大成 DENTONS

Swing pricing mechanism

The CSSF tells Luxembourg regulated funds how they should do the swing – swing pricing, that is

On 30 July 2019, the CSSF[1] published its answers to frequently asked questions (together, the "**FAQ**") regarding the swing pricing mechanism (the "**SPM**").

The principles articulated in the FAQ apply to Luxembourg regulated funds employing the SPM, i.e. (1) undertakings for collective investment in transferable securities ("**UCITS**") subject to part I of the Law of 17 December 2010 on undertakings for collective investment (the "**UCI Law**"), (2) undertakings for collective undertakings subject to part II of the UCI Law ("**Part II UCIs**") and (3) specialized investment funds ("**SIFs**"; together with the UCITS and the Part II UCIs, the "**Regulated Funds**") subject to the Law of 13 February 2007 (the "**SIF Law**").

The FAQ address (1) investor disclosure, (2) the net asset value ("**NAV**") calculation error under the CSSF Circular 02/77[2], as well as (3) relevant internal governance matters concerning the SPM.

This note first sheds light on the basic principles of the SPM. We then take a look at the SPM's application in the Grand Duchy. The third part outlines the essential content of the FAQ, followed by our estimate of their market impact in the fourth part. In the final part, we try to situate the FAQ within the current developments in fund management.

1. Swing pricing fundamentals[3]

a. NAV and dilution

Swing pricing forms part of the NAV calculation process. The NAV is in essence calculated as the difference between the fund's assets (e.g. investments) and its liabilities (e.g. fees of the investment fund manager (the "**IFM**") and the fund's service providers). The NAV fluctuates to reflect the positive or negative performance of the assets on the one hand and the negative impact of the fund's liabilities on the other.

When the NAV is divided by the number of shares/units/partnership or other ownership interests held by the investors (the "**Shares**"), the NAV per Share value is obtained. The NAV per Share facilitates the valuation of the investors' respective holdings and, as a consequence, transactions in the Shares.

[1] Commission de Surveillance du Secteur Financier, the Luxembourg banking and financial markets supervisor.

[2] Concerning the protection of investors in case of NAV calculation error and compensation of the consequences resulting from non-compliance with the investment rules applicable to undertakings for collective investment.

[3] This part is largely based on (1) the Luxembourg investment fund association's ("ALFI") third edition of its swing pricing guidelines issued in May 2016 (document available to ALFI members only), (2) LEWRICK, Ulf and SCHANZ, Jochen. "Is the price right? Swing pricing and investor redemptions". Bank for International Settlements Working Papers N° 664, 2017 and (3) MALIK, Sheheryar and LINDNER, Peter. "On Swing Pricing and Systemic Risk Mitigation". IMF Working Paper 17/159, 2017.

If the NAV per Share is calculated correctly[4], the *trading* investors know that they are being treated fairly when they purchase and redeem the Shares from a fund[5] and the *buy-and-hold* investors know their Shares are being valued fairly. However, a problem may arise when the Shares are single-priced, i.e. when investors can subscribe for and redeem the Shares at the same NAV per Share without paying any transaction charges.

Whereas the IFM can handle limited investor trading[6] in the Shares ("**Trading**") by using available cash buffers, the IFM needs to compensate for Trading which exceeds available cash by buying the underlying assets with cash inflows from subscriptions or by selling the fund's assets to meet the redemptions. This activity may generate costs for a fund in several ways.

First, the NAV for Trading is determined using the *mid- or last-traded* prices of the underlying securities[7]. Conversely, the IFM buys the underlying securities at *higher offer* prices and sells them at *lower bid* prices. This price difference is called the "spread effect", which frequently increases with the size of the trade (the so-called market impact).

Moreover, the fund incurs additional costs associated with the transactions in underlying assets, such as commissions and taxes. In sum, the actual costs of subscribing or redeeming a Share may be higher or lower than the current NAV per Share. Because the incoming and outgoing investors pay no transaction charges, the bill has to be picked up by the remaining investors. Hence, Trading can have a material detrimental effect on the holdings of the remaining investors, especially when occurring at significant volumes.

