2154 ^a	0.0211	0.0176	0.0245	0.0203	0.0109	0.0073	0.0144	0.0075	0.0104	0.0153
PORT6	-0.2693 ^a	-0.0141	-0.0477	-0.0376	-0.2835	-0.2951	-0.2962	-0.2844	-0.2912	-0.3031	-0.2846
PORT7	-0.2953^a	-0.0163	-0.0297	-0.0285	-0.0181	-0.0204	-0.0284	-0.0319	-0.0346	-0.0388	-0.0623 ^c
PORT8	-0.2757 ^a	-0.0024	-0.0023	-0.0065	0.0046	0.0104	0.0156	0.0207	0.0213	0.0167	0.0121
PORT9	-0.2704 ^a	0.0598	0.0617	0.0789	0.0860 ^c	0.0434	0.0307	0.0350	0.2345	0.2895	0.2850
PORT10	-0.2584^a	-0.0338 ^c	0.0534	0.1167	0.0456	-0.0147	-0.0207	0.0238	0.0158	0.0339	0.0571

Panel C: S-GARCH-based CAARs following shocks of -20% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.5105 ^a	0.0883	0.0231	0.0389	0.0699	0.0667	0.0524	0.0631	0.1300	0.1372	0.1904
PORT2	-0.4941 ^a	-0.0017	0.0291	0.0201	0.0444	0.0338	0.0355	0.0368	0.0353	0.0288	0.0420
PORT3	-0.4696 ^a	-0.0429^b	0.0001	0.0125	0.0169	0.0256	0.0606	0.0770	0.0764	0.0828	0.0839
PORT4	-0.4552 ^a	0.2148	0.2119	0.2099	0.2153	0.1965	0.1887	0.1977	0.1978	0.1949	0.1929
PORT5	-0.4487 ^a	0.0612	0.0493	0.0568	0.0253	0.0463	0.0618	0.0695	0.0551	0.0507	0.0544
PORT6	-0.5672 ^a	-0.7383	-0.8102	-0.7756	-0.7254	-0.7174	-0.7161	-0.7153	-0.7457	-0.7583	-0.7028
PORT7	-0.6303 ^a	-0.0493	-0.0960 ^c	-0.0868 ^c	-0.0872^c	-0.0796	-0.0916 ^c	-0.0959	-0.0882	-0.0811	-0.1048
PORT8	-0.6011 ^a	-0.0081	-0.0615	-0.0812 ^c	-0.0367	-0.0525	-0.0460	-0.0579	-0.0478	-0.0425	-0.0463
PORT9	-0.5101 ^a	0.0735	0.0780	0.0904	0.1270	0.0561	0.0487	0.5158	0.6760	0.6482	0.6642
PORT10	-0.5530 ^a	-0.0195	0.1943	0.3146	0.1827	0.0960	0.0263	0.1094	0.0918	0.0951	0.1185

Appendix C.10

Liquidity-adjusted S-GARCH-based CAARs of stocks in turnover rate portfolios following positive shocks

Panel A: S-GARCH-based CAARs following shocks of 5% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.1024^a	-0.0026	-0.0058 ^c	-0.0072 ^b	-0.0072 ^c	-0.0012	-0.0004	-0.0018	-0.0012	0.0059	0.0026
PORT2	0.1018^a	-0.0015	0.0007	-0.0011	-0.0010	-0.0029	-0.0039	-0.0074	-0.0060	-0.0071	-0.0097
PORT3	0.1017^a	-0.0058	-0.0108 ^b	-0.0139 ^a	-0.0200 ^a	-0.0202 ^a	-0.0220 ^a	-0.0214 ^a	-0.0228 ^a	-0.0243 ^a	-0.0227 ^a
PORT4	0.0954^a	-0.0007	-0.0055	-0.0122 ^b	-0.0100^c	-0.0102 ^c	-0.0118 ^c	-0.0144 ^b	-0.0126 ^c	-0.0127 ^c	-0.0145 ^c
PORT5	0.1033^a	-0.0011	-0.0191 ^c	-0.0287 ^b	-0.0326^b	-0.0360 ^a	-0.0330 ^b	-0.0309 ^b	-0.0303 ^b	-0.0319^b	-0.0323 ^b
PORT6	0.1455^a	-0.0059	-0.0106	-0.0143 ^c	-0.0136 ^c	-0.0125	-0.0128	-0.0169 ^c	-0.0348 ^c	-0.0345	-0.0303
PORT7	0.1148^a	0.0020	-0.1250	-0.1320	-0.1264	-0.1266	-0.1232	-0.1266	-0.1217	-0.1209	-0.1227
PORT8	0.1397 ^a	-0.0036	0.0240	0.0245	0.0334	0.0319	0.0311	0.0313	0.0208	0.0237	0.0241
PORT9	0.2146^b	0.0403	0.0278	0.0311	0.0334	0.0330	0.0346	0.0356	0.0353	0.0353	0.0403
PORT10	0.1152^a	0.0140	0.0067	-0.0091	0.0018	0.0133	0.0347	0.0776	0.0610	0.0477	0.0507

Panel B: S-GARCH-based CAARs following shocks of 10% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.2115^a	-0.0136	-0.0211 ^c	-0.0311 ^b	-0.0342 ^b	-0.0280 ^c	-0.0203	-0.0153	-0.0113	0.0031	-0.0026
PORT2	0.2176 ^a	-0.0021	-0.0173	-0.0278 ^b	-0.0104	-0.0095	-0.0259	-0.0367	-0.0249	-0.0301	-0.0358
PORT3	0.2140 ^a	-0.0171 ^c	-0.0341 ^b	-0.0466 ^a	-0.0585 ^a	-0.0580 ^a	-0.0621 ^a	-0.0607 ^a	-0.0568 ^a	-0.0627 ^a	-0.0602 ^b
PORT4	0.2038 ^a	0.0043	-0.0203 ^c	-0.0327 ^b	-0.0261 ^c	-0.0305 ^b	-0.0402 ^b	-0.0384 ^b	-0.0356 ^b	-0.0364 ^b	-0.0400 ^b
PORT5	0.2267 ^a	0.0045	0.0002	-0.0237	-0.0272	-0.0310	-0.0372	-0.0401	-0.0391	-0.0466	-0.0489
PORT6	0.2974 ^a	-0.0087	-0.0401 ^c	-0.0133	-0.0099	-0.0090	0.0233	0.0138	-0.0379	-0.0299	-0.0296
PORT7	0.2423 ^a	-0.0138	-0.0572	-0.0715 ^c	-0.0619	-0.0637	-0.0633	-0.0570	-0.0441	-0.0421	-0.0580
PORT8	0.3092 ^a	0.0016	0.0760	0.0586	0.0703	0.0672	0.0754	0.0806	0.0545	0.0618	0.0650
PORT9	0.2884 ^a	0.0163	0.2813	0.3528	0.3318	0.3394	0.3472	0.3446	0.3475	0.3461	0.3409
PORT10	0.2510 ^a	0.1077	0.1419	0.1068	0.1338	0.1439	0.1277	0.1752	0.1576	0.1251	0.1478

