MSCI

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Vanessa A. Countryman
Secretary
U.S. Securities and Exchange Commission
100 F Street NE
Washington, DC 20549-1090

By electronic submission

MSCI Comments on the U.S. Securities and Exchange Commission ("the Commission") Proposed Rule on Open-End Fund Liquidity Risk Management Programs and Swing Pricing; Form N-PORT Reporting (File Number S7-26-22) (the "Proposed Rule")

MSCI is a leading provider of critical decision support tools and solutions for the global investment community. Our products and services include indexes; portfolio construction and risk management tools; environmental, social and governance ("ESG") and climate solutions; and real estate market and transaction data and analysis. Our analytics offerings include risk management, performance attribution and portfolio management content, applications and services that provide clients with an integrated view of risk and return and tools for analyzing market, credit, liquidity, counterparty, and climate risk across all major asset classes, spanning short-, medium- and long-term time horizons.

MSCI is pleased to provide comments on the Commission's proposed amendments to current rules for open-end management investment companies ("open-end funds") regarding liquidity risk management programs and swing pricing. We understand that the Proposed Rule is designed to improve liquidity risk management programs to better prepare fund for stressed conditions and improve transparency in liquidity classifications. While MSCI supports the Commission's objectives to reduce model risk and improve transparency for investors, the proposed liquidity classification framework may have untended consequences. In particular, we make the following observations:

- **The uniform 10% stressed trade size may be too high.** Our analysis indicates that many large equity funds may exceed the 15% illiquid holding limit. As an alternative, the current rules for calculating the reasonably anticipated trade size, which allow funds to define their own trade size assumptions based on fund characteristics, could be combined with a minimum stressed trade size.

- **The proposed definition of value impact is unlikely to accurately capture the changes in liquidity.** During the COVID pandemic outbreak in March 2020, equity traded volumes increased, but at the same time, so did bid-ask spread and market impacts. Applying the proposed amendments could result in counter-intuitive classification. For example,

equity funds may have seen their share of illiquid positions decrease in March and positions qualified as highly liquid increase.

- **Defining value impact through average daily volume for listed equities could lead to fluctuations and significant daily jumps.** Traded volumes sometimes spike collectively for many stocks, typically around quarter-ends when earnings reports are published. These fluctuations could lead to significant daily jumps in the share of illiquid holdings for equity funds even at smaller trade sizes. Rather than defining value based on volume impact, we suggest defining value based on price impact, similar to fixed income instruments.

In the attached Annex, we provide further comments consistent with these observations and in response to specific questions included in the proposing release.

MSCI would like to thank the Commission for its consideration of our submission. Should you have any questions, please do not hesitate to contact me through ryan.mensing@msci.com.

Sincerely,

s/

Ryan Mensing
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#	Question	Response
1	Should we require funds to use a stressed trade size, as proposed? Would the change from reasonably anticipated trade size to stressed trade size materially change the proportion of investments classified in a given liquidity category? If yes, how? Would the proposed stressed trade size affect certain types of funds more than others? Would the proposed stressed trade size be likely to overstate or understate liquidity?	Performing liquidity classification using a stressed trade size could help fund managers prepare for market downturns, but we suggest a Final Rule not define this stressed size in terms of a fixed proportion of the position size. Funds might face two types of liquidity stresses: (1) a market-wide stress, where investors are withdrawing funds across many funds and liquidity conditions deteriorate in entire asset classes; and (2) a more idiosyncratic stress which impacts one (or a handful of) funds only. The volatile period around March 2020, during the breakout of the Covid crisis, is a good example for (1), while the collapse of the Woodford Equity Income Fund for (2). Liquidity classification is an effective tool to prevent funds from deviating too far from their peers in terms of investing in less liquid assets and hunting for yield, but it is unlikely to prepare the entire industry for truly extreme market shocks. Fixing the trade size irrespective of investor composition, redemption history or expected investor behavior is likely to disadvantage larger funds. If the Commission adopts a fixed percentage rule, the 10% figure is likely to decrease the share of investments classified as highly liquid and increase the share of illiquid holdings for most funds, as most of our clients currently assume trade sizes that are smaller than 10%. Our analysis of the largest equity mutual funds showed that 9 out of 9 would have exceeded the 15% illiquid holding cap more than once every 10 weeks over the period January 2020 to November 2022, assuming weekly classification frequency.[1]

[1] *See* What Would the SEC's Liquidity Proposal Mean for Equity Funds? *available at* https://www.msci.com/www/blog-posts/what-would-the-sec-s-liquidity/03618554751 (January 27, 2023).

