Liquidity support and distress resilience in bank-affiliated mutual funds

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The story

◎ Open-ended mutual funds issue shares redeemable daily at their net asset value, backed by a portfolio of potentially illiquid assets ⇒ Large redemptions impose a cost on remaining investors ⇒ In a crisis, fund investors have the incentive to withdraw faster than the others ("run" the fund) ⇒ Mutual funds are particularly vulnerable to financial distress

◎ Bank-affiliated funds may be more resilient because banks may serve as an "investor of last resort" for funds which are seeing excessive outflows. Recent examples (US):

BNY Mellon steps in to support money market fund after outflows

Bank swaps $1.2bn of assets for cash to cover redemptions at Dreyfus Cash Management fund

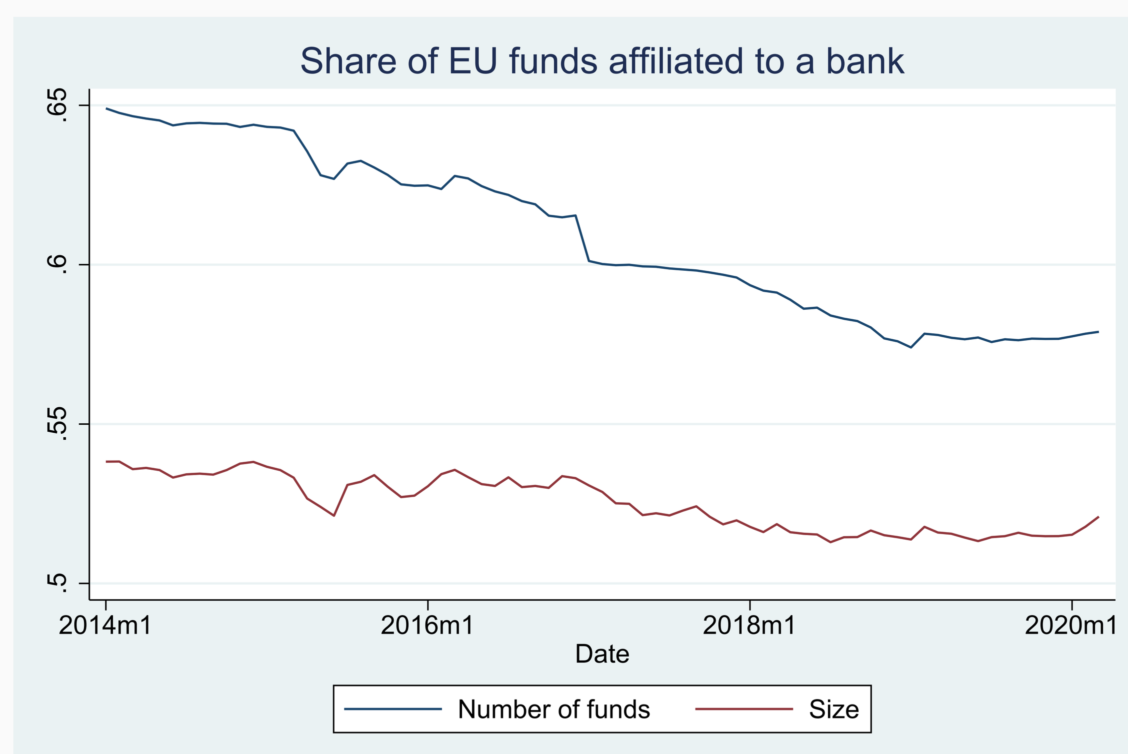
Richard Henderson and Robert Armstrong in New York MARCH 20 2020 6

