

## Addendum

# Liquidity Risk Management is Central to Open-Ended Funds

## Introduction

Recent evaluations of the March 2020 market turbulence have focused on the role of redemptions from bond funds as a particular source of pressure on underlying markets and as a driver of market dynamics. This addendum to our recent *ViewPoint: Liquidity Risk Management is Central to Open-Ended Funds* (the *ViewPoint*) takes a deeper dive into some of the key questions that need to be answered before drawing conclusions on this issue.

## Key Observations

- **Open-ended funds hold only a portion of global financial assets:** as of year-end 2019, 27% of assets were managed by asset managers, the remaining 73% managed internally by asset owners.<sup>1</sup> **An assessment of market dynamics in March 2020 needs to consider the whole ecosystem, and should avoid focusing solely on open-ended funds where data on flows is readily available.**
- **Redemptions from funds should also be considered in the context of the size of the overall markets.** While in absolute terms redemptions in 2020 may be similar to 2008, global capital markets have grown significantly over this period.
- **Assessments of open-ended funds' liquidity positions should reflect how redemptions are managed in practice:** the assertion that bond funds were relying on declining liquid asset buffers has been based on a High Quality Liquid Assets (HQLA) metric. While this measure is appropriate for banks, it is not a good measure for gauging mutual fund liquidity. Funds aim to meet investor redemptions by selling a part of each market segment the fund is invested in (e.g. by maturity, rating and industry sector) in order to maintain risk-constant positions over time across the portfolio, and not by accessing cash or liquid asset buffers. Regulation and best practice liquidity management standards reflect this, and recent evidence shows funds successfully met redemptions in March by using this approach.
- **Mutual funds do not face bank-like funding liquidity risk:** unlevered mutual funds do not have material asset-liability mismatches, as they do not finance the purchase of assets by issuing short-term debt. Rather, mutual fund shares represent equity ownership of the underlying assets, and their price can fluctuate accordingly. Unlike a bank balance sheet, investors in bond mutual funds bear the risk of price fluctuations from duration, credit, currency, and liquidity risk.
- **Swing pricing has been shown to be effective in its impact on redeeming investors' behaviour, and in protecting remaining investors.** However, this tool is not available in all jurisdictions, and not used by all managers where it is available. We recommend swing pricing or comparable anti-dilution tools be made available and be operationalised in all jurisdictions.
- **An extremely small portion of funds suspended redemptions during the COVID crisis.** Recent estimates are that only 0.11% of fund AUM globally was subject to suspensions.<sup>2</sup> These few cases represented idiosyncratic issues, and no US-domiciled funds were suspended. From a systemic risk perspective, other funds were not impacted by a spill-over effect.
- **Funds have flexibility to avoid becoming forced sellers of downgraded securities, and available evidence suggests forced selling of downgraded securities did not take place in March:** separate accounts, active and index mutual funds and ETFs' investment guidelines often allow them to hold downgraded securities and strategically time sales. Investment Grade mutual funds often have a minimum (typically around 80% of AUM) to be held in IG bonds, allowing significant potential exposure to downgrades and other HY bonds.

The opinions expressed are as of January 2021 and may change as subsequent conditions vary.

[blackrock.com/publicpolicy](https://www.blackrock.com/publicpolicy)

## How did the size of the redemptions compare to the experience during the Global Financial Crisis?

While many cite the size of redemptions in absolute terms, it is also important to consider their size relative to funds themselves and overall capital markets. The Financial Stability Board (FSB), for example, notes that “[o]utflows from some...equity and corporate bond funds in March [2020] reached levels not seen since the 2008 financial crisis, both in terms of absolute amounts and as a percentage of assets under management”.<sup>3</sup> However, since 2008, global capital markets have grown significantly, as have fund assets. While, as the FSB notes, fund assets roughly doubled in size between 2008 and 2018, over the same period global equity market capitalisation grew by 128% and global bonds outstanding by 41%.<sup>4</sup> As a result, if in absolute terms redemptions in 2020 are comparable to 2008, they represent a smaller percentage of the overall market.

## Did bond fund redemptions put pressure on underlying bond markets?

Recent commentary has focused on redemptions from open-ended funds (OEFs) as a primary driver of market movements in March 2020. The FSB’s November 2020 ‘Holistic Review of the March Market Turmoil’, for example, notes that “[t]o meet redemption pressures...open-ended funds sold assets, which may have impacted market dynamics”.<sup>5</sup> **This observation contradicts the SEC’s analysis of the March market turmoil, which concluded that “[US] bond mutual funds experienced \$255 billion of net outflows during March 2020, with another \$21 billion from bond ETFs. However, total trading volume in the corporate bond market during the same period was more than triple the level of bond fund outflows, totalling \$1.08 trillion in March 2020”.**<sup>6</sup>

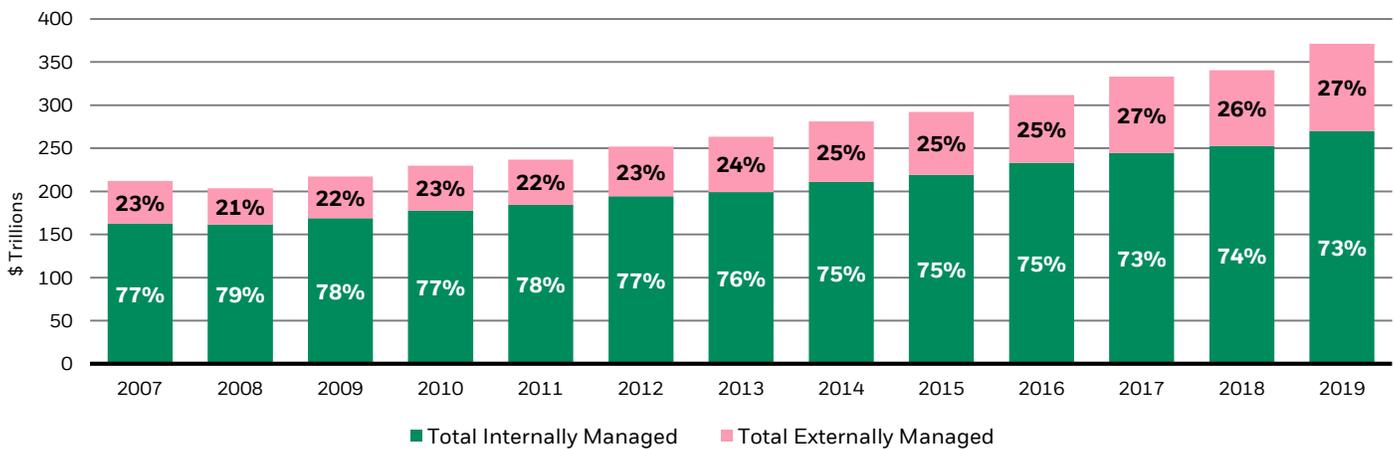
OEFs hold only a portion of global financial assets. Any assessment of the role of OEFs must first analyse the composition of the entire capital markets ecosystem: the estimated split between global financial assets managed externally by asset managers versus assets managed internally by asset owners stood at 27% and 73% respectively, as of year-end 2019. Exhibit 1 shows a breakdown of global financial assets by the type of asset owner as of year-end 2019. Exhibit 2 shows the progression of the split between externally and internally managed assets over time. While much has been written about the growth of non-bank financing, Exhibit 2 shows that internally managed assets have grown similarly to assets managed by asset managers.<sup>7</sup>

