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Central Bank Access and Flight to Safety*

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Abstract

We examine whether access to the Federal Reserve's Overnight Reverse Repo Facility (ON RRP) affects money market fund flows during flight-to-safety episodes. We find that funds with ON RRP access serving sophisticated investors experience about a 1 percentage point increase in net daily flows over total assets during the March 2020 flight-to-safety episode relative to similar funds without access. The effect aligns with theoretical predictions and explains more than half of the inflows in those funds. Our results show that access to central bank deposit facilities amplifies flight-to-safety behavior.

JEL Classification: E58, G01, G21, G23

Keywords: central bank account access, flight-to-safety, regulation D

1 INTRODUCTION

“Flight to safety” refers to the reallocation of funds from riskier financial assets into safer, more liquid assets during episodes of stress (Vayanos, 2004; Caballero and Krishnamurthy, 2008). There are several manifestations of flight-to-safety in recent history. In September 2008, prime money market funds (MMF) faced runs as investors fled to safer government MMF, after the Reserve Primary Fund “broke the buck,” ultimately forcing government intervention

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(Kacperczyk and Schnabl, 2013; Schmidt et al., 2016). In March 2020, at the onset of COVID-19, a dash for cash triggered a flight to safety and large outflows from prime MMF until the Federal Reserve stepped in with liquidity backstops (Cipriani and La Spada, 2020; Li et al., 2021). And in March 2023, following the failure of Silicon Valley Bank, depositors fled from riskier banks to safer ones (Cipriani et al., 2024).

A core policy question is whether granting financial institutions access to the central bank's deposit facilities might amplify flight-to-safety pressures. The financial institutions that typically receive the flows during flight-to-safety episodes are those that are heavily invested in safe assets, such as Treasury securities, that enjoy deposit insurance, or that have an implicit government guarantee. The ability to deposit the incoming inflows directly at the central bank rather than in Treasury securities provides an additional safe investment option and enhances the safe haven status of institutions. Hence, investors' funds could abruptly shift to financial institutions with deposit accounts at the central bank, draining liquidity from traditional intermediaries, exacerbating run risk, and impairing credit supply during times of stress.

Regulators have long considered such concerns, particularly in the case of Pass-Through Investment Entities (“PTIEs”), a type of “narrow bank”. PTIEs invest a significant fraction of, or all, their deposits in reserve balances with the central bank in order to pass through the interest that they earn on reserve balances to their depositors. Absent any restrictions on how large PTIEs could grow, flight-to-safety considerations in times of stress are warranted. The Federal Reserve has explored regulatory changes to limit flight-to-safety dynamics.¹

Theory predicts that central banks' deposit facilities can create a safe-haven effect in countries with reserve currencies, but the effect is hard to test empirically because flights to safety are infrequent and access is endogenous. We address these challenges by studying incremental take-up in the ON RRP during COVID-19, which provides a setting where there is sufficiently granular data to reasonably control for confounding factors (Frost et al., 2015; Carapella et al., 2025).² The idea is simple: In times of stress, government MMF receive inflows from banks,

¹The Board of Governors of the Federal Reserve System issued an Advanced Notice of Proposed Rulemaking to request public comments on whether it should propose changes to Regulation D. See: Federal Register Vol. 84, No. 48 on Tuesday, March 12, 2019 (Federal Register :: Regulation D: Reserve Requirements of Depository Institutions).

²The Federal Reserve introduced ON RRP in 2014 to support its control of short-term interest rates by allowing eligible non-bank participants in short-term funding markets to earn interest on repurchase agreements (repos) with the Federal Reserve. The set of such eligible counterparties is broad and includes money market funds, primary dealers, and government sponsored enterprises. Although the ON RRP is a monetary policy tool, its potential destabilizing effects were highlighted early on and as a result, total ON RRP is capped by the Federal Reserve. The Fed has historically increased the cap during stress; for example, it increased the facility size from \$100 billion to \$150 billion in March 2020.