Panel C: S-GARCH-based CAARs following shocks of 20% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.4567 ^a	0.0227	-0.0074	0.0245	0.0104	0.0316	0.0504	0.0605	0.0687	0.0582	0.0591
PORT2	0.5258 ^a	-0.0571	-0.1010 ^c	-0.1158 ^b	-0.0924	-0.0962 ^c	-0.1023 ^c	-0.1146 ^c	-0.1285 ^b	-0.1331 ^b	-0.1454 ^b
PORT3	0.4381 ^a	-0.0132	-0.0807 ^b	-0.1289	-0.1137 ^c	-0.0914	-0.1169	-0.1158	-0.1147	-0.1282	-0.1452 ^c
PORT4	0.4409 ^a	0.0009	-0.0324	-0.0459	-0.0278	-0.0348	-0.0589	-0.0545	-0.0465	-0.0472	-0.0523
PORT5	0.4887 ^a	0.0019	-0.0078	-0.0646	-0.0678	-0.0494	-0.0489	-0.0471	-0.0376	-0.1031	-0.1166
PORT6	0.6101 ^a	0.0257	-0.1398	-0.1703 ^c	-0.1727 ^c	-0.1787 ^c	-0.1254	-0.1315	-0.1349	-0.0367	-0.0619
PORT7	0.4704 ^a	-0.0430	-0.1539 ^c	-0.1650 ^c	-0.1639 ^c	-0.1571 ^c	-0.1576 ^c	-0.1500 ^c	-0.1295	-0.1198	-0.1394 ^c
PORT8	0.8217 ^a	0.0204	0.0091	-0.0169	-0.0028	-0.0143	-0.0190	0.0174	-0.0688	-0.0668	-0.1872
PORT9	1.2971 ^b	0.1996	0.0843	0.0859	0.0894	0.0854	0.0975	0.1267	0.1324	0.1478	0.1324
PORT10	0.5805 ^a	0.3169	0.4355	0.3771	0.3602	0.3078	0.3142	0.4118	0.3531	0.4092	0.4201

Appendix C.11

Liquidity-adjusted S-GARCH-based CAARs of stocks in turnover rate portfolios following negative shocks

Panel A: S-GARCH-based CAARs following shocks of -5% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.1043^a	-0.0019	-0.0119 ^c	-0.0124 ^c	-0.0071	-0.0008	0.0031	0.0033	0.0084	0.0012	-0.0024
PORT2	-0.1062^a	0.0065	0.0049	0.0006	-0.0023	-0.0040	-0.0035	-0.0049	-0.0098	-0.0120	-0.0126
PORT3	-0.1070^a	-0.0010	-0.0019	-0.0072	-0.0124	-0.0168	-0.0152	-0.0162	-0.0169	-0.0223 ^c	-0.0247 ^b
PORT4	-0.0977^a	-0.0057	-0.0080	-0.0112 ^c	-0.0154 ^b	-0.0162 ^b	-0.0192 ^b	-0.0176 ^b	-0.0203 ^b	-0.0189 ^b	-0.0209 ^b
PORT5	-0.1047^a	-0.0116	-0.0098	-0.0171	-0.0147	-0.0161	-0.0188	-0.0157	-0.0196	-0.0240 ^c	-0.0275 ^c
PORT6	-0.1257 ^a	-0.0141	0.0167	0.0153	0.0150	0.0088	0.0054	0.0088	0.0075	-0.0056	-0.0155
PORT7	-0.2386^b	0.0049	0.0093	-0.0027	0.0021	-0.0046	-0.0055	-0.0012	-0.0054	-0.0114	-0.0082
PORT8	-0.1279^a	0.0036	0.0062	0.0092	-0.0109	-0.0040	-0.0095	-0.0181	-0.0160	0.0135	0.0215
PORT9	-0.1238 ^a	0.1128	0.1604	0.1520	0.1515	0.1451	0.1412	0.1447	0.1420	0.1502	0.1468
PORT10	-0.1262^a	-0.0328^c	0.0008	0.0254	0.0155	-0.0102	-0.0088	-0.0026	-0.0059	-0.0057	-0.0090

Panel B: S-GARCH-based CAARs following shocks of -10% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.2051^a	-0.0139	-0.0169	-0.0169	-0.0006	0.0052	0.0230	0.0079	0.0083	0.0030	0.0023
PORT2	-0.2249 ^a	0.0006	-0.0051	-0.0121	-0.0143	-0.0262	-0.0229	-0.0152	-0.0247	-0.0291	-0.0337
PORT3	-0.2277^a	0.0112	-0.0219	-0.0105	-0.0113	-0.0231	-0.0247	-0.0309	-0.0409	-0.0523	-0.0563 ^c
PORT4	-0.2079 ^a	-0.0173	-0.0170	-0.0284 ^c	-0.0357 ^c	-0.0385 ^b	-0.0420 ^b	-0.0338 ^c	-0.0358 ^c	-0.0375 ^c	-0.0358 ^c
PORT5	-0.2353 ^a	0.0330 ^b	0.0492 ^b	0.0418 ^b	0.0460 ^b	0.0129	0.0112	0.0094	-0.0276	-0.0283	-0.0423
PORT6	-0.2783 ^a	-0.0085	0.0637	0.0491	0.0101	-0.0072	-0.0150	-0.0065	-0.0092	-0.0075	-0.0189
PORT7	-0.2808 ^a	-0.2641	-0.2412	-0.2465	-0.2422	-0.2517	-0.2490	-0.2517	-0.2620	-0.2634	-0.2597
PORT8	-0.3056 ^a	0.0129	0.0291	0.0230	-0.0164	-0.0018	0.0144	0.0181	0.0164	0.0848	0.1014
PORT9	-0.2782 ^a	0.0154	0.0445	0.0427	0.0724 ^c	0.0593	0.0476	0.0602	0.3332	0.4157	0.3915
PORT10	-0.2755 ^a	-0.1123 ^b	-0.0074	0.0589	0.0481	0.0181	0.0590	0.0547	0.0508	0.0362	0.0589

Panel C: S-GARCH-based CAARs following shocks of -20% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.4199 ^a	-0.0133	-0.0218	-0.0159	-0.0127	-0.0080	-0.0212	0.0062	0.0080	0.0304	0.0320
PORT2	-0.4734 ^a	0.0587	0.0303	0.0203	0.0181	-0.0341	-0.0246	-0.0179	-0.0412	-0.0704	-0.0665
PORT3	-0.5276^a	0.0248	-0.0821	-0.0489	-0.0693	-0.0864	-0.0818	-0.1022	-0.1098	-0.1215	-0.1131
PORT4	-0.4583 ^a	-0.0005	-0.0415	-0.0630	-0.0635	-0.0574	-0.0585	-0.0496	-0.0479	-0.0541	-0.0469
PORT5	-0.5493 ^a	0.0292	0.0669	0.0499	0.0129	-0.0510	-0.0498	-0.0569	-0.0873	-0.0961	-0.0960
PORT6	-0.6702 ^a	-0.0305	0.1506	0.1288	0.1211	0.1103	0.0932	0.0998	0.0913	0.0870	0.0581
PORT7	-0.6186 ^a	-0.6598	-0.6314	-0.6236	-0.6272	-0.6172	-0.6020	-0.6117	-0.6209	-0.6220	-0.6165
PORT8	-0.6411 ^a	0.0352	0.0480	0.0985	0.0946	0.0954	0.0741	0.0029	0.0103	0.1733	0.2214
PORT9	-0.6257 ^a	-0.0037	0.0136	0.0051	0.0517	0.0465	0.0404	0.0533	0.7129	0.9836	0.9435
PORT10	-0.5719 ^a	-0.1884^c	-0.1389^c	-0.1648 ^c	-0.2152 ^c	-0.2484	-0.1584	-0.0047	-0.0221	-0.1027	-0.1309

Appendix C.12

Liquidity-adjusted S-GARCH-based CAARs of stocks in illiquidity ratio portfolios following positive shocks