### Exhibit 1: Total Financial Assets by asset owner type: Year-end 2019

	\$ tn	% total
Retail & HNW	118.96	32%
Pensions	38.12	10%
o/w Defined Benefit	22.47	6%
o/w Defined Contribution	15.65	4%
Insurance Companies	30.94	8%
Corporate Treasury	150.33	41%
o/w Financial Corporations	99.85	27%
o/w Non-Financial Corporations	50.48	14%
Official Institutions	29.32	8%
o/w Sovereign Wealth Funds	6.35	2%
o/w State Entities & Other	22.97	6%
Endowments & Foundations	3.31	1%
<b>Total financial assets</b>	<b>370.97</b>	<b>-</b>

Source: McKinsey Performance Lens: Global Growth Cube

### Exhibit 2: Total Financial Assets by Internal / External Management, 2007 - 2019



Source: McKinsey Performance Lens: Global Growth Cube

Looking more specifically at fixed income holdings, a similar picture emerges: in the US, according to Federal Reserve Z.1 data, mutual funds account for just 6% of US Treasury bond holdings, and 16% of corporate and foreign bond holdings.<sup>8</sup> In Europe, granular data of this kind is less readily available, but one estimate from the ECB's May 2020 Financial Stability Review puts holdings of Euro Area corporate debt securities by euro area investment funds at approximately 30%, with the remaining 70% held by a combination of banks, insurance companies, pension funds, and other entities.<sup>9</sup>

As discussed in [Lessons from COVID-19: Liquidity Risk Management is Central to Open-Ended Funds](#), redemptions for many bond funds peaked towards the end of March 2020. For example, we estimated that for Europe-domiciled funds, in the week to 18th March, pure corporate IG funds saw weekly outflows of around -2.3% on average; pure corporate high yield funds around -3.8%; and mixed quality corporate bond funds around -3.6%. For US-domiciled corporate bond funds, during the same week, pure corporate IG funds saw outflows of around -1.2% on average; pure corporate high yield funds around -1.8%; and mixed quality corporate bond funds around -1.7%.<sup>10</sup>

These outflows, while still manageable, were elevated compared to flows during calmer market conditions. However, before concluding that bond funds were unique in placing pressure on the broader market, it is important to factor in the wider ecosystem and the actions of other types of market participants. This includes pension funds rebalancing and asset allocation decisions by other asset owners.

Granular data on flows from open-ended funds is widely available from various sources, which enables researchers to create a reasonably accurate picture of funds' behaviour during the crisis. Comparable data is not available for other market participants, resulting in an incomplete picture of activity at the level of the entire market or financial system. Looking at the SEC's data cited earlier, open-ended funds can only explain around one-third of activity on bond markets during March, and an explanation for the remaining two-thirds is missing. As noted in [Lessons from COVID-19: Market Structure Underlies Interconnectedness of the Financial Market Ecosystem](#), a significant number of institutional investors rebalanced portfolios due to the relative performance of equities and bonds. As equity valuations fell sharply, many institutional investors sold fixed income positions and invested in equities to stay within policy level asset allocation bands.<sup>11</sup> Indeed, the Bank of England have noted that '[d]ifferent types of non-bank financial investor – including pension funds, hedge funds, mutual funds, insurance companies and sovereign wealth funds – could have been responsible for these

portfolio outflows...but there is little information to identify their individual contributions", with other areas of non-bank financial intermediation "largely hidden from view and measurement".<sup>12</sup>

In Europe, this problem is compounded by a lack of reliable consolidated trading data for major asset classes such as equities and fixed income. While trading activity in US fixed income can be monitored through TRACE, comparable consolidated information is not available in Europe, where transaction data is fragmented and not real-time. This impacts the ability of regulators to monitor European markets, while negatively impacting liquidity in some bond markets. From an asset management perspective, it also limits the types of analyses that can underpin better liquidity risk management, including the use of tools such as swing pricing. The need to develop an accurate picture of market activity underscores the importance of the ongoing project to develop a comprehensive European consolidated tape that includes fixed income data under the auspices of the Capital Markets Union.<sup>13</sup>

## **Did heightened redemptions lead funds to exhaust their liquid asset buffers?**

Another common hypothesis is that open-ended fund portfolios had become increasingly concentrated in less liquid assets in the run-up to March 2020, thereby taking on more liquidity risk. **This assessment conflates the risks inherent in bank balance sheets with management of mutual funds, and contradicts ESMA's findings that funds met redemptions during March by selling assets pro-rata.**

The ECB's November 2020 Financial Stability Review, for example, suggests that over recent years fund portfolios held a declining share of "liquid debt securities", thereby "reducing the sectors' ability to absorb a shock to market liquidity accompanied by large outflows". To support this, the ECB cites data showing a decline of 'highly liquid assets' within debt securities held by funds from 36.4% in Q4 2013 to 29.3% in Q2 2020.<sup>14</sup> In this analysis, only cash, cash equivalents, or government bonds are counted as 'highly liquid assets', as per the 'Level 1' category of assets in the 'High Quality Liquid Assets' (HQLA) construct originally developed for bank liquidity buffer calculations under Basel III.

HQLA is an appropriate measure for banks, as they need to meet requests for deposits at par. By contrast, fund investors hold a redeemable equity stake in the fund, the value of which fluctuates with the net asset value of the portfolio.<sup>15</sup>

Therefore, in order to treat all investors fairly, fund managers aim to meet redemptions on a pro-rata or risk-constant basis by selling over time a representative 'slice' of the portfolio at current market prices while maintaining the

fund’s risk profile. Portfolios are structured using ongoing liquidity stress testing so that cash or highly liquid assets are not relied on as the sole source of liquidity. As such, **funds will sell a range of securities and not just rely on cash, cash equivalents, or government bonds in portfolios to weather a market shock or manage large outflows.**

The inappropriateness of using HQLA to assess fund liquidity is further demonstrated by the treatment it applies to assets that are not cash or near-cash. In the ECB’s November 2020 Financial Stability Review, HQLA ‘Level 2A’ and ‘Level 2B’ assets – which includes, inter alia, investment grade corporate bonds and equities – are classified as ‘liquid’ assets, but for the purpose of the HQLA calculation have a variety of discounts applied to them. All other assets not captured in Levels 1, 2A, or 2B – which includes sub-investment grade corporate bonds – are classified as having ‘little or no liquidity’ and are discounted by 100%.<sup>16</sup> While it is generally true that securities such as corporate bonds have less market liquidity than cash or government bonds, the static discounts applied under the HQLA framework do not reflect that funds can still use these securities to meet redemptions, and that their liquidity varies with both market conditions and the size of the position to be sold. Indeed, as we saw in March, **even in challenging market liquidity conditions, assets such as high yield corporate bonds retained some liquidity and were successfully sold to meet redemption requests**, with investors bearing the costs of accessing liquidity. Put differently, **market liquidity and bank funding liquidity are not the same as fund liquidity.**