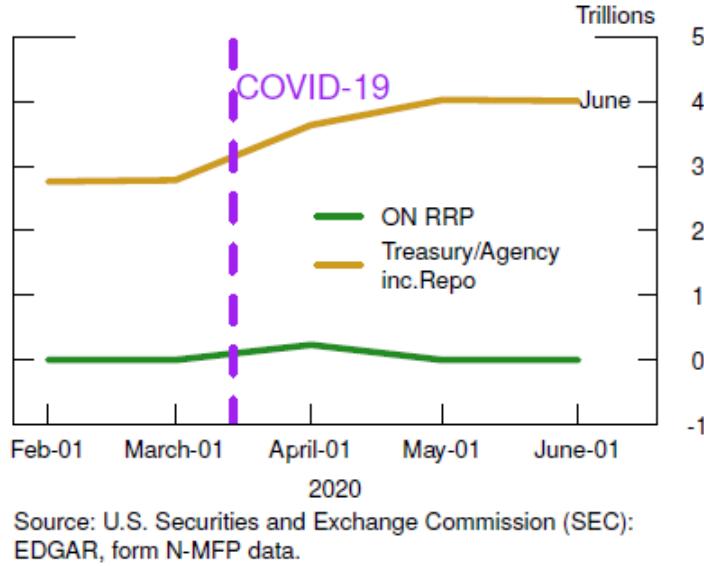


Figure 1: Government MMF investment in ON RRP balances and Treasury and Agency repurchase agreements, in trillions USD

prime MMF, or other investment vehicles as a general result of a flight-to-safety. Without access to ON RRP, government MMF would invest these additional funds into government assets, such as Treasury securities, which would put downward pressure on their yields, mitigating, on the margin, the incentives to move funds into government MMF. With access to an elastic ON RRP, government MMF could absorb more liquidity without suppressing short-term rates, thereby exacerbating flight-to-safety dynamics. As advocated by [Carapella et al. \(2025\)](#) and also shown in Figure 1, the ON RRP take-up increased in March and April 2020 at the outbreak of the COVID-19 pandemic. However, flows to the ON RRP during that stress episode were limited overall, and take-up quickly normalized to levels close to zero. [Carapella et al. \(2025\)](#) additionally discuss that there is limited evidence that the ON RRP contributed to the banking stress of March 2020, suggesting that there is little evidence that access to the ON RRP amplified flight-to-safety dynamics.

The aforementioned analysis focuses on the aggregate ON RRP take-up and ignores important heterogeneity across MMF with respect to ON RRP access. Moreover, the focus on equilibrium take-up does not address the more fundamental point of whether government MMF with ON RRP access experienced larger inflows than their counterparts without access, all else being equal, even if they did not invest these inflows in the ON RRP.

Our paper contributes to the literature by showing that access to central bank deposit facilities can amplify flight-to-safety dynamics, but only for sophisticated investors who understand the benefits of having an elastic store of value. Indeed, we show that institutional MMF

with access to ON RRP experience statistically significant higher inflows during flight-to-safety episodes relative to peers without ON RRP access. By contrast, there is no incremental effect of ON RRP access for retail funds, the investors of which are arguably less sophisticated. The incremental effect is quantitatively large, accounting for over half of the inflows in those funds.

2 EMPIRICAL METHODOLOGY AND DATA

We use iMoneyNet, Inc. data for MMF domiciled in the United States. The data provide daily information on the portfolio assets, share class assets, share class yields, and other characteristics, such as whether the share class is catered to institutional or retail investors.³ Our focus is on government MMF, because they have been found to receive inflows during flight-to-safety episodes. We drop non-government MMF and also remove observations that are missing relevant identifying information, asset information, or 1-day average simple yield information; about 1.15% of the government MMF sample. Finally, we aggregate all information to the portfolio level because ON RRP access is granted at the fund level. We determine a fund's ability to access the ON RRP using the New York Federal Reserve Bank's list of reverse repo counterparties.⁴ We define a fund as an ON RRP counterparty based on its status as of January 2, 2020, before the COVID shock. Our final dataset consists of daily data for 158 fund portfolios from January 2, 2020 to June 30, 2020.

Our objective is to evaluate whether investors recognize the additional safety of a fund with access to the ON RRP, which then affects the flight-to-safety dynamics. We examine the differences in net flows between government MMF that have access to the ON RRP and those that do not. In a closely related work, [Cipriani and La Spada \(2020\)](#) illustrate behavioral differences between institutional and retail prime MMF investors during the March 2020 run on prime money market funds and find that institutional investors run, while retail investors do not. We employ the same logic that institutional investors are more sophisticated but, instead, study their choice of investing across government MMF with and those without ON RRP access, rather than their choice of withdrawing from prime MMF. Our conjecture is that institutional investors are more likely to account for the incremental effect that ON RRP access can have on a fund's ability to absorb inflows without putting pressure on yields. Hence, we expect that

³Mutual funds often offer multiple share classes, each with a different fee structure, which affects the net return for investors. The number of share classes within a fund portfolio varies from 1 to 18.

