

Fund Valuation Under the SEC's New Fair Value Rule

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Fund Valuation Under the SEC's New Fair Value Rule

I. Introduction

Funds¹ valuation practices are guided by the Investment Company Act of 1940 (Investment Company Act), the valuation-related rules thereunder, and accounting standards. Section 2(a)(41) of the act establishes a two-pronged approach to valuing portfolio investments:

- » securities for which market quotations are readily available must be priced at market value; and
- » all other securities must be assigned a “fair value as determined in good faith by the board of directors” of the fund.

Most funds value each of their portfolio investments every business day. This is a necessary step in a fund’s daily calculation of its net asset value (NAV). A fund then uses its NAV to process daily purchases and redemptions by fund shareholders.²

A well-functioning valuation process is critically important to funds and their shareholders. As the Securities and Exchange Commission (SEC) has stated, “Proper valuation, among other things, promotes the purchase and sale of fund shares at fair prices, and helps to avoid dilution of shareholder interests. Improper valuation can cause investors to pay fees that are too high or to base their investment decisions on inaccurate information.”³ Proper valuation also helps ensure accurate total return performance calculations, which are based on the change to a fund’s NAV.

As of September 30, 2021, funds registered under the Investment Company Act held \$32.5 trillion in assets. Funds hold a wide array of portfolio investments, including equities, fixed-income securities, and derivatives—valuing them requires a variety of processes, methodologies, inputs, and assumptions.

¹ In this report, we will refer to mutual funds, exchange-traded funds (ETFs), closed-end funds, and business development companies (BDCs) as *funds*.

² Open-end funds, which include mutual funds and ETFs, value their portfolios each business day, from which they calculate the NAVs used to process daily purchases and redemptions by fund shareholders. Closed-end funds and BDCs must periodically value each of their portfolio holdings, with most closed-end funds choosing to do so every business day. Closed-end interval funds resemble open-end mutual funds in that their shares are continuously offered and typically priced daily to facilitate investor purchases. See the appendix for additional detail.

³ *Good Faith Determinations of Fair Value*, SEC Release No. IC-34128 (Dec. 3, 2020) (“Fair Value Release”), available at www.sec.gov/rules/final/2020/ic-34128.pdf.

Within the framework of the Investment Company Act, valuation practices have evolved over the decades in response to:

- » the changing investment landscape, as evidenced by the increase in number and type of funds' portfolio investments;
- » changes to market structure;
- » enhanced data availability, including the development of the Financial Industry Regulatory Authority (FINRA) Trade Reporting and Compliance Engine (TRACE);⁴
- » changes to accounting standards, including the development of Accounting Standards Codification Topic 820, *Fair Value Measurement* (ASC Topic 820); and
- » other relevant legal and regulatory actions, including the enactment of the Sarbanes-Oxley Act of 2002 and adoption of rules thereunder, and adoption of Rule 38a-1 under the Investment Company Act (the "compliance rule") in 2003.

In December 2020, the SEC adopted Rule 2a-5 under the Investment Company Act (the "fair value rule," or the "rule").⁵ Motivated by the cumulative impact of the changes mentioned above, this rulemaking is the SEC's most comprehensive and significant action on fund valuation in 50 years.⁶ Funds must comply with this new rule (and companion recordkeeping Rule 31a-4) by September 8, 2022.

Given the importance of this new rule and fund valuation generally, we have prepared this report to examine fund valuation practices. In the sections below, we discuss or describe:

- » the range of funds' portfolio investments and how they are valued;
- » the key parties that contribute to fund valuation; and
- » the core requirements of the fair value rule and how they compare to current industry practices.

The appendix summarizes the legal requirements and accounting standards that govern and shape fund valuation.

We believe this report also makes clear the rigor with which fund advisers, boards, and key third-party service providers carry out their work.

⁴ TRACE is the FINRA-developed vehicle that facilitates the mandatory reporting of over-the-counter (OTC) transactions in eligible fixed-income securities. All broker-dealers that are FINRA member firms have an obligation to report transactions in TRACE-eligible securities under an SEC-approved set of rules.

⁵ See *supra*, note 3.

⁶ Further explaining the purpose of this rulemaking and its approach, the SEC states, "The final rule establishes minimum and baseline standards that we believe are inherent in any good faith fair value determination, as informed by current industry practice." Fair Value Release at 10. ICI's [comment letter](#) on the 2020 proposal was generally supportive of the new framework. Overall, we believed it would improve and modernize the regulatory framework for fund valuation of portfolio securities; appropriately reflected the roles of fund boards and investment advisers; and correctly recognized the importance of accounting standards to funds' fair value determination process.

II. Range of Fund Investments and Their Varied Valuation Methodologies

Funds invest in a wide range of equities, fixed-income securities, and derivatives. To provide a measure of this variety and volume, ICI evaluated and aggregated the portfolio holdings data contained in each reporting fund's last publicly disclosed Form N-PORT filing made in 2020.⁷ In the aggregate, these 12,838 fund filings reported 505,390 unique investments in their portfolios, distributed across broad asset classes⁸ as follows:

- » Debt: 178,314
- » Asset-backed securities: 146,027
- » Derivatives: 117,415
- » Equities: 47,136
- » Loans: 8,095
- » Short-term investment vehicles: 2,916
- » Repurchase agreements: 2,700
- » Commodities: 49
- » Real estate: 4
- » "Other": 654
- » "No" asset type: 2,080

Given this variety and volume, it is not surprising that funds use various valuation methodologies, with varying inputs, assumptions, and complexity.

As discussed in more detail in the appendix, when pricing an asset or liability, market participants use data and assumptions as inputs. Inputs form the basis of the US Generally Accepted Accounting Principles (GAAP) fair value hierarchy, which is used to categorize the fair value measurement for a portfolio investment into one of three levels.

Level 1. For a fair value measurement to qualify as a Level 1 measurement in the fair value hierarchy, or for an input into a fair value measurement to qualify as a Level 1 input, the price (input) must be a quoted price (unadjusted) in an active market for an identical asset that the fund can access at the measurement date. An active market is a market in which transactions for the asset take place with sufficient frequency and volume to provide pricing information on an ongoing basis. The fund must be able to access the price at the measurement date. For example, a fund has access to the price if it has the

⁷ We restricted our analysis to reporting funds (i.e., those funds that make Form N-PORT filings) of ICI members. Because reporting funds' fiscal year-ends differ and not all fund filings are publicly available, we could not review and aggregate the data as of a single date.

⁸ We aggregated this information from funds' responses to Item C.4.a on Form N-PORT, and we further categorized the information to correspond to these 11 categories. "Other" includes investments that were not reported under one of the form's more specific categories, such as registered investment companies and private funds (among others). We have classified an investment as having "No" type in cases where funds classified it differently and there was no strong preponderance of evidence suggesting that a particular classification was likely to be correct (Form N-PORT has no corresponding classification option).

ability to transact at the price on an exchange. Exchange-traded equity securities are typically classified as Level 1 in the fair value hierarchy. Any adjustment to a quoted price in an active market would, however, result in the fair value measurement being classified differently (e.g., Level 2).

Level 2. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include:

- » quoted prices for similar assets in active markets;
- » quoted prices for identical or similar assets in markets that are not active;
- » inputs other than quoted prices that are observable for the asset, including interest rates, yield curves, implied volatilities,⁹ and credit spreads; and
- » market corroborated inputs.¹⁰

Fixed-income securities are typically classified as Level 2 in the fair value hierarchy.

Exchange-traded equities also may be classified as Level 2 in the fair value hierarchy. A fund may adjust the last sale closing price for an actively traded exchange-listed security for significant events that take place subsequent to the foreign market closing time and prior to the fund's designated time for calculating its NAV (typically, 4:00 p.m. ET). Such an adjustment would cause the fair value measurement to be classified as Level 2 in the fair value hierarchy.¹¹

Level 3. Level 3 inputs are unobservable inputs for the asset. Unobservable inputs are used to measure fair value when relevant observable inputs are not available, thereby enabling fair valuation in situations in which there is little, if any, market activity for the asset at the measurement date. However, the fair value measurement objective remains the same—determining an exit price at the measurement date from the perspective of a market participant that holds the asset. Unobservable inputs should reflect the assumptions that market participants would use when pricing the asset, including

⁹ Volatility represents divergence in an asset's price from the mean and is a statistical measure of the dispersion of returns. Volatility is an input in options pricing models, along with the underlying stock price, the strike price, the time to expiration, and the risk-free interest rate. If the market price of the option is known, the model can be used to solve for the implied volatility, which represents a forward-looking measure of market volatility.

¹⁰ The inclusion of market corroborated inputs is significant in that it expands the scope of Level 2 inputs beyond those directly observable for the security. Inputs determined through mathematical or statistical techniques, such as correlation or regression, may be categorized as Level 2 if the inputs into, and/or the result from, these techniques can be corroborated with observable data.

¹¹ See *infra*, Section V.C.3, for a more detailed discussion of these time zone-based fair value adjustments.

assumptions about risk. Unregistered equity securities obtained in private placement offerings are typically classified as Level 3 in the fair value hierarchy.¹²

Using the SEC’s Form N-PORT data, the Fair Value Release provides a useful snapshot of how fund assets are spread across the three tiers of the GAAP fair value hierarchy.¹³ We summarize its key data points below.

	Number of funds	Total net assets (billions of dollars)	Average Level 1 inputs	Average Level 2 inputs	Average Level 3 inputs	Average “N/A” inputs ¹⁴
Open-end funds	12,387	\$23,475	62%	35%	0.2%	1%
Registered closed-end funds	696	\$305	26%	53%	6%	12%

The small percentage of Level 3 assets in open-end funds is noteworthy, but not surprising. In many instances, hard-to-value assets are also illiquid assets, and an open-end fund (other than a money market fund) is subject to a 15 percent limit on illiquid investments.¹⁵ This limit on illiquid investments also provides a de facto cap on an open-end fund’s ability to invest in hard-to-value investments. Thus, while this 0.2 percent Level 3 figure for open-end funds will not remain static, the percentage will remain a small percentage of open-end fund assets, both by fund and industrywide.

But while the majority of fund assets (in total dollars) are classified as Level 1, fund complexes (particularly those with fixed-income funds) may hold many more individual CUSIPs classified as Level 2. One fund complex informed us that as of December 31, 2020,

¹² One commonly used method for valuing investments in private equity is the *guideline public company method*. This method entails selecting similar public companies and the multiples at which their shares trade in the market and applying those multiples to the subject portfolio company. More specifically, this could involve (i) identifying similar public companies based on industry, geographic reach, customers, seasonality of business, business cycle life stage, revenues, assets, profitability, and/or growth rates, and (ii) calculating multiples for those companies such as a price-earnings multiple, a price-book multiple, or a price-EBITDA multiple (EBITDA is earnings before interest, taxes, depreciation, and amortization). Those multiples then can be applied to the subject portfolio company’s earnings, book value, or EBITDA to derive a fair value for its shares. For early stage companies that have little or no earnings, multiples may include price-to-sales or enterprise value-to-sales.