One needs to bear in mind that a fund also incurs transaction costs when the IFM is pursuing the fund's investment policy. Nonetheless, while current investors accept those costs, they are not supposed to suffer dilution caused by actively trading investors.

b. Swing pricing

To counter the dilution effect, an IFM can implement the SPM. In a nutshell, when substantial Trading takes place, the NAV is adjusted or "swung" upwards or downwards to attribute the estimated costs of that Trading to the active investors, thus protecting the value of the current investors' holdings. The direction of the "swing" is determined by the net Trading of the day.[8]

That being said, the SPM is subject to different considerations. First, the NAV adjustment is usually limited to a fixed amount (the "swing factor"), which is normally expressed as a percentage and lies in the range between 0.5 to 3 percent. The rate of the swing factor should capture the estimated costs of Trading under normal market conditions. Further, the swing factor can be tiered to take into account the size of flows.

Second, the SPM generally only kicks in after a certain level of Trading (the "swing threshold") has been exceeded ("partial" or "semi-swing" pricing) but can also be triggered irrespective of the size or significance of Trading ("full" swing pricing). The decision whether to institute a swing threshold depends on various factors, including the volume of Trading and the amount of cash reserves.

The IFM normally enacts detailed rules in a policy governing the SPM and sets up a special committee responsible for the correct application of the SPP, including regular reviews of swing factors and swing thresholds.

Summary details of the SPM are often disclosed in the fund's offering document. In this vein, the IFMs increasingly publish the swing factor, partly to manage investors' expectations. On the contrary, IFMs may decide to keep some information confidential to avoid bad faith behavior by investors. For instance, if a swing threshold were to be made publicly available, a large trader could try to transact just below it to avoid the SPM being set off.

[4] Considerations around the exact methodology of the NAV's calculation go beyond the scope of this note.

[5] For the purposes of this note, we disregard transfers between the investors themselves as the Regulated Funds are in principle obliged to sell and buy back the Shares at the investor's request.

[6] The net value of subscription, redemption and switch orders transferred by the investors for a single fund on any trading day.

[7] Open-ended Regulated Funds as a rule invest in liquid securities so that they are able to meet the requests of the trading investors at short notice.

[8] For a practical example, see page 5 of ALFI's 2015 swing pricing industry survey.

Investors, for the most part, do not know if and when the NAV has been swung. If the SPM is applied, the price adjustment will already be included in the NAV published.

The SPM is a relatively simple, well-established and cost-effective anti-dilution technique. The SPM acts as a deterrent to short-term speculative investors by acting against frequent trading and market timing. Studies have also shown that funds using the SPM demonstrate superior long-term performance in comparison with funds that do not employ the SPM.

The SPM also has its limitations. It is an across-the-fund measure and therefore does not address the specific circumstances of each individual investor transaction. Further, the SPM may increase accounting and performance volatility in the short term. Worse still, if the swing parameters (especially the swing factor and the swing threshold) are not properly calibrated, the SPM can even increase transaction costs.

Likewise, research[9] has indicated that the introduction of the SPM gives comfort to the IFM to lower a fund's cash reserves so that they can be invested in more profitable but risky assets. Thus, this might actually neutralize any positive effect from the SPM.

Hence, the SPM is not a panacea and each IFM needs to decide whether the benefits of its implementation outweigh the costs and inconveniences it may bring about.

c. Liquidity risk management

More broadly, the SPM is used to manage a fund's liquidity. In particular, it smooths out investor trading volatility as it acts as a deterrent to short-term speculative trading. The SPM counters the first-mover advantage derived from redeeming the Shares before other investors do in order to obtain a better price. In the absence of the SPM, investors could run to redeem their Shares at the best price possible, thus precipitating a liquidity crisis for the fund.

Nonetheless, if Trading exceeds the calibrated levels of the SPM, the latter can be of limited value, especially because the swing factor is normally limited. If a liquidity crisis actually materializes (through a run by investors or otherwise), the SPM may fail to prevent serious damage to the fund and its investors.

Other liquidity risk management ("**LRM**") tools might be put into action[10]. Quite similar to the SPM are *redemption fees*, which are only imposed on redemptions. They address each individual investor transaction, thus preventing any benefit leakages[11]. However, redemption fees are rarely introduced since they are very unpopular with investors.

