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NUVEEN
Investments

January 13, 2016

By Electronic Delivery

Mr. Brent J. Fields
Secretary
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Re: **Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment Period for Investment Company Reporting Modernization Release - File No. S7-16-15**

Dear Mr. Fields:

Nuveen Fund Advisors, LLC ("Nuveen")[1], the investment adviser for the Nuveen open-end funds, appreciates the opportunity to comment on the Securities and Exchange Commission's proposals Rel. No. IC-31835 (September 22, 2015) relating to open-end fund liquidity risk management programs, Rel. No. IC-31835 (September 22, 2015) (the "Proposing Release"). Capitalized terms not otherwise defined herein shall have the meanings spelled out in the Proposing Release.

Nuveen representatives have participated on three industry working groups that have prepared and are filing comment letters with the SEC, roughly contemporaneous with this comment letter: the Investment Company Institute ("ICI"), the Securities Industry and Financial Markets Association's Asset Management Group ("SIFMA-AMG"), and the Global Association of Risk Professionals ("GARP", whose letter focused mostly on the swing pricing issue). We generally agree with commentary and proposed alternative regulatory constructs contained in the ICI, SIFMA-AMG and GARP comment letters.

However, there are certain observations that we wish to make, in some cases to reinforce and amplify points made in these industry letters, in others to make our own points. Further, if the SEC does not adopt the ICI's or SIFMA-AMG's proposals for a principles-based and/or

[1] Nuveen is a wholly-owned subsidiary of Nuveen Investments, which markets a wide range of specialized investment solutions, including a wide range of open-end funds and closed-end funds sub-advised by several investment subsidiaries: Nuveen Asset Management, Symphony Asset Management, NWQ Investment Management Company, Santa Barbara Asset Management, Tradewinds Global Investors, Winslow Capital Management and Gresham Investment Management. In total, Nuveen Investments had more than $220 billion of assets under management as of September 30, 2015, including open-end funds having over $60 billion, and closed-end funds having over $50 billion, of assets.

qualitative liquidity classification framework, we offer for your consideration an alternative liquidity classification scheme that in part is based on the quantitative approach utilized in the SEC's original proposal. While we believe that our alternative proposal is more workable and less burdensome than the original SEC proposal, it would still be challenging and costly for the industry to implement. We would prefer and recommend the adoption of the ICI's or the SIFMA-AMG's proposals, since we believe that they would accomplish the goals of the SEC's proposal in a far more effective and less burdensome manner. We also wish to reinforce the ICI's and SIFMA-AMG's objections to the SEC's proposed Three Day Liquid Asset Minimum requirement with our own observations, and to propose a disclosure regime regarding liquidity matters and liquidity classification schemes.

We are not commenting at this time on the "swing pricing" aspects of the Proposing Release, because our sense is that, although swing pricing is an intriguing and potentially very helpful tool for funds, the establishment of the regulatory framework and operational infrastructure to implement a swing pricing regime is on a much longer timetable than the other, more directly liquidity-related aspects of the Proposing Release.

This comment letter is organized into the following sections:

I. Background

Open-end mutual funds are widely recognized as important and valuable investment vehicles mostly because they enable ordinary "retail" investors to pool their assets together in a collective

("mutual") vehicle, invested efficiently in a generally diversified manner by a professional investment adviser. The "mutualization" of the investments pursuant to these vehicles by ordinary retail investors has many advantages – cost effectiveness, efficiency, diversification, access to asset classes otherwise unavailable to the retail investor, professional management, convenience – and importantly, daily liquidity. That mutualization also may have potential disadvantages – for example, current shareholders of a bond mutual fund having high embedded yields from bonds purchased by the fund in an earlier, higher-yielding environment may have those above-current market yields effectively "diluted" by new incoming shareholders, the proceeds of whose investments must be invested in bonds having then-currently-available lower yields. This mixture of advantageous and disadvantageous characteristics is inherent in mutual funds.

The law applicable to mutual funds, most notably the Investment Company Act of 1940 and regulations thereunder, reflects a legislative and regulatory determination, made after weighing the relative benefits and detriments of the mutualization aspect of mutual funds, that strongly favors the existence of mutual funds. And of course mutual funds have taken advantage of that legal favor to have grown in recent years in number, size, and diversity of mandate, serving well a very large contingent of retail investors. Mutual funds have also served broader public policy interests such as facilitating and lowering the cost of capital formation for the economy at large, and enabling ordinary citizens to exercise greater and more direct control over their own investments.

The SEC's liquidity proposal seems focused most notably on trying to prevent the lack of liquidity in a mutual fund's portfolio from resulting in the "dilution" to ongoing shareholders caused by redeeming shareholders, particularly where redemptions are strong and/or persistent, and where such redemption-driven portfolio sales are disproportionately of less liquid securities so that the remaining portfolio becomes less liquid and more susceptible to being mis-valued. Our view is that such dilution can occur in two ways:

1. The price (net of any selling costs) at which a portfolio security is sold to raise the cash to pay the redemption is less than the value of the security reflected in the calculation of the NAV at which the redeeming shareholders' shares were redeemed; and
2. If the fund over-values its increasingly less-liquid portfolio, the NAV at which redeeming shareholders shares are redeemed is too high, which has the effect of diluting the "real" value of the shares of the ongoing shareholders.[2]

The SEC's liquidity classification proposal attempts to help bridge one of the arguable detriments of the mutualization aspect of mutual funds, which is a major contributor to the first source of dilution enumerated – the fact that there can be a timing mismatch between the point in time that shareholders are able to redeem shares and the point in time when the fund is able to liquidate portfolio assets to generate the cash to pay such redemptions. Because even in the best case (as we explain more fully below), a fund will typically not receive notification of a large share redemption until well after the markets have closed on the day of that redemption, this

[2] Note that this source of dilution from lack of adequate liquidity is caused most directly by the lack of adequate liquidity itself, but by insufficiently accurate valuation. In other words, while the lack of adequate liquidity was the primary cause of the problem, the source of the harm from the problem is actually valuation-related.

timing mismatch will almost always result in remaining shareholders bearing the market risk of the assets to be liquidated until a later point in time after the NAV determination of a net redemption when the portfolio assets are actually sold to raise the cash necessary to pay the redemption proceeds. Typically, that portfolio sale is the next business day.[3] In general, this transfer of market risk from redeeming shareholders to remaining shareholders can be seen as one of the effective costs of providing daily liquidity to fund shares, which benefits all shareholders in the long run. This sort of timing mismatch may be aggravated, and the period of extra market risk borne by remaining shareholders thereby extended, when a fund's underlying assets have constrained liquidity.[4] The SEC's proposed liquidity classification rubric would require funds to analyze, and disclose, the extent to which its portfolio has such constrained liquidity.

The SEC's liquidity proposal also appears to be focused on the second source of liquidity-related dilution enumerated above – the specific potential that a fund experiencing persistently heavy net redemptions may see the overall liquidity of its portfolio deteriorate over time as it sells the more liquid portions of its portfolio assets to meet such redemptions. Such actions increase the risk that future net redemptions will be even more difficult to meet at portfolio values consistent with those used to calculate the fund NAVs at which such net redemptions occur, and might thereby cause dilution to remaining shareholders, or in an extreme case cause the fund to suspend redemptions. The recent experience of the Third Avenue Focused Credit Fund, which had long invested in a portfolio that included a substantial portion of holdings of constrained liquidity, and then experienced an extended period of strong and persistent redemptions, is an extreme example of the sorts of problems that this set of circumstances can cause.

In our view, the ultimate goal of the SEC's current attempt to establish a substantive and disclosure-based regulatory regime regarding mutual fund liquidity should be to balance the need to reduce these detriments of the mutualization aspect of mutual funds, with the need to preserve as much as possible the benefits of such mutualization.

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[3] We describe the timing differences between fund share redemptions/subscriptions and the associated portfolio transactions in more detail in Appendix A at the end of this letter. In cases where a fund share redemption settles on a T+1 basis (instead of on a T+3 basis) the timing gap between the redemption cash payout and the receipt of proceeds of a T1 portfolio transaction on Day T4 is even greater – three business days (T4-T1) instead of one (T4-T3). The fund, in either such case, will need some form of bridge financing to cover that gap. If the SEC (or any other regulator) has concerns regarding the ordinary, and typically unavoidable, timing gaps between the settlement of mutual fund share subscription and redemption transactions and transactions in those funds' underlying portfolios, we submit that the best and most appropriate regulatory lever would not be to establish fund liquidity guidelines as the SEC has proposed in the Proposing Release, but rather to alter the regulation of the settlement terms of fund shares and/or their underlying instruments. For example, the SEC could mandate regular-way settlement for mutual fund share transactions, or work with bank regulators to establish standard settlement periods for transactions involving senior loans.

[4] One of the broad trends of the past several decades has been the continued expansion of the asset classes represented in the open-end fund universe. As a result, retail investors have gained access to the diversification benefits of asset classes previously unavailable to them. These new asset classes present a wide range of liquidity profiles. The relatively unfavorable liquidity profiles of certain of these new classes of underlying assets may exacerbate the impact of the timing mismatch described above, and thus it is reasonable to consider how the risks associated with such timing mismatches should be managed and communicated to shareholders. We submit that, on balance, this expansion of the asset classes used by mutual funds has been beneficial to retail investors, and to securities markets in general.

II. A Series of General Observations about Mutual Funds and Liquidity

Rather than try to identify specific questions posed by the SEC in the Proposing Release and answer them individually, we have identified a series of the most important broader themes, labeled as Observations "A" through "E", that we wish to emphasize in this comment letter, and have expounded on those themes as the best way to provide the SEC with overall feedback on the liquidity risk management proposals set forth in the Proposing Release. In most cases these different themes respond to multiple questions posed by the SEC in the Proposing Release.

A. The trade execution characteristics of a security are a much more important determinant of the security's liquidity than its settlement characteristics.

The SEC's proposed liquidity classification scheme and the Three Day Liquid Asset Minimum requirement set forth in the Proposing Release both cast the concept of liquidity as relating to the point in time when the fund can actually raise the cash necessary to pay redeeming shareholders. We think that this focus on the timing of cash-raising, rather than on the timing of entering the portfolio transactions that are intended to raise that cash, is largely misplaced. As described above, a major source of concern for remaining shareholders of a fund experiencing strong and persistent net redemptions is the "extra" market risk borne by the fund between (a) the time of a large redemption, and (b) the execution (not the settlement) of the sales of portfolio assets that generate the cash to pay the redemptions, with respect to those portfolio assets being sold. This is because, once the portfolio trades are executed, the fund no longer bears market risk from the securities that have been sold, irrespective of whether they have cash-settled, except to the degree that a counterparty were to fail to settle that trade.[5]

In our experience, a fund can typically find multiple possible sources for the necessary "bridge" financing (e.g., a line of credit, or an overdraft of the fund's cash account at its custodian bank) to cover the period between the redemption payout and the receipt of proceeds from even a delayed settlement of portfolio securities sales, at least if the percentage of the fund's net assets to be borrowed during the bridge period is not excessive (for the sake of discussion, let's say 20%) or the period of time is not too long (say, a week or two). So long as a fund can obtain such bridge financing, and is highly confident that the daily valuations of portfolio holdings are accurate, fund NAV dilution from strong and persistent net redemptions can be avoided by entering into near-carrying value sale trades on a sufficient number of portfolio holdings, even if those sale trades settle on a delayed basis. Therefore, fund liquidity regulations, policies and disclosure should focus on the ability of funds, in the face of large and/or ongoing redemptions, to enter into portfolio sale transactions within a reasonable timeframe, at reasonable prices, and not on the timing of settlement of those transactions.