Another method used for valuing investments in private equity is the *discounted cash flow method*. This method projects a company’s future free cash flows based on expected financial performance such as revenue or EBITDA. The discounted cash flow method also considers the terminal value of the company at the anticipated liquidity event. Terminal value can be estimated using an expected exit multiple or other method. The projected cash flows, including the terminal value, are discounted to a present value using an appropriate discount rate. ASC Topic 820 identifies different methods for determining the appropriate discount rate. For example, the discount rate adjustment technique uses a risk adjusted rate to discount the expected cash flows.

¹³ Fair Value Release at 124–125. The SEC notes, “The sum of the average using level 1, 2, 3, and ‘N/A’ within each fund category may not sum up to 100 percent due to rounding error.”

¹⁴ The Fair Value Release explains that investments that are valued at NAV (i.e., investments in private funds), and thus do not have a level associated with them, are classified as “N/A” on Form N-PORT. Investments in open-end funds and ETFs are typically classified as Level 1 in the fair value hierarchy.

¹⁵ Rule 22e-4(b)(1)(iv) under the Investment Company Act.

it held approximately 94,000 separate fixed-income CUSIPs across its funds, compared to 4,400 equity CUSIPs. One pricing service recently indicated that it offers evaluated prices¹⁶ for approximately 2.8 million instruments, including fixed-income securities such as sovereign, corporate, and municipal bonds; structured products; leveraged loans; and non-US equity securities.¹⁷

III. Key Contributors to the Fund Valuation Process

In the subsections below, we explain how these parties contribute to fund valuation: fund boards, investment advisers, and some key third-party providers (administrators, pricing services, dealers and appraisers, subadvisers, and independent auditors).

A. Fund Boards

Mutual funds, closed-end funds, and ETFs structured as open-end funds have boards of directors. A fund board must maintain a particular level of independence, and as fiduciaries, directors represent the interests of shareholders. A fund board's role is primarily one of oversight. The fund board typically is not involved in the day-to-day management of the fund company—the fund's investment adviser (along with, in some cases, its administrator) handles this.

The Investment Company Act and rules thereunder task the fund board with certain valuation-related responsibilities. By statute, the fund board determines fair value in good faith for those securities that do not have readily available market quotations.¹⁸ And Rule 22c-1 under the Investment Company Act requires a fund board to set the time (or times) during the day that an open-end fund's current NAV must be computed and make and approve such changes as it deems necessary.

Prior to adoption of the fair value rule, the SEC and its staff had provided guidance regarding how fund boards should carry out these responsibilities. The Fair Value Release rescinded the prior guidance.¹⁹ Consequently, the rule itself and its related guidance will govern how boards fulfill their fair value responsibilities once funds begin complying, no later than September 8, 2022 (the compliance date).

¹⁶ Evaluated prices represent a pricing service's estimate of the amount for which the security could currently be sold in an orderly institutional sized transaction (typically \$1 million or more). The pricing service considers a wide range of market-based inputs in developing the estimate, including recent trades in the security, trades in similar securities, broker bids, yield curves, and credit spreads; security-specific data, including coupon, maturity, call features, and credit quality; and issuer data, including financial results, financial position, and economic outlook.

¹⁷ See Letter from Mark Heckert, Chief Product Officer, ICE Fixed Income & Data Services, to Vanessa Countryman, Secretary, SEC, dated April 9, 2021, available at www.sec.gov/files/ice-data.pdf.

¹⁸ Likewise, Rule 2a-4(a)(1) states that "other securities and assets [that do not have readily available market quotations] shall be valued at fair value as determined in good faith by the board of directors of the registered company."

¹⁹ The Fair Value Release explains that rescission of prior guidance "is appropriate because the guidance...is superseded or made redundant by the adoption of Rule 2a-5 and by the requirements under the current accounting and auditing standards." Fair Value Release at 96. See the appendix for more detail.

Most significantly, the rule permits the fund's board²⁰ to designate²¹ the fair value determination relating to any or all fund investments to a "valuation designee," which generally will be the fund's primary investment adviser.²² We anticipate that the vast majority of fund boards will make this designation. Either the board (if it does not make such a designation) or the valuation designee must carry out the four core fair value functions described in detail in Section V.

In this respect, paragraph (b) of the rule—which specifies the responsibilities of a fund board that makes this designation—ratifies the long-standing practical division of valuation-related labor: the fund board's role as typically one of oversight, with the investment adviser (and other entities, including pricing services) establishing and applying methodologies and doing the day-to-day valuation work. Boards have well-established practices in overseeing investment advisers, developed over decades of fulfilling their statutory²³ and regulatory²⁴ responsibilities, and investment advisers' valuation-related work has long been a focal point of this oversight.

Also consistent with historical practice, a board making this designation must continue to oversee the designee.²⁵ The Fair Value Release provides guidance on how boards should exercise this oversight,²⁶ noting among other things that the fund board should approach its oversight "with a skeptical and objective view that takes account of the fund's particular valuation risks, including with respect to conflicts, the appropriateness of the fair value determination process, and the skill and resources devoted to it."

To help facilitate this oversight, the rule requires a valuation designee to provide the fund board with:

²⁰ Rule 2a-5(e)(3) defines *board* to mean "either the fund's entire board of directors or a designated committee of such board composed of a majority of directors who are not interested persons of the fund."

²¹ In explaining its use of the term *designate*, the Fair Value Release states, "[W]e believe that a board 'designating' a valuation designee to perform fair value determinations better describes the relationship between the board and valuation designee under the final rule—that is, one where the valuation designee performs the fair value determinations for the fund on the board's behalf subject to appropriate oversight by the fund's board." Fair Value Release at 41.

²² Rule 2a-5(e)(4) defines *valuation designee* as "the investment adviser, other than a subadviser, of a fund or, if the fund does not have an investment adviser, an officer or officers of the fund."

²³ For instance, Section 15 of the Investment Company Act requires initial board approval of a fund's investment adviser (including its subadviser[s], if applicable) and annual review and approval thereafter. Section 2(a)(20) of the Investment Company Act defines *investment adviser* broadly enough to include entities providing traditional subadvisory services to funds.

²⁴ For instance, Rule 38a-1 under the Investment Company Act requires that:

- » the fund's policies and procedures provide for the oversight of compliance by the investment adviser;
- » the fund board approve the investment adviser's policies and procedures;
- » the fund review, at least annually, the adequacy of the investment adviser's policies and procedures; and
- » the fund chief compliance officer (CCO) address in its annual written report to the fund board the operation of those policies and procedures, and any material changes made thereto.

All of these actions also apply to a fund's subadviser(s), if applicable.

²⁵ Moreover, the Fair Value Release states that "the final rule does not in fact shift the statutory fair valuation responsibilities away from directors. Rather, the final rule establishes the requirements the board must meet to fulfill its continuing statutory obligations." Fair Value Release at note 18.

²⁶ See Fair Value Release at 56–59 for guidance on board oversight.

- » quarterly reporting, generally related to material changes or developments affecting fair valuation;²⁷
- » annual reporting, generally related to an overall assessment of the fair value process;²⁸ and
- » prompt reporting, under certain circumstances.²⁹

While these specific requirements are new, reporting to fund boards on valuation matters is not. With respect to fair valuation, the role of the fund board has always been best understood as one of oversight, with important day-to-day valuation responsibilities resting with other key parties (e.g., investment advisers, administrators, and pricing services). Consequently, periodic reporting has been an important means of facilitating board oversight of fund valuation.³⁰

The fair value rule itself does not require funds to adopt policies and procedures. Rather, the Fair Value Release states that the compliance rule requires funds to adopt and implement policies and procedures reasonably designed to prevent violations of the requirements of Rules 2a-5 and 31a-4, and that the fund board must approve such policies and procedures—irrespective of whether the policies and procedures are those of the fund or the fund’s adviser.³¹

²⁷ Specifically, this requires at least quarterly reporting of:

- » any fair value reports or materials requested by the board; and
- » a summary or description of material fair value matters that occurred in the prior quarter, including:
 - » any material changes in the assessment and management of valuation risks;
 - » any material changes to, or material deviations from, established fair value methodologies; and
 - » any material changes to the valuation designee’s process for selecting and overseeing pricing services, as well as any material events related to the valuation designee’s oversight of pricing services.

²⁸ Specifically, this requires an annual assessment of the adequacy and effectiveness of the valuation designee’s process for determining the fair value of the designated portfolio of investments, including:

- » a summary of the results of the testing of fair value methodologies; and
- » an assessment of the adequacy of resources allocated to the process for determining the fair value of designated investments, including any material changes to the roles or functions of the persons responsible for determining fair value.

²⁹ Specifically, this requires the valuation designee to notify the board of the occurrence of “matters that materially affect the fair value of the designated portfolio of investments, including a significant deficiency or material weakness in the design or effectiveness of the valuation designee’s fair value determination process, or material errors in the calculation of net asset value, (any such matter or error, a ‘material matter’) within a time period determined by the board (but in no event later than five business days after the valuation designee becomes aware of the material matter), with such timely follow-on reporting as the board may determine appropriate.” While the rule does not establish a standard for what constitutes a material error in the calculation of NAV, the Fair Value Release indicates that reliance on \$0.01 a share or 0.5 percent of the NAV would not be unreasonable. Fair Value Release at 73. The Fair Value Release recognizes that determining the materiality of a matter may take time and suggests 20 business days as an outer limit on this determination timeframe. Fair Value Release at 75.

³⁰ See, e.g., *Fair Valuation Series: The Role of the Board*, Investment Company Institute, Independent Directors Council, and ICI Mutual Insurance Company (2006) at 12–13, available at www.ici.org/pdf/06_fair_valuation_board.pdf.

³¹ It will generally be the investment adviser, as valuation designee, that adopts fair value policies and procedures under Rule 38a-1, unless the board retains responsibility for determining fair value. Funds with valuation designees need not adopt duplicative policies separately.

Finally, the rule does not require a board to ratify the valuation designee's fair value determinations.

B. Investment Advisers

The rule permits a fund's primary investment adviser to serve as valuation designee and as such, carry out the rule's core fair value responsibilities. Again, this will bring the regulatory framework into greater conformity with how funds determine fair value for their investments in practice. Together with assistance from certain key third parties (as described below), investment advisers are experienced and well-equipped to carry out the rule's core functions:

- » assessing and managing material valuation risk;
- » establishing and applying fair value methodologies;
- » testing fair value methodologies; and
- » evaluating pricing services.

While the rule permits only a fund's primary adviser to serve as the designee,³² the contributions from advisory personnel are frequently varied and complementary. Funds' valuation practices have long been governed by detailed policies and procedures,³³ which outline the responsibilities of the fund board, the investment adviser and its personnel, and third parties.

Given the multidisciplinary nature of fund valuation, many fund complexes feature multi-member valuation committees that oversee and perform aspects of funds' day-to-day valuation work. These committees frequently include senior personnel with valuation expertise and may also include others from fund accounting, operations, risk, compliance, and legal. A valuation committee frequently has its own governing instrument (e.g., a charter or written policies and procedures), which among other things defines the committee's membership, scope of authority, and how decisions and determinations are made. Some committees have formal agendas and memorialize the actions they take (e.g., in meeting minutes).

