# **Deloitte.** Insights



# Fair valuation pricing survey, 17th edition, executive summary

Aligning technology, risk management, and opportunity in the valuation process

Deloitte's 17th annual Fair Valuation Pricing Survey aggregates the views of 86 mutual fund firms. The population of FV survey participants represents a diverse mix of US-based mutual fund firms encompassing various sizes, asset classes, and geographies. The FV survey took place between May and July 2019.

Deloitte is a global leader providing audit, tax, and a broad range of advisory and consulting services to mutual fund firms. With an unending focus on fair valuation across the industry by regulators, mutual fund boards and investment advisers, valuation trends, developments, and leading practices continue to be of critical importance in managing valuation risks. The peer and industry information and valuation insights provided by Deloitte's annual Fair Valuation Pricing Survey are unique and valuable to your business, your operations, and to your fund board. For more information, read about our Fair Valuation Pricing Survey on Deloitte.com.

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### Introduction

HE 17TH ANNUAL Deloitte Fair Valuation Pricing Survey (FV survey) revealed an industry that is evolving on a variety of valuation-related topics, including valuation policies and procedures, both general and specific to various types of investments, as well as valuation governance, use of technology, internal controls, and valuation risk management. Throughout the FV survey, the following emerging and maturing industry trends are discussed:

- Investment companies are continuing to explore the use of technology in the valuation process. However, they have not widely adopted advanced technologies such as robotics process automation and artificial intelligence in the valuation process, as technological gains have generally been limited to more basic use cases.
   We believe that additional gains exist in untapped places.
- The formation of liquidity committees is refocusing attention on the connection between valuation and liquidity. Understanding how to capture and share information relevant for the daily undertakings of those in the front office, liquidity risk management, and the valuation function may be the next step.



- Private equity securities continue to be a large part of mutual fund holdings, with 59 percent of survey participants indicating that they hold private equities. Opportunities to standardize the valuation model process and enhance the control environment may free up the board agenda and management time.
- Valuation governance trends continue to focus on upfront risk discussions with management, proactive inquiry and reaction to real-time valuation events, and the streamlining and automation of valuation board reporting.

# Slow adoption of technology provides for future opportunities

AST YEAR'S FV survey revealed that many investment managers were exploring the use of technology in their valuation process. We incorporated several questions into this year's survey to gain an understanding of whether that exploration had expanded. The FV survey results suggest that investment managers continue to explore which types of technologies are useful (see figure 1).

While there are certain use cases in place, adoption of technological solutions has been slower and more measured than we expected (see figure 2). The use of more advanced technologies, such as robotics process automation, has been limited to certain specific areas such as exception-based (18 percent of FV survey participants) and

back-testing reporting (8 percent of FV survey participants).

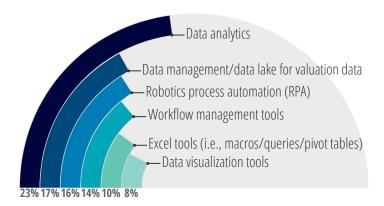
This is not to say that the mutual fund industry has not been innovative as use cases continue to emerge. A technology trend that is emerging is the use of workflow tools to better control and optimize the valuation process. In an effort to reduce redundancies and enhance reliability of manual tools, which are prone to user error, workflow tools can automate the process of collecting pricing data from third parties and allow for the performance of tolerance checks based on customized rules.

Throughout the process, dashboard reporting can be used to convey status, when reviews need to be

FIGURE 1

### Exploration of the usefulness of various types of technologies

Percentage of participants who said their firms are exploring the future use of these technologies



performed (e.g., by pricing personnel or by members of the front office), and the number of exceptions that are resolved or open—thereby improving transparency. If a decision to fair value a security is made, the workflow tool could then notify the pricing team and provide detailed instructions. Workflow technology can help streamline the valuation process by reducing the instances when the same information is touched by different people, reducing the need to email files, cutting down on errors, and freeing up management's time to respond to exceptions. Since the process is done centrally within the tool, the ability exists to build in board reporting functionality.

