

# Trading Dynamics in the Foreign Exchange Market

## A Latent Factor Panel Intensity Approach

### Web-Appendix

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## A Web-Appendix: Estimation Outputs (Restricted Model)

| Par.                 | 1        |        | 2        |        | 3        |        | 4        |        | 5        |        |
|----------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|                      | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   |
| Baseline Intensity   |          |        |          |        |          |        |          |        |          |        |
| $\omega^{o1}$        | -3.5997  | 0.3765 | -2.4204  | 0.4575 | -2.8243  | 0.3266 | -1.4126  | 0.2898 | -2.4032  | 0.4881 |
| $\omega^{o2}$        | -3.8671  | 0.4133 | -1.7176  | 0.3431 | -3.3688  | 0.3209 | -1.8800  | 0.3145 | -2.1486  | 0.2967 |
| $\omega^{o3}$        | -3.6592  | 0.3463 | -2.1582  | 0.3727 | -2.3268  | 0.2574 | -2.4916  | 0.3728 | -1.7600  | 0.2906 |
| $\omega^{o4}$        | -3.8064  | 0.4688 | -2.1308  | 0.4010 | -2.5197  | 0.2739 | -1.5788  | 0.3462 | -2.2952  | 0.3041 |
| $\omega^{o5}$        | -3.1696  | 0.3608 | -2.3538  | 0.3803 | -2.1272  | 0.2335 | -1.1687  | 0.2732 | -1.4921  | 0.4277 |
| $\omega^{o6}$        | -2.1099  | 0.3120 | -2.1244  | 0.3234 | -2.2822  | 0.2316 | -2.3439  | 0.3341 | -0.7146  | 0.2468 |
| $\omega^{o7}$        | -3.6844  | 0.3468 | -1.8212  | 0.3331 | -2.6118  | 0.3382 | -2.0973  | 0.3336 | -2.1791  | 0.3500 |
| $\omega^{o8}$        | -3.7030  | 0.4456 | -1.4871  | 0.2935 | -2.8605  | 0.2632 | -2.4452  | 0.2923 | -1.9280  | 0.3065 |
| $\omega^{o9}$        | -2.8778  | 0.4488 | -1.3460  | 0.3300 | -1.7694  | 0.4284 | -2.3280  | 0.3373 | -2.0051  | 0.2865 |
| $\omega^{o10}$       | -2.9221  | 0.3666 | -1.8242  | 0.3509 | -3.0557  | 0.2600 | -2.1269  | 0.3313 | -2.0764  | 0.2662 |
| $\alpha_o^o$         | 0.4783   | 0.0137 | 1.0158   | 0.0348 | 0.8723   | 0.0265 | 0.7617   | 0.0390 | 0.5602   | 0.0188 |
| $\alpha_c^o$         | 0.8328   | 0.0339 | 0.1954   | 0.0246 | 0.4005   | 0.0296 | 0.4726   | 0.0421 | 0.6419   | 0.0258 |
| $\tilde{\nu}_1^o$    | -0.3708  | 0.1804 | -1.1815  | 0.3276 | -0.8554  | 0.2623 | -0.6638  | 0.2425 | -0.4711  | 0.2378 |
| $\tilde{\nu}_2^o$    | 0.2203   | 0.1548 | -0.2270  | 0.3721 | 0.1880   | 0.3375 | -0.2826  | 0.2019 | -0.0396  | 0.1470 |
| $\tilde{\nu}_3^o$    | 0.4626   | 0.3126 | 0.4064   | 0.5058 | 0.1581   | 0.4324 | 0.3218   | 0.2985 | 0.5144   | 0.2109 |
| $\tilde{\nu}_4^o$    | 0.2161   | 0.1586 | 1.0544   | 0.1974 | 0.8801   | 0.1844 | 0.2703   | 0.1940 | 0.1341   | 0.1899 |
| $\omega^{c1}$        | -3.3861  | 0.5671 | -2.8119  | 0.4688 | -3.2758  | 0.2953 | -0.9964  | 0.2683 | -3.1403  | 0.4225 |
| $\omega^{c2}$        | -3.1983  | 0.5497 | -3.5283  | 0.4795 | -3.1158  | 0.3598 | -2.0521  | 0.2681 | -3.5978  | 0.3900 |
| $\omega^{c3}$        | -2.3182  | 0.5298 | -1.0039  | 0.4948 | -3.3692  | 0.2864 | -2.4022  | 0.2663 | -2.6607  | 0.3762 |
| $\omega^{c4}$        | -3.4108  | 0.5370 | -1.8456  | 0.4980 | -2.1229  | 0.3128 | -0.5527  | 0.2663 | -0.9013  | 0.6247 |
| $\omega^{c5}$        | -2.6424  | 0.5589 | -1.1474  | 0.5784 | -2.9694  | 0.2842 | -1.5480  | 0.2474 | -3.1519  | 0.4831 |
| $\omega^{c6}$        | -2.5896  | 0.5048 | -2.9320  | 0.4511 | -2.6745  | 0.2747 | -2.3311  | 0.2684 | -1.8620  | 0.3166 |
| $\omega^{c7}$        | -2.4801  | 0.5430 | -1.2497  | 0.4926 | -2.6615  | 0.3893 | -1.3700  | 0.2564 | -1.6623  | 0.3584 |
| $\omega^{c8}$        | -2.4844  | 0.6230 | -1.9121  | 0.4322 | -1.4100  | 0.3308 | -1.1274  | 0.2505 | -2.2269  | 0.3464 |
| $\omega^{c9}$        | -2.2160  | 0.5042 | -1.8011  | 0.4584 | -1.7256  | 0.4057 | -1.7387  | 0.3605 | -1.7400  | 0.3208 |
| $\omega^{c10}$       | -2.6580  | 0.4889 | -1.4743  | 0.4789 | -1.8609  | 0.2694 | -1.9948  | 0.2783 | -2.2267  | 0.3194 |
| $\alpha_c^c$         | 0.7918   | 0.0350 | 0.7834   | 0.0420 | 0.7036   | 0.0187 | 0.6442   | 0.0295 | 0.7571   | 0.0256 |
| $\alpha_c^c$         | 0.6425   | 0.0600 | 0.6526   | 0.0660 | 0.7137   | 0.0312 | 0.6694   | 0.0328 | 0.6301   | 0.0410 |
| $\tilde{\nu}_1^c$    | -0.5016  | 0.2263 | -0.9095  | 0.2608 | -0.4805  | 0.1888 | 0.0617   | 0.1498 | -0.4324  | 0.2589 |
| $\tilde{\nu}_2^c$    | -0.2758  | 0.1201 | -0.3920  | 0.1649 | 0.0582   | 0.1288 | -0.5888  | 0.1148 | -0.2649  | 0.1700 |
| $\tilde{\nu}_3^c$    | -0.4160  | 0.1833 | -0.4258  | 0.2063 | 0.0800   | 0.1860 | -0.5022  | 0.1188 | 0.1586   | 0.2001 |
| $\tilde{\nu}_4^c$    | 0.1555   | 0.2144 | 0.3196   | 0.1980 | 0.3774   | 0.1591 | 0.0752   | 0.1182 | 0.3747   | 0.2032 |
| Seasonality          |          |        |          |        |          |        |          |        |          |        |
| $\nu_1$              | 0.0825   | 0.0556 | -0.1084  | 0.0530 | -0.3075  | 0.0395 | -0.1218  | 0.0606 | -0.1665  | 0.0419 |
| $\nu_2$              | -0.3293  | 0.0553 | 0.3091   | 0.0625 | 0.0321   | 0.0438 | 0.1477   | 0.0679 | 0.2622   | 0.0464 |
| $\nu_3$              | -0.0196  | 0.0520 | -0.1568  | 0.0555 | -0.0982  | 0.0396 | -0.2471  | 0.0593 | 0.0218   | 0.0956 |
| $\nu_4$              | -0.2244  | 0.0516 | -0.2532  | 0.0569 | -0.2801  | 0.0397 | -0.2774  | 0.0573 | -0.2153  | 0.0429 |
| $\nu_5$              | 0.2888   | 0.0451 | 0.1291   | 0.0646 | 0.0895   | 0.0421 | 0.0754   | 0.0615 | 0.0583   | 0.0510 |
| $\nu_6$              | -0.1797  | 0.0456 | -0.0567  | 0.0517 | -0.1329  | 0.0386 | -0.2864  | 0.0539 | -0.1237  | 0.0405 |
| $\nu_7$              | 0.3105   | 0.0463 | -0.0153  | 0.0725 | 0.1208   | 0.0424 | 0.0722   | 0.0600 | 0.0056   | 0.1209 |
| $\nu_8$              | 0.1498   | 0.0480 | -0.0404  | 0.0567 | 0.0613   | 0.0415 | -0.0096  | 0.0446 | -0.0500  | 0.0408 |
| $\varpi$             | -2.4607  | 0.3225 | -2.5273  | 0.2815 | -2.5856  | 0.2266 | -2.4683  | 0.3053 | -2.2575  | 0.2485 |
| Covariates           |          |        |          |        |          |        |          |        |          |        |
| $\gamma_{P/L\ 1}^o$  | -0.0925  | 0.0134 | -0.0701  | 0.0138 | -0.0582  | 0.0072 | -0.0358  | 0.0118 | -0.0416  | 0.0217 |
| $\gamma_{P/L\ pf}^o$ | -0.0720  | 0.0314 | -0.1650  | 0.0391 | -0.0800  | 0.0317 | -0.0653  | 0.0434 | 0.0238   | 0.0506 |
| $\gamma_{vol}^o$     | -0.2953  | 0.0693 | -0.1783  | 0.1094 | -0.1944  | 0.0905 | -0.0789  | 0.0640 | -0.0435  | 0.0421 |
| $\gamma_{P/L\ 1}^c$  | 0.1280   | 0.0278 | 0.0574   | 0.0115 | 0.0381   | 0.0035 | 0.0266   | 0.0079 | 0.0551   | 0.0073 |
| $\gamma_{P/L\ pf}^c$ | -0.0185  | 0.0380 | -0.1172  | 0.0432 | 0.0119   | 0.0334 | 0.0733   | 0.0423 | -0.0012  | 0.0631 |
| $\gamma_{vol}^c$     | 0.6090   | 0.1801 | 0.1192   | 0.1325 | 0.0975   | 0.0979 | 0.0172   | 0.0811 | 0.1672   | 0.0722 |
| no obs.              | 1164     |        | 797      |        | 1694     |        | 821      |        | 1335     |        |
| mean ll              | -7.65131 |        | -7.96018 |        | -8.52090 |        | -7.87718 |        | -7.34069 |        |

**Table 1:** Estimation results for investor groups 1 to 5. The  $\gamma$  coefficients on the covariates should be interpreted as follows: superscript “o” for opening intensity, superscript “c” for closing intensity. The subscripts stand for the corresponding variable, where “P/L 1” is the paper profit/loss in the corresponding currency pair, “P/L pf” is the paper profit/loss in the total portfolio and “vol” is the standardized excess trading volume. All other coefficients are detailed in the main text. “mean ll” stands for the mean log-likelihood. Quasi-maximum likelihood standard errors reported.