[5] Other than unsettled trades in September of 2008 with Lehman Brothers that had been entered within the relevant settlement time frame (within 3 business days prior to Lehman's bankruptcy declaration in most cases), we are not aware that counterparty failure of as-yet-unsettled trades has ever become a major systematic problem; and even with unsettled Lehman trades, our understanding is that such trades were generally settled and removed from bankruptcy proceedings in relatively short order and without financial impact.

B. The liquidity characteristics of exchange-traded and over-the-counter-traded ("OTC") securities are very different, and any workable liquidity classification scheme for those two types of securities should recognize those differences.

The SEC's Proposing Release offers a liquidity classification scheme consisting of six so-called "buckets", quantitatively determined by reference to the number of days it would be expected to take to convert a fund's position in a given security to cash, with the buckets composed of 1 business day, 2-3 business days, 4-7 business days, 8-15 business days, 16-30 business days, and 30+ business days. This quantitative, "days to cash realization" rubric seems workable for exchange-traded securities like common stocks, which have a quantitatively determinable average daily trading volume ("ADTV"), and present direct, ascertainable and analyzable relationships between selling volume and price. However, OTC securities trade very differently from exchange-traded securities. We submit that such a quantitative, "days to cash realization" liquidity classification scheme cannot be meaningfully applied to the vast majority of OTC securities like bonds, for several reasons:

1. Exchange-traded securities are typically unitary and fungible, while OTC securities are atomized and distinct. A significant public corporate issuer will typically have only one class of common stock, which in the vast majority of cases is exchange-listed. If that issuer issues more common stock, that new common stock is typically made fungible with the already issued and outstanding common stock, such that the issuer at all times has a single, unitary form of common stock, which tends to represent a large, concentrated portion of the issuer's capital structure. Thus, one can easily and reliably determine an ADTV for that issuer's exchange-traded security, which ADTV in turn can be used to estimate how long it might have taken to sell a fund's holding of that common stock in a simple, mathematically direct relationship at a assumed materially price-neutral pace measured as a percentage of that ADTV – i.e., by dividing a specified percentage of that ADTV into the amount of a fund's holding to determine how much of that security the fund could have sold on a given day without materially impacting price, with the caveat that the accuracy of such an estimate would be dependent upon the accuracy of the estimate of the percentage of ADTV that could have been sold without material impacting price, which is in fact unknowable even on a backward looking basis.

In contrast, that same corporate issuer (or an equivalent municipal or other governmental issuer) may have issued a very large number (in some cases over a hundred) of different OTC bonds or preferred stocks, having various issue dates, maturities, coupons, seniority/subordination levels, call provisions, and other features. This "atomization" of the issuer's OTC securities will often mean that a particular CUSIP (i.e., a specific and unique security) of even a large, well-known and widely-followed issuer will trade infrequently, despite the fact that, in the aggregate, that issuer's OTC securities may trade frequently. Indeed, if a particular OTC CUSIP of a well-known and widely-followed issuer happens to be held by a set of buy-and-hold investors (see point #2 immediately below), that CUSIP may be highly liquid (price-transparent and easy to sell) despite actually trading seldom or never. Thus, we believe that trying to assess the depth of liquidity of a single OTC CUSIP by reference to that CUSIP's ADTV could present a very misleading picture of that security's actual liquidity. In turn, any attempt to

systematically determine the absolute or even relative liquidity of a fund's holding of an OTC security based upon a quantitative assessment of how long it will take for a fund to sell its holding at a pace determined by reference to a specified percentage of that security's ADTV would be inaccurate and meaningless.

2. OTC securities have different investor universes and different investment purposes than exchange-traded securities, such that the lower trade volume of OTC securities may not signify lower liquidity than exchange-traded securities. Unlike exchange-traded securities, OTC securities are typically not "designed" to be traded, and are typically not invested in by parties desiring to trade them, but rather in our experience tend to more often be "bought and held." For example, fixed-income securities such as long-term government, corporate or municipal bonds are often bought and held by investors, notably because the periodic income stream from those securities, paid consistently throughout the entire term of that security, are a primary source of return from owning the security and typically will strongly motivate the investor to continue to hold that security throughout most or all of that security's term. Nevertheless, the attractive qualities of the OTC security (e.g., income stream, strong creditworthiness) may make the security readily saleable and therefore highly liquid, despite a historical lack of trading volume. So, lack of historical ADTV, whether measured at the CUSIP level or even at an all-security level for an issuer, does not necessarily serve as an accurate or reliable indicator of how much of that CUSIP, or that issuer's OTC securities in the aggregate, could be sold within a specified time period without substantially impacting the price.

3. OTC securities of different issuers and/or sectors have far greater inherent fungibility with each other than equivalent exchange-traded securities do, which makes ADTV an even less reliable gauge of an OTC security's actual liquidity. Common stocks tend to trade largely based on issuer-specific dynamics, as opposed to other more general characteristics such as sector or geography (although at times such general characteristics can be a powerful determinant of a common stock's price change and return dynamics). In contrast, many large cohorts of OTC securities (such as investment grade bonds or preferred stock) of different issuers will have trading characteristics that are not primarily governed by issuer-specific considerations, but rather have trading characteristics that are mostly dependent on factors like maturity, duration and/or credit rating. When determining the liquidity of such securities, therefore, the relevant "market depth" for a given security should not be measured by the trading volume of that specific CUSIP, or even that of all the issuer's outstanding OTC securities, but rather would best be measured by reference to all the OTC securities with which the market treats that security as fungible. In that case, the size of the market for not only the outstanding OTC securities of that issuer, but also the similar outstanding OTC securities of all similarly-situated issuers (at least with similar seniority, type/purpose and other features and terms) should typically be considered when assessing the relevant "market" for trading in the issuer's securities with appropriately similar characteristics, when determining the liquidity of that issuer's OTC securities. The fungibility of fixed-income securities of different issuers in the same sector, and even from multiple issuers in different sectors, is particularly clear in the case of municipal bonds, which are issued by over 50,000

different issuers, in over 1,000,000 separate CUSIPS.[6] So, again, measuring the depth of liquidity of a particular CUSIP would have almost nothing to do with the ADTV of that CUSIP. Given this much greater fungibility, any attempt to classify the liquidity of a portfolio of OTC securities by reference to the "days to cash realization" of each of its constituent securities based upon a comparison of the position size of each such security to the average daily trading volume of that security would paint a misleading picture of the true liquidity level of that portfolio or its constituent securities, and would tend to grossly underrepresent the true liquidity of the portfolios of funds that invest in such OTC securities.

4. <u>The science and methodological techniques necessary to objectively calculate a reliable days-to-cash-realization figure for OTC securities in our view simply do not exist, and may never exist</u>**.** We are not aware of any methodology in existence that can fairly and accurately evaluate the true "days to cash realization" of the bulk of OTC securities.[7] We observe that various leading vendors of data and analysis to the asset management industry have developed liquidity classification systems that purport to calculate a liquidity score under the SEC's 6-bucket quantitative, "days-to-cash-realization" analytical rubric for OTC securities. We have reviewed some of these systems, which use a wide variety of factors (e.g., bond issuer, issuer type, industry, sector, coupon, maturity, duration, optionality, issue size, issuer size, geographic location, credit quality, degree of subordination, etc.) to plug into a "model", or algorithm, that determines the estimated ability to liquidate a particular OTC security. While we found that these systems were able to "force rank" the relative liquidity of a given fund's various holdings in a reasonably coherent and accurate manner, we also found that those systems' assessments of the quantity of an OTC security that a fund would be able to sell over a given period (e.g., 1 day, 3 days, etc.) were in some cases wildly inaccurate and, on the whole, unreliable.[8] So, unlike exchange-traded securities, where almost all of the

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[6] To that extent, we effectively disagree with the report by the SEC's Department of Economic and Risk Analysis titled "Liquidity and Flows of U.S. Mutual Funds" (the "Liquidity White Paper") published in conjunction with the Proposing Release, where it essentially treated all municipal securities as relatively illiquid. The Liquidity White Paper stated that "an alternative proxy for portfolio liquidity in municipal bond funds is the relative amount of municipal bonds they hold in their portfolio." (Liquidity White Paper, page 38.) The Liquidity White Paper also expressly assumed that "as the percentage of a fund's portfolio invested in municipal bonds increases the liquidity of that portfolio decreases." (Ibid.) Such a conclusion obviously does not support efforts to demarcate fine differentiations among municipal bonds based on their levels of liquidity. In contrast, we actually find the overall municipal bond market in general, particularly the market for investment grade bonds and bonds of larger issuers, to be reliably liquid.

[7] The Liquidity White Paper essentially makes the same point that OTC securities are not susceptible to a "days to cash realization"-based liquidity classification rubric. For example, the paper commented that the databases that the authors were able to access "were not suitable to perform our bottom-up liquidity analysis for funds that invest primarily in bonds." (Liquidity White Paper, p. 31) The authors also noted that "liquidity measures for fixed-income securities are typically more complex and tailored to the data available for each class." [Ibid., p. 32] Finally they recognized that "infrequent trading of many fixed-income securities can introduce both stale and inaccurate measures of liquidity into the calculation of a fund's bottom-up liquidity." [Ibid.]

[8] For example, in a given instance the system projected that the fund could only sell $1.1 million of a particular OTC holding on a single day without materially impacting price, while the fund's portfolio manager and trader, based on experience, was confident that the fund could obtain a "real" bid, from a real dealer, for at least $10 million of that bond on that day (and probably more), at a price very close to the carrying value of that security. In at least

inputs to the "days to cash realization" calculation used to specify amounts of a holding into different liquidity classification buckets (i.e., the amount of security held by the fund, and the ADTV of that security over a specified historical period, such as three months) are highly objective and indisputable, for OTC securities the determinations are based on mere "models" whose inputs are numerous and highly interrelated, whose analytical algorithms are subjective and disputable, and ultimately whose outputs are unreliable and far from "objective."

We find support for this view in the fact that, of all the asset managers of whose risk management practices we are aware, none has adopted a "days to cash realization" method for measuring the liquidity of OTC securities, even though many such asset managers use a days to cash realization methodology, or something similar, to help gauge the liquidity of portfolios that invest in exchange-traded securities.