Panel A: S-GARCH-based CAARs following shocks of 5% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.1158^a	-0.0046	-0.0018	-0.0081	-0.0072	-0.0056	-0.0043	0.0015	0.0037	0.0133	0.0126
PORT2	0.1052^a	-0.0060 ^a	-0.0119 ^a	-0.0176 ^a	-0.0169 ^a	-0.0137 ^a	-0.0132 ^a	-0.0173 ^a	-0.0126 ^b	-0.0139 ^b	-0.0094
PORT3	0.1053 ^a	-0.0111 ^a	-0.0160 ^a	-0.0103	-0.0140	-0.0135	-0.0172	-0.0179	-0.0136	-0.0107	-0.0148
PORT4	0.1160^a	-0.0098 ^b	-0.0227 ^a	-0.0231 ^a	-0.0213 ^a	-0.0172 ^c	-0.0181 ^b	-0.0200 ^b	-0.0187 ^b	-0.0185 ^c	-0.0214 ^b
PORT5	0.1189 ^a	-0.0052	-0.0045	-0.0084	-0.0116	-0.0121	-0.0072	-0.0103	-0.0309	-0.0301	-0.0255
PORT6	0.1139 ^a	-0.0070 ^b	-0.0237 ^b	-0.0279 ^b	-0.0204 ^c	-0.0189 ^c	-0.0245 ^b	-0.0287 ^b	-0.0305 ^b	-0.0312 ^b	-0.0334 ^b
PORT7	0.2139^b	0.0336	0.0243	0.0251	0.0249	0.0251	0.0222	0.0198	0.0180	0.0442	0.0416
PORT8	0.1115 ^a	-0.0024	-0.0110	-0.0142 ^c	-0.0152 ^c	-0.0138	0.0331	0.0752	0.0741	0.0741	0.0734
PORT9	0.1103^a	0.0022	-0.0643	-0.0725	-0.0714	-0.0717	-0.0683	-0.0690	-0.0690	-0.0680	-0.0671
PORT10	0.1287 ^a	-0.0002	-0.0041	-0.0173	-0.0271	-0.0273	-0.0299	-0.0338	-0.0456 ^c	-0.0493 ^c	-0.0543 ^b

Panel B: S-GARCH-based CAARs following shocks of 10% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.1855 ^a	-0.0028	-0.0072	-0.0218	-0.0186	-0.0201	-0.0143	0.0005	0.0138	0.0490	0.0433
PORT2	0.2301 ^a	-0.0111	-0.0282 ^a	-0.0387 ^a	-0.0356 ^a	-0.0254 ^b	-0.0231 ^c	-0.0233 ^c	-0.0101	-0.0142	-0.0012
PORT3	0.2281 ^a	-0.0398 ^a	-0.0581 ^a	-0.0390	-0.0338	-0.0408	-0.0444	-0.0372	-0.0378	-0.0340	-0.0303
PORT4	0.2597^a	-0.0496 ^b	-0.0694 ^a	-0.0701 ^a	-0.0709 ^a	-0.0671 ^a	-0.0553 ^b	-0.0619 ^b	-0.0562 ^b	-0.0503 ^b	-0.0533 ^b
PORT5	0.2642 ^a	0.0110	0.0014	0.0004	-0.0015	-0.0104	-0.0092	-0.0016	0.0049	0.0099	0.0159
PORT6	0.2699 ^a	-0.0220	-0.0396 ^b	-0.0533 ^b	-0.0518 ^b	-0.0520 ^b	-0.0476 ^b	-0.0597 ^b	-0.0583 ^b	-0.0625 ^b	-0.0665 ^b
PORT7	0.2595^a	-0.0199	0.2654	0.3548	0.3285	0.3327	0.3314	0.3251	0.3340	0.4108	0.3995
PORT8	0.2430^a	0.1098	0.1580	0.1425	0.1548	0.1571	0.1659	0.1872	0.1957	0.2209	0.2165
PORT9	0.2548 ^a	0.0057	0.0375	0.0388	0.0327	0.0325	0.0398	0.0331	0.0371	0.0391	0.0319
PORT10	0.2733 ^a	-0.0267	-0.0490	-0.0998 ^b	-0.1324 ^b	-0.1150 ^c	-0.1164 ^c	-0.1211 ^c	-0.1139 ^c	-0.1375 ^b	-0.1374 ^b

Panel C: S-GARCH-based CAARs following shocks of 20% or more

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.4388 ^a	-0.0172	-0.0225	-0.0026	0.0090	0.0348	0.0814	0.1000	0.1916	0.1768	0.1825
PORT2	0.5305 ^a	-0.0496 ^b	-0.0862 ^b	-0.1407 ^c	-0.1150 ^b	-0.0923 ^c	-0.0934 ^c	-0.0856	-0.0814	-0.0914	-0.0380
PORT3	0.5618 ^a	-0.0686 ^a	-0.1123 ^a	-0.1078 ^b	-0.1054 ^b	-0.0992 ^c	-0.1044 ^b	-0.1060 ^b	-0.0932 ^c	-0.0964 ^c	-0.1075 ^c
PORT4	0.5499 ^a	-0.0356	-0.0724 ^b	-0.1023 ^b	-0.0862 ^b	-0.0757 ^c	-0.0632	-0.0313	-0.0147	0.0117	0.0184
PORT5	0.5714 ^a	0.0245	-0.0134	-0.0115	-0.0174	-0.0153	0.0075	0.0361	0.0306	0.0286	0.0290
PORT6	0.5992 ^a	-0.0887 ^a	-0.1214 ^a	-0.1151 ^b	-0.1126 ^b	-0.1174 ^b	-0.1253 ^b	-0.1291 ^b	-0.1313 ^b	-0.1444 ^b	-0.1523 ^b
PORT7	1.3508 ^c	0.1872	0.1025	0.0999	0.1095	0.1172	0.1374	0.1303	0.1173	0.1269	0.1094
PORT8	0.5936^a	0.2891	0.4845	0.4614	0.4842	0.4856	0.4950	0.4854	0.5033	0.5512	0.5566
PORT9	0.6983 ^a	-0.0005	-0.0384	-0.0612	-0.0564	-0.0560	-0.0379	-0.0503	-0.0387	-0.0335	-0.0355
PORT10	0.6365 ^a	-0.0532	-0.0914	-0.1614	-0.2858 ^b	-0.3184 ^b	-0.3877 ^b	-0.3783 ^b	-0.3564 ^b	-0.4164 ^b	-0.4134 ^b

Appendix C.13

Liquidity-adjusted S-GARCH-based CAARs of stocks in illiquidity ratio portfolios following negative shocks

Panel A: S-GARCH-based CAARs following shocks of -5% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0868^a	0.0028	0.0002	0.0015	0.0088	0.0139	0.0375 ^c	0.0382 ^c	0.0392 ^c	0.0400^c	0.0339^c
PORT2	-0.1039^a	0.0022	-0.0139	-0.0142	-0.0157	-0.0118	-0.0128	-0.0089	-0.0083	-0.0111	-0.0105
PORT3	-0.1115 ^a	0.0005	0.0036	-0.0024	-0.0075	-0.0156	-0.0169	-0.0128	-0.0119	-0.0147	-0.0219
PORT4	-0.1177^a	0.0012	0.0022	-0.0016	-0.0059	-0.0128	-0.0109	-0.0011	0.0002	-0.0022	-0.0039
PORT5	-0.1208 ^a	0.0028	0.0064	0.0055	-0.0203	-0.0222	-0.0189	-0.0087	-0.0113	-0.0107	-0.0113
PORT6	-0.1213 ^a	-0.0122	-0.0075	-0.0060	-0.0106	-0.0169	-0.0201	-0.0160	-0.0172	-0.0181	-0.0264 ^c
PORT7	-0.1268^a	0.1440	0.1765	0.1708	0.1664	0.1628	0.1572	0.1578	0.1552	0.1507	0.1508
PORT8	-0.1197 ^a	-0.0016	-0.0071	-0.0008	-0.0111	0.0199	0.0619	0.0573	0.0602	0.0625	0.0652
PORT9	-0.2056^b	0.0019	0.0060	0.0039	0.0012	0.0012	-0.0021	-0.0027	-0.0024	0.0254	0.0235
PORT10	-0.1241^a	-0.0083	-0.0002	-0.0054	-0.0267	-0.0458 ^b	-0.0468 ^b	-0.0482 ^b	-0.0411 ^c	-0.0543 ^b	-0.0586 ^b