| Par.                 | 6        |        | 7        |        | 8        |        | 9        |        | 10       |        |
|----------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|                      | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   |
| Baseline Intensity   |          |        |          |        |          |        |          |        |          |        |
| $\omega^{o1}$        | -2.1824  | 0.3421 | -1.7564  | 0.2677 | -1.1434  | 0.2298 | -3.2003  | 0.4094 | -2.7298  | 0.3697 |
| $\omega^{o2}$        | -1.5736  | 0.3009 | -2.2316  | 0.3557 | -2.5722  | 0.3842 | -2.6521  | 0.4214 | -2.9849  | 0.3744 |
| $\omega^{o3}$        | -2.1914  | 0.3251 | -2.1816  | 0.2731 | -0.3293  | 0.3336 | -2.1789  | 0.3928 | -2.6373  | 0.3618 |
| $\omega^{o4}$        | -1.4384  | 0.2457 | -1.0214  | 0.1928 | -2.2422  | 0.2651 | -2.3665  | 0.3842 | -2.5032  | 0.4085 |
| $\omega^{o5}$        | -1.8618  | 0.2643 | -1.1283  | 0.2221 | -1.3693  | 0.2498 | -2.8107  | 0.4059 | -2.5228  | 0.3917 |
| $\omega^{o6}$        | -1.7789  | 0.2174 | -2.5510  | 0.2636 | -2.9955  | 0.3772 | -3.0084  | 0.4068 | -2.7395  | 0.3585 |
| $\omega^{o7}$        | -1.8903  | 0.2477 | -2.6102  | 0.3185 | -1.2718  | 0.2362 | -2.2358  | 0.3762 | -3.3484  | 0.3814 |
| $\omega^{o8}$        | -2.4803  | 0.2881 | -2.3975  | 0.2960 | -1.3280  | 0.2883 | -3.4929  | 0.4344 | -2.8616  | 0.3694 |
| $\omega^{o9}$        | -2.8495  | 0.2471 | -2.1105  | 0.3191 | -2.1451  | 0.3187 | -4.2848  | 0.5359 | -2.3059  | 0.5074 |
| $\omega^{o10}$       | -2.1800  | 0.2813 | -2.4023  | 0.2847 | -1.4359  | 0.2295 | -3.0860  | 0.4003 | -2.8468  | 0.4560 |
| $\alpha_o^o$         | 0.7886   | 0.0292 | 0.5453   | 0.0148 | 0.9612   | 0.0198 | 0.9835   | 0.0265 | 0.8409   | 0.0322 |
| $\alpha_c^o$         | 0.4641   | 0.0231 | 0.6723   | 0.0196 | 0.2995   | 0.0132 | 0.3539   | 0.0201 | 0.4413   | 0.0393 |
| $\tilde{\nu}_1^o$    | -0.5707  | 0.2202 | -0.4691  | 0.1936 | -1.4972  | 0.1903 | -0.8447  | 0.2142 | -0.7452  | 0.2750 |
| $\tilde{\nu}_2^o$    | -0.1227  | 0.2145 | 0.0073   | 0.0481 | 0.2349   | 0.1976 | 0.3042   | 0.3541 | 0.1919   | 0.2795 |
| $\tilde{\nu}_3^o$    | -0.5574  | 0.3135 | 0.2693   | 0.2039 | -0.1862  | 0.3080 | 0.9768   | 0.6599 | 0.8620   | 0.4619 |
| $\tilde{\nu}_4^o$    | 0.6011   | 0.2523 | 0.3397   | 0.2218 | 1.3020   | 0.2028 | 0.4860   | 0.2264 | 0.7571   | 0.2219 |
| $\omega^{c1}$        | -2.7723  | 0.5061 | -1.7997  | 0.3044 | -3.1020  | 0.2953 | -3.0210  | 0.3598 | -2.7579  | 0.4018 |
| $\omega^{c2}$        | -1.9723  | 0.4026 | -2.8557  | 0.6247 | -3.9353  | 0.3449 | -3.0078  | 0.3242 | -3.7843  | 0.4046 |
| $\omega^{c3}$        | -2.8192  | 0.4184 | -2.2213  | 0.2830 | -3.3585  | 0.4683 | -2.8427  | 0.2817 | -3.7289  | 0.4341 |
| $\omega^{c4}$        | -2.0372  | 0.3596 | -1.3380  | 0.2013 | -3.4255  | 0.3416 | -2.2534  | 0.2926 | -1.8811  | 0.4382 |
| $\omega^{c5}$        | -3.3777  | 0.3956 | -1.3554  | 0.2470 | -3.0666  | 0.3228 | -3.1033  | 0.3135 | -2.8578  | 0.4138 |
| $\omega^{c6}$        | -0.5632  | 0.2650 | -2.3949  | 0.2751 | -3.5640  | 0.3822 | -3.7747  | 0.3290 | -3.4304  | 0.3861 |
| $\omega^{c7}$        | -0.8052  | 0.2702 | -2.6025  | 0.3240 | -3.2003  | 0.3082 | -2.2952  | 0.2691 | -3.7407  | 0.3824 |
| $\omega^{c8}$        | -2.9283  | 0.4015 | -2.5007  | 0.3036 | -3.5390  | 0.3402 | -3.4291  | 0.3735 | -3.4004  | 0.4046 |
| $\omega^{c9}$        | -0.5831  | 0.4911 | -2.5778  | 0.3397 | -4.4806  | 0.3307 | -4.3295  | 0.5359 | -1.6224  | 0.3696 |
| $\omega^{c10}$       | -2.2476  | 0.3971 | -1.4081  | 0.3852 | -3.2203  | 0.2774 | -3.0561  | 0.3390 | -2.1849  | 0.4051 |
| $\alpha_o^c$         | 0.7731   | 0.0332 | 0.7329   | 0.0209 | 0.6010   | 0.0230 | 0.7134   | 0.0282 | 0.5643   | 0.0241 |
| $\alpha_c^c$         | 0.6627   | 0.0409 | 0.7452   | 0.0264 | 0.9005   | 0.0315 | 0.8123   | 0.0437 | 0.9049   | 0.0474 |
| $\tilde{\nu}_1^c$    | -0.5562  | 0.2529 | -0.3113  | 0.2618 | -0.0506  | 0.1792 | -0.2703  | 0.1467 | -0.1236  | 0.1603 |
| $\tilde{\nu}_2^c$    | -0.0901  | 0.1793 | -0.4431  | 0.2060 | 0.0234   | 0.1105 | -0.1231  | 0.1429 | -0.0051  | 0.0860 |
| $\tilde{\nu}_3^c$    | 0.0187   | 0.1092 | -0.2962  | 0.1953 | -0.1787  | 0.2642 | -0.1167  | 0.2220 | -0.0585  | 0.1375 |
| $\tilde{\nu}_4^c$    | 0.2781   | 0.2179 | 0.3007   | 0.1688 | -0.1097  | 0.1887 | 0.0484   | 0.1655 | 0.3258   | 0.1365 |
| Seasonality          |          |        |          |        |          |        |          |        |          |        |
| $\nu_1$              | -0.4116  | 0.0618 | -0.2932  | 0.0569 | -0.2124  | 0.0369 | -0.2459  | 0.0402 | -0.1123  | 0.0519 |
| $\nu_2$              | 0.0230   | 0.0583 | -0.0682  | 0.0457 | -0.0427  | 0.0364 | 0.2390   | 0.0477 | 0.0882   | 0.0629 |
| $\nu_3$              | -0.2054  | 0.0525 | -0.0782  | 0.0417 | -0.1125  | 0.0358 | -0.1736  | 0.0442 | -0.1639  | 0.0552 |
| $\nu_4$              | 0.0233   | 0.0532 | -0.1201  | 0.0391 | -0.0617  | 0.0348 | -0.2210  | 0.0428 | -0.1672  | 0.0536 |
| $\nu_5$              | 0.2469   | 0.0680 | 0.4498   | 0.0506 | 0.3821   | 0.0383 | 0.2015   | 0.0493 | 0.5455   | 0.0599 |
| $\nu_6$              | -0.1175  | 0.0605 | 0.1661   | 0.0492 | 0.0322   | 0.0353 | -0.1246  | 0.0407 | -0.0967  | 0.0533 |
| $\nu_7$              | -0.0269  | 0.0604 | 0.1428   | 0.0453 | 0.1993   | 0.0376 | 0.0453   | 0.0431 | -0.0305  | 0.0711 |
| $\nu_8$              | 0.0567   | 0.0474 | -0.0229  | 0.0413 | 0.0377   | 0.0356 | -0.0380  | 0.0440 | -0.0582  | 0.0546 |
| $\varpi$             | -2.2328  | 0.2961 | -1.8973  | 0.2888 | -1.5801  | 0.1449 | -1.7715  | 0.1980 | -4.0202  | 0.5791 |
| Covariates           |          |        |          |        |          |        |          |        |          |        |
| $\gamma_{P/L\ 1}^o$  | -0.0479  | 0.0094 | -0.0233  | 0.0083 | -0.0848  | 0.0116 | -0.0599  | 0.0094 | -0.0577  | 0.0117 |
| $\gamma_{P/L\ pf}^o$ | -0.0577  | 0.0280 | 0.0260   | 0.0198 | 0.1654   | 0.0353 | 0.2678   | 0.0467 | 0.0058   | 0.0841 |
| $\gamma_{vol}^o$     | -0.2011  | 0.0926 | -0.0990  | 0.0448 | -0.2087  | 0.0668 | -0.1153  | 0.0677 | -0.0082  | 0.0719 |
| $\gamma_{P/L\ 1}^c$  | 0.0097   | 0.0156 | 0.0535   | 0.0073 | -0.0171  | 0.0370 | 0.0352   | 0.0055 | 0.0399   | 0.0102 |
| $\gamma_{P/L\ pf}^c$ | -0.0075  | 0.0209 | -0.0188  | 0.0228 | 0.2155   | 0.0490 | 0.3323   | 0.0694 | 0.1071   | 0.0363 |
| $\gamma_{vol}^c$     | 0.1786   | 0.1301 | 0.1234   | 0.0738 | 0.2053   | 0.0837 | 0.0300   | 0.0702 | 0.0689   | 0.1405 |
| no obs.              | 1130     |        | 1665     |        | 2267     |        | 1390     |        | 1008     |        |
| mean ll              | -5.85832 |        | -5.39290 |        | -6.80206 |        | -7.10712 |        | -7.71184 |        |

**Table 2:** Estimation results for investor groups 6 to 10. The  $\gamma_i$  coefficients on the covariates should be interpreted as follows: superscript “o” for opening intensity, superscript “c” for closing intensity. The subscripts stand for the corresponding variable, where “P/L 1” is the paper profit/loss in the corresponding currency pair, “P/L pf” is the paper profit/loss in the total portfolio and “vol” is the standardized excess trading volume. All other coefficients are detailed in the main text. “mean ll” stands for the mean log-likelihood. Quasi-maximum likelihood standard errors reported.

| Par.                 | 11       |        | 12       |        | 13       |        | 14       |        | 15       |        |
|----------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|                      | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   |
| Baseline Intensity   |          |        |          |        |          |        |          |        |          |        |
| $\omega^{o1}$        | -2.2690  | 0.2888 | -2.2931  | 0.3962 | -2.7287  | 0.2752 | -2.6357  | 0.2698 | -1.8307  | 0.1616 |
| $\omega^{o2}$        | -2.2387  | 0.3608 | -1.8008  | 0.3757 | -1.9493  | 0.2362 | -1.7726  | 0.2394 | -1.8697  | 0.1550 |
| $\omega^{o3}$        | -1.8864  | 0.2782 | -1.7451  | 0.3703 | -2.9554  | 0.2367 | -2.7128  | 0.2781 | -2.2007  | 0.2144 |
| $\omega^{o4}$        | -2.9439  | 0.3336 | -2.0454  | 0.3972 | -2.1253  | 0.2775 | -2.4208  | 0.2807 | -2.3851  | 0.2882 |
| $\omega^{o5}$        | -2.7234  | 0.3035 | -2.1838  | 0.4143 | -2.1821  | 0.2403 | -2.1201  | 0.2519 | -1.6534  | 0.1683 |
| $\omega^{o6}$        | -3.0114  | 0.3179 | -1.8439  | 0.4099 | -1.7759  | 0.2086 | -2.1020  | 0.2547 | -2.5314  | 0.1761 |
| $\omega^{o7}$        | -1.8347  | 0.2771 | -2.6799  | 0.3917 | -2.1108  | 0.2485 | -2.8228  | 0.3105 | -2.6728  | 0.2569 |
| $\omega^{o8}$        | -2.7012  | 0.3434 | -1.9125  | 0.3867 | -2.4918  | 0.2814 | -2.6096  | 0.2806 | -2.4393  | 0.2134 |
| $\omega^{o9}$        | -2.6523  | 0.3321 | -1.9394  | 0.3907 | -2.1916  | 0.2365 | -2.3160  | 0.2914 | -1.6311  | 0.1778 |
| $\omega^{o10}$       | -3.0939  | 0.2926 | -1.8753  | 0.3748 | -1.7974  | 0.2754 | -0.8063  | 0.2505 | -2.5339  | 0.2166 |
| $\alpha_o^o$         | 0.8670   | 0.0287 | 0.5480   | 0.0197 | 0.6833   | 0.0201 | 0.7204   | 0.0205 | 0.7781   | 0.0163 |
| $\alpha_c^o$         | 0.4315   | 0.0264 | 0.6047   | 0.0296 | 0.5905   | 0.0252 | 0.5573   | 0.0255 | 0.5078   | 0.0161 |
| $\tilde{\nu}_1^o$    | -0.5801  | 0.2382 | -0.9658  | 0.2061 | -0.5379  | 0.2736 | -0.6849  | 0.3052 | -0.6296  | 0.2125 |
| $\tilde{\nu}_2^o$    | -0.0330  | 0.1586 | 0.6237   | 0.3659 | -0.1373  | 0.2710 | 0.0696   | 0.2740 | 0.1096   | 0.2634 |
| $\tilde{\nu}_3^o$    | 0.5761   | 0.3630 | 1.6101   | 0.7184 | 0.0213   | 0.3596 | 0.0710   | 0.2867 | -0.1356  | 0.4266 |
| $\tilde{\nu}_4^o$    | 0.5498   | 0.2247 | 0.6127   | 0.2074 | 0.4070   | 0.1709 | 0.7273   | 0.2413 | 0.5961   | 0.1612 |
| $\omega^{c1}$        | -2.6036  | 0.3135 | -1.6436  | 0.2853 | -2.6370  | 0.2646 | -2.9104  | 0.3447 | -1.2728  | 0.2055 |
| $\omega^{c2}$        | -2.1903  | 0.4001 | -2.2601  | 0.2413 | -2.5742  | 0.2203 | -1.8305  | 0.2881 | -2.1400  | 0.2008 |
| $\omega^{c3}$        | -2.4471  | 0.2758 | -1.3779  | 0.2364 | -2.8471  | 0.2350 | -2.3181  | 0.3265 | -3.0458  | 0.2637 |
| $\omega^{c4}$        | -3.1910  | 0.3575 | -1.0082  | 0.3164 | -2.1706  | 0.2214 | -2.5457  | 0.3727 | -2.9632  | 0.2860 |
| $\omega^{c5}$        | -2.3896  | 0.3061 | -2.6154  | 0.3680 | -2.0709  | 0.2215 | -1.9457  | 0.3133 | -2.0047  | 0.2126 |
| $\omega^{c6}$        | -3.4259  | 0.3197 | -1.6487  | 0.2846 | -1.9539  | 0.1867 | -1.6333  | 0.3136 | -1.8893  | 0.2231 |
| $\omega^{c7}$        | -1.1867  | 0.2660 | -2.0190  | 0.2378 | -1.9853  | 0.2325 | -2.3085  | 0.3557 | -2.8566  | 0.3017 |
| $\omega^{c8}$        | -2.7241  | 0.4135 | -1.4248  | 0.2340 | -2.2195  | 0.3615 | -0.4559  | 0.3716 | -2.6446  | 0.2485 |
| $\omega^{c9}$        | -3.3487  | 0.3585 | -0.5996  | 0.2584 | -2.6316  | 0.2294 | -1.8227  | 0.3328 | -1.6500  | 0.2230 |
| $\omega^{c10}$       | -2.5876  | 0.3164 | -1.8058  | 0.2508 | -3.4769  | 0.3205 | -2.2925  | 0.3344 | -3.4867  | 0.2533 |
| $\alpha_o^c$         | 0.7806   | 0.0281 | 0.8042   | 0.0204 | 0.6211   | 0.0180 | 0.6654   | 0.0226 | 0.7534   | 0.0173 |
| $\alpha_c^c$         | 0.6990   | 0.0365 | 0.5939   | 0.0253 | 0.7525   | 0.0259 | 0.7533   | 0.0332 | 0.6945   | 0.0207 |
| $\tilde{\nu}_1^c$    | -0.4133  | 0.1714 | -0.3168  | 0.1690 | -0.4154  | 0.1541 | -0.7117  | 0.1938 | -0.3844  | 0.2265 |
| $\tilde{\nu}_2^c$    | -0.1802  | 0.1264 | -0.2005  | 0.1529 | -0.2017  | 0.1081 | -0.0221  | 0.1301 | -0.0353  | 0.1642 |
| $\tilde{\nu}_3^c$    | -0.2785  | 0.1724 | 0.0429   | 0.1921 | 0.0113   | 0.0887 | 0.0053   | 0.2584 | 0.2510   | 0.2523 |
| $\tilde{\nu}_4^c$    | 0.4741   | 0.1731 | 0.1031   | 0.1636 | 0.0807   | 0.1231 | 0.4356   | 0.2333 | 0.1502   | 0.1827 |
| Seasonality          |          |        |          |        |          |        |          |        |          |        |
| $\nu_1$              | -0.2504  | 0.0480 | -0.0644  | 0.0445 | -0.1340  | 0.0427 | -0.1726  | 0.0428 | 0.0559   | 0.0362 |
| $\nu_2$              | 0.1661   | 0.0526 | -0.0478  | 0.0433 | 0.1855   | 0.0489 | 0.3009   | 0.0452 | -0.1370  | 0.0338 |
| $\nu_3$              | -0.0437  | 0.0471 | -0.2359  | 0.0416 | -0.1969  | 0.0420 | -0.1549  | 0.0411 | -0.1196  | 0.0309 |
| $\nu_4$              | -0.2350  | 0.0493 | -0.0755  | 0.0391 | -0.3678  | 0.0430 | -0.1185  | 0.0400 | -0.2319  | 0.0299 |
| $\nu_5$              | 0.2822   | 0.0565 | 0.4152   | 0.0414 | 0.3415   | 0.0478 | 0.2568   | 0.0468 | 0.2366   | 0.0341 |
| $\nu_6$              | -0.0355  | 0.0448 | -0.0529  | 0.0399 | 0.0104   | 0.0438 | -0.1696  | 0.0409 | -0.0669  | 0.0302 |
| $\nu_7$              | 0.0872   | 0.0503 | 0.1817   | 0.0407 | 0.1419   | 0.0437 | 0.0994   | 0.0405 | 0.1469   | 0.0318 |
| $\nu_8$              | 0.0515   | 0.0475 | 0.0629   | 0.0391 | 0.0116   | 0.0437 | 0.0362   | 0.0380 | 0.0329   | 0.0301 |
| $\varpi$             | -2.7120  | 0.3187 | -1.9965  | 0.1956 | -3.0615  | 0.2965 | -2.8201  | 0.3057 | -2.7694  | 0.2462 |
| Covariates           |          |        |          |        |          |        |          |        |          |        |
| $\gamma_{P/L\ 1}^o$  | -0.0264  | 0.0202 | -0.0205  | 0.0117 | -0.0654  | 0.0141 | -0.0336  | 0.0083 | -0.0163  | 0.0156 |
| $\gamma_{P/L\ pf}^o$ | -0.0675  | 0.0421 | -0.0242  | 0.0281 | 0.1366   | 0.0431 | -0.0629  | 0.0311 | 0.0061   | 0.0494 |
| $\gamma_{vol}^o$     | -0.1669  | 0.1248 | 0.0559   | 0.1010 | -0.0651  | 0.0453 | -0.0575  | 0.0574 | -0.0431  | 0.0663 |
| $\gamma_{P/L\ 1}^c$  | -0.0120  | 0.0303 | 0.0399   | 0.0050 | 0.0358   | 0.0036 | -0.0032  | 0.0320 | -0.0195  | 0.0136 |
| $\gamma_{P/L\ pf}^c$ | 0.1292   | 0.0622 | 0.0133   | 0.0304 | 0.1147   | 0.0459 | 0.2363   | 0.0593 | 0.2831   | 0.0438 |
| $\gamma_{vol}^c$     | 0.2477   | 0.1504 | -0.0356  | 0.1160 | 0.0390   | 0.0431 | 0.1526   | 0.0850 | 0.0325   | 0.1113 |
| no obs.              | 1072     |        | 1761     |        | 1772     |        | 1558     |        | 2519     |        |
| mean ll              | -7.15782 |        | -7.21387 |        | -7.52931 |        | -6.53549 |        | -6.53746 |        |