2	Is the proposed stressed trade size of 10% appropriate? If not, what minimum trade size would be appropriate and why? For example, should we increase or decrease the stressed trade size to, for example, 15% or 5% or some other threshold? Is there other data that should factor into setting the stressed trade size?	Based on our analysis of large equity mutual funds, the uniform 10% stressed trade size would be too high. Instead, the current rules for calculating the reasonably anticipated trade size, which allows funds to define their own trade size assumptions based on fund characteristics, could be combined with a minimum stressed trade size. This approach was highlighted as an alternative by the Commission in the proposing release. The typical values that our clients determined under the current rules are smaller than 10%.
3	Should the stressed trade size vary for different types of funds and, if so, how? For instance, should the stressed trade size be a function of the fund's flow history, such as the 99th percentile highest week of the fund's absolute or net flows over a given period (e.g., 3 years, 5 years, 10 years, or the life of the fund)? Should the stressed trade size be the higher of a specified value applied to each investment or the 99th percentile highest week of absolute flows?	As noted in response to Question 2, MSCI supports keeping the current methodology which allows funds to calibrate their own assumed trade size values based on fund characteristics. This could be combined with a minimum stressed trade size, which was highlighted as an alternative by the Commission. Many of our clients use historical net outflows for a multi-year lookback period as one of the components to determine the reasonably anticipated trade size. Fund flows, however, often follow fat-tailed distributions. Our analysis showed that statistical measures, such as percentiles or expected shortfall-like metrics may understate tail events.[2] We found that fitted fat-tailed distributions, such as generalized Pareto, may capture tail events better. Investor concentration might also be considered when determining the stressed trade size, as the current rule suggests. It is plausible to assume that a single investor who holds large fraction of the fund shares may want his/her investments redeemed. This information, however, sometime only partially available for fund managers. The most common approach that we saw in practice is to floor the anticipated trade size at the largest known investor's investment as a percentage of the fund NAV.

[2] *See* Liquidity Risk Management for Funds: Part 2: Best Practices for Stress Testing *available at* https://www.msci.com/www/research-report/liquidity-risk-management-for/01998350696 (July 24, 2020).

4	Should the method of applying the stressed trade size to each investment vary for different types of funds and, if so, how? Are there types of investments that should be excluded or use a different stressed trade size? Are there other, more appropriate methods of applying a stressed trade size across different type of investments and portfolios?	The stressed trade size should take fund characteristics into account and may vary based on the scale and complexity of the fund. The uniform 10% stressed trade size may be too strict for larger funds. On the other hand, for a fund with a very concentrated investor base, the 10% stressed trade size may be too low. The stressed trade size may also depend on the extent derivatives are used in the fund. During volatile periods, funds using derivatives more heavily may have to post more capital to their margin accounts. This means that funds with a higher derivatives exposure would need more cash, which may be reflected in a larger stressed trade size used in the liquidity analysis.
5	Instead of establishing a set stressed trade size, should we set a minimum stressed trade size and provide factors for determining if a fund should have a higher stressed trade size? If so, what factors should funds consider in setting their stressed trade size?	The combination of an established minimum stressed trade size and a fund-specific stressed trade size is a reasonable approach. To determine the fund-specific stressed trade size, funds may consider the degree of investor concentration, the history of fund flows and the investor type (if known), as the currently effective Rules prescribe.
7	Should we define value impact through average daily trading volume or price decline, as proposed? Should we use a different definition of value impact instead, and if so, should it depend on the type of investment? Should different types of funds have different value impact standards? If yes, what standards, and for what types of funds?	As explained in further detail below in response to Question 8, MSCI would discourage defining the value impact through average daily volume for listed equities. MSCI considers the 1% price decline for non-listed instruments reasonable. We believe that defining the value impact in terms of price decline for listed equities too would be a better approach as we see potential shortcomings of the average volume-based market impact definition. See our response to Question 8.
8	For shares listed on a national securities exchange or a foreign exchange, should we define a significant change in market value as selling or disposing of more than 20% of the average daily trading volume, as proposed? Are there other types of investments for which an average daily trading volume test would be appropriate? For example, is there data	Liquidity measures built solely on traded volumes cannot capture the full extent of liquidity risk and may produce counterintuitive results in certain cases. MSCI identified three significant challenges imposed by the proposed definition of the value impact through average daily volume for listed stocks: 1) MSCI analysis has shown that equity trading volumes more than doubled on average during the March 2020 COVID-19 market crisis, while bid-ask spreads and transaction costs significantly increased. Applying the proposed amendments, equity