⁴https://www.newyorkfed.org/markets/rrp_counterparties.

government MMF with institutional investors and ON RRP access would experience higher inflows during a flight to safety episode.

A government MMF may cater to both institutional and retail investors. The institutional/retail flag for government MMF is provided at the share class level, and a fund portfolio may—though not often—comprise both institutional and retail share classes. Of the 158 fund portfolios in our dataset, 64 consist entirely of institutional share classes, while 55 consist entirely of retail share classes. Of the remaining 49 fund portfolios that comprise both institutional and retail share classes, all but two maintain a constant ratio of institutional-to-retail share classes throughout our data sample. We designate a fund as institutional if more than 50% of the total assets in its portfolio on a given day are held by institutional share classes. Otherwise, the fund is flagged as retail.⁵ In our sample, 24% of the funds are institutional with ON RRP access, 27% are institutional without ON RRP access, 10% are retail with ON RRP access, and 39% are retail without ON RRP access. Hence, there is heterogeneity with respect to ON RRP access within both groups.

We empirically estimate the incremental effect of flight-to-safety dynamics from ON RRP access by regressing the funds' daily net flows over total net assets (TNA) on a fund's ON RRP access and its institutional/retail designation, using

$$\begin{aligned}
y_{i,t} = & \beta_1 Stress_t \times ONRRP_i + \beta_2 Stress_t \times Inst_{i,t} + \\
& \beta_3 Inst_{i,t} \times ONRRP_i + \beta_4 Stress_t \times Inst_{i,t} \times ONRRP_i + \\
& \gamma' X_{i,t} + \alpha_t + \phi_i + \epsilon_{i,t}.
\end{aligned} \tag{1}$$

$y_{i,t}$ are the net flows over TNA for fund i on day t . $Stress_t$ is a dummy variable that captures the flight-to-safety episode and takes the value of one for trading days between March 6, 2020, and March 24, 2020, when prime MMF experienced runs. $Inst_{i,t}$ is a dummy variable that takes the value of one if fund i is designated as institutional on day t . $ONRRP_i$ is a dummy variable that takes the value of one if fund i had access to the ON RRP facility as of January 2, 2020, when our sample begins. α_t and ϕ_i are time and fund fixed effects, respectively. The vector $X_{i,t}$ contains fund-specific controls.

⁵As a robustness check, we have also employed a more continuous measure representing a fund's ratio of institutional to total assets for a given day. All regression results presented below continue to hold.

3 ESTIMATION RESULTS

Table 1 reports the results from estimating equation (1). Columns (1) and (4) report the effect of having access to ON RRP without differentiating between institutional and retail designated funds; the former pertains to a smaller sample of observations from January 2, 2020, to March 24, 2020, while the latter extends from January 2, 2020, to June 30, 2020. Columns (2) and (5) report the incremental effect of ON RRP access for institutional funds for the same sub-samples. Columns (3) and (6) report the same incremental effect while accounting for an important confounding factor, namely the inflows from prime funds belonging to the same fund family as the government funds in our analysis (see [Cipriani and La Spada, 2020](#) for a related discussion and [Cipriani and La Spada, 2021](#) for evidence of why government MMF enjoy a higher money-premium than prime MMF). The concern is that ON RRP access at institutional funds is highly correlated with belonging to a fund family with prime funds; thus, the incremental inflows may be due to the flows from prime funds in the same family rather than the ON RRP access. We control for this confounding factor by including in the regression (1) double and triple interactions of $Stress_t$ and $Inst_{i,t}$ with the ratio of total daily prime fund flows over a fund's family TNA for each fund i , indicated by prime control in the Table.⁶

