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SUMMARY OF AMF FINDINGS IN THE CONTEXT OF ESMA COMMON SUPERVISORY ACTION ON LIQUIDITY RISK MANAGEMENT IN UCITS

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INTRODUCTION

As announced by the Autorité des Marchés Financiers (AMF) when presenting its supervisory priorities for 2021, the AMF took part in the Common Supervisory Action on UCITS liquidity ("CSA UCITS Liquidity") coordinated by ESMA. The health crisis associated with the Covid-19 epidemic and the effects it has had on financial markets strengthened the conviction that a review was required of liquidity risk management processes in UCITS funds, to ensure that they comply with regulatory obligations and are able to meet redemption requests at any time by UCITS fund holders. In practice, based on a methodology defined by ESMA, AMF teams were able to (i) undertake a review of liquidity risk management processes in a representative sample of UCITS asset management companies ("AMC") and UCITS funds, (ii) assess the level of compliance of these practices with the regulatory obligations defined by UCITS Directive 2009/65/EC and its implementing texts, and (iii) identify good and poor practices in this area.

Regarding operational implementation, the exercise comprised two stages based on two questionnaires; first, each National Competent Authority ("NCA") sent out a broad questionnaire to the majority of market players (220 asset management companies in France), then subsequently, a more in-depth questionnaire was sent out to a smaller sample of companies (around fifty in France) and funds (150 UCITS for the AMF) selected using a risk-based approach. The AMF chose to supplement this approach with (i) a system of SPOT (Operational and Thematic Supervision of Practices) inspections on four players, and (ii) in-depth interviews by the AMF departments with around a dozen players in all during one or other of the stages of the exercise.

The main investigations carried out by the AMF departments related to 6 main topics:

- Pre-investment checks on UCITS liquidity,
- Global monitoring system for UCITS liquidity risk and its governance within AMCs,
- Market data and assumptions regarding UCITS assets liquidation,
- Taking into account the risk of liquidity needs in relation to the use of derivatives,
- Taking into account UCITS liquidity needs linked to share redemptions in liquidity management,
- Use of liquidity management tools in UCITS.

This publication comes after the publication by ESMA of the press release ESMA_34-43-880 on 24 March 2021. In addition to the summary of findings at European level and fundamental regulatory reminders that appear in the ESMA publication, with this summary note, the AMF wanted to share the more operational findings that emerged from this review of authorised UCITS management players in the French asset management market.

This document is neither a position, nor a recommendation. Practices identified as 'good' or 'poor' highlight approaches observed during the checks and analyses carried out and which are likely to promote or hinder compliance with the liquidity risk management regulations.

It should be noted that the relevant regulations and instances of good and poor practices that appear in this note are the result of observations made by AMF departments across the entire panel of asset management companies involved in the different stages of the supervisory action, i.e. both in the SPOT inspections and from the different questionnaires that were collected and analysed. The AMF reiterates the fact that it remains the responsibility of each AMC to choose the operating mode that ensures that the subject of liquidity is dealt with in terms of types of asset class, certain specific assets where applicable, and portfolios.

1. BACKGROUND, SCOPE AND ORGANISATION OF WORK BY THE AMF

1.1. BACKGROUND

The Common Supervisory Action on UCITS liquidity risk management ("CSA UCITS Liquidity") is the result of a request from the European Commission to ESMA and the NCA notably as a result of difficulties with liquidity experienced by several UCITS in 2019. The general framework and the aims of the action were set out by ESMA in a press release in January 2020. These aims are as follows: (i) to identify those UCITS funds that may be at risk in terms of liquidity,[1] and (ii) to identify any managers who do not respect the regulatory framework in terms of UCITS liquidity risk management.

In its Guidelines on liquidity stress testing *(ESMA 34-39-897)*, ESMA defines liquidity risk as "*the risk that a position in the fund cannot be sold, liquidated or closed at limited cost to comply at any time with obligations to redeem units/shares.*"
On completion of this action, ESMA published a press releases dated 24 March 2021.[2]

Regarding implementation, ESMA was in charge of coordinating the action carried out by each competent authority in its own market.

It should be noted that the **ESMA guidelines on liquidity stress testing** in UCITS and AIFs **did not fall within the scope of this action** as they only came into force on 30 September 2020, and were therefore not applicable when the AMCs completed the relevant questionnaires, nor, where applicable, when SPOT inspections were carried out (see below).

As a reminder, these guidelines involve in particular the use of liquidity stress testing of assets, liabilities (subscriptions/redemptions), other types of liabilities (including margin calls) and also stress scenarios combining assets and liabilities:

- At a frequency consistent with the risks, and a recommended quarterly frequency;
- Specific to the characteristics of each fund;
- Involving historical and hypothetical scenarios and, where appropriate, reverse stress tests.

They also provide for cumulative stress tests on several funds (ability to sell similar assets on several funds).

On 16 September 2020, in its Position DOC-2020-08, the AMF declared that it was in compliance with these guidelines.

1.2. CALENDAR AND ORGANISATION OF WORK BY THE AMF

ESMA decided to organise the supervisory action in two stages, each covering a certain percentage of the population of AMCs and UCITS on the French market:

- The first stage covered at least 80% of UCITS management companies and 95% of UCITS assets under management (AUM), during which the AMCs received a broad questionnaire which was both qualitative and quantitative, and aimed at identifying potential areas of risk;

[1] *As money market funds are covered in specific studies by ESMA, this action did not focus on this type of fund.*
[2] *https://www.esma.europa.eu/press-news/esma-news/esma-assesses-compliance-ucits-liquidity-rules-and-highlights-areas-vigilance*

- The second stage, aimed at a sample of AMCs identified from analyses during the first stage and covering at least 20% of UCITS managers and 50% of UCITS AUM, and during which a more detailed questionnaire was sent out, which formed the basis for further analyses and discussion with the NCAs.

Based on their analyses of all the elements collected during these two stages, each NCA sent in to ESMA their conclusions on the action, using a template supplied by the authority.

It should be noted that, concerning cross-border cases (foreign manager of a French UCITS or vice versa), it was decided that activities would be distributed according to the AMC location, i.e. the AMF received information on all UCITS managed by authorised AMCs in France, whether the UCITS are established in France or elsewhere. Conversely, authorised UCITS in France managed by a foreign management company would not be within the scope of the AMF.

2. SAMPLE SELECTION AND WORK CARRIED OUT

The main work carried out during the first stage consisted in analysing the responses to the first questionnaire. They identified 55 AMCs on the basis of two main criteria:

- Indicator no.1: UCITS that have declared a "slow" liquidation of their assets compared to their obligations as a result of liabilities, with no liquidity management tools in place;
- Indicator no.2: UCITS investing in asset classes presumed to be significantly illiquid but where the declared liquidity profile suggests a "rapid" liquidation, which could give rise to fears of the use of overly optimistic liquidation assumptions.

The AMCs selected were classified according to the estimated level of liquidity risk and thus divided into three groups for investigation in the second stage:

- Group 1: 4 AMCs on which SPOT inspections were carried out:
  - AMC no.1 manages a wide range of funds, using simple and complex financial instruments, some of which may have reduced liquidity. It is aimed at both non-professional and professional investors.
  - AMC no.2 manages a wide range of funds, using simple and complex financial instruments, some of which may have a reduced liquidity. It delegates part of its financial management. It is aimed at non-professional and professional investors.
  - AMC no.3 specialises in managing equity UCITS, and is less involved in developing investment strategies using more complex financial instruments. It is aimed primarily at professional investors.
  - AMC no.4 manages a diversified range of UCITS, mainly invested in equities and interest-rate instruments and does not use complex financial instruments. It is aimed at non-professional and professional investors.

- Group 2: 7 AMCs were subject to an in-depth investigation but not to a SPOT inspection, i.e. via telephone conversations and, where necessary, requests for additional information. These AMCs were mainly small and medium-sized, representing AUM of €50 billion, or 7% of the total AUM of the 55 AMCs in the sample selected at the end of Stage 1. While the risk approach guided the majority of selection choices for in-depth monitoring, one company was chosen because of its unusual activity, which was ETF management.

- Group 3: 44 lower priority AMCs completed the sample. Investigations were carried out to ensure the quality of the data transmitted and that no significant risk was identified.

Stage 2 of the supervisory action started on 30 June 2020 using a new questionnaire (Appendix 2) which was sent to these 55 AMCs with the deadline for replies set for 28 July. The Stage 2 questionnaire was more detailed and open-ended than that used in Stage 1 and in particular required the AMCs concerned to produce certain documents (procedures, presentations and committee reports, examples of implementation of liquidity risk management procedures) and for some of the UCITS a line-by-line description of their portfolio.

SPOT inspections on the 4 Group 1 AMCs were launched on 9 July 2020, with follow-up letters sent where necessary, asking companies to put remedial measures in place.

The results of the due diligence conducted by the AMF teams using the three types of investigation described above are given below**.**

3. SUMMARY OF THE MAIN FINDINGS

The supervisory and analytical due diligence carried out by the AMF departments revealed that, with the exception of one management company, all 55 AMCs involved in Stage 2 of the action have a formalised liquidity risk monitoring system in place, with the characteristics and conditions for implementation set out in procedures.

However, the SPOT inspections revealed that, to varying degrees, the procedures in place are not fully operational as they do not set out all the practical aspects of this monitoring in sufficient detail, especially the formalisation and storage of checks carried out, and of analyses and processes for remedying matters or escalating information that may result.

In addition, the calculation assumptions and the scenarios on which these monitoring systems are based are not sufficiently justified, or at the very least, their justification is not documented. Finally, the conditions under which AMCs reassess the validity of these assumptions and scenarios are generally not specified in the procedures.

On a practical level, in general, it emerged from the due diligence carried out by the AMF departments that a significant number of the AMCs that carried out a preliminary assessment of the impact of their investments on the liquidity of the UCITS managed, did not formalise this. Very few AMCs provided their financial management function with a tool to produce and formalise such provisions. The lack of due diligence or proper formalisation is explained by the presumption of liquidity,[3] which is permitted by the regulations under certain conditions, and/or the application of several predefined and calibrated risk limits in order to control liquidity risk in the managed UCITS. Although no inappropriate application of this presumption of liquidity was observed,[4] the AMF noted that the use of this presumption could be more systematically documented and justified.

With regard to the liquidity risk arrangements and governance, they vary from one AMC to another, especially in relation to their size. Companies ensure that they send liquidity risk monitoring reports to senior management. In larger structures, this reporting system is usually formalised within the framework of regular risk monitoring

[3] Under the terms of **Article R 214-9 of the Monetary and Financial Code** " (…) *financial instruments relating to paragraphs 1 to 3 of I of Article R. 214-11 are presumed not to compromise the ability of the UCITS to comply with the provisions of Articles L. 214-7 and L. 214-8 and they are presumed to be negotiable, unless the UCITS has information leading to different conclusions.*" This Article therefore introduces the presumption that investment in securities admitted to negotiation on a regulated market does not compromise the ability of a UCITS to comply with its obligation to redeem its units or shares at any time, unless the UCITS has information leading to different conclusions.

[4] According to the CESR's guidelines concerning eligible assets for investment by UCITS, Point 17, "*In the case of transferable securities which are not admitted to trading on a regulated market as defined in Article 19(1) of Directive 85/611/EEC, liquidity cannot automatically be presumed.*"

committees on which one of the senior managers sits, whereas in smaller structures, it can be more informal, especially when the senior executive also has an active management role. In this case, formalisation of reporting may occur less frequently. In addition to periodical reports, some companies provide for specific reports in the event of specific alerts, for example in the case of certain liquidity or redemption limits being exceeded. Some AMCs have adopted a risk-based approach and adjust the frequency and thoroughness of reports to the risk level of each UCITS and asset type that is held. In terms of content, the AMF identified a lack of granularity in monitoring reports for some AMCs, however, they noted that others use aggregated monitoring covering all funds under management, especially on high-risk asset types.

Methodologies for estimating liquidity risk are similar for equities across AMCs but are based on a variety of assumptions regarding levels of participation in trading volumes, the period of observation of these volumes, and the data taken into account to calculate these volumes. Furthermore, it appears that AMCs do not always adjust these assumptions according to market circumstances.
Concerning interest-rate instruments, in the absence of market volume data, the parameters considered are variable. Whenever possible, AMCs use liquidity grids provided by their internal or external trading desk. However, analyses by these trading desks are not sufficiently well integrated into the liquidity risk monitoring system, especially by the risk function. In addition, the relevance of these data is not subject to formalised back-testing.
Finally, the liquidity risks associated with derivative financial instruments, especially the cash flows they may generate and their specific liquidation conditions, are not taken into account appropriately by all AMCs.

