Internet Appendix for
"Friendly Investing and Information Sharing in the Asset Management Industry"

This Internet Appendix reports the supplementary results as described below:

- Table IA1: Univariate comparisons

- Table IA2: Decomposing fund performance: Variables in changes

- Table IA3: Decomposing fund performance: Calendar portfolios

- Table IA4: Information flow between financial groups and connected funds: Style-adjusted

- Table IA5: Information flow between financial groups and connected funds: Variables in changes

- Table IA6: Fund holdings of financial groups: Controlling for analyst recommendations

- Table IA7: Trading financial groups stock: Controlling for analyst recommendations

- Table IA8: List of brokerage mergers

- Table IA9: Trading financial groups' stocks: Brokers' acquisitions

- Table IA10: Funds voting behavior: Brokers' acquisitions

Table IA1: **Univariate Comparisons**

Panel A presents univariate comparisons of fund-level variables for the two samples of funds with high and low connected holdings. In Panel B, we present univariate comparisons of financial group-level variables for the two samples of institutions with high and low ownership by connected funds. A mutual fund is connected to a financial group if its fund family is a client of its broker's division. The sample consists of actively managed U.S. domestic equity mutual funds over the 1996-2020 period.

Panel A: Fund Variables

	High Connected Holdings	Low Connected Holdings	Difference	
FUND_SIZE	5.518	5.412	0.105***	(0.000)
EXPENSE_RATIO	0.012	0.012	0.000***	(0.000)
LOAD_FEE	0.037	0.033	0.004***	(0.000)
FUND_TURNOVER	0.900	0.808	0.091***	(0.000)
FUND_FLOWS	0.998	1.005	-0.007***	(0.000)
FUND_AGE	3.780	3.711	0.069***	(0.000)
FAMILY_SIZE	3.355	2.585	0.770***	(0.000)
Observations	224,613	226,714	451,327	

Panel B: Financial Group Variables

	High Ownership by Connected Funds	Low Ownership by Connected Funds	Difference	
MARKET_CAPITALIZATION	8.889	7.014	1.874***	(0.000)
BOOK_TO_MARKET	0.807	0.862	-0.055**	(0.003)
12_MONTH_LAGGED_RETURN	0.154	0.125	0.029**	(0.002)
PROFITABILITY	0.018	0.003	0.015***	(0.000)
RETURN_VOLATILITY	5.474	5.387	0.087	(0.478)
Observations	2,916	2,972	5,888	

Table IA2: **Decomposing fund performance: Variables in Changes**

This table shows estimates of regressions of monthly fund returns on the percentage of fund family TNA invested in connected financial groups. The dependent variables are the (%) return of the fund portfolio computed using the stock abnormal returns from the FF4-factor model of all stocks in which fund i invests in month t (columns 1 and 2); stocks in which fund i invests in month t that are borrowing clients of connected financial groups (column 3 and 4); and stocks in which fund i invests in month t excluding the stocks that are borrowing clients of financial groups (column 5 and 6). The main independent variable $\Delta CONNECTED\_HOLDINGS$ is defined, for each fund i, as the change between month $t-1$ and the previous 36-month average in the fund family holdings in the stocks of their connected financial groups. We also include $\Delta COMMISSIONS$, measured as the change between month $t-1$ and the previous 36-month average of total fees paid by the fund family to brokers over family TNA. Control variables include the same fund-level controls used in Table 2 and defined in Table A1 of the Internet Appendix. The sample includes actively managed U.S. domestic equity mutual funds from 1996 through 2020. Robust t-statistics clustered at the fund and quarter-year level are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

	All Stocks		Borrowers		Non-Borrowers	
	1	2	3	4	5	6
ΔCONNECTED_HOLDINGS	0.051***	0.050***	0.062***	0.061***	0.001	-0.002
	(2.84)	(2.78)	(3.41)	(3.35)	(0.02)	(-0.05)
ΔCOMMISSIONS		0.136*		0.103		0.498*
		(1.90)		(1.36)		(1.92)
Controls Fund	X	X	X	X	X	X
Style x Time FE	X	X	X	X	X	X
Observations	451,327	451,327	451,327	451,327	451,327	451,327
Adjusted r^2	0.349	0.349	0.358	0.358	0.229	0.229

Table IA3: **Decomposing fund performance: Calendar Portfolios**

This table presents risk-adjusted monthly portfolio returns for different portfolios of stocks. We report the risk-adjusted monthly returns of the following three portfolios: a portfolio of stocks held by funds with a high level of connected holdings (column 1), a portfolio of stocks in which funds with a high level of connected holdings invest that are borrowing clients of connected financial groups (column 2); and a portfolio of stocks in which funds with a high level of connected holdings invest excluding the stocks that are borrowing clients of financial groups (column 3). We define funds with a high level of connected holdings as funds whose percentage of TNA invested in the stocks of connected financial groups is in the top quintile of the variable's distribution. At the bottom of the table, we report the number of months used in the estimation. The sample runs from 1996 through 2020. Robust t-statistics are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

