

Cyclical Investment Behavior across Financial Institutions

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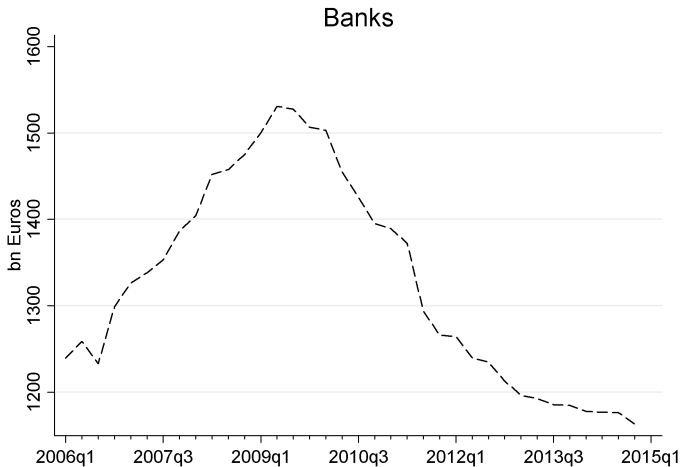
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- Shift from bank-based finance to market-based finance
 - Broadening the funding base has advantages
 - Transfer of risk from banks to other financial institutions
- A large part of OFI's assets in debt securities
- How do financial institutions react to price changes?
- Reaction to price changes differ across financial institutions

- Stabilize markets (Fama, 1965; Friedman, 1953)
- Exacerbate price dynamics (Abreu and Brunnermeier, Econometrica 2003; Brunnermeier and Nagel, JF 2004; Vishny and Shleifer, JEP 2011)
- Abbassi, Iyer, Peydró and Tous (JFE forthcoming)
 - Use German security level data for banks
 - Trading banks behaved more counter-cyclically than non-trading banks during the crisis

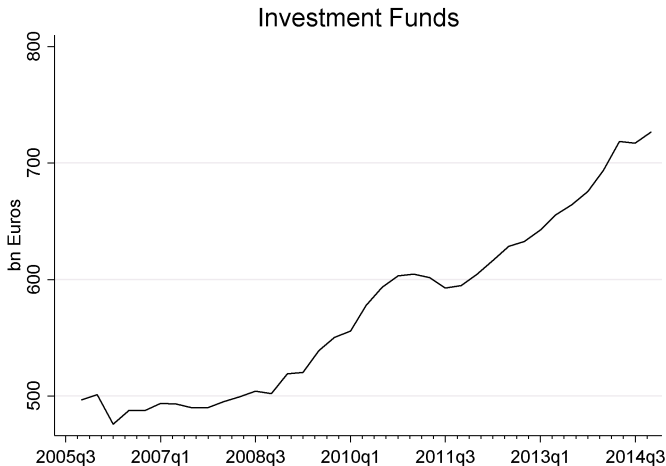
- German Microdatabase Securities Holdings Statistics
 - Research Data and Service Centre of the Deutsche Bundesbank
 - Confidential security-by-security (by ISIN) holdings of investors domiciled in Germany by holding sector
- Banks; Investment Funds (Mutual Funds); and Insurance Companies and Pension Funds
- Debt securities
- Quarterly from 2005q4 - 2014q4

Figure 1: Nominal Holdings of Debt Securities of Banks



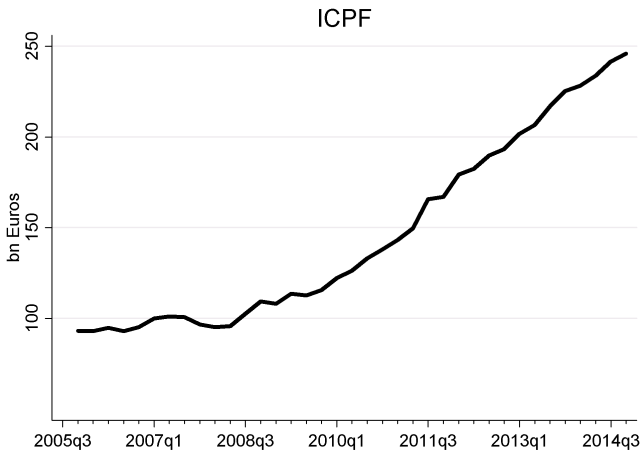
Source: Microdatabase Securities Holdings Statistics, Deutsche Bundesbank

