
Crisis and Inside Information: When Insiders Help

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- Withdrawals induce fire-sales.
- Fire-sales are subject to information content (Manconi et al, 2010)
- Chinese Walls are porous
- Bank-managed funds have superior information on borrowing firms

This paper tests:

Does the lending-based info make bank-managed funds insiders?

How does this affect their behavior around the crisis?

What are the implications for stock prices?

Outline

1. Introduction

2. Related Literature

3. Hypotheses

4. The Data

5. Econometric Issues

6. Main Findings

7. Conclusion

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- ***Conflict of Interests in Financial Conglomerates***

(Puri, 1996, Ellis, Michaely, and O'Hara, 2000, Schenone, 2004, Ritter and Zhang, 2005, Massa and Rehman, 2007,).

- ***Mutual Fund Families***

(Mamaysky and Spiegel 2002, Nanda et al., 2003, Massa, 2003, Gaspar et al. 2006).

- ***Differential Information in International Markets***

(Brennan and Cao, 1996, Van Nieuwerburgh and Veldkamp, 2009).

- ***Transmission of Information by and role of Insiders***

(Campbell, et al., 1993, Llorente, et al., 2002, Acharya and Johnson, 2007, Dass and Massa, 2008).

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H1: The bank-managed funds derive superior information from the lending of the affiliated bank.

H2: The bank-managed funds by acting as insiders reduce the liquidity of the stocks in which they have a stake, increase insider trading and make the stock return more subject to extreme realizations.

H3: During a crisis the bank-managed funds increase liquidity, reduce insider trading and make the stock return less subject to extreme realizations.

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Factset/Lionshares Database

Datastream

CRSP

Loan Pricing Corporation's (LPC) DealScan

DataEx

4. Foreign Ownership by Country

Country	Mean (equal-weighted)	Standard Deviation	N	Value-weighted	Floating adjusted
ARGENTINA	0.013	0.041	40	0.011	0.024
AUSTRALIA	0.048	0.065	798	0.086	0.115
AUSTRIA	0.105	0.112	81	0.151	0.334
BELGIUM	0.073	0.080	126	0.136	0.257
BERMUDA	0.217	0.171	73	0.244	
BRAZIL	0.072	0.086	194	0.058	0.177
CANADA	0.059	0.077	1404	0.124	0.243
CHILE	0.014	0.022	70	0.014	0.040
CHINA	0.067	0.116	605	0.092	0.296
CROATIA	0.022	0.030	61	0.010	
DENMARK	0.053	0.078	138	0.128	0.171
EGYPT	0.030	0.038	47	0.058	0.097
FINLAND	0.108	0.107	128	0.240	0.313
FRANCE	0.069	0.084	522	0.156	0.252
GERMANY	0.085	0.103	568	0.189	0.342
GREECE	0.062	0.097	210	0.147	0.593
HONG KONG	0.050	0.066	804	0.090	0.157
INDIA	0.044	0.053	666	0.070	0.118
INDONESIA	0.048	0.055	149	0.102	0.328
IRELAND	0.139	0.118	83	0.197	0.227
ISRAEL	0.046	0.075	208	0.077	0.184
ITALY	0.062	0.069	291	0.137	0.219
JAPAN	0.039	0.048	2525	0.094	0.153
SOUTH KOREA	0.049	0.068	743	0.126	0.207
LITHUANIA	0.094	0.099	32	0.049	
MALAYSIA	0.035	0.056	424	0.082	0.172
MEXICO	0.062	0.097	89	0.071	0.097
NETHERLANDS	0.144	0.137	163	0.186	0.280
NEW ZEALAND	0.035	0.050	78	0.070	0.309
NIGERIA	0.003	0.008	35	0.005	
NORWAY	0.078	0.088	196	0.149	0.253
PAKISTAN	0.023	0.045	44	0.029	0.129
PERU	0.022	0.039	31	0.055	0.174
PHILIPPINES	0.054	0.062	96	0.102	0.209
POLAND	0.040	0.049	174	0.076	0.212
PORTUGAL	0.054	0.049	40	0.084	0.129
ROMANIA	0.094	0.135	43	0.035	
RUSSIAN FEDERATION	0.036	0.054	225	0.022	
SINGAPORE	0.053	0.075	361	0.116	0.271
SOUTH AFRICA	0.056	0.074	186	0.110	0.234
SPAIN	0.054	0.064	143	0.116	0.200
SWEDEN	0.070	0.078	271	0.126	0.160
SWITZERLAND	0.101	0.109	243	0.190	0.256
TAIWAN	0.042	0.061	653	0.123	0.158
THAILAND	0.040	0.046	199	0.061	0.145
TURKEY	0.067	0.075	178	0.115	0.394
UNITED KINGDOM	0.057	0.070	1198	0.123	0.136