Regarding UCITS liabilities, the monitoring methods used depend on the nature of the unit holders. In the case of individual unit holders, the resources given to identifying them are variable and interaction with the distribution networks, which should make it possible to anticipate redemption flows, should be more sustained. In general, the AMCs analysed apply the data they have on their liability structure and their redemption history to the UCITS that they manage. Some AMCs that offer their UCITS to a broad investor base apply redemption stress scenarios based on historic redemption data and/or on the influence of the largest holders. In other cases, such simulations are only applied to UCITS whose strategy allows for the holding of financial instruments that present liquidity risks. In some cases, AMCs that deal with institutional investors monitor only the largest unit holders and the redemption history. Finally, other AMCs do not monitor liabilities specifically or they carry out only limited monitoring, relying on asset risk management or the presence of gates in the UCITS. The reconciliation of redemption simulations and asset liquidity indicators is not always officially formalised and there is not always an alert threshold or a reporting mechanism associated with this monitoring. When AMCs apply the ESMA guidelines on liquidity stress testing in UCITS and AIFs, in force since September 2020, and which were being finalised in many of the AMCs analysed, this issue should be resolved.

Finally, not all AMCs formalise their justification for the choice of risk management tools (suspension of unit/share redemptions, gates, swing pricing, etc.). Some formalise an opportunity analysis prior to the launch of new UCITS and then periodically. Procedures are set out for the practical application of the mechanisms attached to these tools but generally they do not set out the criteria for their implementation. In this regard, the integration of these tools into the overall governance of liquidity risk could be improved.

Given these findings, the AMF departments will strengthen their due diligence on UCITS presenting a particular liquidity risk, especially when examining their authorisation. With this in mind, there are plans to update the constraints set out in the letter of undertaking that AMCs submit when the UCITS is approved and include a passage on taking liquidity risk into account at the product design stage, in accordance with the ESMA guidelines on liquidity stress testing.

4. APPLICABLE REGULATIONS

To carry out their work, the AMF departments used the following regulatory sources:

- Monetary and Financial Code;
- General Regulation of the AMF ("AMF GR");
- CESR Guidelines concerning eligible assets for investment by UCITS (Ref: CESR/07-044) ("CESR Guidelines").

The AMF also referred to the professional guide produced by the *Association Française de Gestion Financière* (French asset management association – AFG) "Code of conduct for asset managers using Swing Pricing and variable anti-dilution levies".

PRE-INVESTMENT DUE DILIGENCE
Article R. 214-9 of the Monetary and Financial Code on taking the liquidity of securities into account in order to determine their eligibility as assets of a UCITS and the presumption of liquidity, unless there is contradictory information, when these securities are approved for trade on a regulated market. **Article R. 214-10 of the Monetary and Financial Code on taking the liquidity of money market instruments into account in order to determine their eligibility as assets of a UCITS and the presumption of liquidity, unless there is contradictory information, when these securities are approved for trade on a regulated market.** **Article 321-79 of the AMF GR on the presence of effective, appropriate and documented risk management procedures for UCITS.** **Article 321-101 9° of the AMF GR relating to forecasts and preliminary analyses to be carried out concerning an investment's contribution to liquidity and the UCITS portfolio risk profile.** **Article 321-101 8° of the AMF GR relating to written policies and procedures to be drawn up on due diligence to be performed and the implementation of effective arrangements for ensuring that investment decisions are carried out, notably, in compliance with the risk limits of the UCITS concerned.** ***CESR Guidelines* – Point 17 concerning due diligence and liquidity risk assessment parameters and the lack of presumption of liquidity for securities not listed on a regulated market.**
MONITORING MECHANISM AND GOVERNANCE
Article 321-77 of the AMF GR relating to the prerogatives of the permanent risk management function, especially with regard to reporting to senior management.

Article 321-78 of the AMF GR relating in particular to the inclusion of liquidity risk assessment procedures in risk management policy and its content, as well as reporting requirements. **Article 321-79 of the AMF GR providing for the establishment of an efficient, appropriate and documented risk management policy and procedures.** **Article 321-81 I. a) of the AMF GR relating to the implementation of the means to enable an AMC to measure and manage at any time the risks to which the UCITS that they manage may be exposed.** **Article 321-81 II. a), b), c), f) and III. paragraph 1 of the AMF GR relating to governance and risk monitoring measures that must be provided for each UCITS.** **Article 321-81 IV. of the AMF GR relating to the compliance of the investment profile with the UCITS redemption policy.** **CESR Guidelines – Points 17, 18, and 19, 59, 60, 61 and 62 on the prerogatives of the permanent risk management function in terms of advising managers, and the means of communication and reporting to the financial management function and the governing bodies.**
METHODOLOGIES FOR MONITORING LIQUIDITY RISK
Article 321-77 of the AMF GR relating to the review by the permanent risk management function of the adequacy and effectiveness of the risk management method. **Article 321-81 II. d) and e) and IV. of the AMF GR relating to the risk monitoring measures that must be taken for each UCITS.**
MONITORING LIQUIDITY RISK FOR DERIVATIVE FINANCIAL INSTRUMENTS
Article 321-81 V. and VI. of the AMF GR relating to risk monitoring procedures and compliance with commitments related to financial contracts.
TAKING LIABILITIES INTO ACCOUNT WHEN MONITORING LIQUIDITY RISK
Article 321-81 III. paragraph 2 of the AMF GR concerning compliance at all times with the requirement to meet redemption requests and to conduct stress tests.
LIQUIDITY MANAGEMENT TOOLS
Articles L. 214-7-4 and L. 214-8-7 of the Monetary and Financial Code relating to the conditions under which UCITS (FCP or SICAV) may be able to suspend the issue and redemption of units/shares and/or cap unit/share redemptions. **Articles 411-20 and 411-20-1 of the AMF GR relating to the establishment of mechanisms to suspend and to cap redemptions, by putting gates in place.**

As already indicated, in their observations the AMF departments did not take into account the ESMA Guidelines 34-39-897 on liquidity stress testing in UCITS and AIFs, since these came into force after the launch of this Common Supervisory Action. However, the boxes below recall some of these guidelines when they are linked to practices observed by the AMF.

5. FINDINGS AND ANALYSES

5.1. PRE-TRADE MONITORING OF UCITS LIQUIDITY

- **Pre-trade monitoring**

The SPOT inspections and the interviews conducted by the AMF highlighted a structural lack of formalised pre-trade due diligence (or "pre-trade controls" to use ESMA's terminology) around aspects of liquidity. More specifically, a significant proportion of the AMCs in the three Groups analysed do not formalise the specific due diligence carried out, where necessary, by the competent functions (portfolio managers and/or risk managers) in order to assess the impact in terms of liquidity on the UCITS portfolio, prior to carrying out transactions.

In particular, of the 4 AMCs in Group no.1, none of them formalises monitoring of the liquidity of managed UCITS assets before making an investment. In formal terms, these companies rely on predefined and adjustable rules of eligibility and investment within periodic bodies and/or the continuous monitoring of their liquidity risk, and/or, for certain asset categories, they rely on a presumption of liquidity. Where appropriate, this presumption is stated but it is not systematically or sufficiently documented. Two AMCs from Group 1 (AMC no.1 and AMC no.2) do have a tool available to portfolio managers and risk managers, enabling them to monitor liquidity profiles and possible distortions of the portfolio in connection with an investment. However, even when portfolio managers use this tool pre-investment, due diligence is not formalised. Furthermore, in none of these companies is prior validation required by the risk management function.

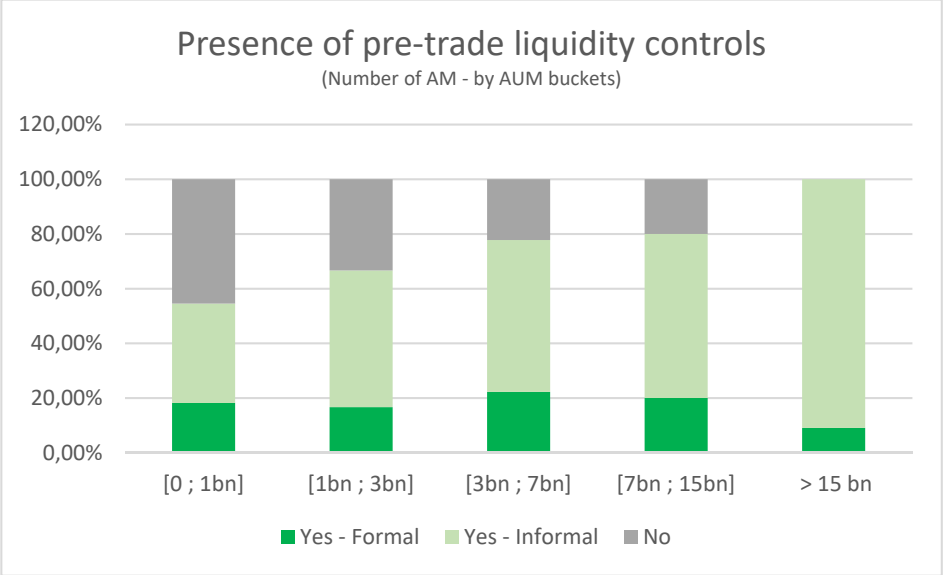
Two types of pre-trade controls can be defined concerning liquidity:

1. Controls related to the intrinsic liquidity of the intended investment, and
2. Controls related to the impact of the intended investment on the UCITS liquidity profile.

Regarding the second type of control, at the UCITS portfolio level: a large majority of AMCs do not carry out these controls (only 13% of them say they are able to do this via their tools). When these controls are carried out, they are not compulsory or do not always cover all the instruments processed.

Regarding controls related to the intended investment, 73% of the AMCs (85% of AUM) carry out controls of this type, to a greater or lesser degree. For the most part, these are not formalised, with only 16% of AMCs (8% of AUM) formalising their controls.

In detail, the graph below shows the proportion of AMCs carrying out "pre-trade liquidity controls" according to the net assets of the UCITS managed, and whether or not these are formalised controls. The different categories were defined so as to have a similar number of AMCs in each (between 9 and 12).



The presence of pre-trade controls seems to be closely linked to the size of the AMC. However, the level of formalisation is better in the medium-sized companies. In this respect no AMC said that they had a process for formalising their "pre-trade controls", which varied in intensity according to the liquidity risk of the UCITS before investing. In practice, however, and as illustrated by the stressful period linked to the health crisis, managers seem to be paying more attention to the liquidity risk of new investments when this risk is higher, but without quantifying or systematising these reviews. Conversely, there would seem to be little use in carrying out the same level of analysis systematically for investments in portfolios with little liquidity risk.

Although they are not, strictly speaking, carrying out liquidity controls, some AMCs have put controlled limits in place pre-trade, to limit liquidity risk. AMC no.3, for example, prohibits investment for most UCITS in issuers with market capitalisation of less than €500 million and AMC no.1 imposes liquidity buffers according to the risks relating to the investment strategy of each portfolio and the assessment by this AMC of the liquidity situation of the market.

Other practices by several players were noted. In particular, one Group 2 AMC has implemented a block in its order management software on securities deemed to have insufficient liquidity. Another company in Group 3 operates using a buy list whose inclusion criteria take account of liquidity criteria.

- **Liquidity presumption**

As mentioned previously, according to Article R. 214-9 of the Monetary and Financial Code,[5] the liquidity of assets listed for the purposes of eligibility for UCITS assets can be presumed, "*unless there is information available to the UCITS that would lead to a different determination*".[6]

[5] Article resulting from the transposition of Directive 2007/16/EC of 19 March 2007 on "eligible assets".

[6] Article 2 1), final paragraph of Directive 2007/16/EC "eligible assets": "*financial instruments which are admitted or dealt in on a properly regulated market* […] *shall be presumed not to compromise the ability of the UCITS to comply with* [the obligation to redeem its units at the request of any holder] *and shall also be presumed to be negotiable, unless there is information available to the UCITS that would lead to a different determination".*

The questionnaire used in Stage 2 asked AMCs, on the one hand, if this liquidity presumption was actually used, (and if so, on which assets), and on the other hand, if they used a system to detect a non-negotiable instrument, which could jeopardise the ability of the UCITS to meet redemption requests from its holders.