	available for fixed-income securities that funds could use objectively to analyze market participation under a value impact standard?	funds would have seen their share of illiquid positions decrease in March and their share of positions categorized as highly liquid increase. We believe that accounting for transaction costs in the definition of the market impact standard would help avoid this.[3] 2) The volume-based metric may introduce some instability to the bucketing, especially for small cap equity funds. Many small cap stocks do not trade often, and we observe spikes in the trading volume (e.g., a couple of days of very high traded volume followed by weeks of very limited activity). During the period following a day with large traded volumes, the stock may appear very liquid, however, when that day phases out of the averaging window, the stock may get classified as illiquid. This might be further amplified by events such as earnings announcements, when traded volumes typically spike. As our analysis has shown, some funds would often have daily changes of the illiquid bucket percentage in the 5-10% range. Choosing a longer averaging window could be a partial remedy, however it may also decrease the reactiveness of the classification.[4] 3) Trading 20% of the average daily volume may incur significant transaction costs. Using MSCI's transaction cost model, we found that for approximately 20% of the ACWI IMI index constituents these trading costs would exceed 1% for a trade size equal to 20% of the daily volume. Our results may highlight the need to incorporate transaction cost considerations into the definition of the market impact standard. These considerations apply for other types of investments as well. For fixed income securities, trading might be even more sporadic or scattered than for listed stocks. It can happen that a bond was not traded because there were no sellers, however, selling the bond could be done at limited transaction costs. For example, many municipal bonds are held until maturity. Trading volumes usually fall significantly right after the issuance and might be low throughout the lifespan of the bond. Adopting a

[3] *See* SEC Liquidity Proposal: A Better Warning Signal? *available at* https://www.msci.com/www/quick-take/sec-liquidity-proposal-a-better/03536057592?v=0 (December 5, 2022).

[4] *See* What Would the SEC's Liquidity Proposal Mean for Equity Funds? *available at* https://www.msci.com/www/blog-posts/what-would-the-sec-s-liquidity/03618554751 (January 27, 2023).

