Table OA3a. Foreign Exchange Market Positions and Dealer Leverage
Foreign Entities: USD Contracts
Weekly

| | (1)<br>all contracts<br>purchased,<br>foreign BHCs | (2)<br>all contracts<br>sold,<br>foreign BHCs |
|---|---|---|
| contemp. chg log s.t. borrowing, foreign | 0.598*** | 0.592*** |
| | (3.74) | (3.67) |
| lag1wk chg log s.t. borrowing, foreign | 0.862*** | 0.851*** |
| | (4.87) | (4.84) |
| lag2wk chg log s.t. borrowing, foreign | 0.303** | 0.284** |
| | (2.45) | (2.28) |
| lag3wk chg log s.t. borrowing, foreign | 0.169 | 0.175 |
| | (1.23) | (1.29) |
| lag Fed Funds rate | -0.001 | -0.001 |
| | (-0.37) | (-0.26) |
| lag chg Fed Funds rate | -0.010 | -0.013 |
| | (-0.41) | (-0.55) |
| lag chg in VIX | 0.000 | 0.000 |
| | (0.32) | (0.23) |
| lag VIX | -0.000 | -0.000 |
| | (-0.81) | (-0.78) |
| lag1wk log Fed QE purchases | 0.233*** | 0.236*** |
| | (3.24) | (3.36) |
| contemp. log Fed QE purchases | -0.348** | -0.343*** |
| | (-2.58) | (-2.65) |
| lag2wk log Fed QE purchases | 0.248** | 0.233** |
| | (2.20) | (2.07) |
| lag3wk log Fed QE purchases | 0.028 | 0.031 |
| | (0.28) | (0.31) |
| lag1wk chg log value all USD contracts purchased, foreign | -0.386*** | |
| | (-5.05) | |
| lag2wk chg log value all USD contracts purchased, foreign | -0.187*** | |
| | (-3.48) | |
| lag3wk chg log value all USD contracts purchased, foreign | -0.156*** | |
| | (-3.56) | |
| lag1wk chg log value all USD contracts sold, foreign | | -0.387*** |
| | | (-5.11) |
| lag2wk chg log value all USD contracts sold, foreign | | -0.195*** |
| | | (-3.58) |
| lag3wk chg log value all USD contracts sold, foreign | | -0.159*** |
| | | (-3.57) |
| Constant | 0.010 | 0.009 |
| | (0.80) | (0.73) |
| r2 | | |
| p | 0.000 | 0.000 |
| N | 434 | 434 |

$t$ statistics in parentheses

Note: The results in Table OA3 correspond to the summary Table 13 in the paper. Dependent variables 'all purchases' and 'all sales' refer to the change in log value of any purchased or sold (respectively) currency option, future, swap, forward, or spot contract. Regressions use Newey-West standard errors with 3 lags.

$^{*}$ $p < 0.10$, $^{**}$ $p < 0.05$, $^{***}$ $p < 0.01$

Table OA3b. Foreign Exchange Market Positions and Dealer Leverage
Domestic Entities: USD Contracts
Weekly

| | (1) all contracts purchased, domestic BHCs | (2) all contracts sold, domestic BHCs |
|---|---|---|
| contemp. chg log s.t. borrowing, domestic | 0.179* | 0.181* |
| | (1.90) | (1.91) |
| lag1wk chg log s.t. borrowing, domestic | 0.242 | 0.247 |
| | (1.38) | (1.41) |
| lag2wk chg log s.t. borrowing, domestic | -0.136 | -0.132 |
| | (-1.63) | (-1.57) |
| lag3wk chg log s.t. borrowing, domestic | -0.027 | -0.022 |
| | (-0.38) | (-0.32) |
| lag Fed Funds rate | 0.002 | 0.002 |
| | (1.27) | (1.30) |
| lag chg Fed Funds rate | -0.004 | -0.004 |
| | (-0.34) | (-0.34) |
| lag chg in VIX | -0.000 | -0.000 |
| | (-0.01) | (-0.08) |
| lag VIX | -0.000 | -0.000 |
| | (-0.67) | (-0.63) |
| lag1wk log Fed QE purchases | 0.082* | 0.079* |
| | (1.72) | (1.67) |
| contemp. log Fed QE purchases | -0.007 | -0.009 |
| | (-0.16) | (-0.21) |
| lag2wk log Fed QE purchases | 0.040 | 0.040 |
| | (0.63) | (0.64) |
| lag3wk log Fed QE purchases | -0.038 | -0.038 |
| | (-0.48) | (-0.47) |
| lag1wk chg log value all USD contracts purchased, domestic | -0.519*** | |
| | (-4.10) | |
| lag2wk chg log value all USD contracts purchased, domestic | -0.192* | |
| | (-1.65) | |
| lag3wk chg log value all USD contracts purchased, domestic | -0.111** | |
| | (-2.17) | |
| lag1wk chg log value all USD contracts sold, domestic | | -0.516*** |
| | | (-4.16) |
| lag2wk chg log value all USD contracts sold, domestic | | -0.194* |
| | | (-1.69) |
| lag3wk chg log value all USD contracts sold, domestic | | -0.114** |
| | | (-2.20) |
| Constant | 0.008 | 0.007 |
| | (0.77) | (0.72) |
| r2 | | |
| p | 0 | 0 |
| N | 434 | 434 |

