

# Asset & Wealth Management Benchmarking Insights | Alternatives

Valuation Methods & Metrics

January 2022



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# 1

## Overview

# Overview

PwC's Asset & Wealth Management practice is pleased to publish the results from our ***Asset & Wealth Management Benchmarking Insights Series for Alternatives***.

Our benchmarking series is designed to **gather, analyze and share information** about key industry trends and metrics. This report summarizes industry practices related to **valuation**.

The information reflected in this report leverages the knowledge and experience garnered from providing audit services to leading alternative asset management firms. Our valuation report captures information from **over 80 US and Europe based alternative asset management firms** across various product types and strategies representing **over \$1.3 trillion of assets under management (AUM)**. Participants primarily have calendar year ends and include a combination of hedge funds, private equity funds, credit funds and other alternative fund types such as venture capital funds and BDCs.

Because of the diverse nature of alternative asset managers, **these results should not be considered representative of all alternative asset management firms**. Furthermore, many of the concepts in this report are influenced by the specific facts and circumstances of each participant. Accordingly, these results should be viewed as directional, rather than authoritative, and do not necessarily represent practices that are applicable in all situations. Lastly, some of the data in this report can be compared to data in previous reports that we have published on the same topic. However, note that there are some survey participants which participated in prior surveys but did not participate in the 2021 survey and vice versa. Therefore, differences should not be interpreted as trends. Should you have any questions about the data herein we encourage you to reach out to our team. Refer to the back of the report for our contact information.

We hope that you find this report interesting and useful as you evaluate your organization on the topics highlighted herein.

# Valuation Methods & Metrics – Report Highlights

Included in this report are details about the valuation process, including information about the parties that **prepare and review** the valuations, the **timing** of those activities, and how firms **incorporate technology** into their valuation process. As the industry experiences an influx of capital, many alternative asset managers are seeking ways to make their processes more efficient and scalable, and the implementation of technology in the valuation process can be a beneficial way to do so. 29% of survey participants have **implemented non-spreadsheet technology** in the valuation process.

We looked at the process for those firms that have an **in-house** valuation function as well as those that utilize one or more **third-party valuation firms** (55% of participants use a third-party valuation firm as part of their valuation process).

We then examined management's oversight of the valuation process by looking at the composition of the **valuation committee** (79% of participants have a formal valuation committee) as well as the **frequency** and **level of detail** of that committee's review.

We also delved into the details of participants' **valuation methodology**, including the use of multiple valuation methods for a given investment, back-testing, and the use of **interim data inputs** (66% of participants use interim or estimated data in period-end valuations rather than waiting for coterminous data to be available).

Our report concludes with a look into how survey participants are **investing in SPACs**, including the specific types of securities held and whether advisors are launching SPAC-specific funds.