4. Type of Institutional Investors

Institutions Type	All Institutions		North-American		Non North-American	
	# of Managed funds	Total foreign holdings (\$ bns)	# of Managed funds	Total foreign holdings (\$ bns)	# of Managed funds	Total foreign holdings (\$ bns)
Investment Adviser	10,657	2111.81	3,441	1188.25	7,216	923.57
Bank Management Division	8,242	851.22	601	61.84	7,641	789.37
Mutual Fund Manager	5,093	1072.15	3,161	776.27	1,932	295.88
Insurance Management Division	1,098	177.62	234	12.96	864	164.66
Broker/Inv Bank Asset Mgmt	622	99.65	254	34.83	368	64.83
Hedge Fund Company	262	36.48	153	8.01	109	28.47
Private Banking Portfolio	126	5.86	0	0	126	5.86
Pension Fund	76	249.38	8	70.81	68	178.57
Insurance Company	67	10.71	3	0	64	10.71
Venture Capital/Pvt Equity	16	0.15	0	0	16	0.15

4. Foreign Ownership Composition by Country

Country	Bank asset management division (mean)	Bank asset management division (sta. dev.)	Investment advisor (mean)	Mutual fund manager (mean)	Others (mean)
ARGENTINA	0.086	0.195	0.685	0.076	0.152
AUSTRALIA	0.125	0.231	0.606	0.142	0.128
AUSTRIA	0.278	0.249	0.530	0.118	0.074
BELGIUM	0.252	0.271	0.426	0.143	0.179
BERMUDA	0.063	0.089	0.555	0.289	0.093
BRAZIL	0.167	0.229	0.399	0.278	0.155
CANADA	0.084	0.207	0.603	0.249	0.064
CHILE	0.080	0.211	0.648	0.206	0.067
CHINA	0.150	0.275	0.546	0.158	0.147
CROATIA	0.144	0.236	0.362	0.265	0.228
DENMARK	0.109	0.170	0.651	0.155	0.085
EGYPT	0.175	0.290	0.629	0.140	0.056
FINLAND	0.117	0.139	0.624	0.164	0.095
FRANCE	0.218	0.281	0.538	0.160	0.084
GERMANY	0.187	0.271	0.562	0.177	0.074
GREECE	0.170	0.262	0.669	0.107	0.053
HONG KONG	0.113	0.218	0.655	0.158	0.074
INDIA	0.135	0.254	0.574	0.233	0.058
INDONESIA	0.123	0.217	0.575	0.232	0.071
IRELAND	0.197	0.235	0.550	0.148	0.105
ISRAEL	0.075	0.202	0.659	0.197	0.069
ITALY	0.232	0.228	0.558	0.123	0.087
JAPAN	0.097	0.169	0.632	0.170	0.101
SOUTH KOREA	0.128	0.268	0.611	0.196	0.065
LITHUANIA	0.245	0.266	0.345	0.056	0.354
MALAYSIA	0.079	0.181	0.756	0.124	0.041
MEXICO	0.130	0.216	0.565	0.197	0.107
NETHERLANDS	0.226	0.229	0.512	0.189	0.073
NEW ZEALAND	0.120	0.223	0.697	0.119	0.064
NIGERIA	0.039	0.171	0.884	0.056	0.021
NORWAY	0.108	0.176	0.504	0.241	0.147
PAKISTAN	0.072	0.151	0.588	0.241	0.100
PERU	0.101	0.162	0.618	0.130	0.150
PHILIPPINES	0.158	0.279	0.548	0.180	0.114
POLAND	0.429	0.370	0.430	0.082	0.059
PORTUGAL	0.254	0.239	0.418	0.224	0.105
ROMANIA	0.249	0.277	0.570	0.125	0.057
RUSSIAN FEDERATION	0.227	0.309	0.414	0.197	0.162
SINGAPORE	0.111	0.212	0.613	0.182	0.094
SOUTH AFRICA	0.119	0.212	0.580	0.185	0.116
SPAIN	0.300	0.248	0.414	0.156	0.129
SWEDEN	0.181	0.242	0.557	0.153	0.109
SWITZERLAND	0.178	0.209	0.524	0.207	0.091
TAIWAN	0.151	0.252	0.627	0.163	0.059
THAILAND	0.063	0.161	0.580	0.214	0.143
TURKEY	0.168	0.227	0.603	0.100	0.129
UNITED KINGDOM	0.204	0.266	0.523	0.174	0.099