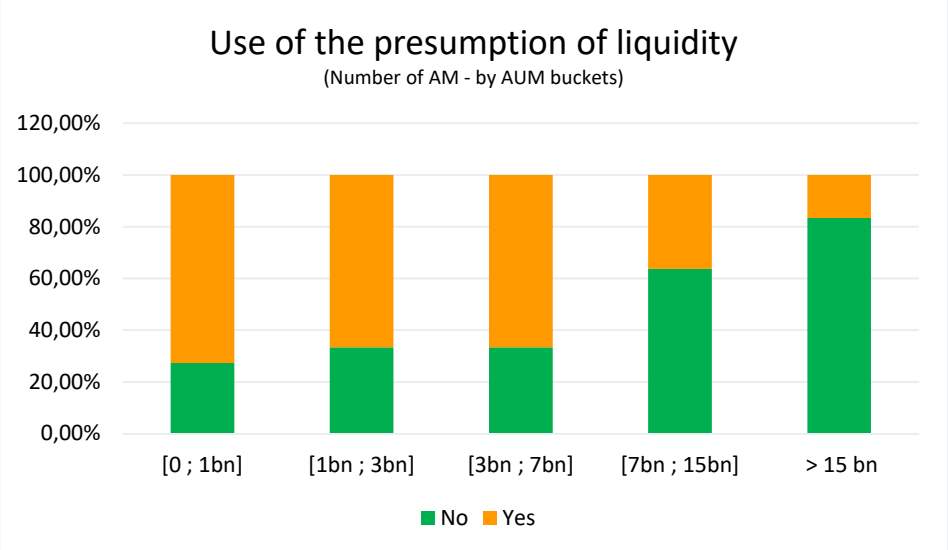
The responses were not always clear. Thus, out of 55 AMCs, 28 say they implement this presumption for at least one asset class, which represents 51% of the scope of the survey or 21% of AUM. Of these AMCs, many use this presumption only for listed derivatives, of which they make moderate use, typically currency or interest-rate derivatives for hedging purposes. Conversely, 14% of AMCs (2.6% of AUM) use this presumption for their entire investment universe.

Among the AMCs making use of this possibility, more than half say that they do not carry out any investigation in relation to the possibility that these assets are insufficiently liquid, with several putting forward the tautological argument that there is no need to check because these assets are considered to be liquid in principle. Measures aimed at reinforcing the liquidity presumption used by the other AMCs include: regular checks on volumes traded on the markets (especially with regard to the scale of activity by the AMC on the market), the establishment of limits, warnings from the intermediation desk in the event that it is impossible to place orders, a principle of responsibility on the part of the portfolio manager (i.e. his ability to estimate for himself if this presumption is applicable), *ex post* checks of risks and major changes in the economic context.

In addition to derivatives, liquidity presumption sometimes relates to sub-segments of large-cap equities and investment-grade bonds (German and American sovereign papers or securities from issuers located in one of the G7 or G10 countries, and also any of the OECD member countries), and to money market funds. For example, for its investments, AMC no.3 considers that large European market capitalisations (direct or synthetic) and short-term NDS have high liquidity.

In contrast, some AMCs say they do not use liquidity presumption and perform liquidity analyses on each security without discrimination. Other AMCs say that they use this presumption only to assess the eligibility of the asset for UCITS investment, but not to determine the ability of the UCITS to meet redemption requests by its holders.

The use of this liquidity presumption is strongly linked to AMC size. For example, it is used by 73% of AMCs managing UCITS AUM of under €1 billion and only by 17% of those managing AUM exceeding €15 billion.



On the other hand, the use of liquidity presumption does not seem to be positively linked to the frequency of post-investment checks. For example, presumption is used more by AMCs where post-trade checks are monthly (50% of AMCs) than by those where checks are weekly (44%).
Similarly, the extent of the scope of liquidity presumption is not positively related to frequency of post-investment checks. 63% of AMCs using liquidity presumption for all their investments carry out a monthly check of their liquidity.

Relevant regulations:

- **Article R. 214-9 of the Monetary and Financial Code:** "*I. – The eligible financial securities mentioned in 1° of I of Article L. 214-20 satisfy the following conditions: […]*
  2° Their liquidity does not compromise the ability of the UCITS to comply with the provisions of Articles L. 214-7 and L. 214-8; […]
  For application of 2° and 5° of this I, the financial instruments relating to 1° to 3° of I of Article R. 214-11 are presumed not to compromise the ability of the UCITS to comply with the provisions of Articles L. 214-7 and L. 214-8 and they are presumed to be negotiable, unless there is information available to the UCITS that would lead to a different determination."
- **Article R. 214-10 of the Monetary and Financial Code:** "*The money market instruments mentioned in 2° of I of Article L. 214-20 satisfy the following conditions:* […]
  2° They may be sold at a limited cost within a short and appropriate period, taking into account the UCITS' obligation to buy back or redeem its units or shares at the request of any holder or shareholder."
- **Article 321-79 of the AMF GR:** "*Asset management companies shall establish, implement and maintain operational a risk management policy and procedures that are efficient, appropriate and documented, making it possible to identify the risks relating to their business, processes and systems and, where needed, to determine the level of risk they can tolerate"*.
- **Article 321-101 of the AMF GR:** "*The asset management company: […]8° shall establish written policies and procedures on the due diligence it carries out and implement effective arrangements for ensuring that investment decisions on behalf of the UCITS are executed in compliance with the objectives, investment strategy and risk limits of these UCITS"* […] *9° when implementing their risk management policy, and where appropriate after taking into account the nature of a foreseen investment, shall formulate forecasts and perform analyses concerning the investment's contribution to the UCITS portfolio composition, liquidity and risk and reward profile before carrying out the investment. The analyses must only be carried out on the basis of reliable and up-to-date information, both in quantitative and qualitative terms."*
- **CESR Guidelines concerning eligible assets for investment by UCITS:**
  "*17. Where information is available to the UCITS that would lead it to determine that a transferable security could compromise the ability of the UCITS to comply with [the obligation to redeem investors at their request], the UCITS must assess its liquidity risk.*
  The liquidity risk is a factor that the UCITS must consider when investing in any financial instrument in order to be compliant with the portfolio liquidity requirement to the extent required [to comply with the obligation to redeem investors at their request]. In taking this prudent approach, the following are examples of the matters a UCITS may need to consider:
  In the case of transferable securities which are not admitted to trading on a regulated market as defined in Article 19(1) of Directive 85/611/EEC, liquidity cannot automatically be presumed".

Good practices:

- Setting up a system whereby the risk function, individually or collectively, must first authorise asset types that have never been used within a portfolio and define the liquidity risk limits associated with the portfolios concerned. Such decisions to be formalised.
  It should be noted that according to Point 28 in the aforementioned ESMA guidelines: "*Liquidity stress tests should produce outcomes which:* […] *d. assist risk management monitoring and decision-making, including setting relevant internal limits by the manager regarding fund liquidity as an additional risk management tool. This may include ensuring the results of LST can be measured through a comparable metric, such as a key risk indicator*".
- Providing pre-investment risk indicators and limits:
  - When it is deemed relevant (e.g. asset class assumed to have more restricted liquidity, specific market conditions, anticipation of movements in liabilities, etc.), pre-define a minimum share of liquidities and liquid financial instruments to be observed from when the investment is made, and to be adjusted according to the AMC's analysis of the level of market liquidity,
  - Define a buy-list of eligible financial instruments according to an analytical approach including liquidity criteria,
  - Provide a mechanism for blocking orders focusing on financial instruments considered as illiquid.
- Making available to the portfolio managers and risk managers, tools with which to simulate the impact of investment on distorting the fund's liquidity profile.

Poor practices:

- Not ensuring an adequate level of traceability for the due diligence carried out prior to investment in terms of liquidity risk
- In the liquidity risk management procedure and in practical terms, not establishing any gradation in the level of due diligence and formalisation of forecasts and analyses relating to the contribution of an investment to the liquidity of a UCITS before making the investment.
- Not specifying in the liquidity risk management procedure the types of assets to which the AMC applies a liquidity presumption, where applicable.
- Not specifying/documenting how the AMC ensures that it does not possess any information that could call such a presumption into question.

5.2. GLOBAL LIQUIDITY RISK MONITORING SYSTEM AND GOVERNANCE

In general, post-investment liquidity risk monitoring systems are in place in the AMCs, with just a few exceptions.

However, the liquidity risk monitoring system is not always formalised with a procedure or it is scattered across various procedures (product creation, investment monitoring, etc.). Thus the description of liquidity risk monitoring systems varies considerably from one player to another. Liquidity risk monitoring systems may include, for example:

- A product launch committee to define these characteristics: frequency of NAV, liquidity management tools, maximum size of UCITS to limit its influence on the underlying assets trading market, any restrictions on asset classes, definition of a minimum liquidity threshold, etc.;
- Liquidity reporting at a determined frequency;
- A procedure for reporting information to the AMC senior management;

- A risk monitoring committee that discusses liquidity risk;
- Procedures governing the use of liquidity management tools;
- Supervision of planned controls in this area;
- Supervision of staff working in liquidity risk management and of the responsibilities of each team (marketing, risk, management, supervision).

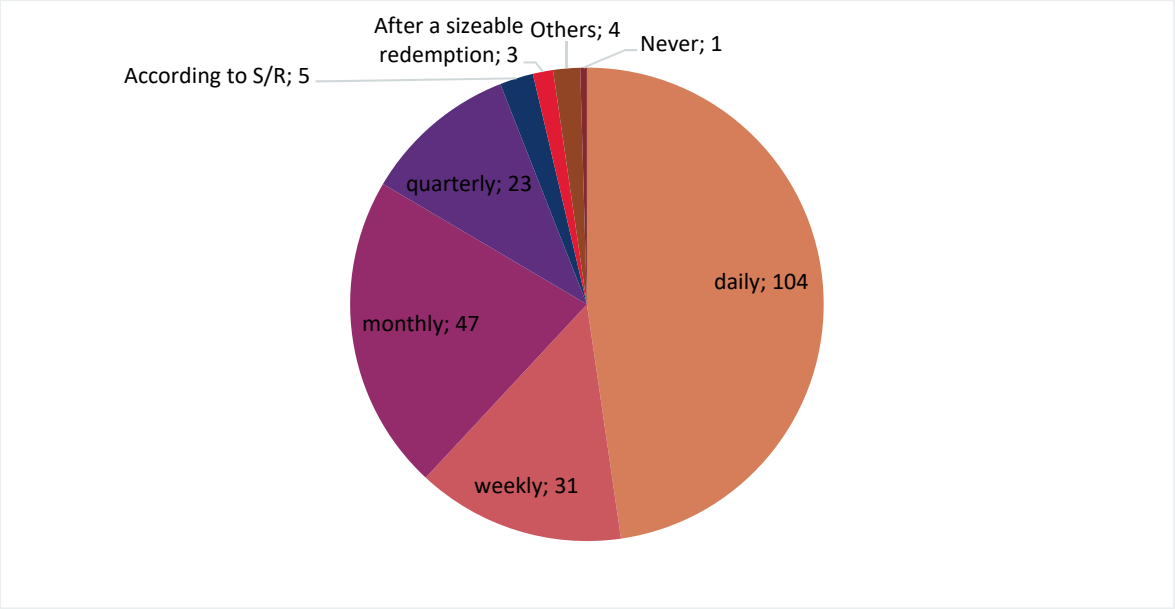
Each company's monitoring system will rely more importantly on the points mentioned above, depending on their specific field. Analysing the suitability of the system for monitoring *ex-post* liquidity risk is a complex exercise to carry out as it goes beyond analysing frequency, escalating information, control of risk management information and internal controls. This analysis depends on the risk inherent in each type of management and marketing channel within an AMC.

For example, in one of the Group 2 companies, which includes a large proportion of ETFs in its managed assets, the system they use is based for the most part on the definition of the maximum size of the UCITS according to the nature of the ETF and the type of underlying assets. In fact, within the framework of managing an ETF, the company has little control over UCITS assets, given that the room for manoeuvre with the selected assets and the size of the lines is very limited.

- **Reporting on liquidity risk and associated information escalation process**

Within the more general framework of the AMCs consulted in Stage 1 of the exercise, only one company replied that it did not produce a liquidity report. 94% of AMCs said that they made sure that members of the board were copied into liquidity reports. It should be noted that the board members of smaller sized structures sometimes also take on the role of portfolio managers or risk managers, and thus information can circulate more easily between members of the team, but on the other hand, analysis is less diverse. In the case of AMCs no.1, no.2 and no.3 in Group 1, managers sit on monthly risk committees. In addition, in AMC no.1, the financial managers have a tool at their disposal for them to carry out their own liquidity monitoring in parallel with the monitoring by the risk department, for AMC no.2, which delegates a significant share of management, monitoring is formalised by the risk function, and for AMC no.3, risk data are sent to the management team daily by the risk function. For AMC no.4, a specific risk report is presented at quarterly board meetings, with no risk committee meeting in the interval, but the risk function sends each financial manager a weekly risk monitoring update which includes a liquidity component. Escalation processes are in place for feeding information to senior management in the event of "alerts". These are based on indicators and levels which are defined with varying degrees of precision, depending on the AMC.