Goldman Sachs spends $1.9bn to shore up two money market funds

Coronavirus crisis triggers rush of selling by institutional investors

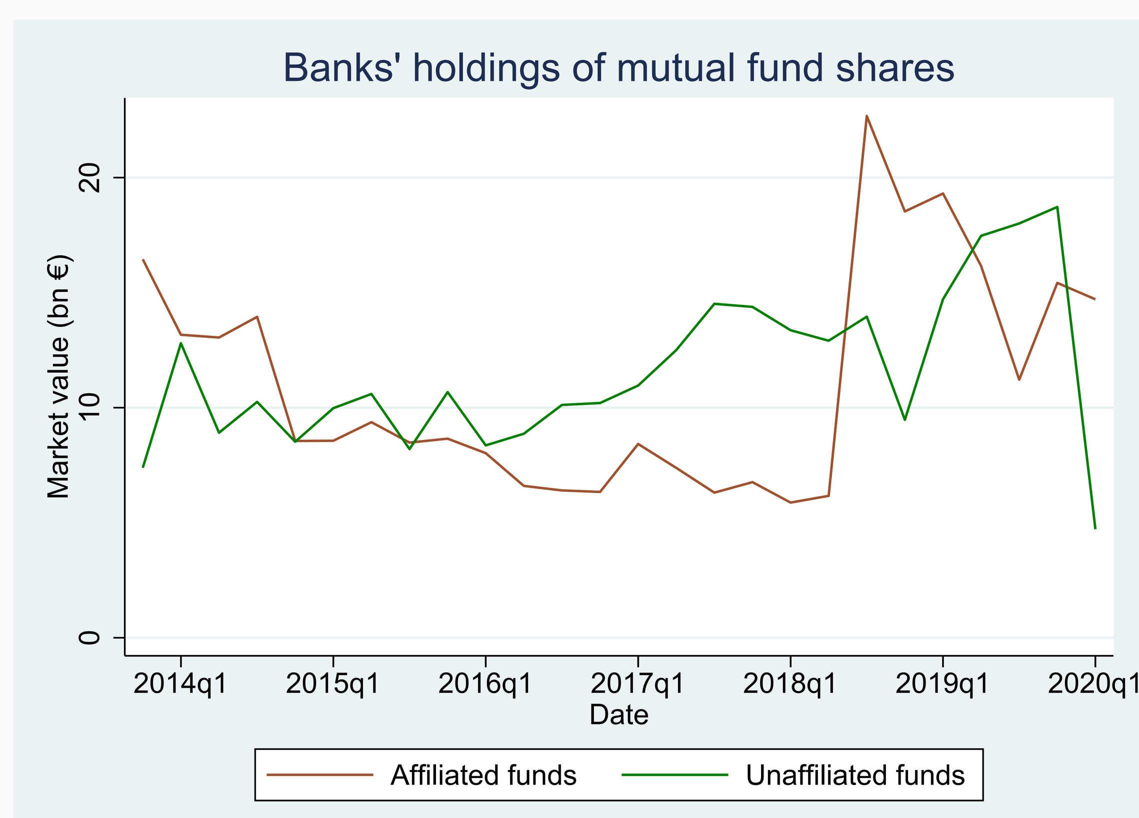
Laura Noonan in New York MARCH 23 2020 15

◎ Many mutual funds in Europe are bank-affiliated (i.e. their parent company is a bank):



Note: This sample covers 95% of the EU mutual funds by assets reported by Lipper for Investment Management.

◎ European banks can provide liquidity support to distressed affiliated funds by buying the shares which fund investors are selling. In fact, European banks have considerable proprietary holdings of affiliated fund shares:



Note: This sample includes the proprietary holdings of mutual fund shares for the 26 largest euro-area banking groups.