$t$ statistics in parentheses

Note: The results in Table OA3 correspond to the summary Table 13 in the paper. Dependent variables 'all purchases' and 'all sales' refer to the change in log value of any purchased or sold (respectively) currency option, future, swap, forward, or spot contract. Regressions use Newey-West standard errors with 3 lags.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table OA3c. Foreign Exchange Market Positions and Dealer Leverage
Foreign Entities: Foreign Currency Contracts
Weekly

| | (1)<br>all contracts<br>purchased,<br>foreign BHCs | (2)<br>all contracts<br>sold,<br>foreign BHCs |
|---|---|---|
| contemp. chg log s.t. borrowing, foreign | 0.764** | 0.763** |
| | (4.07) | (4.20) |
| lag1wk chg log s.t. borrowing, foreign | 0.920** | 0.931** |
| | (4.39) | (4.52) |
| lag2wk chg log s.t. borrowing, foreign | 0.195 | 0.205 |
| | (1.30) | (1.36) |
| lag3wk chg log s.t. borrowing, foreign | 0.188 | 0.171 |
| | (1.41) | (1.32) |
| lag Fed Funds rate | -0.001 | -0.001 |
| | (-0.50) | (-0.55) |
| lag chg Fed Funds rate | -0.010 | -0.007 |
| | (-0.36) | (-0.24) |
| lag chg in VIX | 0.000 | 0.000 |
| | (0.00) | (0.06) |
| lag VIX | -0.000 | -0.000 |
| | (-0.58) | (-0.53) |
| lag1wk log Fed QE purchases | 0.267* | 0.253* |
| | (2.25) | (2.34) |
| contemp. log Fed QE purchases | -0.387** | -0.366** |
| | (-2.94) | (-2.90) |
| lag2wk log Fed QE purchases | 0.264 | 0.253 |
| | (1.59) | (1.64) |
| lag1wk chg log value all USD contracts purchased, foreign | -0.336*** | |
| | (-5.11) | |
| lag2wk chg log value all USD contracts purchased, foreign | -0.224*** | |
| | (-4.95) | |
| lag3wk chg log value all USD contracts purchased, foreign | -0.128** | |
| | (-3.52) | |
| lag1wk chg log value all USD contracts sold, foreign | | -0.348*** |
| | | (-5.14) |
| lag2wk chg log value all USD contracts sold, foreign | | -0.214*** |
| | | (-4.73) |
| lag3wk chg log value all USD contracts sold, foreign | | -0.122** |
| | | (-3.53) |
| r2 | 0.174 | 0.175 |
| p | 0 | 0 |
| N | 2170 | 2170 |

$t$ statistics in parentheses

Note: The results in Table OA3 correspond to the summary Table 13 in the paper. Dependent variables 'all purchases' and 'all sales' refer to the change in log value of any purchased or sold (respectively) currency option, future, swap, forward, or spot contract.

Foreign currency contract variables include separate observations for positions in EUR, JPY, GBP, CHF, and CAD.

Standard errors are clustered by time and currency.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table OA3d. Foreign Exchange Market Positions and Dealer Leverage
Domestic Entities: Foreign Currency Contracts
Weekly

| | (1) all contracts purchased, domestic BHCs | (2) all contracts sold, domestic BHCs |
|---|---|---|
| contemp. chg log s.t. borrowing, domestic | 0.177 | 0.174 |
| | (1.96) | (1.92) |
| lag1wk chg log s.t. borrowing, domestic | 0.201 | 0.193 |
| | (1.28) | (1.23) |
| lag2wk chg log s.t. borrowing, domestic | -0.249* | -0.253* |
| | (-2.44) | (-2.48) |
| lag3wk chg log s.t. borrowing, domestic | -0.047 | -0.048 |
| | (-0.57) | (-0.58) |
| lag Fed Funds rate | 0.001 | 0.001 |
| | (0.87) | (0.93) |
| lag chg Fed Funds rate | -0.000 | -0.001 |
| | (-0.02) | (-0.04) |
| lag chg in VIX | 0.000 | 0.000 |
| | (0.20) | (0.22) |
| lag VIX | -0.000 | -0.000 |
| | (-0.58) | (-0.56) |
| lag1wk log Fed QE purchases | 0.057 | 0.058 |
| | (1.07) | (1.07) |
| contemp. log Fed QE purchases | -0.005 | -0.006 |
| | (-0.06) | (-0.08) |
| lag2wk log Fed QE purchases | 0.017 | 0.018 |
| | (0.38) | (0.39) |
| lag1wk chg log value all USD contracts purchased, domestic | -0.430** | |
| | (-3.33) | |
| lag2wk chg log value all USD contracts purchased, domestic | -0.185** | |
| | (-2.81) | |
| lag3wk chg log value all USD contracts purchased, domestic | -0.107 | |
| | (-1.95) | |
| lag1wk chg log value all USD contracts sold, domestic | | -0.431** |
| | | (-3.31) |
| lag2wk chg log value all USD contracts sold, domestic | | -0.185* |
| | | (-2.76) |
| lag3wk chg log value all USD contracts sold, domestic | | -0.105 |
| | | (-1.89) |
| r2 | 0.201 | 0.202 |
| p | 0 | 0 |
| N | 2170 | 2170 |

$t$ statistics in parentheses

Note: The results in Table OA3 correspond to the summary Table 13 in the paper. Dependent variables 'all purchases' and 'all sales' refer to the change in log value of any purchased or sold (respectively) currency option, future, swap, forward, or spot contract.

Foreign currency contract variables include separate observations for positions in EUR, JPY, GBP, CHF, and CAD.

Standard errors are clustered by time and currency.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$