

## REFERENCES

---

- Chen, Qi, Itay Goldstein, and Wei Jiang. 2010. “Payoff Complementarities and Financial Fragility: Evidence from Mutual Fund Outflows.” *Journal of Financial Economics*, 97 (2): 239–62.
- Coval, Joshua, and Erik Stafford. 2007. “Asset Fire Sales (and Purchases) In Equity Markets.” *Journal of Financial Economics* 86 (2): 479–512.
- Goldstein, Itay, Hao Jiang, and David T. Ng. 2017. “Investor Flows and Fragility in Corporate Bond Funds.” *Journal of Financial Economics* 126 (3): 592–613.
- Ferreira, Miguel A., Aneel Keswani, Antonio F. Miguel, and Sofia B. Ramos. 2012. “The Flow-Performance Relationship around the World.” *Journal of Banking & Finance* 36 (6): 1759–780.
- Financial Stability Board (FSB). 2017. “Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities.” Basel.
- Financial Stability Board (FSB). 2020. “Holistic Review of the March Market Turmoil.” Basel.
- Financial Times* (FT). 2020. “Have Investment Funds Averted a Liquidity Crisis?” May 5. <https://www.ft.com/content/9aab8518-aaf1-412e-b910-fb5891fc625d>.
- Fitch Ratings. 2020. “Global Mutual Fund Redemption Suspensions Highlight Liquidity Mismatches.”
- International Monetary Fund (IMF). 2015. “The Asset Management Industry and Financial Stability.” *Global Financial Stability Report* Chapter 3. Washington, DC, April.
- International Monetary Fund (IMF). 2019. “Are Fixed-Income Funds Well Prepared to Meet Investor Redemptions?” *Global Financial Stability Report* Chapter 3, Box 3.1. Washington, DC, October.
- International Monetary Fund (IMF). 2020. “Markets in the Time of COVID-19.” *Global Financial Stability Report* Chapter 1. Washington, DC, April.
- International Organization of Securities Commissions (IOSCO). 2018. “Recommendations for Liquidity Risk Management for Collective Investment Schemes.” Madrid.
- Jin, Dunhong, Marcin Kacperczyk, Bige Kahraman, and Felix Suntheim. 2019. “Swing Pricing and Fragility in Open-end Mutual Funds.” IMF Working Paper 19/227 International Monetary Fund, Washington, DC.
- Sirri, Erik R., and Peter Tufano. 1998. “Costly Search and Mutual Fund Flows.” *Journal of Finance* 53 (5): 1589–622.

## Appendix

**Table 1. Sample Overview and Summary Statistics**

	Fund net flow and return data (daily)	Fund net flow, return and portfolio data (monthly)	Detailed portfolio data (monthly)
Sample period	Jan. 1, 2019–May 1, 2020	January 2015–May 2020	April 2019–March 2020
Number of funds	2,073	2,877	638
<b>Fund domicile</b>			
United States	34%	29%	43%
Luxembourg	27%	21%	30%
Ireland	9%	8%	6%
Other	30%	42%	21%
NAV (bn USD, mean)	2.3	2.5	3.8
NAV (bn USD, median)	1.1	1.1	2.1
Of global fixed income sector (IIFA, March 2020)	25.33%	64.52%	22.47%
Flow net (mean)	0.0487%	1%	0.92%
Flow net (median)	0.0015%	0.22%	0.44%
Return (median)	0.0096%	0.21%	0.25%
Return (mean)	0.003%	0.14%	–0.02%
Sources: Refinitiv Datastream; and Morningstar. Note: The sample is compared with the global fixed income sector, including funds of funds, as reported by the International Investment Funds Association in March 2020. Observations with net flows below –50 percent or above 50 percent have been dropped. Bn = billion; EM = emerging market; NAV = net asset value; USD = US dollars.			