4. Summary Statistics of Main Variables

<i>Variable</i>	Data Source	Mean	Median	Std. Dev.	N
Foreign ownership	Factset	3.5%	1.1%	5.6%	58631
Foreign Bank-managed ownership	Factset	0.5%	0.0%	1.3%	58631
Foreign Non-bank-managed ownership	Factset	3.0%	0.9%	4.9%	58631
Domestic ownership	Factset	2.3%	0.0%	5.4%	58631
Missing domestic ownership dummy	Factset	0.43	0	0.49	58631
CDS change - stock return comovement	Markit/Compustat Global	-0.01	-0.01	0.06	1957
Amihud illiquidity	Compustat Global	0.60	0.26	0.97	58631
Likelihood of extremely low returns	Compustat Global	0.13	0	0.33	56789
Negative stock return skewness	Compustat Global	-0.35	-0.32	0.44	52399
Shift in Short-selling demand	Data Explorer	0.32	0	0.46	36806
Log(market value)	Compustat Global	5.63	5.42	1.75	58631
Market-to-book	Datastream	2.00	1.33	2.40	58631
Book leverage	Datastream	0.25	0.20	0.24	58631
Profitability	Datastream	0.05	0.05	0.12	58631
ADR dummy	BNY Mellon	0.07	0	0.26	58631
Return volatility	Compustat Global	0.03	0.03	0.01	57890
Share turnover	Compustat Global	0.23	0.12	0.33	58413
Log(number of analyst)	IBES	1.36	1.09	1.07	58631
Stock return	Compustat Global	0.07	0.01	0.47	58523

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Panel Estimates with:

Time Fixed effects

Country/Year Fixed Effects

Clustering (Firm)

Control Variables

Dummy variable: missing domestic ownership

Log(market value)

Market-to-book

Book leverage

Profitability

ADR dummy

Return volatility

Share turnover

Number of Analyst

Stock return

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6.1 Foreign Ownership Composition Around the Global Financial Crisis

Year	Foreign ownership	Fraction: Bank-managed funds	Fraction: Investment advisor	Fraction: Mutual fund manager	Fraction: Others
2006	0.050	0.130	0.626	0.173	0.071
2007	0.051	0.141	0.612	0.182	0.065
2008	0.047	0.169	0.605	0.170	0.056
2009	0.045	0.205	0.575	0.158	0.062
T-test: (2007=2008)	22.69***	-14.86***	1.05	10.82***	3.52***
Signrank test: (2007=2008)	24.24*** (12964)	-20.94*** (12964)	2.84*** (12964)	12.86*** (12964)	5.31*** (12964)
T-test: (2006=2009)	10.28***	-13.22***	3.84***	4.97***	4.54***
Signrank test: (2006=2009)	9.03*** (9957)	-18.00*** (9957)	5.12*** (9957)	5.11*** (9957)	-0.37 (9957)