**Table 3:** Estimation results for investor groups 11 to 15. The  $\gamma_i$  coefficients on the covariates should be interpreted as follows: superscript “o” for opening intensity, superscript “c” for closing intensity. The subscripts stand for the corresponding variable, where “P/L 1” is the paper profit/loss in the corresponding currency pair, “P/L pf” is the paper profit/loss in the total portfolio and “vol” is the standardized excess trading volume. All other coefficients are detailed in the main text. “mean ll” stands for the mean log-likelihood. Quasi-maximum likelihood standard errors reported.

| Par.                 | 16       |        | 17       |        | 18       |        | 19       |        | 20       |        |
|----------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|                      | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   |
| Baseline Intensity   |          |        |          |        |          |        |          |        |          |        |
| $\omega^{o1}$        | -1.0282  | 0.1931 | -2.8422  | 0.5367 | -3.4808  | 0.3258 | -1.6107  | 0.3036 | -2.4951  | 0.5941 |
| $\omega^{o2}$        | -2.4238  | 0.2761 | -3.4793  | 0.4623 | -2.5184  | 0.3136 | -1.0049  | 0.2764 | -2.5632  | 0.5862 |
| $\omega^{o3}$        | -2.5265  | 0.2169 | -2.6770  | 0.4688 | -3.3111  | 0.3490 | -1.7546  | 0.3836 | -2.1841  | 0.5917 |
| $\omega^{o4}$        | -1.3018  | 0.1931 | -3.7318  | 0.5033 | -2.6290  | 0.2956 | -1.4564  | 0.3015 | -2.8724  | 0.5926 |
| $\omega^{o5}$        | -1.8672  | 0.2049 | -3.8222  | 0.4578 | -3.1590  | 0.3559 | -1.4380  | 0.2707 | -1.9663  | 0.5913 |
| $\omega^{o6}$        | -2.0277  | 0.2165 | -4.0954  | 0.4508 | -3.3127  | 0.3258 | -0.8021  | 0.2802 | -2.9068  | 0.5958 |
| $\omega^{o7}$        | -2.2442  | 0.2088 | -2.7913  | 0.4745 | -3.2047  | 0.3634 | -0.9125  | 0.2877 | -3.3558  | 0.6117 |
| $\omega^{o8}$        | -2.6946  | 0.2180 | -3.7140  | 0.5168 | -2.7318  | 0.3166 | -1.1011  | 0.2789 | -2.6806  | 0.5993 |
| $\omega^{o9}$        | -2.1300  | 0.2583 | -2.8272  | 0.4920 | -2.1930  | 0.2983 | -2.1987  | 0.3286 | -2.4798  | 0.5733 |
| $\omega^{o10}$       | -1.6686  | 0.1977 | -3.8604  | 0.5644 | -2.4748  | 0.3066 | -1.4467  | 0.2711 | -2.2449  | 0.5898 |
| $\alpha_o^o$         | 0.5940   | 0.0112 | 0.7409   | 0.0161 | 0.8756   | 0.0288 | 0.6696   | 0.0173 | 0.6057   | 0.0131 |
| $\alpha_c^o$         | 0.6431   | 0.0142 | 0.5337   | 0.0207 | 0.4611   | 0.0289 | 0.4786   | 0.0195 | 0.6173   | 0.0180 |
| $\tilde{\nu}_1^o$    | -0.3796  | 0.2676 | -1.3645  | 0.1693 | -0.3475  | 0.3918 | -1.0279  | 0.1610 | -0.9620  | 0.2121 |
| $\tilde{\nu}_2^o$    | -0.0690  | 0.2202 | 1.4054   | 0.5561 | 0.0200   | 0.5619 | 0.2766   | 0.2749 | 1.2534   | 0.7408 |
| $\tilde{\nu}_3^o$    | 0.1417   | 0.2672 | 2.2567   | 1.0979 | 0.1032   | 0.7087 | 0.8441   | 0.4892 | 1.9407   | 1.5357 |
| $\tilde{\nu}_4^o$    | 0.8682   | 0.1612 | 1.2054   | 0.2830 | 0.4988   | 0.2125 | 0.3060   | 0.1670 | 1.0244   | 0.4535 |
| $\omega^{c1}$        | -1.8862  | 0.2254 | -2.5467  | 0.3795 | -3.8438  | 0.3189 | -1.3789  | 0.2810 | -1.0597  | 0.3925 |
| $\omega^{c2}$        | -2.7604  | 0.3015 | -1.2138  | 0.2013 | -2.8439  | 0.2757 | -1.7186  | 0.2544 | -0.1684  | 0.3814 |
| $\omega^{c3}$        | -1.7804  | 0.2793 | -1.8047  | 0.1827 | -3.9207  | 0.2784 | -2.0746  | 0.4438 | -1.3485  | 0.3897 |
| $\omega^{c4}$        | -1.5602  | 0.2055 | -0.4663  | 0.2531 | -2.7837  | 0.2827 | -1.5016  | 0.3839 | -2.3225  | 0.4102 |
| $\omega^{c5}$        | -0.7347  | 0.2385 | -1.5333  | 0.2351 | -2.8967  | 0.3481 | -1.1674  | 0.3972 | -1.3110  | 0.3815 |
| $\omega^{c6}$        | -1.0251  | 0.2333 | -1.8276  | 0.2621 | -3.4658  | 0.2747 | -1.6183  | 0.2587 | -0.5375  | 0.3978 |
| $\omega^{c7}$        | -1.9315  | 0.2736 | -1.3962  | 0.1974 | -4.1318  | 0.3531 | -2.8212  | 0.2707 | -1.4261  | 0.4048 |
| $\omega^{c8}$        | -2.4028  | 0.2186 | -1.1580  | 0.2925 | -3.4517  | 0.2537 | -1.1279  | 0.2737 | -0.3075  | 0.3794 |
| $\omega^{c9}$        | -2.7057  | 0.2759 | -1.3317  | 0.2195 | -2.1590  | 0.2181 | -2.2173  | 0.3080 | -0.9542  | 0.3798 |
| $\omega^{c10}$       | -1.8166  | 0.2177 | -1.5024  | 0.4170 | -2.7942  | 0.2266 | -1.2746  | 0.2777 | -1.2607  | 0.3880 |
| $\alpha_o^c$         | 0.7230   | 0.0185 | 0.9251   | 0.0155 | 0.6678   | 0.0224 | 0.7681   | 0.0240 | 0.9226   | 0.0153 |
| $\alpha_c^c$         | 0.6284   | 0.0215 | 0.4707   | 0.0139 | 0.8490   | 0.0306 | 0.5643   | 0.0296 | 0.4946   | 0.0157 |
| $\tilde{\nu}_1^c$    | -0.5575  | 0.2281 | -2.0391  | 0.1765 | -0.1483  | 0.1925 | -0.6241  | 0.1920 | -1.4524  | 0.4524 |
| $\tilde{\nu}_2^c$    | -0.0887  | 0.1692 | 0.7559   | 0.2098 | 0.1664   | 0.1773 | -0.2110  | 0.2054 | 0.2149   | 0.3648 |
| $\tilde{\nu}_3^c$    | -0.0308  | 0.2625 | 0.3161   | 0.2432 | -0.1315  | 0.2172 | -0.0250  | 0.3859 | 0.7260   | 0.5592 |
| $\tilde{\nu}_4^c$    | 0.4916   | 0.1659 | 1.2471   | 0.1573 | 0.1120   | 0.1397 | 0.4589   | 0.1787 | 0.4206   | 0.2635 |
| Seasonality          |          |        |          |        |          |        |          |        |          |        |
| $\nu_1$              | 0.0643   | 0.0347 | -0.2941  | 0.0347 | -0.0508  | 0.0451 | -0.1802  | 0.0369 | -0.0775  | 0.0347 |
| $\nu_2$              | 0.2702   | 0.0350 | -0.0072  | 0.0351 | 0.0363   | 0.0443 | 0.0301   | 0.0502 | 0.0190   | 0.0401 |
| $\nu_3$              | -0.0925  | 0.0314 | -0.2726  | 0.0355 | -0.0623  | 0.0428 | -0.2046  | 0.0364 | -0.1859  | 0.0330 |
| $\nu_4$              | -0.1710  | 0.0295 | -0.3323  | 0.0331 | -0.1904  | 0.0417 | -0.1865  | 0.0360 | -0.1413  | 0.0302 |
| $\nu_5$              | 0.4334   | 0.0397 | 0.4566   | 0.0364 | 0.2013   | 0.0448 | 0.2979   | 0.0405 | 0.3101   | 0.0375 |
| $\nu_6$              | -0.0903  | 0.0311 | -0.1375  | 0.0305 | -0.0787  | 0.0394 | -0.1470  | 0.0334 | -0.1174  | 0.0316 |
| $\nu_7$              | 0.0028   | 0.0308 | 0.1423   | 0.0327 | -0.0201  | 0.0414 | 0.1077   | 0.0387 | 0.0764   | 0.0323 |
| $\nu_8$              | -0.1231  | 0.0306 | 0.0640   | 0.0337 | -0.0013  | 0.0416 | 0.0847   | 0.0385 | -0.0120  | 0.0290 |
| $\varpi$             | -2.6389  | 0.2153 | -2.6621  | 0.2186 | -2.4749  | 0.2714 | -1.6733  | 0.1943 | -2.8561  | 0.2309 |
| Covariates           |          |        |          |        |          |        |          |        |          |        |
| $\gamma_{P/L\ 1}^o$  | -0.0340  | 0.0116 | -0.0349  | 0.0088 | -0.0647  | 0.0188 | -0.0305  | 0.0115 | -0.0400  | 0.0126 |
| $\gamma_{P/L\ pf}^o$ | 0.0093   | 0.0616 | -0.0591  | 0.0313 | 0.0826   | 0.0537 | 0.0396   | 0.0376 | -0.0090  | 0.0325 |
| $\gamma_{vol}^o$     | -0.0989  | 0.0305 | 0.1002   | 0.0363 | -0.0822  | 0.1147 | -0.2129  | 0.0529 | -0.1180  | 0.0519 |
| $\gamma_{P/L\ 1}^c$  | 0.0609   | 0.0157 | -0.0188  | 0.0183 | -0.0508  | 0.0096 | 0.0543   | 0.0083 | 0.0059   | 0.0372 |
| $\gamma_{P/L\ pf}^c$ | 0.1282   | 0.0486 | 0.1028   | 0.0279 | 0.4339   | 0.0490 | 0.1759   | 0.0492 | 0.1057   | 0.0401 |
| $\gamma_{vol}^c$     | 0.0200   | 0.0437 | -0.0051  | 0.0381 | 0.2933   | 0.1252 | 0.5594   | 0.1105 | 0.1622   | 0.0694 |
| no obs.              | 3179     |        | 3116     |        | 1235     |        | 2110     |        | 3029     |        |
| mean ll              | -6.20839 |        | -7.93035 |        | -7.26371 |        | -7.11106 |        | -6.74751 |        |

**Table 4:** Estimation results for investor groups 16 to 20. The  $\gamma_i$  coefficients on the covariates should be interpreted as follows: superscript “o” for opening intensity, superscript “c” for closing intensity. The subscripts stand for the corresponding variable, where “P/L 1” is the paper profit/loss in the corresponding currency pair, “P/L pf” is the paper profit/loss in the total portfolio and “vol” is the standardized excess trading volume. All other coefficients are detailed in the main text. “mean ll” stands for the mean log-likelihood. Quasi-maximum likelihood standard errors reported.