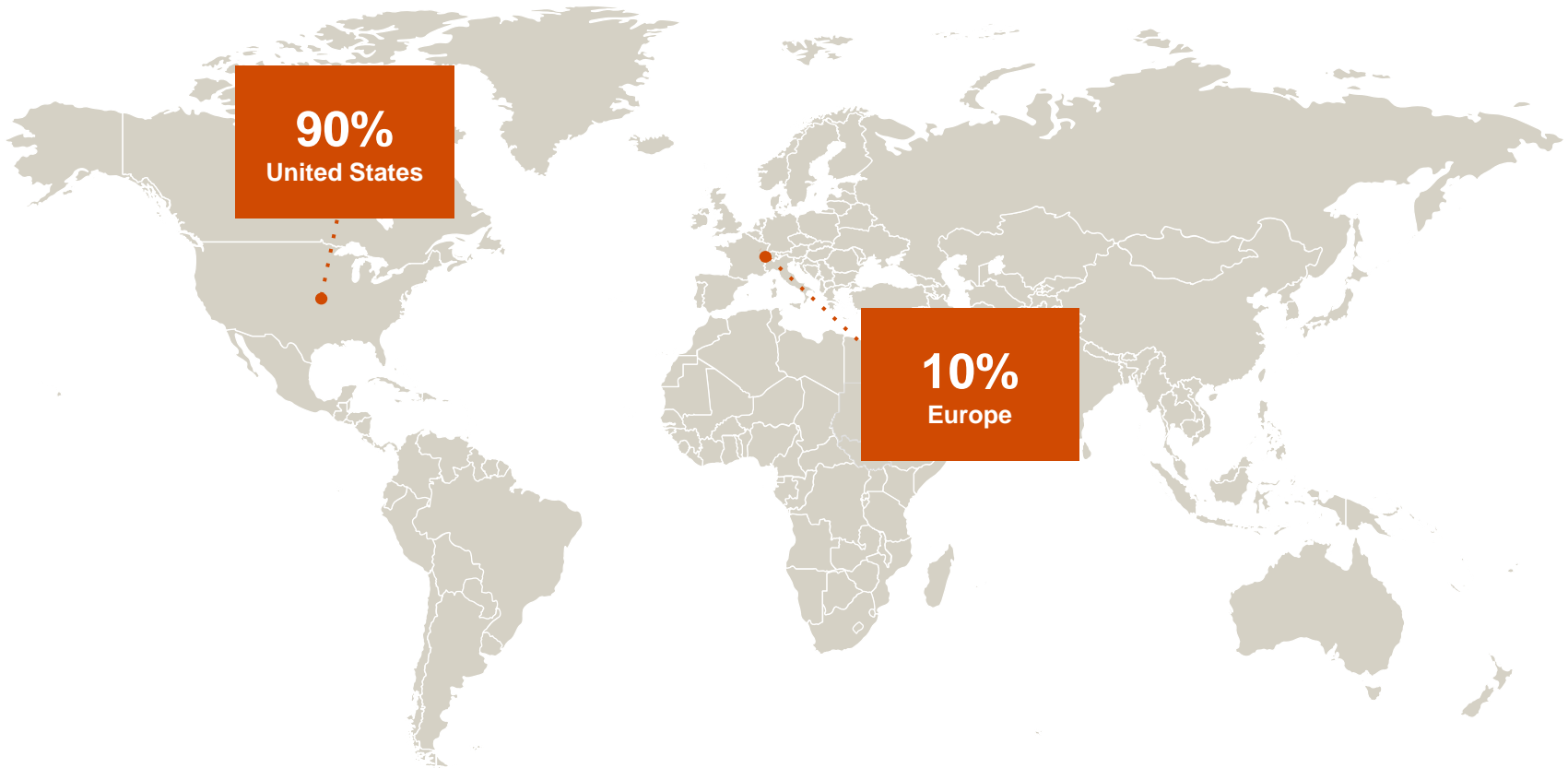




# 2

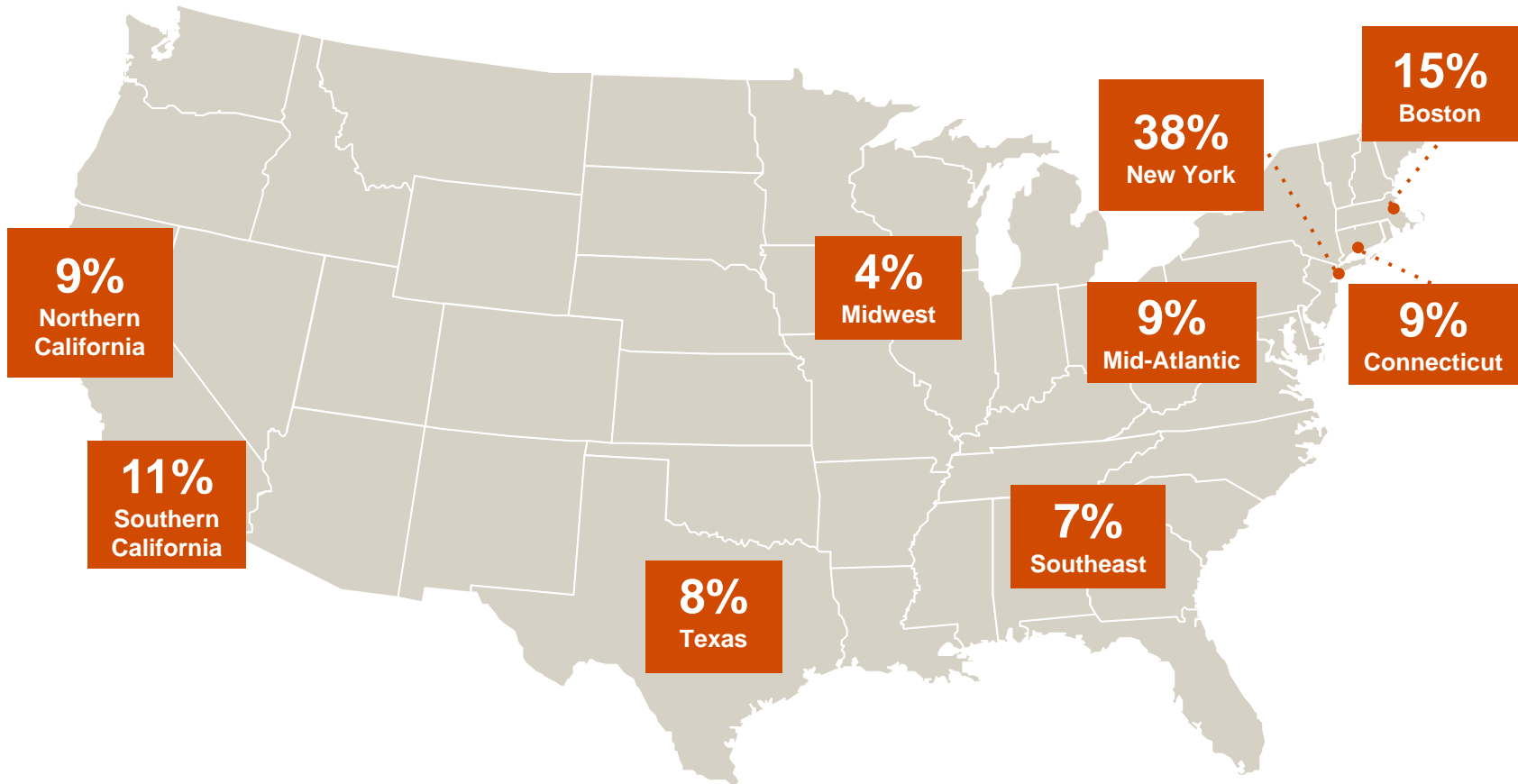
## Participant Demographics

# Participant locations



# Participant locations

Detail of US participant locations:

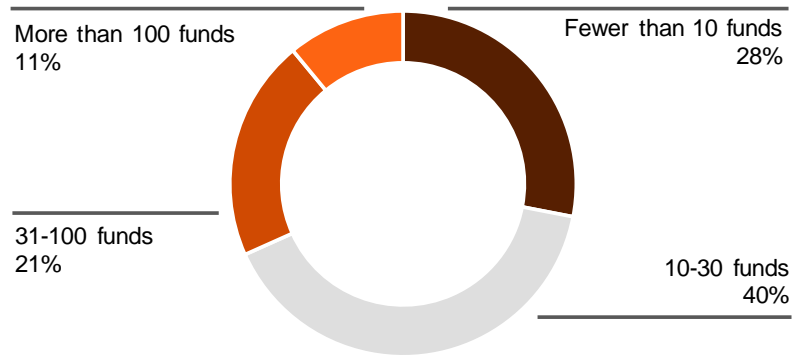


**NOTE:** Participants were given the option to select multiple locations. Therefore, percentages will not sum to 100%.

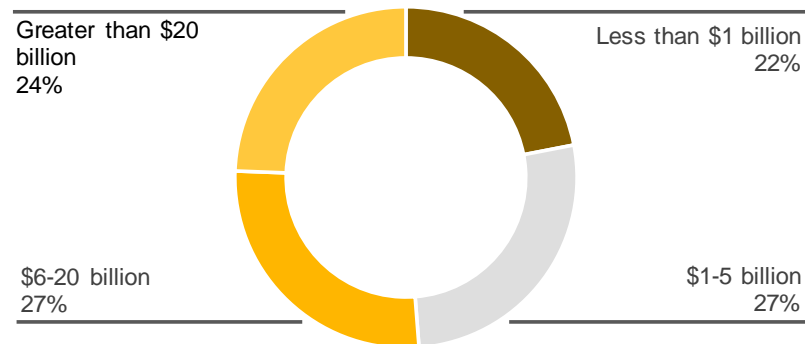


# Participant demographics

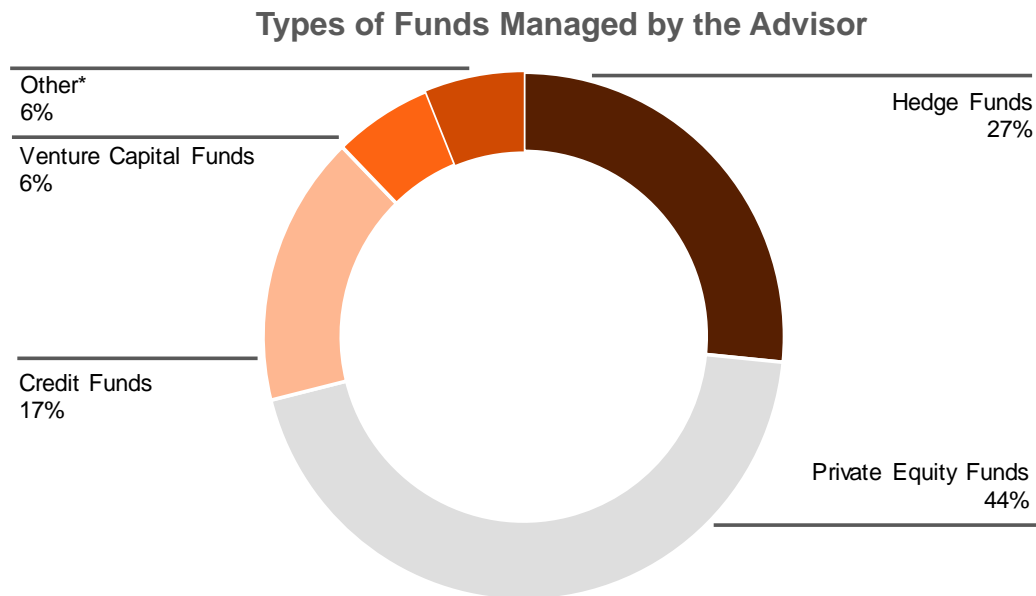
## Number of Funds Managed



## Assets Under Management



# Participant demographics



\* Other includes BDCs, real estate funds and fund of funds.

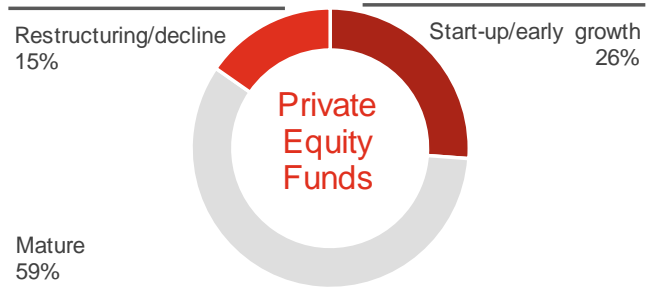
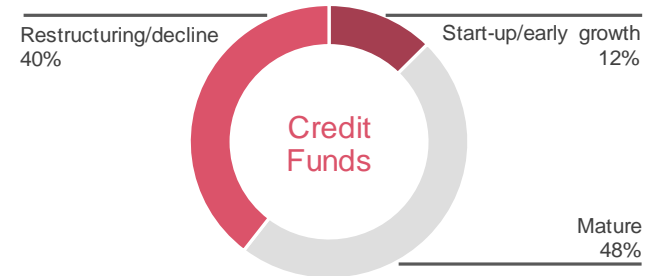
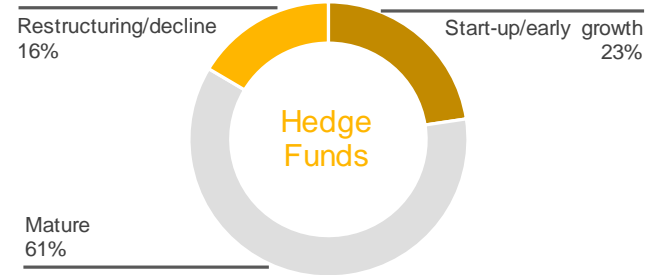
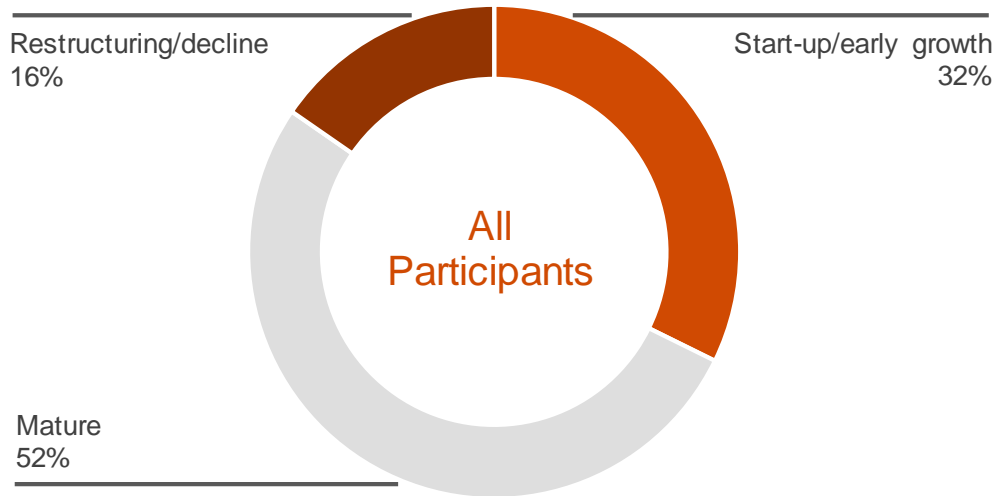
## Presentation of data in this report