		volume-based classification for fixed income securities bears the risk of turning large fraction of asset classes to be categorized as illiquid.
9	Should the percent of average daily trading volume be higher or lower (e.g., 15% or 25%)? Should the measurement period for the average daily trading volume be longer or shorter than the proposed 20 business days (e.g., 10, 30, or 40 business days)? Should days where shares were not traded be counted as zero volume days as proposed or in some other manner? Are there circumstances in which the average daily trading volume test should vary by instrument, type of instrument, or trading venue?	A market impact standard based solely on volume metrics may fall short in capturing the full extent of liquidity risk. Please refer to our response to Question 8. In our view, the market impact definition should also include transaction cost considerations. We find it reasonable to incorporate traded volumes as one of the components of the market impact standard definition. In this case, the Commission may consider instrument type specificities when deciding on the averaging window and the percentage of the volumes to be considered. For example, many small and micro-cap stocks do not trade every day and the average daily volume may fluctuate more over time, and a longer averaging period and higher percentage value might be appropriate. Lack of trading often indicates that there was just no interest in trading, not necessarily that you cannot trade. On days where investors want to trade a larger amount, they manage to trade it (maybe at a high cost), and these days show up as high-volume days, increasing the ADV for the next 20 days. But if such large trading happened 3-4 weeks ago, then likely we could trade that amount again if we wanted, even if that large trading volume day is no longer in the averaging window. On the other hand, the average volume for large and mega cap stocks can be greater than a billion USD and, as such, a smaller percentage value could be considered.
10	For investments that are not listed on a national securities exchange or foreign exchange, should we define a significant change in market value as any sale or disposition that the fund reasonably expects would result in a price decline of more than 1%, as proposed? Should the identified percentage be higher or lower (e.g., 0.5% or 2%)? Should this standard for determining a significant change in market value apply to all	MSCI agrees generally that the 1% price impact falls into a reasonable range for most asset classes. However, we would note three potential consequences of this approach. **1. The classification becomes less sensitive to holding size** Allowing 1% price decline, the bucketing rules may differentiate less between small and relatively large holding sizes. Because, for example, developed market sovereign bonds and investment grade credit typically trade below 50 bps bid-ask spread, even after accounting for the excess market impact of large order sizes, these large

	investments? Would funds need additional guidance or parameters to measure this standard consistently, including what inputs or comparable investments may be used in determining the price decline?	positions would still be classified as highly liquid. This is shown in our recent analysis.[5] **2. Assets remain highly liquid even under severe stress** Historical analysis shows that, in distressed markets, bid-ask spreads may triple or even quadruple, see our blog post publication.[6] A corporate bond that is traded at 25 bps half bid-ask spread may show up as highly liquid even in periods of severe market stress. **3. Expected and excess transaction costs may not be considered differently** The uniform 1% price decline definition may make whole asset classes always classified as highly liquid, irrespective of the holding size. On the other hand, parts of other markets will always be classified illiquid. However, the half bid-ask spread is an anticipated cost by fund managers, and liquidity issues may be more likely to arise from excess transaction costs above the typical half bid-ask spread. This may include excess market impact resulting from a large trade size well-above the typical trade size of the instrument, or from widening bid-ask spreads in stressed markets. Impact limits that are defined in terms of the typical half bid-ask spread may also be of interest, beyond an absolute limit.

[5] *See* Comparing Apples to Apples in Bond-Fund Liquidity *available at* https://www.msci.com/www/blog-posts/comparing-apples-to-apples-in/03612522892 (January 24, 2023).

[6] *See* Bond Liquidity: How Bad Was COVID? *available at* https://www.msci.com/www/blog-posts/bond-liquidity-how-bad-was/02090095898 (September 16, 2020).

11	Should the 1% price decline definition of value impact be applied against the fund's last valuation of an investment, which would include both the effect of the fund's sale and market moves?	The 1% price decline should exclude the market risk component and only consider the market impact caused by the trading. This approach may confuse two separate sources of risk: market risk and liquidity risk. In our view, liquidity risk management should focus on liquidity risk and not on market risk. That is, market prices changing due to news or global events, for example, should not impact liquidity classifications. On the practical side, classification based on this could also cause difficulties. In periods where the asset's value declines by 1%, the asset will become inherently illiquid. For example, if a large 75 bps rate increase is announced by the central bank, and subsequently the prices of many portfolio holdings decline by more than 1%, then for that day, a large fraction of the portfolio will become illiquid, even though the price decline has little to do with liquidity concerns. Similarly, on days when there are rallies, illiquid securities may get classified as highly liquid, purely because their prices increased due to market movements. Beyond these modelling and conceptual considerations, there are also practical challenges. Market risk and liquidity risk are typically modelled separately. It may require significant implementation burden for funds to consider drops in market price in addition to transaction costs when classifying instruments.
16	As proposed, should we eliminate the less liquid investment category and amend the illiquid investment definition to include an investment that a fund reasonably expects can be sold within seven calendar days without significantly changing the market value but is not convertible to U.S. dollars within that period (i.e., investments that are currently classified as less liquid under the rule)? What effect would these proposed amendments have and how would those funds that significantly invest in such less liquid investments likely change?	The "Less liquid" category primarily includes the following: 1. assets with long settlement periods (7+ days), mostly bank loans 2. assets that have a normal settlement period (1-3 days), but the position with the specified trade size can only be liquidated within 3-5 business days. Consequently, the proposed changes would render illiquid all assets that have a typical settlement period (e.g., 2 business days) but take 3+ business days to sell. Furthermore, the proposed change may create challenges for diversified fixed-income funds that invest in moderately liquid assets and also bank loans. While bank loans will become inherently illiquid, during volatile periods, the moderately liquid fixed-