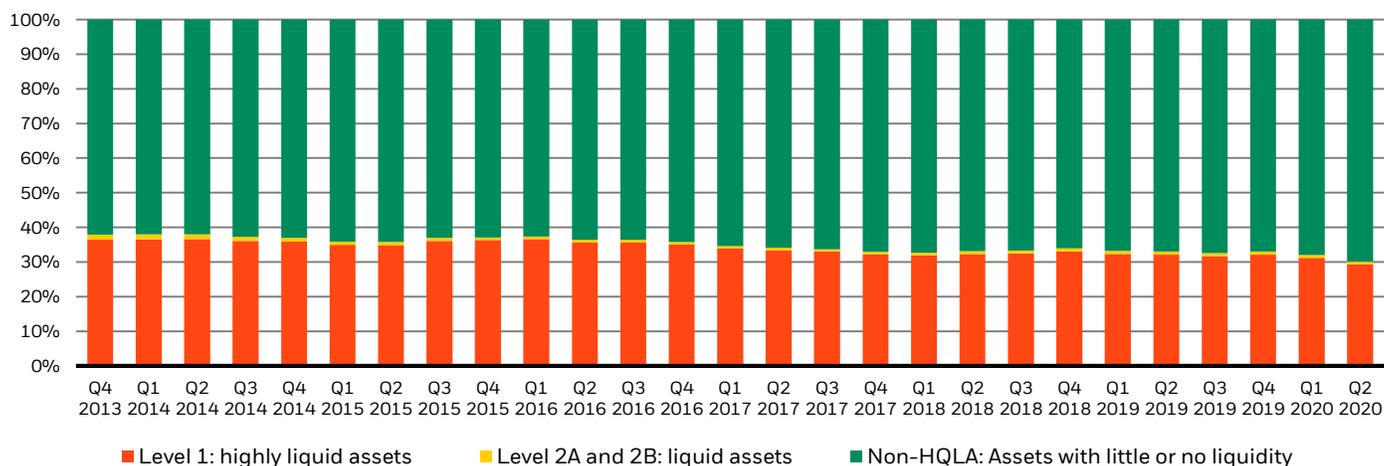
As Exhibit 3 shows, the consequence of under-weighting a wide range of assets (including IG corporate bonds) and completely discounting others (such as HY bonds) is the misleading conclusion that only 0.8% of funds’ debt holdings – the portion that includes IG corporate bonds –

can be classified as ‘liquid’, while 70% of funds’ debt holdings are deemed to have ‘little or no liquidity’. This approach produces a highly distorted picture of investment funds’ portfolios. Furthermore, current rulebooks for fund structures in both the US and EU require fund managers to assess available liquidity on an ongoing basis: under SEC Rule 22e-4, ‘illiquid asset’ exposures are limited to 15% for ‘40 Act (Investment Company Act of 1940) funds; while UCITS are limited to 10% in ‘non-transferable’ assets, provided funds can continue to meet redemptions. These requirements cannot be reconciled with the assertion that 70% of funds’ debt holdings have ‘little or no liquidity’. They also negate the need for side pockets which in any case would be extremely complex to implement in a retail fund structure.

Exhibit 4 uses two representative BlackRock broad high yield and investment grade bond strategies to illustrate the contrast between the HQLA framework and liquidity risk management employed by asset managers. The analysis presented here considers a 10% redemption scenario for each strategy. The redemption is met on a ‘pro-rata’ basis – by selling 10% of each individual security holding. Panel A applies a HQLA screen to this portion of the assets; while Panels B and C show the results of a time-to-liquidation analysis reflecting how asset managers measure and manage fund liquidity.

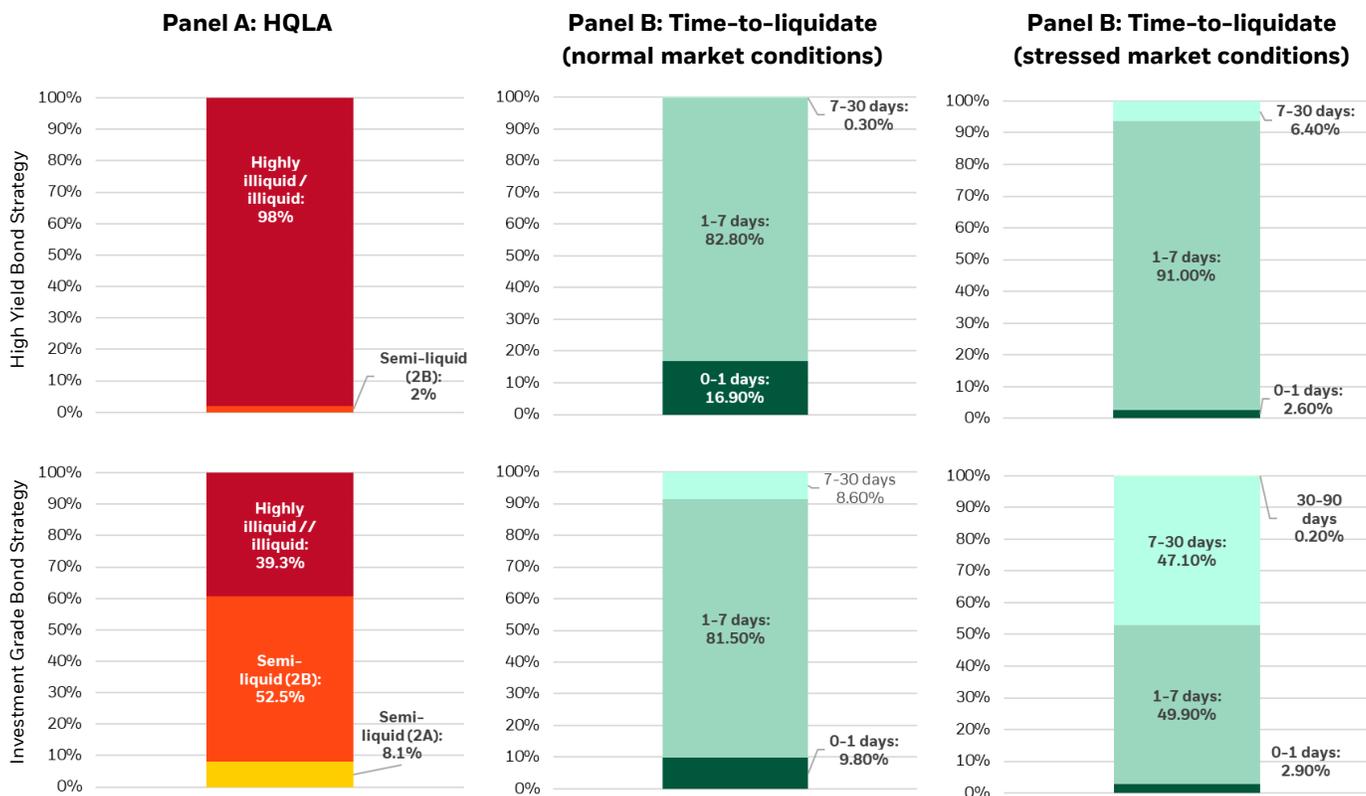
Under the HQLA framework, 98% of the HY fund assets and 39% of the IG fund assets are deemed totally illiquid – this happens by construction, as a 100% discount is applied to any sub-investment grade corporate bonds, on the assumption that they are completely unusable as a source of liquidity. In practice, bond funds are not limited to selling HQLA assets, and even during the market stress of March 2020 the overwhelming majority of funds – including HY funds – were able to meet all redemption requests.<sup>17</sup>

**Exhibit 3: ECB HQLA breakdown by liquidity bucket of debt held by euro area investment funds**



Source: European Central Bank, “Financial Stability Review”, November 2020.

## Exhibit 4: shortcomings of HQLA framework for fund liquidity



Source: BlackRock. Strategies selected are illustrative examples to demonstrate liquidity properties of corporate bond funds. They are not intended to be representative of all funds investing in corporate bonds, and selection of different funds could yield different results. Breakdowns are based on a 10% redemption from the fund, met by selling down each holding in proportion. The HQLA breakdown in Panel A is in accordance with standard HQLA liquidity 'levels' and discounts. Time-to-liquidate metric shown in Panels B and C is based on a comparison of the size of each position compared to estimated market depth in that security. To simulate stressed markets, a 50% drop in ADV is applied across all the securities in question. A drop in ADV is taken as indicative of a liquidity stress period. Importantly, using ADV as a measure of liquidity assumes that the available volume can be executed as 'average' cost. However, it can be the case that ADV increases while transaction costs increase as well: in this analysis, reducing ADV at average transaction costs is tantamount to assuming normal ADV at increased cost. Importantly, this analysis may give a counter-intuitive picture in that the high yield strategy appears more liquid than the investment grade strategy. This is because the portfolios used in the simulation are of a different size: the investment grade strategy is larger than the high yield strategy, meaning a 10% redemption in the former represents more securities to sell in absolute terms relative to market depth, which in turn gives the surface level impression of a less liquid portfolio.