	All Stocks 1	Borrowers 2	Non-Borrowers 3
ALPHA	0.007***	0.006***	-0.000
	(6.44)	(6.11)	(-0.21)
MKT	1.088***	0.930***	0.130***
	(26.32)	(27.26)	(8.42)
SBM	0.258***	0.171***	0.114***
	(4.13)	(3.75)	(5.12)
HML	-0.066	-0.042	-0.059***
	(-1.35)	(-1.01)	(-3.46)
WML	-0.068*	-0.065**	0.005
	(-1.78)	(-2.01)	(0.57)
Observations	312	312	312
r^2	0.882	0.890	0.529

Table IA4: **Information flow between financial groups and connected funds: Style-adjusted**

This table explores differences in funds' trade profitability when funds trade in stocks of firms that receive loans from the connected financial groups. The dependent variable is measured as Δ*Fund Holdings (Style-Adjusted)$\times$Return*, that is, the product of the change in style-adjusted holdings of a fund in a stock between quarter *t-1* and quarter *t* and the subsequent quarter stock return. The main independent variable, *CONNECTED_LENDER_HOLDINGS*, is measured as the family holdings of the connected financial group that initiates a loan to stock *j* in quarter *t+1* and zero otherwise. We also include *CONNECTED_LENDER_COMMISSIONS*, measured as fees paid by the fund family to the connected financial group that initiates a loan to stock *j* over family TNA. Control variables include the same fund-level controls used in Table 2 and defined in Table A1 of the Internet Appendix. The sample includes actively managed U.S. domestic equity mutual funds, as well as their full portfolios of stocks. Our sample period runs from 1996 through 2020. Robust *t*-statistics clustered at the fund and quarter-year levels are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

	1	2	3	4
CONNECTED_LENDER_HOLDINGS	0.031**	0.031**	0.028**	0.027**
	(2.15)	(2.07)	(2.24)	(2.13)
CONNECTED_LENDER_COMMISSIONS		0.044		0.070*
		(0.90)		(1.70)
Controls Fund	X	X		
Stock x Time FE	X	X	X	X
Fund x Stock FE	X	X	X	X
Fund x Time FE			X	X
Observations	21,641,333	21,641,333	21,641,333	21,641,333
Adjusted r^2	0.212	0.212	0.260	0.260

Table IA5: **Information flow between financial groups and connected funds: Variables in Changes**

This table explores differences in funds' trade profitability when funds trade in stocks of firms that receive loans from the connected financial groups. The dependent variable is measured as Δ*Fund Holdings (Benchmark-Adjusted)$\times$Return*, that is, the product of the change in benchmark-adjusted holdings of a fund in a stock between quarter *t-1* and quarter *t* and the subsequent quarter stock return. The main independent variable, $\Delta CONNECTED\_LENDER\_HOLDINGS$, is measured as the change in family holdings of the connected financial group that initiates a loan to stock j between the current quarter and the average in the previous 12 quarters. We also include $\Delta CONNECTED\_LENDER\_COMMISSIONS$, measured as the change between the current quarter and the previous 12 quarters' average in fees paid by the fund family to the connected financial group that initiates a loan to stock j over family TNA. Control variables include the same fund-level controls used in Table 2 and defined in Table A1 of the Internet Appendix. The sample includes actively managed U.S. domestic equity mutual funds, as well as their full portfolios of stocks. Our sample period runs from 1996 through 2020. Robust *t*-statistics clustered at the fund and quarter-year levels are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

	1	2	3	4
ΔCONNECTED_LENDER_HOLDINGS	0.062*	0.058*	0.054*	0.049*
	(1.81)	(1.68)	(1.88)	(1.70)
ΔCONNECTED_LENDER_COMMISSIONS		0.064		0.082*
		(1.25)		(1.85)
Controls Fund	X	X		
Stock x Time FE	X	X	X	X
Fund x Stock FE	X	X	X	X
Fund x Time FE			X	X
Observations	21,641,333	21,641,333	21,641,333	21,641,333
Adjusted r^2	0.257	0.257	0.302	0.302

Table IA6: **Fund holdings of financial groups: Controlling for Analyst Recommendations**