		income assets may also move to the illiquid bucket due to the above-mentioned behavior.
20	As proposed, should we remove the less liquid category and require funds to use a three category classification framework? Would the proposed changes simplify classifications and reduce burdens over time, after funds updated systems to reflect the change? Would the proposed changes appropriately reflect the liquidity of a fund, or would the current framework be more appropriate? Should funds be permitted to invest above 15% in less liquid investments if there are other methods or mechanisms to reduce the mismatch between the receipt of cash upon the sale of assets with longer settlement periods and the payment of shareholder redemptions or to address potential dilution associated with this mismatch? If so, what other methods or mechanisms should these funds be required or permitted to use (for example, swing pricing, gates to suspend redemptions, redemption fees, redemptions in kind, additional limits on less liquid investments, notice periods, or lengthening the settlement period for paying redemptions)?122 If we permit (to the extent not already permitted) or require use of one or more of these tools, how should they be used (individually, in some combination with each other, or with other protections, such as disclosure, board approval, and Commission reporting)? Should we amend other rules, or provide relief from any specific rules or provisions of the Federal	Removal of the less liquid bucket is unlikely to significantly reduce the classification burden. The removal of the “less liquid” bucket requires an initial effort to modify the classification framework as well as the liquidity reports. However, once the changes are implemented, we would not expect to see a reduction in the computational and reporting burden as the classification still requires the same data inputs: liquidity analytics to assess time to trade, and settlement period data to find the correct bucket. As the data requirements are the same and the analytics requirements are the same, we would not expect to see a meaningful reduction in the burden to produce classification reports.

	securities laws, to expedite or permit use of these methods and mechanisms?123	
26	Should we amend the definition of convertible to cash and other references to cash in rule 22e-4 to refer to U.S. dollars, as proposed? Would these amendments raise issues for specific types of funds? If so, which ones and how? Would these amendments affect funds' investment strategies, including their allocation to foreign investments and U.S. dollars, or their performance?	MSCI agrees that taking FX conversion into account allows for better liquidity assessment from a US-based investors' perspective, but we think that this change could involve some added implementation costs for funds and third-party service providers. From a U.S.-based investors' perspective, including the FX conversion better represents funds' actual liquidity, especially in cases when there are restrictions on currency conversion between a foreign currency and USD. We would also highlight that for certain emerging market currencies, the repatriation to U.S. dollars may take multiple days. Consequently, emerging market funds investing in these countries may see some part of their investments shifting towards the lower liquidity buckets. The proposed amendment may create added implementation burdens for funds and third-party analytics providers. Currently, the significant impact to the market value of the investment is typically assessed in the instrument's own local currency.

