Exploration
Investment managers dive deeper into innovation to find process improvements

Fair valuation pricing survey executive summary
Sixteenth edition
Contents

Innovative technology and process improvements 1
Evolving with the help of third parties 6
Mindful of the risks of innovation 7
Other highlights 8
Looking ahead 9
Let’s talk 13
Innovative technology and process improvements

It’s hard to escape the word “innovation” these days. The business world seems to love it, along with the word “disruptors,” which is often used to describe technology advancements such as robotic process automation (RPA), cognitive machine learning, natural language processing, and blockchain. Some might suggest that if an investment manager isn’t embracing or at least considering innovation, its business is probably falling behind. But is that really true? Investment managers have historically been innovators, and trends have emerged relative to the valuation of investments.

To explore this further, the sixteenth annual Deloitte Fair Valuation Pricing Survey (FV survey) asked participants how they are incorporating robotics and cognitive automation into their valuation processes.

• Eleven percent indicated that their fund group began to use data analytics, offshoring, and/or robotics process automation to improve the efficiency, costs, and effectiveness of the valuation process in the last year—and 22 percent indicated they are exploring these ideas.

• Twenty-eight percent indicated that they had incorporated robotics (such as having programs perform rules-based tasks) into their valuation process. Examples of areas where robotics have been used to automate valuation processes/ workflow include the identification (but generally not the evaluation) of price exceptions, back-testing analysis, and for other periodic analysis and reporting (non-board-related).

• The FV survey noted that no participants had incorporated cognitive automation beyond the use of natural language processing.

What these results suggest is that the industry’s investment in innovative technology has not fully taken shape relative to automating the valuation process. However, we should not be surprised by that, and it does not mean that firms are falling behind in these areas because they are not racing to adopt emerging technologies in their valuation processes. Similar to the adoption of innovative technology in the operations and finance functions, the growth in available “use cases” might eventually lead to more established practices. We would also note that just because a majority is taking it slowly, not all are; in fact, some are making substantial strides in this area, especially as it relates to robotics.
FV survey participants are focusing on many investments that aren’t necessarily in the headlines but have the potential to boost efficiency and effectiveness in the valuation process. For example, FV survey participants noted the following:

- Twenty-five percent indicated that the use of automation by fund management and its agents, largely for enhanced exception-based identifications, had increased over the last year (compared to 20 percent in the prior year).
- In the last 12 months, 26 percent of FV survey participants conducted a study designed to identify ways to improve the efficiency of the valuation process.

The last point serves as a reminder that innovation may come in many forms. Innovation, of course, is a very broad term, and it could be unfair to associate it only with new technologies. Simply redesigning how a valuation task or control is accomplished to make an improvement (no matter how small) is a form of innovation that has been widely pursued. Let’s explore a couple of areas where innovation may be starting to emerge.

Intersection of liquidity and valuation

Liquidity in the capital markets is without doubt a necessity. The US Securities and Exchange Commission’s (SEC) liquidity rule brought with it the requirements for assessing, categorizing, and managing portfolio liquidity to help achieve such an objective relative to mutual funds. Some third-party providers have stepped up and developed tools that have the potential to facilitate compliance with the liquidity rule. This is an area where we have observed innovation in the form of new technology. However, should liquidity data used by front-office personnel and any new tools that have been developed intersect with the valuation process? Is an enterprise view of sharing such data purposeful? FV survey participants noted the following:

- Twenty-one percent of front-office personnel use new liquidity tools during periodic procedures they perform relative to the valuation process.
- Only 4 percent of FV survey participants indicated that liquidity data is linked into the systems that are used to produce or analyze valuations.
- Sixty-nine percent of FV survey participants indicated that liquidity data obtained/used by front-office personnel is not directly used in the valuation process.

How such data may be shared across the enterprise in the future is uncertain. It appears that some FV survey participants are finding ways to innovate the valuation process relating to liquidity. We know that liquidity data is relevant for investment valuation, and an interesting nuance is how third-party pricing providers consider liquidity and whether their view on the liquidity of a fund group’s investment holdings is congruent with the fund group’s front office. Twenty-one percent in the FV survey said they have noticed differences in how pricing vendors have assessed liquidity in valuing securities. If their assessment for a specific security is dissimilar from that of a fund group, the difference might result in a price that is higher or lower than that at which the fund group’s trader might sell it.