## B Web-Appendix: Estimation Outputs (Full Model)

| Par.                 | 1        |        | 2        |        | 3        |        | 4        |        | 5        |        |
|----------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|                      | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   |
| Baseline Intensity   |          |        |          |        |          |        |          |        |          |        |
| $\omega^{o1}$        | -3.6284  | 0.3775 | -2.4906  | 0.4631 | -2.8975  | 0.3182 | -1.4124  | 0.2991 | -2.3245  | 0.5343 |
| $\omega^{o2}$        | -3.8955  | 0.4145 | -1.7540  | 0.3451 | -3.4619  | 0.3191 | -1.8625  | 0.3209 | -2.0364  | 0.3387 |
| $\omega^{o3}$        | -3.6775  | 0.3526 | -2.2092  | 0.3692 | -2.4387  | 0.2514 | -2.4552  | 0.3795 | -1.7086  | 0.3417 |
| $\omega^{o4}$        | -3.8527  | 0.4767 | -2.2015  | 0.4054 | -2.5750  | 0.2755 | -1.6199  | 0.3582 | -2.2057  | 0.3472 |
| $\omega^{o5}$        | -3.1539  | 0.3656 | -2.4107  | 0.3840 | -2.2109  | 0.2308 | -1.1625  | 0.2820 | -1.3753  | 0.4820 |
| $\omega^{o6}$        | -2.1340  | 0.3154 | -2.2233  | 0.3255 | -2.3672  | 0.2281 | -2.3157  | 0.3391 | -0.6396  | 0.3093 |
| $\omega^{o7}$        | -3.6935  | 0.3471 | -1.9028  | 0.3337 | -2.7160  | 0.3307 | -2.0883  | 0.3371 | -2.0297  | 0.3925 |
| $\omega^{o8}$        | -3.6341  | 0.4519 | -1.5522  | 0.2967 | -2.9131  | 0.2565 | -2.4318  | 0.2997 | -1.9057  | 0.3794 |
| $\omega^{o9}$        | -2.8393  | 0.4622 | -1.3975  | 0.3299 | -1.8589  | 0.4326 | -2.3188  | 0.3431 | -1.9200  | 0.3469 |
| $\omega^{o10}$       | -2.9351  | 0.3701 | -1.8846  | 0.3533 | -3.1482  | 0.2550 | -2.1186  | 0.3396 | -1.9857  | 0.3399 |
| $\alpha_o^o$         | 0.4902   | 0.0141 | 1.0236   | 0.0347 | 0.8842   | 0.0261 | 0.7622   | 0.0397 | 0.5743   | 0.0193 |
| $\alpha_c^o$         | 0.8225   | 0.0353 | 0.1877   | 0.0241 | 0.3866   | 0.0293 | 0.4618   | 0.0422 | 0.6175   | 0.0262 |
| $\tilde{\nu}_1^o$    | -0.4038  | 0.1834 | -1.1763  | 0.3352 | -0.8689  | 0.2377 | -0.6549  | 0.2500 | -0.5246  | 0.3047 |
| $\tilde{\nu}_2^o$    | 0.2328   | 0.1519 | -0.1915  | 0.3852 | 0.2367   | 0.2817 | -0.2838  | 0.2054 | -0.0329  | 0.3969 |
| $\tilde{\nu}_3^o$    | 0.4909   | 0.3111 | 0.4681   | 0.5254 | 0.2512   | 0.3673 | 0.2860   | 0.3058 | 0.4704   | 0.4526 |
| $\tilde{\nu}_4^o$    | 0.2546   | 0.1596 | 1.0406   | 0.1993 | 0.8864   | 0.1849 | 0.2512   | 0.1932 | 0.1492   | 0.1893 |
| $\omega^{c1}$        | -3.4514  | 0.5650 | -2.8299  | 0.4715 | -3.3544  | 0.3002 | -1.0282  | 0.2513 | -3.4822  | 0.4085 |
| $\omega^{c2}$        | -3.2566  | 0.5455 | -3.5309  | 0.4779 | -3.1629  | 0.3587 | -2.0671  | 0.2549 | -3.9555  | 0.3841 |
| $\omega^{c3}$        | -2.3837  | 0.5278 | -1.0157  | 0.4955 | -3.4047  | 0.2917 | -2.5084  | 0.2643 | -2.9655  | 0.3628 |
| $\omega^{c4}$        | -3.4616  | 0.5303 | -1.8366  | 0.4937 | -2.1960  | 0.3139 | -0.5355  | 0.2707 | -1.2371  | 0.5083 |
| $\omega^{c5}$        | -2.7495  | 0.5464 | -1.1753  | 0.5853 | -3.0047  | 0.2895 | -1.5874  | 0.2520 | -3.5945  | 0.4628 |
| $\omega^{c6}$        | -2.6478  | 0.4977 | -2.9194  | 0.4521 | -2.7212  | 0.2793 | -2.3922  | 0.2641 | -2.1842  | 0.3099 |
| $\omega^{c7}$        | -2.5675  | 0.5404 | -1.2326  | 0.4958 | -2.6827  | 0.3991 | -1.3885  | 0.2540 | -2.2360  | 0.4202 |
| $\omega^{c8}$        | -2.6277  | 0.6195 | -1.9132  | 0.4330 | -1.4815  | 0.3358 | -1.1852  | 0.2451 | -2.5753  | 0.3495 |
| $\omega^{c9}$        | -2.2699  | 0.5076 | -1.8094  | 0.4565 | -1.7640  | 0.4010 | -1.8303  | 0.3564 | -2.1347  | 0.3340 |
| $\omega^{c10}$       | -2.6985  | 0.4827 | -1.4734  | 0.4773 | -1.8980  | 0.2748 | -2.0203  | 0.2858 | -2.5926  | 0.3301 |
| $\alpha_o^c$         | 0.7725   | 0.0347 | 0.7694   | 0.0422 | 0.6899   | 0.0187 | 0.6346   | 0.0289 | 0.7220   | 0.0258 |
| $\alpha_c^c$         | 0.6453   | 0.0586 | 0.6599   | 0.0655 | 0.7227   | 0.0309 | 0.6677   | 0.0324 | 0.6729   | 0.0381 |
| $\tilde{\nu}_1^c$    | -0.5147  | 0.2216 | -0.8804  | 0.2600 | -0.4621  | 0.1980 | 0.0415   | 0.1095 | -0.3654  | 0.2381 |
| $\tilde{\nu}_2^c$    | -0.2453  | 0.1209 | -0.4227  | 0.1646 | 0.0415   | 0.1521 | -0.5789  | 0.1123 | -0.1753  | 0.1916 |
| $\tilde{\nu}_3^c$    | -0.3986  | 0.1892 | -0.4609  | 0.2114 | 0.0575   | 0.1995 | -0.4272  | 0.1217 | 0.2118   | 0.2200 |
| $\tilde{\nu}_4^c$    | 0.1485   | 0.2104 | 0.3239   | 0.1956 | 0.3717   | 0.1626 | 0.0874   | 0.1237 | 0.4214   | 0.1832 |
| Latent Factor        |          |        |          |        |          |        |          |        |          |        |
| $a$                  | 0.5914   | 0.3138 | 0.7143   | 0.1430 | 0.5710   | 0.0880 | 0.4803   | 0.1572 | 0.7710   | 0.0875 |
| $\delta^o$           | 0.2319   | 0.0977 | 0.1915   | 0.0594 | 0.2838   | 0.0324 | 0.3279   | 0.0494 | 0.2023   | 0.0498 |
| $\delta^c$           | -0.3699  | 0.1617 | -0.1990  | 0.0586 | -0.2677  | 0.0275 | -0.3904  | 0.0608 | -0.2736  | 0.0627 |
| Seasonality          |          |        |          |        |          |        |          |        |          |        |
| $\nu_1$              | 0.0851   | 0.0574 | -0.1059  | 0.0530 | -0.3059  | 0.0398 | -0.1245  | 0.0607 | -0.1804  | 0.0431 |
| $\nu_2$              | -0.3241  | 0.0556 | 0.3065   | 0.0626 | 0.0316   | 0.0439 | 0.1528   | 0.0676 | 0.2700   | 0.0517 |
| $\nu_3$              | -0.0243  | 0.0526 | -0.1599  | 0.0556 | -0.0986  | 0.0398 | -0.2399  | 0.0614 | 0.0026   | 0.1594 |
| $\nu_4$              | -0.2254  | 0.0520 | -0.2514  | 0.0568 | -0.2795  | 0.0397 | -0.2709  | 0.0578 | -0.2146  | 0.0445 |
| $\nu_5$              | 0.2921   | 0.0453 | 0.1260   | 0.0619 | 0.0904   | 0.0423 | 0.0915   | 0.0645 | 0.0702   | 0.0518 |
| $\nu_6$              | -0.1784  | 0.0457 | -0.0572  | 0.0509 | -0.1348  | 0.0387 | -0.2750  | 0.0546 | -0.1223  | 0.0418 |
| $\nu_7$              | 0.3130   | 0.0466 | -0.0132  | 0.0567 | 0.1229   | 0.0424 | 0.0734   | 0.0599 | 0.0070   | 0.0369 |
| $\nu_8$              | 0.1464   | 0.0494 | -0.0378  | 0.0555 | 0.0585   | 0.0413 | -0.0009  | 0.1053 | -0.0645  | 0.0434 |
| $\varpi$             | -2.4563  | 0.3242 | -2.5326  | 0.2819 | -2.5792  | 0.2270 | -2.4337  | 0.3079 | -2.2841  | 0.2519 |
| Covariates           |          |        |          |        |          |        |          |        |          |        |
| $\gamma_{P/L\ 1}^o$  | -0.0933  | 0.0136 | -0.0734  | 0.0140 | -0.0613  | 0.0075 | -0.0352  | 0.0129 | -0.0442  | 0.0247 |
| $\gamma_{P/L\ pf}^o$ | -0.0631  | 0.0325 | -0.1557  | 0.0401 | -0.0699  | 0.0319 | -0.0718  | 0.0483 | 0.0262   | 0.0635 |
| $\gamma_{vol}^o$     | -0.2865  | 0.0702 | -0.1811  | 0.1104 | -0.2003  | 0.0915 | -0.0737  | 0.0675 | -0.0501  | 0.0432 |
| $\gamma_{P/L\ 1}^c$  | 0.1241   | 0.0289 | 0.0585   | 0.0121 | 0.0370   | 0.0036 | 0.0249   | 0.0081 | 0.0542   | 0.0087 |
| $\gamma_{P/L\ pf}^c$ | -0.0218  | 0.0387 | -0.1228  | 0.0443 | 0.0023   | 0.0338 | 0.0861   | 0.0443 | -0.0120  | 0.0626 |
| $\gamma_{vol}^c$     | 0.6250   | 0.1866 | 0.1178   | 0.1315 | 0.0992   | 0.0983 | 0.0177   | 0.0666 | 0.1657   | 0.0742 |
| no obs.              | 1164     |        | 797      |        | 1694     |        | 821      |        | 1335     |        |
| mean ll              | -7.63807 |        | -7.95475 |        | -8.50758 |        | -7.86159 |        | -7.31369 |        |

**Table 5:** Estimation results for investor groups 1 to 5. The  $\gamma_i$  coefficients on the covariates should be interpreted as follows: superscript “o” for opening intensity, superscript “c” for closing intensity. The subscripts stand for the corresponding variable, where “P/L 1” is the paper profit/loss in the corresponding currency pair, “P/L pf” is the paper profit/loss in the total portfolio and “vol” is the standardized excess trading volume. All other coefficients are detailed in the main text. “mean ll” stands for the mean log-likelihood. Quasi-maximum likelihood standard errors reported.