Throughout this report, data has been organized by showing responses for all participants, as well as separate charts with responses for each of the three primary fund types shown above: Hedge Funds, Credit Funds, and Private Equity Funds.

Information has been provided in this format in order to allow for comparison between different types of businesses within the alternatives sector. However, as many participants are large institutions that sponsor more than one type of fund, responses from a given participant may be included in more than one of these categories. Furthermore, individual participants in each category may have open-ended funds, closed-ended funds, or a combination of both.

# Participant Portfolio Composition

## Stages in the corporate life cycle for the funds' portfolio companies

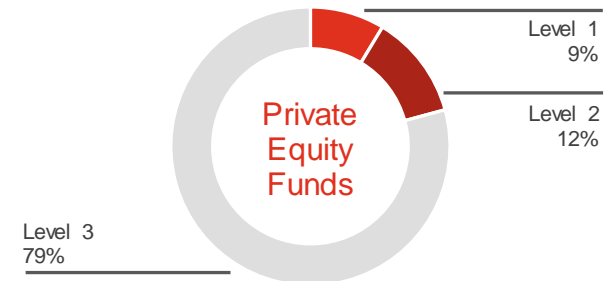
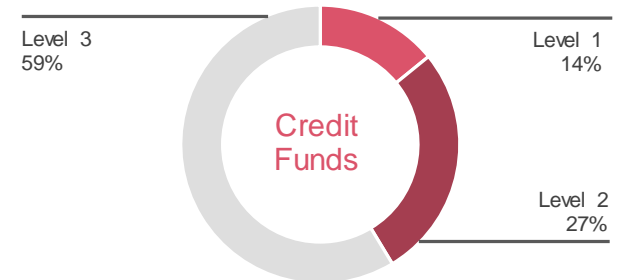
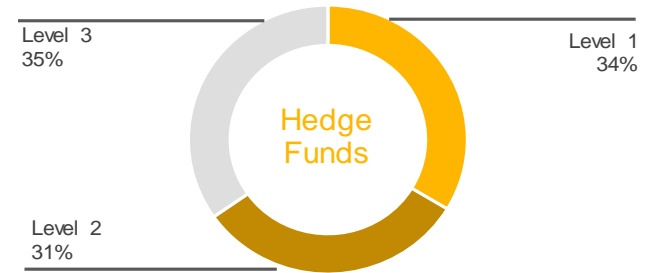
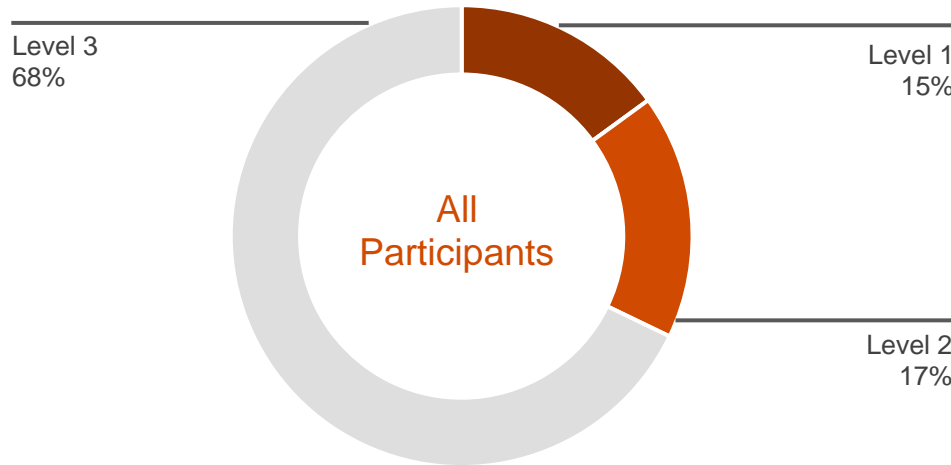


### Stages in the corporate life cycle

Alternative asset managers may invest in companies that are in the start-up phase, companies that are in decline or undergoing restructuring, or mature companies. The valuation considerations, whether for equity investments or debt investments, vary depending on the nature of the underlying portfolio companies.

# Participant Portfolio Composition

Breakdown of portfolios by investment fair value hierarchy classification



# 3

## Valuation Benchmarking

# Valuation Process – In-House Valuation

90%

of all participants utilize an in-house group for the preparation of valuation models

86%

Hedge Funds

81%

Credit Funds

96%

Private Equity

The majority of participants have an **in-house function to prepare valuation models**, while others (10%) exclusively utilize a third-party valuation firm to prepare models. Note that an in-house function does not necessarily mean a group solely dedicated to valuation. There are three primary operating models for the preparation of valuation models: 1) valuations prepared by **front office/deal professionals**, 2) valuations prepared by **middle office or back office professionals**, or 3) valuations are outsourced (the use of third-party valuation firms is covered in the next section of this report). Many of the 90% that utilize an in-house group to prepare valuation models also leverage **third-party valuation firms** to assist in the valuation process.

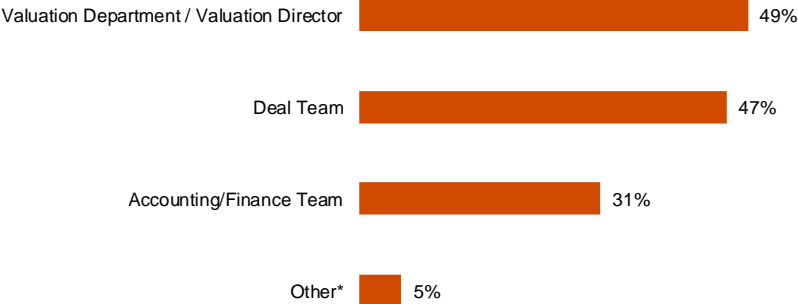
Among the 90% there is also variability in the manner in which valuation models are prepared, including the frequency and timing of valuations.