Other LRM instruments that aim to pass transaction costs to redeeming investors are *anti-dilution levies*, which target only large transactions but do not involve any NAV adjustment, as well as *valuation according to bid or ask prices*, which is often used by funds investing in fixed-income securities of low liquidity.

Some LRM measures are nonetheless more invasive in that they restrict investor redemptions. The more notable examples are redemption gates and outright suspensions of redemptions. With *redemption gates*, the IFM only honors redemptions until a certain threshold, while the excess redemption orders are either canceled or carried over to the next trading day.

In case of a *suspension of redemptions*, no investor can withdraw its capital from the fund. Suspensions are used as a last resort in times of severe market stress or when the valuation of the fund's assets cannot be properly performed.

Finally, one should mention redemptions in kind, which do not lock-in investors' capital but allow the IFM to make good redemption orders through direct transfer of the fund's underlying assets to the investors. This option frequently exists in funds investing in illiquid assets, in order to prevent undesired fire sales.

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[9] See LEWRICK, and SCHANZ, pages 21-23.

[10] For an extensive overview, see Open-ended Fund Liquidity and Risk Management – Good Practices and Issues for Consideration, International Organization of Securities Commissions, FR02/2018.

[11] Under the SPM, the existing investors may not benefit fully from the mechanism due to trades on the other side of the market, i.e. subscriptions. On a day when net redemptions occur and the NAV/Share is as a result swung downwards, the investors that have subscribed for the Shares profit from that lower price and divert some of the gain that would otherwise all go to the existing investors had no subscriptions occurred.

2. Application of the SPM in Luxembourg

a. Preliminary remarks

Luxembourg was a pioneer in the adoption of the SPM, which was introduced in the early 2000s. The technique quickly spread to other European fund centers, including the UK, Ireland, and Switzerland. The widespread use and success of the SPM have even led the Securities and Exchange Commission to permit the use of SPM by US mutual funds in 2016[12]. Swing pricing is nowadays a standard product offering from Luxembourg fund administrators.

This part is based on ALFI's 2015 swing pricing industry survey (the "**Survey**"), which covered almost 70% of assets under management in Luxembourg. Although almost four years have passed since the Survey was conducted, a considerable time period in the rapidly evolving fund environment, we consider the overarching trends to still be a good indication of reality, in particular in the light of the trend towards growing adoption of the SPM.

b. Results of the Survey

i. SPM calibration

As regards the *types of funds* employing the SPM, all respondents to the Survey applied the SPM to UCITS but only 37% to alternative investment funds ("**AIFs**") subject to the AIFMD[13]. This confirms that the SPM is more appropriate for liquid strategies. On the other hand, the SPM was used in only a quarter of money market funds, largely due to negligible levels of dilution.

With respect to the *swing threshold*, almost all the respondents employing the SPM used the partial swing, citing as the main reasons the prevention of NAV volatility created by full swing and the capability to control smaller Trading through cash buffers. The swing threshold in place rarely exceeded 5% but the IFMs generally used different swing thresholds across their funds.

Some 80% of the respondents who used the SPM operated with a pre-determined *swing factor*. All the respondents determined the swing factor based on a combination of spread effects, transaction costs, and transaction taxes, whereas only 10% included market impact considerations. When the swing factor was limited, the overwhelming majority applied a 2% cap.

ii. Investor disclosure

Turning to investor disclosure, almost half of the respondents disclosed the swing factor upon client request. However, almost no respondent published the swing factor information via paper or electronic means accessible to all investors, as the swing factor can quickly become out-of-date. Thus, only one respondent published swing factor information in the prospectus and another one in the annual report. Very few respondents disclosed such information on their websites.

Almost all respondents published only one NAV, without indicating whether it had been swung or not. Only four respondents revealed the swing threshold, but only upon request to avoid undesired arbitrage.

With respect to periodic investor reporting, 83% of the respondents revealed at year-end they had employed the SPM, while 17% made no disclosures. Accounting-wise, almost two-thirds of the respondents treated the swung component of subscriptions/redemptions as an adjustment to capital, while 30% treated the adjustment as an income or expense item.

iii. NAV calculation error under CSSF Circular 02/77

The misapplication of the SPM can also lead to a material NAV error under the CSSF Circular 02/77, triggering the requirement to correct the error. Two-thirds of the respondents considered that no error occurs if the information within the *confirmed* capital activity led to a different decision made at the *estimated* capital activity cut-off.

iv. Internal governance

IFMs to a large extent established standalone valuation or swing pricing committees in charge of the SPM policy's implementation. More than half of the fund bodies reviewed the SPM policy monthly or quarterly. Over half of the respondents had the approach to update the swing factors depending on market conditions or other ad-hoc events in a combination with a regular, normally quarterly, review cycle.