| Par.                 | 6        |        | 7        |        | 8        |        | 9        |        | 10       |        |
|----------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|                      | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   |
| Baseline Intensity   |          |        |          |        |          |        |          |        |          |        |
| $\omega^{o1}$        | -2.1869  | 0.3564 | -1.6789  | 0.2801 | -1.1182  | 0.2259 | -3.1901  | 0.3924 | -2.7502  | 0.3898 |
| $\omega^{o2}$        | -1.6711  | 0.3067 | -2.1429  | 0.3717 | -2.5649  | 0.3811 | -2.6546  | 0.4071 | -3.0036  | 0.3909 |
| $\omega^{o3}$        | -2.2701  | 0.3334 | -2.0492  | 0.2885 | -0.2418  | 0.3217 | -2.1193  | 0.3816 | -2.6262  | 0.3799 |
| $\omega^{o4}$        | -1.4397  | 0.2502 | -1.0109  | 0.1987 | -2.2268  | 0.2610 | -2.3702  | 0.3676 | -2.4733  | 0.4151 |
| $\omega^{o5}$        | -1.9343  | 0.2687 | -1.0690  | 0.2317 | -1.3293  | 0.2472 | -2.7900  | 0.3927 | -2.5371  | 0.4109 |
| $\omega^{o6}$        | -1.9205  | 0.2314 | -2.4441  | 0.2754 | -2.9930  | 0.3718 | -3.0183  | 0.3920 | -2.7531  | 0.3718 |
| $\omega^{o7}$        | -1.9855  | 0.2626 | -2.5269  | 0.3254 | -1.2090  | 0.2325 | -2.2254  | 0.3590 | -3.3512  | 0.3876 |
| $\omega^{o8}$        | -2.4954  | 0.2989 | -2.3018  | 0.3066 | -1.3105  | 0.2837 | -3.4513  | 0.4232 | -2.8744  | 0.3862 |
| $\omega^{o9}$        | -2.8276  | 0.2526 | -1.9981  | 0.3284 | -2.1234  | 0.3184 | -4.2520  | 0.5343 | -2.3342  | 0.5168 |
| $\omega^{o10}$       | -2.2063  | 0.2865 | -2.3509  | 0.2917 | -1.4138  | 0.2242 | -3.0942  | 0.3833 | -2.8531  | 0.4698 |
| $\alpha_o^o$         | 0.7970   | 0.0291 | 0.5511   | 0.0147 | 0.9636   | 0.0197 | 0.9872   | 0.0265 | 0.8443   | 0.0322 |
| $\alpha_c^o$         | 0.4460   | 0.0232 | 0.6461   | 0.0216 | 0.2931   | 0.0130 | 0.3465   | 0.0195 | 0.4266   | 0.0403 |
| $\tilde{\nu}_1^o$    | -0.5865  | 0.2219 | -0.5245  | 0.1855 | -1.5045  | 0.1880 | -0.8349  | 0.2198 | -0.7880  | 0.2763 |
| $\tilde{\nu}_2^o$    | -0.1092  | 0.2194 | -0.0016  | 0.0217 | 0.2171   | 0.1907 | 0.2825   | 0.3369 | 0.2531   | 0.3055 |
| $\tilde{\nu}_3^o$    | -0.5697  | 0.3232 | 0.2807   | 0.2133 | -0.2018  | 0.2961 | 0.9617   | 0.6161 | 0.9936   | 0.5470 |
| $\tilde{\nu}_4^o$    | 0.6745   | 0.2485 | 0.3477   | 0.2104 | 1.2804   | 0.2018 | 0.4847   | 0.2233 | 0.7574   | 0.2278 |
| $\omega^{c1}$        | -2.9051  | 0.5037 | -2.3053  | 0.3169 | -3.1634  | 0.2704 | -3.0887  | 0.3730 | -2.8176  | 0.3756 |
| $\omega^{c2}$        | -1.9529  | 0.4020 | -3.1209  | 0.5710 | -3.9727  | 0.3319 | -3.0590  | 0.3347 | -3.8430  | 0.4013 |
| $\omega^{c3}$        | -2.8976  | 0.4231 | -2.6875  | 0.2956 | -3.4355  | 0.4540 | -2.9393  | 0.2987 | -3.7997  | 0.4137 |
| $\omega^{c4}$        | -2.1198  | 0.3724 | -1.6356  | 0.2020 | -3.5073  | 0.3272 | -2.2874  | 0.3057 | -1.9292  | 0.4188 |
| $\omega^{c5}$        | -3.4665  | 0.4165 | -1.7162  | 0.2618 | -3.1283  | 0.2973 | -3.1625  | 0.3266 | -2.9672  | 0.4042 |
| $\omega^{c6}$        | -0.4489  | 0.2549 | -2.8303  | 0.2857 | -3.6515  | 0.3786 | -3.8338  | 0.3329 | -3.5023  | 0.3673 |
| $\omega^{c7}$        | -0.8734  | 0.2669 | -3.0252  | 0.3474 | -3.2902  | 0.2808 | -2.3520  | 0.2771 | -3.8075  | 0.3749 |
| $\omega^{c8}$        | -3.0486  | 0.4225 | -2.9338  | 0.3130 | -3.5934  | 0.3171 | -3.5048  | 0.3781 | -3.4653  | 0.3857 |
| $\omega^{c9}$        | -0.6166  | 0.4690 | -3.0348  | 0.3347 | -4.5536  | 0.3179 | -4.4217  | 0.5306 | -1.5939  | 0.3694 |
| $\omega^{c10}$       | -2.3609  | 0.4222 | -1.9775  | 0.4334 | -3.2791  | 0.2513 | -3.1196  | 0.3519 | -2.1916  | 0.3975 |
| $\alpha_c^c$         | 0.7655   | 0.0334 | 0.6951   | 0.0219 | 0.5956   | 0.0226 | 0.7100   | 0.0282 | 0.5577   | 0.0240 |
| $\alpha_c^c$         | 0.6636   | 0.0392 | 0.7809   | 0.0293 | 0.9116   | 0.0304 | 0.8190   | 0.0430 | 0.9079   | 0.0445 |
| $\tilde{\nu}_1^c$    | -0.5634  | 0.2570 | -0.2125  | 0.2769 | -0.0564  | 0.2026 | -0.2789  | 0.1484 | -0.0753  | 0.1804 |
| $\tilde{\nu}_2^c$    | -0.1199  | 0.1924 | -0.4054  | 0.2203 | 0.0556   | 0.1857 | -0.0828  | 0.1375 | -0.0278  | 0.1580 |
| $\tilde{\nu}_3^c$    | -0.0488  | 0.2043 | -0.3038  | 0.1998 | -0.1724  | 0.2792 | -0.0973  | 0.2294 | -0.0662  | 0.1637 |
| $\tilde{\nu}_4^c$    | 0.2937   | 0.2122 | 0.3906   | 0.1593 | -0.1140  | 0.1872 | 0.0232   | 0.1624 | 0.3141   | 0.1453 |
| Latent Factor        |          |        |          |        |          |        |          |        |          |        |
| $a$                  | 0.5329   | 0.1276 | 0.3747   | 0.1060 | 0.9040   | 0.0773 | 0.9001   | 0.0444 | 0.5129   | 0.0906 |
| $\delta^o$           | 0.3964   | 0.0505 | 0.5078   | 0.0343 | 0.0825   | 0.0384 | 0.1104   | 0.0355 | 0.2715   | 0.0401 |
| $\delta^c$           | -0.4702  | 0.0588 | -0.7087  | 0.0461 | -0.0906  | 0.0403 | -0.1177  | 0.0361 | -0.3014  | 0.0463 |
| Seasonality          |          |        |          |        |          |        |          |        |          |        |
| $\nu_1$              | -0.4220  | 0.0642 | -0.2720  | 0.0571 | -0.2125  | 0.0376 | -0.2460  | 0.0405 | -0.1068  | 0.0525 |
| $\nu_2$              | 0.0185   | 0.0606 | -0.0687  | 0.0474 | -0.0411  | 0.0373 | 0.2408   | 0.0479 | 0.0866   | 0.0603 |
| $\nu_3$              | -0.2027  | 0.0552 | -0.0814  | 0.0437 | -0.1119  | 0.0357 | -0.1698  | 0.0443 | -0.1622  | 0.0552 |
| $\nu_4$              | 0.0354   | 0.0570 | -0.1236  | 0.0409 | -0.0609  | 0.0350 | -0.2218  | 0.0431 | -0.1690  | 0.0512 |
| $\nu_5$              | 0.2464   | 0.0705 | 0.4391   | 0.0521 | 0.3809   | 0.0385 | 0.1986   | 0.0496 | 0.5465   | 0.0585 |
| $\nu_6$              | -0.1339  | 0.0620 | 0.1762   | 0.0496 | 0.0317   | 0.0365 | -0.1258  | 0.0411 | -0.0979  | 0.0529 |
| $\nu_7$              | -0.0449  | 0.0623 | 0.1233   | 0.0462 | 0.2002   | 0.0381 | 0.0477   | 0.0440 | -0.0306  | 0.0564 |
| $\nu_8$              | 0.0556   | 0.0488 | -0.0443  | 0.0433 | 0.0367   | 0.0353 | -0.0444  | 0.0431 | -0.0596  | 0.0537 |
| $\varpi$             | -2.2104  | 0.3039 | -1.8763  | 0.2801 | -1.5748  | 0.1452 | -1.7620  | 0.1986 | -4.0233  | 0.5767 |
| Covariates           |          |        |          |        |          |        |          |        |          |        |
| $\gamma_{P/L\ 1}^o$  | -0.0547  | 0.0106 | -0.0216  | 0.0087 | -0.0859  | 0.0108 | -0.0626  | 0.0090 | -0.0631  | 0.0133 |
| $\gamma_{P/L\ pf}^o$ | -0.0654  | 0.0295 | 0.0274   | 0.0195 | 0.1734   | 0.0354 | 0.2720   | 0.0460 | 0.0097   | 0.0494 |
| $\gamma_{vol}^o$     | -0.2292  | 0.0962 | -0.1113  | 0.0470 | -0.2056  | 0.0675 | -0.1020  | 0.0671 | -0.0087  | 0.0801 |
| $\gamma_{P/L\ 1}^c$  | 0.0117   | 0.0127 | 0.0564   | 0.0083 | -0.0164  | 0.0370 | 0.0352   | 0.0058 | 0.0454   | 0.0113 |
| $\gamma_{P/L\ pf}^c$ | -0.0067  | 0.0203 | -0.0215  | 0.0260 | 0.2098   | 0.0490 | 0.3435   | 0.0714 | 0.0946   | 0.0378 |
| $\gamma_{vol}^c$     | 0.1814   | 0.1323 | 0.1182   | 0.0782 | 0.2018   | 0.0848 | 0.0206   | 0.0793 | 0.0815   | 0.1427 |
| no obs.              | 1130     |        | 1665     |        | 2267     |        | 1390     |        | 1008     |        |
| mean ll              | -5.84168 |        | -5.34914 |        | -6.79977 |        | -7.10151 |        | -7.70659 |        |

**Table 6:** Estimation results for investor groups 6 to 10. The  $\gamma$  coefficients on the covariates should be interpreted as follows: superscript “o” for opening intensity, superscript “c” for closing intensity. The subscripts stand for the corresponding variable, where “P/L 1” is the paper profit/loss in the corresponding currency pair, “P/L pf” is the paper profit/loss in the total portfolio and “vol” is the standardized excess trading volume. All other coefficients are detailed in the main text. “mean ll” stands for the mean log-likelihood. Quasi-maximum likelihood standard errors reported.