Figure 2: Nominal Holdings of Debt Securities of Investment Funds



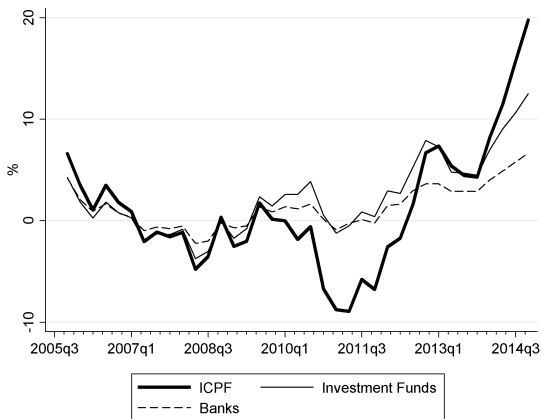
Source: Microdatabase Securities Holdings Statistics, Deutsche Bundesbank

Figure 3: Nominal Holdings of Debt Securities of Insurance Companies and Pension Funds



Source: *Microdatabase Securities Holdings Statistics, Deutsche Bundesbank*

Figure 4: Cumulative Capital Gains on Debt Security Holdings



Source: Microdatabase Securities Holdings Statistics, Deutsche Bundesbank

“If some northern European lenders had kept their Italian government debt in 2011-2012, they would be earning much more”

— Matteo Renzi, Italy's Prime Minister

- Insurance Companies and Pension Funds
 - Long-term liabilities
 - Payouts predictable and unrelated to economic condition
- Banks
 - High leverage
 - Short-term liabilities
- Investment Funds
 - Limited leverage
 - Investor redemptions

Table 1: Summary statistics

Variable	Mean	Std. Dev.	N
Buy IF	8.4	35.4	110587
Buy ICPF	12.4	35.5	19955
Buy Banks	16.3	100.9	91278
Sell IF	7.5	30.6	125753
Sell ICPF	11.57	34.6	16868
Sell Banks	19.5	147.9	85845

Buy and sell refers to the amount bought and sold in million Euros. Source: Microdatabase Securities Holdings Statistics, Deutsche Bundesbank

- $Netbuy_{s,t} = \beta \Delta Price_{s,t-1} + \gamma' X_{j,t-1} + \phi' Z_{t-1} + \alpha_s + \epsilon_{s,t}$
 - Netbuy: log difference of the nominal amount held of security s at quarter t if this amount changes
 - $\Delta Price$: log difference in the price of the security
 - $X = Gov_Bond_Yield, \pi,$ and ΔGDP of country j
 - $Z = VIX, EONIA$
 - α_s is a security fixed effect
 - Standard errors clustered at the security level

Table 2: Netbuy

	(1)	(2)	(3)
	IF	ICPF	Banks
Δ Price	0.174*** (0.02)	-0.650*** (0.12)	0.169*** (0.06)
Gov Bond Yield	-0.144 (0.18)	4.633*** (0.86)	0.807** (0.40)
π	-0.846*** (0.23)	1.983* (1.14)	0.035 (0.57)
VIX	0.003 (0.00)	0.070*** (0.02)	-0.005 (0.01)
Δ GDP	1.440*** (0.25)	4.013*** (0.87)	0.483 (0.41)
EONIA	0.967*** (0.12)	-1.164** (0.52)	0.181 (0.22)
R^2	0.139	0.178	0.120
N	263612	28096	134005
Security FE	Yes	Yes	Yes

Standard errors are in parentheses and clustered at the security level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Benchmark: ICPF

	(1)	(2)	(3)
	Netbuy	Netbuy	Netbuy
$\Delta \text{ Price} * \text{Banks}$	0.684*** (0.18)	0.732*** (0.18)	0.928*** (0.20)
$\Delta \text{ Price} * \text{IF}$	0.333*** (0.13)	0.382*** (0.13)	0.424*** (0.13)
R^2	0.339	0.340	0.432
N	50751	50751	50751
Security*Time FE	Yes	Yes	Yes
Sector FE	No	Yes	No
Sector*Time FE	No	No	Yes

Standard errors are in parentheses and clustered at the security level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

- Regulating shadow-banking sector
 - Redemption fees for investors in investment funds
 - Asset liquidity
- Short-termism
 - Taxes (Summers and Summers, 1989)
- Capital flows
 - Investor base (Cerutti et al., 2015)
 - Surges and stops

- Banks and Investment Funds pro-cyclically
 - May exacerbate price dynamics
- Insurance Companies and Pension Funds counter-cyclically
 - May stabilize the markets

Thank You!