6.2 Identify Information Advantage of Foreign Bank-managed Funds: Test

Foreign Bank Managed Ownership

	Full Sample		Non-crisis	Crisis
	(1)	(2)	(3)	(4)
Foreign bank-managed ownership	0.682*** (3.33)	0.706*** (3.30)	0.610** (2.47)	1.064*** (3.10)
Other foreign institutional ownership	-0.090** (-2.07)	-0.079* (-1.78)	-0.080 (-1.58)	-0.099 (-1.38)
Domestic ownership	0.045 (0.46)	0.037 (0.40)	0.062 (0.68)	-0.142 (-0.65)
Dummy variable: missing domestic ownership	0.002 (0.22)	-0.002 (-0.19)	-0.012 (-0.80)	0.015 (0.94)
Log(market value)	0.001 (0.44)	0.001 (0.46)	0.001 (0.32)	0.001 (0.23)
Market-to-book	0.002 (1.45)	0.001 (0.91)	0.000 (0.40)	0.002 (0.89)
Book leverage	-0.005 (-0.63)	0.003 (0.30)	0.000 (0.02)	0.007 (0.43)
Profitability	0.031 (0.97)	0.025 (0.67)	0.002 (0.06)	0.076 (0.93)
ADR dummy	0.000 (0.13)	0.002 (0.63)	0.004 (0.89)	0.001 (0.09)
Return volatility	-0.766** (-2.62)	-0.490 (-1.47)	-0.807 (-1.56)	-0.299 (-0.74)
Share turnover	-0.024** (-2.37)	-0.025** (-2.59)	-0.023 (-1.56)	-0.030** (-2.09)
Number of Analyst	-0.004** (-2.41)	-0.004** (-2.19)	-0.004* (-1.72)	-0.005 (-1.10)
Stock return	0.025*** (4.01)	0.022*** (3.47)	0.019*** (2.66)	0.026* (1.95)

Decomposition into High lending ownership & Low lending ownership

	Full Sample		Non-crisis	Crisis
	(1)	(2)	(3)	(4)
Foreign bank-managed ownership: high lending	1.122*** (3.47)	0.942*** (2.70)	0.359 (1.02)	2.300*** (2.86)
Foreign bank-managed ownership: low lending	0.476 (1.47)	0.486 (1.34)	0.518 (1.31)	0.532 (0.72)