◎ Investors of funds affiliated to a financially solid bank rely on the bank providing a safety net in case of outflows ⟹ No first-mover advantage, investors do not run the fund ⟹ Even absent a parent bank's intervention, affiliated funds are more resilient to financial distress (self-fulfilling prophecy)

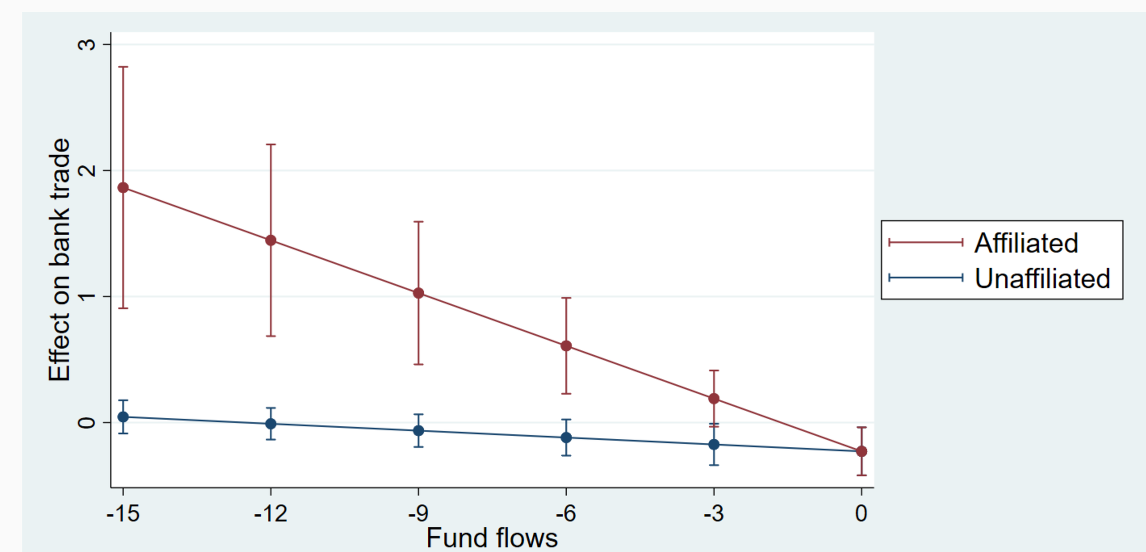
Empirical analysis and results

Do European banks support distressed affiliated funds by purchasing fund shares?

$$\text{Bank trade}_{ijt} = \overbrace{\beta_1}^{-0.01} \text{Fund flows}_{jt} + \overbrace{\beta_2}^{-0.02^{***}} \text{Fund flows}_{jt} \times \text{Outflow}_{jt} + \underbrace{\beta_3}_{-0.03^{*}} \text{Fund flows}_{jt} \times \text{Affiliated}_{ijt} + \underbrace{\beta_4}_{-0.12^{***}} \text{Fund flows}_{jt} \times \text{Outflow}_{jt} \times \text{Affiliated}_{ijt} + \gamma_{ft} + \alpha_{it}$$

Bank trade$_{ijt}$: change in holdings of fund share j in the portfolio of bank i over quarter t (nominal value, % of fund j's TNA)
Fund flows$_{jt}$: % flows of fund j over quarter t, net of banks' trades
Affiliated$_{ijt}$ is 1 if fund j is affiliated to bank i in quarter t
Is Outflow$_{jt}$ is 1 if Fund flows$_{jt} < 0$
γ_{ft} and α_{it}: fund style-quarter and bank-quarter fixed effects

⇒ Effect of fund outflows on banks' decision to trade the fund share compared to inflows:



Note: the plotted lines represent the function E(Bank trade | Fund flows, Outflow = 1) − E(Bank trade | Fund flows, Outflow = 0) for affiliated and unaffiliated funds.

◎ Whether a non-affiliated fund has outflows or inflows does not impact the decision of a bank to trade that fund's shares in the same quarter (blue line)

◎ When an affiliated fund has outflows, there is a large contrarian reaction by the parent bank (buy trade) which is absent in the case of inflows (red line)

Are bank-affiliated funds more resilient to distress? Does the presence of a parent bank change fund investors' behavior after shocks?