Minimum declared frequency of liquidity reporting by AMCs during Stage 1 of the exercise



In the other cases, frequencies are generally daily to monthly. Some companies also mention reporting after any large redemption request. Reporting frequency is sometimes calibrated to the frequency with which the UCITS' net asset value is calculated or the type of fund. For example, an AMC affiliated to an insurance company in Group 3 reports weekly on UCITS investing in securities directly and quarterly on funds of funds. A few AMCs also said that they had triggered higher reporting frequencies, at the discretion of their management, during periods of crisis (such as the health crisis) or based on predefined market indicators (e.g. increased volatility). Some companies announced reporting frequencies that seemed low, given the nature of the assets under management: one of the Group 2 AMCs, which manages, among other things, illiquid assets like high-yield bonds and small-cap equities, said that they had put a liquidity management system in place based on a quarterly frequency. The content of the reports also varied: for example, reports by AMC no.4 were unable to identify the least liquid securities as there was insufficient granularity.

In addition to sending in reports at predefined frequencies, several companies have set alert thresholds triggering specific and systematic escalation of information. The most common are alert thresholds relating to the overall liquidity of a portfolio: one AMC in Group 3 sets an alert if no more than 15% of the portfolio can be liquidated in less than 5 days. This AMC specifies that this is in line with the recommendations of the SEC.[7] Another sets an alert level when the fund's liquidity ratio is 85% of the fund's net assets that must be liquidatable within one day. In another AMC of significant size in Group 2 managing UCITS investing predominantly in equities, the alert threshold is calibrated according to the nature of the UCITS (< 75% liquiditable within one week on large-cap equities strategies, < 30% liquiditable within one week on micro-cap, etc.). Finally, another AMC in Group 2 which manages a wide range of UCITS, has established a joint limit for assets and liabilities: < 70% of UCITS liquiditable within one day and concentration of liabilities (the largest customer > 15%, the top 5 customers > 25%).

In the case of AMC no.1, an escalation process is triggered if exceeded thresholds on assets (associated with an action by the portfolio manager) are not settled the same day and if exceeded thresholds on liabilities (associated with a market movement, for example) related to internal constraints are not settled within 10 working days.

[7] https://www.sec.gov/divisions/investment/guidance/secg-liquidity.htm

The follow-up on these alerts is varied: request for justification to the portfolio manager, inclusion in the risk committee agenda or exchange of emails between the different teams to consider a remedy if necessary. In the case of AMC no.4, which does not have a risk committee, it is impossible to trace any follow-up to reports and alerts. Although the company indicates that it has never had any alerts, its system demonstrates no effective liquidity risk monitoring or governance. AMCs no.1, no.2 and no.3 formalise alerts, with 1 and 2 following up with exchanges with the portfolio management team, but ultimately it is not always possible to trace measures taken, to ensure they have been implemented and that they are effective.

It is difficult to comment on the appropriateness of reporting frequencies since a very high frequency of a large number of indicators may also result in a failure to distinguish the UCITS presenting the highest level of risk. However, it is good practice to adjust the frequency and the presentation of risks and to focus on UCITS exposed to the highest level of liquidity risks. For example, an AMC in Group 2 which manages a wide range of UCITS selects those for which particular monitoring will be carried out using a risk-based approach. AMC no.2 also carries out enhanced liquidity risk monitoring, especially linked to liabilities, for a list of UCITS invested significantly in risky asset classes (small-cap equities, emerging equities and interest rates, high-yield bonds, securitisation). Similarly, specific monthly monitoring is formalised for UCITS investing in instruments described as "less liquid" by AMC no.1 (Asset Backed Securities or Contingent Convertibles*).* This monitoring is carried out at the level of each UCITS concerned, but also in an aggregated way.

AMC no.4 does not use asset classes with a high liquidity risk, but carries out an aggregated monitoring of positions held across all portfolios under management, in order to monitor its control ratio.

- **Internal and external control on the subject of liquidity**

186 AMCs, or 85% of the Stage 1 sample, carried out at least one internal or external control on liquidity risk in 2018 and 2019. 14 of them said they had received alerts as a result of these controls from the internal compliance and control function or the depositary.

The most frequent alerts/points raised during controls include:

- The omission of certain funds or mandates from the scope of the liquidity analysis;
- The lack of updates to the liquidity procedure which was therefore no longer in line with practice;
- Analyses of assets and liabilities are not compared;
- The absence of a stress test as required by the ESMA guidelines (ESMA 34-39-897);
- The absence of a limit on AUM in less liquid strategies;
- The lack of communication between the risk function and the management team.

As part of the SPOT inspections, AMF departments noted several shortcomings in the permanent control system of the AMCs within their scope. For example, second-level controls in one of the AMCs in Group 1 are based on due diligence by the risk management department, but do not provide for any independent verification by the compliance function that risk monitoring procedures have been correctly applied. In addition, the permanent control functions of two Group 1 AMCs failed to identify several shortcomings detected by the AMF team.

Relevant regulations:

- **Article 321-77 of the AMF GR**: "*III. - The permanent risk management function shall:*
  a) implement the risk management policy and procedures;
  b) ensure compliance with the UCITS risk limitation system and especially limits concerning global risk and counterparty risk of UCITS in accordance with Articles 411-71-1 to 411-83;
  c) provide advice to the Board of Directors as regards the identification of the risk profile of each managed UCITS;
  d) provide regular reports to the Board of Directors, and, where it exists, the supervisory function, on:
  - i) the consistency between the current levels of risk incurred by each managed UCITS and the risk profile agreed for that UCITS;
  - ii) the compliance of each managed UCITS with relevant risk limit systems;
  - iii) the adequacy and effectiveness of the risk management process, indicating in particular whether appropriate remedial measures have been taken in the event of any deficiencies;
  e) provide regular reports to senior management outlining the current level of risk incurred by each managed UCITS and any actual or foreseeable breaches to their limits, so as to ensure that prompt and appropriate action can be taken;
  f) review and support, where appropriate, the arrangements and procedures for the valuation of financial contracts negotiated over the counter, as referred to in Article 411-84."
  Article 321-78 of the AMF GR: *"I. – Asset management companies shall establish, implement and maintain an appropriate and documented risk management policy making it possible to identify the risks to which the UCITS that they manage are or may be exposed.[…]*
  II. – The risk management policy shall comprise such procedures as are necessary to enable the management company to assess for each UCITS it manages the exposure of that UCITS to market, liquidity and counterparty risks, and the exposure of the UCITS to all other risks, including operational risks, which may be material for the UCITS it manages.
  III. – The risk management policy shall address at least the following:
  a) the techniques, tools and arrangements that enable them to comply with the obligations set out in Articles 321-81, 411-72 and 411-73;
  b) the allocation of responsibilities within the asset management company pertaining to risk management.
  IV. – Asset management companies shall ensure that the risk management policy referred to in I states the terms, contents and frequency of reporting of the risk management function referred to in Article 321-77 to the Board of Directors and to Senior Management and, where appropriate, to the supervisory function.
  V. – For the purposes of this Article, asset management companies take into account the nature, scale and complexity of their business and the UCITS they manage."
  Article 321-79 of the AMF GR: "*Asset management companies shall establish, implement and maintain a risk management policy and procedures that are efficient, appropriate and documented, making it possible to identify the risks relating to their business, processes and systems and, where needed, to determine the level of risk they can tolerate."*
  Article 321-81 of the AMF GR: *"I. – Asset management companies shall adopt adequate and effective arrangements, processes and techniques in order to:*
  a) measure and manage at any time the risks which the UCITS they manage are or might be exposed to;[…]
  II. – For the purposes of I, asset management companies shall take the following actions for each UCITS they manage:
  a) put in place such risk measurement arrangements, processes and techniques as are necessary to ensure that the risks of taken positions and their contribution to the overall risk profile are accurately measured on

the basis of sound and reliable data and that the risk measurement arrangements, processes and techniques are adequately documented;

b) conduct, where appropriate, periodic back-tests in order to review the validity of risk measurement arrangements which include model-based forecasts and estimates;

c) conduct, where appropriate, periodic stress tests and scenario analyses to address risks arising from potential changes in market conditions that might adversely impact the UCITS they manage; […]

e) ensure that the current level of risk complies with the risk limit system set out in d) for each UCITS;

f) establish, implement and maintain adequate procedures that, in the event of actual or anticipated breaches to the risk limit system of the UCITS, result in timely remedial actions in the best interests of unit holders or shareholders.

III. - Asset management companies shall use an appropriate liquidity risk management process for each UCITS they manage.

This procedure shall enable them in particular to ensure that all the UCITS they manage comply at all times with the requirement set out in the third paragraph of Articles L. 214-7 or L. 214-8 of the Monetary and Financial Code.

Where appropriate, they shall conduct stress tests which enable assessment of the liquidity risk the UCITS are exposed to under exceptional circumstances. […]

CESR Guidelines – POINTS 17, 18, AND 19, 59, 60, 61 AND 62

"*17. The risk management function should provide advice to the Board of Directors for the identification of all risks relevant to the UCITS and provide on-going monitoring and measurement of those risks. The risk management function should implement the methods and procedures necessary for the above-mentioned purposes, including the drafting of the related documentation.*

18. The portfolio manager is responsible for taking investment decisions compatible with the risk limits system. On the other hand, measurement of the corresponding risks and monitoring of the risk limit system is assigned to the risk management function. However, the risk management process should operate in parallel with, and should be intrinsically tied to, the investment process. The Company should ensure that regular communication channels are established between the risk management function and the portfolio manager for the risk management process to function effectively. That implies an ongoing, dynamic risk management process, for which an appraisal only at intervals will not be sufficient.

19. The risk management function should report regularly to the Board of Directors and Senior Management […].

59. The risk management function should provide periodic reports to the Board of Directors, which holds responsibility for the overall risk management process.

60. The risk management function should, as part of a formalised periodic reporting process, inform the Board of Directors regularly of the actual level of risk incurred by the UCITS.

61. The risk management function should also periodically report to the Senior Management, at the direction of the Board of Directors. These reports should set out the results of the controls relating to the risk profile of the funds, the overall adequacy of the risk management and the measures taken to address any deficiencies.

62. Reports from the risk management function should be delivered directly to the Board of Directors and Senior Management."

Good practices:

- Setting out a reporting frequency and/or in-depth analysis for monitoring UCITS with a high liquidity risk, or when certain types of less-liquid or illiquid assets are used.

It should be noted that according to Point 26. b. of the ESMA guidelines on liquidity stress testing in UCITS and AIFs, "*the frequency should be adapted to the fund rather than a 'one-size-fits-all' approach being taken to all funds operated by the manager*".

- Where appropriate, in addition to specific reporting for each UCITS, providing a report that aggregates the portfolio positions on all UCIs managed, especially in the case of investments in financial instruments presenting a high liquidity risk.

Poor practices:

- Not defining in sufficient detail in the procedures the criteria for an alert that give rise to an ad hoc report to Senior Management, nor the escalation processes in the event of such alerts being triggered. It should be noted that according to Point 24.f). of the aforementioned ESMA guidelines, in the context of risk management, a liquidity stress test policy should in particular include "*the circumstances requiring escalation, including when liquidity limits/thresholds are breached*".
- Not setting up a risk committee combining the management and risk functions in order to carry out a formalised and regular monitoring of liquidity risk when the liquidity risk of the UCITS under management, given the nature of their assets and/or their level of AUM, is significant.
- Not ensuring sufficient traceability of follow-up action on liquidity alerts, subsequent analyses, measures taken, and their proper implementation.
- Formalising liquidity risk reporting that does not have a sufficient level of granularity to be able to identify those positions that impact on the liquidity level of a portfolio, nor provide a dynamic vision of change in this impact.

➢ **Market data and asset liquidation assumptions**

Most AMCs use UCITS asset liquidation assumptions as a tool for measuring the liquidity of their portfolios. These data can be used on a standalone basis or in combination with the liquidation of liabilities in the context of liquidity stress tests.

However, UCITS asset liquidation assumptions are very much dependent on the characteristics of the financial instruments in which the UCITS is invested, on the data available and, as will be shown below, on the hypotheses selected by the fund managers.

Equities

Concerning equities, data on volumes traded on the primary listings are widely available from data providers.