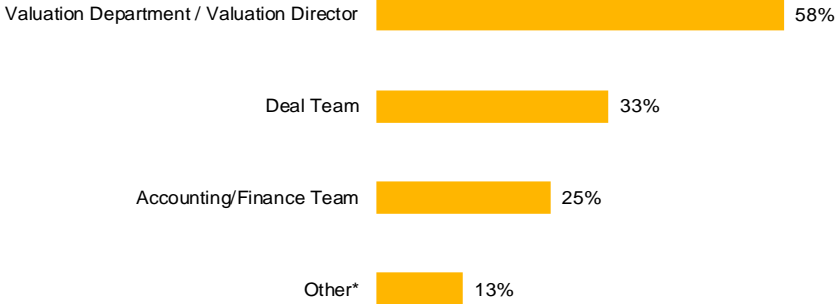
# Valuation Process – In-House Valuation

## Groups responsible for the preparation of in-house valuation models

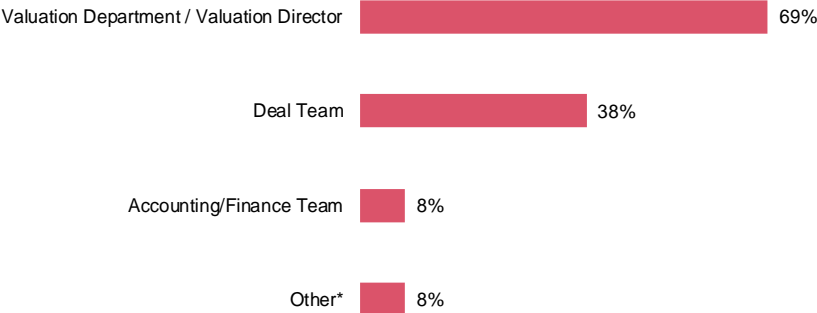
### All Participants



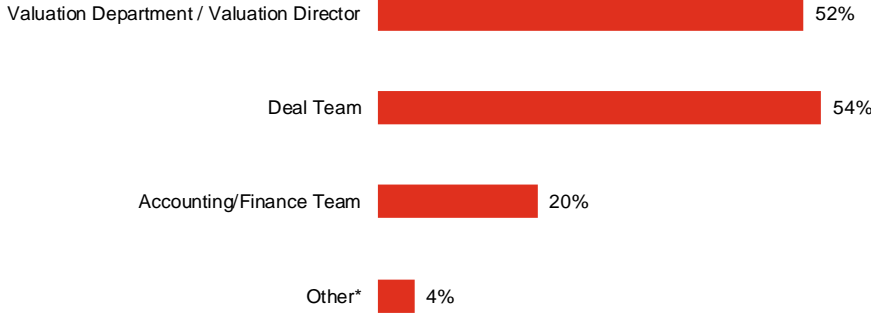
### Hedge Funds



### Credit Funds



### Private Equity Funds

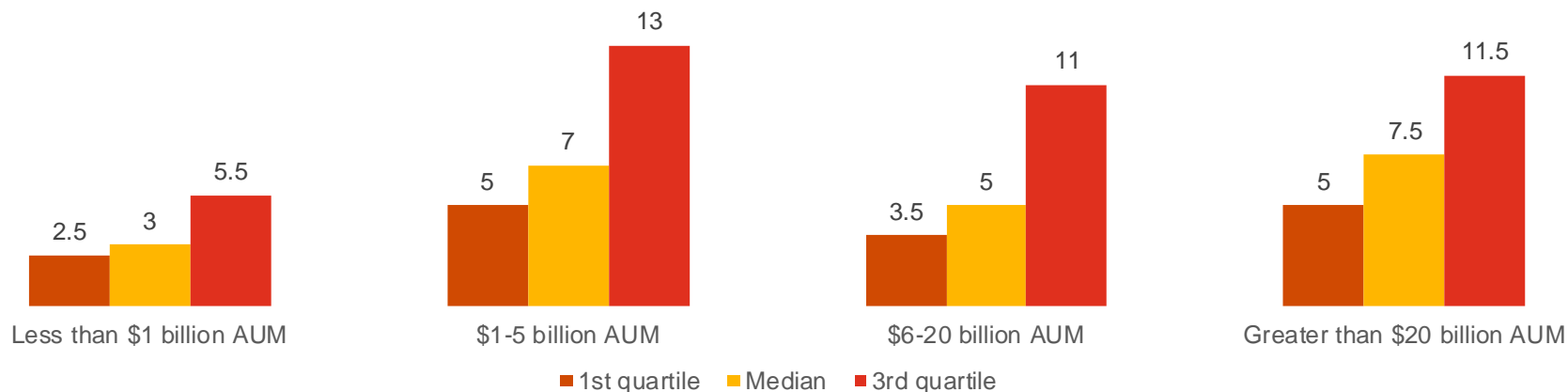


**NOTE:** Participants were given the option to select multiple responses. Therefore, percentages will not sum to 100%.

\*Other includes the Portfolio Manager or the CFO.

# Valuation Process – In-House Valuation

Number of professionals in the group which prepares valuation models (by AUM)

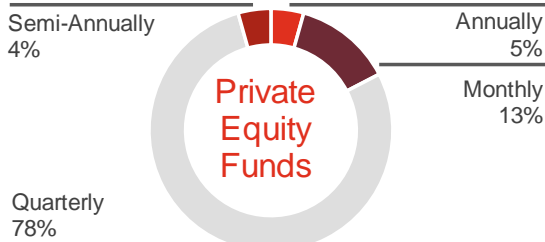
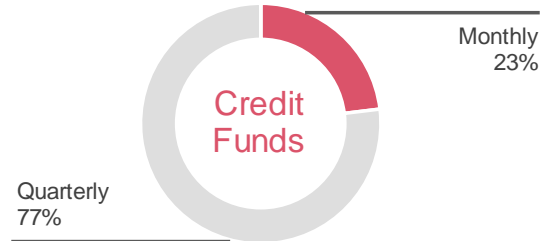
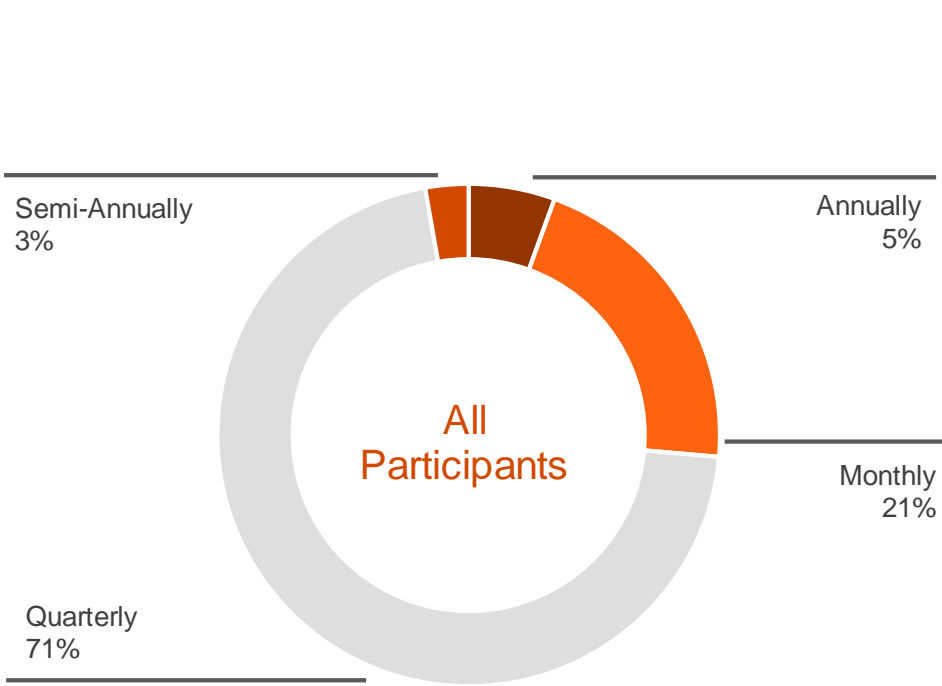


## In-house valuation groups

The chart above shows the 1<sup>st</sup> quartile, median, and 3<sup>rd</sup> quartile of the headcount of the in-house group that prepares valuation models by AUM. As noted on the previous page, this group is not necessarily solely dedicated to investment valuations, as in many cases this is the accounting/finance group or the deal team. Unsurprisingly, the general trend is that, as AUM increases, the number of individuals in the in-house valuation group also increases. However, it is worth noting that the increase is not proportionate with the increase in AUM. In other words, the median headcount for participants with greater than \$20 billion AUM is not 20 times greater than the median headcount for participants with less than \$1 billion AUM. This is likely driven by the fact that many larger asset managers can achieve economies of scale in their valuation process, such that the effort required to perform each incremental investment valuation becomes marginally smaller as the population increases. One way this scalability can be achieved is through the use of technology in the valuation process, which is explored further in a subsequent section of this report. Our data shows that participants with greater AUM are more likely to be making investments in technology to be used in the valuation process, which is one of the primary ways to make the valuation process more efficient and more scalable.

# Valuation Process – In-House Valuation

Frequency of in-house valuations



# Valuation Process – In-House Valuation

## Use of standardized models for investment valuations



### Benefits of standardized valuation models

Approximately two thirds of survey participants use standardized valuation models to some extent. Typically, these participants use standardized valuation models by valuation methodology (for example one template for all market approach models), but some also noted using standardized valuation models by asset type (for example one template for all real estate investments). Participants noted that the primary benefits of using a standardized model were ease of review (e.g. valuation committee reviews) and facilitating higher level reporting internally. The use of standardized valuation models can help enable a level of automation, and is one way to make the valuation process more efficient and scalable.