Panels B and C present a more accurate picture of fund liquidity, by taking into account time-varying factors such as market depth relative to the size of each position to be liquidated, arriving at an estimate of the time-to-liquidate each position, and the liquidity of the fund for a given redemption scenario. The assessment of market depth for each security reflects its Average Daily Volume (ADV): the amount that can be traded at average (mid-point) cost. Comparing the amount of each security to be sold to its ADV gives a time-to-liquidate estimate, and each holding is 'bucketed' accordingly. Importantly, this analysis uses a conservative 'last-dollar' liquidation assumption, meaning that – for example – if the whole of holding cannot be sold in 0-1 days, it will be placed in the 2-7 day liquidation bucket, and so on.

The results here give a much more realistic illustration of fund liquidity, indicating that sizable portions of fund assets can be liquidated within one day. Importantly, this approach to liquidity risk allows different parameters to be

varied, to make an assessment for different redemption scenarios or adverse market conditions. Panel C examines fund liquidity in a stressed market scenario, represented here by a highly conservative 50% drop in ADV across all securities. While the portion of assets in the more liquid 'buckets' naturally reduces in this scenario, it still indicates that sizeable portions of assets can be liquidated in a reasonable time frame.

The ECB's May 2020 Financial Stability Review suggests that the combination of market stress and heightened redemptions during March 2020 may have caused issues, as "[l]ow liquid asset holdings reduced the capacity of the investment fund sector to absorb these outflows, likely resulting in forced asset sales and amplification of market dynamics".<sup>18</sup> However, as the analysis above shows, HQLA is not an appropriate framework for funds. It is not clear that funds' positions were highly illiquid, nor is it apparent that they were unable to absorb outflows, as all funds (with a few idiosyncratic exceptions) met their redemptions.

Indeed, regulators have already established rules for liquidity risk management which reflects a combination of factors, including the structure of the fund, the investor base, and the liquidity of the assets. For example, in the US, SEC Rule 22e-4 requires fund assets to be classified as either 'highly liquid', 'moderately liquid', 'less liquid', and 'illiquid' – with a minimum percentage of assets held in the 'highly liquid' category. Categorisation is determined by asset managers based on a reasonable assessment of the time it would take to liquidate the asset without changing its market value, similar to the analysis shown above. Crucially, this means there is no ex-ante static definition of a highly liquid investment – liquidity depends both on the size of the transaction and the type of asset.

Likewise, in the EU, managers of UCITS and AIFs must comply with ESMA's September 2020 Liquidity Stress Testing Guidelines. These guidelines require stress testing on both the asset side – considering volatility in valuations; and the liability side – considering redemption risk and counterparty exposure. Asset managers have invested significantly in upgrading risk management systems throughout 2020 to meet the September 2020 deadline for the more rigorous ESMA guidelines.

The purpose of liquidity risk management, as prescribed in these regulations, is to ensure funds can meet redemptions without disadvantaging remaining investors. As discussed above, this does not equate to holding a 'cash buffer'; instead, the focus is on ensuring the fund portfolio is resilient to a range of redemption scenarios and market conditions, and can meet redemptions with a pro-rata slice of assets. Recent analysis has indicated that funds generally met redemptions in adherence with best-practice liquidity management processes, maintaining a stable portfolio composition – which is a core component of managing redemption risk. This is borne out in ESMA's conclusion that the majority of corporate bond funds surveyed were able to meet redemptions by vertical slicing across their entire portfolio. In its report, ESMA finds that:

*“When analysing the portfolio composition of corporate debt funds between mid-February and the end of June 2020 the main conclusion is that funds experiencing outflows managed to maintain the composition of their portfolio broadly stable. This analysis suggests a liquidity management approach consistent with the “vertical slicing” of their portfolio, i.e. selling assets proportional to their investment allocation. A vertical slicing approach reduces the risk of unfair treatment for remaining or redeeming investors. From a financial stability perspective, being able to sell less liquid portfolio assets also reduces the risk of creating a first-mover advantage for investors redeeming their fund shares early”.*<sup>19</sup>

When assessing the liquidity of a fund, it is necessary to use a framework that reflects funds and how redemptions are managed.

## How do you compare bank deposits and mutual fund redemptions?

To mitigate effectively the different risks in banking and asset management, we need to understand the different nature and sources of those risks, which lie in their respective funding mechanisms. Banks are leveraged entities using short term funding, to fund their operations. Depositors' principal must be returned at par. Bank runs can occur when depositors demand their money back in short order. If this risk is not properly managed, it can lead to the bank becoming insolvent.

Mutual funds do not represent bank-like funding liquidity risk because the value of mutual fund shares, unlike bank deposits, can fluctuate. **Investors in mutual funds have an equity stake valued according to the pro-rata share of underlying fund assets. If the assets decline in value, the share price of the fund declines accordingly.** Investors do not have the right to redeem at par. While mutual fund investors invest for the long term, funds may face redemption risk – the risk of having difficulty in meeting investor requests to redeem their shares for cash within the timeframe required in fund documents and/or regulation, without unduly diluting the interests of remaining shareholders.

Unlike a bank, a mutual fund cannot become insolvent. In the rare event where a fund could not meet redemptions and was eventually wound down, investors would still be entitled to a pro-rata share of the underlying securities or cash generated by the liquidation of the underlying securities.

## Why is swing pricing an effective liquidity risk management tool?

Asset managers have an obligation to treat all fund investors fairly. This extends to managing redemption requests from one set of investors in a way that will not disadvantage remaining investors. In a period of market stress or diminished liquidity, there is a theoretical first-mover advantage for fund investors who redeem ahead of others, as they will not have to pay the cost of accessing market liquidity – 'diluting' the holdings of remaining investors. Swing pricing and other anti-dilution mechanisms address this by ensuring the transacting investor(s) pay the cost of accessing liquidity.