30	Should we require funds to include the day of classification when counting the number of days to convert to U.S. dollars as proposed, or should we require funds to begin to count the number of days to convert to U.S. dollars on the following day? What are the advantages and disadvantages of this alternative? Would this alternative result in less conservative liquidity classifications for some funds or investments (i.e., by causing some investments that otherwise would have been classified as moderately liquid to be classified as highly liquid) or impair a fund's ability to meet redemptions?	MSCI does not think that the proposed change would move assets from the moderately liquid to the highly liquid bucket. This is because the current rule classifies holdings based on the number of days it takes to convert it to cash. This can be interpreted in the local currency of the asset. Then converting the local currency proceeds to USD, as the amendments prescribe, may take additional time. As such, the conversion to USD may take longer than to local currency and assets may move towards lower liquidity bucket.
31	Instead of using the days an investment would be convertible to U.S. dollars in the liquidity classifications as proposed, should we separately set the number of days to: (1) make the trade; and (2) settle the trade or otherwise dispose of an investment, in determining liquidity classifications? Why or why not? Is there a different way the rule should measure the period that an investment is convertible to U.S. dollars?	From the perspective of a fund's liquidity management, what matters most is the total time it takes to receive the cash after the sale of an asset. As such, we see little benefit in separately defining time to sell and time to settle and this requirement would pose some added implementation burden for classification (and also for reporting if the settlement period would need to be separately reported to the Commission).

58	Should we require swing pricing for both net redemptions and net purchases, as proposed, or only for net redemptions? Do dilution and liquidity concerns exist for open-end funds in both scenarios?	If swing pricing is adopted in a Final Rule, then both asset sales and purchases should be included. As the Commission noted, investor dilution may also occur for net subscriptions. Two potential sources of investor dilution are: (1) transaction costs; and (2) change in portfolio composition. For large net subscriptions, the fund may decide between spreading the investment of the cash inflow over multiple days and keeping transaction costs lower or invest it relatively fast to preserve the portfolio composition. Even though funds do not have time limits to invest cash inflows, slower investment of capital may dilute the interest of existing investors since only smaller fraction of their portfolio would generate returns.
63	Should we adopt a framework that, in the case of net redemptions, requires a fund to adjust its NAV by a swing factor only when those net redemptions exceed an identified threshold (i.e., as we propose for net purchases)? If so, should that threshold be the same size as the 1% market impact threshold, or a lower or higher amount (e.g., 0.5%, 1.5%, or 2%)?	While MSCI agrees with the Commission that swing pricing can be one effective mitigant to investor dilution,[7] we would also note potential side effects of total swing pricing. If a fund adjusts its NAV downwards for any net redemptions, it may introduce additional volatility to the fund's reported NAV. This volatility may result in an increase of the tracking error that comes solely from capital flows. Our second observation is related to the treatment of subscribers vs redeemers. On days of net redemptions, both the subscribers and the redeemers trade fund units at the swing NAV. For subscribers, it means that they could purchase fund shares at a lower price than the mid-NAV, even if the redeemers only slightly outsize subscribers. In this case redeemers effectively subsidize subscribers.

[7] *See also* Section 4 of Liquidity Risk Management for Funds: Part 1: Dilution Effects (July 2020) *available at* https://www.msci.com/documents/10199/ec49c6f3-149e-e806-c049-85770693b012.

134	If we adopt a liquidity fee framework instead of a swing pricing framework, should a fund be required to apply a liquidity fee under the same circumstances in which a fund would be required to adjust its net asset value under the proposed swing pricing requirement? Should a fund be required to use the same approach to calculating a liquidity fee as the proposed approach to calculating a swing factor? Should the same board oversight framework apply under this approach as the proposed swing pricing requirement (e.g., with the board approving the fund's liquidity fee policies and procedures and designating a liquidity fee administrator, and such administrator would report periodically to the board)?	Both swing pricing and liquidity fees could provide protection against dilution. However, there is an important difference between calculating the swing factor and the fee amount. Transaction costs are due only for the net flows, since redemptions and subscriptions can be netted, and no trading is required for their overlap. We see one main difference between the two mitigants on how these costs are distributed between redeemers and subscribers. Let us assume a day with net redemptions. With swing pricing, subscribers may purchase fund units at a discount. Redeemers (majority flow) effectively are not only paying the transaction costs for the net flows but also subsidizing subscribers (minority flow) by the discount amount. On the other hand, dynamic fees may charge only the transaction cost amount on redeemers, without financing the discounted purchases. As such, generally, fees may result in lower cost for the majority flow than applying the swing factor. We agree, however, that the operational costs of dynamic fees may be relatively high. In recently published MSCI research,[8] we proposed an approach for the calculation of simplified liquidity fees which, on average, may effectively mitigate investor dilution.
246	Would these amendments cause a fund or any third-party service providers assessing liquidity to have new or unforeseen burdens? Would this increase the cost of third-party services?	The proposal makes some modelling aspects easier which simplifies some calculations, but the changes would impose some initial implementation burden as well as operational burden due to daily classifications. The proposed approach would make modelling easier in some respects, especially as funds used to spend significant effort to determine their reasonably anticipated trade size, which would now be fixed at 10%. However, this approach also may have drawbacks with respect to the quality of results (as explained in responses to Questions 2 and 8), especially now that funds have already invested into building out their reporting systems for the current rules. In this sense, this would be a step back. On the other hand, the changes require some initial implementation burden, as well as ongoing operational burden due to the increased number of analytics runs due to the requirement to classify daily. It is likely that these would involve additional costs as