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[12] Access the relevant document here.

[13] Directive 2011/61/EU on alternative investment fund managers.

v. Other LRM measures

IFMs also included the authorization in their fund documents to use other anti-dilution measures, in particular, redemptions in kind, redemption gates, and anti-dilution fees. Only one respondent applied redemption fees.

3. The FAQ

a. Investor disclosure

According to the CSSF's FAQ, a Regulated Fund can avail itself of the SPM, if this is allowed by the Regulated Fund's articles of association, management regulations or limited partnership agreement[14](each, the "**Corporate Documents**"). The FAQ refers more broadly to *"adjustments to the* [NAV] *in order to counter the dilution effects of capital activity"*.

Moreover, the prospectus of a Regulated Fund should describe at least the following items in connection to the SPM:

- details on the SPM, including whether any swing threshold is used;
- the reasons for resorting to the SPM, including the benefits for the investors;
- the consequences of using the SPM;
- with respect to the swing factor, the maximum swing factor applicable, its underlying components (spreads, transaction costs, taxes, etc.), as well as the decision process and decision-makers approving the swing factor, and;
- the sub-funds of the Regulated Fund that are subject to the SPM (this can also be revealed by reference to an appropriate website).

The CSSF finally recommends disclosing in the prospectus that any performance fee will be charged based on the unswung NAV.

A Regulated Fund should also disclose SPM-related information in the annual and semi-annual reports. Those reports should at least communicate:

- details on the NAV adjustment mechanism and if any swing threshold is used;
- the maximum swing factor applicable; and
- the list of the sub-funds of the Regulated Fund that have utilized the SPM (this can also be covered by reference to an appropriate website).

b. NAV calculation error under CSSF Circular 02/77

The CSSF confirmed that its Circular 02/77 applies to NAV calculation errors. Namely, if an administrative error (e.g. a wrong swing factor used) in the SPM's application causes a material NAV calculation error within the meaning of the CSSF Circular 02/77, the Regulated Fund has to observe the corrective procedures under that circular, including the financial impact of the error and the corresponding compensation of the Regulated Fund and/or its investors for their loss.

However, the Regulated Fund and/or its investors also need to be indemnified when the SPM error does not reach the materiality error under the circular, if the Regulated Fund was not protected from the level of dilution it should have been had the SPM policy approved by the governing body of the Regulated Fund (or its manager)[15] been applied properly. The CSSF provides an illustrative example in that connection.

c. Internal governance

Lastly, the CSSF expects investment fund managers, which employ the SPM for the Regulated Funds they manage, to devise and implement a detailed SPM policy approved by the manager's (or the Regulated Fund's) governing body, as well as operational procedures governing the day-to-day application of the SPM.

The CSSF furnished a non-exhaustive list of elements that the SPM policy and the related operational procedures are supposed to cover, such as the governance process concerning the SPM's application, the oversight of delegates in case functions related to the SPM are delegated (usually the administrative agent is responsible for the SPM's daily application) or the methodology for the determination and periodic review of the swing factors and thresholds.

[14] The FAQ do not mention the limited partnership agreement, but we believe this was an inadvertent oversight as SIFs can also be established as simple limited partnerships or special limited partnerships.

[15] A Regulated Fund can be self-managed or externally managed.

4. Impact on market practice

a. SPM calibration

The FAQ are not prescriptive as regards the investment strategies to which the SPM may or may not be applied or to the particular fine-tuning of the SPM, such as the level of the swing threshold. The CSSF obviously takes a liberal approach towards the practice, as long as the SPM is subject to adequate disclosure to investors.

b. Investor disclosure

Considering the transparency towards investors via the Corporate Documents and the prospectus, SIFs already had to include the conditions and procedures for issuance and redemption of Shares in their Corporate Documents (see articles 8, 12(2)(i)) and 28(2) of the SIF Law).