**Swing pricing has been shown to be an effective anti-dilution tool in terms of both its impact on redeeming investors' behaviour, and as a mechanism to protect remaining investors.** An FCA-IMF study published in 2017 reviewed the behaviour of 221 Europe-domiciled corporate bond funds between 2006 and 2016. It concluded that:

*“alternative pricing rules change open-end funds' operations in a way that enables funds to more effectively manage their liquidity risk. Specifically, alternative pricing rules help funds to retain their investor capital during periods of high market stress.”*<sup>20</sup>

This study also found that investors were “significantly less likely to redeem their shares in a stress period when a fund uses swing pricing than when the fund uses traditional pricing”, and that “funds with swing pricing have fewer volatile flows, consistent with them being more resilient to stress events”. This is consistent with our anecdotal experience that swing pricing incentivises investors to spread out redemption requests, minimising the need for more intrusive market infrastructure changes such as mandatory notice periods. While we are not aware of a systematic analysis of how swing pricing impacted investor behaviour during the COVID-19 crisis in 2020, an ESMA study of the behaviour of European corporate bond funds in February and March 2020 did find that “swing pricing was activated by a large proportion of the funds ... having the possibility to use it according to fund rules and national law: 4 AIFs out of 13 and 134 UCITS out of 187” indicating that many but not all managers are making use of swing pricing.<sup>21</sup>

Over recent years European regulators have worked to increase the availability of swing pricing both in rulebooks and in practice by fund managers. ESMA recently reported that for UCITS and AIFs, 11 and 14 EU jurisdictions (respectively) permit swing pricing, including the major fund domiciles of Luxembourg, Ireland, France and Germany; while Sweden’s Financial Supervision Authority is currently investigating how swing pricing tools could be introduced.<sup>22</sup> However, recent analysis suggests use of swing pricing still varies significantly between asset managers, by jurisdiction and by asset class.<sup>23</sup>

Clearly, to realise the full benefits of swing pricing at a system-wide level, take-up of the mechanism needs to be significantly higher than at present. Swing pricing brings the benefits that extended redemption notice periods might have in terms of managing liquidity, while avoiding the significant operational challenges this would pose to other parts of the fund distribution ecosystem. We support recent calls by several policymakers to expand the liquidity risk management toolkit more widely, and to encourage the practical adoption of tools by all fund managers. We recognise that in some jurisdictions – notably the US – wider market structure issues makes operationalising swing pricing more difficult: in these cases, we stress the importance of developing other anti-dilution mechanisms to achieve the same aims.

### **Does the presence swing pricing incentivise or dampen redemptions?**

In jurisdictions where it is permitted and operationalised, investors are well acquainted with swing pricing – the mechanisms are clearly disclosed in fund documentation. In our experience, many end-investors in these regions have

come to see swing pricing as evidence of best practice for protecting the funds’ long-term investment performance – we see the use of swing pricing increasingly feature in Requests for Proposals from clients. As we showed in the case studies in [Lessons from COVID-19: Liquidity Risk Management is Central to Open-Ended Funds](#), swing pricing is not reserved only for stress events. It is an ex-ante redemption management tool used on a regular basis to externalise trading costs onto the transacting investor(s) when there are high levels of net redemptions or net subscriptions (as happened in April 2020 when investors re-entered the market). Our case studies show that the use of swing pricing and the level of swing factors applied peaked in March 2020 to reflect underlying market turbulence. While in normal market conditions the swing factor is typically applied using an automated process, managers will intervene promptly to reset the swing factor to reflect increased transaction costs arising from changing market conditions. Because the size of the swing factor applied is based partly on the size of the redemption, investors are not incentivised to pre-empt the swing pricing mechanism by making large withdrawals at once. Instead, their incentive is to either remain invested in the fund; or to make smaller redemptions, spread out over a longer period of time.<sup>24</sup>

### **How widespread were fund suspensions, and what impact did this have?**

Mutual fund suspensions are rare. Exhibit 5 below puts this in perspective, showing the fund suspensions or sudden closings over the past decade.

Where regulation permits, managers may take action to suspend redemptions if market conditions prevent the valuation of underlying assets or the volume of requests mean that honouring redemptions would negatively impact investors remaining in the fund. As such, suspensions are relatively rare, but are an appropriate tool for treating all investors fairly and, in some cases, giving the fund time to stabilise. Suspending redemptions is a regulated and supervised process, and the potential for the fund to be suspended will be set out in fund documentation.

In the US, no funds suspended redemptions in March 2020. Under SEC Rule 22e-4, the circumstances in which a fund may close are either a) during any period during which trading on NYSE is restricted; b) if the SEC determines that it is “not reasonably practicable” for the fund to liquidate securities or fairly value assets; or c) in “other such periods” where the SEC permits suspension “for the protection of fund shareholders”. The SEC has noted that it has “rarely issued orders” of this type but has occasionally done so for specific funds.<sup>25</sup>

## Exhibit 5: Fund suspensions over the last decade

Fund(s)	Date of suspension(s)	Notes
Third Avenue Focused Credit Fund	July 2015	\$2.1bn US credit fund suspended after prolonged period of heightened redemptions, following poor performance, with a relatively high percentage of illiquid securities remaining in the portfolio.
UK property funds	June 2016	~9 UK property funds, ranging £0.4bn to £4.4bn in AUM (average £2.3bn), suspended after valuation uncertainty following UK Brexit vote.
Woodford Equity Income Fund	June 2019	£3.6bn equity income fund suspended after being unable to meet a redemption request, following multi-year underperformance and an increasing concentration in small-cap, unlisted securities.
Nordic bond funds	March 2020	~68 small regionally-focused Nordic bond funds, primarily investing in fixed income, offered by ~7 fund managers in Denmark and Sweden suspended, mainly citing valuation uncertainty in underlying assets.
UK property funds	March - April 2020	16+ UK property funds, ranging from approx. £400mn to £3.4bn in AUM (average £1.2bn) suspended citing material valuation uncertainty in the portfolio.
India Bond Funds	April 2020	6 bond funds, ranging from 1575 INR Crores (\$220mn) to 9966 INR Crores (\$1.4bn) AUM, average 4164 INR Crores (\$580mn), focused on Indian markets suspended citing continuous and sustained fall in asset liquidity alongside heightened redemptions
H2O Asset Management fund range	August 2020	8 funds, ranging from €140mn to €3.65bn AUM (average €1.4bn) suspended at the request of the Autorité des Marchés Financiers, due to "significant exposures" to illiquid assets

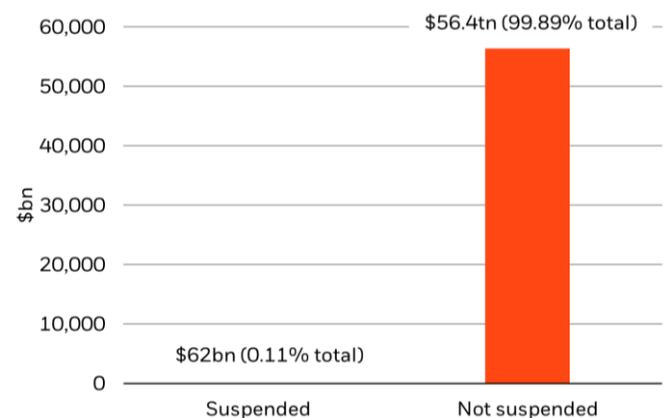
Source: BlackRock research. May not be an exhaustive list.

By contrast, in Europe, the ability for funds to suspend redemptions is set out in the relevant regulations (UCITS and AIFMD), and managers retain the discretion to use this tool if they deem it necessary. There is no authoritative, publicly available data source of the number of EU-domiciled funds that have suspended at any given time. However, Fitch and ESMA have investigated the extent of fund suspensions during the COVID-19 crisis. Fitch estimates \$62 billion or 0.11% of funds globally suspended redemptions – see Exhibit 6 below. ESMA estimates Euro 8.5 billion or 0.8% of aggregate EU-domiciled corporate

bond UCITS suspended redemptions – see Exhibit 7 below. In both cases, this reflects the funds noted in the table above that suspended during 2020.