So why has the use of new technology for valuation purposes been so slow and measured? Our survey data suggests several headwinds to more widespread technological adoption in the valuation space. For example, there are both development and implementation costs, and one survey participant also highlighted possible

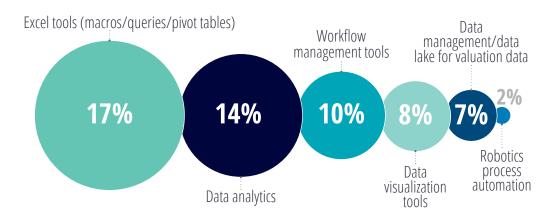
ongoing data licensing and surcharges as well. Some may also view the resulting cost savings from technology to be lesser than expected, at first glance. Although technological solutions may save operational time, they can require substantial effort to appropriately implement and monitor on a day-to-day basis. It is key to ensure that the technology is functioning as intended through reviews and tests of automated and technological solutions, before incorporating it into the regular internal control environment.

Lack of expertise may also be a factor inhibiting adoption. Our questions related to technological capabilities and support raised surprising results. Only 4 percent of survey participants report that the chief technology officer initiated an effort to use technology to increase the efficiency of the valuation process. Most participants who said their firms did use such technology reported that the effort was initiated by the fund treasurer's office or by someone within the valuation team.

FIGURE 2

Recent adoption of technological solutions

Percentage of participants who said their firms began using these technologies in the past year



#### FIGURE 3

### Adoption of new technologies to assist in the valuation process

Percentage of participants who said their firms use these technologies



### Robotics process automation

20% Generate exception reports related to day-over-day comparisons, secondary, tertiary price comparison, etc.

**18%** Generate daily pricing exceptions reports

**8%** Generate back-testing reports



### Data analytics

**45%** Analyze back-testing results and trends over certain time periods

17% Perform security valuation plot analysis to highlight price variances



### Other technology

7% Consider the trading volume of fixed-income securities in determining the size of lots trading in the markets

Source: Deloitte Fair Valuation Pricing Survey, 17th edition.

Finally, survey participants also expressed concern that by relying on technology, human expertise may be lost. If technology operates as a type of "black box," there is a risk that if something goes wrong, the error may go undetected.

Regardless of these potential concerns, exploration is still occurring and use cases are emerging, which we believe will continue. Taking the time to automate the valuation process through workflow tools may create and help strengthen the control environment.

### Connecting the dots: Liquidity and valuation

HE TOPIC OF liquidity has taken on increasing focus within the industry as fund managers adopt formal liquidity risk management programs and bucket investments in predefined liquidity categorizations, in conjunction with a rule promulgated by the US Securities and Exchange Commission (SEC) called the liquidity rule. For this reason, the FV survey included questions designed to understand the connections between the liquidity rule and valuation practices.

In response to the new rule requirements, 69 percent of survey participants have created a liquidity committee to review and consider the liquidity of the fund group's holdings, up sizably from 48 percent last year.

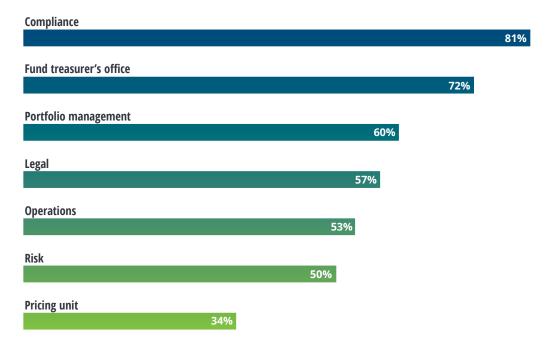
Participation on the committee by those in the risk function was also significantly higher than last year, from 31 percent to 50 percent this year. (see figure 4)

About one-third of FV survey participants reported having pricing unit members on their liquidity committees. Given the connection between liquidity risk and valuation process, this result begs the question: Can complying with the liquidity rule also help firms address valuation risk?

FIGURE 4

### Members of the liquidity committee

Percentage of FV survey participants reporting that such a role exists on the committee



Answering this question requires an exploration into whether there is a nexus between valuation and liquidity. The FV survey results suggest that many groups feel that this is the case:

- Thirty-four percent of FV survey participants indicated that their boards specifically consider the liquidity of the fund group's holdings when performing valuation oversight.
- Fifty-five percent of FV survey participants with a risk function in-house consider liquidity within that function.