[8] *Id.*

		many funds do not currently classify daily. The exact scale of cost increases for funds is difficult to quantify as of now.
249	What price impact models do funds currently use for liquidity classifications of their investments? Are there advantages of using one model over another? Are there price impact models available to use only through certain third-party service providers assessing liquidity? Do service providers assessing liquidity vary in costs for their services?	MSCI's LiquidityMetrics formalizes the concept of liquidity using liquidity surfaces. Liquidity surfaces model the relationship between traded size, transaction cost and execution time horizon. For calculating the liquidation horizon, users need to specify the trade amount and their assumption for significant price impact limit. This defines a point on the liquidity surface, and we can read off the liquidation horizon. Liquidity surfaces are calibrated on observed market data. Transaction cost estimates can be broken down into two components: the half bid-ask spread and the market impact component. The bid-ask spread is the minimum cost of a roundtrip trade, so half of it may be attributed to the buy and sell sides of a trade, respectively. The market impact component is the cost incurred by larger trades on top of the half bid-ask spread. One advantage of such model that it explicitly takes transaction costs into account. For example, two stocks may have similar trading characteristics and comparable average daily volumes, still, may differ in terms of bid-ask spread and market impact.
250	What would be the costs of obtaining daily pricing and liquidity information for the purposes of daily liquidity classifications? What are the current costs related to obtaining such information?	Daily model calibrations would marginally improve liquidity classifications but may come with additional costs as it would increase computational effort. Most data sources that MSCI uses in liquidity analytics are daily, although some data comes with a weekly frequency. For model calibration, we use large datasets and, as such, the calibration of the models is computationally intensive. Technologically, we could increase the calibration frequency of the MSCI models, but this is likely to result in higher costs for users of the analytics. MSCI models rely on historical observations. We tailored the length of the lookback period to strike balance between reactiveness of the model (i.e., how quickly it picks up changes in the market) and the stability of the model (i.e., how stable classifications are over time if there are no significant changes in the market). As a

		consequence, daily model calibrations may have limited effect on the accuracy of the classification.
251	Do funds currently monitor their liquidity classifications on a daily basis? Are there specific types of funds that do not currently evaluate their classifications more frequently than monthly?	Around half of MSCI U.S.-based clients are already classifying on a daily basis, while the other half classify monthly.
254	Which components of trading costs contribute the most to fund dilution? How significant are market impact costs? If we adopted an alternative that excluded market impact from swing factor calculations, would the rule's effectiveness at mitigating dilution be significantly reduced?	If swing pricing was introduced, both bid-ask spreads and market impact should be considered. As described in our response to Question 249, MSCI's LiquidityMetrics breaks transaction costs down into two components: the half bid-ask spread and the market impact component. The market impact component can be as large or even significantly larger than the half bid-ask spread component, especially for large trade sizes and in stressed markets. Hence, both bid-ask spreads and market impact costs may contribute significantly to fund dilution. The whole transaction cost should be taken into account. An alternative that excludes the market impact component from swing factor calculations is likely underestimate transaction costs and reduce its effectiveness against fund dilution.