This table presents estimates of the model: $Y_{ijt} = \beta_0 + \beta_1 CONNECTED_{ijt} + SELL\_SIDE\_RECOMMENDATION_{ijt} + \beta_2 X_{ijt-1} + \delta + \epsilon_{ijt}$. In the first two columns, the dependent variable is *Fund Holding (Benchmark-Adjusted)*$_{ijt}$, the percentage of fund i total net assets invested in the financial group j in quarter t in excess of the weight of financial group j in the fund's benchmark. In the last two columns, the dependent variable is *Fund Holding (Style-Adjusted)*$_{ijt}$, the percentage of fund i total net assets invested in the financial group j in quarter t minus the average weight of financial group j in the portfolio of all funds in the same style of fund i. The main independent variable $CONNECTED_{ijt}$ is an indicator variable equal to one if the family of the fund i is a client of a broker that belongs to financial group j in quarter t. In this table, we further control for $SELL\_SIDE\_RECOMMENDATION$, measured as the median sell-side analyst recommendation on stock j in quarter $t+1$ issued by connected financial groups. X is a vector of control variables at the fund level (fund size, expense ratio, loads, turnover, flows, age, and fund family size). These variables are defined in Table A1 of the Internet Appendix. δ denotes fixed effects. The sample includes actively managed U.S. domestic equity mutual funds and publicly traded financial groups. Our sample period runs from 1996 through 2020. Robust t-statistics clustered at the fund and quarter-year levels are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

	1	2	3	4
CONNECTED	0.203***	0.193***	0.114***	0.107***
	(17.50)	(18.33)	(13.79)	(14.69)
SELL_SIDE_RECOMMENDATION	0.001	0.001	0.000	0.001
	(1.06)	(0.74)	(0.11)	(0.66)
Controls	X	X	X	X
Stock x Time FE	X	X	X	X
Fund x Stock FE	X	X	X	X
Fund x Time FE		X		X
Observations	1,727,923	1,722,402	1,727,923	1,722,402
Adjusted r^2	0.615	0.669	0.576	0.637

Table IA7: **Trading financial groups stock: Controlling for Analyst Recommendations**

This table explores differences in funds' investment choices when funds trade connected financial groups' stocks as compared to other stocks in their portfolio. The table presents estimates of the following model: $\Delta Y_{ijt} = \beta_0 + \beta_1 CONNECTED_{ijt} + \beta_2 DISTRESS_{jt} + \beta_3 CONNECTED_{ijt} \times DISTRESS_{jt} + SELL\_SIDE\_RECOMMENDATION_{ijt} + \beta_4 X_{ijt-1} + \delta + \epsilon_{ijt}$. In the first two columns, the dependent variable is the change in benchmark-adjusted holdings of fund i in stock j between quarter t-1 and quarter t. In the last two columns, the dependent variable is the change in style-adjusted holdings of fund i in stock j between quarter t-1 and quarter t. $CONNECTED_{ijt}$ is an indicator variable equal to one if the family of the fund i is a client of broker j in quarter t. $DISTRESS_{jt}$ is an indicator variable equal to one if the percentage of the firm j stocks sold by the aggregate mutual fund industry is greater than 1% of shares outstanding in quarter t. In this table, we further control for $SELL\_SIDE\_RECOMMENDATION$, measured as the median sell-side analyst recommendation on stock j in quarter t+1 issued by connected financial groups. Control variables include the same fund-level controls used in Table 2 and defined in Table A1 of the Internet Appendix. The sample includes actively managed U.S. domestic equity mutual funds, as well as their full portfolios of stocks. Our sample period runs from 1996 through 2020. Robust t-statistics clustered at the fund and quarter-year levels are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

| | Δ Fund Holdings (Benchmark-Adjusted) | | Δ Fund Holdings (Style-Adjusted) | |
	1	2	3	4
CONNECTED × DISTRESS	0.095***	0.087***	0.101***	0.095***
	(4.85)	(4.57)	(5.99)	(5.58)
CONNECTED	0.022***	0.015**	0.023***	0.015***
	(2.99)	(2.32)	(3.92)	(2.90)
SELL_SIDE_RECOMMENDATION	0.001	0.001	0.002	0.002**
	(0.45)	(1.15)	(1.65)	(2.05)
Controls Fund	X		X	
Stock x Time FE	X	X	X	X
Fund x Stock FE	X	X	X	X
Fund x Time FE		X		X
Observations	4,709,962	4,703,961	4,709,962	4,703,961
Adjusted r^2	0.203	0.290	0.177	0.273

Table IA8: **List of brokerage mergers**

This table lists brokerage mergers during our sample period. We include the names of brokers involved in the merger and the effective date of the event.