These data are provided primarily as a rolling average of the volumes traded on the target equity over the last X days. The calibration of this moving average is central to estimating the liquidity of equities. In fact, the proportion of the volume taken into account in the liquidation hypothesis must be consistent with the way in which the orders given by the management team are executed. Also, by adjusting the observation period it is possible to benefit from more stable data (long period) or data that are more responsive to changes in market conditions (short period). The balance to be found is specific to the context of each asset management company. Data on volumes traded on platforms such as multilateral or block trading facilities[8] are also available, but less systematically.

[8] A block order is a privileged over-the-counter order for large amounts of equities so that they can be traded without having to split the order and at a single price.

The indicator used by almost all AMCs is the maximum duration of the liquidation of an "equity" position without it having an impact on prices. For this, AMCs determine the maximum proportion of volume that an order can take without affecting the equity price and choose an estimate of the volume traded. Assumptions are therefore expressed as a percentage of participation in the volumes and an observation window for the average volumes (e.g. 20% of the average of volumes over 3 months).

In the framework of the aforementioned ESMA guidelines on liquidity stress testing, AMCs must also decide on a way to modify these hypotheses to simulate stressed market conditions.

Two AMCs in Group 1 have put in place evolving liquidation assumptions according to their assessment of market conditions. AMC no.1 applies a variable approach according to its estimate of market conditions ("normal" or "stressed"). It defines what it calls "standard" (negotiable with no price impact) and "maximum" (negotiable with price impact) participation percentages for the volumes observed over the last three months and divides these percentages in the event of a "stressed" market situation. AMC no.4 also provides for a downward adjustment of the percentage of observed liquiable volumes with no price impact when market conditions are stressed (reduction from 20-33% to 10%).

However, in both cases, the methodology for determining whether market conditions are normal or stressed is discretionary and not clarified in the procedures.

AMC no.2 does not adjust the liquidable percentage according to its assessment of market conditions. Whereas AMC no.4 has developed a methodology for estimating the impact on the net asset value of a UCITS from the liquidation of an entire position, taking into account the weight of the equity in the portfolio, the number of days of liquidity and its historic volatility at 3 months. This approach is based on academic research publications but the corresponding procedure provides no justification as to its relevance.

The majority of Group 3 AMCs use the average volume observed in the primary listings. This average volume is calculated over 3 months for the four AMCs that were subject to the SPOT review. However, some Group 3 AMCs use less conservative hypotheses by aggregating volumes observed on all the places where the equity is listed, or even by incorporating the available block order information. This is particularly the case with AMC no.3 (Group 1). This latter approach raises some questions, since such block transactions are by definition very irregular and may for example not exist under stressed market conditions.

In addition, AMCs no.1, no.3 and no.4 also monitor investment and coverage ratios to ensure that predefined limits are respected.

Bonds

Unlike equities, there is no consolidated market data on the volumes of bonds actually traded. AMCs must therefore make an approximate assessment of the liquidity of bonds using already available data or make do with incomplete data. The methods and accuracy of these approximations vary considerably from one AMC to another. The main methods used are as follows:

- Indirect hypotheses on the issue size, the participant, the contributed bid-ask spread, the flow rate according to the percentage of the issue to be amortised, etc.
- Paid market sources, sometimes modelled:

  - Trace (for American bonds);
  - Bloomberg;
  - Markit;
  - RiskMetrics;
  - Internal aggregation tools.
- Specific analytical tools:
  - Internal rating models;
  - Analysis for high-yield bonds based on selling positions on the repo market to assess the volume of selling interest in hedge funds that speculate downwards.

For equities, the commonly accepted definition of liquidity is the ability to buy or sell a security without affecting the price. For bonds, AMCs are split between those that use an approach similar to that for equities and those that consider liquidity to be the ability to buy or sell a security at a maximum fixed cost. In this case, AMCs set a maximum bid-ask spread, thereby accepting a certain level of loss, and estimate the duration of liquidation of the position under this constraint.

Derivatives

Two different types of liquidity risk can affect derivatives:

1) Inability to close or take a reverse position on portfolio derivatives at moderate cost;
2) need for additional liquidity due to significant margin calls which may, like a redemption, require the sale of additional positions in the portfolio.

- Listed derivatives

Only one AMC says that it monitors the initial margin deposit by means of an estimate made during pre-investment checks by the portefolio management team and monitored by the middle office. This AMC also estimates the liquidation period using the average volume of the underlying assets.

The vast majority of AMCs use a liquidity presumption on listed derivatives (15 out of 21 AMCs which had at least 1 UCITS with >75% leverage). Some AMCs (4/21) mitigate the effect of this presumption by imposing constraints on authorised products and/or exposures to these products. This is particularly the case for AMCs no.1, no.3 and no.4.

- OTC derivatives

Regarding OTC derivatives, most AMCs define a time horizon for liquidating the position qualitatively.

Article R.214-15 of the Monetary and Financial Code, which provides that UCITS may invest, among other things, in OTC derivatives, requires that they carry out *"a reliable and verifiable evaluation on a daily basis*" and that they shall, "*on the initiative of the UCITS, be sold, liquidated or closed at any time by a symmetrical transaction, at their market value*". This provision is essential because if the AMC has no specific guarantee that the OTC derivatives can be unwound at any time on its own initiative with limited cost, then these derivatives become potentially illiquid and cause the UCITS to run significant risks.

In order to comply with this obligation, several practices were observed by the AMF for OTC derivatives held by UCITS:

- When there is no break clause at the instigation of the AMC, the question arises as to the eligibility of the instrument in the assets of a UCITS. In theory, this is only possible if a symmetrical transaction is still possible at a consistent price (foreign exchange swaps on the main currencies). This is a particularly risky situation because if market tensions increase the costs of unwinding of the hedging of a counterparty, then major disagreements can arise between the parties over a termination that is not provided for contractually;
- When the contract does contain a break clause at the instigation of the AMC, but the AMC has not specifically provided for the cost of unwinding and leaves it to the counterparty to estimate it by only imposing constraints such as "commercially reasonable",[9] then the counterparty has considerable latitude;
- When the exact methods of determining the cost of termination by the AMC are stipulated in the framework contract or in the transaction confirmation, determining the execution price, minimum and/or maximum executable quantities and the cost of the transaction are included. This method fixing the cost of disinvestment can therefore involve higher transaction costs in normal times, but ensures that whatever happens, the fund can disinvest the contract under correct conditions.

For example, AMC no.3 used the first two approaches described above for concluding OTC contracts. With these approaches, it may be impossible to close certain OTC positions in acceptable conditions in the context of a stressed market.

This results in a variety of different practices in the actors. While counterparties are naturally reluctant to introduce such clauses, if they do not, then there is a major risk of liquidity in the event of disagreements between the counterparty and the AMC and the requirements of the UCITS Directive could not be met.

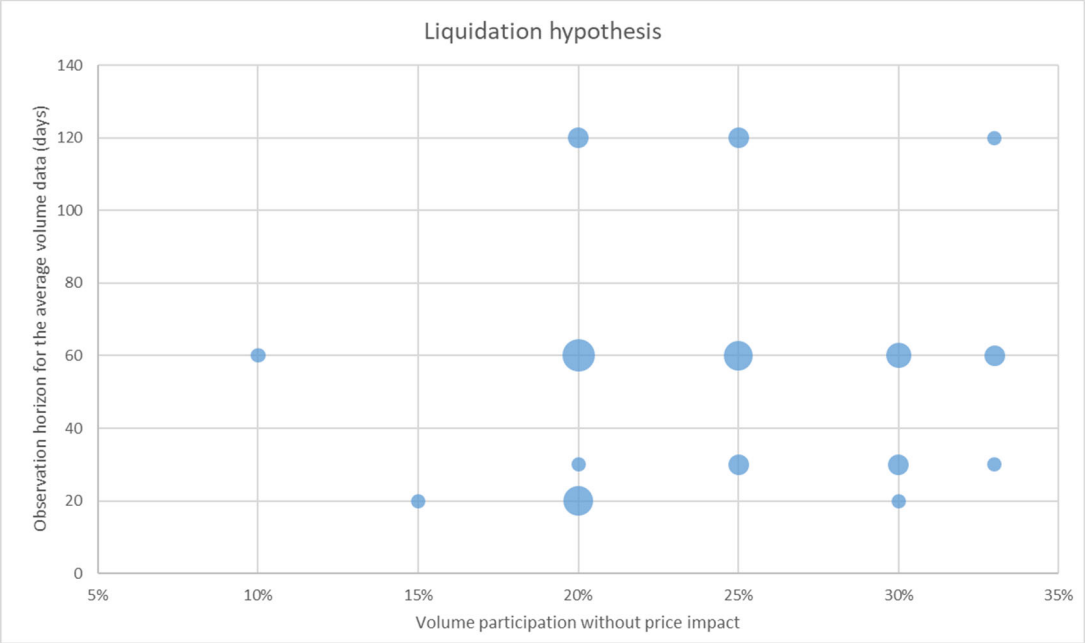
Variability of liquidity estimates

In exchanges with the AMCs it emerged that share liquidation hypotheses varied considerably, both in the percentage of volume participation and in the observation window.

Analysis of the responses to the questionnaire confirm this observation. For the 34 AMCs that provided their share liquidation hypothesis, the proportion of average volumes taken into consideration ranged from 10% to 33% of volumes, with one company even using a hypothesis of 100% of volumes. Regarding the observation window, choices ranged mainly from 20 days to 6 months, but one actor went as far as 1 year.

The following graph shows the number of AMCs using a liquidity hypothesis per pair [proportion of volume traded without price impact / reference horizon over which volume is estimated]. The larger the dot, the more AMCs are using the hypothesis in question.

[9] Sample formulation: "Where an Index Swap Transaction is terminated in accordance with this provision, the amount payable will be determined by the Calculation Agent that may take into account the level that would have been realized by a Hypothetical Broker Dealer, acting in a commercially reasonable manner in terminating or liquidating the Applicable Hedge Positions, as adjusted to account for any factors (including the impact of any costs, commissions or other fees)."



- This results in a wide variation between actors in the risk assumptions they use to determine what is a liquidation without price impact: the volume that can be traded without price impact varies from 10% to 33% of average volumes traded on the security;
- The observation timeframes used to determine average volumes traded vary from 20 days to 120 days.

These hypotheses are usually used indifferently across all equity markets. The “line-by-line” details of portfolio liquidation hypotheses make it possible to compare the liquidation hypotheses of different AMCs for the same financial instrument.

The instruments selected for this analysis meet the following characteristics:

- ISINs present in several funds (managed by different AMCs);
- Liquidation in 8 days minimum to ensure that the data used (1 to 7 days of liquidation) correspond to the maximum volume that can be liquidated on the market with no impact on price according to the AMC’s hypotheses and thus eliminate differences linked with the difference in position size.

In all, 340 lines, or 129 unique ISINs, were selected (40 convertible or speculative bonds and 89 equities). For each ISIN, the multiplier factor between the highest and lowest daily liquidation amount was calculated. On average, this factor was between 2 and 5 depending on the type of instrument. The table below describes its distribution in more detail:

Category	Min	25th percentile	Median	75th percentile	Max
Equity Small Caps	1,04	1,47	1,54	2,14	5,99
Equity Mid Caps	1,00	1,21	1,48	2,96	7,93
Equity Large caps	1,07	1,42	2,05	2,62	3,01
Convertible/High Yield Bonds	1,03	1,59	2,46	6,35	20,32

It can be seen that the estimates of liquidable amounts with no impact on prices vary widely. Although these hypotheses vary by a factor of 1.5 to 2.5 for the median cases, they can diverge by as much as a factor of 8 for equities and 20 for convertible and high-yield bonds.

For equities, the reasons for these differences include the very varied hypotheses for estimating liquidity, mentionned at the beginning of this paragraph. This is all the more true for bonds, for which most AMCs use internal models to approximate liquidity.

Liquidity hypotheses far removed from "market realities"

In general, and in addition to their significant variability, liquidity hypotheses defined by the risk teams are only very rarely back-tested. Across Stage 2 of the exercise, 73% of AMCs do no back-testing of these hypotheses and 3.5% say that no checking is necessary since the hypotheses are conservative compared to the conditions observed on the market.

Only 3.5% of AMCs carry out this check on a regular basis, the others do it either on an ad hoc basis (7% of AMCs) or informally in the context of discussions with the portfolio management team or the negotiating desk. None of the 4 AMCs that underwent a SPOT inspection carries out formalised back-testing of liquidity hypotheses. 3 of them say that such checks are carried out informally as necessary, but they plan to formalise this review process better in the near future.

