

Financial Risk & Regulation

Liquidity risk management of investment funds – Supervisory experience of 2020

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During the stress period caused by the Covid-19 crisis in the spring of 2020, large redemptions were observed for investment funds. As the stress period was not long, the liquidity of the funds was generally not in jeopardy, but some studies drew attention to the over-optimism of fund managers, inadequate risk management methods, and organizational problems. At the same time some regulatory issues became relevant. In this newsletter, we summarize the observations of ESMA and the English supervisor on the shortcomings of risk management practices, liquidity management tools, and pricing solutions.

Hungarian supervisory developments

On 29 April, MNB published [Recommendation no. 6/2021](#), in which it implemented the recommendation on liquidity stress tests issued by ESMA (European Securities and Markets Authority). The relevant financial institutions are expected to apply this from 1 June 2021. The recommendation of ESMA has already been presented in our [August 2020 newsletter](#). The sector may also be interested in the ESMA recommendation on changes in the remuneration of investment funds, which we presented in our [May 2020 newsletter](#), where we have described what performance measurement techniques are available to better understand yields.

Current regulatory issues

The issue of liquidity risk for investment fund managers has come to the fore on the part of regulators since the beginning of the Covid-19 pandemic and the market downturn in March 2020, when there was a large wave of redemptions by investors. The largest outflows in the EU markets were in bond funds, including high-yield funds, and real estate funds.

In the [March report of ESMA](#) investment funds have received special attention, especially concerning to the effects of the Covid crisis. The report shows that bond funds saw large capital inflows in the second half of 2020, but at the same time reduced their cash holdings as market volatility decreased, and the low interest rate environment led to a decline in high-quality liquid assets due to fund managers' risk-seeking behavior. Similarly, Money Market Funds (MMFs) built large liquidity buffers in the second half of last year.

The topicality of investment fund liquidity is also well illustrated by the publication of the analysis of IOSCO (International Organization of Securities Commissions) in November 2020 on how EU money market funds behaved during the March-April shock. In this, IOSCO highlighted the heterogeneity of the market, which the [regulation should also take into account](#). In addition, IOSCO is processing the supervisory and industry feedback on the liquidity risk management of open-ended funds that was given to its previous, 2018 recommendation. At the end of 2021, IOSCO, together with the Financial Stability Board (FSB) will analyze the liquidity management tools available to funds and their effects especially with regard to the market stress period in spring 2020.

The liquidity risk management of UCITS

[ESMA launched a joint supervisory action](#) (Common Supervisory Action - CSA) with national competent authorities on the liquidity risk management of UCITS (Undertakings for Collective Investment in Transferable Securities) in January 2020. The aim of the action, in which the authorities of all 30 EEA states participated, was to coordinate and standardize joint regulatory activities and to assess the adequacy of risk management. ESMA assessed the sector's readiness to manage liquidity risks as part of an earlier 2019 stress test. According to the study, even in the case of reasonable shock scenarios, almost 40% of less liquid corporate (high-yield) bond funds might have a liquidity shortage.

In contrast, for funds (which include other funds besides high-yield ones) examined by national authorities, in ESMA's general experience in the first half of 2020 there were only a few cases of such liquidity risk that would not have allowed the investors to redeem their units or which would have risked meeting other liabilities of the fund. Only a few cases of non-compliance were identified, but there were areas where progress was needed according to regulators:

- Despite the regulatory obligation, the risk management documentation was inadequate, the description of preliminary liquidity analyses, forecasts, decision-making processes were not clear, and there were doubts about the reliability of the data.
- There were also problems with the quality of the written risk management procedures, either the procedure was not included in the documentation, or the risk management tool written in the documentation was not used at all or was not used properly.
- The methodology of risk management was inadequate, the models were not forward-looking, they were not measured backwards. The liquidity situation was not assessed prior to investment decisions, and, in addition, the behavioral impact of investors was not properly modeled. The forecasting of the models for unfavorable market scenarios was inadequate.
- The funds used overly optimistic liquidity assumptions for securities traded on a stock exchange or a regulated market.
- In many cases, it was incorrect to assume that assets that were not traded on a regulated market as defined in the UCITS Directive (2009/65/EC) were considered liquid.
- In some cases, in addition to portfolio management, liquidity management functions were delegated to third parties, but internal risk management functions, including monitoring and due diligence functions, were insufficient.