# Valuation Process – Third-Party Valuation Firms

55%

of all participants use a third-party valuation firm  
in some capacity

While some participants manage the valuation process fully in-house, many participants engage **third-party valuation firms** to assist in the process.

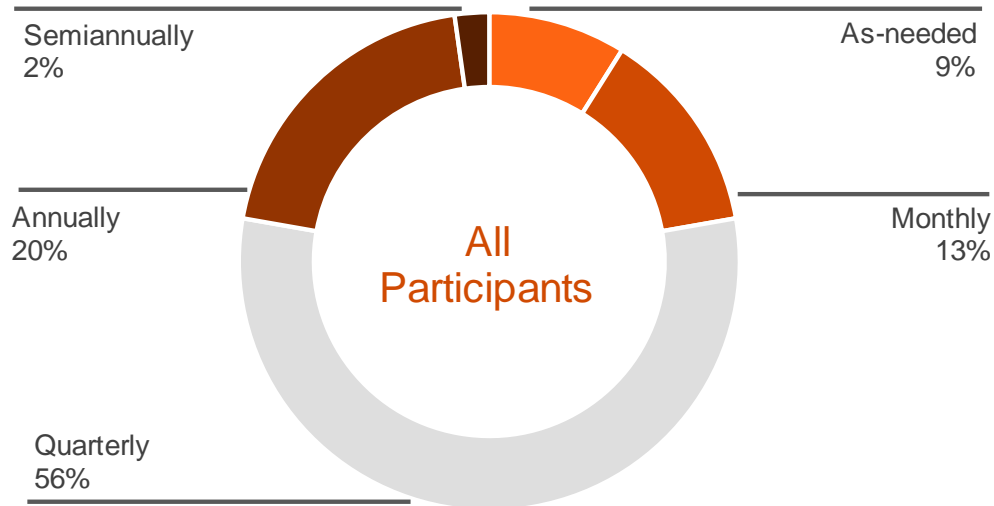
The use of third-party valuation firms is often driven by an effort to **enhance internal controls** but may also be a requirement as set out in **fund governing documents or side letters**.

Survey participants with advisors based in Europe use third-party valuation firms slightly less frequently (43%) than survey participants with US-based advisors.

The use of third-party valuation firms is **more common for open-ended funds** where periodic contributions and redemptions are based on interim net asset values. Over 75% of participants with open-ended vehicles use a third-party valuation firm in some capacity, whereas closer to 50% of participants with closed-ended vehicles do so.

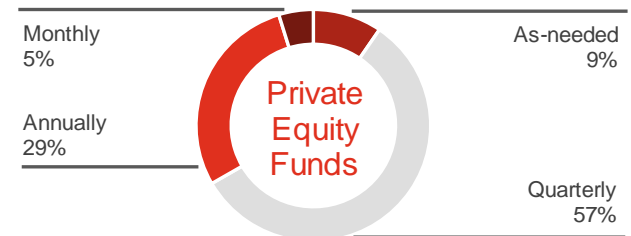
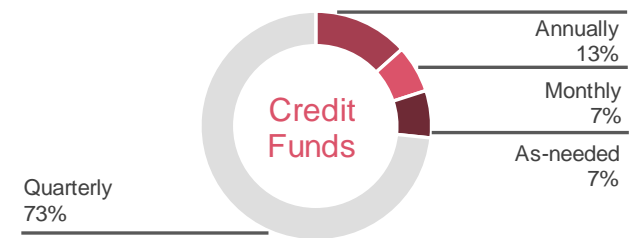
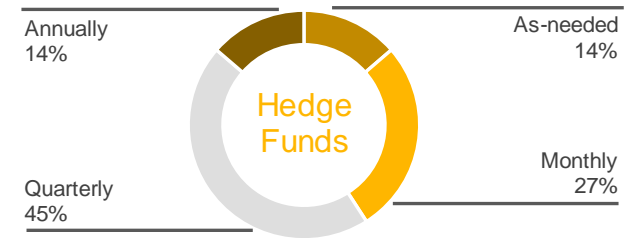
# Valuation Process – Third-Party Valuation Firms

Frequency of the preparation of valuation models by third-party valuation firms



## Use of third-party valuations

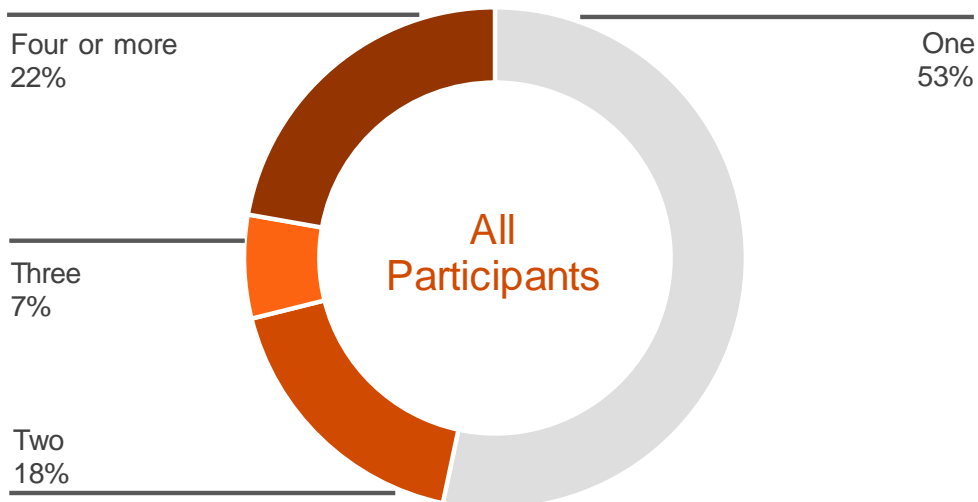
83% of survey participants that use a third-party valuation firm are doing so in addition to the valuation models prepared in-house. Therefore, because in-house valuation models are also being prepared on a periodic basis, the frequency of third-party valuations may not necessarily be in line with the cadence of interim reporting (e.g., monthly or quarterly). However, for survey participants that have valuation models prepared exclusively by third-party valuation firms, the frequency of such valuations is more likely to be consistent with the cadence of interim reporting.





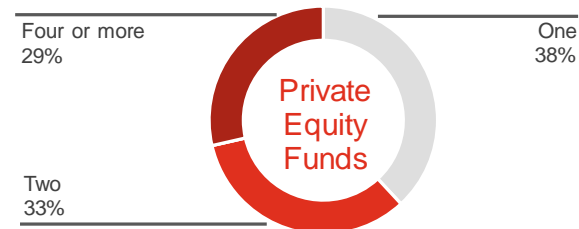
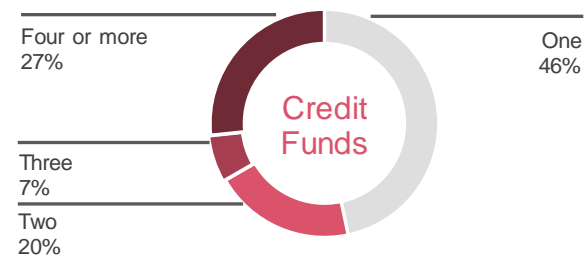
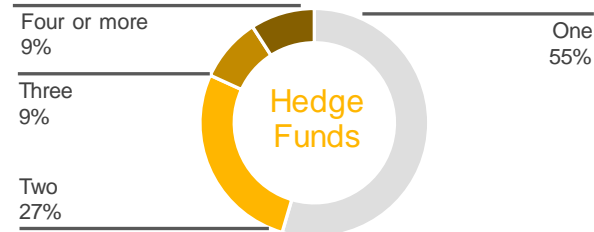
# Valuation Process – Third-Party Valuation Firms