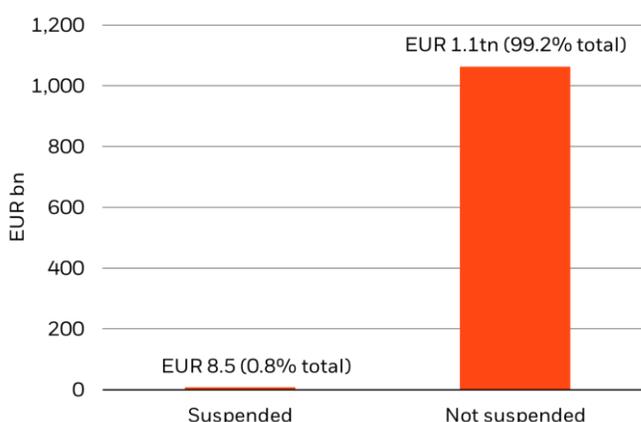
**Even during periods of market stress, the use of suspensions is rare. In the case of COVID-19, the documented cases reflect idiosyncratic aspects of the funds and/or the local market.** These circumstances are described more fully in [Lessons from COVID-19: Liquidity Risk Management is Central to Open-Ended Funds](#). **From a systemic risk perspective, no other funds experienced spillover effects from these limited fund suspensions.**

### Exhibit 6: Global mutual fund suspensions: YTD as of June 2020



Source: Fitch, "More Mutual Funds Suspend Redemptions Due to Liquidity Mismatch", June 2020.

### Exhibit 7: UCITS Corporate Bond Funds: March 2020



Source: European Securities and Markets Authority, "Recommendation of the European Systemic Risk Board (ESRB) on liquidity risk in investment funds", November 2020.

## **Did forced selling of ‘fallen angels’ by funds exacerbate market turbulence?**

Some commentators have suggested that forced selling of ‘fallen angels’ by funds restricted to a particular credit rating may have exacerbated market turbulence in March 2020. For example, the Bank for International Settlements’ Annual Economic Report notes a concern about “so-called fallen angels – debt that drops out of investment grade and can no longer be held by most asset managers and institutional investors. In addition to US prime money market funds, mutual funds investing in corporate debt experienced sharp outflows, forcing them to sell”.<sup>26</sup> **In practice, separately managed accounts, active mutual funds, index mutual funds and ETFs have flexibility in their investment guidelines, allowing them to hold downgraded securities and time sales more strategically.**

As we discussed in our *ViewPoints*, Lessons from COVID-19: [European BBB Bonds and Fallen Angels](#) and [U.S. BBB Bonds and Fallen Angels](#), the potential for forced selling as a result of downgrades depends on where those bonds are held, given the high degree of variability in types of investors and investment objectives. For example, in separate accounts, asset owners have more direct control over the portfolio strategy than they would have in pooled funds, and can customize investment strategies to allow asset managers flexibility to hold downgraded securities. In actively managed mutual funds, portfolio managers often have discretion to under- or over-weight securities and sectors relative to a benchmark, and can invest up to a certain percentage of the fund’s assets in securities that are not part of the index. Moreover, Investment Grade mutual funds often have a minimum (typically around 80% of AUM) to be held in IG bonds, allowing significant potential exposure to downgrades and other HY bonds. **Even in the case of index mutual funds and ETFs, which aim to closely track the performance and risk characteristics of their benchmark index, many funds include flexibility to hold up to a certain percentage of non-index names, including bonds that have been downgraded, which allows for a more strategic timing of sales of fallen angels and avoids a forced sale scenario.**

These guidelines have been written to reduce the need for automatic or forced selling of downgraded securities. The decision to keep them in the portfolio is at the discretion of the portfolio managers, who can make a judgement about investment upside, return potential, or to how to strategically time sales at a more opportune moment.

In Exhibit 8, we examine the holdings two BlackRock-managed fixed income strategies. One is an index strategy tracking a broad US aggregate bond index, and the other is an actively managed total return strategy that aims to outperform the same index. As detailed below, we see portfolio managers exercising discretion on whether or not to sell a security, as well as the timing of any sales.

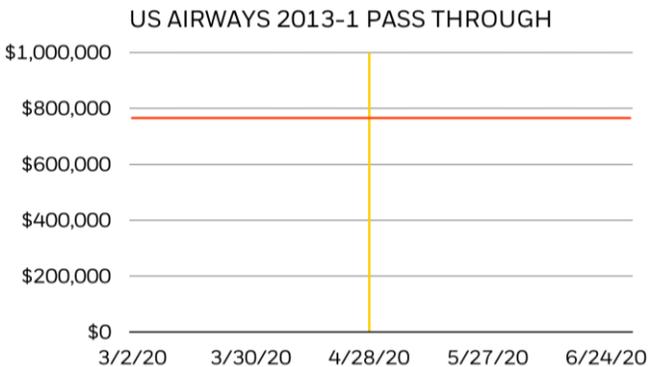
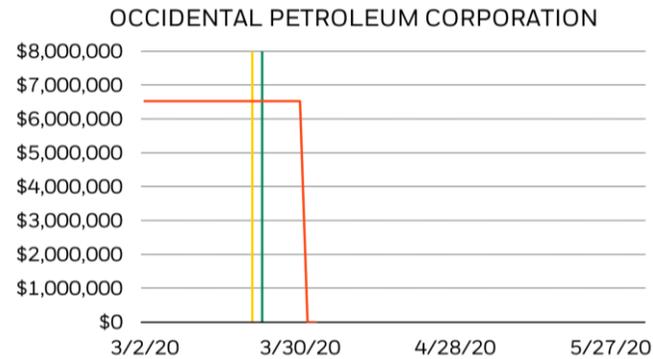
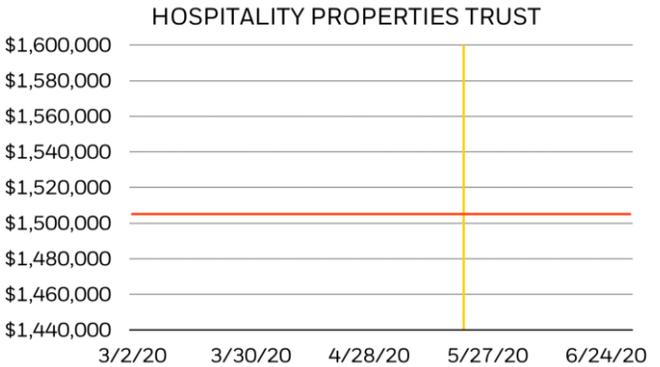
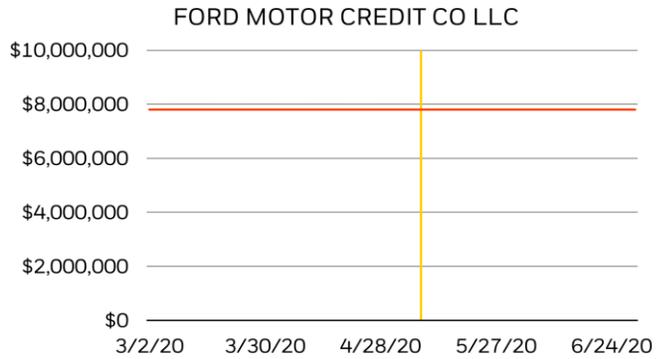
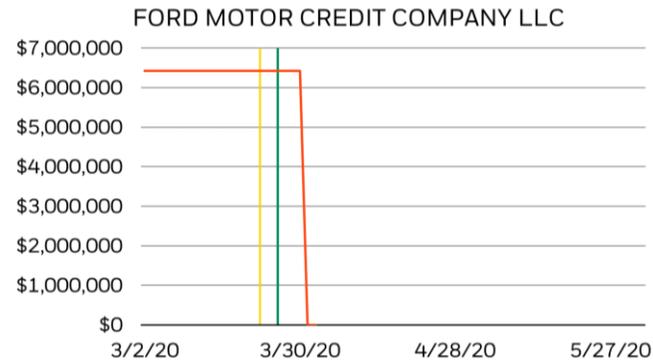
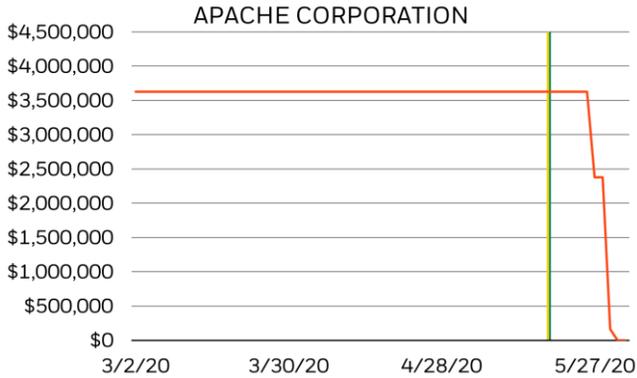
Panel A shows the index strategy. Approximately 110 (1.8%) of the 6000 corporate bond holdings were downgraded between March and June 2020. In most cases, there was no change in holdings prior to the downgrade day, although there are some exceptions. Likewise, in most cases, no action was taken on the downgrade day or on the day the bond was removed from the index. Not surprisingly, all downgraded holdings were sold from index portfolios. The average time post-downgrade was 13 business days which reflected market depth and execution quality over time. In no cases did we observe forced selling from this strategy which reflect the strategy’s ability to hold up to 10% of its assets in non-index securities at any time.