But does that matter? It probably depends. While it might not be significant, it’s possible that standard quality checks employed today to assess fair value estimates may not always detect subtle differences in liquidity assumptions. In times of market stress, a fund group may need to consider potential inconsistencies in the liquidity assumptions, which may impact the fair value conclusions.

Liquidity data is also used by mutual fund boards of directors/trustees (boards) in performing oversight. Thirty-nine percent of FV survey participants noted that the board or one of its committees specifically considers the liquidity of a fund group's holdings in performing its valuation oversight.

**Innovation in the boardroom**

Innovation has also found a current in the boardroom relative to how boards perform their oversight of investment valuation. For example, the FV survey results highlight innovation in board reporting that is occurring today, and there are indications that more dramatic changes are on the horizon.

People love to talk about “big data.” Recent trends related to board governance over valuation have demonstrated some of the promise of data analysis, as some boards have streamlined the data presented at periodic meetings and now use summarized data. Such valuation dashboards often highlight key valuation indicators (KVIs) that effectively steer boards to valuation issues warranting their attention. Recognizing that boards are often interested in new ways to more effectively perform their duties, the FV survey contained questions addressing the following:

- What kind of summarized information are boards receiving?
- Does the use of summarized information reduce the level of information that boards feel they need to receive?

In answer to the first question, the FV survey found:

- Seventy-five percent indicated that the board receives a memo highlighting key valuation matters/occurrences/statistics over the period.
- Forty-four percent indicated that the board receives summary data and analysis in a dashboard format, virtually consistent with the 49 percent noting such last year.
- Forty-four percent indicated that the board receives summary data and analysis in a non-dashboard format.

In addition to receiving summarized data, the FV survey queried whether the board also receives full detail as support for each of the items that have been summarized (e.g., listing of all securities included in the summary). Twenty-one percent of FV survey participants indicated that the full board does not receive full detail on areas in which it receives summarized data, suggesting that some have concluded that summarized data may provide enough information to effectively perform oversight. This is perhaps also supported by the additional 40 percent who suggested that full detail is received for some but not all such areas.
In the end, a board can determine whether it would like to receive all the detail. Having summarized data presented in a certain way may help a board better focus on areas of risk within the full detail it receives, meaning that having the summarized data provides incremental value. For others, such detail may seem superfluous. The decision about whether to couple summarized data with full detail may come down to both an evaluation of such a pairing and simple preference. However, this is an area where many boards have clearly attempted to challenge the status quo and innovate.

To the extent that dashboards are used, an emerging trend is that a board may participate in the risk assessment process to determine the content and format of the dashboards and accompanying KVIs. The FV survey revealed how participants’ respective boards receive valuation-based dashboards and how the boards participate in the process:

- Seventy-two percent of boards participate in identifying, reviewing, and evaluating back-testing results of KVIs and reports generated from a valuation dashboard.
- Fifty-four percent of boards participate in assessing and refining the format, content, and frequency of the reports generated from a valuation dashboard (i.e., exception reporting when thresholds and triggers are approached or exceeded, or year-over-year KVI trend analysis).
- Forty-one percent of boards participate in identifying KVIs for particular issuers, classes of investments, sectors, regions, markets, or other categories.
- Thirty-three percent of boards participate in analyzing and determining the thresholds or triggers for each KVI tracked by a valuation dashboard and for escalation.

Certain technological advances and other innovations such as those mentioned above have made an impact on valuation oversight. But innovation may not stop there. What would the reaction be if someone were to say that the SEC might actually help drive innovation? While such a statement might raise a few eyebrows, it may not be as far-fetched as it seems.

The SEC seems to be very interested in helping valuation oversight evolve. Dalia Blass, division of investment management director at the SEC, noted in a speech at an investment management conference in March, “We are in the early stages, but we are hopeful that we can develop recommendations to assist boards in performing their valuation duties under the Act in a way that recognizes this evolution and better serves investors.”2 She continued by promising to seek input from a wide range of boards as well as other stakeholders as the SEC reviews current responsibilities.