## Number of third-party valuation firms used



### Use of multiple third-party valuation firms

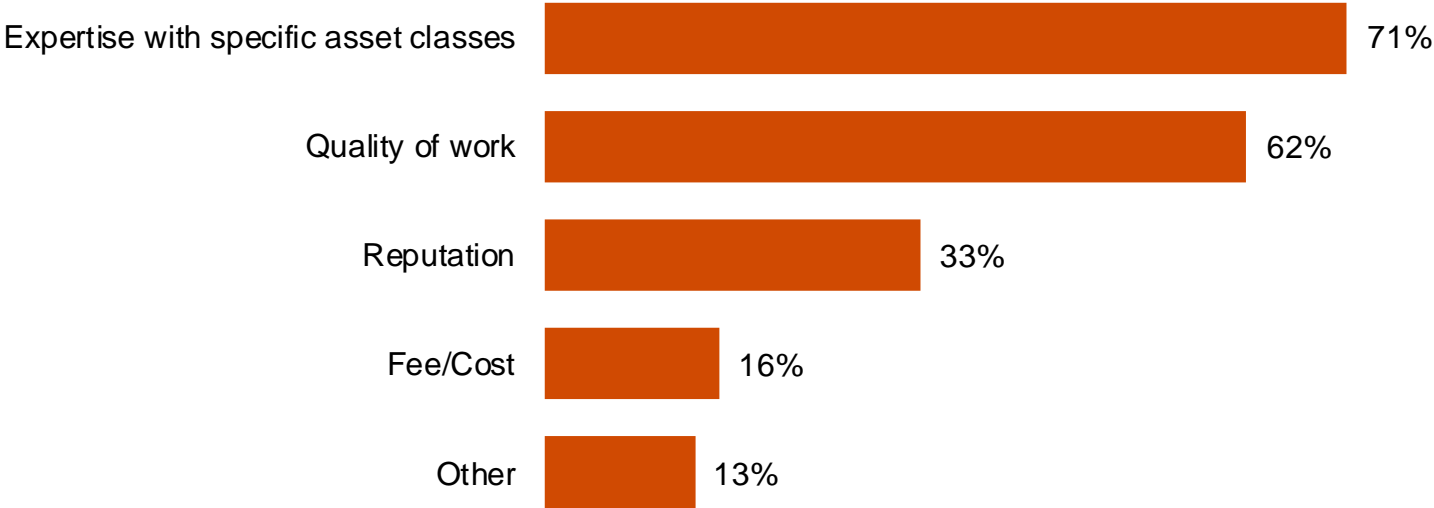
There are several factors that would drive an alternative asset manager to engage multiple third-party valuation firms. The most common factor is advisors seeking specific asset class expertise. Certain third-party firms may specialize in certain asset classes and may therefore be a better fit for a subset of an advisor's portfolio. In other cases, the advisor may be seeking more market perspective and might therefore engage multiple third-party valuation firms.



# Valuation Process – Third-Party Valuation Firms

Primary selection criteria for choosing a third-party valuation firm

## All Participants

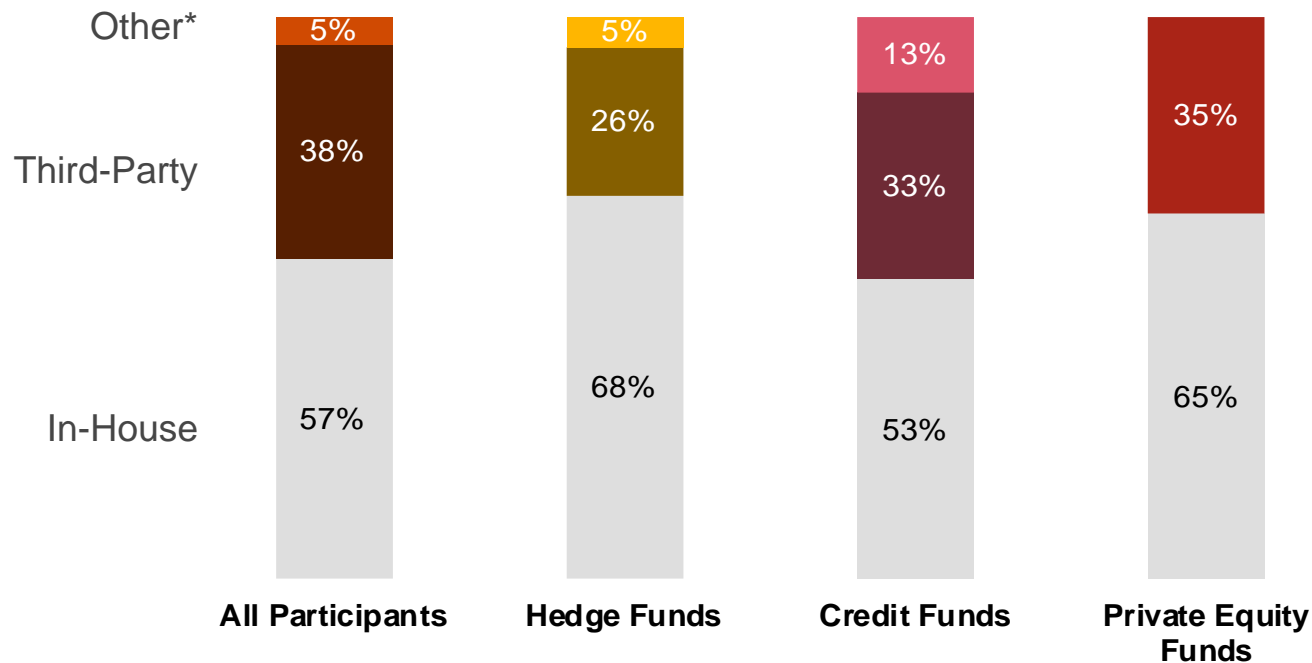


**NOTE:** Participants were given the option to select multiple responses. Therefore, percentages will not sum to 100%.

\*Other includes the ability to cover multiple asset classes and structures, as well as experience with auditors and regulators.

# Valuation Process – Third-Party Valuation Firms

If an in-house valuation is developed in addition to a third-party valuation obtained, which is considered the official value?



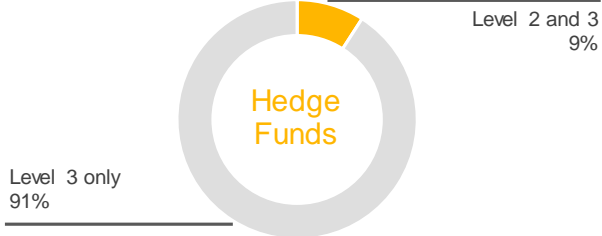
\* Other represents situations where either the in-house valuation or third-party valuation may be the official value, depending on the type of investment or management's judgment.

## Reliance on third-party valuations

Though management may be using a third-party firm's valuation as their official value, ultimately it is management's valuation, and they must be able to defend it. In such instances, management should evaluate and scrutinize the inputs, assumptions, and valuation methodology the same way they would if the valuation was prepared in-house.