In addition to the liquidity hypotheses, in the case of AMC no.4, the AMF noted that the management and risk management teams do not use the same data sources.

As several AMCs indicated that the best visibility over instrument liquidity was the intermediation desk, the AMF held exploratory discussions with three French intermediation desks. While the main subject of concern to the AMF is the quality of execution in terms of price, the intermediation tables also pay particular attention to liquidity. They have three sources of liquidity data that are not available to most AMCs, especially the smallest ones. First of all, the intermediation desks receive the banks' "guidelines", i.e. their buying or selling interests. In addition, because of their positioning, they hold data on many transactions that they execute on behalf of their customers. Finally, they develop algorithms with which to predict liquidity and optimise order placement, especially on instruments that do not have aggregated market data, such as bonds.

However, few AMCs ask their intermediation desks for information on liquidity to use in their risk models. The only cases identified limit their action to communicating very general information such as liquidity trends and this was usually intended for the portfolio management teams.

AMCs no.1, no.2 and no.4 in particular are exceptions to this rule as the data from the group's intermediation desk is used in the AMCs liquidity risk monitoring tool. In this case, however, the AMC performs no reliability check on data coming from the desk.

Some AMCs have implemented major IT developments to aggregate information available from several sources and modelize the liquidity of the financial instruments. The aim is to provide their portfolio management teams with a clear picture of the markets. However, this information is often confined to senior managers and is not necessarily made available to the risk management teams. As a result, hypotheses produced by the risk management teams may lack objectivity, they are rarely back-tested and rarely incorporate the market views of the intermediation desk which are "most in contact" with order execution.

Lastly, liquidation hypotheses do not always correspond to the way in which the portfolio is to be disinvested, as in fact disinvestment is never exactly proportional to the assets ("vertical slicing") or based solely on the liquidity of the instruments ("waterfall"). The AMF departments note that the four AMCs that underwent a SPOT inspection (Group 1) measure the impact of disinvestment on the basis of the estimated liquidation time for each security in the portfolio taken separately, but they do not simulate the different scenarios for the disinvestment of several securities at a time. In particular, AMC no.1 has already taken steps to simulate the two aforementioned liquidation hypotheses, as part of the implementation of the aforementioned ESMA guidelines.

Taking simultaneous redemption requests into account on the asset class considered

15 AMCs (or 27% of the Group 3 AMCs) are setting up a consolidated monitoring of the positions held on several UCITS in order to estimate the overall liquidity of these positions in the event of risk of simultaneous exit by holders (e.g. risks to the reputation of the AMC). Two others (3.6%) plan to set up monitoring of this kind. AMC no.4 carries out such monitoring, while AMC no.1 performs this monitoring for certain illiquid or poorly liquid assets and AMC no.3 ensures that this monitoring is carried out by bodies to which it delegates the management of its UCITS, if applicable.

One player has put in place some innovative monitoring of similar UCITS managed by other AMCs in its small caps segment in order to avoid the risk of systemic contagion: subscriptions/redemptions of these UCITS are monitored monthly and, in the event of a sizeable withdrawal, the main securities held by these UCITS are identified (if the information appears in their business reports) and placed under scrutiny. While this type of approach seems to be interesting in "niche" investment spheres, rolling it out to other spheres would seem by nature to be more complex.

Relevant regulations

- **Article 321-81 of the AMF GR: "***I. - Asset management companies shall adopt adequate and effective arrangements, processes and techniques in order to:*
  a) measure and manage at any time the risks which the UCITS they manage are or might be exposed to; […]
  II. - For the purposes of I, asset management companies shall take the following actions for each UCITS they manage:
  a) put in place such risk measurement arrangements, processes and techniques as are necessary to ensure that the risks of taken positions and their contribution to the overall risk profile are accurately measured on the basis of sound and reliable data and that the risk measurement arrangements, processes and techniques are adequately documented;
  b) conduct, where appropriate, periodic back-tests in order to review the validity of risk measurement arrangements which include model-based forecasts and estimates; […]
  c) conduct, where appropriate, periodic stress tests and scenario analyses to address risks arising from potential changes in market conditions that might adversely impact the UCITS they manage;
  d) establish, implement and maintain a documented system of internal limits concerning the measures used to manage and control the relevant risks to which each UCITS is exposed, taking into account all risks which may be material for the UCITS, as referred to in Article 321-76, and ensuring consistency with the risk profile of the UCITS; […]
  III. – Asset management companies shall use an appropriate liquidity risk management process for each UCITS they manage.

This procedure shall enable them in particular to ensure that all the UCITS they manage comply at all times with the requirement set out in the third paragraph of Articles L. 214-7 or L. 214-8 of the Monetary and Financial Code.
Where appropriate they shall conduct stress tests which enable assessment of the liquidity risk to which the UCITS may be exposed under exceptional circumstances."

Good practices

- Providing for the possibility of adjusting portfolio liquidity requirements more regularly than stress tests, in particular in the event of changes in market conditions
- When appropriate, carrying out consolidated monitoring across several of the portfolios under management of positions in financial instruments with a low liquidity level.
  Carrying out this type of monitoring is consistent with Point 72 of the ESMA guidelines on liquidity stress testing in UCITS and AIFs which stipulates that managers should aggregate liquidity stress tests across several funds under their management where they assess such an activity to be appropriate for those funds.
- Bringing together in a relevant manner the departments/third-party suppliers in charge of executing orders establishing liquidation hypotheses and incorporating these market views into the processes and procedures for estimating asset liquidity.

Poor practices

- Not justifying the choice of observation timeframe for volumes of trade used to monitor liquidity risk and not providing for a regular process for adjusting this timeframe, especially in the event of unusual market conditions.
- Selecting liquidation hypotheses that do not correspond to the way in which a portfolio could be disinvested.
  This is consistent with Point 47 of the ESMA guidelines on liquidity stress testing in UCITS and AIFs which defines the objectives of the methods of liquidating assets that should be used in a liquidity stress test.
- Incorporating data from block trades in over-the-counter securities transactions with data from trading volumes used to calculate liquidity indicators for the asset portfolios managed.
- Not performing minimum due diligence back-tests on the quality of the chosen market data and hypotheses, especially when they come from a third-party negotiation desk.

Taking into account the risk of liquidity requirements associated with the use of derivatives

From the SPOT inspections, it emerges that only one AMC in Group 1 carries out a formal calculation and monitoring of a ratio of liquidity risk coverage to exchanges of flows associated to the use of derivative instruments. More broadly, it appears that most AMCs consider margin calls exclusively as a subject of reconciliation and cash management, with no potential impact on management overall. These observations are confirmed by the questionnaire responses. Specifically, 53% of the AMCs concerned by margin calls[10] have no process in place to take account of related liquidity requirements. Yet this is a source of potentially significant liquidity requirements and it is essential to ensure that they can be covered under conditions that are not unfavourable to investors.

[10] 27 AMCs are considered to be particularly affected by margin calls because they manage funds with leverage greater than 75% and derivative products listed in the portfolio.

This observation is widely used, for example, for CFDs. These are special OTC derivatives as their terms of purchase and sale differ little from a purchase of underlying assets except that the fund only has to advance an amount of collateral and not the total exposure amount. In fact, several AMCs report that they estimate the liquidity of the CFDs in the same way as that of underlying equities. This is particularly the case for AMC no.3. However, CFDs are above all OTC derivatives that can generate significant margin calls, unlike an investment in equities.

The first level of consideration of margin calls consists in maintaining a liquidity buffer or some very liquid assets to cope with them. 38% of the AMCs concerned do this but without using a factual estimate of the amount.

Two AMCs in particular have calculated Value-at-Risk levels on derivative positions to estimate the extreme variations in margin calls in 99% of cases within 5 to 7 days (the time required to notify the counterparty default and replace the position). This measure, used especially in the context of internal banking and insurance models allows the fund's liquidity buffer to be sized to cope with such eventualities. For one of the two AMCs, the liquidity buffer is reduced by the amount corresponding to the estimated loss in the liquidity risk monitoring simulations. To date, other large AMCs do not have these modules. One Group 1 AMC told the AMF that they plan to introduce the possibility of establishing simulations of initial margin deposits under stressed conditions.

No AMC estimates the risk of increasing initial margin deposits in line with an increase in volatility, although the calibration models used by clearing agents are known in this regard. One AMC was able to send its clearing agent's newsletter to the AMF departments outlining changes in initial margin deposits before and during the health crisis linked to COVID-19. As calculation of the initial margin deposits is dependent on the volatility of the instrument, their amounts are usually quite regular but can vary greatly during market shocks, such as during the 2008 financial crisis or during the COVID-19 health crisis. The initial margin requirement is calculated in nominal terms and its increase coupled with a significant negative performance of the securities causes a multiplier effect in times of crisis. It appears that the increase was very significant during the crisis, on average 143% for the initial deposit rate when it is only 80% on their nominal level.

On the S&P 500 Futures Index, for example, the initial margin requirement, from the start of the Covid-19 crisis to the peak,[11] rose from $33,000 to $60,000 per contract, an increase of 82%, while the rate saw a 156% increase, rising from 3.9% to 10.8%.

By comparison, during the 2008 financial crisis, the increase was 70% for the initial margin requirement level and 104% for the rate.

Concerning CFDs, in terms of available cash flow, it is important to take contractual constraints into account: collateral return period in the event of reduced exposure, possibility of carrying out intermediate resets. CFDs are not subject to daily margin calls, however, resets (on a monthly basis) may involve large cash flows which may be amplified by movements of collateral.

[11] JP Morgan study over the entire period from 21/02 to 29/04, with the peak varying from one instrument to another.

Relevant regulations

- **Article 321-81 of the AMF GR**: *"III. - Asset management companies shall use an appropriate liquidity risk management process for each UCITS they manage.*
  This procedure shall enable them in particular to ensure that all the UCITS they manage comply at all times with the requirement set out in the third paragraph of Article L. 214-7 or Article L. 214-8 of the Monetary and Financial Code.
  Where appropriate, investor services providers companies shall conduct stress tests which enable assessment of the liquidity risk of the UCITS under exceptional circumstances
  IV. – Investment services providers shall ensure that for each UCITS they manage, the liquidity profile of the investments of the UCITS is appropriate to the redemption policy laid down in the fund rules or the instruments of incorporation or the prospectus.
  V. - Investment services providers shall ensure that the UCITS is able at all times to respond to all the payment and delivery obligations to which they committed themselves when concluding a derivative instrument.
  VI. – The risk management procedure shall enable asset management companies to satisfy at all times the requirements referred to in V."

Good practices

Simulating the impacts of market stress test scenarios on margin calls linked to the derivative instruments used, and taking the results of these simulations into consideration to assess a portfolio's level of liquidity. It should be noted that according to Point 58 of the aforementioned ESMA guidelines, net redemptions may not be the only relevant risk to liquidity coming from the liability side of a fund's balance sheet and which should therefore be subject to liquidity stress testing, and gives the example of a level of margin call that a fund would not be able to fund. It is specified that contingency planning should reflect this situation adequately.

Poor practices

- Not formalising in a policy or procedure the AMC's requirements in terms of break clauses for OTC derivatives according to their nature and their liquidity characteristics.
- Not taking into account the increase in initial margin requirements which could result from a rise in volatility.
- Not carrying out a prior analysis of the terms for breaking financial futures contracts with the result that their potential impacts on liquidity risk are not taken into account appropriately. It should be noted that according to Point 57 of the aforementioned ESMA guidelines, all relevant items on the liability side of the fund's balance sheet, including items other than redemptions, should be subject to liquidity stress testing.

5.3. TAKING INTO ACCOUNT LIQUIDITY NEEDS LINKED TO UCITS UNIT/SHARE REDEMPTIONS IN LIQUIDITY MANAGEMENT

The degree to which liquidity needs resulting from redemptions system are taken into account in the liquidity management varies a great deal. The attention paid to collecting data and modelling this risk is generally of lesser scope and quality than that relating to asset liquidity risk and dependent on the AMC's distribution network.

Regarding AMCs that underwent a SPOT inspection, while all monitor subscriptions and redemptions and try as far as possible to identify the customer with whom the movement began, it was noted that there was a great variation in the degree of effort put in. In addition, the use of these data by the risk management function is also variable.

In AMC no.1, a 9-person team is in charge of this task. Risk management uses these data to draw up a monthly report of the main movements and customers.

The vast majority of managers have a system for monitoring the main movements of liabilities, in order to calculate retrocessions. However, the ability to access information from which redemption risk can be modelled is uneven and generally weaker the more the marketing of collective investment under management is via an intermediary.