We have other concerns about requiring that the degree of liquidity of OTC securities be determined according to a quantitative, days-to-cash-realization metric:

- False precision and false comparability. Because the days-to-cash-realization liquidity classification rubric is conceptually inappropriate to and unworkable in the OTC context, implementing that classification scheme would present a "false precision" about how much of such an OTC security could be sold within a specified time period. That sort of false precision could end up misleading regulators as well as investors, to the possible detriment of both, which might well have a longer-term effect of increasing systemic risk. The apparent precision of the measure may also suggest that numbers generated and published by different fund sponsors can be meaningfully compared, when in fact that would not be the case.

- The "most aggressive evaluator wins" phenomenon. Requiring funds to apply subjective and imprecise liquidity classification criteria to OTC securities in a manner that would appear on the surface to be quantitative and objective would tend to reward those fund sponsors that perform their subjective liquidity assessments more aggressively and/or less diligently, and punish in a relative sense those funds that perform their subjective liquidity assessments conservatively and diligently.

- Systematic model risk. Any quantitative liquidity classification scheme applied to OTC securities will need to use a "model" that makes assumptions about markets and

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one instance we felt that the vendor's algorithms for calculating the supposed volume of an OTC security (a bond) that could be sold on a single day had significant conceptual shortcomings. That algorithm heavily relied on the security's price volatility to help measure its liquidity. This vendor's algorithm appeared not to distinguish between changes in price that resulted from changes in the general level of market interest rates, and changes in price that resulted from a significant increase in selling activity. This essentially resulted in a bond's assessed liquidity being inversely related to its duration. In our experience, for most bonds, and in almost all markets, even though a bond with higher duration than a reference bond is more price-volatile than that reference bond, the relative liquidity of those two bonds are for most practical purposes identical. (There was a period, during the so-called "taper tantrum" in 2013, where the effective degree of liquidity of a bond *was* directly but inversely related to its duration, but that was the only such period within recent memory where that was the case, which also illustrates the point that liquidity is a dynamic consideration which changes in relation to changes in market conditions.)

securities, and evaluates the liquidity of securities in a very hypothetical manner. As we have seen with many quantitative managers, quantitative models work well when markets are stable and are behaving similarly to the recent past. However, when market conditions change dramatically, the historical relationships driving the models break down and the models no longer function as designed.[9] Enacting regulations which drive the entire industry to rely on a small number of liquidity models based on historical data builds in a systemic risk that the present will not behave like the past, which in turn creates the risk that those similar models are likely to fail at the next financial crisis.

- Third party vendor risk. The need to use models to calculate the relative liquidity of OTC securities under the SEC's proposed liquidity classification rubric raises another major concern about an unintended consequence: that such a requirement would introduce systemic risk by effectively forcing the fund industry to outsource its liquidity determination processes to third parties. The analysis required to quantitatively assess the liquidity of OTC securities like municipal bonds would be extremely data intensive and extraordinarily complicated, and would require funds and advisers to establish processes and infrastructure to track such factors as trading volumes (not just for individual securities but for groups of comparable securities), availability of quotations, the number of dealers who have traded in a security, the breadth of ownership, etc. It would not appear to be practicable or cost-effective for every fund manager to aggregate and analyze such massive amounts of data themselves. Consequently, most fund investment advisers would find it necessary to rely on third-party vendors to collect the data and probably to perform the analysis and make the liquidity classification determinations. Much of the information used in these assessments would be proprietary, and thus from the perspective of the fund advisers the determinations would be generated by a "black box" of nonpublic data and algorithms. This dependence would create the same sort of government-mandated oligopoly that existed when securities regulations used the ratings assigned by credit rating agencies to determine the eligibility of securities for various purposes, which proved to be problematic during the 2007-09 financial crisis. Of necessity, the data used in assessing liquidity would reflect average trading volumes and market behavior during times of normal trading activity. If the models turn out to be flawed with respect to how securities would trade when markets are under great stress, the potential for systemic failure would be all the greater because so many managers would be relying on the same sources for their assessment of liquidity.

C. A mutual fund's liquidity risk management policies and practices cannot be distilled down to a single metric.

The SEC's proposed "Three Day Liquid Asset Minimum" regimen significantly oversimplifies the concept of liquidity risk management by essentially distilling the required investment and

[9] Systemic financial events whose fundamental cause was econometric models based on historical data that failed to predict the oncoming economic behavior with adequate accuracy to avoid market catastrophe and/or systemic risk to the economy are too numerous to list, but here are a few: the failure of so-called "portfolio insurance" in the U.S. stock market collapse of October 1987, Long-Term Capital Management (1998), and of course the collapse of the U.S. housing market and the associated collapse of the subprime mortgage market in 2006-09.

liquidity management policies for a given fund down to two numbers: the fund's pre-established Three Day Liquid Asset Minimum, and the amount of Three Day Liquid Assets that the fund had on hand at the most recent reportable date. We believe that such a prescriptive, one-size-fits-all approach is unworkable, and that a principles-based approach would be far better. We think that the approach set forth in the ICI comment letter is a very good one.

As the SEC itself indicated in its Proposing Release, liquidity risk management is a highly intricate and subtle exercise. A successful liquidity risk management program involves elements of product design, portfolio management, and oversight. Liquidity risk must be viewed in the portfolio context, given the range of liquidity characteristics, and the potential for these liquidity characteristics to vary over time. Despite this, the SEC's proposal appears to be based on the rigid assumption that only assets that can assuredly be turned into cash within three business days[10] are worthy of being counted as being "available" to help meet a share redemption or other immediate fund cash outlay need. This assumption is a highly over-simplified depiction of portfolio liquidity, and to that extent is an unsound basis for a prescriptive public policy. Instead, we propose that the SEC should seek to develop policies designed to promote the development by funds and their investment advisers of robust liquidity management policies, tailored to the dynamics of specific funds, based on the asset classes and investment strategies involved.

Effective liquidity management begins with product design. Given the potential liquidity demands of an open-end fund, consideration must be given to the liquidity of the underlying assets along with other factors such as the character of the underlying shareholders, including, to the degree such information is available, how diversified the ownership base is, what type of investors are represented, whether and to what extent shares are held in omnibus accounts and/or are subject to the discretionary investment/disinvestment decision-making of a single financial advisor[11], and what kind of redemption behavior may reasonably be expected. While portfolio guidelines may be put in place to ensure that portfolios maintain sufficient liquidity, product developers must also rely upon their understanding of the underlying investment process, and on portfolio managers' ongoing awareness of the fund's possible future liquidity requirements and their ability to navigate the markets in which they trade.

While various possible methods of classifying the liquidity of portfolio holdings, such as percentage of ADTV owned, or various qualitative assessments, are useful metrics for evaluating liquidity risk, their importance and how they are applied should vary based on the investment adviser's holistic view of the fund's projected liquidity needs, possible liquidity sources, and portfolio characteristics, taking into account the characteristics of the shareholder base, the specific markets in which the portfolio assets trade, possible sources of "bridge" liquidity, and how the portfolio team executes its trades. Ideal oversight involves processes which monitor portfolio composition, shareholder concentration, and flows into and out of the fund's shares, in

[10] Note that, if the asset in question settles on a T+3 basis, this means that the fund expects to be able to sell that asset, in the indicated amount, in a single business day (on "Day T", as it were), at roughly its carrying value.

[11] The SEC may wish to consider rules requiring omnibus platforms to disclose on a periodic basis to the fund sponsors (a) the degree to which assets are controlled by a single decision maker or decision making body, (b) these parties' decision-making processes, and/or (c) any procedures they have for providing the fund with notification of large trades.

order to inform product managers and portfolio managers so they can respond to specific market conditions, rather than prescribe uniformly specific metrics, tactics or strategies which may or may not apply to the situation at hand.

In practice, when faced with meaningful liquidity demands, as from large redemptions, fund portfolio managers look to source liquidity from across their portfolios, taking into account current market conditions, including relative prices, intrinsic value, and other factors, as well as trading liquidity. Their objective, in addition to meeting the fund's near-term cash needs, should be to position the portfolio to perform well going forward. Specific trading strategies will vary based on the asset classes invested in, as well as the overall portfolio objectives.

The foregoing discussion was our attempt to illustrate the complexity and nuances of the real-world liquidity management process. We believe that it is a bad idea to try to distill all that complexity and nuance down to a single metric – the proposed Three Day Liquid Asset Minimum protocol. Focusing the public's or regulators' attention on that one metric as an indicator of a fund's liquidity stance runs a great risk that those audiences will materially misunderstand a given fund's actual situation. We also believe that if the Three Day Liquid Asset Minimum protocol were to be adopted in the final rule, it could be expected to cause funds and their investment advisers to "manage to" that metric, instead of focusing on the broader and more holistic dictates of prudent liquidity management as described above, which could end up being detrimental to fund shareholders and the investing public at large. We think that the non-prescriptive aspects of the SEC's proposed rule requiring funds and fund groups to develop, adopt and implement overarching liquidity risk management protocols will enable each fund group to develop the optimal liquidity determination policies and processes for its particular circumstances, but still provide sufficient guidance and impetus to fund groups to provide reasonable assurance as a public policy matter that liquidity risk management programs and liquidity classification protocols have been developed and implemented for all funds in the group.

D. Given the existence and assuming the reliability of committed credit lines, securities that settle on a delayed basis should not necessarily be thought of as having "less liquidity" than otherwise similar securities that settle regular-way.

The market for so-called "leveraged loans", sometimes referred to as "senior loans" (which is the term this letter uses), over the last couple decades has both grown significantly, and developed increasingly robust trading and information-sharing practices. Notwithstanding these advances, senior loans are not "securities", and the settlement timing for senior loan trades still normally extends beyond the T+3 settlement period in most instances, and in some cases well beyond.

The question inevitably arises when considering open-end funds that invest predominately or exclusively in senior loans whether the general inability to settle sales of senior loans held in the fund's portfolio raises "liquidity" issues – i.e., does their delayed settlement time frame make senior loans less "liquid" than otherwise similar securities that settle on a T+3 basis? The SEC's proposed 6-bucket liquidity classification scheme, in which classification determinations hinge

entirely on "days to cash realization", and its separate-but-related proposal to require that a mutual fund both establish its Three Day Liquid Asset Minimum and periodically disclose the percentage of its assets that qualify as "Three Day Liquid Assets", answers that question with a resounding "yes". We think that the SEC proposal's insistence on "days to cash realization" as the proper metric in both of these regulatory regimes, while having some merit when applied to certain security types, ultimately misconstrues the true concept of "liquidity" to the extent that it insists on "cash realization" as the point where a security's liquidity can be fully assessed. Consequently, this SEC proposal unfairly penalizes senior loans, and mutual funds that invest in senior loans.