The SIF Law does not expressly stipulate this requirement for SIFs' prospectuses[16] but the information concerning the SPM can be considered to be "*information necessary for investors to be able to make an informed judgment of the investment proposed to them and, in particular, of the risks attached thereto*" within the meaning of article 53 of the SIF Law and thus should form part of the prospectus.

On the other hand, UCITS and Part II UCIs did not have to cover the SPM in their Corporate Documents if it had already been included in their prospectus (see article 151(2) of the UCI Law).

The FAQ also extends the obligation to disclose certain SPM-related information to the annual and semi-annual reports. The existing rules on periodic investor reporting for Regulated Funds (see schema B of annex I to the UCI Law and the annex to the SIF Law) did not hold any specific provisions in this respect.

Thus, from now on, if UCITS and Part II UCIs want to avail themselves of the SPM, they will have to include at least an explicit authorization in their Corporate Documents. All Regulated Funds will have to describe the SPM in sufficient detail in their prospectuses, following the CSSF's answer 2. The CSSF largely followed the ALFI Guidelines (see page 31), whereby the FAQ are somewhat more detailed.

Whereas so far around half of the industry disclosed swing factor information, even if only upon investor request, the Regulated Funds will now have to share this information with investors in prospectuses, as well as in annual and semi-annual reports, including the maximum swing factor.

The Regulated Funds will also have to disclose whether they use a swing threshold, i.e. full or partial swinging, but not the exact value of the swing threshold. The CSSF apparently acknowledged concerns around possible investor arbitrage.

As regards *performance fees*, the CSSF followed the ALFI Guidelines (see page 31) when recommending the Regulated Funds to disclose in the prospectus that any performance fee will be charged based on the unswung NAV.

However, it is not entirely clear whether this means that the CSSF only recommends that the basis for calculating performance fees *be revealed* in the prospectus or whether it also considers that the unswung NAV is *the only appropriate* basis for calculating the performance fees.

The ALFI Guidelines did regard the unswung NAV to be the more appropriate calculation basis but the ALFI Guidelines give the impression that what counted most was to only publish the actual basis, be it swung or unswung NAV (see page 26).[17]

c. NAV calculation error under CSSF Circular 02/77

The Survey does not state how the respondents applied the circular. In any case, the FAQ may have important financial consequences on the Regulated Funds: for instance, IFMs had to reimburse investors more than €40 million in 2018 for NAV calculation errors[18].

In the CSSF's view, a Regulated Fund should compensate its remaining investors even when the misapplication of the SPM, from which they suffer a loss, did not cause the NAV error to be material. The ALFI Guidelines seem to have considered only material errors to be relevant (see page 30).

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[16] Under the SIF Law they are called "offering documents".

[17] Regarding performance fees in UCITS, see our recent insight on the consultation paper of the European Securities and Markets Authority in this respect.

[18] See the CSSF's annual report for 2018, as well as our insight on the topic.

As illustrated by the example under the FAQ, if an administrative agent receives an instruction to apply a swing factor of 96 bps and the administrative agent accidentally applies 69 bps, the Regulated Fund should compensate the remaining investors for their damages resulting from the application of that incorrect swing factor. In contrast, the trading investors only have to be reimbursed if the NAV error is material.

d. Internal governance

The Survey does not show whether all respondents have implemented a detailed SPM policy, although this seems to be best practice and widely observed. The CSSF expects the IFMs to establish and implement an SPM policy approved by the IFM's (or the Regulated Fund's) governing body. The SPM has to be detailed but the CSSF only prescribes its essential elements and does not regulate those elements further.

Therefore IFMs should in principle have sufficient freedom in the conception and execution of the SPM policy, as long as it is adequately defined. The FAQ also suggests that an IFM can use the same SPM policy to different Regulated Funds.

The required content of the SPM policy and the related operational procedures largely corresponds to the ALFI's Guidelines (see page 14).

e. Other LRM measures

Similarly to the SPM calibration, the CSSF has not imposed restrictions in respect of other LRM measures that the Regulated Funds can employ. Thus, provided that the Corporate Documents allow for it, the IFMs can resort to other LRM measures, which they find appropriate.

f. Conclusion

On a *design* level, the IFMs remain able to tweak the SPM to the needs of the Regulated Funds they manage, in particular when determining the swing factor and swing threshold. Moreover, the IFMs can continue to use other LRM measures complementary to the SPM.