We derive two results on the incremental effect of ON RRP access on flight-to-safety. First, without differentiating between institutional and retail funds, there is no statistically significant effect of the ON RRP, although the coefficient on $Stress_t \times ONRRP_i$ is positive—columns (1) and (4). Second, when we differentiate between institutional and retail funds in columns (2) and (5), the impact of access to the ON RRP becomes significant for institutional funds, which experience, on average, a 0.9 to 1.0 percentage point increase in the net daily flows over TNA during flight-to-safety episodes compared to institutional funds without access, as shown in the third row. Our estimated effects are statistically significant and align with the theoretical predictions. It is also quantitatively large, as it accounts for 50 to 64 percent of the average daily inflows over TNA in institutional funds with ON RRP access during the period of stress.⁷

⁶We winsorize the ratio of prime fund flows relative to TNA at the 1st and 99th percentile to reduce the influence of outliers stemming from likely data errors. Our results are similar when we include additional controls, such as the total size of government MMF in a fund family—instead of the prime fund flows in the double and triple interactions. Such controls address the concern that larger government fund families may be perceived to be safer and, thus, attract more inflows unrelated to ON RRP access. A complication that arises is that ON RRP access is highly related to size. Hence, we cut the size distribution at a point where there is equal representation of funds with and without ON RRP access within the large size bucket.

⁷The average net inflow over TNA in institutional funds with ON RRP access was 1.57% for the period from March 6 to March 24.

Our results continue to hold and are quantitatively of the same magnitude when including the prime control in columns (3) and (6).

Dep. Var: Net inflows (%)	1/2/2020–3/24/2020			1/2/2020–6/30/2020		
	(1)	(2)	(3)	(4)	(5)	(6)
$Stress_t \times ONRRP_i$	0.002 (1.08)	-0.003 (-1.19)	-0.006 (-1.49)	0.002 (0.81)	-0.005 (-1.54)	-0.007* (-1.72)
$Stress_t \times Inst_{i,t}$		-0.003 (-0.71)	-0.003 (-0.63)		-0.002 (-1.43)	-0.005 (-1.33)
$Stress_t \times Inst_{i,t} \times ONRRP_i$		0.009** (2.19)	0.011** (2.28)		0.010** (2.58)	0.013** (2.57)
Observations	8,921	8,921	8,921	19,430	19,430	19,430
Within R^2	0.0003	0.0011	0.0033	0.0005	0.0004	0.0025
Prime control	No	No	Yes	No	No	Yes

Table 1: Fund-level regression of daily percentage net flows of government MMF as a function of a family’s ON RRP access and institutional/retail status with date and fund fixed effects. Column header denotes regression time sample. All specifications include series and date fixed effects. We cluster standard errors at the day and fund levels. t -statistics are in parentheses. ***, **, and * respectively represent 1%, 5%, and 10% statistical significance.

4 CONCLUDING REMARKS

In times of stress, investors shift funds from riskier assets toward safer ones, leading to flight-to-safety dynamics that can destabilize markets and pose risks to financial stability. We document that granting access to central bank deposit facilities—specifically the Federal Reserve’s Overnight Reverse Repo Facility—amplifies these dynamics for sophisticated investors. Institutional money market funds with access to the facility experienced about a 1 percentage point increase in daily net flows over total net assets during the March 2020 episode relative to similar funds without access. By contrast, we find no incremental effect for retail funds.

There are three important caveats regarding our analysis when drawing broader conclusions about financial stability. First, we have abstracted from the positive effects of central bank deposit facilities on financial stability. In particular, granting access to these facilities can provide an elastic store of value in times of stress, enhance the resilience of safe-haven institutions, and crowd out more runnable private-money assets (Carlson et al., 2016). Second, Treasury bill yields exceeded the ON RRP rate in March 2020, so a large share of inflows to government MMF went to T-Bills and ON RRP take-up was modest. If the next flight to safety occurs when safe asset demand is higher or Treasury supply is lower, Treasury yields could fall below the ON RRP rate and further amplify the flight-to-safety flows we document (Stein and Wallen, forthcoming). Third, our analysis focuses on the COVID-19 period when banks were

well capitalized and had sufficient liquidity buffers. In stress scenarios in which some banks may experience distress, the direction and magnitudes of flight-to-safety flows from banks to MMF may be different, and MMF with ON RRP access may experience an even larger share of the flight-to-safety flows.

Accounting for these considerations—and potentially others—would be necessary for a more comprehensive assessment of the financial stability implications of granting access to central bank deposit facilities. Our analysis focuses on the effect of such access on flight-to-safety behavior, and we view the additional considerations as promising avenues for future research.

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