6.2 Identify Information Advantage of Foreign Bank-managed Funds: Test II

Non-crisis period				
<i>Dif: High lending portfolio-Low lending portfolio</i>	Full sample		Sub-sample (#quarter \geq 20)	
	(1)	(2)	(3)	(4)
International market factor	0.096*** (4.10)	0.074** (1.98)	0.089*** (3.51)	0.061 (1.47)
International smb factor	-0.190*** (-4.08)	-0.213*** (-4.10)	-0.221*** (-4.20)	-0.260*** (-4.41)
International hml factor	-0.481*** (-8.21)	-0.497*** (-8.33)	-0.518*** (-8.02)	-0.526*** (-7.96)
International momentum factor	0.004 (0.13)	0.089** (2.37)	-0.009 (-0.27)	0.088** (2.12)
Domestic market factor		0.019 (0.76)		0.037 (1.38)
Domestic smb factor		0.030 (1.13)		0.086*** (2.85)
Domestic hml factor		0.038 (1.32)		-0.001 (-0.04)
Domestic momentum factor		-0.084*** (-3.86)		-0.098*** (-3.94)
Alpha	0.005** (2.42)	0.006*** (2.67)	0.005** (2.26)	0.006*** (2.76)
Crisis Period				
<i>Dif: High lending portfolio-Low lending portfolio</i>	Full sample		Sub-sample (#quarter \geq 20)	
	(1)	(2)	(3)	(4)
International market factor	-0.112*** (-3.75)	-0.240*** (-5.19)	-0.155*** (-5.36)	-0.316*** (-7.05)
International smb factor	-1.906*** (-5.39)	-1.868*** (-4.99)	-1.947*** (-5.57)	-1.900*** (-4.94)
International hml factor	-0.269*** (-4.35)	-0.318*** (-3.98)	-0.166*** (-2.72)	-0.287*** (-3.49)
International momentum factor	-0.089** (-2.19)	-0.103** (-2.18)	-0.095** (-2.47)	-0.111** (-2.40)
Domestic market factor		0.149*** (3.58)		0.191*** (4.09)
Domestic smb factor		0.072 (1.46)		0.080 (1.55)
Domestic hml factor		0.040 (0.93)		0.098** (2.16)
Domestic momentum factor		0.042 (1.09)		0.051 (1.25)
Alpha	0.016*** (3.39)	0.016*** (3.37)	0.013*** (2.96)	0.013*** (2.87)

6.3 Drop in Foreign Ownership and Abnormal Stock Returns

Contemporaneous Returns

	Full Sample		Non-crisis	Crisis
	(1)	(2)	(3)	(4)
Drop in foreign bank-managed ownership	-1.205*** (-6.36)	-1.202*** (-6.36)	-1.527*** (-6.41)	-0.705** (-2.05)
Drop in foreign non bank-managed ownership	-0.478*** (-8.07)	-0.468*** (-7.94)	-0.435*** (-6.17)	-0.510*** (-5.17)
Drop in domestic ownership	-0.218*** (-3.98)	-0.224*** (-4.08)	-0.218*** (-3.00)	-0.222*** (-2.68)

Decomposition into High lending ownership & Low lending ownership

	Full Sample		Non-crisis	Crisis
	(1)	(2)	(3)	(4)
Drop in foreign bank-managed ownership: high lend.	-1.905*** (-3.44)	-1.896*** (-3.41)	-2.405*** (-3.38)	-1.205 (-1.25)
Drop in foreign bank-managed ownership: low lending	-0.828 (-1.45)	-0.774 (-1.36)	-0.730 (-0.96)	-0.808 (-1.01)
Drop in foreign non bank-managed ownership	-0.662*** (-5.16)	-0.638*** (-5.02)	-0.429*** (-3.05)	-0.828*** (-3.98)
Drop in domestic ownership	-0.046 (-0.34)	-0.055 (-0.41)	-0.088 (-0.50)	-0.056 (-0.23)

Future Returns

	Full Sample		Non-crisis	Crisis
	(1)	(2)	(3)	(4)
Drop in foreign bank-managed ownership	-0.058 (-0.33)	-0.050 (-0.28)	-0.240 (-1.07)	0.264 (0.83)
Drop in foreign non-bank-managed ownership	0.121** (2.20)	0.128** (2.32)	0.050 (0.75)	0.231** (2.59)
Drop in domestic ownership	-0.015 (-0.27)	-0.019 (-0.34)	-0.117 (-1.65)	0.090 (1.03)

6.4 Foreign Bank-managed Ownership and Stock Illiquidity

Panel Regression

	Full Sample		Non-crisis	Crisis
	(1)	(2)	(3)	(4)
Foreign bank-managed ownership	-0.359 (-1.33)	-0.166 (-0.62)	1.435*** (2.78)	-3.473*** (-7.22)
Other foreign institutional ownership	0.233** (2.55)	0.290*** (3.18)	0.820*** (7.22)	0.229* (1.69)
Domestic ownership	-0.519*** (-6.19)	-0.474*** (-5.69)	-0.681*** (-7.44)	-0.098 (-0.76)