On a *document* level, the IFMs need to ensure that the Corporate Documents permit the use of any LRM measures. Furthermore, the selected SPM should be included in a sufficiently detailed SPM policy, which needs to be approved by the relevant governing body and accompanied by specific operational procedures governing the daily application of the SPM.

Operationally, the IFMs are advised to review how they apply the CSSF Circular 02/77 so that they remain compliant with the CSSF's requirements. If the IFMs have not done so previously, they will also have to remedy certain NAV errors that are not material.

Above all, the IFMs should take care that the Regulated Fund's Corporate Documents and prospectuses *disclose* a sufficient amount of *information* on the conception and use of the SPM without risking any investor arbitrage or leakage of proprietary information.

5. Wider context

The FAQ come at a time of intense public debate concerning the LRM of open-end funds. The discussions on the capability of those funds to offer daily redemption to their investors while investing in assets that might require more time to liquidate (the so-called liquidity mismatch) are not new[19]. The related concerns led the EU to enact an extensive framework for the operation of money market funds.[20]

However, several recent high profile cases have put increased scrutiny on the matter. The most publicized example is the fall from grace of Woodford Investment Management's ("**WIM**") flagship fund, the Woodford Equity Income Fund ("**WEIF**") [21].

WEIF is a UCITS fund, subject to the UCITS Directive[22] and prohibited from investing more than 10% of its assets in unquoted securities. While WEIF was comfortably within this basket during good times, heightened investor redemptions forced WIM to sell the more liquid part of the portfolio and caused the illiquid part of the portfolio to swell over the 10% limit.

[19] See for example the Financial Stability Board's recommendations on shadow banking – "Strengthening Oversight and Regulation of Shadow Banking: An Overview of Policy Recommendations" 28 August 2013.

[20] See Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds.

[21] See LATHAM, Mark. "The Neil Woodford crisis: an accident waiting to happen?" Funds Europe, 18 July 2019.

[22] Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS).

This not only produced regulatory compliance problems for WIM but also made it more difficult to continue honoring redemption orders, resulting in the decision to suspend redemptions. The suspension was followed shortly by H2O Asset Management's issues with its investments in less liquid corporate bonds, which led to a dip of more than 10% in the share price of its parent company Natixis.

The public outcry against the WEIF affair was especially severe in the UK. Mark Carney, the Bank of England's (the "**BoE**") governor, stated that funds permitting daily withdrawal to investors while investing in illiquid assets were "built on a lie". On top of that, there have been calls[23] to introduce liquidity standards to UK UCITS that would be higher than under the current UCITS Directive.

The International Organization of Securities Commissions released LRM recommendations for collective investment schemes[24] but the BoE challenged their suitability in its July 2019 Financial Stability Report. The European Securities and Markets Authority for its part recently published guidelines on liquidity stress testing in UCITS and AIFs[25], responding to a request of the European Systemic Risk Board[26].

It will be interesting to track further regulatory activities in the area of fund LRM but it looks that for the moment the financial watchdogs do not want to hamper IFM's capacity to use the SPM in any way.

6. How can we assist?

Dentons Luxembourg's Investment Funds Team has developed expertise in swing pricing and other anti-dilution and LRM tools.

If you manage Regulated Funds, you can contact us to review their investor-facing documents, as well as your SPM policy and operational procedures, including the application of the CSSF Circular 02/77, not only to ensure they all comply with the FAQ and other applicable rules but also to neatly manage investor expectations.

If you contemplate implementing anti-dilution or LRM measures, we would also be happy to help you find the right ones for your goals, shape them according to your needs and then package them in the fund documentation.

[23] See letter of Andrew Bailey, the chief executive of the UK Financial Conduct Authority, to the written question of Lord Myners, 6 August 2019.

[24] "Recommendations for Liquidity Risk Management for Collective Investment Schemes: Final Report". FR01/2018, February 2018.

[25] "Guidelines on liquidity stress testing in UCITS and AIFs: Final Report". ESMA34-39-882, 2 September 2019; the guidelines will only apply from September 2020.

[26] Recommendation of 7 December 2017 on liquidity and leverage risks in investment funds, ESRB/2017/6.

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