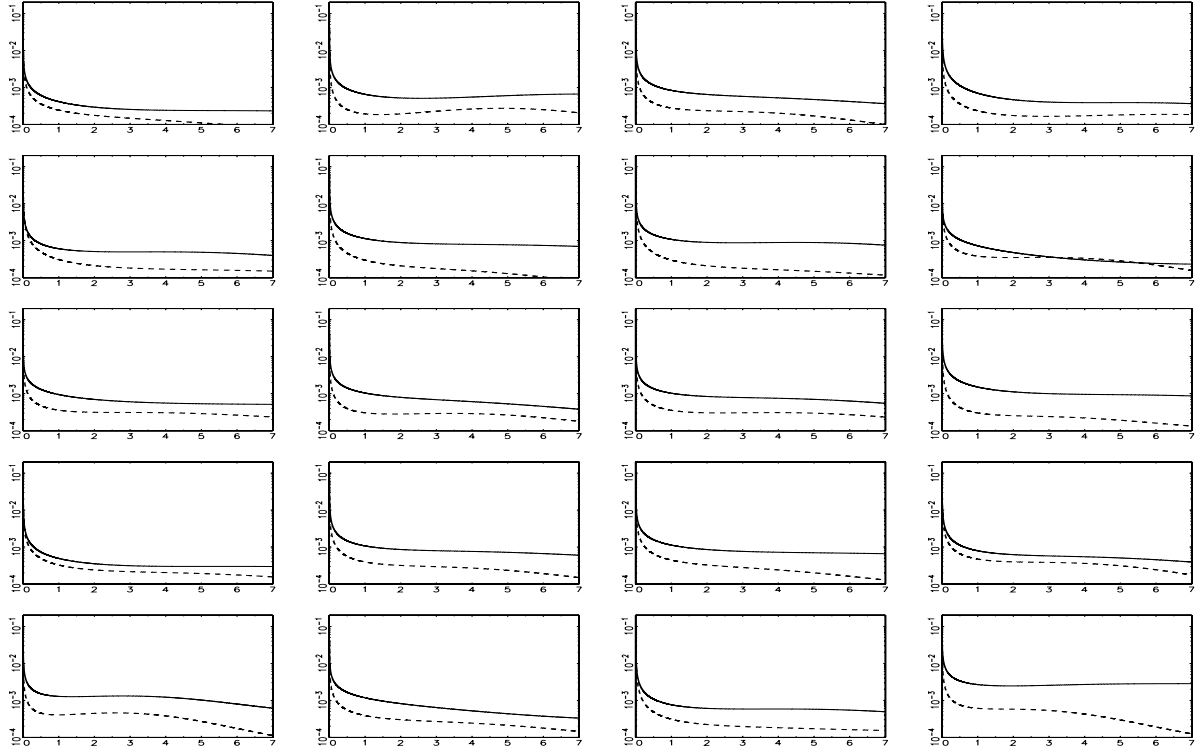
| Par.                 | 11       |        | 12       |        | 13       |        | 14       |        | 15       |        |
|----------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|                      | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   |
| Baseline Intensity   |          |        |          |        |          |        |          |        |          |        |
| $\omega^{o1}$        | -2.2436  | 0.2995 | -2.2636  | 0.4076 | -2.7227  | 0.2634 | -2.6730  | 0.2820 | -1.8225  | 0.1610 |
| $\omega^{o2}$        | -2.2102  | 0.3716 | -1.7983  | 0.3866 | -1.9614  | 0.2221 | -1.7475  | 0.2511 | -1.8619  | 0.1537 |
| $\omega^{o3}$        | -1.8588  | 0.2841 | -1.7098  | 0.3790 | -2.9679  | 0.2246 | -2.6790  | 0.2865 | -2.1972  | 0.2132 |
| $\omega^{o4}$        | -2.9310  | 0.3425 | -2.0808  | 0.4072 | -2.1364  | 0.2673 | -2.4264  | 0.2853 | -2.3927  | 0.2864 |
| $\omega^{o5}$        | -2.6933  | 0.3084 | -2.1743  | 0.4217 | -2.1875  | 0.2280 | -2.1260  | 0.2584 | -1.6652  | 0.1687 |
| $\omega^{o6}$        | -2.9786  | 0.3283 | -1.8301  | 0.4236 | -1.7857  | 0.1990 | -2.1029  | 0.2617 | -2.5246  | 0.1768 |
| $\omega^{o7}$        | -1.8145  | 0.2864 | -2.6743  | 0.4021 | -2.1289  | 0.2373 | -2.7882  | 0.3174 | -2.6713  | 0.2479 |
| $\omega^{o8}$        | -2.6797  | 0.3458 | -1.9026  | 0.4007 | -2.4773  | 0.2559 | -2.6071  | 0.2838 | -2.4395  | 0.2096 |
| $\omega^{o9}$        | -2.6178  | 0.3428 | -1.9450  | 0.4041 | -2.2023  | 0.2261 | -2.2985  | 0.3024 | -1.6427  | 0.1776 |
| $\omega^{o10}$       | -3.0682  | 0.3044 | -1.8581  | 0.3839 | -1.8232  | 0.2518 | -0.7721  | 0.2620 | -2.5536  | 0.2200 |
| $\alpha_o^o$         | 0.8706   | 0.0289 | 0.5666   | 0.0186 | 0.6899   | 0.0199 | 0.7297   | 0.0203 | 0.7878   | 0.0157 |
| $\alpha_c^o$         | 0.4225   | 0.0273 | 0.5750   | 0.0291 | 0.5818   | 0.0237 | 0.5381   | 0.0256 | 0.4923   | 0.0154 |
| $\tilde{\nu}_1^o$    | -0.6073  | 0.3459 | -1.0354  | 0.2014 | -0.5218  | 0.2263 | -0.6802  | 0.3122 | -0.6466  | 0.1946 |
| $\tilde{\nu}_2^o$    | -0.0333  | 0.3618 | 0.6629   | 0.3813 | -0.1506  | 0.1333 | 0.0679   | 0.2623 | 0.1152   | 0.2305 |
| $\tilde{\nu}_3^o$    | 0.5618   | 0.5134 | 1.6427   | 0.7528 | 0.0009   | 0.0734 | 0.1065   | 0.2613 | -0.1280  | 0.3295 |
| $\tilde{\nu}_4^o$    | 0.5547   | 0.2368 | 0.5939   | 0.2047 | 0.3982   | 0.1681 | 0.7399   | 0.2490 | 0.6202   | 0.1627 |
| $\omega^{c1}$        | -2.7163  | 0.3137 | -1.8383  | 0.2927 | -2.6880  | 0.2566 | -2.8735  | 0.3525 | -1.3343  | 0.2048 |
| $\omega^{c2}$        | -2.2988  | 0.4028 | -2.4466  | 0.2448 | -2.6043  | 0.2181 | -1.8362  | 0.2915 | -2.2047  | 0.1994 |
| $\omega^{c3}$        | -2.5337  | 0.2744 | -1.5508  | 0.2435 | -2.8893  | 0.2342 | -2.3686  | 0.3250 | -3.1166  | 0.2580 |
| $\omega^{c4}$        | -3.2687  | 0.3599 | -1.0974  | 0.3084 | -2.1993  | 0.2175 | -2.4985  | 0.3722 | -3.0249  | 0.2843 |
| $\omega^{c5}$        | -2.4996  | 0.3067 | -2.7767  | 0.3712 | -2.1000  | 0.2172 | -1.9347  | 0.3165 | -2.0512  | 0.2126 |
| $\omega^{c6}$        | -3.5250  | 0.3186 | -1.7849  | 0.2823 | -1.9696  | 0.1861 | -1.6775  | 0.3179 | -1.9933  | 0.2216 |
| $\omega^{c7}$        | -1.2332  | 0.2705 | -2.1843  | 0.2395 | -2.0099  | 0.2303 | -2.3422  | 0.3693 | -2.9935  | 0.3147 |
| $\omega^{c8}$        | -2.8116  | 0.4185 | -1.5447  | 0.2380 | -2.2288  | 0.3528 | -0.4709  | 0.3633 | -2.7495  | 0.2460 |
| $\omega^{c9}$        | -3.4571  | 0.3615 | -0.6863  | 0.2555 | -2.6617  | 0.2269 | -1.8842  | 0.3330 | -1.7114  | 0.2199 |
| $\omega^{c10}$       | -2.6858  | 0.3175 | -1.9873  | 0.2550 | -3.4875  | 0.3177 | -2.2842  | 0.3317 | -3.5318  | 0.2530 |
| $\alpha_c^c$         | 0.7717   | 0.0281 | 0.7915   | 0.0211 | 0.6093   | 0.0182 | 0.6466   | 0.0237 | 0.7363   | 0.0170 |
| $\alpha_o^c$         | 0.7101   | 0.0365 | 0.6128   | 0.0255 | 0.7613   | 0.0264 | 0.7682   | 0.0324 | 0.7101   | 0.0201 |
| $\tilde{\nu}_1^c$    | -0.3805  | 0.1725 | -0.2547  | 0.1667 | -0.4371  | 0.1581 | -0.7168  | 0.1974 | -0.3331  | 0.2306 |
| $\tilde{\nu}_2^c$    | -0.1690  | 0.1262 | -0.1993  | 0.1489 | -0.1877  | 0.1094 | -0.0260  | 0.1969 | -0.0516  | 0.1729 |
| $\tilde{\nu}_3^c$    | -0.2657  | 0.1676 | 0.0453   | 0.1642 | 0.0201   | 0.0870 | -0.0516  | 0.3613 | 0.2259   | 0.2403 |
| $\tilde{\nu}_4^c$    | 0.4438   | 0.1712 | 0.1330   | 0.1597 | 0.0986   | 0.1227 | 0.4321   | 0.2229 | 0.0953   | 0.1792 |
| Latent Factor        |          |        |          |        |          |        |          |        |          |        |
| $a$                  | 0.6830   | 0.2215 | 0.7205   | 0.0624 | 0.7776   | 0.1474 | 0.9070   | 0.1611 | 0.7548   | 0.1267 |
| $\delta^o$           | 0.2108   | 0.0746 | 0.2938   | 0.0451 | 0.1579   | 0.0616 | 0.1201   | 0.1128 | 0.1878   | 0.0584 |
| $\delta^c$           | -0.2265  | 0.0725 | -0.2242  | 0.0311 | -0.1751  | 0.0605 | -0.1415  | 0.1201 | -0.2137  | 0.0577 |
| Seasonality          |          |        |          |        |          |        |          |        |          |        |
| $\nu_1$              | -0.2507  | 0.0485 | -0.0677  | 0.0452 | -0.1333  | 0.0416 | -0.1680  | 0.0465 | 0.0560   | 0.0361 |
| $\nu_2$              | 0.1639   | 0.0530 | -0.0421  | 0.0437 | 0.1838   | 0.0490 | 0.2926   | 0.0480 | -0.1364  | 0.0341 |
| $\nu_3$              | -0.0444  | 0.0496 | -0.2294  | 0.0434 | -0.1982  | 0.0414 | -0.1541  | 0.0429 | -0.1205  | 0.0314 |
| $\nu_4$              | -0.2318  | 0.0497 | -0.0799  | 0.0396 | -0.3671  | 0.0433 | -0.1216  | 0.0422 | -0.2324  | 0.0301 |
| $\nu_5$              | 0.2865   | 0.0567 | 0.4129   | 0.0423 | 0.3381   | 0.0478 | 0.2592   | 0.0487 | 0.2339   | 0.0343 |
| $\nu_6$              | -0.0382  | 0.0448 | -0.0540  | 0.0413 | 0.0093   | 0.0379 | -0.1700  | 0.0429 | -0.0664  | 0.0296 |
| $\nu_7$              | 0.0874   | 0.0509 | 0.1832   | 0.0413 | 0.1441   | 0.0437 | 0.0959   | 0.0433 | 0.1473   | 0.0320 |
| $\nu_8$              | 0.0547   | 0.0489 | 0.0656   | 0.0409 | 0.0113   | 0.0361 | 0.0422   | 0.0400 | 0.0350   | 0.0316 |
| $\varpi$             | -2.7030  | 0.3217 | -1.9944  | 0.1991 | -3.0522  | 0.2959 | -2.8239  | 0.3130 | -2.7529  | 0.2455 |
| Covariates           |          |        |          |        |          |        |          |        |          |        |
| $\gamma_{P/L\ 1}^o$  | -0.0273  | 0.0212 | -0.0230  | 0.0125 | -0.0689  | 0.0141 | -0.0335  | 0.0091 | -0.0176  | 0.0143 |
| $\gamma_{P/L\ pf}^o$ | -0.0653  | 0.0432 | -0.0271  | 0.0313 | 0.1428   | 0.0427 | -0.0699  | 0.0367 | 0.0077   | 0.0348 |
| $\gamma_{vol}^o$     | -0.1734  | 0.1273 | 0.0661   | 0.1087 | -0.0664  | 0.0455 | -0.0542  | 0.0614 | -0.0466  | 0.0695 |
| $\gamma_{P/L\ 1}^c$  | -0.0107  | 0.0306 | 0.0409   | 0.0046 | 0.0369   | 0.0038 | -0.0044  | 0.0320 | -0.0182  | 0.0143 |
| $\gamma_{P/L\ pf}^c$ | 0.1296   | 0.0625 | 0.0102   | 0.0281 | 0.1045   | 0.0461 | 0.2502   | 0.0605 | 0.2783   | 0.0467 |
| $\gamma_{vol}^c$     | 0.2689   | 0.1488 | -0.0243  | 0.1020 | 0.0427   | 0.0431 | 0.1383   | 0.0838 | 0.0469   | 0.1087 |
| no obs.              | 1072     |        | 1761     |        | 1772     |        | 1558     |        | 2519     |        |
| mean ll              | -7.15364 |        | -7.19047 |        | -7.52246 |        | -6.52545 |        | -6.53033 |        |

**Table 7:** Estimation results for investor groups 11 to 15. The  $\gamma_i$  coefficients on the covariates should be interpreted as follows: superscript “o” for opening intensity, superscript “c” for closing intensity. The subscripts stand for the corresponding variable, where “P/L 1” is the paper profit/loss in the corresponding currency pair, “P/L pf” is the paper profit/loss in the total portfolio and “vol” is the standardized excess trading volume. All other coefficients are detailed in the main text. “mean ll” stands for the mean log-likelihood. Quasi-maximum likelihood standard errors reported.