³² The rule also permits an officer or officers of funds without investment advisers to serve as valuation designees. See *supra*, note 22. Given the very small number of internally managed funds, we assume throughout this report that a fund's valuation designee would be its primary investment adviser.

³³ See *Compliance Programs of Investment Companies and Investment Advisers*, SEC Release No. IC-26299 (Dec. 17, 2003) ("Compliance Rule Adopting Release"), available at www.sec.gov/rules/final/ia-2204.htm#P140_42493 (stating that "Rule 38a-1 requires funds to adopt policies and procedures that require the fund to monitor for circumstances that may necessitate the use of fair value prices; establish criteria for determining when market quotations are no longer reliable for a particular portfolio security; provide a methodology or methodologies by which the fund determines the current fair value of the portfolio security; and regularly review the appropriateness and accuracy of the method used in valuing securities, and make any necessary adjustments.").

These committees (or subsets thereof) may work daily to oversee, review, and resolve routine matters, such as pricing anomalies or exceptions. Such anomalies or exceptions could include investments:

- » that are subject to trading halts,
- » whose daily prices (as provided by a pricing service) may have moved sharply beyond preset tolerances,
- » for which the pricing service did not provide prices, or
- » whose prices from a pricing service appear to be unrepresentative of the amount for which the security could be sold.

In times of market stress, this daily valuation work performed by the committee and other personnel generally increases, as there may be more anomalies or exceptions to review and resolve. Often, funds lodge more price challenges (a process by which funds or other market participants challenge the accuracy of a vendor-provided price,³⁴ which usually includes a rationale and supporting information, including recent trading activity, issuer-specific news, or broker quotes) and override vendor prices (a determination by an adviser to value a security at a price other than that provided by a primary vendor, which is normally memorialized and includes a rationale) more frequently during such market conditions. See Section V.D.4 for a more-detailed discussion of price challenges and overrides.

In addition to this daily work, valuation committees and advisory personnel periodically perform other tasks that maintain and improve the overall quality of the valuation process. These typically include:

- » reviews of and enhancements and revisions to policies and procedures;
- » more in-depth reviews of:
 - » certain investments (e.g., Level 3 securities, investments whose prices have not changed recently, and securities with only a single pricing source);
 - » summary statistics (e.g., the percentages of fund assets classified as Level 1, 2, and 3 under the fair value hierarchy);
 - » testing results;
 - » price challenge and override activity;
 - » SEC enforcement actions or other regulatory developments;
- » evaluations of new products (e.g., new funds) or investment types; and
- » due diligence of pricing services and other relevant entities (e.g., fund administrators).

Some of this summary information also may be shared with the fund board. (See Section V for more detailed discussions of testing and vendor due diligence.)

³⁴ We use the terms *vendor* and *pricing service* interchangeably.

Given their expertise, fund portfolio managers and traders (and, where applicable, investment personnel at subadvisers) may be consulted on discrete matters from time to time. And they may proactively raise issues that could affect fund valuation (for example, investment-specific or marketwide events or developments). But such personnel generally provide input only, and do not have decisionmaking authority with respect to final valuation determinations. This is due to the potential conflicts of interest that undue influence could create. For instance, valuation determinations affect fund performance, and portfolio managers are frequently compensated in part based on fund performance measures.

In response to these potential conflicts, the fair value rule requires the designee to specify the titles of the persons responsible for determining the fair value of the designated investments (including their functions), and “reasonably segregate...fair value determinations from the portfolio management of the fund such that the portfolio manager(s) may not determine, or effectively determine by exerting substantial influence on, the fair values ascribed to portfolio investments.”³⁵

The rule’s “reasonable segregation” requirement is meant to address the potential conflicts that portfolio manager input (e.g., in the design or modification of fair value methodologies or determination of specific fair values) may present, while also recognizing the important perspective and insight regarding the value of fund holdings that portfolio management personnel may provide. Thus, the rule and related guidance make a critical distinction between the fair value *process* (in which portfolio managers may participate, and to which they may provide their “unique insights”) and fair value *determinations* (which portfolio managers *may not* make, or effectively make by exerting substantial influence). The Fair Value Release notes that “[r]easonable segregation of functions facilitates these important checks and balances, and funds could institute this requirement through a variety of methods, such as independent reporting chains, oversight arrangements, or separate monitoring systems and personnel.”³⁶

C. Key Third Parties

In addition to fund boards and advisers, there are third parties that are critical to funds’ valuation processes. The Fair Value Release recognizes this, primarily through guidance rather than rule text. It states that the board or designee:

may of course obtain assistance from others in fulfilling its duties. It may, for example, seek assistance from pricing services, fund administrators, subadvisers, accountants, or counsel. That assistance can take different forms, and may include services such as performing back-testing as specified by the valuation designee and performing calculations required by the valuation method selected by the board or valuation designee.³⁷

³⁵ Rule 2a-5(b)(2).

³⁶ Fair Value Release at 80. The Fair Value Release further illustrates this point by stating, “If portfolio managers provide a significant amount of input on the fair value of an investment, the segregation process should be appropriately rigorous and robust to mitigate any potential conflicts of interest. For example, in such a circumstance, the valuation designee could, as part of its reasonable segregation process, seek to provide independent voices as a check on any potential conflicts of interest to the extent appropriate.” Fair Value Release at 81.

³⁷ Fair Value Release at 52. However, the Fair Value Release also notes that “in seeking the assistance of others, the entity or officer designated to perform the fair value determination remains responsible for that determination and may not designate or assign that responsibility to the third party...”

Below we describe how a few of these key third parties contribute to funds' valuation processes.

Administrators. A fund administrator is “any person who provides significant administrative or business affairs management services to an investment company,”³⁸ and this may include fund accounting services. Some fund complexes handle this function in-house (within the investment adviser, or an affiliate of the adviser), while others contract with a third party for these services (either a stand-alone service provider or one offering other fund services, such as custody of the fund's securities). This in turn generally includes assigning a value to all portfolio securities and calculating the fund's NAV daily.

In carrying out this function, the administrator maintains a daily list of a fund's portfolio holdings. It also receives daily data feeds from external sources (e.g., pricing services) with pricing data corresponding to the fund's holdings. The administrator generally does not exercise discretion in assigning prices to a fund's portfolio investments and calculating the NAV. Rather, it follows and applies the fund's specific valuation policies and procedures, which include detailed instructions on how to “map” approved pricing sources to fund holdings. If a matter requires judgment or discretion (e.g., if a portfolio holding does not receive a price from an approved pricing service), the administrator will reach out to appropriate personnel at the adviser for resolution.

Once all portfolio holdings have been valued in accordance with the fund's policies and procedures (which may include input or feedback from the adviser), the administrator finalizes the calculation of the fund's NAV and disseminates it to relevant parties.

Administrators are covered by the compliance rule.³⁹

Pricing Services. A pricing service is an entity that provides price and trade-related data for funds' portfolio investments.⁴⁰ Pricing services have access to global securities markets and provide pricing data from numerous sources on a wide range of financial instruments, including equities, fixed-income securities, and derivatives. They provide real-time as well as end-of-day prices for investments, corresponding to the time(s) at which funds calculate their NAVs (usually 4:00 p.m. ET). Pricing services provide evaluated prices for investments that may not trade regularly (e.g., most fixed-income investments) by collecting and analyzing actual trade data for the specific investment, when they are available (through sources such as FINRA's TRACE and the MSRB's Electronic Municipal Market Access [EMMA]). Their evaluated prices also are commonly informed by actual trade data for similar investments and data and information from broker-dealers (e.g., prices they quote

³⁸ Rule 0-1(a)(5) under the Investment Company Act.

³⁹ As it pertains to fund administrators, the compliance rule requires:

- » the fund's policies and procedures to provide for the oversight of compliance by the administrator;
- » the fund board to approve the administrator's policies and procedures;
- » the fund to review, at least annually, the adequacy of the administrator's policies and procedures; and
- » the fund CCO to address in its annual written report to the fund board the operation of those policies and procedures, and any material changes made thereto.

⁴⁰ See also *infra*, note 79 and accompanying text, for the SEC's understanding of the term in the Fair Value Release.

for investments), trading desks, and many other sources. Specific valuation techniques will vary according to the pricing service and type of security. Some more commoditized evaluated pricing data are generated by computer models, but valuations on complex and less-liquid securities can involve significant manual interactions (e.g., calling a primary dealer).

Fund complexes investing in a wide array of investments may use multiple pricing services as a means of obtaining broader coverage, leveraging expertise of specific services, and providing potentially useful controls and redundancy (e.g., an adviser may have multiple service providers assigned to the same asset class and periodically compare the prices that they provide). The use of third-party pricing services mitigates the potential conflicts of interest that investment advisers face in valuing funds' portfolio investments, as described above. The major pricing services have multiple clients (including investment advisers), and the individual prices they distribute to each do not vary. But according to the SEC, use of pricing services is not necessarily conflict-free.⁴¹

Dealers and Appraisers. The overwhelming majority of evaluated prices that funds use in their NAV calculations come from pricing services, due to their extensive resources, analytical capabilities, and broad coverage (particularly of fixed-income markets).⁴² But funds may turn to other parties in some circumstances. For instance, while coverage from pricing services is broad, it may not be comprehensive, given the large number and continuous issuance of fixed-income securities. If a fund's pricing services do not cover an investment, the fund may consult a dealer that makes a market in or is otherwise knowledgeable about that investment (or investment type). In some cases, this is the dealer from which the fund purchased the investment. Use of dealer quotes may be temporary, lasting only until one of the fund's pricing services initiates coverage of the investment.

And for certain bespoke or hard-to-value investments (e.g., private equity), some funds may use specialized appraisers or valuation agents to assist with valuations. This assistance may range from offering an independent check on the price that the investment adviser internally develops using its own methodology (and related inputs and assumptions) to providing a concrete pricing recommendation to the adviser.

Subadvisers. Many funds use subadvisers, which manage all or a portion of a fund's investment portfolio and determine which investments to buy, hold, and sell. A subadviser is overseen by the fund's primary adviser and the fund board.⁴³ Subadvisers typically do not have primary responsibility for producing a fund's daily valuations, and they may not serve as valuation designees under Rule 2a-5.⁴⁴ Still, a subadviser sees fund holdings and their associated values (for the portion of the fund that it manages, if it does not have complete responsibility) each day, and can provide input to the primary adviser if any

⁴¹ The Fair Value Release states that "the conflict is not necessarily one of responding to pressure from a particular investment adviser, but, rather, a pricing service might generally provide higher or more aggressive valuations to retain business." Fair Value Release at 32.

⁴² See *supra*, note 17.

⁴³ See *supra*, notes 23 and 24 and accompanying text.

⁴⁴ But see note 37 and accompanying text.

valuations appear incorrect. And the primary adviser may reach out to relevant personnel at the subadviser for additional information and color, as it deems appropriate.