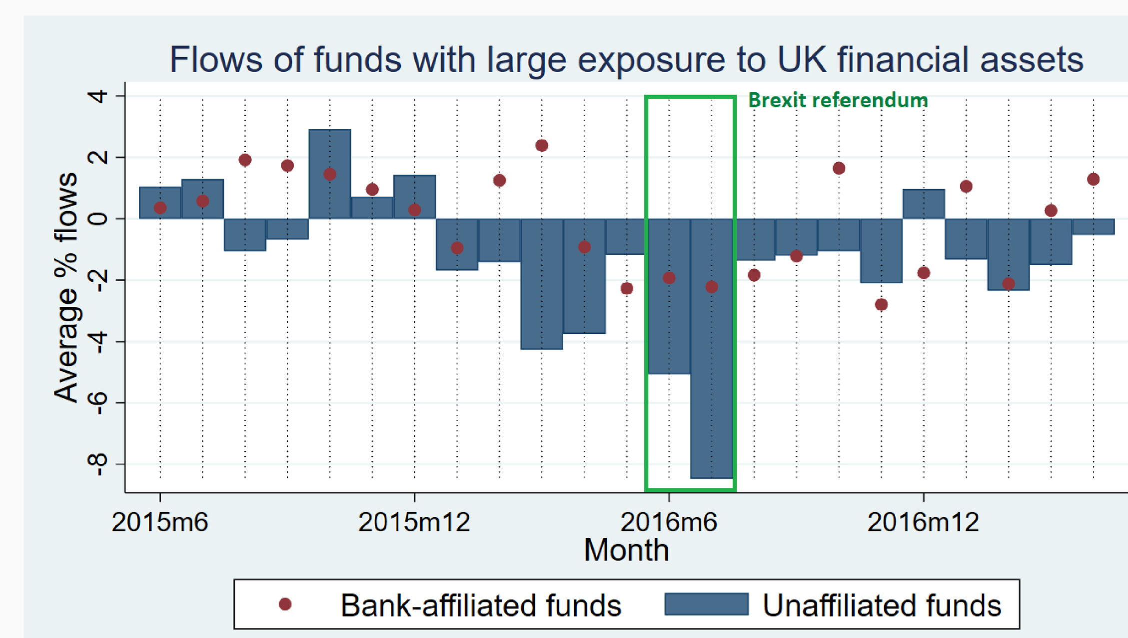
◎ Compare bank-affiliated and unaffiliated funds, while controlling for investment style and other fund attributes:

$$\text{Fund characteristic}_{jt} = \underbrace{\beta}_{<0} \text{Affiliated}_{jt} + \text{Fund controls}_{j,t-1} + \gamma_{ft}$$

Fund characteristic$_{jt}$: flows volatility / flows-performance sensitivity / cash holdings of fund j in month t
Affiliated$_{jt}$ is 1 if fund j is affiliated to bank i in month t
γ_{ft}: fund style-month fixed effects

⇒ Bank-affiliated funds have lower flows-performance sensitivity, lower flows volatility and hold lower precautionary cash buffers, suggesting a more stable investor base.

◎ Resilience to exogenous shocks:



Note: This sample includes EU mutual funds with at least 30% of their portfolio invested in UK assets and at least 25% invested in financial sector assets.

⇒ On average, bank-affiliated funds with a large exposure to UK financial assets weather the Brexit referendum shock better than their unaffiliated peers.

Main takeaways

◎ European banks provide liquidity support to their affiliated mutual funds. As a consequence, bank-affiliated funds are less vulnerable to large redemptions and are better able to weather temporary financial distress. Our results are stronger for funds affiliated to financially solid banks (high capital and/or low CDS spread).

◎ By redistributing risks across business entities, bank holding companies mitigate fund runs and subsequent fire sales in a crisis, with potential wider benefits to financial stability.

◎ However, further results show that negative shocks at a parent bank spill over to its affiliated funds: interconnections facilitate financial contagion and the propagation of shocks across sectors.

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