Prominent members of the industry have made some thoughtful suggestions to the SEC. In a letter to Ms. Blass, dated October 16, 2017, the Independent Directors Council wrote, "We urge the staff to take a fresh look at fair valuation, with the view towards proposing a rule that allows fund boards to serve in the capacity in which they add value—i.e., to oversee the fair valuation process, with a focus on those elements of the process that may present conflicts of interest."3

This is a big deal. If boards were to perhaps focus on a more refined set of responsibilities, particularly honing in on how valuation could result in a conflict of interest, the entire governance process would undergo a wave of innovation that has not been experienced in years.

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In anticipation of this potential innovation, the FV survey asked participants about how their boards consider conflicts of interest. Twenty percent indicated that their boards were specifically considering conflicts of interest. These FV survey participants listed specific examples boards are considering that included oversight of the price challenge process, special scrutiny of fair-valued securities, and the monitoring of the involvement of investments personnel in the valuation process. Some of these procedures may ordinarily be done by many boards regardless of whether the practices are specifically designed to provide oversight relative to a perceived conflict.

Understanding where conflicts may exist and whether a board’s procedures are designed to effectively oversee conflicts may be an area of emerging development. It may be that other parties, such as a chief compliance officer, may also be focused on the same risks. A small percentage of FV survey participants indicated that redundancies in such procedures had been detected and work was underway to correct them, but that doesn’t appear to be the case for the majority of FV survey participants. Whether such an exercise is useful is unclear at this point. Beginning to think about these sorts of concepts, however, may be important in starting the journey to transformative innovation in the boardroom.
Evolving with the help of third parties

Whether it’s the concept of liquidity, producing new reporting for boards, or for other critical matters, it’s not surprising that the mutual fund industry is dependent on third parties. As certain technological developments become more prevalent in the industry, external service providers are increasingly getting involved in their development and maintenance. Using such providers does not, however, eliminate the operational risks associated with their services. Fund managers dependent upon third parties for aspects of their valuation process must understand and manage operational risks.

As many risk managers know, third-party service providers can be dependent on information or services from another party, commonly referred to as “fourth parties.” Recognizing that these situations could have an impact on valuation processes, the FV survey asked how participants evaluate fourth parties that provide data used by third-party pricing sources. We found 1 percent directly perform due diligence of third-party providers, more than one-third (38 percent) make inquiries of their vendors about their due diligence, and the remaining 61 percent do not perform any analysis or make any specific inquiries.

This area is likely evolving. More questions are being asked today about fourth parties than were posed a decade ago, particularly for fund complexes with robust enterprise risk management programs. For some fund groups, however, it’s possible that this area may never evolve beyond the basic inquiry level where it stands today. It will perhaps depend on the level of perceived risk that exists, and it might also depend on the general economic and market factors influencing such risk. For example, when market conditions are less volatile and when back-testing results support the prices provided, a fund group may feel more comfortable with the results of its inquiries into a third-party pricing provider regarding its fourth parties.

For now, a meaningful first step for many fund groups could include establishing an inventory of fourth parties relied upon by pricing vendors and evaluating whether there are any risks—particularly around data quality and business continuity—warranting additional consideration.
Mindful of the risks of innovation

Innovation carries with it some risks, and that's not a novel thought, especially when it involves becoming more dependent on external parties. FV survey participants identified the following difficulties relative to innovation in the valuation arena.

• Sixty-four percent highlighted that they feel like dependence on third parties was a risk.
• Twenty-eight percent identified the loss of expertise in the valuation function.
• Twenty-four percent noted that the technology was not tested frequently enough.
• Twenty percent noted the inability to properly define accountability.

These are all challenges that firms face in any innovative environment. However, the FV survey results suggest that many fund groups are aware of the challenges and are still willing to pursue change while working on mitigating these factors. While innovation in all its forms may not always be easy or fun, the process of creating something new that shows tangible benefits can be rewarding.