We believe that a large percentage of senior loans are "liquid", both in the sense of that term as it has been long defined by the SEC in the context of the 15% Standard[12], and in its directly substantive, common sense meaning. Senior loans tend to be readily tradeable, much like a large, borderline investment grade / below-investment grade bond, and as such a fund can typically find a buyer for a senior loan, at approximately its carrying value, in a single business day. That ready salability persisted even during the most difficult times of the 2008 financial crisis. Once the fund has entered into a contract to sell that senior loan at a specified value, the fund ceases to bear the investment risk of the value of that loan pending the settlement of that sale, just like in the case of a sale of a bond that settles regular-way (T+3) during the pendency of its settlement period. In other words, the value of the fund's position in that just-contracted-to-be-sold senior loan is fixed as the sale price, so that the risks associated with a truly illiquid holding (e.g., the risk that the fund will not be able to raise enough cash from sale of its holdings to pay off redeeming shareholders, or that the value of the holding will decline going forward such that current redeeming shareholders will redeem shares at a value that is higher than the fund assets' actual value, such that ongoing shareholders' interests will be diluted – the so-called "first mover advantage") will not occur. The only meaningful difference is that the settlement for the sale of the senior loan can remain pending for several business days beyond a regular-way settled security's T+3 settlement point. However, our experience is that, because the contract to sell the senior loan is a reliable source of future cash receipts (although the *timing* of that receipt may not be reliable), the possible provider or providers of credit to the fund have historically been very willing to provide "bridge" financing (whether via a committed credit facility, reverse repo, or overdraft facility) to enable a fund to cover the cash payout/receipt timing differential, i.e., to advance cash to the fund to enable the fund to meet a redemption payout.

If and to the extent that the sale of a delayed-settlement instrument like a senior loan in combination with such "bridge" financing can result in cash flows to the fund similar to those associated with the sale and T+3 settlement of an undeniably "liquid" bond that settles in a regular-way manner, it strikes us that the delayed-settlement instrument should not be treated as necessarily being "less liquid" than that regular-way settled bond, either as a general matter, or specifically as relates to any future regulatory regime prescribing the management and disclosure of a fund's liquidity status. Because in our experience the loan sale / bridge financing combination has functionally been the equivalent to the sale and settlement of a regular-way

[12] In the context of the SEC staff's articulated liquidity guidelines requiring that mutual funds invest no more than 15% of net assets in securities that are "illiquid", an "illiquid" security is defined as a security that cannot be sold or disposed of (rather than settled) in the ordinary course of business within seven days at approximately the value at which the fund has valued the investment. See footnote 80 of the Proposing Release.

settled security, we think of senior loans as generally being "liquid", and also as having a favorable level of "relative liquidity" for liquidity risk management purposes. We think that any classification, investment policy and disclosure regime regarding liquidity should recognize and reflect that high level of "liquidity" of senior loans.

Nevertheless, because the cash receipt characteristics of senior loans and/or other delayed-settlement instruments is different from that of regular-way settled securities, we think it is appropriate to categorize such delayed-settlement instruments differently for liquidity classification purposes than a regular-way settled security possessing equivalent "salability". That is why the fallback alternative liquidity classification protocol we describe in Section III below for OTC securities would categorize delayed-settlement instruments having strong salability in a separate category from that for other OTC securities with strong salability that settle on a T+3 basis.

If the SEC sees an issue with the settlement timing mismatch between fund share transactions and senior loan transactions, then the regulatory approach we recommend would be to establish mandatory, standardized settlement timing for loans and/or fund shares.

E. No disclosure-based regulatory regime regarding fund portfolio liquidity can prevent heavy redemptions of a fund's shares; and indeed greater public transparency of fund portfolio liquidity might well trigger or exacerbate the risk of such a spate of heavy redemptions.

The SEC's disclosure protocol set forth in the Proposing Release would require that all of the most important proposed new disclosure items (e.g., the liquidity classifications of a fund's portfolio holdings, a fund's Three Day Liquid Asset Minimum, and the fund's percentage of Three Day Liquid Assets) would be disclosed to not only the SEC itself, but would also be made fully available to the public. Our sense is that the SEC may have been motivated in the proposing Release to make this information fully accessible to the public, and not just to itself and its staff, primarily for one or more of three possible reasons: (a) the SEC may not have believed that it was entitled to receive more or deeper information about liquidity matters than the public in the absence of specific statutory authority for such differentiation; (b) the SEC may consider the risks and cybersecurity costs of maintaining such large quantities of non-public information to be too high; and (c) even if the SEC did have the authority, and resources, to receive more liquidity information than the public, it believed that providing the public with such information would serve the public's best interests by enabling investors to better gauge the liquidity status of any fund. We will not attempt to address the first concern in this letter; we will offer an alternative approach to address the second later in this response letter; and we focus here on the third.

First, let us consider how disclosure might be used and for what purpose by various relevant groups. In this case we believe that the relevant entities to be considered include the SEC, shareholders and prospective shareholders, fund boards, and third-party market participants (hedge funds and other traders).

Based on the SEC's mission to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation, the SEC has important reasons to want to receive both fund-level (aggregated) and holdings-level (security-by-security) liquidity assessments. The fund-level information will help the SEC identify potential risks which can help them prioritize inquiries and exams. Holdings-level information could further assist the SEC in identifying sponsors who have overly aggressive liquidity assessments, or portfolios that diverge meaningfully from market perceptions. Finally, having holdings-level information from all sponsors and funds will help the SEC detect possible systemic exposures.

In addition to the SEC's own use of such holdings-level liquidity assessments, the SEC may perceive that providing holdings-level liquidity disclosure to the investing public itself may help protect shareholders. However, our sense is that shareholders and prospective shareholders have relatively little use for holdings-level data.[13] As shareholders' focus is primarily on selecting individual funds and combining them into portfolios to meet specific objectives, their focus is on understanding the fund's investment profile and how it might fit in with a portfolio of other investments. This would argue for providing the public with high-level, easily understood liquidity metrics. Indeed, we are aware of no evidence that shows that greater public transparency as to a fund's self-assessment of the liquidity of each of its portfolio's constituent securities would tend to prevent the triggering of a spate of heavy redemptions on such a fund's shares as a result of public and shareholder concerns about the ability of a fund to be able to maintain the integrity of a fund's portfolio, including its orientation toward more-liquid holdings, in the face of extended, persistent net redemptions. Given that funds already are required to publicly file their portfolio holdings lists periodically, and many funds make public their holdings on a more frequent basis than regulatorily required, data aggregators like Morningstar already are able to perform their own assessment of the liquidity characteristics of a mutual fund's portfolio. It is hard to understand how providing even greater insight into that fund's proprietary views of its portfolio's security-by-security liquidity characteristics would serve to lessen the risk that shareholders would be inclined to engage in widespread fund share redemptions if market or fund-specific events were to raise questions about the fund's ability to maintain portfolio integrity in the face of persistent strong net redemptions.

Finally, let us consider how other market participants may use disclosure about mutual funds' security-by-security liquidity assessments. We strongly feel that making this information publicly available is a bad idea and is likely to prove to be highly detrimental to the market's, the funds' and the public's overall best interests. The information and insights reflected in the security-by-security liquidity classifications, even if only disclosed to the public on a 45-day or 60-day lagged basis, could easily provide astute investors such as hedge funds or proprietary traders with the ability to develop and implement strategies that would take advantage of a particular fund's portfolio holdings and liquidation classification information, particularly at times when it is publicly known that the fund is experiencing significant and sustained redemption pressure. For example, a sophisticated investor could identify a fund a significant portion of whose portfolio is composed of securities considered less liquid under this

[13] Disclosure of liquidity metrics on Form N-PORT is currently proposed to be reported in structured data format, which means that sophisticated institutional investors will likely have a leg up over most ordinary retail investors in accessing and analyzing those data.

methodology that is undergoing a spate of sizeable share purchases redemptions[14], and could sell short particular securities in that fund's portfolio identified as having lower liquidity because of these liquidity classification disclosures, which the fund could be expected to need to liquidate to meet those redemptions, enabling that sophisticated investor to buy back those securities from that fund at a discounted price under the fund's difficult circumstances. One way to characterize this situation is that the SEC's Proposal's requirement that a fund publicly disclose not only its holdings but also its assessment of each holding's liquidity would provide that sophisticated investor with an "asymmetric information advantage" relative to the fund, which the sophisticated investor can exploit to its advantage, and to the disadvantage of the fund and its shareholders. Indeed, given how markets work today, and how large number of sophisticated and sizeable investors exist who are seeking out more intimate information about funds in order to anticipate, or even to help cause, trouble at funds that they will be able to take economic advantage of, our sense is that making security-specific self-assessments of the liquidity of portfolio securities, particularly as to OTC securities, would tend to tip the informational and transactional advantages even more steeply in favor of such sophisticated investors, to funds' and the public's overall detriment. If our sense is even partly correct, that is simply not a good idea from a public policy perspective.

Our proposals in Section V below include a disclosure regime to address these concerns.

III. The SEC's Proposed Liquidity Classification Scheme Is Unworkable for OTC Securities, So Nuveen Favors the Adoption of One of Several Alternative Schemes

A. The SEC's Proposed Liquidity Classification Scheme

The SEC's proposed liquidity classification rubric in the Proposing Release would impose a requirement that mutual funds determine a "days to cash realization"-based classification for both exchange-traded securities and OTC securities. As we described in Observation "B" in Section II above, OTC securities trade very differently from exchange-traded securities, and in consequence a "days to cash realization" based liquidity classification scheme cannot work accurately or reliably for OTC securities.

B. Nuveen Prefers Trade Association-Proposed Liquidity Classification Schemes Over the SEC's Proposed Classification Scheme

[14] This scenario of course resembles the one that recently befell the Third Avenue Focused Credit Fund, which was forced to gate itself to further redemptions after a period of persistent and severe net redemptions had caused the overall liquidity characteristics of its portfolio to become increasingly unfavorable, such that the fund's management concluded that further net redemptions would endanger the ability of the ongoing shareholders to ultimately receive the true value of their shares. Of course, this catastrophic result occurred to the Third Avenue fund even in the absence of regulatorily mandated disclosure of security-by-security liquidity classifications, as contemplated by the SEC in the Proposing Release. But we submit that providing sophisticated investors with that additional, security-specific liquidity information would only have further enhanced those investors' ability to take advantage of their asymmetric information advantage to the detriment of the fund and its shareholders, and would place many more funds in danger of experiencing similar catastrophic results.

Based on the most recent drafts we have seen, various industry trade associations – the Investment Company Institute ("ICI"), and the Asset Management Group of the Securities Industry and Financial Markets Association ("SIFMA-AMG") – propose to completely abandon the "days to cash realization"-based approach proposed by the SEC's proposing release. We find both the ICI proposal and the SIFMA-AMG proposal to be thoughtful, workable and worthy. If forced to pick between these two, it is our opinion that the ICI's proposal of a principles-based approach offers the best balance of improving liquidity management practices and disclosure while protecting the benefits that a diverse industry provides.