Panel B shows the active strategy. Approximately 24 (1.5%) of its 1600 holdings were downgraded between March and June 2020. The active strategy can hold up to 20% of its assets in non-benchmark securities and it is not unusual for these portfolios to use this as part of their asset allocation strategy. Not surprisingly, 17 of the 24 positions were maintained through the observation period. Of the other 7 downgraded bonds, the pattern was similar to the index strategy. No actions were taken to sell these securities on the downgrade day although the change in credit outlook was cited as a reason to reduce the portfolio weightings as opportunities arose. These positions were sold down completely between 6 and 29 business days following the downgrade, which reflected market depth and execution quality. In no cases did we observe forced selling from this strategy.

**Exhibit 8: Sample of downgraded security holdings in index and active bond strategies, 1 March – 30 June 2020**

**Panel A: Index Strategy**

**Panel B: Active Total Return**



Source: BlackRock. Vertical yellow line represents the downgrade day for the individual security, green line shows the date it was removed from the index. Strategies selected are illustrative examples to demonstrate handling of downgrades by funds investing in corporate bonds. They are not intended to be representative of all funds investing in corporate bonds, and selection of different funds could yield different results.

## Endnotes

1. Source: McKinsey Performance Lens: Global Growth Cube
2. Fitch, "[More Mutual Funds Suspend Redemptions Due to Liquidity Mismatch](#)", June 2020.
3. Financial Stability Board, "[Holistic Review of the March Market Turmoil](#)", November 2020. See page 21.
4. Fund assets are reported to have grown from US\$21 trillion in 2008 to US\$53 trillion in 2018. See Financial Stability Board, "[Holistic Review of the March Market Turmoil](#)", November 2020, page 12. According to SIFMA, global equity market capitalisation stood at approximately US\$34 trillion in 2008, and US\$77 trillion in 2018. The respective figures for the value of outstanding bonds is approximately US\$71 trillion, and US\$101 trillion.
5. Financial Stability Board, "[Holistic Review of the March Market Turmoil](#)", November 2020. See page 27.
6. US Securities and Exchange Commission, Division of Economic and Risk Analysis, "[US Credit Markets: Interconnectedness and the Effects of the COVID-19 Economic Shock](#)," October 2020. See page 38.
7. Source: McKinsey Performance Lens: Global Growth Cube
8. Source: Federal Reserve Z.1 data as of June 2020, available at: <https://www.federalreserve.gov/releases/z1/20200611/z1.pdf>. See also BlackRock, "[Lessons from COVID-19: Overview of Financial Stability and Non-Bank Financial Institutions](#)", September 2020.
9. European Central Bank "[Financial Stability Review](#)", May 2020. See page 77.
10. Source: EPFR. Data excludes ETFs. Flows are calculated relative to fund assets at the beginning of each period and weighted by AUM relative to the overall category.
11. BlackRock, "[Lessons from COVID-19: Market Structure Underlies Interconnectedness of the Financial Market Ecosystem](#)", November 2020. See page 6
12. Bank of England, "[Financial Stability Paper No. 45: Capital flows during the pandemic: lessons for a more resilient international financial architecture](#)", December 2020.
13. In 2020, the European Commission began consulting on the use cases for a consolidated tape and practical steps towards establishing one. See European Commission, "[Review of the regulatory framework for investment firms and market operators](#)", February 2020.
14. European Central Bank, "[Financial Stability Review](#)", November 2020. See page 89.
15. For further discussion, see BlackRock's *ViewPoint*, "[Taking Market-Based Finance Out of the Shadows: Distinguishing Market-Based Finance from Shadow Banking](#)", February 2018.
16. HQLA 'Level 1' assets are deemed to be 'highly liquid assets', and according to the ECB [HQLA definitions](#) (see pg 6) are effectively counted as cash + government bonds (plus covered bond issues above EUR 500m that are rated above AA-, with a 7% haircut applied). HQLA levels 2A and 2B are deemed to be 'liquid assets', but with a haircut: 2A includes: bonds issued by regional governments and other public sector entities with a 20% risk weight under CRR (15% discount); Covered bonds of a EUR250m+ issue with rating above A- (15%); corporate bonds with max time to maturity of 10 years, minimum 250mn issue size, credit rating above AA- (15%). 2B includes other covered bonds (30%); corporate bonds with max time to maturity of 10 years, minimum 250mn. issue size, at least investment grade (50%); certain ABS at least AA- (25%); and shares on a major stock index that have 'a proven record as a reliable source of liquidity' (50%)
17. For further discussion, see BlackRock, "[Lessons from COVID-19: Liquidity Risk Management is Central to Open-Ended Funds](#)", November 2020.
18. European Central Bank "[Financial Stability Review](#)", May 2020. See page 82.
19. European Securities and Markets Authority, "[Recommendation of the European Systemic Risk Board \(ESRB\) on liquidity risk in investment funds](#)", November 2020. See paragraph 47.
20. Financial Conduct Authority, "[Occasional Paper 48: Swing pricing and fragility in open-end mutual funds](#)", May 2019. See page 45.
21. European Securities and Markets Authority, "[Recommendation of the European Systemic Risk Board \(ESRB\) on liquidity risk in investment funds](#)", November 2020. See paragraph 58.
22. European Securities and Markets Authority, "[Recommendation of the European Systemic Risk Board \(ESRB\) on liquidity risk in investment funds](#)", November 2020. See pages 36-37
23. See AMF/Banque and Banque de France Investor of use of liquidity management tools noting that overall 6% of fund prospectuses by assets disclosed the use of swing pricing rising to 19% in the case of bond funds. See [https://www.amf-france.org/sites/default/files/2020-07/lmt\\_ve2.pdf](https://www.amf-france.org/sites/default/files/2020-07/lmt_ve2.pdf). See also ICI Report Experiences of European Markets, UCITS, and European ETFs During the COVID-19 Crisis December 2020 at [https://www.ici.org/pdf/20\\_rpt\\_covid4.pdf](https://www.ici.org/pdf/20_rpt_covid4.pdf) Noting that "91 percent of respondents indicated that at least one of their Luxembourg-domiciled UCITS had adopted swing pricing (either partial or full) as an option; while 50 percent of respondents indicated that at least one of their Irish-domiciled UCITS had swing pricing as an option."
24. See BlackRock, "[Swing Pricing: The dilution effects of investor trading activity on mutual funds](#)", October 2020.
25. See Securities and Exchange Commission, "[Investment Company Liquidity Risk Management Programs](#)", footnote 36, page 17.
26. Bank for International Settlements, "[Annual Economic Report](#)", June 2020. See page 16.