Independent Auditors. A fund's financial statements must be audited annually by an independent public accountant registered with the Public Company Accounting Oversight Board (PCAOB). The audit provides reasonable assurance that the fund's financial statements are prepared in conformity with GAAP and that they are free of material misstatement, whether due to error or fraud. The independent accountant conducts the audit pursuant to audit standards adopted by the PCAOB. Among other things, those standards require:

- » the independent accountant to assess the risks of material misstatement in the financial statements by obtaining an understanding of the fund, its investment securities, and the environment in which it operates;
- » considering the fund's internal control over financial reporting, including controls for safeguarding securities as a basis for designing audit procedures; and
- » performing substantive testing of transactions, account balances, and security values to provide sufficient appropriate audit evidence to support the independent accountant's opinion on the financial statements.

PCAOB standards also require the independent accountant to have specified communications with the fund board's audit committee, including an overview of the overall audit strategy, the significant risks identified during the auditor's risk assessment, critical accounting policies, critical accounting estimates, and any significant unusual transactions. The independent accountant also must convey to the audit committee a draft of its audit report and the results of its evaluation of whether the presentation of the financial statements and the related disclosures are in conformity with GAAP.

Auditing procedures performed on a fund's portfolio investments are a significant part of the overall audit because of the relative significance of those investments to the fund's performance, NAV, financial position, and results of operations. The principal objectives in auditing the fund's investments are to obtain reasonable assurance that:

- » the fund has ownership of, and accounting control over, all of its investments;
- » transactions are authorized and recorded in the accounting records in the proper account, amount, and period;
- » investments are properly valued consistent with ASC Topic 820;
- » income from investments and realized gains and losses from transactions are accounted for properly; and
- » investments are free of liens, pledges, or other security interests, or if not, such matters are identified properly and disclosed in the financial statements.

The SEC's Accounting Series Release 118 (ASR 118) requires the independent accountant to test values assigned to *all* investments at the balance sheet date. Testing requires the accountant to verify the price applied by the fund by obtaining a price for the security from a source independent of the source used by the fund.

Because the Fair Value Release rescinded ASR 118, as of September 8, 2022, independent auditors will no longer be required to test 100 percent of the values assigned to portfolio securities at the balance sheet date. As a result, auditors will look only to PCAOB standards, which permit sampling and other techniques to verify the value of a fund's investments.⁴⁵ Alternatively, the independent accountant may continue its current practice of testing 100 percent of the values of the fund's investments.

The PCAOB recently amended its audit standards relating to auditing estimates and fair value measurements.⁴⁶ The standard permits the auditor to test the security values assigned by the fund by developing an independent expectation of the security's value. Developing an independent expectation involves the auditor using some or all of its own methods, data, and assumptions to develop an expectation of the value of the security for comparison to the value assigned by the fund. The auditor may also use data or assumptions obtained from a third party (such as a pricing service) in developing an independent expectation of the security's value. The recently amended standard addresses the use of pricing information from third-party pricing services as audit evidence. It identifies factors that affect the reliability⁴⁷ and relevance⁴⁸ of pricing information provided by pricing services as audit evidence.

The recently adopted standard also permits the auditor to test the process used by the fund to develop the value assigned to the security. Testing the fund's process involves performing procedures to test and evaluate the methods, data, and significant assumptions used in developing the value, in order to form a conclusion about whether it is appropriate.

The audit of a fund's financial statements provides independent assurance that the fund's investments are properly valued in conformity with ASC Topic 820.

IV. The Role of the SEC and Its Staff

The SEC is the primary regulator of funds and their advisers. The SEC's Division of Examinations periodically examines funds and advisers, and valuation is a frequent focal

⁴⁵ Notwithstanding this September 8, 2022, rescission date, the SEC staff issued an FAQ indicating that auditors need not test 100 percent of the values assigned to portfolio securities for periods ending on or after March 31, 2021. See *infra*, note 94.

⁴⁶ PCAOB Auditing Standard 2501, *Auditing Estimates Including Fair Value Measurements*, is effective for audits of financial statements for fiscal years ending on or after December 15, 2020.

⁴⁷ Factors affecting reliability include: the experience and expertise of the pricing service relative to the types of financial instruments being valued, including whether the types of financial instruments being valued are routinely priced by the pricing service; whether the methodology used by the pricing service in determining fair value of the types of financial instruments being valued is in conformity with ASC Topic 820; and whether the pricing service has a relationship with the fund by which fund management has the ability to directly or indirectly control or significantly influence the pricing service.

⁴⁸ Factors affecting relevance include: whether the fair values are based on quoted prices in active markets for identical financial instruments; when the fair values are based on transactions of similar financial instruments, how those transactions are identified and considered comparable to the financial instruments being valued; and when no recent transactions have occurred for either the financial instrument being valued or similar financial instruments, or the price was developed using a quote from a broker or dealer, how the fair value was developed, including whether the inputs used represent the assumptions that market participants would use when pricing the financial instruments.

point for these exams. The division's *2021 Examination Priorities* identifies "valuation of client assets for consistency and appropriateness of methodology" as a "core" evaluation area for advisers, and notes that SEC staff "frequently review...whether [advisers] appear to have sufficient resources to perform core compliance responsibilities."⁴⁹ Furthermore, "The division will review mutual fund filings and reports to funds' boards for compliance with regulatory requirements and for valuation issues." And while this is common exam subject matter, market events inform the specific valuation-related matters that the SEC examines.⁵⁰ This is true of both routine exams and targeted exams that the division periodically conducts on a select number of registrants involving discrete matters.

This division not only signals anticipated areas of exam focus, it also periodically shares observations from its completed exams. Its October 2021 risk alert addressed compliance oversight of valuation, among other topics.⁵¹ Examinations and publication of related observations reinforce the importance of valuation and provide funds, boards, and advisers with opportunities to reassess and in some cases strengthen their current practices.

The SEC has brought enforcement actions against funds, boards, advisers, and associated persons of those entities when it finds violations of applicable statutory provisions and rules.⁵² Grounds for liability have included (among others) violations of:

- » Section 34(b) of the Investment Company Act, which prohibits the making of any untrue statements of material fact in a registration statement, application, report, account, record, or other document filed or transmitted pursuant to the Investment Company Act;
- » Rule 22c-1 under the Investment Company Act, which governs funds' pricing of their redeemable securities;
- » Rule 38a-1 under the Investment Company Act, which requires funds to adopt and implement written policies and procedures reasonably designed to prevent violation of the federal securities laws by the fund and to provide for oversight of compliance by the fund's investment adviser;
- » Section 206 of the Advisers Act, which contains the act's antifraud provisions; and
- » Rule 10b-5 under the Exchange Act, an antifraud rule.

⁴⁹ *2021 Examination Priorities*, SEC Division of Examinations, available at www.sec.gov/files/2021-exam-priorities.pdf.

⁵⁰ For instance, the 2021 priorities state, "In focusing on valuation and the resulting impact on [mutual] fund performance, liquidity, and risk-related disclosures, the division will review for investments in market sectors that experienced, or continue to experience, stress due to the pandemic, such as energy, real estate, or products such as bank loans and high-yield corporate and municipal bonds." Moreover, "Examinations of market participants engaged with digital assets will continue to assess...pricing and valuation..." See also *Examination Priorities for 2015*, SEC Office of Compliance Inspections and Examinations (stating that the division would "continue to assess funds offering alternative investments and using alternative investment strategies, with a particular focus on...leverage, liquidity, and valuation policies and practices..."), available at www.sec.gov/about/offices/ocie/national-examination-program-priorities-2015.pdf.

⁵¹ *Observations from Examinations in the Registered Investment Company Initiatives*, SEC Division of Examinations (Oct. 26, 2021), available at www.sec.gov/files/exams-registered-investment-company-risk-alert.pdf.

⁵² A valuation-related bibliography listing the SEC's enforcement actions is available at www.sec.gov/divisions/investment/icvaluation.htm. As of the date of this report, this bibliography appears to be current through July 31, 2015.

V. Rule 2a-5's Core Requirements

In the Fair Value Release, the SEC states that “to determine the value of fund investments in good faith requires a certain minimum, consistent framework for fair value and standard of baseline practices across funds, which the final rule establishes.”⁵³ The rule requires funds to carry out four core functions, which we discuss in more detail below. To a large degree, these new requirements codify—and can be satisfied using—existing industry practices.

A. Assessing and Managing Valuation Risks

A fund must “[p]eriodically assess...any material risks associated with the determination of the fair value of fund investments (‘valuation risks’), including material conflicts of interest, and manag[e] those identified valuation risks...”⁵⁴ The rule does not identify specific risks—the Fair Value Release states that “a fund’s specific valuation risks depend on the facts and circumstances of the particular fund’s investments”—or define *periodically*.⁵⁵ However, the Fair Value Release contains a nonexhaustive list of examples of sources and types of valuation risk, which are investment-specific, fund-specific, market-related, and service provider-related.⁵⁶ More concretely, a valuation designee must report to the fund board at least quarterly about “[a]ny material changes in the assessment and management of valuation risks...including any material changes in conflicts of interest of the valuation designee (and any other service provider)...”⁵⁷

To date, these risk assessments have been more implicit than explicit. Creation and maintenance of valuation policies and procedures necessarily require consideration of applicable risks and design of controls to mitigate those risks. To provide a few examples:

- » The valuation risk profiles of exchange-traded equities, OTC-traded fixed-income securities, and private securities are very different, and these assessments direct how funds value and test the valuations of their wide array of investments.

⁵³ Fair Value Release at 7–8.

⁵⁴ Rule 2a-5(a)(1).

⁵⁵ In this regard, the Fair Value Release states that “different frequencies for the reassessment of valuation risks may be appropriate for different funds or risks [and] the periodic reassessment of valuation risk generally should take into account changes in fund investments, significant changes in a fund’s investment strategy or policies, market events, and other relevant factors.” Fair Value Release at 14.

⁵⁶ Fair Value Release at 17. Specifically, the sources and types of valuation risk identified in the Fair Value Release include:

- » the types of investments held or intended to be held by the fund and the characteristics of those investments;
- » potential market or sector shocks or dislocations and other types of disruptions that may affect a valuation designee’s or a third party’s ability to operate;
- » the extent to which each fair value methodology uses unobservable inputs, particularly if such inputs are provided by the valuation designee;
- » the proportion of the fund’s investments that are fair valued as determined in good faith, and their contribution to the fund’s returns;
- » reliance on service providers that have more limited expertise in relevant asset classes, the use of fair value methodologies that rely on inputs from third-party service providers, and the extent to which third-party service providers rely on their own service providers (so-called fourth-party risks); and
- » the risk that the methods for determining and calculating fair value are inappropriate or that such methods are not being applied consistently or correctly.

⁵⁷ Rule 2a-5(b)(1)(i)(A)(2)(i).

- » Assignments of fair value responsibilities within an investment adviser (e.g., limiting the influence of portfolio managers) and the use of independent third parties recognize the potential conflicts of interest that exist in the fair value process.
- » Various forms of testing (discussed further below) provide a check on the reliability of information from pricing services.
- » Pricing service due diligence more broadly (discussed further below) both reflects an adviser’s current understanding of vendor-related risks and seeks to better understand those risks.