Effective Date	Acquiring Broker	Acquired Broker
1997-09-02	BT New York (Successor: Deutsche)	Alex Brown
1998-06-30	Société Générale Securities	Cowen
2000-11-02	Goldman Sachs Group	Spear Leeds Kellogg
2001-04-30	ABN-AMRO	ING Baring-US
2001-09-04	Wachovia	First Union Capital Markets
2002-02-04	Bank of New York	Autranet
2005-03-31	Instinet	Bridge Trading
2009-10-02	Macquarie Group	Fox Pitt Kelton
2014-09-03	Keybank	Pacific Crest Securities

Table IA9: **Trading financial groups' stocks: Brokers' acquisitions**

This table explores differences in funds' investment choices when funds trade connected financial groups' stocks as compared to other stocks in their portfolio. The table presents estimates of the following model: $\Delta Y_{ijt} = \beta_0 + \beta_1 TREATED_{ijt} + \beta_2 DISTRESS_{jt} + \beta_3 TREATED_{ijt} \times DISTRESS_{jt} + \beta_3 POST_{jt} \times TREATED_{ijt} \times DISTRESS_{jt} + \beta_4 X_{ijt-1} + \delta + \epsilon_{ijt}$. In the first two columns, the dependent variable is the change in benchmark-adjusted holdings of fund i in stock j between quarter t-1 and quarter t. In the last two columns, the dependent variable is the change in style-adjusted holdings of fund i in stock j between quarter t-1 and quarter t. The main independent variables are: $POST_{jt}$, an indicator variable equal to one after an acquisition event involving financial group j; $TREATED_{ijt}$ an indicator variable equal to one if the family of the fund i is a client of a broker acquired by financial group j; $DISTRESS_{jt}$, an indicator variable equal to one if the percentage of the firm j stock sold by the aggregate mutual fund industry is greater than 1% of shares outstanding in quarter t. X is a vector of the control variables, including the same controls used in Table 2 and defined in Table A1 of the Internet Appendix. The sample includes actively managed U.S. domestic equity mutual funds, as well as their holdings in financial groups involved in the mergers of brokerage firms, as detailed in Table IA8. Our sample period runs from 1996 through 2020. Robust t-statistics clustered at the fund and quarter-year levels are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

	Δ Fund Holdings (Benchmark-Adjusted)		Δ Fund Holdings (Style-Adjusted)	
	1	2	3	4
POST × TREATED × DISTRESS	0.062*	0.076*	0.073**	0.071
	(1.85)	(1.78)	(2.03)	(1.40)
TREATED × DISTRESS	-0.079	-0.122	-0.073	-0.086
	(-1.34)	(-1.39)	(-1.34)	(-1.03)
TREATED	0.031**	0.009	0.042***	0.012
	(2.05)	(0.46)	(3.12)	(0.61)
Controls Fund	X		X	
Stock x Time FE	X	X	X	X
Fund x Stock FE	X	X	X	X
Fund x Time FE		X		X
Observations	131,455	131,455	131,455	131,455
Adjusted r^2	0.155	0.536	0.075	0.502

Table IA10: **Funds voting behavior: Brokers' acquisitions**

This table explores the voting behavior of connected funds. The dependent variable is an indicator variable with a value of one if a fund votes in favor of the management. The main independent variables are: $POST_{jt}$, an indicator variable equal to one after an acquisition event involving financial group j; $TREATED_{ijt}$ an indicator variable equal to one if the family of the fund i is a client of a broker acquired by financial group j; $ISS\_DISAGREE$ is an indicator variable with a value of one if the ISS recommends voting in opposition to the management. X is a vector of the control variables, including the same controls used in Table 2 and defined in Table A1 of the Internet Appendix. In this table, our sample period runs from 2003 through 2020, and the sample is restricted to funds that are covered in the ISS Voting Analytics database and stocks of financial groups involved in the mergers of brokerage firms, as detailed in Table IA8. Robust t-statistics clustered at the fund and quarter-year levels are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

	Fraction of Funds with Management		Fraction of Shares with Management	
	1	2	3	4
ISS_DISAGREE × POST × TREATED	0.258**	0.337***	0.258**	0.337***
	(2.39)	(3.13)	(2.38)	(3.14)
ISS_DISAGREE × TREATED	-0.103	-0.181	-0.103	-0.181
	(-0.74)	(-1.29)	(-0.73)	(-1.30)
ISS_DISAGREE × POST	-0.594***	-0.594***	-0.593***	-0.594***
	(-5.92)	(-5.92)	(-5.90)	(-5.91)
POST × TREATED	-0.186***	-0.015	-0.186***	-0.026
	(-3.24)	(-0.12)	(-3.22)	(-0.21)
Control Inv. Advisor	X		X	
Stock x Time FE	X	X	X	X
Inv. Advisor x Stock FE	X	X	X	X
Inv. Advisor x Time FE		X		X
Proposal Type x Time FE	X	X	X	X
Observations	4,331	4,331	4,331	4,331
Adjusted r^2	0.491	0.579	0.490	0.578