After all, who wants to live in the past when one can dive into the future, explore something new, and perhaps find a hidden treasure?
Other highlights

Other findings of interest relating to valuation policies and procedures, board governance, specific investment types, and other roles and responsibilities include those shown below.

Valuation policies and procedures

- The FV survey indicates that a similar percentage of participants changed or revised their valuation policies over the past year (61 percent in 2018, 63 percent in 2017). The most common changes include:
  - Addition of more pricing sources
  - Changes to the composition of the pricing committee, its responsibilities, and/or meeting frequency
- A higher percentage of FV survey participants noted that the chief compliance officer has or shares responsibility for revising the valuation policies and procedures (55 percent this year compared to 38 percent last year).
- More than one-third (34 percent) of FV survey participants reported they consider liquidity in the fair value determination of all portfolio positions. This percentage is up from 22 percent in 2017.

Board governance

- Consistent with last year, 67 percent of FV survey participants reported that their boards receive price challenge information, a trend that seems to have matured from the 40 percent reporting such in our survey conducted in 2013.
- Nine percent of FV survey participants reported that at least one board member visits pricing vendors periodically (but not every visit), compared to 16 percent in the prior year. Only 3 percent noted that a board member attends every visit.

Fair valuation considerations for specific investment types

- Fifty-five percent of FV survey participants reported using zero triggers to fair value foreign equities, up from 40 percent in the prior year.
- Twenty percent of FV survey participants changed their primary source for certain securities this year, the same percentage as last year. Forty-one percent added or changed secondary pricing sources for certain securities, fairly consistent with the 47 percent reporting such in the prior year.
- Eleven percent of FV survey participants changed policies, procedures, practices, or internal controls relating to odd-lots.
- Forty-two percent of FV survey participants holding private equities indicated that they explicitly calibrate their valuation models and the related assumptions and inputs to equal the respected initial transaction price and/or subsequent rounds of relative financing.

Roles and responsibilities

- Sixty-four percent of FV survey participants reported they have an employee who has specific responsibility to manage and oversee the fund group’s valuation process, almost unchanged from the 61 percent reporting such last year.
- Fifty-nine percent of FV survey participants noted that they have a chief risk officer (42 percent) and/or a risk committee (37 percent).
- Forty-three percent of FV survey participants with a risk function reported that the chief risk officer or members of the risk committee meet with the board or one of its subcommittees to discuss valuation concerns.
- Thirty-nine percent of FV survey participants indicated that their traders evaluate the appropriateness of the valuation of investments that have been deemed illiquid, compared to 17 percent last year.
Investment companies continue to focus on having the right people and processes in place to achieve their best estimates of fair value for each investment. The results of the FV survey suggest several emerging areas that may be points of special focus over the coming year for management and boards. Many of these issues relate to the exploration of greater innovation in the valuation process and the benefits and challenges that may bubble up from taking a deeper dive into uncharted waters.

**Looking ahead**

What is clear more than ever is the pace of innovation and technology is not slowing. We anticipate that new trends will emerge and eventually mature as “use cases” become more common in the valuation process. Some key areas to consider include:

- Understanding how new technology is being used within the fund group, the reliability of its output, and its potential applicability in the valuation process;
- Thinking about how new technology may be used to create smarter analytics;
- Considering how data that exists in the broader enterprise may be available and useful for analysis by fund management for the pricing function;
- Contemplating the speed at which available information is reflected in prices, and the expectation of regulators relative to the ability of a fund group to absorb and use such information; and
- Recognizing new conflicts that might exist as a result of the use of new technology.

Clearly, we see fund groups continuing to assess how automation can improve daily workflow and considering how tools more powerful than simple spreadsheets can be leveraged to streamline and improve processes.
Potential outsource opportunities to third parties
We anticipate that fund complexes will look for more opportunities to leverage their service providers to achieve efficiency and effectiveness objectives in the valuation process. While on the outsourcing journey, investment managers will continue to seek to understand the risk management considerations of third and fourth parties being involved in the valuation process.