We expect the rule to increase the industry’s formality in assessing and identifying these risks going forward, including the design and operation of controls to manage valuation risks.

B. Establishing and Applying Methodologies

A fund must establish and apply fair value methodologies.⁵⁸ This includes:

- » selecting and applying in a consistent manner an appropriate methodology or methodologies for determining and calculating the fair value of fund investments, including specifying the key inputs and assumptions specific to each asset class or portfolio holding;⁵⁹
- » periodically reviewing the appropriateness and accuracy of the methodologies selected and making any necessary changes or adjustments thereto;⁶⁰ and
- » monitoring for circumstances that may necessitate the use of fair value.⁶¹

The rule does not prescribe what these “appropriate methodologies” must be. Indeed, the Fair Value Release states:

We recognize that there is no single methodology for determining the fair value of an investment because fair value depends on the facts and circumstance of each investment, including the relevant market and market participants. We continue to believe that for any particular investment, there may be a range of appropriate values that could reasonably be considered to be fair value, and whether a specific

⁵⁸ Rule 2a-5(a)(2).

⁵⁹ The rule text stipulates that a selected methodology may be changed if a different methodology is equally or more representative of the fair value of fund investments. The Fair Value Release further clarifies that “this requirement is not meant to limit a board or valuation designee, as applicable, from using an appropriate methodology to fair value an investment, even if other investments within the same ‘asset class’ are fair valued using a different appropriate methodology.” Fair Value Release at 19.

⁶⁰ Again, the rule does not define *periodically*. With respect to this provision, the Fair Value Release clarifies that “a necessary adjustment to the selected methodology under the final rule is not limited to modifying an existing methodology for a particular investment (for example, adjusting inputs), but also may include changing to a new methodology where appropriate.” Fair Value Release at 25–26.

⁶¹ This provision is meant to address situations where the rule’s requirements might apply to investments that might ordinarily be outside the rule’s scope (i.e., those that ordinarily have readily available market quotations). “For example, if a fund invests in securities that trade in foreign markets, the board or valuation designee, as applicable, generally should identify and monitor for the kinds of significant events that, if they occurred after the market closes in the relevant jurisdiction but before the fund prices its shares, would materially affect the value of the security and therefore may suggest that market quotations are not reliable.” Fair Value Release at 26.

value should be considered fair value will depend on the facts and circumstances of the particular investment.⁶²

But as discussed in the appendix, the Fair Value Release also states that “an appropriate methodology must be consistent with those used to prepare the fund’s financial statements and thus be consistent with the principles of the valuation approaches laid out in ASC Topic 820.”⁶³ And a valuation designee must periodically report to the board on any material changes to, or material deviations from, the established fair value methodologies,⁶⁴ and methodological changes must be documented under the new recordkeeping rule.⁶⁵

As a regulatory matter, these concepts are not new. In addition to requiring funds to adopt policies and procedures to monitor for circumstances that may necessitate the use of fair value prices, the 2003 Compliance Rule Adopting Release stated that funds must “establish criteria for determining when market quotations are no longer reliable for a particular portfolio security; provide a methodology or methodologies by which the fund determines the current fair value of the portfolio security; and regularly review the appropriateness and accuracy of the method used in valuing securities, and make any necessary adjustments.”⁶⁶

1. Responsibilities of Investment Advisers and Pricing Services

Investment advisers and pricing services each play important roles in establishing and applying methodologies, and the precise duties of each may vary depending on the investment type. After careful vetting and analysis, it is the investment adviser that determines the pricing source(s) to use for each asset class. For most funds and for the vast majority of investments that are fair valued (i.e., Level 2 fixed-income securities), it is the pricing service—not the investment adviser—that establishes and applies fair value methodologies.

Usually for Level 2 securities, these pricing sources are pricing services. A fund complex may use different vendors across applicable asset types—in this way, the investment adviser may seek to benefit from the relative strengths of vendors.

An investment adviser may choose to assign multiple pricing services to a single asset class (e.g., a primary and secondary vendor for an asset class). Funds using this type of “pricing hierarchy” will generally use prices provided by the primary vendor on a daily basis. But if that primary vendor does not cover or otherwise provide prices for specific investments,

⁶² Fair Value Release at 22.

⁶³ Fair Value Release at 21.

⁶⁴ Rule 2a-5(b)(1)(i)(A)(2)(ii).

⁶⁵ Fair Value Release at 21.

⁶⁶ Compliance Rule Adopting Release at text accompanying notes 45 through 47. The SEC stated that “the requirements of Rule 2a-5 and guidance in this release will supersede the Compliance Rules Adopting Release’s discussion of policies and procedures for the pricing of portfolio securities and fund shares.” Fair Value Release at 39. *See also Fair Valuation Series: An Introduction to Fair Valuation*, Investment Company Institute/Independent Directors Council/ICI Mutual Insurance Company (2005), available at www.ici.org/pdf/05_fair_valuation_intro.pdf.

or if the investment adviser has reason to question the primary vendor's price for an investment, the fund then might use the price from the secondary vendor. If a primary vendor does not cover an investment (e.g., a newly issued bond), the investment adviser may work with the vendor and provide the necessary information so that the vendor may establish coverage, including offering documents for the security and evidence of the fund's purchase of that security.

It is incumbent upon an investment adviser to understand a pricing service's methodologies and key inputs and assumptions as part of its due diligence and oversight of the pricing service, so as to assure itself that the prices provided are consistent with ASC Topic 820. The rule treats the price challenge process as part of this ongoing oversight, and this is an important means by which investment advisers and pricing services work jointly to improve the accuracy of pricing.

Ongoing testing provides a way of assessing how these methodologies are working. If appropriate, investment advisers can make further inquiries and, with the pricing service, determine whether any adjustments to a methodology or its assumptions or inputs are warranted. Such changes could be made at that pricing service. If that step is insufficient, the investment adviser could switch pricing services.

2. Changes to Methodologies, Inputs, and Assumptions

As a practical matter, an investment's valuation *methodology* does not change very often—it is the methodology's underlying *inputs and assumptions* that change with greater frequency. For instance, a pricing service may use the same basic valuation methodology for mortgage backed securities (MBS)—e.g., an income approach, whereby the MBS's estimated future cash flows are discounted to a net present value. The pricing service may periodically adjust the assumptions that feed into the methodology (e.g., estimated prepayment speeds or defaults on the underlying mortgages, as influenced by numerous economic factors). Market data (e.g., actual trade data for the MBS, or other MBS with similar characteristics) are regularly incorporated into a pricing service's models and affect the daily prices (i.e., the outputs) that it generates for such an MBS.

It is important that pricing services communicate to their clients material changes to methodologies and key inputs and assumptions.

3. Level 3 Securities

Given the large number of fixed-income securities,⁶⁷ it would be impracticable for fund complexes with extensive fixed-income holdings to fully internalize this function and establish and apply fair value methodologies to all of these securities. But fund complexes typically take more of a "hands-on" approach to harder-to-value (i.e., Level 3) securities, and in those cases, the investment adviser both establishes and applies fair value methodologies to those assets. As noted above, Level 3 securities make up a small percentage of fund assets, but they can be time intensive to value.

⁶⁷ See *supra*, Section II.

For example, fund complexes may need to identify guideline public companies⁶⁸ and develop earnings or cash flow multiples to value Level 3 securities. Funds are typically dependent on the issuer of the Level 3 security to provide periodic financial reporting and other fundamental analytical data about its business for use in valuing the security. The independent accountant's audit of values assigned to Level 3 securities also can be time intensive, requiring an understanding of the issuer of the security, its business, the security itself, the fund's valuation methodology (including the appropriateness of the guideline companies), and the inputs used to develop a value for the security.

C. Testing Methodologies

A fund must “[t]est...the appropriateness and accuracy of the fair value methodologies that have been selected [and] identify...the testing methods to be used and the minimum frequency with which such testing methods are to be used...”⁶⁹ The rule does not require particular testing methods or a specific minimum testing frequency—the Fair Value Release states that these matters “would vary depending on the type and amount of investments held by the fund.”⁷⁰ The Fair Value Release calls calibration⁷¹ and back-testing⁷² “particularly useful testing methods,” but stops short of requiring them. Instead, this rule provision “provides flexibility to allow funds to use new, appropriate testing methods.”⁷³ As part of its annual board reporting, a valuation designee must provide “[a] summary of the results of the testing of fair value methodologies...”⁷⁴

The type, frequency, and purpose of valuation testing vary, as described below. Advisers may aggregate and summarize data from the testing described below for purposes of both internal assessments (e.g., by a valuation committee or relevant personnel of the adviser) and board reporting.

1. Forms of Daily Testing

Investment advisers and administrators perform certain forms of testing daily. This testing is primarily intended to be a pricing control to identify outliers deserving of additional attention, and its purpose is to ensure that the prices received from pricing services (or

⁶⁸ See *supra*, note 12.

⁶⁹ Rule 2a-5(a)(3).

⁷⁰ Fair Value Release at 29.

⁷¹ The SEC describes “calibration” as “the process for monitoring and evaluating whether there are material differences between the actual price the fund paid to acquire portfolio holdings that received a fair value under the act and the prices calculated for those holdings by the fund’s fair value methodology at the time of acquisition.” Fair Value Release at note 89.

⁷² The SEC states that “back-testing involves a comparison of the fair value ascribed to the fund’s investment against observed transactions or other market information, such as quotes from dealers or data from pricing services. One common form of back-testing is ‘disposition analysis,’ which compares a fair value as determined using a fair value technique with the price obtained for the security upon its disposition by the fund.” Fair Value Release at note 91. The SEC also notes that “back-testing as a testing method may be less useful for portfolio holdings that trade infrequently.” Fair Value Release at note 93. Finally, the Fair Value Release identifies back-testing as an example of a kind of assistance that a third party can provide to a valuation designee. Fair Value Release at 52.

⁷³ Fair Value Release at 30.

⁷⁴ Rule 2a-5(b)(1)(i)(B)(1).

other sources) are generally in line with what can reasonably be expected based on recent market activity. To illustrate, this could include comparing:

- » Municipal Bond X's Thursday price to Municipal Bond X's Wednesday price to check for a significant change;
- » Municipal Bond X's Thursday price change as a percentage of the fund's NAV, to assess the overall size of its impact;
- » Municipal Bond X's Thursday price change to Municipal Bond Index Y's Thursday price change, to determine if the individual bond's price change was roughly in line with that of the relevant market generally; and/or
- » Municipal Bond X's Thursday price as provided by Vendor A with Municipal Bond X's Thursday price as provided by Vendor B (this assumes the investment adviser receives daily prices from more than one vendor).

In any of these cases, an investment adviser (or administrator) would establish acceptable thresholds,⁷⁵ which, if exceeded, could indicate an issue with the price provided by the third party and warrant additional investigation. Of course, these tests may result in "false positives," and these flagged deviations are not necessarily indicative of problems. An investment adviser may analyze and resolve these exceptions through various forms of validation (e.g., comparing the prices with daily trade data or dealer quotes, reviewing supporting data or information that the pricing service may provide, or discussing the price with portfolio managers or traders) and take no further action. In some cases, these reviews result in price challenges or overrides, as discussed further below.