So, if many believe in the nexus between liquidity and valuation, how can the information used to comply with the liquidity rule and the resulting decisions also help in the valuation process? One thing is clear—this question is quite difficult for the industry to answer. For example, just 14 percent of FV survey participants have factored results from their developed risk management scenarios or tools, such as asset and stress test liquidity, into their valuation process.

Part of the challenge is the high focus on determining just how liquid investments are. In reality, finding the connection between liquidity and valuation for purposes of striking a daily NAV per share may be less about defining what is "liquid" and more about how firms can use liquidity data captured for other purposes to help determine and monitor daily investment valuations. Figure 5 depicts how such data could be shared and used.

To date, the sharing of liquidity data between the front office and the pricing function has been limited, as 75 percent of survey participants indicated that liquidity data obtained and used by front office personnel is not directly used in the valuation process. Perhaps the key to effectively integrating liquidity data into the valuation function is creating a streamlined link between the data and the valuation function. Only 6 percent of FV survey participants indicated that liquidity data is linked to the systems they use to produce or analyze valuations. While far from a certainty, it is possible that focusing technology efforts toward better integration of liquidity data within the overall enterprise may provide a technological home run.

Where liquidity and valuation meet: Communicating valuation across the firm



### Private equity continues to impact mutual fund portfolios

UTUAL FUNDS CONTINUE to expand outside traditional public markets and hold investments in private companies. Private equity and hard-to-value investments can provide much needed alpha; however, determining the valuation of such investments on a frequent basis can be challenging given the uniqueness of each investment. More than half (61 percent) of FV survey participants indicated that the valuation format for these investments is bespoke; models are not standard and may be unique to each investment. Perhaps to bring some semblance of order, a small percentage (11 percent) of survey participants holding private equities are using an external software provider to assist in performing valuation calculations, and this may very well be the start of an emerging trend.

Model risk relative to portfolio management is a risk for many investment managers. However, model risk does not seem to be limited to a front office risk, as the heavy usage of models to value private equities and other hard-to-value investments also means that there is an operational risk as well. Thirty-two percent of FV survey participants indicated that their risk management program considers the model risk associated with internal models for difficult-to-value investments.

Model risk for valuation might not be limited to focusing on whether a model is operating as designed. There is also risk in whether it is designed appropriately from the beginning. An administrative proceeding issued in June 2019 by the SEC<sup>2</sup> dealt in part with exactly this.

Within the proceeding against a hedge fund manager, the SEC noted that "models must be calibrated to relevant observable market data, including transaction prices, to ensure they reflect current market conditions" and suggested that the hedge fund manager failed to do so for mortgage-backed securities held within a fund, resulting in values that were lower than they should have been. Calibrating a model is required within accounting principles generally accepted in the United States (ASC 820).<sup>3</sup>

The FV survey specifically addressed the concept of calibration relative to the valuation of private equities, and it is clear that explicit use of calibration is on the rise.

This may be partially a result of the American Institute of Certified Public Accountants (AICPA) Accounting and Valuation Guide – Valuation of Portfolio Company Investments of Venture Capital and Private Equity Funds and other Investment Companies (the "draft guide"),4 the initial draft of which was issued in May 2018, and which has now been finalized. The draft guide discussed calibration in greater detail than ASC 820 does, devoting an entire chapter to it and countless other references within. One might reasonably expect that the percentage of those FV survey participants explicitly using calibration and documenting that they do so will grow (see figure 6), even if many today might suggest that they already implicitly consider calibration when establishing a model for each security.

FIGURE 6

### Use of calibration in the valuation of private equities is rising at investment management firms



Source: Deloitte Fair Valuation Pricing Survey, 17th edition.

Just as with new technology, ongoing testing of models is important, and many FV survey participants pointed to such testing, as illustrated below:

- Seventy-two percent of participants perform periodic reviews of valuation models to determine their appropriateness and accuracy relative to the investment being valued.
- Fifty-six percent of participants reported that the valuation model is explicitly subject to internal controls policies and procedures.