C. Nuveen Offers as a Fallback Option a Partly Quantitative Liquidity Classification Rubric that Essentially Would Represent a Hybrid of the SEC's Original Proposal and the Trade Association Proposals

We spent a great deal of time thinking about the case where the SEC were to determine (a) that a principles-based liquidity classification approach was insufficient for its purposes, and (b) that the ultimate rule should implement a quantitative classification rubric to the extent feasible. We have developed an alternative classification approach that retains as much of the SEC's original quantitative, prescriptive approach that we thought reasonably possible, applying that approach to a universe of securities where it was workable, but implementing a different, better, more workable approach with any securities not in that universe, which we set forth below. We would again emphasize that we feel that the ICI and SIFMA-AMG proposals are worthy, are far superior to the SEC's proposed prescriptive liquidity classification scheme, and likely to be deemed superior to our alternative scheme. However, in the event that the SEC is unwilling to accept the ICI's or SIFMA-AMG's proposals for a principles-based and/or fully qualitative approach to liquidity classification, and the SEC desires to establish a liquidity classification rubric that retains as much of the SEC's original quantitative approach to liquidity classification as reasonably feasible, our alternative scheme may have some appeal.

The key to understanding our alternative liquidity classification scheme is to note that it takes into account the fact that exchange-traded securities and OTC securities have fundamentally different features, and trade in fundamentally different ways. See the Observation ""B" in Section II.B. above. Consequently, our alternative particular scheme has one classification rubric for exchange-traded securities, and a very different classification rubric for OTC securities. This arguably makes the scheme more complicated than the others. However, despite there being two separate liquidity classification rubrics and two separate sets of liquidity "buckets" in our alternative scheme, we believe that because each rubric would be tailored to fit its particular security type, the infrastructure and daily effort to operationalize this liquidity classification scheme could possibly turn out to be more straightforward and efficient than other proposed schemes discussed above, despite its apparently greater complexity.

1. One Half of Our Alternate Liquidity Classification Scheme Would Retain Much of the SEC's Original Quantitative Approach, but Limit Its Application to Exchange-Traded Securities Only

We believe that, if the SEC determines that a quantitative liquidity classification approach is required, that such an approach should be limited to such securities to which it can be reasonably

and effectively applied. As such, we would propose that the SEC consider applying its quantitative approach only to exchange-traded securities. We also recommend several adjustments be made to the SEC's proposed quantitative approach in order to make it simpler and more consistent in its application.

The first adjustment we would make would be to simplify the process of classifying the liquidity of exchange-traded securities by eliminating all factors from consideration other than a projection of days-to-cash-realization. The SEC's proposed classification scheme would require a fund to base a liquidity classification determination for a specific exchange-traded security not only on the days-to-cash-realization of the security, but also on several other prescribed "factors". In contrast, our proposed alternative scheme would base the security's liquidity classification *solely* on the historically demonstrated ability to raise cash by entering into a sales transaction during the specified period based on the application of a prescribed calculation methodology using prescribed, standardized parameters, most notably ADTV. Specifically, the security's ADTV would be measured over some regulatorily specified trailing number of days or months (we recommend three calendar months, to reflect quarterly earnings announcement timetables), and this measure would be refreshed once a month. This figure would be multiplied by a percentage multiplier (the "ADTV Multiplier"), which we propose be regulatorily specified (we recommend 20%) based on an estimate of the maximum participation in a typical security's daily trading volume that any single participant's trades could represent on a given day before their own activity would become a significant factor in moving the price of the security relative to what that price would be estimated to have been that day in the absence of such activity.

The second such adjustment would be that the 6 liquidity buckets that the SEC originally proposed be reduced to 5, as follows:

Bucket 1: cash realized[15] in 0-1 business day[16],
Bucket 2: cash realized in 2-3 business days,
Bucket 3: cash realized in 4-7 business days,
Bucket 4: cash realized in 8-15 business days, and

[15] For purposes of this comment letter, we decided to retain the "days to cash realization" aspect of the SEC's original proposed classification scheme in our proposed classification rubric for exchange-traded securities. We strongly considered making a further change to the SEC's original scheme to focus on "days to transaction" instead of "days to cash realization", because, for the reasons we described in Observations "A" and "D" in Section II. above, we believe strongly that the timing of a trade to sell a security is a much more important indicator of the "liquidity" of that security than the timing of the receipt of cash from such a sale. But we ended up choosing not to alter the SEC's classification rubric to reflect transaction timing instead of settlement timing, because we wanted to minimize the number of differences from the SEC's proposal, and we did not want to obscure what we thought was our most important alteration – the establishment of separate liquidity classification schemes for exchange-traded securities on the one hand, and OTC securities on the other. We note that any rubric that focuses on the timing of cash settlement instead of the timing of trade execution can become very complicated, as witness the complex cash-timing nuances regarding Buckets 1 and 5 in the "calculation table" in the text.

[16] We note that, because (a) our alternative liquidity classification scheme would treat exchange-traded securities separately from OTC securities, (b) only securities that settle on a T+1 basis would fall into Liquidity Bucket 1, and (c) the only exchange-traded instruments that we know of that currently settle on a T+1 basis are exchange-traded derivatives, Bucket 1for exchange-traded securities under our rubric would therefore not include any equity securities or other exchange-traded securities with regular T+3 settlement, and would therefore be limited to the aggregate positive moneyness of such T+1-settling exchange-traded derivatives.

Bucket 5: both (a) holdings (or portions of holdings) of securities that could be sold such that cash could only be realized in more than business 15 days, and (b) securities as to which there is a legal or structural impairment to the fund's ability to sell the security at all, such as a contractual restriction on sale, or being in possession of material non-public information about the issuer or security.

The contribution of each exchange-traded security to each liquidity bucket would be calculated as follows:

ADTV * 20% = Daily Transaction Amount (DTA)
PV= Value of Portfolio Holding in that Security

(assumes that trade settlement occurs T+3 except where noted[17])		
Description	Calculation (lesser of[18])	
0-1 business days	PV of Exch.-traded securities (derivatives) with T+1 trade settlement	
2-3 business days	One day: 1 * DTA	PV
4-7 business days	Four days: 4 * DTA	Max(PV-1*DTA, 0)
8-15 business days	Eight Days: 8 * DTA	Max(PV-5*DTA, 0)
>15 business days + illiquid	Max (PV-13*DTA, 0), or PV if illiquid	

- Multiplying the ADTV for the security by the ADTV Multiplier would result in the "Daily Transaction Amount" ("DTA") for that security, representing at that moment that amount of the security that could be sold by a fund on a single day without noticeably impacting that security's price
- DTA would also represent the amount of a T+3-settling security for which cash could be realized upon sale on Day T0 in 3 business days (i.e., on Day T3), and thus qualify inclusion in Liquidity Bucket 2 for exchange-traded securities.
- Multiplying that Daily Transaction Amount by 4 (representing the amount that could be sold on the four Business Days encompassing Day T1 through Day T4, to enable cash to be realized on Day T4 through Day T7), and taking the lesser of that result or the remaining amount of the security holding less that which had already been classified as Bucket 2, would result in the percentage figure for Bucket 3, with a similar calculation being performed for Bucket 4, and with Bucket 5 containing the remainder in the quantitative "waterfall" rubric.
- Beyond this quantitatively formulaic bucketing, additional judgment could be applied to determine if a given exchange-traded security's liquidity was for some reason more challenged (i.e., less liquid) than its ADTV would indicate. For example, exchange-

[17] Exchange-traded securities (other than T+1 settling exchange-traded derivatives, discussed in the previous footnote) that settle on a basis other than T+3, such as certain foreign-listed equities, would need to have their particular settlement timing reflected in this calculation. This special complexity further argues (see footnote 15) for using a classification rubric that focuses on the timing of trade *execution* and not the timing of *cash settlement*.

[18] The "lesser of" calculation would apply only to Buckets 2, 3 and 4. The figure for Bucket 1, as explained in the footnote 16, would only be composed of exchange-traded instruments that settle on a T+1 basis, which we would presume would be 100% sellable on Day T; and the figure for Bucket 5 is not calculated as the "lesser of" two numbers, but is simply the figure resulting from the formula shown.

halted securities would, by virtue of their newly nonexistent ADTV going forward, and their true "illiquidity", should normally be placed in Bucket 5.

Not all amounts of exchange-traded securities placed in Bucket 5 would be identical to the "illiquid" securities currently identified through the "15% Standard." In fact, in cases where a portion of a holding would fall into Bucket 5 because less than all of that holding, in the foregoing calculation rubric, could be converted to cash within 15 business days and thus fell through the various stages of the holding amount / ADTV "waterfall" rubric all the way to Bucket 5. In other words, the holding amount so classified in Bucket 5 would not be "illiquid" in the ordinary sense, but instead the holding would be a liquid security whose partial Bucket 5 classification would be attributable to the fact that the fund had a large holding relative to ADTV. In addition, the larger the fund becomes, relative to the ADTV of its underlying equity securities, the greater the percentage that will appear in Bucket 5. However, all equities and other exchange-traded securities currently identified as "illiquid" under the 15% Standard would be placed in Bucket 5.

Adopting a 5-bucket quantitative rubric for exchange-traded securities would equalize the number of buckets with the mostly qualitative 5-bucket rubric we are proposing for OTC securities (below), which would provide beneficial categorization and disclosure consistencies across asset classes and fund types, and within a particular fund that invests substantially in both exchange-traded securities and OTC securities. However, because we are proposing completely separate liquidity classification rubrics for OTC securities and exchange-traded securities, the corresponding buckets from those separate rubrics for the two different security type cohorts should not be considered as fungible; and therefore a fund's percentage holdings of a given bucket from one security type cohort (e.g., Bucket 4 from the exchange-traded security type cohort) should not be lumped together and disclosed in an aggregated fashion with the fund's percentage holdings in the same-numbered bucket from the other security type cohort (i.e., Bucket 4 from the OTC security type cohort), but should always be disclosed separately. Indeed, we believe that keeping the disclosures about percentage holdings of exchange-traded securities and OTC securities separate from each other makes sense even if the SEC were to adopt a final rule that uses the same classification rubric for both exchange-traded and OTC securities, because the differences in how those two cohorts of securities trade (see Observation "B" in Section II above), and how their trading would likely be impacted by stress in the market, are so significant.