# Related Content

For access to our full collection of public policy commentaries, including the *ViewPoint* series and comment letters to regulators, please visit <https://www.blackrock.com/publicpolicy>.

- [\*ViewPoint\*: Lessons from COVID-19: Liquidity Risk Management is Central to Open-Ended Funds](#)
- [\*ViewPoint\*: Lessons from COVID-19: Market Structure Underlies Interconnectedness of the Financial Market Ecosystem](#)
- [\*ViewPoint\*, Lessons from COVID-19: Overview of Financial Stability and Non-Bank Financial Institutions](#)
- [\*ViewPoint\*: Lessons from COVID-19: European BBB Bonds and Fallen Angels](#)
- [\*ViewPoint\*: Lessons from COVID-19: U.S. BBB Bonds and Fallen Angels](#)

This publication represents the regulatory and public policy views of BlackRock. The opinions expressed herein are as of January 2021 and are subject to change at any time due to changes in the market, the economic or regulatory environment or for other reasons. The information herein should not be construed as sales material, research or relied upon in making investment decisions with respect to a specific company or security. Any reference to a specific company or security is for illustrative purposes and does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities, or an offer or invitation to anyone to invest in any funds, BlackRock or otherwise, in any jurisdiction. There is no guarantee that any forecasts made will come to pass. Reliance upon information in this material is at the sole discretion of the reader.

**In the U.S.**, this material is available for public distribution. **In the UK**, issued by BlackRock Investment Management (UK) Limited (authorised and regulated by the Financial Conduct Authority). Registered office: 12 Throgmorton Avenue, London, EC2N 2DL. Registered in England No. 2020394. Tel: 020 7743 3000. For your protection, telephone calls are usually recorded. BlackRock is a trading name of BlackRock Investment Management (UK) Limited. This material is for distribution to Professional Clients (as defined by the FCA Rules) and Qualified Investors and should not be relied upon by any other persons. **In the EEA**, issued by BlackRock (Netherlands) BV: Amstelplein 1, 1096 HA, Amsterdam, Tel: 020 – 549 5200, Trade Register No. 17068311. BlackRock is a trading name of BlackRock (Netherlands) BV. For qualified investors **in Switzerland**, this material shall be exclusively made available to, and directed at, qualified investors as defined in the Swiss Collective Investment Schemes Act of 23 June 2006, as amended. **In Australia**, issued by BlackRock Investment Management (Australia) Limited ABN 13 006 165 975, AFSL 230 523 (BIMAL). This material is not a securities recommendation or an offer or solicitation with respect to the purchase or sale of any securities in any jurisdiction. The material provides general information only and does not take into account your individual objectives, financial situation, needs or circumstances. Before making any investment decision, you should therefore assess whether the material is appropriate for you and obtain financial advice tailored to you having regard to your individual objectives, financial situation, needs and circumstances. BIMAL, its officers, employees and agents believe that the information in this material and the sources on which it is based (which may be sourced from third parties) are correct as at the date of publication. While every care has been taken in the preparation of this material, no warranty of accuracy or reliability is given and no responsibility for the information is accepted by BIMAL, its officers, employees or agents. Any investment is subject to investment risk, including delays on the payment of withdrawal proceeds and the loss of income or the principal invested. While any forecasts, estimates and opinions in this material are made on a reasonable basis, actual future results and operations may differ materially from the forecasts, estimates and opinions set out in this material. No guarantee as to the repayment of capital or the performance of any product or rate of return referred to in this material is made by BIMAL or any entity in the BlackRock group of companies. **In Singapore**, this is issued by BlackRock (Singapore) Limited (Co. registration no. 200010143N). **In Hong Kong**, this material is issued by BlackRock Asset Management North Asia Limited and has not been reviewed by the Securities and Futures Commission of Hong Kong. **In South Korea**, this material is for distribution to the Qualified Professional Investors (as defined in the Financial Investment Services and Capital Market Act and its sub-regulations). **In Taiwan**, independently operated by BlackRock Investment Management (Taiwan) Limited. Address: 28F., No. 100, Songren Rd., Xinyi Dist., Taipei City 110, Taiwan. Tel: (02)23261600. **In Japan**, this is issued by BlackRock Japan, Co., Ltd. (Financial Instruments Business Operator: The Kanto Regional Financial Bureau. License No375, Association Memberships: Japan Investment Advisers Association, the Investment Trusts Association, Japan, Japan Securities Dealers Association, Type II Financial Instruments Firms Association.) For Professional Investors only (Professional Investor is defined in Financial Instruments and Exchange Act). **In China**, this material may not be distributed to individuals resident in the People's Republic of China ("PRC", for such purposes, excluding Hong Kong, Macau and Taiwan) or entities registered in the PRC unless such parties have received all the required PRC government approvals to participate in any investment or receive any investment advisory or investment management services. For **Other APAC Countries**, this material is issued for Institutional Investors only (or professional/sophisticated/qualified investors, as such term may apply in local jurisdictions) and does not constitute investment advice or an offer or solicitation to purchase or sell in any securities, BlackRock funds or any investment strategy nor shall any securities be offered or sold to any person in any jurisdiction in which an offer, solicitation, purchase or sale would be unlawful under the securities laws of such jurisdiction. **In Latin America**, for institutional investors and financial intermediaries only (not for public distribution). This material is for educational purposes only and does not constitute investment advice or an offer or solicitation to sell or a solicitation of an offer to buy any shares of any fund or security and it is your responsibility to inform yourself of, and to observe, all applicable laws and regulations of your relevant jurisdiction. If any funds are mentioned or inferred in this material, such funds may not be registered with the securities regulators in any Latin American country and thus, may not be publicly offered in any such countries. The securities regulators of any country within Latin America have not confirmed the accuracy of any information contained herein. Investing involves risk, including possible loss of principal. The contents of this material are strictly confidential and must not be passed to any third party. **In Mexico** if any funds, securities or investment strategies are mentioned or inferred in this material, such funds, securities or strategies have not been registered with the National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores, the "CNBV") and thus, may not be publicly offered in Mexico. The CNBV has not confirmed the accuracy of any information contained herein. The provision of investment management and investment advisory services is a regulated activity in Mexico, subject to strict rules, and performed under the supervision of the CNBV. BlackRock Mexico, S.A. de C.V., Asesor en Inversiones Independiente ("BLKMX") is a Mexican subsidiary of BlackRock, Inc., registered with the CNBV as an independent investment advisor under registration number 30088-001-(14085)-20/04/17, and as such, authorized to provide Investment Advisory Services. BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión ("BlackRock MX Operadora" and together with BLKMX, "BlackRock México") are Mexican subsidiaries of BlackRock, Inc., authorized by the CNBV. For more information on the investment services offered by BlackRock Mexico, please review our Investment Services Guide available in [www.BlackRock.com/mx](http://www.BlackRock.com/mx). Reliance upon information in this material is at your sole discretion. BlackRock México is not authorized to receive deposits, carry out intermediation activities, or act as a broker dealer, or bank in Mexico. Further, BlackRock receives revenue in the form of advisory fees for our mutual funds and exchange traded funds and management fees for our collective investment trusts.

©2021 BlackRock, Inc. All Rights Reserved. BLACKROCK is a registered trademark of BlackRock, Inc. All other trademarks are those of their respective owners.