Depending on significance, if a model does not work as originally intended, either because it was not set up correctly or because the model becomes corrupt in some way, there is a real risk that the fund's NAV may be wrong.

We believe, with the continued investments in private equity and other hard-to-value securities, that incorporating these valuation models into a robust model risk management program will help firms significantly manage the valuation risk.

# Board governance hitting on all cylinders

S IN PRIOR years, the FV survey asked numerous questions about the role and level of involvement of funds' boards of directors, who have statutory responsibilities regarding the valuation of fund investments. Boards continue to have an interest in better understanding valuation risks. Thirty-four percent of FV survey participants whose firms have a risk function indicated that the chief risk officer or members of the risk committee meet with the board or one of its subcommittees to discuss the valuation of portfolio securities. This percentage is essentially unchanged from the previous year, suggesting that boards are still considering how best to incorporate risk into their valuation oversight responsibilities.

The FV survey findings continued to validate maturing governance trends whereby mutual fund boards have three primary oversight tools available to them:



1. Advance risk-assessed planning that is then memorialized in valuation policies and procedures specifying when the board "must be involved" or "must be notified" of a valuation matter



2. Real-time "ad hoc" inquiry on valuation monitoring



3. Robust risk-based valuation reporting

In the last 12 months, 26 percent of survey participants, up slightly from last year, noted that
the board held a valuation discussion with

management, outside of a regularly scheduled meeting, to address a valuation matter or question.

- The percentage of FV survey participants with valuation policies and procedures that explicitly require that one or more board members "must be involved" and/or "must be notified" in the resolution of a valuation matter increased slightly from 45 percent to 48 percent. The most common valuation matters are when a predetermined threshold is exceeded for any internally valued securities; when an unforeseen country, industry, or issuer event occurs; or when the internal pricing committee cannot reach a consensus.
- The FV survey found that some boards do have a focused agenda on conflicts of interest, as 22 percent of survey participants noted that their boards seek to identify areas in the valuation process where there might be a conflict of interest and provide oversight relative to these conflicts.
- Seventy-four percent of survey participants reported that their boards receive price challenge information, compared to 67 percent last year and 40 percent in our survey conducted in 2013.
- Overwhelmingly, boards are receiving summary data and analysis for valuation; ninety-seven percent of participants reported this happening, compared to 88 percent in the prior year. A few years ago, the use of valuation risk dashboards

was an emerging trend. It has since matured, with 45 percent reporting that their boards receive dashboards, compared to 44 percent in the previous year.

- Boards continue to put time in upfront to
  ensure they get the outcomes they feel will help
  them discharge their valuation oversight
  responsibilities. Forty-six percent of boards
  participate in identifying key valuation indicators (KVIs), up from 41 percent last year, while
  62 percent assess and refine the format, content,
  and frequency of dashboard reporting, up from
  54 percent.
- The most popular KVIs are unchanged/stale portfolio pricing positions, back-testing results—illiquid assets of total portfolio value and/or on NAV, percentage of level 3 investments held in the portfolio, percentage of portfolio positions using vendor-based pricing, and the number and/or percentage of brokerpriced positions.

Although reporting valuation results through the use of dashboards may have stabilized, some boards are still looking to refine their reporting. In the past 12 months, 15 percent of survey participants indicated that the board conducted a review of the valuation board reports (with the goal of rationalizing valuation board reports) and another 16 percent indicated that their board plans to do so. One immediate opportunity is the removal of full details as support for summarized data received to oversee the valuation process. In 2019, 26 percent of FV survey participants received full details—down from 33 percent in the prior year. Forty-eight percent of FV survey participants still received full details of only some of the summarized valuation reports. While this may be in response to anticipated SEC guidance on board valuation governance,5 our survey results over the last several years have shown that board reporting has been an area of interest for quite some time. We believe this may, in large part, be due to the consideration and opportunities provided by the valuation risk dashboards.