Panel B: S-GARCH-based CAARs following shocks of -10% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.1731 ^a	0.0106	0.0009	0.0173	0.0383	0.0364	0.0451	0.0716	0.0700	0.0650	0.0647
PORT2	-0.2151 ^a	-0.0187	-0.0398	-0.0377	-0.0165	-0.0188	-0.0169	-0.0127	-0.0149	-0.0218	-0.0159
PORT3	-0.2591 ^a	-0.0065	-0.0174	-0.0225	-0.0223	-0.0356	-0.0342	-0.0303	-0.0403	-0.0396	-0.0312
PORT4	-0.2472 ^a	0.0317	0.0103	0.0104	0.0224	-0.0076	-0.0079	0.0134	0.0117	0.0115	0.0129
PORT5	-0.2735 ^a	0.0184	0.0282 ^c	0.0292	-0.0359	-0.0342	-0.0163	-0.0080	-0.0142	-0.0092	-0.0097
PORT6	-0.2835 ^a	-0.0135	-0.0107	-0.0037	-0.0092	-0.0254	-0.0266	-0.0273	-0.0274	-0.0418	-0.0467
PORT7	-0.3051 ^a	0.0588	0.0615	0.0572	0.0577	0.0481	0.0414	0.0458	0.0493	0.3387	0.4318
PORT8	-0.2728 ^a	-0.0100	-0.0050	-0.0075	-0.0107	0.0977	0.2090	0.1976	0.2097	0.2109	0.2064
PORT9	-0.2579 ^a	-0.2133	-0.2062	-0.2109	-0.1992	-0.2097	-0.2113	-0.2052	-0.2157	-0.1588	-0.1523
PORT10	-0.3068 ^a	-0.0129	-0.0140	-0.0077	-0.0550	-0.0997 ^c	-0.1125 ^c	-0.0928	-0.1048 ^c	-0.0993 ^c	-0.0761

Panel C: S-GARCH-based CAARs following shocks of -20% or less

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.3791 ^a	0.0596	0.0310	0.0538	0.0527	0.0378	0.0323	0.0444	0.0870	0.0824	0.1344
PORT2	-0.4680 ^a	-0.0618	-0.1209	-0.1079	-0.1048	-0.1060	-0.0758	-0.0666	-0.0639	-0.0766	-0.0650
PORT3	-0.5894 ^a	-0.0208	-0.0656	-0.0765	-0.0867	-0.0826	-0.0943	-0.0957	-0.0843	-0.0926	-0.0499
PORT4	-0.5659 ^a	-0.0080	-0.0384	-0.0339	-0.0320	-0.0909	-0.0843	-0.0383	-0.0467	-0.0364	-0.0385
PORT5	-0.5545^a	0.0366	0.0371	0.0475	0.0495	0.0744	0.0788	0.0550	0.0459	-0.1021	-0.1211
PORT6	-0.6197 ^a	-0.0713	-0.0803	-0.0667	-0.0762	-0.1073	-0.1160	-0.1175	-0.1192	-0.1211	-0.1233
PORT7	-0.6090 ^a	0.1617	0.1443	0.1292	0.1208	0.1196	0.1139	0.1213	0.8416	1.0614	0.9969
PORT8	-0.5848 ^a	-0.0327	-0.0502	-0.0819	-0.0972	-0.1135	-0.1546	-0.1390	-0.1226	-0.1156	-0.1354
PORT9	-0.5385 ^a	-0.5485	-0.5579	-0.5409	-0.5054	-0.5052	-0.5072	-0.5070	-0.5303	-0.3917	-0.3817
PORT10	-0.5991 ^a	-0.0243	0.0193	0.0017	-0.1232	-0.2447 ^c	-0.2971 ^b	-0.2675	-0.2593	-0.2416	-0.2301

Appendix C.14

Sub-period S-GARCH-based CAARs of stocks in proportional spread portfolios following shocks of 5% or more

Panel A: S-GARCH-based CAARs from 1st July 1992 to 30th June 1997

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.1350 ^a	0.0104	0.0098	-0.0097	-0.0047	-0.0022	0.0037	-0.0114	0.0009	0.0094	0.0177
PORT2	0.1326 ^a	-0.0034	-0.0205 ^c	-0.0247 ^c	-0.0192	-0.0116	-0.0079	-0.0167	-0.0214	-0.0153	-0.0145
PORT3	0.1427 ^a	-0.0085	-0.0180 ^b	-0.0231 ^b	-0.0147	-0.0131	-0.0088	-0.0069	-0.0075	0.0084	0.0119
PORT4	0.1864 ^a	-0.0113	-0.0279 ^c	-0.0370 ^b	-0.0427 ^b	-0.0414 ^b	-0.0348 ^c	-0.0410 ^b	-0.0378 ^b	-0.0393 ^b	-0.0398 ^c
PORT5	0.1308 ^a	0.0059	-0.0226	-0.0252	-0.0237	-0.0290 ^c	-0.0255	-0.0160	-0.0052	-0.0055	-0.0051
PORT6	0.1940 ^a	-0.0070	-0.0198 ^c	-0.0113	-0.0133	-0.0026	-0.0081	-0.0159	-0.0163	-0.0130	0.0246
PORT7	0.1555 ^a	-0.0087	-0.0499 ^b	-0.0667 ^b	-0.0702 ^a	-0.0632 ^b	-0.0571 ^b	-0.0556 ^b	-0.0512 ^c	-0.0461	-0.0325
PORT8	0.1325 ^a	-0.0182 ^a	-0.0361 ^a	-0.0425 ^a	-0.0473 ^a	-0.0454 ^a	-0.0390 ^b	-0.0373 ^b	-0.0396 ^b	-0.0382 ^b	-0.0359 ^b
PORT9	0.1314 ^a	-0.0335	-0.0466 ^c	-0.0366	-0.0282	-0.0328	-0.0309	-0.0307	-0.0266	-0.0188	-0.0147
PORT10	0.1748 ^a	0.0110	-0.0277	-0.0898	-0.0948	-0.1156 ^c	-0.0344	0.0387	0.0575	0.0353	0.0336

Panel B: S-GARCH-based CAARs from 1st July 1997 to 28th June 2002

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.0759 ^a	-0.0024	-0.0081 ^a	-0.0097 ^a	-0.0114 ^a	-0.0117 ^a	-0.0088 ^b	-0.0144 ^a	-0.0098 ^b	-0.0088 ^c	-0.0072
PORT2	0.0813 ^a	0.0002	-0.0010	-0.0051	-0.0078 ^c	-0.0076 ^c	-0.0069	-0.0090 ^c	-0.0092 ^c	-0.0101 ^c	-0.0101 ^c
PORT3	0.0800 ^a	-0.0014	-0.0049	-0.0051	-0.0048	-0.0059	-0.0090 ^c	-0.0103 ^c	-0.0054	-0.0080	-0.0072
PORT4	0.0879 ^a	-0.0012	-0.0023	-0.0025	0.0002	0.0030	0.0031	0.0056	0.0065	0.0027	0.0027
PORT5	0.1004 ^a	0.0067	0.0090	0.0111	0.0127	0.0120	0.0150	0.0100	0.0117	0.0068	0.0099
PORT6	0.1034 ^a	0.0008	-0.0039	-0.0061	-0.0060	-0.0061	-0.0081	-0.0104	-0.0147	-0.0140	-0.0166
PORT7	0.1109 ^a	-0.0053	-0.0024	-0.0129	-0.0222 ^c	-0.0220	-0.0222	-0.0249	-0.0080	-0.0104	-0.0101
PORT8	0.1206 ^a	-0.0037	0.0056	0.0068	0.0089	0.0159	0.0143	0.0285	0.0326	0.0228	0.0209
PORT9	0.0947 ^a	0.0164	0.2905	0.3575	0.3342	0.3434	0.3429	0.3418	0.3440	0.3484	0.3471
PORT10	0.1201 ^a	-0.0191 ^c	0.0019	-0.0063	-0.0051	0.0089	0.0027	0.0000	-0.0217	-0.0262	-0.0209