We would expect that at least a sizeable portion of a holding of the vast majority of exchange-traded securities held by mutual funds would be placed in Liquidity Bucket 2, because, as to a typical exchange-traded security held by a fund, sales will be readily achievable on a single day (i.e., Day T0), even in relatively large quantities, and therefore cash-settled on Day T3. However, every liquidity classification policy and process will need to make exceptions. Here are examples of a few possible such exceptions:

a. Securities whose trading has been halted by the exchange on which they are listed should normally be placed in Liquidity Bucket 5 because such securities normally do not trade until trading on the exchange resumes, unless it is known to be possible to sell the security off the exchange at a price that is roughly approximate to its current carrying

value, in which case that security could be placed in the appropriate Security Bucket or Buckets depending on expected sale volume and timing.

b. Exchange-traded securities whose "percentage of days traded"[19] on the exchange is very small.[20]

c. Similarly to OTC securities (discussed below), if other security-specific or idiosyncratic facts or factors come into play as to a particular exchange-traded security, that security's liquidity classification should be adjusted accordingly. For example, if the fund owns a widely-traded exchange-traded security which the fund is prohibited from selling by contract or operation of law (such as limitations imposed by the federal securities due to the nature of the security's manner of issuance), that security should be placed in Liquidity Bucket 5 ("illiquid") except under special circumstances permitting placement in a higher liquidity bucket. Similarly, if an exchange-traded security is used as collateral to specifically "cover" a liability incurred within the ambit of the asset segregation requirements established in SEC Release IC-10666 that itself cannot be unwound within 7 days at approximately its carrying value, under current SEC interpretations that security should be considered as "illiquid" under the liquidity determination protocols, and therefore placed in Liquidity Bucket 5 ("illiquid").

Suggested special disclosure requirements for the liquidity classification breakdowns for exchange-traded securities. If the SEC were to ultimately adopt our proposed liquidity classification rubric for exchange-traded securities, we would emphasize that any publicly-available information about the liquidity classifications of assets of a particular fund should be accompanied by an explanation of precisely what the figures represent – a breakdown calculated simply by dividing the amount of the fund's holding of that security, by a specified percentage of the Average Daily Trading Volume over a specified backward-looking period. That explanation should indicate that these are simple, objective and backward-looking data points, and involve no special analysis performed by or discretionary judgement of the fund or its adviser, except in rare cases where there are special circumstances that require re-classification of a particular security in a different Liquidity Bucket than that simple mathematical calculation would dictate, such as the possession of material non-public information about the issuer driving a determination that the security cannot be readily sold on the exchange. Such disclosure should also indicate that the liquidity determinations are backward looking and may not be indicative of future liquidity if market conditions change.

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[19] "Percentage of days traded" is simply the number of days during a specified period on which reported trades of the security occurred, divided by the total number of tradable days within that period.

[20] For example, a fund or fund complex might decide that an exchange-traded security with a percentage of days traded less than 5%, should presumably be treated as illiquid and placed in Security Bucket 5 because it is unlikely that they could be sold within 7 days at approximately their carrying value, while securities whose "percentage of days traded" is of moderate size (e.g., between 5% and 80%), should be placed in Security Bucket 3 or 4 and/or possibly 5, depending on expected sale volume and timing, because such intermittent trading activity would seem to indicate that it was less than reasonably certain that the security could be converted to cash in 3 business days without materially impacting the realizable value for such security. Of course, if other facts or market dynamics were to indicate that the likelihood of being able to sell the security was much less, or greater, than indicated by such presumptive classification determinations, the fund should adjust that classification designation accordingly on a security-by-security basis.

2. The Other Half of Our Alternative Liquidity Classification Scheme Would Adopt, for OTC Securities, a Qualitative Classification Rubric, Similar to the Proposed Rubrics that the ICI and SIFMA-AMG Classification Schemes Would Apply to All Types of Securities

This alternative liquidity classification scheme for OTC securities would, establish the following five OTC security liquidity "buckets", using qualitative, category-based criteria:

1. Any OTC security that can be converted to cash in 1 business day at a value that equals or very closely approximates its current carrying value ("cash equivalent" securities).

2. Any OTC security that can be converted to cash in 2 or 3 business days with reasonable certainty by entering into a sale transaction on a same-day basis, at a price that is roughly approximate to its current carrying value, and settle such trade no later than on Day T+3 ("fully liquid" securities).

3. Any OTC security for which a fund with reasonable certainty can enter into a sales transaction on a same-day basis, at a price that is roughly approximate to its current carrying value, but for which there is not a reasonable certainty that the settlement of such sale would occur on Day T+3 ("delayed settlement" securities).

4. Any OTC security for which a robust[21] trading market exists, but whose trading dynamics make it less than reasonably certain that an agreement to sell (or buy) the security on a same-day basis without materially impacting the realizable value for such security (securities with "constrained liquidity").

5. Any OTC security for which no robust trading market exists and/or which cannot be reasonably expected to be sold within a relatively short time frame at or near the security's current carrying value ("illiquid" securities).

A highly significant difference between this rubric for OTC securities, and the rubric described for exchange-traded securities above, is the role of position size. Position size is a factor in the exchange-traded liquidity rubric set forth above: the larger the position relative to ADTV, the larger the percent of the fund that will appear in the buckets representing a greater number of days to cash realization. In this OTC security rubric, in contrast, position size is not used as a factor, as described at greater length under Interpretive Rule "A" on the page that follows. While this might, at first blush, appear to be less precise that the SEC's proposed approach, we

[21] A "robust" trading market for this purpose means that it can be reasonably expected that one or more purchasers can be found within a relatively short time frame –7 days or less – for the security at roughly the price at which the security is valued for purposes of calculating the fund's NAV. This does not mean that a fund will, with reasonable certainty, be able to find such a buyer to enter into a transaction with at such a price on a same-day basis; if that were the case, the security should be categorized in Liquidity Bucket 2 if settlement would be expected to occur on a T+3 basis, and in Liquidity Bucket 3 if settlement were not expected to occur until after Day T+3. Rather, this category would encompass securities that could reasonably be expected to be sold with some special effort, or "by appointment", in a relatively expeditious manner of a few business days.

submit that, given the inevitable imprecision of any model seeking to impute daily trading capacity for OTC securities, the alternative approach we offer is actually a more realistic presentation of what is knowable about the liquidity of a security or portfolio, and therefore presents more useful and actionable information to both regulators and investors.

a. Explanatory Comments to Our Proposed Liquidity Classification Rubric for OTC Securities

The first two liquidity classification buckets for OTC securities (Buckets 1 and 2) individually and collectively bear a close resemblance to the first two buckets of the SEC's proposed classification rubric (which we are proposing to largely continue to apply to exchange-traded securities, as described above), except that, as described below in "Interpretive Rule A", there is no application of a quantitative "days to cash realization" analytical rubric to the classification determination. Instead, all of a fund's holding of a particular security would normally fall into a single bucket (e.g., Bucket 2), and would not be spread among different buckets (via a time-to-sale "waterfall") to the extent that not all of the fund's position could be expected to be sold in a specified period of time. Moreover, we are proposing that a fund would be able to make its liquidity classification determinations primarily at a "categorical" level – such that all securities having certain specified characteristics would fall into a specified liquidity bucket – and not on a security-by-security basis.

Buckets 1, 2 and 3 would generally be categorized as "liquid" under the longstanding binary "liquid vs. illiquid" classification scheme (the "15% Standard"). Securities classified in Bucket 4 would generally qualify as "liquid" under the existing "15% Standard", provided that a binding agreement for sale of the security could reasonably be expected to be entered within seven days at approximately the price at which the fund is currently valuing the security. Bucket 5 would generally map to those securities that are regarded as "illiquid" under the 15% Standard.

b. Interpretive Rules.

Nuveen's alternative liquidity classification scheme would contemplate that the SEC adopt several **interpretive rules** that would govern the determination of the proper "bucket" for a given OTC security, as follows:

A. The analysis for OTC securities would NOT take into account the fund's or the complex's size of holding. Instead, the assessment of the proper bucket for the security would be determined for that security **in a "categorical" manner**, with the determination about which classification bucket a security would be placed in being generally determined for an entire category of securities ("asset class"), or perhaps different securities within that asset class could be placed into different classification buckets depending on some pre-established, static factors, as discussed in Interpretive Rule "B" immediately below; but in all cases a fund's entire holding of a particular security would

be placed in the same classification bucket[22]. This would differ markedly from the SEC proposal, in which the classification determination would need to be made on a security-by-security basis, and different portions of a fund's holding of a particular security could fall into multiple classification buckets, depending on the amount of time necessary to convert those different holding portions to cash. Our rationale for this is that bucketing OTC securities would be subjective and unproductive for reasons outlined in Observation "B" of Section II above.

B. The analysis could, and in certain settings probably should, take into account various features of different subsets of securities within a particular asset class, if those features are determined to differentiate the relative liquidity of that asset class in a categorical sense. As an illustrative (but over-simplistic and certainly not prescriptive) example, if U.S. corporate bonds are regarded as an asset class, a fund family could determine that different sub-cohorts of the U.S. corporate bond asset class should be classified in the following classification buckets:

Liquidity Classifications of U.S. Corporate Bonds

Bond Rating	Issue Size	Liquidity Bucket
AAA, AA, A	$50 mil. or greater	2
	less than $50 mil.	4
BBB	$250 mil. or greater	2
	less than $250 mil.	4
BB, B	$500 mil. or greater	2
	less than $500 mil.	4
CCC, CC, C	All	4
D, Defaulted	all	5

A more robust (and probably more realistic) analytical classification protocol could include other factors that could be weighted objectively in a presumptive determination of each security's liquidity classification. Such factors could include, for example,

- the size of the all the issuer's securities outstanding in the aggregate;
- the security's "time since issuance" (because more recently issued securities tend to be more closely followed and therefore more liquid than older securities);
- the security's coupon relative to the issuer's "on the run" coupon (fixed-income securities with "off-market" coupons tend to trade with less liquidity than securities

[22] One way to illustrate the practical implications of this "categorical" classification approach, and contrast it with the "bottom-up", security-by-security approach proposed by the SEC in the Proposing Release (which we propose to largely continue to apply to exchange-listed securities, as discussed above), is to point out that the categorical approach would tend to treat in the ultimate classification breakdown two funds that invest in *the same or similar* types of OTC securities (say, high yield bonds, or senior loans) very similarly to each other; but would tend to draw sharp classification distinctions between two funds that invest in *different types* of OTC securities (say, high yield bonds by one fund, and senior loan funds by the other).

with "current" coupons; indeed, this factor may closely relate to the "time since issuance" factor);
- Whether the security is TRACE-reportable;
- Whether the security is represented in broad-based indices;
- Whether the security was issued in an emerging market, which tend to be less liquid than securities issued in developed markets; and
- Industry factors (e.g., energy bonds may become less liquid if energy prices are falling sharply).

The point we are making here is that the choices of factors to be included in a liquidity classification scheme for numerous distinct and often complex security categories cannot be prescribed by regulation, but should be left to the discretion of the people closest to those instruments and the markets in which they trade - the fund, its adviser, and the fund Board - and will from time to time change based on market conditions. As an example, a bond's credit rating has typically been a more significant factor than its duration in affecting liquidity—but in 2013, duration briefly came to the fore as a highly significant factor, then subsequently receded in significance.

C. Individual securities within an asset class or a sub-cohort of an asset class may need to be placed in a different classification bucket than other members of its asset class or sub-cohort because of security-specific or other idiosyncratic features or factors, such as cases where the fund or its adviser has come into possession of material non-public information about the issuer of an otherwise highly liquid bond.