Continued focus on the impact of liquidity on the valuation process
As the SEC’s liquidity rule is fully adopted and implemented by the industry, the question of the impact of liquidity on valuation processes may be debated in a more aggressive fashion. Investment managers may find it beneficial to understand how liquidity analyses may be integrated into the valuation process of pricing sources and internal parties—and consider whether that should change the oversight of such parties.

Spotlight on the future of board governance
Two work streams seem to be emerging—the SEC’s board outreach initiative and the current focus by boards and management to look for ways to streamline board reporting. Overall, the outcome should be positive as the SEC reconsiders the roles and responsibilities of the board, including the board’s oversight role and delegation model over the valuation process. Considering this, focus areas for fund groups and their boards may include:

- Reassessing how the board/board committee allocates its time in overseeing the valuation function;
- Considering conflicts of interest that might exist in the valuation process; and
- Assessing the impact of technology on valuation, including changes in internal controls, conflicts of interest, and other areas of risk.
Beyond the board’s involvement in valuation reporting, it has other means available to enhance its valuation oversight model. One example is that the valuation oversight model may provide clear and concise expectations on the upfront determination of mutual fund director involvement and the expectation for a culture of proactive transparent communication of events that have the potential to impact portfolio valuations. Similar to the prior year survey, 45 percent of FV survey participants note valuation policies and procedures explicitly identify valuation events where one or more noninterested board members “must be involved” or “must be notified.” The top valuation event that requires such a call to action:

- A predetermined event such as a market closure or halt occurs or when an unforeseen country, industry or issuer event occurs (reported by 29 percent of FV survey participants).
- A predetermined threshold is exceeded for any holdings internally fair valued (reported by 62 percent of FV survey participants).
- When the internal pricing committee cannot reach a consensus (reported by 14 percent of FV survey participants).

Another helpful aid for valuation oversight is the practice of holding valuation discussions outside the regularly scheduled board meetings, which continues to be evident in this year’s FV survey. Specifically, 22 percent of boards held an ad hoc meeting to discuss valuation. Top drivers included valuation matters related to vendor fixed-income security pricing, interest rate tolerance breaches, foreign fair value triggers, and material override of pricing vendors. The forum for such meetings continued to vary with 28 percent noting that the full board met in person or on the phone to discuss the matter.

As the SEC continues its board outreach initiatives and considers the board’s role and responsibilities, board and management should continue to work together to assess risk and streamline board reporting. They should look for opportunities to enhance the board oversight model to include set expectations of when the board should be at the table to discuss pricing uncertainty in the market and have a robust culture of frequent and transparent communication to discuss valuation matters.
Implications of new regulation

With the full adoption and implementation of the mutual fund modernization rule, there could be several stress points to the valuation process. First, with the modernization rule, external parties will be able to compare valuations across investment managers as well as within the fund group. We would expect that investment managers have some risk-sensing capabilities to front-run potential inquiries and build the discovery of valuation outliers into the overall valuation challenge process. Fund groups may also wish to keep their eyes open for any new regulatory guidance relative to valuation.

Industry challenges

As the investment management industry continues to be challenged in ways previously unseen in the mutual fund industry, all stakeholders in the valuation process will need to keep an eye on changes in the valuation environment. Challenges in achieving organic growth, declining fees and margin compression, talent outsourcing and retention, technology adoption and disruption, rising costs, reduced expected returns, and the shift to passive versus active and its resulting impact on management fees are all combining to add new pressures on the investment management industry.4

Thus, now more than ever, investment managers, boards, and investors need to keep a close eye on controls to stay on top of management bias and conflicts of interest. The importance of investment valuation to the calculation of performance and NAV, and the resulting impact on compensation and financial results, make it critical that robust and transparent controls are in place to manage these risks.

As always, it will be interesting to see what the industry dives into over the next year... and what it may find as it continues to explore the depths of the new world in which we live!

Let’s talk

Deloitte’s sixteenth annual Fair Valuation Pricing Survey aggregates the views of 93 mutual fund firms. The population of FV survey participants represents a diverse mix of mutual fund firms encompassing various sizes, asset classes, and geographies. The FV survey took place between July and August 2018.

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