Panel C: S-GARCH-based CAARs from 1st July 2002 to 29th June 2007

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.0966 ^a	-0.0055 ^c	0.0074	0.0102	0.0166	0.0241	0.0214	0.0216	0.0182	0.0224	0.0169
PORT2	0.0816 ^a	-0.0178 ^a	-0.0185 ^a	-0.0222 ^a	-0.0265 ^a	-0.0225 ^a	-0.0204 ^a	-0.0232 ^a	-0.0189 ^a	-0.0148 ^b	-0.0196 ^a
PORT3	0.0822 ^a	-0.0023	-0.0033	-0.0054	-0.0046	-0.0036	0.0090	0.0175	0.0213	0.0231	0.0198
PORT4	0.0832 ^a	-0.0089 ^a	-0.0082 ^b	-0.0094 ^b	-0.0101 ^b	-0.0091 ^c	-0.0119 ^b	-0.0102 ^c	-0.0135 ^b	-0.0104 ^c	-0.0144 ^b
PORT5	0.0942 ^a	-0.0138	-0.0117	-0.0119	-0.0118	-0.0127	-0.0118	-0.0110	-0.0146	0.0084	-0.0024
PORT6	0.1147 ^a	-0.0065	-0.3305	-0.3335	-0.3315	-0.3287	-0.3213	-0.3205	-0.3151	-0.3132	-0.3127
PORT7	0.0813 ^a	-0.0126	-0.0204 ^b	-0.0196 ^c	-0.0337 ^b	-0.0335 ^b	-0.0339 ^b	-0.0347 ^b	-0.0379 ^b	-0.0364 ^b	-0.0368 ^b
PORT8	0.0930 ^a	-0.0008	0.0061	0.0063	0.0044	0.0020	0.0041	0.0001	0.0051	0.0067	0.0047
PORT9	0.0949 ^a	0.0046	0.0049	0.0074	0.0079	0.0236 ^c	0.0710	0.0669	0.0268	0.0314	0.0302
PORT10	0.0901 ^a	0.0075	0.0514	0.0411	0.0409	0.0430	0.0362	0.0372	0.0342	0.0291	0.0311

Appendix C.15

Sub-period S-GARCH-based CAARs of stocks in proportional spread portfolios following shocks of -5% or less

Panel A: S-GARCH-based CAARs from 1st July 1992 to 30th June 1997

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.1300 ^a	0.0186	0.0278	0.0245	0.0278	0.0050	-0.0050	-0.0055	-0.0021	0.0011	0.0029
PORT2	-0.1513 ^a	0.0131	0.0213	0.0276	0.0264	-0.0093	-0.0237	-0.0110	-0.0058	-0.0095	-0.0078
PORT3	-0.1422 ^a	-0.0188	-0.0012	-0.0118	-0.0115	-0.0112	-0.0104	-0.0070	-0.0038	0.0030	0.0003
PORT4	-0.1628 ^a	0.0494	0.0661 ^c	0.0654 ^c	0.0665 ^c	0.0324	0.0180	0.0269	0.0307	0.0303	0.0263
PORT5	-0.1300 ^a	0.0014	0.0091	0.0065	0.0069	-0.0060	-0.0113	-0.0086	-0.0062	-0.0011	-0.0059
PORT6	-0.1579 ^a	0.0124	0.0158	0.0084	0.0404	0.0262	0.0174	0.0221	0.0075	0.0110	0.0079
PORT7	-0.1959 ^a	-0.0076	-0.0060	0.0007	0.0015	-0.0020	-0.0065	0.0050	0.0125	0.0100	-0.0132
PORT8	-0.1612 ^a	0.0049	-0.0070	-0.0094	-0.0168	-0.0241	-0.0360 ^c	-0.0401 ^c	-0.0439 ^c	-0.0398 ^c	-0.0443 ^c
PORT9	-0.1415 ^a	0.0050	0.0115	0.0073	0.0110	-0.0109	-0.0131	-0.0293	-0.0285	-0.0251	-0.0210
PORT10	-0.1290 ^a	-0.0492 ^b	0.0244	0.1008	0.0657	-0.0261	-0.0141	-0.0774	-0.0527	-0.0394	-0.0442

Panel B: S-GARCH-based CAARs from 1st July 1997 to 28th June 2002

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0830 ^a	-0.0011	0.0000	0.0016	0.0010	0.0030	0.0040	0.0063	0.0043	0.0022	0.0023
PORT2	-0.0828 ^a	0.0006	0.0059	0.0057	0.0051	0.0072	0.0048	0.0046	0.0065	0.0033	0.0032
PORT3	-0.0849 ^a	-0.0005	-0.0022	-0.0048	-0.0047	-0.0032	-0.0051	0.0020	0.0007	-0.0030	-0.0042
PORT4	-0.0843 ^a	0.0007	-0.0005	0.0021	0.0009	0.0027	0.0032	0.0051	0.0108	0.0101	0.0104
PORT5	-0.0972 ^a	0.0163 ^b	0.0234	0.0192	0.0155	0.0144	0.0172	0.0206	0.0112	0.0138	0.0170
PORT6	-0.0942 ^a	-0.0121	-0.0139	-0.0177	-0.0191 ^c	-0.0170	-0.0168	-0.0197	-0.0214	-0.0182	-0.0047
PORT7	-0.1219 ^a	-0.0038	-0.0072	-0.0045	-0.0125	-0.0064	-0.0080	0.0061	0.0083	0.0079	0.0079
PORT8	-0.1020 ^a	0.0020	-0.0340	-0.0206	-0.0270	-0.0148	-0.0143	-0.0118	-0.0192	-0.0157	-0.0070
PORT9	-0.1293 ^a	0.0079	0.0025	0.0042	0.0053	0.0055	0.0088	0.0120	0.0048	0.3367	0.4301
PORT10	-0.1307 ^a	-0.0126	-0.0209 ^b	-0.0169 ^c	-0.0401	-0.0386	-0.0162	0.0066	-0.0011	0.0011	0.0001

Panel C: S-GARCH-based CAARs from 1st July 2002 to 29th June 2007

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0919 ^a	0.0045	0.0031	0.0059	0.0183	0.0232	0.0513	0.0431	0.0475	0.0381	0.0397
PORT2	-0.0849 ^a	0.0026	0.0014	-0.0010	0.0008	-0.0005	0.0012	-0.0013	-0.0005	-0.0177 ^c	-0.0133
PORT3	-0.0766 ^a	0.0012	-0.0021	-0.0001	0.0176	0.0303	0.0320	0.0292	0.0322	0.0283	0.0319
PORT4	-0.0883 ^a	0.0018	0.0020	0.0001	-0.0015	-0.0038	-0.0060	-0.0073	-0.0083	-0.0091	-0.0077
PORT5	-0.0961 ^a	0.0021	0.0217	0.0152	0.0273	0.0236	0.0265	0.0285	0.0264	0.0148	0.0093
PORT6	-0.5025	-0.0016	-0.0206	-0.0021	0.0129	0.0060	0.0084	0.0115	0.0182	-0.0001	-0.0028
PORT7	-0.1076 ^a	-0.0141	-0.0131	-0.0137	-0.0125	-0.0260	-0.0265	-0.0267	-0.0256	-0.0305 ^c	-0.0322 ^c
PORT8	-0.0972 ^a	0.0174 ^c	0.0208 ^b	0.0174 ^c	0.0167 ^c	0.0140	0.0094	0.0065	-0.0029	-0.0073	-0.0060
PORT9	-0.1494 ^a	0.0447	0.0448	0.0485	0.0498	0.0502	0.0499	0.0539	0.0413	0.0361	0.0496
PORT10	-0.0956 ^a	0.0041	0.0052	0.0095	0.0104	-0.0013	0.0013	-0.0021	-0.0048	0.0350	0.0319

Appendix C.16

Sub-period S-GARCH-based CAARs of stocks in turnover rate portfolios following shocks of 5% or more