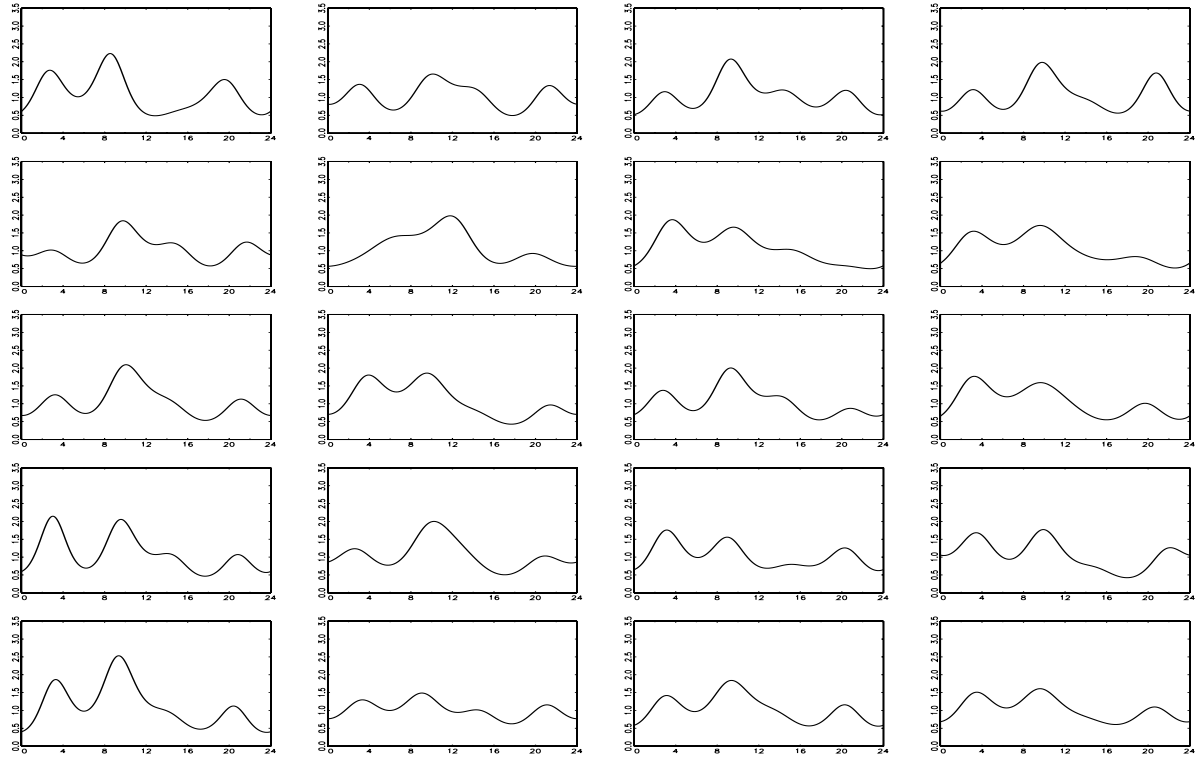


| Par.                 | 16       |        | 17       |        | 18       |        | 19       |        | 20       |        |
|----------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|                      | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   | Est.     | Std.   |
| Baseline Intensity   |          |        |          |        |          |        |          |        |          |        |
| $\omega^{o1}$        | -1.0226  | 0.1924 | -2.8291  | 0.5685 | -3.4940  | 0.2749 | -1.6080  | 0.3252 | -2.5318  | 0.5974 |
| $\omega^{o2}$        | -2.4581  | 0.2732 | -3.4752  | 0.5010 | -2.5307  | 0.2609 | -0.9847  | 0.2959 | -2.5767  | 0.5874 |
| $\omega^{o3}$        | -2.5273  | 0.2167 | -2.6817  | 0.5102 | -3.3028  | 0.2748 | -1.7420  | 0.4007 | -2.1823  | 0.5954 |
| $\omega^{o4}$        | -1.2788  | 0.1864 | -3.7193  | 0.5391 | -2.6664  | 0.2610 | -1.4662  | 0.3211 | -2.8665  | 0.5962 |
| $\omega^{o5}$        | -1.8694  | 0.2033 | -3.8207  | 0.4842 | -3.1941  | 0.3050 | -1.4505  | 0.2921 | -1.9449  | 0.5951 |
| $\omega^{o6}$        | -2.0138  | 0.2165 | -4.1164  | 0.4764 | -3.3760  | 0.2588 | -0.7666  | 0.3011 | -2.9082  | 0.5988 |
| $\omega^{o7}$        | -2.2294  | 0.2075 | -2.7774  | 0.5111 | -3.2274  | 0.3279 | -0.9105  | 0.3095 | -3.3194  | 0.6153 |
| $\omega^{o8}$        | -2.6970  | 0.2217 | -3.7054  | 0.5455 | -2.7319  | 0.2610 | -1.0607  | 0.3036 | -2.6881  | 0.5995 |
| $\omega^{o9}$        | -2.1142  | 0.2638 | -2.8365  | 0.5363 | -2.2055  | 0.2388 | -2.1881  | 0.3392 | -2.5027  | 0.5764 |
| $\omega^{o10}$       | -1.6667  | 0.1954 | -3.8529  | 0.5891 | -2.4800  | 0.2425 | -1.4519  | 0.2892 | -2.2244  | 0.5923 |
| $\alpha_o^o$         | 0.6081   | 0.0111 | 0.7514   | 0.0168 | 0.8820   | 0.0288 | 0.6758   | 0.0172 | 0.6075   | 0.0129 |
| $\alpha_c^o$         | 0.6226   | 0.0142 | 0.5143   | 0.0214 | 0.4559   | 0.0274 | 0.4634   | 0.0194 | 0.5999   | 0.0184 |
| $\tilde{\nu}_1^o$    | -0.3886  | 0.2708 | -1.4043  | 0.1856 | -0.3472  | 0.1767 | -1.0467  | 0.1684 | -1.0506  | 0.2162 |
| $\tilde{\nu}_2^o$    | -0.0796  | 0.2126 | 1.4518   | 0.6007 | 0.0032   | 0.0593 | 0.2917   | 0.2663 | 1.2589   | 0.7575 |
| $\tilde{\nu}_3^o$    | 0.1511   | 0.2908 | 2.3115   | 1.1502 | 0.0840   | 0.2346 | 0.8679   | 0.4860 | 1.9579   | 1.5345 |
| $\tilde{\nu}_4^o$    | 0.8763   | 0.1637 | 1.2283   | 0.2801 | 0.5047   | 0.1901 | 0.3110   | 0.1699 | 1.0430   | 0.4442 |
| $\omega^{c1}$        | -1.8993  | 0.2230 | -2.5904  | 0.4608 | -3.8593  | 0.3271 | -1.3417  | 0.2869 | -1.0395  | 0.6898 |
| $\omega^{c2}$        | -2.7552  | 0.2918 | -1.2854  | 0.2688 | -2.8282  | 0.2773 | -1.7372  | 0.2443 | -0.1375  | 0.6761 |
| $\omega^{c3}$        | -1.8294  | 0.2812 | -1.8409  | 0.2791 | -3.9780  | 0.2877 | -2.1134  | 0.4397 | -1.3857  | 0.6704 |
| $\omega^{c4}$        | -1.5748  | 0.2046 | -0.5373  | 0.3500 | -2.8097  | 0.2912 | -1.5315  | 0.2977 | -2.3678  | 0.7254 |
| $\omega^{c5}$        | -0.7625  | 0.2378 | -1.5979  | 0.2756 | -2.9044  | 0.3262 | -1.1342  | 0.3911 | -1.3663  | 0.6672 |
| $\omega^{c6}$        | -1.0556  | 0.2367 | -1.9215  | 0.3128 | -3.3718  | 0.2898 | -1.6796  | 0.2531 | -0.4958  | 0.5575 |
| $\omega^{c7}$        | -1.9748  | 0.2703 | -1.4444  | 0.2690 | -4.1502  | 0.3579 | -2.8406  | 0.2628 | -1.4901  | 0.6939 |
| $\omega^{c8}$        | -2.4362  | 0.2190 | -1.2254  | 0.3460 | -3.4503  | 0.2607 | -1.1644  | 0.2615 | -0.2550  | 0.6364 |
| $\omega^{c9}$        | -2.7280  | 0.2748 | -1.3584  | 0.3058 | -2.1041  | 0.2243 | -2.2702  | 0.3123 | -0.8946  | 0.6575 |
| $\omega^{c10}$       | -1.8310  | 0.2179 | -1.5558  | 0.4510 | -2.8186  | 0.2282 | -1.2896  | 0.2753 | -1.3123  | 0.6825 |
| $\alpha_c^c$         | 0.7004   | 0.0182 | 0.9147   | 0.0169 | 0.6618   | 0.0225 | 0.7567   | 0.0243 | 0.9219   | 0.0157 |
| $\alpha_c^c$         | 0.6421   | 0.0206 | 0.4858   | 0.0147 | 0.8469   | 0.0317 | 0.5802   | 0.0293 | 0.5182   | 0.0161 |
| $\tilde{\nu}_1^c$    | -0.6094  | 0.2223 | -2.0032  | 0.1824 | -0.1570  | 0.1986 | -0.6297  | 0.1890 | -1.3323  | 0.4488 |
| $\tilde{\nu}_2^c$    | -0.0749  | 0.1411 | 0.7149   | 0.2630 | 0.2009   | 0.1964 | -0.2245  | 0.1364 | 0.2332   | 0.7820 |
| $\tilde{\nu}_3^c$    | -0.0267  | 0.1739 | 0.2921   | 0.3601 | -0.0674  | 0.2527 | -0.0558  | 0.1605 | 0.6654   | 1.1509 |
| $\tilde{\nu}_4^c$    | 0.4989   | 0.1710 | 1.2238   | 0.1614 | 0.0872   | 0.1482 | 0.4682   | 0.1812 | 0.4522   | 0.2922 |
| Latent Factor        |          |        |          |        |          |        |          |        |          |        |
| $a$                  | 0.7237   | 0.0975 | 0.8897   | 0.1183 | 0.9131   | 0.0709 | 0.9093   | 0.0655 | 0.9766   | 0.0066 |
| $\delta^o$           | 0.2252   | 0.0438 | 0.0987   | 0.0716 | 0.1030   | 0.0568 | 0.0892   | 0.0387 | 0.0650   | 0.0166 |
| $\delta^c$           | -0.2995  | 0.0606 | -0.0960  | 0.0668 | -0.1325  | 0.0613 | -0.1372  | 0.0604 | -0.1220  | 0.0229 |
| Seasonality          |          |        |          |        |          |        |          |        |          |        |
| $\nu_1$              | 0.0570   | 0.0353 | -0.2962  | 0.0586 | -0.0533  | 0.0487 | -0.1777  | 0.0374 | -0.0650  | 0.0366 |
| $\nu_2$              | 0.2625   | 0.0365 | -0.0042  | 0.1021 | 0.0393   | 0.0482 | 0.0287   | 0.0400 | 0.0131   | 0.0848 |
| $\nu_3$              | -0.0949  | 0.0320 | -0.2754  | 0.0452 | -0.0602  | 0.0460 | -0.2049  | 0.0374 | -0.1833  | 0.0515 |
| $\nu_4$              | -0.1711  | 0.0305 | -0.3332  | 0.0331 | -0.1906  | 0.0447 | -0.1852  | 0.0364 | -0.1445  | 0.0320 |
| $\nu_5$              | 0.4302   | 0.0408 | 0.4505   | 0.0410 | 0.2072   | 0.0475 | 0.2943   | 0.0397 | 0.3081   | 0.0377 |
| $\nu_6$              | -0.0900  | 0.0317 | -0.1368  | 0.0307 | -0.0794  | 0.0429 | -0.1433  | 0.0330 | -0.1152  | 0.0382 |
| $\nu_7$              | 0.0037   | 0.0346 | 0.1428   | 0.0359 | -0.0215  | 0.0457 | 0.1092   | 0.0391 | 0.0707   | 0.0465 |
| $\nu_8$              | -0.1226  | 0.0309 | 0.0608   | 0.0335 | 0.0019   | 0.0457 | 0.0812   | 0.0376 | -0.0015  | 0.0733 |
| $\varpi$             | -2.6259  | 0.2169 | -2.6493  | 0.2200 | -2.4428  | 0.2873 | -1.6643  | 0.1954 | -2.8670  | 0.2352 |
| Covariates           |          |        |          |        |          |        |          |        |          |        |
| $\gamma_{P/L\ 1}^o$  | -0.0380  | 0.0108 | -0.0360  | 0.0094 | -0.0646  | 0.0127 | -0.0343  | 0.0108 | -0.0402  | 0.0126 |
| $\gamma_{P/L\ pf}^o$ | 0.0153   | 0.0451 | -0.0495  | 0.0426 | 0.0745   | 0.0520 | 0.0359   | 0.0361 | -0.0151  | 0.0326 |
| $\gamma_{vol}^o$     | -0.0948  | 0.0312 | 0.0987   | 0.0364 | -0.0715  | 0.1169 | -0.2150  | 0.0527 | -0.1162  | 0.0523 |
| $\gamma_{P/L\ 1}^c$  | 0.0589   | 0.0166 | -0.0192  | 0.0204 | -0.0521  | 0.0101 | 0.0560   | 0.0085 | 0.0006   | 0.0450 |
| $\gamma_{P/L\ pf}^c$ | 0.1359   | 0.0476 | 0.0959   | 0.0302 | 0.4469   | 0.0558 | 0.1746   | 0.0501 | 0.1327   | 0.0476 |
| $\gamma_{vol}^c$     | 0.0132   | 0.0443 | -0.0021  | 0.0824 | 0.2670   | 0.1261 | 0.5811   | 0.1133 | 0.1646   | 0.0711 |
| no obs.              | 3179     |        | 3116     |        | 1235     |        | 2110     |        | 3029     |        |
| mean ll              | -6.19339 |        | -7.93035 |        | -7.25390 |        | -7.09969 |        | -6.72727 |        |

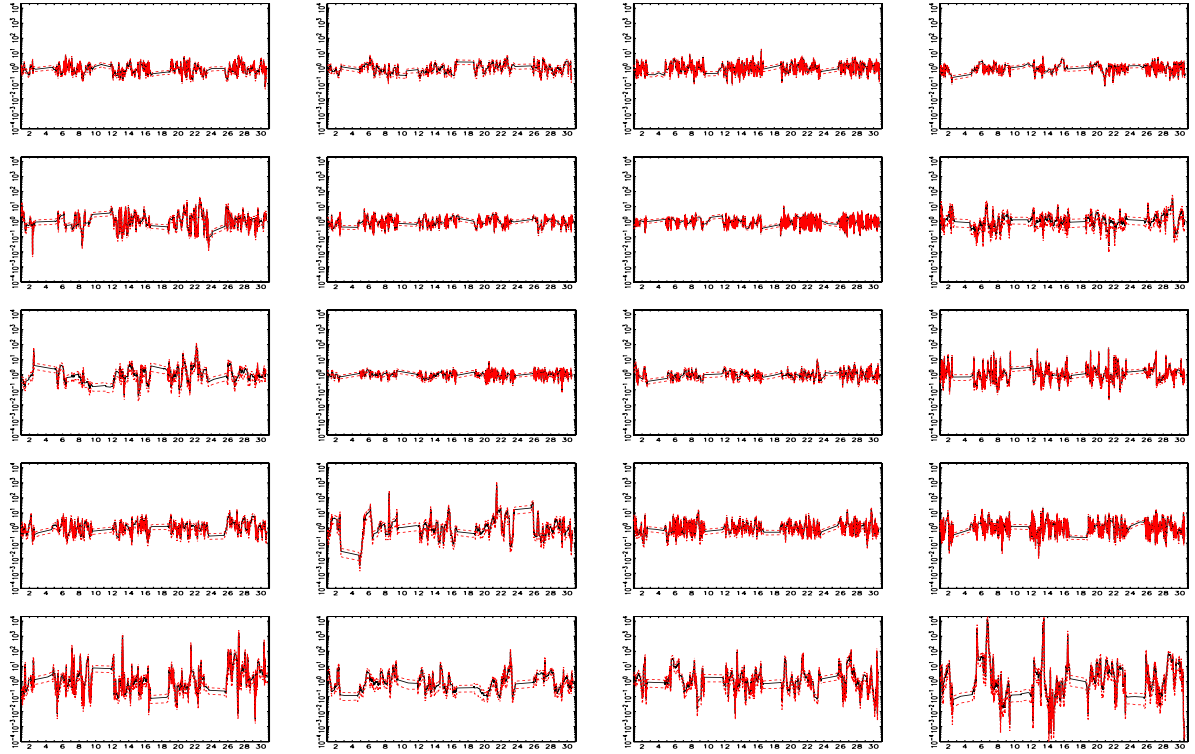
**Table 8:** Estimation results for investor groups 16 to 20. The  $\gamma_i$  coefficients on the covariates should be interpreted as follows: superscript “o” for opening intensity, superscript “c” for closing intensity. The subscripts stand for the corresponding variable, where “P/L 1” is the paper profit/loss in the corresponding currency pair, “P/L pf” is the paper profit/loss in the total portfolio and “vol” is the standardized excess trading volume. All other coefficients are detailed in the main text. “mean ll” stands for the mean log-likelihood. Quasi-maximum likelihood standard errors reported.



**Figure 1:** Opening (solid) and closing (dashed) baseline intensities for all 20 investor groups over 7 days. The plots correspond from the upper left panel to the lower right one to investor groups 1 to 20.



**Figure 2:** Diurnal seasonality patterns of trading activity for all 20 investor groups. The plots correspond from the upper left panel to the lower right one to investor groups 1 to 20. The x-axes always denote time of day in Eastern Standard Time.



**Figure 3:** Smoothed estimates (solid line) of the latent factor for all 20 investor groups. The plots correspond from the upper left panel to the lower right one to investor groups 1 to 20. The x-axes always denote times measured in days, the y-axes are presented on a log scale. The dashed lines mark 95% confidence bounds.