- The data quality conditions set out in the UCITS Directive were not met, as it was typical that the funds relied on the data of only a few data providers and that the required data checks were not performed.
- The Key Information Documents (KID), which provide transparent customer information, were incomplete, and liquidity risks and risk management tools were not clearly stated.
- Decision-making processes were not clear and well documented, especially in the implementation and evaluation of liquidity management tools.
- In some cases, the internal management functions did not work properly. The second and third "lines of defense" (compliance and internal control, respectively) did not perform adequate controls on liquidity risk management processes.
- External audits of UCITS fund managers are not always carried out due to diverging national regulations.

Regulation of money market funds

The [ESMA also issued a consultation report](#) addressing EU money market fund managers and relevant investors. The consultation is based on a review of the Money Market Fund Regulation (MMFR) due in July 2022.

The consultation focuses on the reform of separating the application of redemption fees and redemption gates (restricting redemptions for a certain period of time) from the ratio of Weekly Liquid Assets (WLA). Currently, EU regulations allow the use of these tools if WLA falls below 30% of the net asset value or if the daily redemptions exceed 10%. The consultation refers to studies which have shown that if the fund is close to the WLA threshold, investors will have an interest in redeeming their investment to avoid paying fees, thus creating a first-mover advantage to investors. However, this phenomenon carries the risk of redemption waves, thus, regulators would make redemption restrictions not dependent on liquidity ratios (alternative rules are still being developed). It is also planned to tighten liquidity buffer requirements for money market funds.

Open-ended funds in the UK

The results of a study were published in March on the [liquidity management](#) of open-ended funds in the UK, joint by the Bank of England and the Financial Conduct Authority (FCA) (responsible for enforcing standards of conduct for the financial sector). The study also highlights inadequate risk management and poor risk assessment.

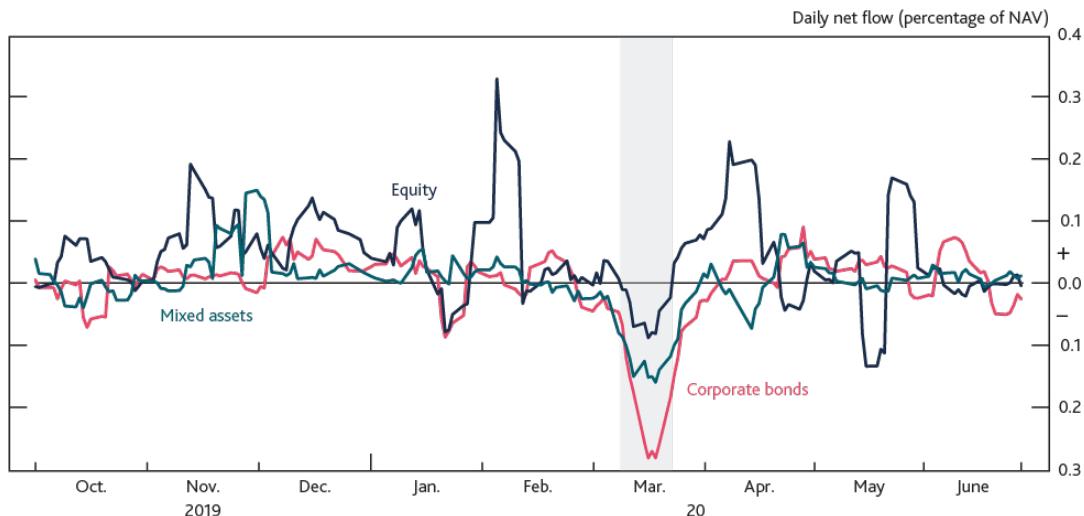
The uniqueness of the liquidity risk of open-end funds is mainly due to the maturity mismatch of the asset and liability side, as some of their units are redeemed by investors on a daily basis, but they also have assets that are harder or slower

to sell. Furthermore, an earlier analysis in 2019, by the Financial Policy Committee (FPC) of the Bank of England, pointed out that the liquidity risk of open-ended funds carries systemic risks as investors redeeming early benefit, especially in times of stress, therefore a redemption wave can greatly affect asset prices, which can reach other segments of the market.

Between the fourth quarter of 2019 and the second quarter of 2020, the study examined fund managers that managed funds investing in less liquid assets, ie. corporate bond funds, so-called

mixed bond funds, and small and medium-cap equity funds.