Even though our fallback classification alternative that we have been describing proposes that the liquidity classification schemes for the two security cohorts (exchange-traded and OTC) each use 5 "liquidity buckets", those two sets of 5 liquidity buckets are not fungible, interchangeable or combinable, and should be disclosed separately, as described and illustrated more particularly below.

D. One Comment In Case the SEC Adopts its Original Liquidity Classification Rubric

If the SEC ends up adopting its original liquidity classification rubric, or something similar, at least for exchange-traded securities, we would like it to clarify that the factors suggested in the original proposal for evaluating liquidity need not all be used in all instances. For example, in the case of highly liquid equity securities of larger issuers, ADTV-based analysis may be completely sufficient to assess each security's liquidity, and evaluating and documenting the numbers of market makers and bid-offer spread details for each such security may often be unnecessary to assess liquidity.

IV. Nuveen Favors Elimination of the SEC's Proposed Three Day Liquid Asset Minimum Regulatory Rubric

A. The SEC's Proposed Three Day Liquid Asset Minimum Regulatory Rubric, and Its Shortcomings

Nuveen believes that the SEC's "Three Day Liquid Asset Minimum" requirement and associated disclosures represents a well-intentioned attempt to address a legitimate economic concern and regulatory need – namely, the need to require funds and fund families to develop and implement rigorous liquidity management policies and protocols.[23] However, we believe that the approach is ultimately too prescriptive and inflexible to accomplish its worthy purpose.

The first challenge is that the proposal is unworkable for OTC securities. For the reasons detailed in Observation "B" in Section II above, in stark contrast to exchange-traded securities, for OTC securities there is no way to calculate a reasonable estimate of trading liquidity which would support the accurate calculation of a fund's Three Day Liquid Assets percentage, or the determination of a Three Day Liquid Asset Minimum.

Even if there were a way to calculate a reliable Three Day Liquid Assets percentage or to determine an appropriate Three Day Liquid Asset Minimum figure for a fund that invests in OTC securities, reporting either figure would often be misleading. As the SEC itself indicated in the Proposing Release, liquidity risk management is a highly intricate and subtle exercise, and we fear that focusing on those two numbers (the Minimum, and the actual current percentage of Three Day Liquid Assets) will tend to mislead the reader about how well-managed a fund's liquidity risk is, or is not, while limiting the flexibility of portfolio managers to dynamically manage liquidity risk in pursuit of the funds' investment objectives. Given the range of factors that need to be considered when actively managing the liquidity of funds which invest at least some of their assets in less liquid securities, focusing shareholders on a single metric will meaningfully distort shareholder perceptions of managers' liquidity management practices – making some managers' practices appear more robust than they are and others less so. This is particularly the case for funds which invest in less liquid securities, because in a crisis it will be the liquidity of the less liquid securities in a portfolio that remain after a fund has been subject to significant redemptions which matters, not the liquid securities which were sold earlier in the process. Furthermore, the single metric does little to convey other very important considerations in a liquidity management program, for example the risks of concentrated ownership, the

[23] The SEC's adoption of the "days to cash realization" liquidity classification rubric, and especially the proposal to place special emphasis on a fund's policies regarding the maintenance of a minimum amount of assets that can be turned into case in 3 business days, and the fund's current amount of such assets, appears to rest on the premise that any liquidity risk management scheme needs most importantly to match the fund's ability to generate a specified amount of free cash within a 3 business day period, in order to exactly mirror the need of the fund to pay redemption proceeds to redeeming shareholders in that same time frame – i.e., on Day T+3. We believe that there are practical aspects of how fund share redemptions occur, about the timing of communications about fund redemption (gross and net) activity to fund sponsors and portfolio managers, and about how portfolio management actions in response to large net fund share redemptions can be effected, that warrant illumination, because such illumination would tend to undermine the connection between the timing of fund share redemption payouts, and the SEC's focus in the Proposing Release on a fund's ability to raise free cash within three business days. A discussion of these issues is set forth in Appendix A at the end of this document.

character of such concentrated ownership (i.e., is it long-term, does the owner provide notification in advance of redemptions), the fund's or asset class' history of substantial outflows, and the fact and nature of a fund's access to a committed credit facility.

Not only do we believe that the use of a Three Day Liquid Asset Minimum requirement would be misleading to shareholders in certain cases, we believe that the publication of such a Minimum requirement could be detrimental to shareholders and unnecessarily exacerbate heavy redemptions of shares of a fund that has temporarily gone below its published minimum. It is easily conceivable that shareholders who have not been party to the process by which a Three Day Liquid Asset Minimum was set could read too much into a fund falling below that number. Of course it doesn't take all of a fund's shareholders to cause a problem. If a significant portion of a fund's shareholders were to arbitrarily redeem based on the Three Day Liquid Asset Minimum being breached, one could easily imagine how their actions could help trigger a self-perpetuating spate of redemptions, even for a fund which otherwise managed its liquidity responsibly and appropriately.

C. Nuveen's Alternative to the Three Day Liquid Asset Minimum Requirement

As outlined above, Nuveen believes that the Three Day Liquid Asset Minimum requirement is unworkable, unnecessary and detrimental to shareholder interests. Rather than mandating a specific approach to managing liquidity, we believe that the SEC should establish broad requirements for liquidity risk management programs which will have the effect of improving liquidity management broadly across the industry.

The sort of non-prescriptive approach we contemplate is analogous to the one implemented by the SEC for fund valuation policies. In the fund valuation context, the SEC has promulgated general standards and considerations that a fund and its adviser need to take into account when valuing portfolio assets, but has not gone so far as to specify particular policies or processes to be used. Rather, each fund group develops and implements its own policies and processes, and as a result in certain cases different fund groups will value the same "hard-to-value" security very differently, each with justification. These differences reflect the inherent uncertainty related to such securities being "hard-to-value," which makes it impossible to "know" which value is "right." We think that this sort of non-prescriptive approach will enable fund groups to develop the optimal liquidity determination policies and processes for its particular circumstances, but provide sufficient guidance and impetus to fund groups to provide reasonable assurance as a public policy matter that liquidity risk management programs and liquidity classification protocols will be developed and implemented for all funds and fund groups.

Similar to the valuation context, the SEC's requirement that funds publish portfolio level liquidity assessments as described below would provide shareholders and perspective shareholders sufficient, actionable information to differentiate between broad classes of funds and between funds in more heterogeneous categories, and to assess the overall liquidity risk which they have across a portfolio of funds.

We believe that, in the absence of the Three Day Liquid Asset Minimum requirement, the disclosure of a fund's breakdown of assets (at the category level in the aggregate in reporting to the general public; but on an asset-by-asset basis in reporting for the SEC's eyes only, as we explain more fully below) on Form N-PORT will provide those respective audiences with the appropriate amount of insight into the fund's overall breakdown of assets and sources of available cash as of a recent date.

V. Nuveen Believes That Security-by-Security Liquidity Classification Information Should Not Be Disclosed to the Public

As we explained in Observation "E" in Section II above, we do not believe that putting security-by-security level information in the hands of the public, including information aggregators who provide advice about fund investments to investors and their financial advisers, would meaningfully serve the funds' or the public's best interests.

Instead of the security-by-security classifications themselves being disclosed to the public via Form N-PORT, our alternative liquidity classification scheme contemplates that each fund separately disclose, on the portion of Form N-PORT that is made public, a "roll-up" of the total amount of the fund's assets in one of the two separate sets (one for exchange-traded securities, the other for OTC securities) of five liquidity classification buckets:

Bucket	Exchange-Traded Securities	OTC Securities
1	Day 1 Liquidity	Cash equivalent securities
2	Day 2-3 Liquidity	Highly liquid, regular-way settled securities
3	Day 4-7 Liquidity	Highly liquid, delayed-settlement securities
4	Day 8-15 Liquidity	Constrained liquidity securities
5	Day 16+ Liquidity	Illiquid securities

As an example, a "balanced fund", investing in roughly equal portions of common stocks and bonds, might disclose that its holdings were classified in these two sets of liquidity buckets as follows[24]:

[24] As we explained in Section III above, those two sets of 5 liquidity buckets are not fungible, interchangeable or combinable, and should be disclosed separately, which we think makes sense regardless of whatever the liquidity classification rubric that the SEC ultimately adopts in the final rule, because the liquidity of exchange-traded securities and of OTC securities are so different.

Sample Liquidity Disclosure

Bucket	Exchange-Traded Securities*		OTC Securities**	
1	0%	Day 1 Liquidity	4%	Cash Equivalent
2	38%	Day 2-3 Liquidity	31%	Highly Liquid, Regular-way Settled
3	8%	Day 4-7 Liquidity	0%	Highly Liquid, Delayed Settlement
4	4%	Day 8-15 Liquidity	12%	Constrained Liquidity
5	1%	Day 16+ Liquidity & Illiquids	3%	Illiquid Securities

* The liquidity breakdown for exchange rate securities is calculated assuming the fund hypothetically sold its entire position in each security over a continuous period, selling no more than 20% of the Average Daily Trading Volume as calculated for the previous 90 days. This calculation is backward looking and may not reflect the fund's ability to sell such securities in the future. These calculations reflects no special analysis performed by or discretionary judgement of the fund or its adviser, except in cases where special circumstances require re-classification of a particular security as illiquid.

** Cash equivalent securities can be converted to cash in 1 business day at a value that equals or very closely approximates its current carrying value. Highly liquid securities are securities which the investment adviser believes with reasonable certainty that the fund can enter into a sale transaction on a same-day basis, at a price that is roughly approximate to its current carrying value. Regular way settled securities settle T+3 or better. Delayed settled instruments settle in a period longer than T+3. Constrained liquidity instruments have trading markets which Nuveen considers to be robust, but whose trading dynamics make it less than reasonably certain that an agreement to sell (or buy) the security on a same-day basis without materially impacting the realizable value for such security. Illiquid securities lack robust trading market exists and/or which cannot be reasonably expected to be sold within a seven days at approximately the security's current carrying value.

We propose that, in addition to publicly filing such rolled-up fund-level liquidity classification data, such a fund would provide the security-by-security classification breakdowns for each security in its portfolio to the SEC, *for SEC eyes only*. This would enable the SEC staff, and potentially other regulators with which the SEC would share such data in a secure manner, to help them assess deeply both systemic risk and fund-level risk associated with the liquidity characteristics of that portfolio. It could potentially also highlight differences among funds and fund sponsors in terms of their categorization practices which might help the SEC staff to determine priorities for examinations or other inquiries.

We strongly believe that such security-by-security information should not be provided to the general public. We have reached this conclusion for two primary reasons. First, we do not see the security-by-security information as providing a meaningful benefit to public audiences in their ability to evaluate funds and managers. Second, as discussed above, making that information available to hedge funds and other sophisticated market participants would give those sophisticated market participants such asymmetrically favorable information in their dealings with funds in market transactions regarding the funds' portfolio securities that it could be expected to result, in the cases of many funds, in significant harm to fund shareholders.