2. Forms of Periodic Testing

An investment adviser also may perform other forms of periodic testing. This could include comparing the prices used in any actual trades (purchases or sales) of a fund investment against the fair value that the fund last used for that investment. An actual trade price that is close to the last fair value price provides evidence of accurate pricing. And an actual trade price that is close to the *next* fair value price would indicate that a pricing service's process is incorporating recent trade data.

⁷⁵ These thresholds may be investment-specific, fund-specific, or a combination thereof. What constitutes an acceptable threshold may vary by asset or fund type, as assets and funds vary in their daily price volatility. For example, short-term bonds are generally less responsive to changes in interest rates than long-term bonds, and their respective thresholds could be set accordingly.

To expand the testing data points, investment advisers need not limit themselves to actual trades of *fund* investments. An investment adviser also could compare its vendor-provided prices for the investments that it holds to actual trades of other market participants publicly reported through TRACE or EMMA. Pricing services may do the same thing, and in fact can compare actual trades to all investments that they price, providing an even broader sample size for evaluation.

Testing is generally more reliable and informative as the number of data points increases. Comparing a vendor's price to a single transacted price, by itself, will not provide much information about the quality of a vendor's prices or its overall process. Indeed, in some cases, overreliance on a single trade could be misleading. For instance, a trade with an abnormal price could be a "fire sale" or an odd lot trade, and as such may not be indicative of the investment's fair value.⁷⁶ In addition to being more robust, aggregated testing data collected over time allow an investment adviser to determine if a pricing service's prices tend to skew high or low with respect to particular investment types.

For investments that do not trade frequently (e.g., Level 3 securities), testing may be more sporadic and therefore provide less useful information. On occasion, certain transaction-related information could shed light on the valuation of that security (e.g., a private company could complete a new financing round that provides an updated measure of the company's value).

3. Testing Time Zone–Based Fair Value Adjustments

International equity securities that a fund holds are subject to a different kind of testing. Many foreign markets close prior to 4:00 p.m. (ET), when most funds cut off orders from investors to purchase or redeem fund shares and calculate the fund NAV. As a result, market quotations for securities principally traded on these foreign exchanges may no longer be current as of 4:00 p.m. Because of this gap in timing, funds will frequently fair value these securities as of 4:00 p.m. to account for any market events occurring subsequent to the foreign market's close or activity that would likely affect the value of those securities.⁷⁷ These adjustment factors (which in some cases are calculated and applied daily) are often provided by pricing services.

Such adjustments frequently result in more accurate valuations as of 4:00 p.m., but this is not an exact science. Consequently, investment advisers frequently test these fair value adjustments by comparing the investments' 4:00 p.m. fair value–adjusted prices to the subsequent market-open prices for those securities. Advisers may analyze both directional (e.g., whether the investment in fact traded up at market-open after the fund adjusted its price upward) and quantitative accuracy (e.g., how the magnitudes of

⁷⁶ ASC Topic 820-10-35-54C, *Measuring Fair Value When the Volume or Level of Activity for an Asset or Liability Has Significantly Decreased* and Topic 820-10-35-54I, *Identifying Transactions That Are Not Orderly*.

⁷⁷ For instance, to the extent that the US markets are correlated to foreign markets that close at a different time, price changes in the US market (as measured by a proxy such as a market index) could indicate that the current 4:00 p.m. values of securities from those foreign markets likely differ from their earlier closing prices. Using these proxies and historical correlation data, the values of these foreign securities may be adjusted accordingly.

the adjustments compare to the changes in subsequent trading prices at market-open). Testing of this kind, particularly over sufficiently long periods, provides a good sense of whether the adjustments are working as intended, and whether changes to the underlying methodologies or assumptions are warranted.

D. Evaluating Pricing Services

A fund must “[o]versee...pricing service providers, if used, [and] establish...the process for approving, monitoring, and evaluating each pricing service provider and initiating price challenges as appropriate.” This provision reflects the importance that pricing services play in the fair value process. The rule text does not define *pricing service*, but the Fair Value Release describes pricing services generally as “third parties that regularly provide funds with information on evaluated prices, matrix prices,⁷⁸ price opinions, or similar pricing estimates or information to assist in determining the fair value of fund investments.”⁷⁹ The Fair Value Release also includes factors that valuation designees should consider before deciding to use a pricing service.⁸⁰

The valuation designee must include as part of its quarterly board reporting:

- » any material changes in conflicts of interest of a service provider,⁸¹ and
- » “[a]ny material changes to the valuation designee’s process for selecting and overseeing pricing services, as well as any material events related to the valuation designee’s oversight of pricing services....”⁸²

Furthermore, the SEC makes clear that the annual review of the adequacy and effectiveness of the fair value process should include an “adequacy and effectiveness” assessment of the pricing services used.⁸³

⁷⁸ Matrix pricing is a technique used to estimate the price for which a bond could currently be sold in an orderly transaction. The price of the bond is estimated by reference to actively traded bonds with similar characteristics (e.g., coupon, maturity, call features, credit quality).

⁷⁹ Fair Value Release at 34.

⁸⁰ These include:

- » the qualifications, experience, and history of the pricing service;
- » the valuation methods or techniques, inputs, and assumptions used by the pricing service for different classes of holdings, and how they are affected (if at all) as market conditions change;
- » the quality of the pricing information provided by the service and the extent to which the service determines its pricing information as close as possible to the time as of which the fund calculates its net asset value;
- » the pricing service’s process for considering price challenges, including how the pricing service incorporates information received from price challenges into its pricing information;
- » the pricing service’s actual and potential conflicts of interest and the steps the pricing service takes to mitigate such conflicts; and
- » the testing processes used by the pricing service.

More broadly, the valuation designee “should generally consider the appropriateness of using pricing information provided by a pricing service in determining the fair values of the fund’s investments where, for example, the fund’s...valuation designee...does not have a good faith basis for believing that the pricing service’s pricing methodologies produce prices that reflect fair value.” Fair Value Release at 37–38.

⁸¹ Rule 2a-5(b)(1)(i)(A)(2)(i).

⁸² Rule 2a-5(b)(1)(i)(A)(2)(iii).

⁸³ Fair Value Release at 35.

With respect to price challenges, the SEC states that “there can be a range of circumstances under which a price challenge may be warranted, some of which cannot be distilled into specific criteria in advance.”⁸⁴ Consequently, funds must have a price challenge *process* rather than preestablished *criteria*.⁸⁵

1. Vendor Due Diligence and Oversight Practices Generally

This rule provision largely codifies existing practice and is generally consistent with prior regulatory statements. The SEC noted in the Compliance Rule Adopting Release that limiting the service providers named in Rule 38a-1—investment advisers, principal underwriters, administrators, and transfer agents—did not lessen a fund’s obligation to consider compliance as part of its decision to employ other entities, such as pricing services.⁸⁶ And the SEC staff has referred to pricing services as “critical” fund service providers.⁸⁷

Funds and advisers hire and oversee pricing services as they do other key third-party service providers—onboarding them only after rigorous initial due diligence and then continuing to evaluate and oversee them in accordance with well-developed practices and compliance policies and procedures.

2. Initial Due Diligence

An adviser’s due diligence is usually most rigorous when the adviser is first considering whether to hire a pricing service. The SEC’s guidance gives some indication of the depth of this initial due diligence,⁸⁸ but perhaps not its breadth. To a large degree, this due diligence is similar to that performed on any key fund service provider,⁸⁹ and includes matters of general importance such as financial resources, business continuity, and cybersecurity. As with fund valuation generally, different personnel may contribute to, and evaluate feedback received from, these due diligence efforts, including an adviser’s valuation specialists, fund accountants, portfolio managers, traders, technology professionals, and compliance and legal personnel. Other valuation-specific focal points of this due diligence include:

- » extent of coverage (this is especially important for fixed-income securities);
- » timeliness of service generally (given the compressed timeframe for calculating fund NAVs, this is critically important);
- » quality of internal controls; and
- » timeliness in responding to specific inquiries and price challenges.

⁸⁴ Fair Value Release at 33. This price challenge process “generally should outline the circumstances under which a price challenge should be initiated.”

⁸⁵ The rule does not require reporting to the board on price challenges or overrides.

⁸⁶ Compliance Rule Adopting Release at note 28.

⁸⁷ SEC Division of Investment Management Guidance Update, Business Continuity Planning for Registered Investment Companies (June 2016), available at www.sec.gov/investment/im-guidance-2016-04.pdf.

⁸⁸ See *supra*, note 80.

⁸⁹ See *generally Board Oversight of Certain Service Providers*, Independent Directors Council Task Force Report, June 2007, available at www.idc.org/pdf/21229.pdf.

Finally, before hiring a vendor (initially, or for a new asset class), the adviser might receive and evaluate the vendor's pricing for a sample portfolio on a daily basis for a set period as a way of assessing the quality of the service. This could include comparing these sample prices to those it receives from a current vendor.

It should be noted, however, that initial comprehensive due diligence and onboarding of a pricing service is not a common occurrence for many advisers. Industrywide, the number of pricing services that funds use is relatively limited. Also, funds frequently use multiple pricing services (assigning different pricing services to different asset classes, or using pricing services in a secondary or tertiary capacity), such that the introduction of an entirely new entity may be infrequent. Advisers are more likely to perform more focused asset class-specific due diligence on an *existing vendor*, in cases where the adviser is launching a new fund or strategy (e.g., if the adviser will begin investing in a new asset class), or is considering promoting a vendor to its primary vendor for an asset class. Significant events affecting an existing vendor (e.g., a merger or acquisition) also may lead an adviser to thoroughly reassess the vendor.

3. Ongoing Oversight and Due Diligence

Advisers oversee the pricing services that they use on an ongoing basis. The specific steps taken may vary in their frequency, depth and/or breadth, and means of execution. For instance, an adviser may interact with a pricing service on an ongoing basis throughout the year and perform its broadest and most vigorous due diligence annually. Such annual due diligence may differ from initial due diligence because the adviser takes into account the working relationship and the knowledge and experience that accrues from it. Annual due diligence may be further complemented by scheduled outreach (e.g., quarterly calls) and ad hoc communications as necessary (e.g., in connection with price challenges, changes to inputs and assumptions, or during stressed market conditions).

Because the parties have an established relationship, an adviser's ongoing due diligence usually focuses on changes to the pricing service or its offerings (e.g., related to personnel, technological enhancements, methodologies and inputs, *their* third-party relationships [known as "fourth parties"], and regulatory developments such as Rule 2a-5) and performance during the period. This due diligence may be conducted via in-person or virtual meetings (which may include agendas), questionnaires, or phone calls.

As a practical matter, oversight and evaluation of pricing services occurs on a rolling basis. For instance, this may be a recurring item that a valuation committee considers (e.g., quarterly). This could consist of qualitative and quantitative assessments that may include summary statistics on timeliness of information delivery, price challenges and overrides, unchanged prices, and testing results. Some of this summary information also may be shared with the fund board.