Change in Illiquidity around the Crisis

	Change: 2008 minus 2007		Change: average (2008 & 2009) - 2007	
	(1)	(2)	(3)	(4)
Foreign bank-managed ownership	-1.203*** (-3.63)	-1.090*** (-3.25)	-1.840*** (-5.08)	-1.694*** (-4.60)
Other foreign institutional ownership	-0.016 (-0.17)	0.001 (0.01)	-0.096 (-0.99)	-0.066 (-0.67)
Domestic ownership	-0.432*** (-3.77)	-0.490*** (-4.26)	-0.399*** (-2.86)	-0.478*** (-3.41)

6.5 Trading by Foreign Bank-managed Funds and Stock Price Informativeness

	Full Sample	Crisis Period (2008-2009)	Non-crisis Period (2001-2007)	Non-crisis Period: (2005-2007)
	(1)	(2)	(3)	(4)
Abs(Δ Foreign bank-managed ownership)	-2.484*** (-3.46)	-4.264*** (-3.25)	-2.210*** (-2.69)	-1.688* (-1.90)
Abs(Δ Other foreign institutional ownership)	-1.252*** (-4.90)	-1.044** (-2.16)	-1.409*** (-4.71)	-0.767** (-2.18)
Abs(Δ Domestic ownership)	-0.577*** (-2.92)	-0.409* (-1.76)	-0.677** (-2.24)	-1.600*** (-4.16)

6.6 Foreign Bank-managed Ownership and Stock Price Crash Risk

Negative Stock Return Skewness

	Full Sample	Crisis Period 2008-2009	Non-crisis Period	Non-crisis Period: (2005-2007)
	(1)	(2)	(3)	(4)
Foreign bank-managed ownership	0.546*** (4.21)	-0.431** (-2.01)	0.964*** (4.67)	1.115*** (3.91)
Other foreign institutional ownership	-0.098** (-2.11)	0.027 (0.50)	-0.069 (-1.01)	-0.171** (-2.13)
Domestic ownership	0.109** (2.03)	0.223*** (3.29)	0.045 (0.54)	0.173* (1.71)

Likelihood of Extremely Low Returns

	Full Sample	Crisis Period 2008-2009	Non-crisis Period	Non-crisis Period: (2005-2007)
	(1)	(2)	(3)	(4)
Foreign bank-managed ownership	-0.418 (-0.51)	-2.840** (-2.06)	1.116 (1.34)	2.295** (1.99)
Other foreign institutional ownership	-0.065 (-0.33)	0.069 (0.22)	-0.276 (-1.07)	-0.270 (-0.86)
Domestic ownership	0.195 (1.02)	-0.123 (-0.41)	0.369 (1.51)	0.074 (0.25)

6.7 Foreign Bank-managed Ownership and Downward Shift in Short-selling

	Full Sample	Crisis Period 2008-2009	Non-crisis Period	Non-crisis Period: (2005-2007)
	(1)	(2)	(3)	(4)
Foreign bank-managed ownership	-0.162 (-0.26)	-3.086*** (-3.10)	2.232** (2.47)	2.462** (2.53)
Other foreign institutional ownership	-0.047 (-0.28)	-0.300 (-1.15)	-0.015 (-0.07)	-0.227 (-0.92)
Domestic ownership	-0.455*** (-3.01)	-0.267 (-1.00)	-0.596*** (-3.18)	-0.528** (-2.46)

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- Bank-managed funds enjoy privileged bank-related information
- In general, bank-managed funds act as insiders. This:
 - Increases stock illiquidity
 - Increases the stock specific informational content
 - Increases short selling
 - Makes the stock more sensitive to extreme event realizations.
- During the crisis, bank-managed funds
 - Reduce stock illiquidity
 - Increases the stock specific informational content
 - Reduce short selling
 - Make the stock less sensitive to extreme event realizations