Our recommendation that security-by-security classifications be included in the "SEC eyes only" portion of Form N-PORT means that, if the SEC ultimately chooses not to differentiate between (a) the level of information provided on an SEC-only basis and (b) the level of information made available to the public, then we would strongly advocate not providing security-by-security classifications to *either* the SEC or the public, but rather to provide only the rolled-up fund-level data, as illustrated above, to both the SEC and the public. In that case, where the final rule would not require any disclosure of security- by- security liquidity assessments to the public or to the SEC, the SEC could still ensure that the SEC staff will have ongoing access to security level data by mandating record-keeping of the underlying security-by-security liquidity classification data by funds and their investment advisers in such a way as to facilitate rapid response to regulatory inquiries.

Other Disclosure Suggestions

Finally, we request that the final rule, or at least the adopting release:

- acknowledge that data from third-party vendors may be used in a fund's assessment of liquidity, but is not required;
- that different funds of the same sponsor may assess the liquidity of a security differently from how a third-party classifies the bond depending on the investment objectives and risk parameters of the fund, and

* * *

We appreciate this opportunity to provide comment and input on the proposals and questions contained in the Proposing Release. If the Commission or its staff has any questions regarding our letter, please do not hesitate to contact me at [redacted].

Sincerely,

Nuveen Fund Advisors, LLC

/s/ Gifford R. Zimmerman
Gifford R. Zimmerman, CFA
Managing Director and Associate General Counsel

cc: The Honorable Mary Jo White
The Honorable Michael S. Piwowar
The Honorable Kara M. Stein
Mr. David Grim, Director, Division of Investment Management, Securities and Exchange Commission
Mr. David Blass, General Counsel, Investment Company Institute

A general discussion of cash settlement timing mismatches between share redemption payouts and portfolio liquidation receipts (and an associated public policy proposal)

Securities that fall within either our Liquidity Bucket 2 (for either exchange-traded securities or OTC securities) can be used to pay off a share redemption-driven payment obligation received on Business Day 0 by no later than Business Day 4, by effecting a sell trade of such securities on Business Day 1, and achieving regular-way (T+3) settlement of that sale of securities for cash on Business Day 4. For fund share redemption payouts on Business Day 3 (for fund share redemption trades that settle regular-way on T+3), receipt by the fund on Business Day 4 (day T+3 relative to the date of the portfolio security sale) of the cash from the portfolio security liquidation would enable the fund to use that cash to pay off any bridge borrowing that might have been necessary to finance the redemption payment on Business Day 3 (or to replenish any draw-down of the fund's normal amount of "retained cash cushion") no more than 1 business day after the need to regular-way settle the fund share redemption trade on Business Day 3. Similarly, for fund share redemption payouts on Business Day 1 (for fund share redemption trades that settle on an accelerated basis on T+1, which accelerated settlement is fairly commonplace, especially in connection with funds that sell and redeem shares through intermediaries), receipt by the fund on Business Day 4 (day T+3 relative to the date of the portfolio security sale) of the cash from the portfolio security liquidation would enable the fund to use that cash to pay off any bridge borrowing that might have been necessary to finance the redemption payment on Business Day 1 (or to replenish any draw-down of the fund's normal amount of "retained cash cushion") no more than 3 business days after the need to quick-settle the fund share redemption trade on Business Day 1. In contrast, if a portfolio security trades in a country where security trades normally do not settle until Day T+4 or after, the fund would not be able to receive the cash from the sale of that on Business Day 4, but rather would only receive that cash on Business Day 5 or later, which would be less timely than the standard we have set for securities placed in Liquidity Bucket 2. Likewise, if a portfolio security trades in a country where even a T+3 settlement will not occur at or before 4:00 pm ET on that T+3 day, such security cannot be said to be convertible into cash on the same timetable as securities we have defined as falling into Liquidity Bucket 2. We are ignoring the fact that holidays in non-U.S. jurisdictions may fall on different business days than U.S. holidays throughout the year. We are also assuming normal trading days in this analysis, and are thereby ignoring any unusual market events that might change the relative ability of a fund to turn a portfolio holding into cash at a particular time, such as a "flash crash".

The mere fact that a fund can turn a portfolio asset to cash within 3 business days does not assure that the cash will arrive at the fund in time to be used to pay out the redemption proceeds of shareholders whose redemptions triggered the need to sell assets, for at least two reasons:

1. A large net redemption on Day T (or "T0") that triggers the need to liquidate securities to raise the cash to pay the redemption will, under current practices, generally not become known to the fund or its adviser until after (often, well after) the close of the trading day. Therefore, the portfolio sale associated with that redemption cannot be made until Day T+1, which in turn means that the cash proceeds from any portfolio sale of a security that settles T+3 (which would qualify as a Highly Liquid Asset) will not arrive at the fund until Day T+4. That in turn means that, if the share redemption settles T+3, the cash proceeds from the portfolio sale would arrive a full business day too late to "match" the timing of the

redemption payout. The SEC Proposal, by its emphasis on the need for a fund to establish a Three Day Liquid Asset Minimum (or what we insist on referring to as a "Highly Liquid Asset Minimum"), and to measure and/or publish the amount or percentage of Highly Liquid Assets on hand, seemed to imply that it was possible and even necessary to "match" the timing of those two events (share redemption payouts, and portfolio security sale settlements) in order to truly say that one is managing the fund's liquidity.

However, in fact it is often not possible to match the timing of those two events in the real world, even in cases where the share redemptions settle on a regular-way, T+3 basis, because of the one-day delay in the fund even knowing that it has a large net redemption that has triggered the need to raise a significant amount of free cash to meet that net redemption amount. That single-day gap (T+4 asset sale settlement vs T+3 fund share redemption payout) will, of necessity, need to be bridged by some other source of ready cash (possibly including cash already on hand). And if the fund's amount of cash and cash equivalents on Day T and therefore its amount of cash on Day T+3 are insufficient to equal or exceed the amount of the net redemption payable on Day T+3, then the fund will need to borrow through one means or another (e.g., by drawing on a credit facility, or overdrawing its custodial cash account) to cover that single-day "cash gap."

2. Even beyond that single-day timing mis-match, for many funds and fund families, a large percentage of their share redemption trades settle on a T+1 basis, and not on a T+3 basis. In the cases of some funds and families, those T+1 settlements can apply to a majority of their share redemptions. In all such cases (again assuming that the fund does not receive notice of the over-large net redemption that trigged the need to sell securities to raise cash to pay the net redemption until after the close of business on Day T), there will be a 3-day "cash gap" between the time of the cash payout to the redeeming shareholders on Day T+1, and the time of the incoming cash from the sale of T+3-settling securities on Day T+4[25]. To the extent that the fund does not have a sufficient amount of cash or cash equivalents on Day T, and therefore a sufficient amount of cash on Day T+1, to equal or exceed the amount of the net redemption payable on Day T+1, then the fund will need to borrow through one means or another (e.g., by drawing on a credit facility, or overdrawing its custodial cash account) to cover that 3-day "cash gap" between Day T+1 and Day T+4.

We note that the 1-day or 3-day borrowings to cover the 1-day or 3-day "cash gaps" described above should not be thought of as "leverage", because counterparties are obligated to provide cash to the fund as part of trade settlement at the end of those 1- or 3-day periods, and the fund is therefore not exposed to the risk/reward of investments beyond its net assets.

We would also like to point out that the structural, essentially unavoidable, one-day mismatch of cash flows between T+3 share redemption payouts from redemption orders received on Day T (i.e., Day 0), and T+3 portfolio security settlements of portfolio security sales that occur on Day 1 and settle on Day 4 has always existed for mutual funds, is fundamental to how they have operated for 75 years, and has never been thought of as problematical, even in a financial crisis. Allowing funds to pay

[25] Even if the fund were to receive notification of an impending, large redemption that will need to be settled on a T+1 basis in the middle of the day, in sufficient time to be able to effect the associated portfolio security sales necessary to raise the cash needed to pay out the redemption proceeds on a same-day basis (i.e., on Day T), there will still be a 2-day gap between the timing of the payout of those redemption proceeds on Day T+1 and the receipt on Day T+3 of the proceeds of the Day T portfolio security sales.

redeeming shareholders on a T+3 basis (more on redemptions on a T+1 basis in the next paragraph) despite often not receiving the proceeds from the associated portfolio liquidations until Day 4 after Day T has been and, in our view, will continue to be a benign structural characteristic of mutual funds, and that public policy considerations favor continuing to permit such a structural one-day settlement mismatch to exist and regularly occur. The public policy benefit of permitting such a one-day cash timing mismatch to continue is premised on the concepts that (a) the counterparty to the fund's portfolio security sale will in fact reliably settle on the 4th business day after Day T[26], and (b) the one day of borrowing to cover this one-day cash timing settlement gap is not "leverage", as explained in the preceding paragraph, and that the fund's only increased risk is limited to the failure of that counterparty to actually settle on that one "extra" day; so that the large and broadly shared benefits associated with the pooled nature of mutual funds greatly outweigh the virtually non-existent marginal downsides associated with enabling and permitting the continuation of this sort of one-day cash timing mismatch as a public policy matter.

This same public policy arguments arguably apply to justify the cash timing mismatch even in the case of the 3-day settlement gap between (x) a share redemption where the redemption proceeds are required to be paid out on a T+1 basis to certain intermediaries of intermediary-distributed mutual funds, and (y) the proceeds of a portfolio security sale that occurs on Day 1 after T (Day T+1) are not received until Day 3 after Day T+1 (Day T+4): the counterparty to the portfolio sale can reliably be expected to settle on Day 4 after T, just as it would normally be expected to settle on Day 3 after T; and the three days of borrowing to cover the settlement gap is not "leverage". However, there is not only an obvious quantitative difference between a 1-day cash timing mismatch and a 3-day mismatch (i.e., two extra days of mismatch), but there is also a qualitative one: having a 3-business day cash timing mismatch simply runs afoul of the concept that interrelated financial transactions (in this case, a fund share redemption, and the fund portfolio sale used to generate cash to fund the payout to that redeeming shareholder) should settle on a closely coordinated if not identical timetable, and a 3-day timing mismatch is simply not "closely coordinated". Therefore, although this is not directly covered in the SEC's Proposing Release, **we think that the SEC should give strong consideration to banning the settlement of fund share transactions on a quicker-than-regular-way basis**, which in the current environment would effectively ban T+1 settlement arrangements between mutual funds and certain intermediaries and would put all normal fund share transaction settlements on the same T+3 basis as that currently in place for most types of securities transactions.

[26] Note that adding the "extra", fourth day to achieve settlement on the fund's portfolio sale does not at all change the fact that the reliability and coherence of the entire security settlement system, including the expected interrelation between mutual fund share redemptions and the settlement of mutual fund portfolio security sales, already expressly assumes that the counterparty to the portfolio security sale will in fact settle on T+3, so that extending that settlement date to T+4 does not really change that fundamental assumption.