In general, all players have informed the AMF of the existence of intrinsic limits to their detailed knowledge of the clientele via collective investments declared to Euroclear. The TPI system (Euroclear's Identifiable bearer shares service) provides an issuer of securities with the identity of the holder, but it is not often used by AMCs to assess redemption risks. In this respect, the aforementioned ESMA guidelines on liquidity stress testing state that in the case of liabilities, stress tests should be based on historical redemptions by the UCITS or peer funds but also on hypothetical scenarios and reverse stress tests.[12] If data quality permits, the AMC should also carry out simulations differentiated by type of investor or with even more granularity (category, concentration, geographic location or investor strategy). The distribution network[13] is also listed as a source of information for stress tests. ESMA provides guidelines on the attitude AMCs should adopt when confronted with this limited data: in the absence of data, the manager must avoid overly optimistic hypotheses, justify resorting to third-party liquidity stress testing models and issue an expert qualitative judgement.

Highly uneven levels of and approaches to knowledge of liabilities:

Three main types of response were identified regarding liability risk.

- *An approximate knowledge of liabilities with no formalisation:*

A few AMCs, in particular 4 small or medium-sized companies, do not consider it necessary to have an in-depth knowledge of the holders of their UCITS and are content to follow the main customer typologies. For them, liquidity management applies more to the asset side and in particular involves monitoring the level of available cash. Another AMC does not take into account factors such as customer type or the redemption history of its UCITS, "*given that the history of redemptions over three years shows that UCITS never have liquidity difficulties*".

A very limited knowledge of UCITS liabilities and therefore limited consideration in risk management are sometimes due to operational difficulties in retrieving data concerning end customers, especially when the AMC does not itself distribute its UCITS. Thus, one of the AMCs that manages a range of ETFs was aware of virtually none of its end customers, given that the subscriptions/redemptions processed as "primary" are processed by "Authorized Participants" who do not retain positions in their own right. Liquidity analyses, if they exist, are therefore limited and calibrated on the redemption level within the limit of the trigger threshold of the gates when it is mentioned in the prospectus.

Taking into account only the trigger threshold of the gates as a de facto factor limiting the risk of UCI redemption does not appear satisfactory for the interests of the unit holders of the funds concerned.

[12] 53. For stressed conditions, example scenarios are historical trends, historical events, contemporary trends in peer funds, hypothetical/event-driven scenarios and reverse stress testing.

[13] 52. For normal conditions, managers could monitor the historical outflows (average and trends over time), average redemptions of peer funds and information from any distribution network regarding forecast redemptions. Managers should ensure that the time series is long enough to fairly reflect 'normal' conditions.

- *A good knowledge of liabilities thanks to direct marketing, but often accompanied by a weak monitoring mechanism:*

Several managers have a good knowledge of the liabilities of their UCITS as they have an essentially professional customer type to whom they market directly (institutional customers, intragroup, intragroup private banking mandate etc.). They rely on this knowledge to justify a stable liability and therefore a lesser need for monitoring at this level. This is particularly the case with AMC no.3, whose customer base is mainly institutional, with the company only monitoring the largest historic buy-backs biannually.

Another AMC that the AMF departments interviewed in some depth does not seem to encounter any particular difficulties in identifying its holders but considers that the diversification of liabilities does not require a high level of modelling, "*In general, portfolio liabilities vary between private banking, retail distribution, institutional customers. This diversity of liabilities provides a good balance and as a result we have always been able to withstand market shocks well. There is no modelling of portfolio liabilities."* Similarly, an AMC specialising in individual portfolio management says, "*Given our activity as a management company dedicated to private banking and observing data over a long period, this degree of granularity does not represent an additional approach in this context*." Here again, the presumption of resistance to past shocks as justification for a lack of monitoring seems to be an inadequate approach in terms of risk management.

- *A detailed knowledge of liabilities thanks to solid investment by the management company:*

Conversely, with regard to managers targeting individual customers through various distribution channels (platforms, financial investment advisers, etc.), their knowledge of the end investors is often very uneven. Only a few of the managers have made a significant effort to identify the origin of incoming and outgoing flows, primarily for commercial reasons. For example, an asset management subsidiary of a private bank has set up a team of 4 people to monitor liabilities, the aim being, on the one hand, to show the amount of distribution fees to be paid, and on the other hand to gain better knowledge of their end customers and as a result optimise customer retention, particularly in the event of a crisis. The company has therefore set a limit that has to be respected of a maximum of 10% of unknown liabilities.

On this subject, the AMCs regularly point out that distributors do not want to pass on information about their customers apart from what they need to calculate the amount of retrocessions, for example. However, the transmission of some statistical data (average AUM held per customer, impact of the X main customers) would be useful for calibrating models of redemption by managers and significantly improving risk management in this respect. Failing this, some AMCs use conservative hypotheses based on redemptions by a distributor's entire clientele. However, this type of approximation cannot be used when customers are largely dependent on a single network.

During interviews with the AMF, another AMC said that it prefers to monitor concentration levels at insurer level because, in their opinion, financial advisers behave similarly as their allocation models are similar.

Liability risk monitoring system:

During Stage 1, 77% of managers said that they take into account information on the holders of their UCITS in their liquidity management system. However, just like their knowledge of liabilities, the level of formalisation and the quality of reports on liabilities is very uneven. The most common indicators in the liquidity reports are:

- Redemption histories of the UCITS or of a similar fund: average, maximum 1 day, maximum 1 week, maximum 1 month, VaR, CVaR, etc.
- Investor type: Retail, Institutional, Internal, External, Stable, Unstable, etc.
- Concentration levels: Top X customers, investment ratio per customer.

In addition to reports describing existing liabilities and unit redemption histories, some companies, usually those that are medium to large in size, mentioned that they have set up hypothetical redemption scenarios or are developing a liability stress test, in line with the aforementioned ESMA guidelines on liquidity stress testing. However, as mentioned previously, some AMCs state that they do not want to carry out such analyses because of the characteristics of their investors and the lack of significant unit redemptions observed.

Unit redemption hypotheses are calibrated on the basis of historic redemptions of the company's UCITS (largest redemptions), the amount held by the largest customers (e.g. exit by the top 3 investors), a fixed amount (-5%, -25%, -50% etc.), and perhaps taking into account the type of UCITS holder and the contractual redemption conditions (periodicity, possibility of setting up a redemption gate). Conversely, some managers base their hypotheses only on the contractual redemption conditions and use a hypothesis of 100% unit redemption on the next possible redemption date.

Note that some AMCs emphasise that using the redemption history is not always relevant. Two companies, one of which is AMC no.4, prefer to use histories of large unit redemptions observed in other funds. One AMC mentioned that, when the unit redemption history is not available for a UCITS, the history of a similar fund is used. Another manager said that, due to the growth in one of its UCITS, the history was not relevant as it was too optimistic. Conversely, one of the AMCs did not want to take into account the largest unit redemption of its UCITS when calibrating future redemption hypotheses because the company had been through some events that, in their opinion, would not be repeated (departure of a manager and AMF sanctions). It therefore prefers to choose a much less conservative hypothesis (5% fixed rate).
Regarding the Group 1 AMCs, AMC no.1 has set up stress tests based on calculating a cVaR to estimate the impact of an exit by the main UCITS holders. Since the calibration of these tests dates back a long time, the AMC is finalising a review of the system in order to introduce more granularity for better compliance with the aforementioned ESMA guidelines on liquidity stress testing and to include observations related to the recent health crisis. Risk monitoring by AMC no.3 consists of monitoring the concentration of the main holders on a monthly basis and the histories of the main redemptions half-yearly. AMC no.4 has set up redemption scenarios based on histories and 90% quantiles for normal scenarios and 99% for stressed scenarios. Lastly, AMC no.2 applies a liquidity score to liability using a multi-criteria approach which takes into account historic data, customer concentration and type and it applies a redemption stress scenario for UCITS identified as likely to present a liquidity risk.

Checking the suitability of assets and liabilities is often not formalised and consists in comparing the results of asset and liability monitoring within the context of a risk committee, for example. AMCs no.3 and no.4, for example, do not formalise their suitability check. This is because the aforementioned ESMA guidelines on liquidity stress testing were not yet applicable when the AMCs were monitored. The majority of AMCs see that this is an area where improvements can be made as part of the work to comply with these guidelines.

Actions put in place by companies in line with their liability monitoring system:

AMF departments have identified only a few concrete actions linked to the use of these risk models. Actions carried out by the AMC in connection with the liability monitoring system could be: calibration of the UCITS size (but generally this is increased regularly as the UCITS approaches the predefined size) and limits on liquidity on the

asset side via liquidity stress tests, the possible setting up of funds for major customers, calibration of contractual redemption conditions, reallocation of the portfolio by managers according to future redemptions, etc.

While a few companies have fully integrated the different functions (portfolio managers, middle office, risk managers, senior management) in managing liability risk, for many it is an exercise carried out by the risk teams, requiring no concrete action related to managing UCITS.

Some managers have continually tried to adapt their redemption hypotheses by surveying their sales people about early redemptions and calling their most important holders. In times of heightened market tension, some managers proactively link up with their main institutional customers to ask if they are considering redeeming their UCITS units in the short term (especially on MMFs). This temporary strengthening of actions vis-à-vis customers in order to better control liquidity risk is good practice and could be systematised in the event of increased liquidity tensions identified by the risk management function in an asset class.

This lack of concrete leverage that can be used by the risk management department to give advance warning or anticipate the occurrence of significant redemptions severely limits the company's ability to manage UCITS liquidity risk effectively.

Relevant regulations

- **Article 321-81 of the AMF GR:** *"III. - Asset management companies shall use an appropriate liquidity risk management process for each UCITS they manage.*
  This procedure shall enable them in particular to ensure that all the UCITS they manage comply at all times with the requirement set out in the third paragraph of Article L. 214-7 or Article L. 214-8 of the Monetary and Financial Code.
  *Where appropriate, investor services providers companies shall conduct stress tests which enable assessment of the liquidity risk of the UCITS under exceptional circumstances.***"**

Good practices

- Adopting a proactive attitude to UCITS holders and distribution networks in the event of stressed financial market conditions.
- Applying strengthened liquidity stress test scenarios requiring a greater frequency and/or level of detail for UCITS identified as likely to encounter liquidity problems.
  It should be noted that according to Point 62 of the aforementioned ESMA guidelines, the conclusions drawn from liquidity stress testing by managers of less liquid assets may have some distinctive features.

Poor practice

- Not attempting to identify causes of variations in liabilities other than redemptions (e.g. margin calls, etc.).

With regard to liquidity stress testing, Point 57 of the ESMA guidelines states that all relevant items on the liability side of the fund's balance sheet, including items other than redemptions, should be subject to liquidity stress testing.

5.4. USE OF LIQUIDITY MANAGEMENT TOOLS IN UCITS

The AMF departments analysed the methods by which AMCs that manage UCITS take into account the possibilities provided for by the Monetary and Financial Code to suspend the redemption or issuance of units or shares, or to limit the redemption of units or shares.

The AMF noted that AMCs are generally reluctant to introduce these tools in UCITS prospectuses and/or regulations/articles of association. This observation differs according to the nature of the tools.

The greatest obstacle is towards gates. A joint study[14] by the DESR and the Banque de France in July 2020 concluded that there are gates in 7% of unit classes (UCITS and AIFs). In the case of UCITS, the figure stands at 11%. Observations made in the present review are consistent with these figures. This is mainly a psychological and business obstacle. Several AMCs consider that this tool could be perceived negatively by investors, who would see it as a sign that the manager was unable to manage his liquidity risk properly. The AMF reminded these AMCs that it is a tool that can only be used in exceptional situations. However, when considering gates, the commercial aspect has a structural influence. AMCs do not want to have them on UCITS where the competition has not already introduced them.

More precisely, several AMCs mentioned that a hurdle to introducing gates in UCITS funds is reluctancy of insurance companies offering such funds through unit-linked insurance products. Indeed, the reason could be that introducing gates in UCITS used as units for insurance products could impair insurance companies' ability to schedule redemptions in accordance with their own constraints.

In this regard, while some AMCs are gradually using them on some of their funds and on the most illiquid asset classes, others consider "in principle" that introducing them in this way is not desirable.

Some others, like AMC no.3, only have this tool on UCITS that are authorised in certain jurisdictions, like Luxembourg where this type of mechanism is more widespread because it is subject to incentives by the regulator.

Concerning swing pricing, AMCs seem to be more open to using this tool for certain asset classes, such as high-yield bonds. Of the 55 AMCs in Stage 2, 33 said they had implemented either swing pricing or gates on at least one of their UCITS.