At the start of the Covid-19 epidemic, the daily outflow was the highest for corporate bond funds, with 2.6% of net asset value flowing out in March 2020, due to decreased liquidity in the affected market, deteriorating credit ratings and thus falling asset prices. The large outflows were only temporary, as in all EU Member States, to which the central banks' asset purchase programs contributed, too (directly or indirectly in the form of subsidies to banks).



The five-day moving average of the daily inflows and outflows of the surveyed funds in proportion to the assets under management

The study assessed what liquidity management tools fund managers use to influence the cash flow of funds in the short or long term. The most common instruments are related to pricing, including the so-called "swing pricing".

- The essence of swing pricing is that the fund manager charges a form of commission to the outgoing or incoming investor by adjusting the net asset value of the fund, which reflects the fund's trading costs, primarily the bid-ask spread. With this method, the fund manager primarily protects long-term investors. If too many investors wanted to enter, long-term investors would gain a larger share of the profit due to the commission, while in the event of a large redemption, the applied tool could limit further outflows. Thus, a positive correction is made in the fund's price in the case of an entry wave and a negative correction in the case of a redemption wave. The adjustment factor may be applied for each transaction ('full swing') or above a threshold defined as a certain percentage of the net asset value set by the fund manager.
- The principle of the so-called "dual pricing" is the same as that of swing pricing, where the fund manager adjusts the price of newly issued and withdrawn units, which it links to market transaction

costs but applies a narrower margin, so it does not pass on the full cost to the new or leaving investors.

- Fund managers may apply a one-off commission against "dilution" due to transaction costs, which may periodically also be a swing pricing technique tied to a threshold ("anti-dilution levy"). The commission is set as a percentage of the value of the transaction.
- Another liquidity management technique is to defer redemptions so that some of them are only settled on a later trading day.
- Institutional investors can not only redeem their investments for cash, but also receive a proportionate share of the security portfolio under management.
- The daily settlement may be temporarily changed by the fund manager by amending the investor prospectus, in which case investors must be notified sufficiently in advance, therefore it cannot be used as a short-term tool in times of stress.
- Large redemptions can be financed by loan funding on a temporary basis, most often through an overdraft facility. However, this can be maximized as a percentage of the net asset value.

Among the tools, swing pricing and anti-dilution levy were the most common ones. Their use was more common during times of stress, with many funds resorting to them only in that case. 80% of the funds defined the threshold for net inflows or outflows (in the case of a partial swing) as up to 2% of the net asset value, other funds set it up to 11%. In calculating the adjustment factor (which diverts the central price considering liquidity costs), fund managers took into account bid-ask spreads, trading commissions, legal costs, and taxes, as well as the market impact of a larger transaction. The correction factor can be maximized by fund managers, however, for many funds this was changed during the stress period.

According to the study, there was no correlation between liquidity management tools and the strategies of the funds, which may be partly explained by the fact that many of the funds examined included several smaller funds (umbrella funds), so they do not differentiate in using liquidity management tools. Investors should be informed about the use of liquidity management tools, although in many cases the surveyed funds did so only ex post.

In addition to using liquidity management tools, funds hold cash or other liquid assets to reduce their liquidity risk. Holding cash serves only liquidity purposes, as it provides cover in case of increasing redemptions, but reduces the return available to the fund. In addition to cash, the surveyed funds in the study mostly built their liquidity buffers in money market funds. There were also government

securities ('Gilt'), short-term and tradable certificates of deposit (CDs) issued by banks, as well as short-term commercial papers issued by corporates (common on Anglo-Saxon capital markets). During the Covid crisis, although bond prices fell due to significant issuance, margin calls due to losses hardly jeopardized the liquidity of the funds.

In a survey of corporate bond fund managers, fund managers had to classify their assets into three liquidity groups. The following three groups, which can be interpreted flexibly, were identified:

- Liquid assets (L1): e. g. government securities, listed securities of developing countries.
- Less liquid or assets with varying liquidity (L2): corporate bonds, emerging market equities. Within this, a high (L2a), medium (L2b) and low liquidity (L2c) groupings were also made depending on how traded the asset was and how reliably it could be valued.
- Illiquid (L3): assets for which a market price is not available (e. g. real estate, private equity funds).

The study showed that corporate bond fund managers overestimate the liquidity of their assets. More than half of the respondents rated 90% of their assets as either L1 or L2a, while a quarter rated 90% as L1 only. In contrast, in the event of a market shock during the Covid crisis, bond ratings deteriorated significantly, but many of the bonds are not traded regularly even under normal market conditions. For fund managers in the latter group, almost half of the assets were bonds rated BBB or lower.

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