Panel A: S-GARCH-based CAARs from 1st July 1992 to 30th June 1997

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.1215 ^a	0.0044	-0.0004	-0.0006	-0.0013	-0.0023	0.0018	0.0014	0.0045	0.0043	0.0027
PORT2	0.1514 ^a	-0.0220	-0.0482 ^c	-0.0487 ^c	-0.0580 ^b	-0.0579 ^b	-0.0564 ^b	-0.0644 ^b	-0.0631 ^b	-0.0613 ^b	-0.0561 ^c
PORT3	0.1313 ^a	-0.0181	-0.0464 ^b	-0.0482 ^b	-0.0532 ^b	-0.0519 ^b	-0.0531 ^b	-0.0482 ^c	-0.0487 ^c	-0.0466 ^c	-0.0410
PORT4	0.1370 ^a	-0.0007	-0.0176	-0.0308	-0.0294	-0.0292	-0.0203	-0.0225	-0.0157	-0.0108	0.0098
PORT5	0.1400 ^a	-0.0025	-0.0214	-0.0288 ^c	-0.0239	-0.0294	-0.0230	-0.0261	-0.0168	-0.0104	-0.0072
PORT6	0.2065 ^a	-0.0265 ^a	-0.0442 ^a	-0.0376 ^b	-0.0347 ^b	-0.0195	-0.0161	-0.0214	-0.0297	-0.0254	0.0123
PORT7	0.1468 ^a	-0.0024	-0.0261 ^c	-0.0431 ^c	-0.0371	-0.0314	-0.0271	-0.0286	-0.0208	-0.0128	-0.0107
PORT8	0.1676 ^a	-0.0011	-0.0042	0.0031	0.0055	0.0084	0.0124	0.0077	0.0092	0.0200	0.0205
PORT9	0.1334 ^a	-0.0036	-0.0265 ^c	-0.0254	-0.0229 ^c	-0.0232	-0.0196	-0.0278 ^c	-0.0298 ^c	-0.0270	-0.0252
PORT10	0.1908 ^a	0.0029	-0.0403 ^c	-0.1257 ^c	-0.1273 ^c	-0.1512 ^c	-0.0542	0.0406	0.0679	0.0435	0.0423

Panel B: S-GARCH-based CAARs from 1st July 1997 to 28th June 2002

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.0907 ^a	-0.0010	-0.0051	-0.0049	0.0001	0.0014	0.0048	0.0036	0.0087	0.0029	-0.0007
PORT2	0.0893 ^a	-0.0017	-0.0020	-0.0060	-0.0105	-0.0090	-0.0110	-0.0153	-0.0042	-0.0079	-0.0058
PORT3	0.0796 ^a	-0.0023	-0.0018	-0.0042	-0.0064 ^c	-0.0060	-0.0061	-0.0098 ^b	-0.0098 ^c	-0.0127 ^b	-0.0154
PORT4	0.0844 ^a	-0.0020	-0.0016	-0.0085	-0.0078	-0.0080	-0.0092	-0.0094	-0.0116	-0.0154	-0.0165
PORT5	0.1050 ^a	0.0112	0.0117	0.0121	0.0008	-0.0034	-0.0008	-0.0105	-0.0119	-0.0147	-0.0129
PORT6	0.1020 ^a	-0.0057	-0.0164	-0.0231	-0.0208	-0.0253	-0.0272	-0.0316	-0.0334	-0.0397	-0.0351
PORT7	0.0918 ^a	-0.0201	-0.0209	-0.0189	-0.0148	-0.0149	-0.0136	-0.0147	-0.0128	-0.0155	-0.0164
PORT8	0.1361 ^a	-0.0183 ^c	-0.0107	-0.0086	0.0059	0.0114	0.0109	0.0104	-0.0461	-0.0372	-0.0217
PORT9	0.1245 ^a	0.0101	0.4006	0.4937	0.4595	0.4723	0.4747	0.4794	0.4846	0.4860	0.4843
PORT10	0.1132 ^a	0.0037	0.0427	0.0348	0.0265	0.0533	0.0383	0.0505	0.0591	0.0576	0.0598

Panel C: S-GARCH-based CAARs from 1st July 2002 to 29th June 2007

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.0959 ^a	-0.0036	0.0079	0.0080	0.0130	0.0241 ^c	0.0303 ^b	0.0329 ^b	0.0332 ^b	0.0355 ^b	0.0322 ^c
PORT2	0.0908 ^a	0.0017	0.0119	0.0112	0.0106	0.0049	0.0050	0.0058	0.0067	0.0095	0.0029
PORT3	0.1038 ^a	-0.0053	-0.0039	-0.0069	-0.0160	-0.0149	-0.0140	-0.0117	-0.0148	0.0004	-0.0057
PORT4	0.0805 ^a	-0.0082 ^b	-0.0099 ^b	-0.0159 ^a	-0.0177 ^a	-0.0181 ^a	-0.0168 ^a	-0.0168 ^a	-0.0151 ^a	-0.0118 ^b	-0.0169 ^a
PORT5	0.0813 ^a	-0.0054	-0.0082	-0.0288	-0.0325	-0.0342	-0.0499	-0.0535	-0.0512	-0.0498	-0.0500
PORT6	0.0841 ^a	-0.0051	-0.0099	-0.0087	-0.0131	-0.0084	0.0681	0.0626	0.0641	0.0644	0.0577
PORT7	0.0917 ^a	-0.0018	-0.3670	-0.3692	-0.3635	-0.3635	-0.3581	-0.3616	-0.3608	-0.3594	-0.3575
PORT8	0.0952 ^a	-0.0056	0.0832	0.0921	0.0946	0.0913	0.0934	0.0947	0.0243	0.0310	0.0300
PORT9	0.0957 ^a	-0.0031	-0.0047	-0.0039	-0.0077	0.0123	0.0119	0.0073	0.0058	0.0078	0.0138
PORT10	0.0909 ^a	-0.0029	-0.0057	-0.0070	-0.0085	-0.0028	-0.0043	-0.0025	-0.0045	-0.0084	-0.0078

Appendix C.17

Sub-period S-GARCH-based CAARs of stocks in turnover rate portfolios following shocks of -5% or less

Panel A: S-GARCH-based CAARs from 1st July 1992 to 30th June 1997

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.1217 ^a	-0.0018	-0.0037	0.0064	-0.0077	0.0019	-0.0101	-0.0155	-0.0115	-0.0132	-0.0128
PORT2	-0.1297 ^a	0.0302	0.0274	0.0197	0.0247	0.0026	-0.0040	-0.0307	-0.0346	-0.0320	-0.0275
PORT3	-0.1741 ^a	0.0019	0.0074	0.0043	0.0036	-0.0190	-0.0225	-0.0292	-0.0267	-0.0285	-0.0302
PORT4	-0.1369 ^a	-0.0184	-0.0074	-0.0202	-0.0168	-0.0244	-0.0347	-0.0269	-0.0222	-0.0193	-0.0252
PORT5	-0.1367 ^a	-0.0024	0.0147	-0.0016	0.0097	-0.0014	-0.0131	-0.0069	-0.0077	-0.0006	-0.0046
PORT6	-0.1932 ^a	0.0132	0.0077	0.0079	0.0549	0.0267	0.0144	0.0287	0.0303	0.0328	0.0251
PORT7	-0.1822 ^a	0.0143	0.0197 ^c	0.0200	0.0164	-0.0131	-0.0239	-0.0107	-0.0130	-0.0139	-0.0066
PORT8	-0.1297 ^a	0.0048	0.0291	0.0360	0.0350	0.0218	0.0234	0.0322	0.0336	0.0350	0.0226
PORT9	-0.1512 ^a	0.0067	0.0143	0.0251 ^c	0.0267 ^b	-0.0031	-0.0133	-0.0052	-0.0037	-0.0018	-0.0219
PORT10	-0.1471 ^a	-0.0485 ^b	0.0406	0.1282	0.0825	-0.0306	-0.0098	-0.0872	-0.0583	-0.0360	-0.0409