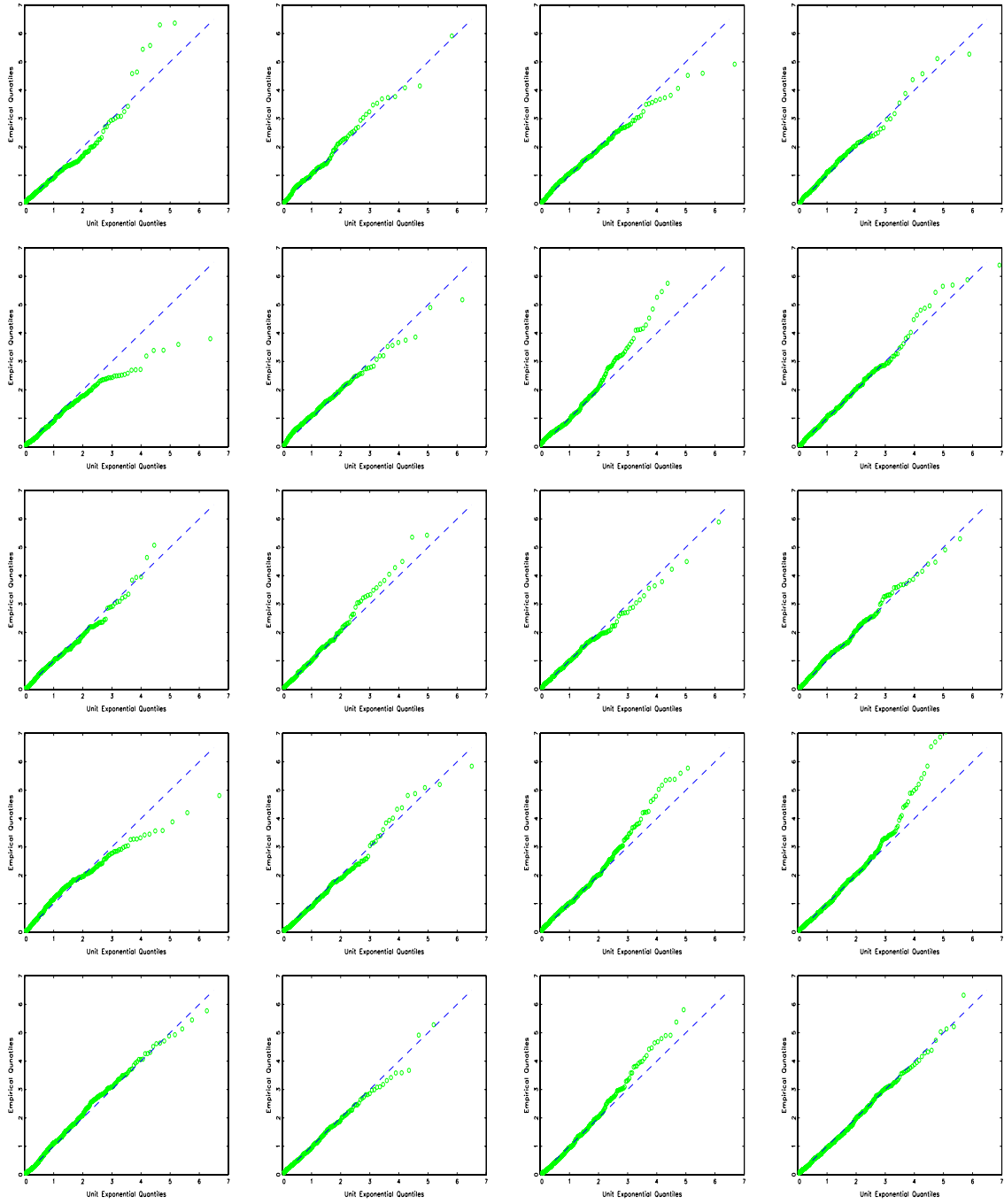
## C Web-Appendix: Model Diagnostics

|          | 1       |        |         |       | 2       |       |         |       |
|----------|---------|--------|---------|-------|---------|-------|---------|-------|
|          | open    |        | close   |       | open    |       | close   |       |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res   |
| mean     | 1420.94 | 0.97   | 4981.64 | 0.96  | 3191.45 | 0.95  | 4352.23 | 0.99  |
| std      | 3496.11 | 1.07   | 7343.19 | 1.29  | 5072.74 | 0.90  | 6673.03 | 1.04  |
| LB(20)   | 520.80  | 24.82  | 32.22   | 32.37 | 77.89   | 25.83 | 110.50  | 36.46 |
| LB(50)   | 800.40  | 53.06  | 58.46   | 82.57 | 138.55  | 65.75 | 163.72  | 69.85 |
| BDS(m=2) | 10.53   | 1.91   | 1.32    | 0.25  | -1.27   | -1.01 | 1.87    | 2.96  |
| BDS(m=3) | 12.61   | 2.41   | 0.92    | -0.12 | 0.79    | -0.45 | 2.36    | 2.30  |
|          | 3       |        |         |       | 4       |       |         |       |
|          | open    |        | close   |       | open    |       | close   |       |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res   |
| mean     | 1689.73 | 0.97   | 2241.79 | 0.99  | 3054.79 | 0.93  | 5638.88 | 1.03  |
| std      | 3530.27 | 0.88   | 4884.67 | 0.97  | 5598.77 | 0.86  | 9369.65 | 1.03  |
| LB(20)   | 117.48  | 74.40  | 239.17  | 59.70 | 109.87  | 19.01 | 42.98   | 21.76 |
| LB(50)   | 186.97  | 117.71 | 314.75  | 80.53 | 156.79  | 33.41 | 111.97  | 55.47 |
| BDS(m=2) | 2.26    | 3.53   | 3.37    | 3.06  | 4.58    | -0.19 | 2.16    | -1.86 |
| BDS(m=3) | 3.61    | 3.75   | 3.34    | 3.44  | 6.61    | 0.07  | 3.38    | -1.49 |
|          | 5       |        |         |       | 6       |       |         |       |
|          | open    |        | close   |       | open    |       | close   |       |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res   |
| mean     | 1365.27 | 0.99   | 2741.27 | 1.01  | 1095.52 | 1.00  | 1681.83 | 1.04  |
| std      | 3404.54 | 1.10   | 5206.90 | 1.07  | 3339.12 | 0.93  | 4948.79 | 1.17  |
| LB(20)   | 223.21  | 58.91  | 64.97   | 15.99 | 83.08   | 31.84 | 52.50   | 11.44 |
| LB(50)   | 422.03  | 131.54 | 83.29   | 33.93 | 103.49  | 59.28 | 83.61   | 23.98 |
| BDS(m=2) | 6.85    | 1.62   | 5.54    | -0.51 | 1.90    | 2.13  | 3.63    | 1.77  |
| BDS(m=3) | 8.92    | 2.81   | 5.50    | -1.32 | 3.15    | 2.79  | 4.88    | 1.64  |
|          | 7       |        |         |       | 8       |       |         |       |
|          | open    |        | close   |       | open    |       | close   |       |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res   |
| mean     | 714.97  | 1.03   | 1994.36 | 1.12  | 809.38  | 0.97  | 1016.77 | 0.99  |
| std      | 2864.14 | 1.10   | 5707.96 | 1.30  | 3042.63 | 1.00  | 3437.20 | 0.99  |
| LB(20)   | 632.12  | 139.65 | 319.92  | 21.92 | 391.20  | 57.05 | 285.90  | 26.03 |
| LB(50)   | 1012.91 | 177.36 | 333.82  | 53.43 | 435.42  | 88.48 | 311.86  | 43.77 |
| BDS(m=2) | 9.74    | 5.84   | 14.58   | 1.00  | 4.29    | 4.40  | 6.96    | 2.27  |
| BDS(m=3) | 11.97   | 6.65   | 15.89   | 1.15  | 4.67    | 4.88  | 8.11    | 2.45  |
|          | 9       |        |         |       | 10      |       |         |       |
|          | open    |        | close   |       | open    |       | close   |       |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res   |
| mean     | 1138.45 | 0.98   | 2019.25 | 1.00  | 2386.93 | 0.95  | 4153.52 | 1.00  |
| std      | 2541.68 | 0.92   | 4806.17 | 1.10  | 4192.04 | 0.88  | 7233.52 | 1.12  |
| LB(20)   | 245.04  | 44.76  | 104.04  | 29.19 | 30.44   | 12.43 | 24.07   | 44.77 |
| LB(50)   | 297.71  | 77.03  | 147.71  | 92.27 | 60.27   | 30.83 | 45.33   | 69.04 |
| BDS(m=2) | 6.10    | 1.88   | 2.54    | 0.09  | 0.23    | 0.43  | 2.18    | 2.63  |
| BDS(m=3) | 6.70    | 1.21   | 4.49    | 0.91  | -0.09   | 0.74  | 3.29    | 3.35  |

**Table 9:** Diagnostics for the raw and the residual series of the open and close sub-processes for investor groups 1 to 10. The series are pooled over currency pairs and investors. LB  $\triangleq$  Ljung-Box test statistic, BDS(m=embedding dimension)  $\triangleq$  Brock-Dechert-Scheinkman test statistic  $\sim N(0, 1)$ .

|          | 11      |        |         |       | 12      |       |         |        |
|----------|---------|--------|---------|-------|---------|-------|---------|--------|
|          | open    |        | close   |       | open    |       | close   |        |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res    |
| mean     | 1489.65 | 0.97   | 2794.90 | 1.00  | 1470.09 | 0.99  | 1671.04 | 1.01   |
| std      | 3151.56 | 0.94   | 6214.11 | 0.97  | 3448.01 | 0.89  | 4455.40 | 1.11   |
| LB(20)   | 201.17  | 17.89  | 164.15  | 15.13 | 233.71  | 41.94 | 412.71  | 26.25  |
| LB(50)   | 252.02  | 46.73  | 181.38  | 49.95 | 368.56  | 60.17 | 640.93  | 51.73  |
| BDS(m=2) | 4.51    | 0.43   | 4.01    | 3.28  | 5.82    | 1.21  | 7.34    | 2.30   |
| BDS(m=3) | 5.18    | 0.75   | 5.89    | 3.03  | 6.12    | 3.00  | 8.60    | 2.17   |
|          | 13      |        |         |       | 14      |       |         |        |
|          | open    |        | close   |       | open    |       | close   |        |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res    |
| mean     | 1515.68 | 0.95   | 2156.05 | 1.01  | 1063.60 | 1.01  | 1793.88 | 0.99   |
| std      | 3667.54 | 0.90   | 5017.52 | 0.97  | 3086.08 | 1.04  | 4464.85 | 1.13   |
| LB(20)   | 359.69  | 24.44  | 262.52  | 22.36 | 247.64  | 22.02 | 53.17   | 23.62  |
| LB(50)   | 451.66  | 63.41  | 388.82  | 55.02 | 309.76  | 63.20 | 88.13   | 44.98  |
| BDS(m=2) | 7.67    | 1.88   | 4.91    | 2.80  | 6.53    | 1.49  | 4.34    | 0.75   |
| BDS(m=3) | 8.16    | 2.46   | 5.17    | 3.86  | 8.02    | 2.40  | 5.24    | 1.48   |
|          | 15      |        |         |       | 16      |       |         |        |
|          | open    |        | close   |       | open    |       | close   |        |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res    |
| mean     | 801.66  | 1.00   | 986.41  | 1.02  | 530.32  | 1.01  | 1026.85 | 1.03   |
| std      | 2273.13 | 0.97   | 2968.60 | 1.14  | 2107.51 | 1.08  | 3499.24 | 1.13   |
| LB(20)   | 327.95  | 130.37 | 259.25  | 53.02 | 772.59  | 34.52 | 581.31  | 57.61  |
| LB(50)   | 445.85  | 169.80 | 338.18  | 87.11 | 1200.88 | 71.70 | 766.18  | 79.09  |
| BDS(m=2) | 11.55   | 5.57   | 12.25   | 5.54  | 10.08   | 1.72  | 6.83    | 2.31   |
| BDS(m=3) | 13.86   | 6.48   | 15.46   | 5.83  | 11.50   | 2.00  | 8.14    | 2.60   |
|          | 17      |        |         |       | 18      |       |         |        |
|          | open    |        | close   |       | open    |       | close   |        |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res    |
| mean     | 784.51  | 1.00   | 899.60  | 1.00  | 1617.66 | 0.99  | 2086.94 | 1.01   |
| std      | 2140.68 | 1.01   | 2718.38 | 1.05  | 4158.96 | 0.90  | 4684.91 | 1.06   |
| LB(20)   | 602.57  | 117.58 | 676.02  | 63.43 | 172.83  | 29.32 | 281.09  | 42.23  |
| LB(50)   | 814.63  | 155.25 | 882.10  | 91.17 | 211.94  | 56.62 | 365.99  | 84.75  |
| BDS(m=2) | 6.06    | 2.30   | 5.85    | 0.38  | 5.50    | 1.79  | 8.22    | 2.41   |
| BDS(m=3) | 6.75    | 3.09   | 7.67    | 1.92  | 6.42    | 1.70  | 7.98    | 2.90   |
|          | 19      |        |         |       | 20      |       |         |        |
|          | open    |        | close   |       | open    |       | close   |        |
|          | raw     | res    | raw     | res   | raw     | res   | raw     | res    |
| mean     | 938.87  | 0.98   | 1904.21 | 1.02  | 613.92  | 1.02  | 448.31  | 0.99   |
| std      | 2760.91 | 0.99   | 4728.90 | 1.29  | 2254.13 | 1.21  | 1657.68 | 1.07   |
| LB(20)   | 202.67  | 36.18  | 146.41  | 61.62 | 224.26  | 41.60 | 299.85  | 86.60  |
| LB(50)   | 229.97  | 83.51  | 184.65  | 99.91 | 314.24  | 66.94 | 433.15  | 129.47 |
| BDS(m=2) | 1.54    | 0.23   | 7.35    | 3.00  | 7.20    | 2.67  | 7.34    | 2.64   |
| BDS(m=3) | 2.59    | 0.14   | 7.63    | 2.43  | 8.67    | 3.77  | 8.76    | 2.81   |

**Table 10:** Diagnostics for the raw and the residual series of the open and close sub-processes for investor groups 11 to 20. The series are pooled over currency pairs and investors. LB  $\triangleq$  Ljung-Box test statistic, BDS(m=embedding dimension)  $\triangleq$  Brock-Dechert-Scheinkman test statistic  $\sim N(0, 1)$ .



**Figure 4:** Quantile-Quantile plots of pooled open & close sub-processes residual series against the unit exponential distribution. The plots correspond from the upper left panel to the lower right one to investor groups 1 to 20.