# Valuation Process – Third-Party Valuation Firms

## Fair value hierarchy classification of assets subject to third-party valuation firm review

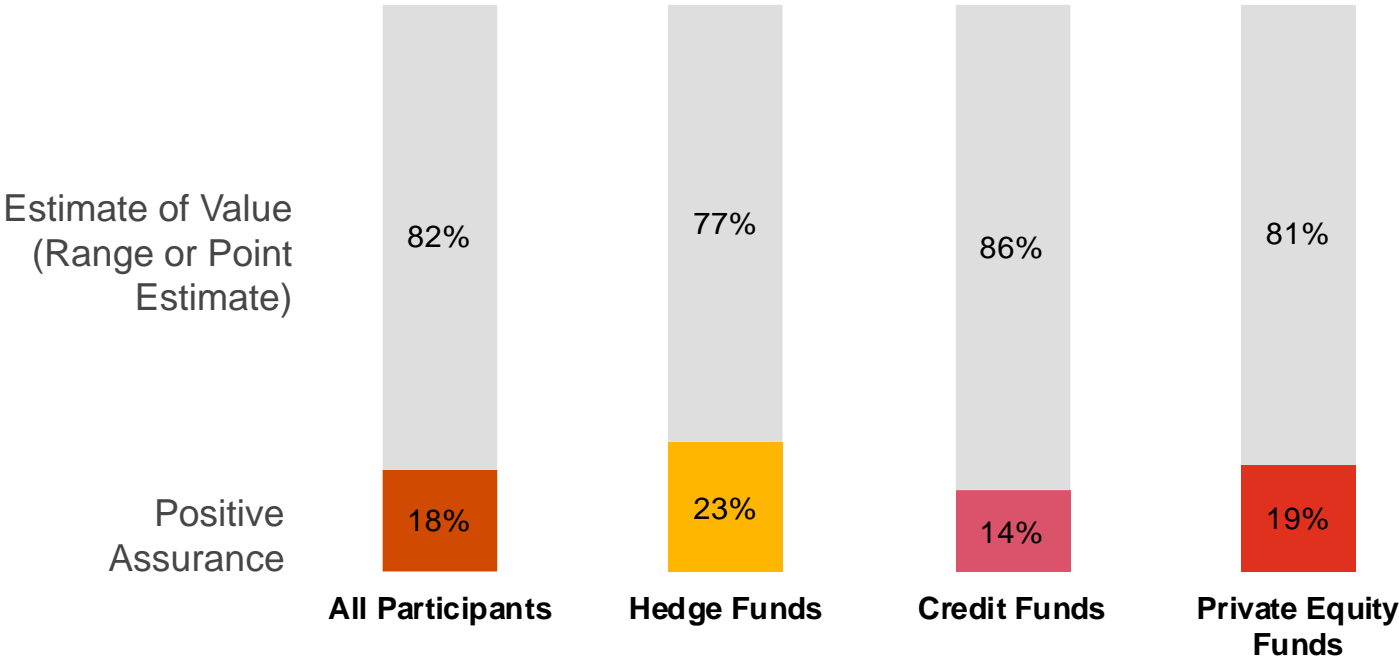


### Assets subject to third-party valuation firm review

Participants that selected “level 2 and level 3” are not necessarily engaging a third-party valuation firm for *all* level 2 and level 3 assets; rather this means that the advisor does not exclusively engage the third-party valuation firm(s) for *only* level 3 assets.

# Valuation Process – Third-Party Valuation Firms

What is the nature of the valuation reports received from third-party firms?



# Valuation Process – Use of Technology

29%

of all participants use non-spreadsheet technology in the valuation process

25%

Hedge Funds

50%

Credit Funds

25%

Private Equity

Some participants have implemented non-spreadsheet **technology** in various components of the valuation process. Non-spreadsheet technologies include **internally developed or externally purchased** tools which are designed to automate or otherwise streamline the valuation process.

Even among those who heavily leverage spreadsheets, many firms are **modernizing and standardizing** their valuation process through utilization of technology that either integrates with their existing templates or replaces old templates. These tools allow for a reduction of the mechanical or administrative tasks embedded within the valuation process to drive **quality and efficiency**.



# Valuation Process – Use of Technology

## How are participants using technology?

The chart to the right indicates where survey participants are using technology in the valuation process. Of the 29% who reported using either internally developed or externally purchased tools in the valuation process, 58% are using such tools for portfolio monitoring, 54% are doing so for cash flow modeling, 50% are using technology in the valuation calculation, and 50% are doing so for data input.

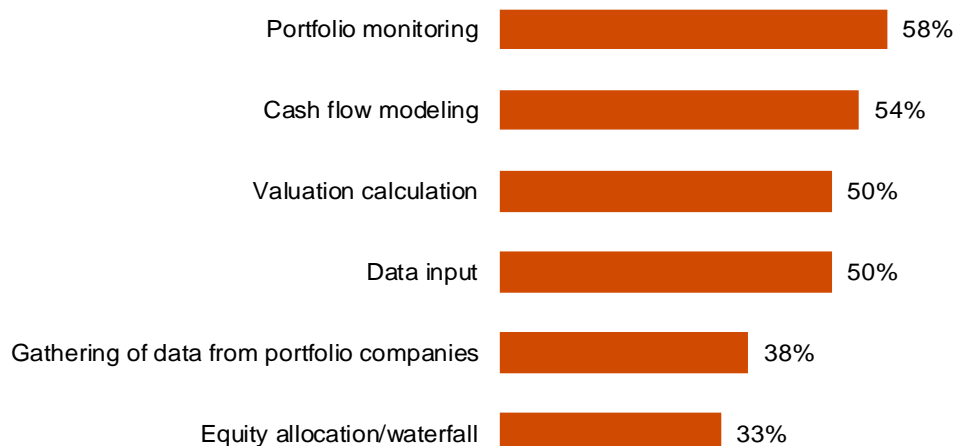
Investment managers are continuing to implement technology in the valuation process, and new technology solutions have been launched in the marketplace. The implementation of technology solutions can drive efficiencies and scalability for many investment advisors, and can be particularly impactful for firms undergoing significant growth, where efficiency and scalability are of the utmost importance.

Although the use of spreadsheet tools continues to be the most common way for investment advisors to execute on tasks within the valuation process, there are alternative solutions out there and many investment managers are exploring these innovative options.

Compared to the data from our 2019 valuation benchmarking report, the use of non-spreadsheet technology has increased by approximately 10%.

The use of non-spreadsheet technology is also more common for participants with greater AUM. 44% of participants with greater than \$20 billion AUM use non-spreadsheet technology in the valuation process, whereas that figure is only 11% for firms with less than \$1 billion AUM.

## For all participants that use non-spreadsheet technology in the valuation process, the sub-processes in which such technology is used are:



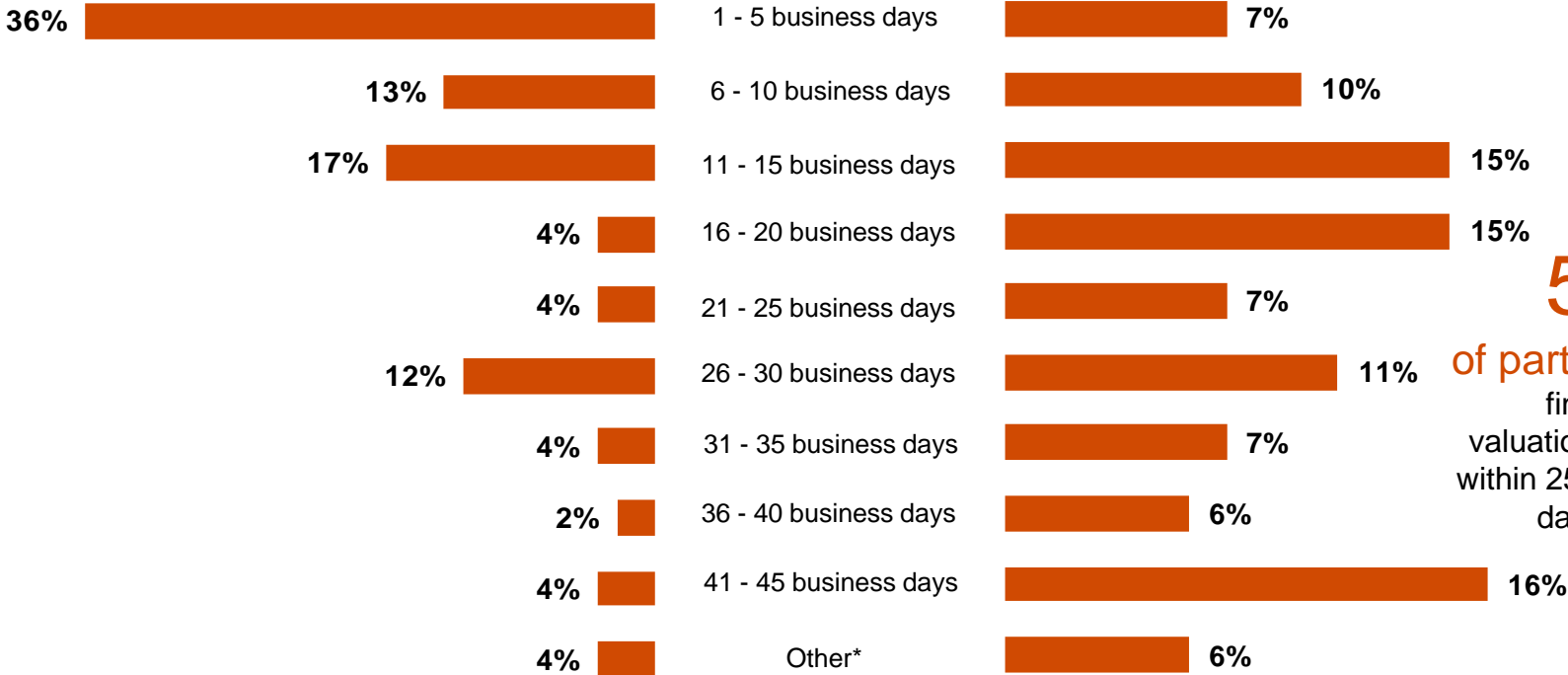
**NOTE:** Participants were given the option to select multiple responses. Therefore, percentages will not sum to 100%.

# Valuation Process – Timing

How many business days before the reporting date does the valuation process begin?