As part of the qualitative questionnaire (Stage 2) sent to the 55 AMCs, they were asked questions about (i) the existence of procedures relating to the introduction of liquidity management tools, and (ii) procedures relating to the triggering of these liquidity management tools.

Of the 55 AMCs surveyed, 28 said they had no procedure for activating liquidity management tools. The others described various different processes. A fairly significant number of AMCs (13) said that they put discussion in place when the product was launched, but without necessarily asking the question again during the lifetime of the product. AMCs no.1 and no.2, for example, have a products and services committee which discusses the advisability of putting liquidity management tools in place each time a UCITS is launched. Others (12 SGP) emphasise their informal review process of their product range, especially when the risk committee detects the

[14] Darpeix, Le Moign, Même, Novakovic (2020). *Présentation et recensement des outils de gestion de liquidité des fonds français*. (*Overview and inventory of French funds' liquidity management tools)* Risques et Tendances Collection of the AMF. [Available online: https://www.amf-france.org/fr/actualites-publications/publications/rapports-etudes-et-analyses/presentation-et-recensement-des-outils-de-gestion-de-la-liquidite-des-fonds-francais]

possibility of vulnerability. Of the 2 AMCs that referred explicitly to procedures for putting liquidity management tools in place, investigations show that these consisted of operational aspects of implementation rather than guidelines for discussion by the AMC based on criteria for assessing liquidity. 2 AMCs said that they were working on putting procedures in place, and several described projects to incorporate liquidity management tools that were under discussion, mainly as a result of market tensions related to the COVID-19 health crisis.

Regarding procedures for triggering liquidity management tools, 38 AMCs said that they had no such procedures (including 20 AMCs which were identified as having a liquidity management tool for at least one UCITS, representing more than half of AMCs in this situation). Conversely, 5 AMCs said that they at least had an informal framework, i.e. not formalised, for triggering liquidity management tools, although to date they had not implemented them for a UCITS. As for the procedures for putting the mechanisms in place, the few written procedures that were identified tend to cover the operational aspect of the system and governance rather than guidelines on the advisability of whether or not the liquidity management tools should be triggered, which therefore remains an eminently qualitative process (which does not appear to pose a particular problem).

The AMF focused on AMCs that declared they had no procedure in place regarding liquidity management tools, whether related to setting up or triggering (24 AMCs). Of these, 10 had nevertheless in practice set up at least one fund with gate mechanisms or swing pricing. However, for 5 of these, the AMF identified at least one UCITS for which the liquidation profile could raise questions (with at least 5% of the assets taking more than three months to liquidate). While the absence of any formalisation of systematic analysis may seem to be of minor importance when funds liquidate rapidly, such a situation seems critical when potential problems with liquidation are identified.

In this respect, it should be remembered that the aforementioned ESMA guidelines on liquidity stress testing already provide for the possibility of carrying out stress tests when the fund is designed in order to determine the usefulness of planning for liquidity management tools[15] and the possibility of integrating new tools as remedial plans following problematic liquidity stress testing results.[16]
In the course of discussions, several AMCs indicated that they intend to improve their swing pricing mechanism, and to set up or improve their back-testing of compatibility between the pre-investment estimated swing factor and the real cost of disinvestment transactions. This monitoring is very important since a conservative "vertical slicing" calibration can result in very sizeable swing factors even though the effective disinvestment is limited to just a few liquid lines ("waterfall") and therefore its real cost is lower. If the differential is not controlled, it can act as a performance driver for the remaining holders. In the context of the CSA UCITS Liquidity, AMC no.1 told the examining body that they plan to set up two new methods of measuring the impact of disinvestment: liquidation by segment and liquidation waterfall, although they did not specify whether these features would contribute to checks by the AMC on the calibration of the swing pricing. This practice raises two questions:

- Means used to support the redemption order: the risk that a liquidation waterfall in "strained" market conditions represents for the remaining holders;
- Compliance with the AFG charter: the possibility under the terms of the AFG's "Code of conduct for asset managers using Swing Pricing and variable anti-dilution levies"[17] of using a "conservative" swing pricing estimate, even if this does not correspond to the liquidation method to be used. This code of conduct

[15] "41. LST **can** also be used at fund launch to help identify factors material to the future risk management of the fund. For example: quantifying the sensitivity of the fund's liquidity risk; identifying factors impacting liquidity risk; identifying metrics/key risk indicators to monitor liquidity risk going forward; the frequency of risk management; and assessment of any potential ex post a-LMT or special arrangements to be included in the prospectus or fund rules."

[16] "29. LST should assist a manager in preparing a fund for a crisis, and in its broader contingency planning. This contingency planning **may** involve a manager's plans to operationalise applying ex post a-LMT to a fund."

[17] http://www.afg.asso.fr/wp-content/uploads/2014/06/GuidePro_SwingPricing_2014_actualise_2016.pdf

stipulates that the methods described to estimate the cost of portfolio readjustment[18] are based on transaction histories or on bid-ask spreads. In both cases this could amount to a "realistic" estimate of the liquidation costs that could result in the calibration of a weak swing factor in the event of an early waterfall liquidation.

Some AMCs commented on communicating the size of the swing (or "swing factor") to their customers, under certain conditions. According to the AFG guide,[19] swing pricing "*must not affect the principle of valuation on a forward pricing basis. In particular, the policy should cover the following conflict situations: […] the use, for the benefit of an investment fund, a client or a proprietary account of the management company, of detailed knowledge of Swing Pricing or ADL parameters to place subscriptions or redemption orders in the fund under preferential conditions"*. AMCs consider that communicating the swing factor to customers would enable them to appreciate the liquidity of the prevailing market at the time of the redemptions, and perhaps withdraw their redemption order if the liquidity conditions were not ideal. One AMC said that it provided the swing factor to customers who were interested in the information after an embargo period (25 days after the end of the month). However, limiting communication of this parameter to just a few customers seems at the very least to be poor practice which could be considered as detrimental to the fair treatment of investors.

Relevant regulations

- **Article L. 214-7-4 of the Monetary and Financial Code:** "*Redemption by the SICAV of its shares and also the issue of new shares may be provisionally suspended by the Board of Directors, the Directorate or the managers of a simplified joint-stock company, pursuant to the company's constitutional documents, in exceptional circumstances and if the shareholders or the public's interests demand it.* […]
  It also sets out the instances and the conditions in which the statutes of the SICAV may stipulate that share redemptions are provisionally capped in exceptional circumstances and if the shareholders or the public's interests demand it".
- **Article L. 214-8-7 of the Monetary and Financial Code:** "R*edemption by the fund of its units, and the issue of new units, may be provisionally suspended by the management company, pursuant to the fund's regulations, in exceptional circumstances and if the unitholders' or the public's interests demand it.* […]
  It also sets out the instances and the conditions in which fund regulations may stipulate that redemptions of units are provisionally capped in exceptional circumstances and if the shareholders or the public's interests demand it".
- **Article 321-81 of the AMF GR:** "*III. – Asset management companies shall use an appropriate liquidity risk management process for each UCITS they manage.*
  This procedure shall enable them in particular to ensure that all the UCITS they manage comply at all times with the requirement set out in the third paragraph of Article L. 214-7 or Article L. 214-8 of the Monetary and Financial Code. Where appropriate, investor services providers companies shall conduct stress tests which enable assessment of the liquidity risk of the UCITS under exceptional circumstances".
- **Article 411-20 of the AMF GR:** "*However, the UCITS may, in accordance with its rules or articles of incorporation, partially or totally cease, on a provisional or permanent basis, issuing shares or units pursuant to the third paragraph of Article L. 214-7-4 and the third paragraph of Article L. 214-8-7 of the Monetary and Financial Code, in objective circumstances entailing the closure of subscriptions, such as reaching a maximum number of shares or units to be issued, a maximum asset threshold, or the end of a given subscription period.*

[18] The management company may base its estimate of the cost of this portfolio readjustment on costs (transaction fees, bid-ask spreads, taxes) by asset class, market segment (country, sector, maturity) or security. It should establish these parameters either daily or periodically, but this calculation period cannot exceed 6 months.

[19] http://www.afg.asso.fr/wp-content/uploads/2014/06/GuidePro_SwingPricing_2014_actualise_2016.pdf

Shares and units are redeemed on the basis of their net asset values, under the conditions set out in Articles 411-123 to 411-125.

If redemptions are temporarily suspended under the terms of the first paragraph of Article L. 214-7-4 or the first paragraph of Article L. 214-8-7 of the Monetary and Financial Code, the UCITS or, where applicable, the management company shall immediately disclose the reasons and the procedures for the suspension of redemptions to the AMF and to all of the authorities of the European Union Member States and all the States party to the European Economic Area agreement where the units or shares are marketed.

Redemptions may be made in cash or in kind. If the redemption in kind corresponds to a representative pro rata share of the assets in the portfolio, then the written agreement signed by the outgoing holder must be obtained by the UCITS or the asset management company. Where the redemption in kind does not correspond to a representative pro rata share of the assets in the portfolio, all the unitholders must indicate in writing their agreement authorising the outgoing holder to redeem its units or shares against certain particular assets, as explicitly defined in the agreement.

By derogation from the above, where the UCITS is governed by Article 411-134, redemptions on the primary market may be carried out in kind under the conditions set out in the UCITS prospectus".

- **Article 411-20-1 of the AMF GR:** "*In accordance with the final paragraph of Article L. 214-7-4 and the final paragraph of Article L. 214-8-7 of the Monetary and Financial Code, the UCITS may provide for the temporary gating of redemptions of units or shares in the cases where it is necessary owing to exceptional circumstances and in order to protect the interests of the unit- or share-holders, or those of the public. Such conditions may be met in particular where, irrespective of the normal carrying out of the management strategy, the level of redemption orders is such that considering the liquidity conditions of the assets of the SICAV, of the fund, or of one of its sub-funds, these orders cannot be executed on terms that protect the interests of holders and ensure their equitable treatment, or where redemption orders are made under circumstances that may undermine market integrity.*

  In these cases, redemptions may be gated in the same proportion for all concerned holders, who must be specifically informed of the fact. The part of orders that is unexecuted and that is resubmitted does not have any priority, on the next centralisation dates, over new redemption orders submitted for execution on those dates.

  The management company shall notify the AMF of its decision to apply a redemption gate. The management company shall also notify the public by any means under the conditions set forth in the prospectus, and at a minimum, on the asset management company's website.

  The rules of the common fund (FCP) or the articles of association of the SICAV shall precisely define the conditions under which a redemption gate may be decided and, in particular:

  1° Set the threshold above which the management company may decide to apply a redemption gate to redemption orders received in respect of a single centralisation date;

  This threshold shall be justified based on the frequency of the net asset value calculation, on the management strategy and on the liquidity of the assets held by the UCITS portfolio; the threshold is equal to the ratio between:

  the difference registered, on the same centralisation date, between the number of redemption requests for units or shares of the UCITS and the number of subscription requests for units or shares of the UCITS; and

  the net asset of the UCITS or the total number of units or shares of the UCITS or sub-fund in question.

  This threshold is determined on the basis of the most recent published net asset value or the most recent indicative net asset value calculated by the management company, or of the number of units or shares outstanding on the valuation date;

  2° State the procedures according to which the UCITS may either decide to cancel the unexecuted part of redemption orders or to carry them forward until the next centralisation date. However, in the cases where

the UCITS calculates its net asset value more than once a week, the unexecuted part of redemption orders is automatically carried forward to the next centralisation date;

3° Specify whether, and under what terms, the holder may oppose the carrying forward of the unexecuted part of his redemption order;

4° Limit the gating of redemption requests to a maximum number of net asset value calculations for a given period; this maximum number must be explained with regard to the frequency of net asset value calculation, the management strategy and the liquidity of the assets in the UCITS portfolio."

Good practices

- Introducing a prior analysis into the UCITS creation process, also a formalised periodic review of the advisability of putting liquidity management tools in place and, where appropriate, of the relevance of the mechanism in place and the need to activate these tools.

It should be noted that according to Point 41 of the aforementioned ESMA guidelines, liquidity stress testing can also be used at fund launch to help identify factors that may be important for the future risk management of the fund. These factors include assessing any ex post additional liquidity management tools or special arrangements to be included in the prospectus or the fund rules.

Poor practices

- In the liquidity management tool procedure, providing only operational aspects of implementation without specifying the methodology and the criteria that have to be weighed up when deciding on the best time to put mechanisms in place.
- Regarding swing pricing mechanisms, not providing back-tests on the consistency between the swing factor estimated beforehand and the real cost of disinvestment transactions.