Panel B: S-GARCH-based CAARs from 1st July 1997 to 28th June 2002

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0954 ^a	-0.0050	-0.0258	-0.0257	-0.0264	-0.0257	-0.0252	-0.0198	-0.0231	-0.0195	-0.0215
PORT2	-0.0944 ^a	-0.0003	-0.0039	-0.0078	-0.0133	-0.0047	-0.0039	0.0013	0.0013	0.0037	0.0008
PORT3	-0.0828 ^a	-0.0053	-0.0123	-0.0131	-0.0162	-0.0215	-0.0210	-0.0194	-0.0194	-0.0229	-0.0239
PORT4	-0.0879 ^a	0.0011	-0.0065	-0.0070	-0.0081	-0.0030	-0.0031	-0.0074	-0.0113	-0.0128	-0.0122
PORT5	-0.1007 ^a	0.0089	0.0227	0.0208	0.0183	0.0129	0.0091	0.0176	0.0121	0.0114	0.0174
PORT6	-0.1051 ^a	-0.0147	-0.0170	-0.0084	-0.0112	-0.0097	-0.0119	-0.0133	-0.0105	-0.0156	-0.0172
PORT7	-0.1122 ^a	-0.0012	-0.0003	-0.0009	-0.0008	0.0004	-0.0002	-0.0013	-0.0067	-0.0078	-0.0038
PORT8	-0.1207 ^a	0.0069	-0.0027	-0.0055	-0.0655	-0.0643	-0.0434	-0.0229	-0.0225	-0.0223	0.0000
PORT9	-0.1465 ^a	0.0097	0.0135	0.0098	0.0085	0.0094	0.0157	0.0209	0.0155	0.4490	0.5726
PORT10	-0.1119 ^a	-0.0037	-0.0025	0.0175	0.0229	0.0365	0.0559	0.0809 ^c	0.0697	0.0688	0.0697

Panel C: S-GARCH-based CAARs from 1st July 2002 to 29th June 2007

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0908 ^a	0.0079	0.0082	0.0121 ^b	0.0293 ^b	0.0353 ^b	0.0546 ^b	0.0491 ^b	0.0541 ^b	0.0506 ^c	0.0511
PORT2	-0.0975 ^a	-0.0047	-0.0059	-0.0066	-0.0070	-0.0012	-0.0003	-0.0029	-0.0013	-0.0104	-0.0061
PORT3	-0.1006 ^a	0.0028	-0.0030	0.0063	0.0199	0.0095	0.0116	0.0114	0.0099	0.0001	-0.0017
PORT4	-0.0822 ^a	-0.0008	-0.0018	-0.0028	-0.0063	-0.0102 ^c	-0.0105 ^c	-0.0086	-0.0064	-0.0152 ^b	-0.0138
PORT5	-0.0898 ^a	0.0048	0.0072	0.0092	0.0070	-0.0219	-0.0172	-0.0205	-0.0452	-0.0541	-0.0671
PORT6	-0.1000 ^a	0.0701	0.0627	0.0566	0.0580	0.0535	0.0530	0.0553	0.0555	0.0458	0.0429
PORT7	-0.5125	0.0136 ^b	0.0186	0.0294	0.0410	0.0404	0.0346	0.0346	0.0346	0.0212	0.0163
PORT8	-0.1797 ^b	0.0040	0.0049	0.0103	0.0098	0.0078	0.0041	0.0065	0.0087	0.0964	0.1000
PORT9	-0.1062 ^a	-0.0016	0.0036	0.0005	0.0033	0.0014	0.0003	-0.0014	-0.0148	-0.0186	0.0083
PORT10	-0.0972 ^a	-0.0001	0.0028	0.0019	0.0031	-0.0011	0.0036	0.0009	-0.0019	-0.0051	-0.0036

Appendix C.18

Sub-period S-GARCH-based CAARs of stocks in illiquidity ratio portfolios following shocks of 5% or more

Panel A: S-GARCH-based CAARs from 1st July 1992 to 30th June 1997

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.1710 ^a	0.0028	-0.0020	-0.0308	-0.0317	-0.0357 ^c	-0.0386 ^c	-0.0389 ^c	0.0074	0.0066	0.0031
PORT2	0.1782 ^a	-0.0047	-0.0327	-0.0327	-0.0241	-0.0137	-0.0140	-0.0157	-0.0069	-0.0036	0.0389
PORT3	0.1478 ^a	-0.0099	-0.0225 ^c	-0.0133	-0.0184	-0.0161	-0.0235	-0.0253	-0.0241	-0.0102	-0.0012
PORT4	0.1825 ^a	-0.0401	-0.0585 ^c	-0.0543 ^c	-0.0527 ^c	-0.0468	-0.0431	-0.0481	-0.0502	-0.0572 ^c	-0.0613 ^c
PORT5	0.1484 ^a	-0.0029	-0.0194	-0.0372 ^c	-0.0434 ^b	-0.0476 ^b	-0.0330	-0.0435	-0.0419	-0.0417	-0.0249
PORT6	0.1539 ^a	-0.0013	-0.0146	-0.0166	-0.0127	-0.0080	-0.0030	-0.0171	-0.0208	-0.0170	-0.0173
PORT7	0.1281 ^a	-0.0037	-0.0118	-0.0127	-0.0059	-0.0068	-0.0060	-0.0150	-0.0153	-0.0103	-0.0052
PORT8	0.1310 ^a	-0.0067	-0.0458 ^a	-0.0368 ^b	-0.0394 ^b	-0.0418 ^b	0.0942	0.2322	0.2221	0.2287	0.2112
PORT9	0.1216 ^a	-0.0013	-0.0296 ^c	-0.0363 ^c	-0.0357 ^c	-0.0357 ^c	-0.0280	-0.0281	-0.0197	-0.0183	-0.0200
PORT10	0.1693 ^a	-0.0006	-0.0337 ^c	-0.1104	-0.1140	-0.1324 ^c	-0.1297	-0.1317	-0.1298	-0.1445 ^c	-0.1265

Panel B: S-GARCH-based CAARs from 1st July 1997 to 28th June 2002

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.0793 ^a	0.0001	-0.0019	-0.0031	-0.0022	-0.0023	-0.0020	-0.0045	-0.0024	-0.0039	-0.0028
PORT2	0.0854 ^a	-0.0020	-0.0045	-0.0071 ^c	-0.0070	-0.0034	-0.0031	-0.0019	0.0006	-0.0031	-0.0026
PORT3	0.0998 ^a	-0.0024	-0.0039	-0.0124	-0.0100	-0.0110	-0.0148	-0.0216	-0.0104	-0.0202	-0.0232
PORT4	0.1110 ^a	-0.0129 ^c	-0.0126	-0.0175	-0.0189 ^c	-0.0086	-0.0082	-0.0082	-0.0063	-0.0072	-0.0050
PORT5	0.1280 ^a	-0.0003	0.0073	0.0148	0.0206	0.0057	0.0065	0.0026	-0.0583	-0.0640	-0.0505
PORT6	0.1039 ^a	-0.0092	-0.0161	-0.0086	-0.0098	-0.0143	-0.0259	-0.0328	-0.0207	-0.0222	-0.0222
PORT7	0.0985 ^a	0.0001	0.4179	0.5245	0.4886	0.4946	0.4923	0.4966	0.5034	0.5018	0.5018
PORT8	0.1048 ^a	-0.0073	-0.0010	-0.0032	-0.0062	-0.0011	-0.0014	0.0155	0.0165	0.0206	0.0198
PORT9	0.0992 ^a	0.0191	0.0173	0.0171	0.0187	0.0207	0.0241	0.0199	0.0133	0.0159	0.0111
PORT10	0.1076 ^a	-0.0077	0.0191	0.0057	0.0005	0.0229	0.0204	0.0174	0.0210	0.0165	0.0197