Thus, ongoing oversight and due diligence encompasses much more than formal, preplanned, episodic interactions with pricing services.

4. Price Challenges and Overrides

The rule's express provisions on price challenges and overrides are minimal, requiring only that a fund establish a process for initiating price challenges.⁹⁰ Industry practices in this area, however, are well-developed. Challenges and overrides are beneficial in that they are an important component of vendor oversight and demonstrate continued and thoughtful engagement by investment advisers. To the extent that an adviser, or multiple advisers in the aggregate, bring to a pricing service's attention relevant information (e.g., information about recently executed trades or market color) that improves its pricing precision, this benefits *all* clients of that pricing service.

The daily price review process described in Section V.C.1 generates many of the prices that an adviser might consider challenging, and in some cases, overriding. Not all daily "exceptions" become challenges—upon further review, many may in fact be reasonable prices (e.g., the price change is attributable to issuer-specific developments)—but some subset does. When an adviser submits a price challenge to a vendor, the adviser typically provides the basis for the challenge (i.e., *why* the price is unreasonable). This could include recent (and potentially uncaptured) transaction information, news, market color (e.g., broker bids for that security), or comparisons to other vendor prices. Such information improves the quality and efficiency of the challenge process.

Just as all exceptions do not lead to challenges, not all challenges lead to overrides. In some cases, the vendor may review the price challenge and leave its price unchanged. At that point, the adviser may decide that the vendor's price is reasonable and continue to use it without adjustment. Or the adviser may continue to believe that the vendor's price is unreasonable and adjust it accordingly. In determining the adjusted price, the adviser may consider the information it submitted to support the challenge as well as any price provided by the secondary vendor. An override normally requires a senior individual or entity composed of senior personnel (e.g., a valuation committee) to act. Both challenges and overrides tend to be more common in stressed markets, or for securities that trade less frequently.

⁹⁰ The Fair Value Release includes additional guidance on price challenges and overrides. With respect to quarterly board reporting on material changes to the selection or oversight of pricing services, the SEC states that a pattern of price challenges or overrides over time that raise concerns with the overall valuation process may be material. Fair Value Release at 67. Also, consistent with the specification of functions requirement (*see supra* note 35 and accompanying text), the specific personnel with duties associated with price challenges should be identified, including those with the authority to override a price, along with the roles and responsibilities of such persons, and the valuation designee is required to establish a process for the review of price overrides. Fair Value Release at 77.

Due to the potential conflicts presented,⁹¹ advisers typically include in their policies and procedures processes for challenging and overriding prices and specify the parties with responsibilities and ultimate authority. As with valuation generally, portfolio managers (or subadvisers) may provide input and insight if they believe a price is incorrect (along with an explanation as to why), but the final decisionmaking authority does not rest with them. Moreover, funds typically document their challenge and override activity. The rule's requirement for "reasonable segregation" of portfolio managers from fair value determinations will reinforce standard practice.

VI. Conclusion

Studying funds' valuation practices reveals several key points:

- » Funds' valuation work is voluminous, complex, frequent, and temporally demanding. A single fund complex may value tens of thousands of separate investments each business day as part of the funds' NAV calculation process. These investments may vary widely with respect to type (e.g., equities, fixed-income securities, and derivatives) and primary method of valuation (e.g., closing prices from a primary exchange for exchange-traded equities; evaluated prices from a pricing service for fixed-income securities that trade over-the-counter; and internal adviser-controlled models for certain private securities). Most of this work—which includes review and validation of input from third parties—occurs between 4:00 p.m. (ET) and 6:00 p.m. (ET) and culminates in the final calculation of a fund's NAV, which is typically disseminated shortly after 6:00 p.m. (ET).⁹²
- » Funds' valuation work requires—and benefits from—contributions from multiple individuals and entities. While the responsibility to value its assets belongs to the fund and is overseen by the fund board, in practice the fund's adviser plays a central role. Within an investment adviser, personnel across multiple disciplines—fund accounting, operations, compliance, legal, risk, and portfolio management—contribute to this process. External parties—most notably, fund administrators and pricing services—also provide critical services to funds and advisers.
- » Funds' valuation work is highly scrutinized by independent auditors and the SEC. The fund's independent public accounting firm annually audits the fund's financial statements, and this includes verification of the values of the fund's investments. Valuation is a frequent point of emphasis for the SEC's Division of Examinations, and the SEC has brought enforcement actions against funds, boards, their advisers, and associated persons of those entities when it finds violations of applicable statutory provisions and rules.

⁹¹ Price challenges and overrides are potentially problematic if driven by a desire to affect the value of portfolio holdings for the benefit of the adviser.

⁹² During stressed or volatile market conditions, researching and resolving pricing matters may cause the NAV to be released later than 6:00 p.m.

- » Valuation is art and science. A degree of subjectivity is inherent in all valuation decisions, including the selection of pricing sources for each portfolio investment. Funds and their pricing services must value investments that may not trade each day, and the methods and models they use necessarily involve assumptions, inputs, and qualitative judgments of their personnel.
- » No single “correct” valuation method exists for many asset types, and therefore, these assets do not have single “correct” daily valuations. This follows from the point above, and variation in models and their resulting outputs often goes hand in hand with assets that do not trade frequently. As noted above, the SEC has recognized that “for any particular investment, there may be a range of appropriate values that could reasonably be considered to be fair value.”

Funds’ valuation practices have evolved over the decades to account for developments in markets, fund investment practices, the regulatory framework, and accounting standards. Incorporating the fair value rules’ requirements will further shape and refine funds’ practices. And this latest rulemaking certainly will not be end of the story—as markets, data sources, and regulation continue to evolve, funds will continue to modify and enhance their valuation practices accordingly.

Appendix: Summary of Legal Requirements and Accounting Standards Affecting Fund Valuation

Below, we summarize the key legal requirements and accounting standards that govern and shape fund valuation.

A. General Obligations Under the Investment Company Act and Its Applicable Rules

The Investment Company Act's initial findings and declarations underscore the importance of valuation to funds and their shareholders. Section 1(b) of the act states:

it is hereby declared that the national public interest and the interest of investors are adversely affected...when investment companies, in computing their earnings and the asset value of their outstanding securities, employ unsound or misleading methods, or are not subjected to adequate independent scrutiny.

Section 2(a)(41) of the act establishes a two-pronged approach to valuation:

- » securities for which market quotations are readily available must be priced at market value; and
- » all other securities must be assigned a “fair value as determined in good faith by the board of directors” of the fund.

Rule 2a-4 under the act sets forth the method by which funds with redeemable shares (i.e., open-end funds) must compute periodically the “current net asset value” of those shares. Tracking the statutory language cited above, Rule 2a-4(a)(1) states, “Portfolio securities with respect to which market quotations are readily available shall be valued at current market value, and other securities and assets shall be valued at fair value as determined in good faith by the board of directors of the registered company.”

Further, Section 22 of the act addresses distribution, redemption, and repurchases of fund shares, and Rule 22c-1 thereunder governs the pricing of open-end fund shares. That rule requires funds to price their shares “based on the current net asset value of such security which is next computed after receipt of a tender of such security for redemption or of an order to purchase or sell such security.”⁹³ Moreover, this rule generally requires a fund to make this calculation “no less frequently than once daily, Monday through Friday, at the specific time or times during the day that the board of directors of the investment company sets....”

⁹³ Rule 22c-1 permits, but does not require, mutual funds (other than money market funds) to use swing pricing. A discussion of swing pricing—which, to date, has not been adopted by any US mutual fund—is beyond the scope of this report.

The newly adopted fair value rule addresses the fair valuation responsibilities of all funds and their boards and advisers. The rule and its related guidance have taken effect, although funds need not comply with them until September 8, 2022.⁹⁴

Consistent with the Investment Company Act's binary approach to valuation, the rule's requirements do not apply to portfolio investments with readily available market quotations (e.g., equities that trade on exchanges). More precisely, Rule 2a-5(c) sets the rule's scope by stating that "a market quotation is readily available only when that quotation is a quoted price (unadjusted) in active markets for identical investments that the fund can access at the measurement date, provided that a quotation will not be readily available if it is not reliable." Previously, this term had not been clearly defined by the SEC or its staff. This definition is consistent with the definition of a Level 1 input in the fair value hierarchy outlined in GAAP.

The rule requires the performance of four core functions for a fund to determine "fair value in good faith" of those investments that do not have readily available market quotations, in accordance with Section 2(a)(41) of the Investment Company Act and Rule 2a-4 thereunder, including:

- » periodically assessing and managing material risks associated with fair value determinations, including material conflicts of interest;
- » establishing and applying fair value methodologies;
- » testing fair value methodologies; and
- » evaluating any pricing services used.

We discuss these new requirements and related industry practices in more depth in Section V.

The SEC also adopted Rule 31a-4, which contains the recordkeeping requirements associated with the fair value rule. It requires a fund to maintain "appropriate documentation to support fair value determinations"⁹⁵ made pursuant to Rule 2a-5. If

⁹⁴ Because the rules' effective date has passed, "a fund may voluntarily comply with the rules in advance of the compliance date. To promote regulatory consistency, however, any fund that elects to rely on Rules 2a-5 and 31a-4 prior to the compliance date may rely only on Rules 2a-5 and 31a-4, and not also consider Commission and staff letters and other guidance that will be withdrawn or rescinded on the compliance date in determining fair value in good faith for purposes of Section 2(a)(41) of the act and Rule 2a-4 thereunder." Fair Value Release at 101. However, the [2021 FAQs](#) on the new rules state that the SEC staff would not object if: (i) "an independent public accountant chooses to stop looking to the auditing guidance contained in ASR 118 and instead determines the appropriate audit approach by following only the relevant Public Company Accounting Oversight Board (PCAOB) auditing standards any time after March 8, 2021..." or (ii) "the fund does not apply Rule 2a-5's definition of readily available market quotations to its cross-trading practices under Rule 17a-7 until the September 8, 2022 compliance date."

⁹⁵ The Fair Value Release clarifies that "appropriate documentation to support a fair value determination that takes into account inputs from pricing services consists of the records related to the fund or valuation designee's initial due diligence investigation prior to selecting a pricing service and records from its ongoing monitoring and oversight of the pricing services....Other appropriate documentation also includes work papers created by the valuation designee while overseeing pricing services or testing fair value methodologies, such as those documenting the valuation designee's monitoring and conducting of price challenges, stale price analysis, and testing such as calibration or back-testing." Fair Value Release at 85–86.

a fund board has designated performance of fair value determinations to a valuation designee—which we anticipate being the norm—the fund must maintain copies of:

- » the reports and other information provided to the board; and
- » a specified list of the investments or investment types whose fair value determination has been designated to the valuation designee.

The new recordkeeping rule specifies that if the fund board has designated performance of fair value determinations to its investment adviser, the adviser shall maintain the records required by this rule (otherwise, the fund maintains such records).