### Other FV survey highlights

- Fifty-nine percent of FV survey participants reported using zero triggers to determine when to fair value equities that trade on foreign exchanges closing before 4 p.m. EST, up from 55 percent last year. This is the highest percentage that we have identified in the history of the FV survey.
- Fifty-eight percent of FV survey participants
   whose firms offer both mutual funds and passively managed ETFs said their procedures for
   determining if a foreign equity price should be
   adjusted from its closing exchange price differed significantly between both product types.
   Just 21 percent indicated that they were exactly
   the same, showing a clear divide in policies and
   procedures between fund types.
- In the event that trading stops unexpectedly on the New York Stock Exchange (NYSE), 28 percent of FV survey participants would value US equities that primarily trade on the NYSE but also trade on other exchanges by designating another exchange in which each security trades, and would use that price from that exchange.
   Another 26 percent would use a composite of prices from other exchanges.
- Twenty-two percent of FV survey participants changed their primary source for certain fixedincome securities in the last 12 months, compared to 20 percent last year. Thirty-two percent added or changed secondary pricing

- sources for certain fixed-income securities, slightly lower than the 41 percent who did so in the prior year.
- Eight percent of FV survey participants changed policies or procedures relating to odd-lots. The SEC administrative proceeding from June 2019 noted that the hedge fund manager's traders submitted price challenges to a pricing vendor and suggested that certain transaction-based prices were for institutional-sized lots, when they were actually for odd-lots.
- Overall, when an odd-lot is held, 7 percent of FV survey participants always or occasionally make an adjustment to the price of an institutionalized-sized lot.
- Fifty-five percent of FV survey participants indicated they would only initiate a price challenge when they have conflicting market data that suggests the price is not accurate. Seventy-two percent of survey participants may change a price if they believe it is not accurate even if they have not received a response from the pricing vendor.
- Sixty-three percent of FV survey participants
  use bid pricing exclusively when valuing fixed
  income securities. Only 3 percent of survey participants indicated that their use of bid pricing
  versus mean pricing differs based on the security type.

### Looking ahead

Based on the FV survey results, as well as what we have observed anecdotally and from regulatory releases, here are some areas we will be following over the next year:

### Regulatory focus on valuation

The SEC continues to make security valuation a top priority. While the June 2019 administrative proceeding was directed at hedge fund managers, the focus on having more formalized valuation policies and procedures is still instructive across fund managers. Notably, the order stated that:

The policy lacked procedures on valuation regarding how, in the context of the specific markets relevant to [the hedge fund] and the specific types of inputs available to [the hedge fund manager], it should ensure consistency with the requirements of ASC 820 for the positions they valued. For example, although [the hedge fund manager] relied heavily on valuation models to value the securities in [the hedge fund], [the hedge fund manager's] valuation policy did not mention the calibration requirement in ASC 820, and [the hedge fund manager] gave no guidance or training concerning calibration. The policy also did not mention any valuation techniques or methodologies, and further lacked procedures designed to promote consistency in valuation and to reduce the potential conflict of interest arising from the role of traders valuing securities they managed.6

We expect that some fund groups will review their policies and procedures and assess whether the

elements from the proceeding are specifically addressed, ahead of any SEC inspections.

The SEC also has several initiatives underway that will have investment managers assessing the implication to the valuation process. These include analyzing data received from N-PORT and N-CEN forms, the board outreach initiative, and the review of existing valuation guidance. On the data front, the SEC's ability to receive and analyze industry data will potentially allow it to highlight portfolio valuation outliers in seconds. What will this mean? What risk-sensing capabilities and data analytics should investment managers put in place to be proactive and anticipate SEC inquires?

On the board outreach and valuation guidance front, investment managers and boards should be ready for any foreshadowing of SEC guidance. Obviously, timing cannot be predicted, but listening to SEC speeches and public presentations can provide some direction, allowing investment managers to get a jump on the impact to the valuation process.

## Governance oversight opportunity: Robust risk valuation board reporting

With 31 percent of FV survey participants indicating that they have either completed or are planning to complete a project to rationalize board reporting (as noted in an earlier section) and with summarized valuation reporting at an all-time high of 97 percent, a real opportunity exists to enhance the valuation board reporting process. Robust risk valuation reporting can keep boards focused on asset classes that are most susceptible to price

uncertainty in changing environments. Spending the time upfront to identify these scenarios will allow boards to perform their oversight responsibilities more efficiently and effectively. Boards should continue to work with management to be successful and should have an eye toward anticipated regulatory changes. Additionally, technology will play a role, as data analytics and visualization tools will make the transition to robust risk reporting more seamless and insightful.