Panel C: S-GARCH-based CAARs from 1st July 2002 to 29th June 2007

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	0.0963 ^a	-0.0055 ^b	0.0080	0.0090	0.0147	0.0220	0.0288 ^c	0.0320 ^c	0.0316 ^c	0.0355 ^c	0.0333 ^c
PORT2	0.0897 ^a	-0.0067	-0.0056	-0.0099 ^b	-0.0090	-0.0050	-0.0031	-0.0049	-0.0026	-0.0024	-0.0053
PORT3	0.0936 ^a	-0.0133 ^b	-0.0108	-0.0113	-0.0213	-0.0238 ^c	-0.0245 ^c	-0.0236	-0.0246 ^c	-0.0050	-0.0170
PORT4	0.0801 ^a	-0.0043	-0.0070	-0.0085	-0.0084	-0.0095	-0.0086	-0.0100	-0.0093	-0.0047	-0.0130
PORT5	0.0887 ^a	-0.0109	-0.0121	-0.0131 ^c	-0.0141 ^c	-0.0140	-0.0179	-0.0154	-0.0177	-0.0184	-0.0197 ^c
PORT6	0.0904 ^a	0.0007	0.0018	0.0025	-0.0009	-0.0013	-0.0010	0.0005	0.0000	-0.0025	-0.0064
PORT7	0.0899 ^a	-0.0025	-0.0010	0.0036	-0.0046	0.0006	0.0865	0.0826	0.0806	0.0838	0.0874
PORT8	0.0891 ^a	-0.0056	-0.0030	-0.0006	0.0015	0.0034	0.0031	-0.0008	0.0045	0.0041	0.0048
PORT9	0.1005 ^a	-0.0027	-0.2067	-0.2086	-0.2087	-0.2092	-0.2018	-0.2008	-0.1997	-0.1971	-0.1985
PORT10	0.0918 ^a	0.0079	0.0054	-0.0058	-0.0062	0.0071	-0.0013	-0.0035	-0.0420	-0.0423	-0.0402

Appendix C.19

Sub-period S-GARCH-based CAARs of stocks in illiquidity ratio portfolios following shocks of -5% or less

Panel A: S-GARCH-based CAARs from 1st July 1992 to 30th June 1997

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.1542 ^a	-0.0355	-0.0358	-0.0410	-0.0526	-0.0498	-0.0217	-0.0245	-0.0419	-0.0512	-0.0468
PORT2	-0.1325 ^a	0.0465	0.0517	0.0512	0.0992	0.0961	0.0922	0.0978	0.0973	0.1024	0.1085
PORT3	-0.1495 ^a	-0.0070	0.0037	-0.0102	-0.0122	-0.0378	-0.0501 ^c	-0.0362	-0.0315	-0.0245	-0.0448
PORT4	-0.1638 ^a	0.0315	0.0335	0.0255	0.0265	0.0022	-0.0041	-0.0285	-0.0266	-0.0162	-0.0226
PORT5	-0.2026 ^a	-0.0006	0.0196	0.0114	0.0200	0.0102	0.0054	0.0061	0.0075	0.0155	0.0226
PORT6	-0.1574 ^a	0.0079	0.0139	0.0118	0.0057	-0.0146	-0.0219	-0.0155	-0.0155	-0.0170	-0.0432
PORT7	-0.1422 ^a	-0.0013	-0.0053	0.0028	-0.0028	-0.0202	-0.0340 ^c	-0.0268	-0.0224	-0.0244	-0.0242
PORT8	-0.1625 ^a	-0.0050	0.1549	0.3018	0.2604	0.1662	0.1699	0.1628	0.1683	0.1683	0.1749
PORT9	-0.1229 ^a	-0.0127	-0.0048	-0.0084	-0.0045	-0.0155	-0.0231	-0.0272	-0.0225	-0.0181	-0.0169
PORT10	-0.1233 ^a	-0.0259 ^c	-0.0399	-0.0332	-0.0510 ^c	-0.1284 ^c	-0.1442 ^c	-0.2098 ^b	-0.1768 ^c	-0.1603 ^c	-0.1727 ^c

Panel B: S-GARCH-based CAARs from 1st July 1997 to 28th June 2002

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0808 ^a	0.0013	0.0039	0.0030	0.0020	0.0021	0.0029	0.0043	0.0051	0.0036	0.0039
PORT2	-0.0909 ^a	-0.0006	-0.0315	-0.0311	-0.0341	-0.0337	-0.0319	-0.0254	-0.0244	-0.0246	-0.0244
PORT3	-0.0984 ^a	0.0038	-0.0027	-0.0045	-0.0114	-0.0004	-0.0076	-0.0076	-0.0119	-0.0115	-0.0075
PORT4	-0.0968 ^a	0.0033	0.0018	-0.0022	-0.0032	-0.0028	0.0000	0.0064	0.0090	0.0100	0.0267
PORT5	-0.0985 ^a	-0.0058	-0.0035	0.0036	-0.0614	-0.0649	-0.0370	-0.0143	-0.0280	-0.0276	-0.0307
PORT6	-0.1163 ^a	-0.0128	-0.0137	-0.0120	-0.0119	-0.0183	-0.0226	-0.0086	-0.0020	-0.0043	0.0009
PORT7	-0.1499 ^a	0.0106	0.0133	0.0142	0.0122	0.0195	0.0244 ^c	0.0231	0.0144	0.4904	0.6199
PORT8	-0.1057 ^a	-0.0136	-0.0173 ^b	0.0023	0.0036	0.0218	0.0233	0.0217	0.0180	0.0161	0.0253
PORT9	-0.0990 ^a	0.0012	0.0002	0.0030	0.0001	-0.0055	-0.0025	-0.0017	-0.0050	0.0118	0.0142
PORT10	-0.1200 ^a	-0.0010	-0.0027	-0.0054	-0.0028	0.0004	0.0124	0.0313	0.0217	0.0255	0.0239

Panel C: S-GARCH-based CAARs from 1st July 2002 to 29th June 2007

PORT	CAAR0	CAAR1	CAAR2	CAAR3	CAAR4	CAAR5	CAAR6	CAAR7	CAAR8	CAAR9	CAAR10
PORT1	-0.0930 ^a	0.0086	0.0075	0.0123 ^b	0.0306 ^b	0.0390 ^b	0.0615 ^b	0.0548 ^b	0.0597 ^b	0.0545 ^c	0.0566 ^c
PORT2	-0.0842 ^a	0.0009	-0.0192	-0.0060	-0.0036	-0.0005	-0.0011	-0.0016	-0.0001	-0.0100	-0.0123
PORT3	-0.0999 ^a	-0.0152	0.0016	-0.0076	0.0032	-0.0106	-0.0089	-0.0075	-0.0052	-0.0159	-0.0131
PORT4	-0.0879 ^a	0.0032	0.0042	0.0023	-0.0010	-0.0052	-0.0031	0.0008	-0.0025	-0.0115	-0.0080
PORT5	-0.0938 ^a	0.0066	0.0025	0.0021	0.0030	0.0022	0.0014	0.0004	-0.0035	-0.0209 ^c	-0.0199 ^c
PORT6	-0.0924 ^a	-0.0133	-0.0093	-0.0164	-0.0165	-0.0183	-0.0197	-0.0243 ^c	-0.0401 ^c	-0.0404	-0.0412
PORT7	-0.1057 ^a	0.1112	0.1026	0.1040	0.1055	0.1034	0.1034	0.1038	0.0882	0.0809	0.0844
PORT8	-0.0953 ^a	0.0103	0.0084	0.0095	0.0084	0.0071	0.0067	0.0060	0.0067	0.0034	0.0025
PORT9	-0.4146 ^a	0.0083	0.0153	0.0151	0.0243	0.0225	0.0197	0.0200	0.0188	0.0851	0.0786
PORT10	-0.1402 ^a	-0.0017	0.0027	0.0104	0.0116	-0.0033	-0.0012	-0.0036	-0.0053	-0.0120	-0.0031