Finally, the Fair Value Release rescinded in their entirety Accounting Series Release 113 and Accounting Series Release 118 (ASR 113 and ASR 118), adopted in 1969 and 1970, respectively. These ASRs provided guidance on, among other things, the role of the fund board in fair value determinations as well as guidance on certain accounting and auditing matters. The SEC explained that these ASRs were superseded or made redundant by the adoption of Rule 2a-5 and by the requirements under the current accounting and auditing standards. The Fair Value Release also withdrew or rescinded certain other specified SEC guidance, staff letters, and other staff guidance addressing a board's determination of fair value and other matters covered by the rules.

B. “Fair Value” Under GAAP

Importantly, while the fair value rule sets forth requirements for “determining fair value in good faith,” funds look to the definition under GAAP. ASC Topic 820 defines *fair value* as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is an *exit price*—the price to sell an asset rather than the price to buy that asset. An exit price embodies expectations about future cash inflows associated with the asset from the perspective of a market participant (i.e., buyers and sellers that are independent of each other, knowledgeable about the asset, willing and able to transact, but not forced or compelled to do so). A transaction is not orderly if it is forced (e.g., a forced liquidation or distress sale).

Fair value is a market-based measurement, rather than an entity-specific measurement, and is measured using assumptions that market participants would use in pricing the asset, including assumptions about risk. Accordingly, a fund's intention to hold a fixed-income security in expectation that it will not sell the security and instead receive the principal amount at maturity is not relevant in measuring fair value. Similarly, a fund cannot fair value a security based on what a buyer might pay at some later time, such as when the market ultimately recognizes the security's true value as perceived by the investment adviser.

The most reliable evidence of fair value is a quoted price in an active market (i.e., a readily available market quotation). When a quoted price in an active market is **not** available, ASC

Topic 820 specifies valuation methodologies (termed approaches or techniques) to measure fair value.⁹⁶ Specified valuation methodologies include:

- » the *market approach*, a valuation technique that uses prices and other relevant information generated by market transactions involving identical or similar securities. Valuation techniques consistent with the market approach include matrix pricing and often use market multiples derived from a set of comparables;
- » the *income approach*, a technique that converts future amounts (for example, cash flows or income) to a discounted present value, based upon the value indicated by current market expectations about those future amounts; and
- » the *cost approach* (sometimes referred to as the asset approach), which reflects the amount that currently would be required to replace the service capacity of an asset (i.e., replacement cost). The cost approach is typically more relevant for valuing enterprises in the earliest stages of development, prior to raising arms-length financing, when there may be limited or no basis for using the market or income approaches.

The Fair Value Release, in discussing the obligation to establish and apply fair value methodologies under the rule, indicates that an appropriate methodology must be consistent with those used to prepare the fund's financial statements, and thus be consistent with the valuation approaches laid out in ASC Topic 820. Further, use of a methodology *inconsistent* with the principles laid out in ASC Topic 820 would be presumed misleading or inaccurate. ASC Topic 820 is principles-based and may not address every situation that a fund may face. The Fair Value Release states that supplemental methodologies for situations not explicitly outlined in ASC Topic 820 may be appropriately applied by fund boards or valuation designees provided they are not inconsistent with the principles outlined in ASC Topic 820.

C. Reporting Obligations and Accounting Standards

Funds must prepare semiannual financial statements that comply with Article 6 of Regulation S-X and GAAP. Among other things, those financial statements must list the fund's investment securities and derivatives contracts at period end, along with the balance held (i.e., number of shares, contacts, or principal amount) and value for each. Article 6 of Regulation S-X defines *value* by reference to Section 2(a)(41) of the Investment Company Act. And as discussed above, the Fair Value Release makes clear that a fund's fair value methodologies must be consistent with ASC Topic 820, and neither the rule nor its related guidance prescribes specific fair value methodologies for fund use. Accordingly, when valuing securities for purposes of preparing financial statements, funds must comply with ASC Topic 820.

⁹⁶ ASC Topic 946, *Financial Services—Investment Companies*, requires investment companies to measure their investment securities at fair value (i.e., by using market quotations when available and applying valuation methodologies or techniques to estimate fair value in the absence of market quotations). The term *fair value* is more comprehensive under GAAP than the Investment Company Act (i.e., investments with readily available market quotations are not "fair valued" under the Investment Company Act). However, the concepts are not in tension as a practical matter.

The semiannual financial statements are included in the fund's shareholder reports and filed with the SEC on Form N-CSR. The fund's annual financial statements must be audited by an independent accountant registered with the PCAOB.

When pricing an asset or liability, market participants use data and assumptions—including assumptions about risk—as inputs. Observable inputs are developed using market data, such as publicly available information about actual events or transactions, and reflect the assumptions that market participants would use to price the financial instrument. Unobservable inputs are those for which market data are *not* available and are developed using the best information available about the assumptions that market participants would use to price the financial instrument. Valuation methodologies must maximize the use of relevant observable inputs and minimize the use of unobservable inputs.

Inputs form the basis of the GAAP *fair value hierarchy*, which is used to categorize the fair value measurement for a portfolio investment into one of three levels:

- » Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date. (Note that the definition of “readily available market quotation” in Rule 2a-5(c) is consistent with the concept of a Level 1 input.)
- » Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar securities in active markets, yield curves, and credit spreads.
- » Level 3 inputs are unobservable inputs for the asset or liability and include management's own assumptions about how market participants would value the asset, such as a multiple of estimated earnings or cash flows.

ASC Topic 820 requires funds to disclose information about their fair value measurements in the financial statement notes. These disclosures are intended to inform readers about the valuation methodologies and inputs used to value the fund's investments, and for Level 3 fair value measurements, the effect of the measurements on the change in net assets over the reporting period.⁹⁷

⁹⁷ These disclosures include:

- » a description of the valuation methodologies and inputs used;
- » the dollar value of investments by level (i.e., Level 1, Level 2, and Level 3) for each asset type (e.g., common stocks, preferred stocks, bank loans) and for the portfolio as a whole;
- » for Level 2 and Level 3 investments, changes to a valuation methodology and the reasons for the changes;
- » for Level 3 investments:
 - » quantitative information about significant unobservable inputs used (e.g., price-earnings multiples, EBITDA multiples, discount rates);
 - » the range and weighted average of significant unobservable inputs used;
 - » a reconciliation or “roll-forward” of opening and closing balances;
 - » unrealized gains/losses from remeasurement included in net assets; and
 - » a description of the measurement uncertainty from the significant unobservable inputs if those inputs could have been different at the reporting date.

In addition, long-term funds must prepare Form N-PORT filings on a monthly basis. Among other things, fund filings on Form N-PORT must include a list of the fund's investments (including derivatives contracts) at month-end along with the balance held and value. The instructions to Form N-PORT indicate that its terms have the same meaning as in the Investment Company Act or related rules unless otherwise indicated. Accordingly, as with financial statements, when valuing securities for purposes of Form N-PORT filings, funds must comply with Section 2(a)(41) of the Investment Company Act and by extension ASC Topic 820. Form N-PORT also requires the fund to disclose each investment's level in the fair value hierarchy.⁹⁸

D. Registration Statement Disclosure Requirements

Funds provide disclosure about their valuation practices in their registration statements. Open-end funds must describe in their prospectuses their procedures for pricing their shares, including the method used to value fund shares and when calculations of NAV are made.⁹⁹ In their statements of additional information, open-end funds must describe the method(s) used to value fund assets.¹⁰⁰

E. Money Market Funds

Rule 2a-7 under the Investment Company Act permits certain money market funds (i.e., government money market funds and retail money market funds) to price their shares by using the amortized cost and/or the penny-rounding methods of valuation, subject to certain conditions. The amortized cost method of valuation is defined as “the method of calculating an investment company's net asset value whereby portfolio securities are valued at the fund's acquisition cost as adjusted for amortization of premium or accretion of discount rather than at their value based on current market factors”; the penny-rounding method is defined as “the method of computing an investment company's price per share for purposes of distribution, redemption, and repurchase whereby the current net asset value per share is rounded to the nearest 1 percent.” All other money market funds are subject to specific rounding conventions in calculating their current NAV per share.

A discussion of these methods of valuation and their related conditions under Rule 2a-7 is beyond the scope of this report. Importantly, however, money market funds using the amortized cost method of valuation still must “shadow price”—i.e., calculate their current NAV per share using available market quotations (or an appropriate substitute that reflects current market conditions)—their portfolios at least daily, and therefore, are not wholly outside the valuation-related requirements of the Investment Company Act and the rules thereunder. In addition, the Fair Value Release notes that the guidance in a 2014 SEC money market fund release on the use of amortized cost valuation remains valid.¹⁰¹

⁹⁸ While Form N-PORT is prepared (and retained in the fund's records) on a monthly basis, the three monthly filings for each fiscal quarter are filed with SEC not more than 60 days after the fiscal quarter. Only the Form N-PORT filing relating to the third month of the fiscal quarter is made publicly available.

⁹⁹ See Item 11(a) of Form N-1A.

¹⁰⁰ See Item 23(c) of Form N-1A. This includes a description of the valuation procedure(s) that the fund uses in determining the NAV and public offering price of its shares.

¹⁰¹ Fair Value Release at note 116.

F. Closed-End Funds

With certain exceptions,¹⁰² closed-end funds generally issue a fixed number of shares that are listed on a stock exchange or traded in the over-the-counter market. The market price of closed-end fund shares fluctuates like those of other publicly traded securities and is determined by supply and demand in the marketplace. Therefore, a fund's shares may trade at a price higher or lower than NAV. A closed-end fund trading at a share price higher than its NAV is said to be trading at a "premium" to the NAV, while a closed-end fund trading at a share price lower than its NAV is said to be trading at a "discount."

But while most closed-end funds' shares are bought and sold on exchanges at prices set by supply and investor demand, closed-end funds still periodically value each of their portfolio holdings and calculate their NAVs just as open-end funds do, with most closed-end funds choosing to do so every business day.¹⁰³ Thus, closed-end and open-end funds may differ in *how frequently* they value their portfolio holdings and calculate their NAVs, but not in *how* they do so. Closed-end funds are subject to the fair value rules.

¹⁰²For instance, interval funds are continuously offered closed-end funds that make offers to repurchase shares periodically at NAV in compliance with Rule 23c-3 under the Investment Company Act. They differ from other closed-end funds that do not offer regularly scheduled liquidity. Interval funds resemble open-end mutual funds in that their shares are continuously offered and typically priced daily to facilitate investor purchases.

¹⁰³More than 95 percent of exchange-listed closed-end funds calculate the value of their portfolios every business day, while others calculate their portfolio values weekly or on some other basis. James Duvall, "The Closed-End Fund Market, 2020," *ICI Research Perspective* 27, no. 5 (April 2021) at 3, available at www.ici.org/files/2021/per27-05.pdf. Closed-end funds must value their portfolio holdings and calculate their NAVs at least monthly to comply with their reporting obligations under Rule 30b1-9 (requiring registered funds, including closed-end funds, to file monthly reports on Form N-PORT). See also Form N-PORT (requiring registered funds to provide portfolio information, including the fund's NAV).



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