## Rationalization of policies and procedures through technology opportunities

The FV survey indicates that a similar percentage of participants changed or revised their valuation policies over the past year (63 percent in 2019 and 61 percent in 2018). The most common changes included:

- The addition of more pricing sources
- Changes to the composition of the pricing committee, its responsibilities, and/or meeting frequency

Increasing exploration of new technology seems likely to continue as investment managers look to be more digitally enabled. The use of data and analytics will continue to grow as a more digital-savvy culture expands in the industry. This will naturally lead to some reconsideration of existing policies and procedures, perhaps because:

- Existing policies and procedures have become obsolete because of the move to technological solutions
- Existing policies and procedures need to be updated to include appropriate internal controls and testing of new technological solutions

 Fund groups have determined that certain procedures do not address actual valuation risks or are redundant

### Continued growth of private equity securities

Clearly, the search for alpha has led many investment managers to invest in private equity securities; 59 percent of FV survey participants indicated they hold this asset class. While only 5 percent of FV survey participants holding private equities have made changes to their valuation practices as a result of the draft guide issued by the AICPA,7 an additional 11 percent said they are considering making changes. With topics such as calibration, the use of premiums and discounts, the fair valuation of debt, the use of transaction prices, and the allocation of enterprise value across a capital structure, it seems likely that survey participants will be making additional changes to address the aspects of the recently finalized guide and enhance the oversight and valuation models over private equity securities.

### Fixed income security oversight into the spotlight

Twelve percent of FV survey participants adjust the daily thresholds they use to identify out-of-tolerance price fluctuations using changes in measures such as duration, benchmarks, yields, and credit quality. The use of dynamic thresholds such as these has not grown in popularity in our recent surveys; however, it seems like they may in the future as technological solutions will provide easier avenues to create them. And this is just one example of how technology can change the fixed income security oversight process.

For example, technology can be used to help identify stale prices. Twenty-five percent of FV survey

participants identify fixed-income security prices that they believe should have changed (but had not) by utilizing an automated report. Such reports can compare the change in prices within a specific grouping of securities to identify inconsistencies and outliers; firms also use automated reports to compare the change in prices to the movement of external benchmarks or proxies. Whether the advantages of technological solutions outweigh the time, effort, and expense it takes to develop and use them will likely vary depending on circumstances and the nature of the portfolio involved. Nonetheless, fund groups may still want to consider this.

Risk management in the valuation process continues to take on a bigger role

The existence of new technology also may bring additional risks. Those FV survey participants

responding to a question on risks identified the several risks relating to the use of new technologies in the valuation function (figure 7).

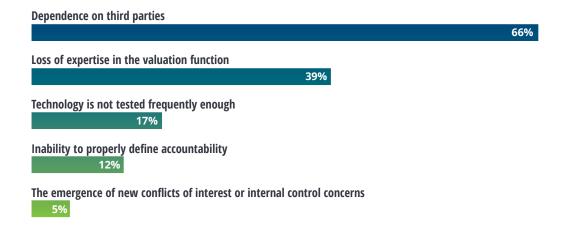
At a minimum, many fund groups may be interested in specifically addressing these risks as part of their risk management program. Others may also be considering whether to specifically assess risks identified in the June 2019 SEC administrative proceeding, such as valuation model risk, the risk of failing to consider bid prices that contradict prices at which investments are being valued, and the risk that policies and procedures are not being followed.

One thing is fairly certain: New risks will emerge. How quickly investment managers identify them, assess their importance, and determine whether and how to address them will dictate the continued success of risk management efforts over the valuation process.

FIGURE 7

### Risks relating to the use of new technologies in the valuation process

Percentage of survey participants



### **Endnotes**

- 1. US Securities and Exchange Commission, "Investment company liquidity risk management programs," accessed August 20, 2019.
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- 7. AICPA, Working draft of AICPA Accounting and Valuation Guide.

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