How many business days after the reporting date is the valuation process finalized?

## All Participants



**54%**  
of participants  
finalize their  
valuation process  
within 25 business  
days or less.

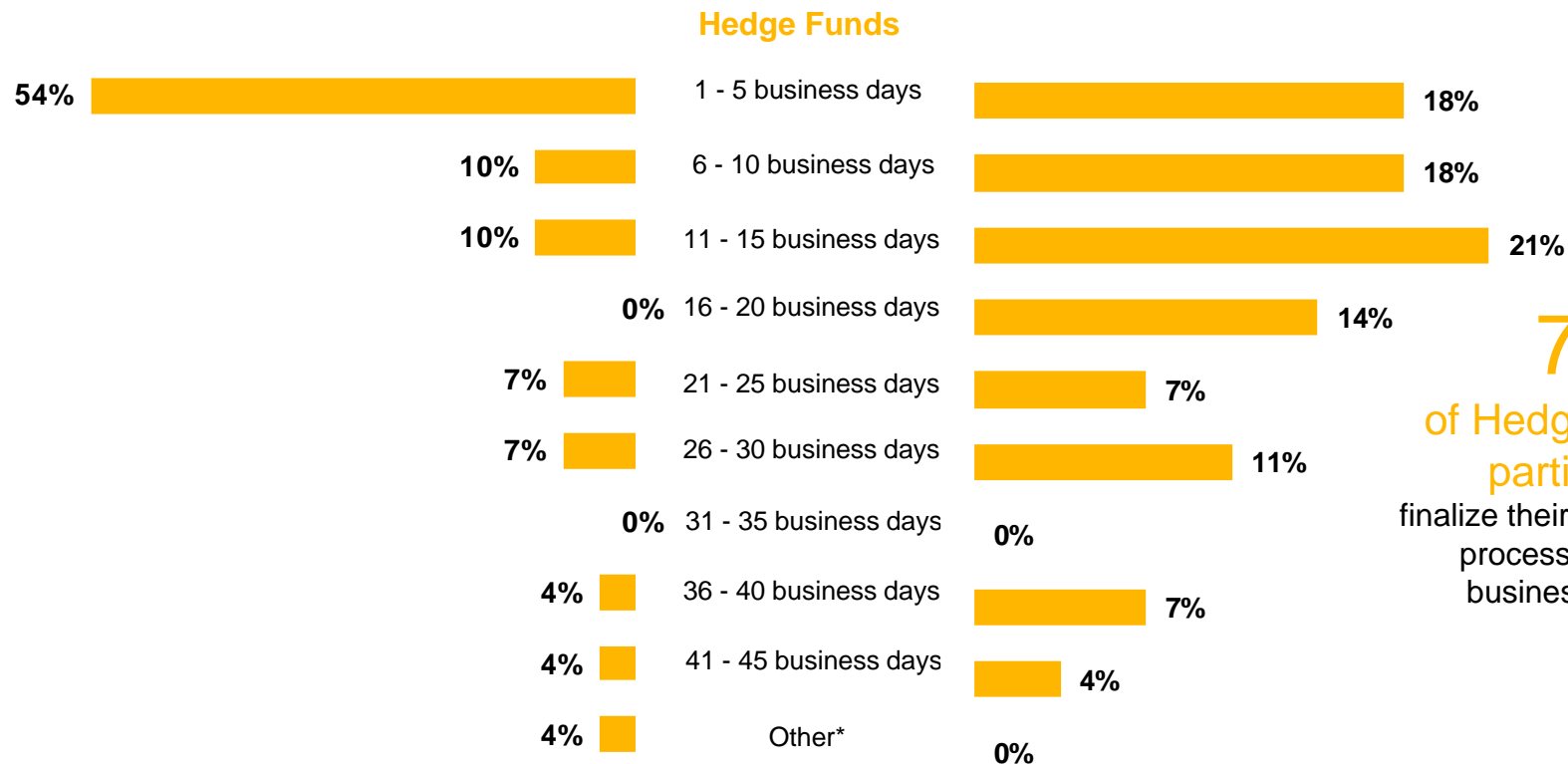
\*Other includes valuation processes that begin after the reporting date.

\*Other includes valuation processes that are finalized more than 45 days after the reporting date.

# Valuation Process – Timing

How many business days before the reporting date does the valuation process begin?

How many business days after the reporting date is the valuation process finalized?



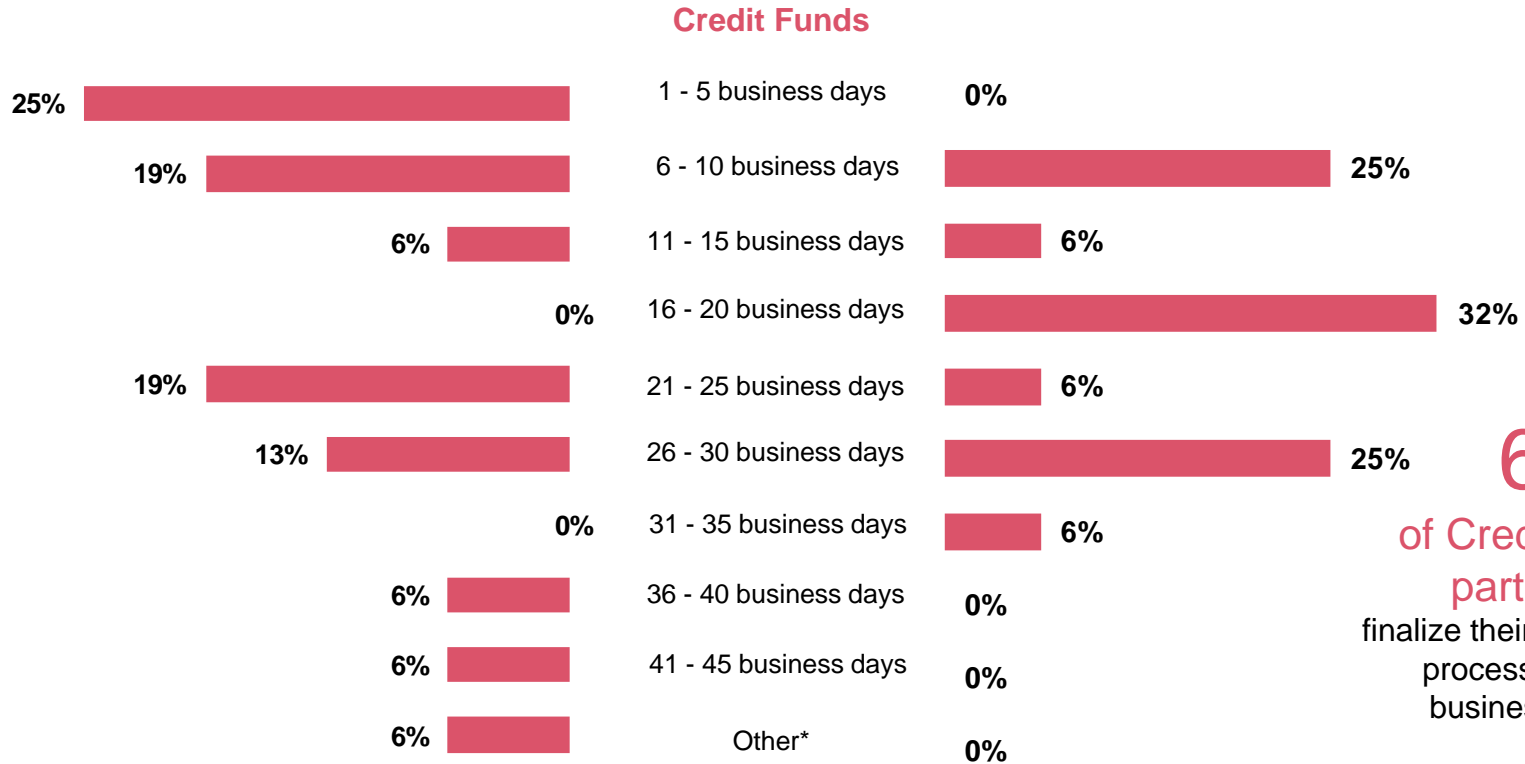
**78%**  
of Hedge Fund participants finalize their valuation process within 25 business days or less.

\*Other includes valuation processes that begin after the reporting date.

# Valuation Process – Timing

How many business days before the reporting date does the valuation process begin?

How many business days after the reporting date is the valuation process finalized?



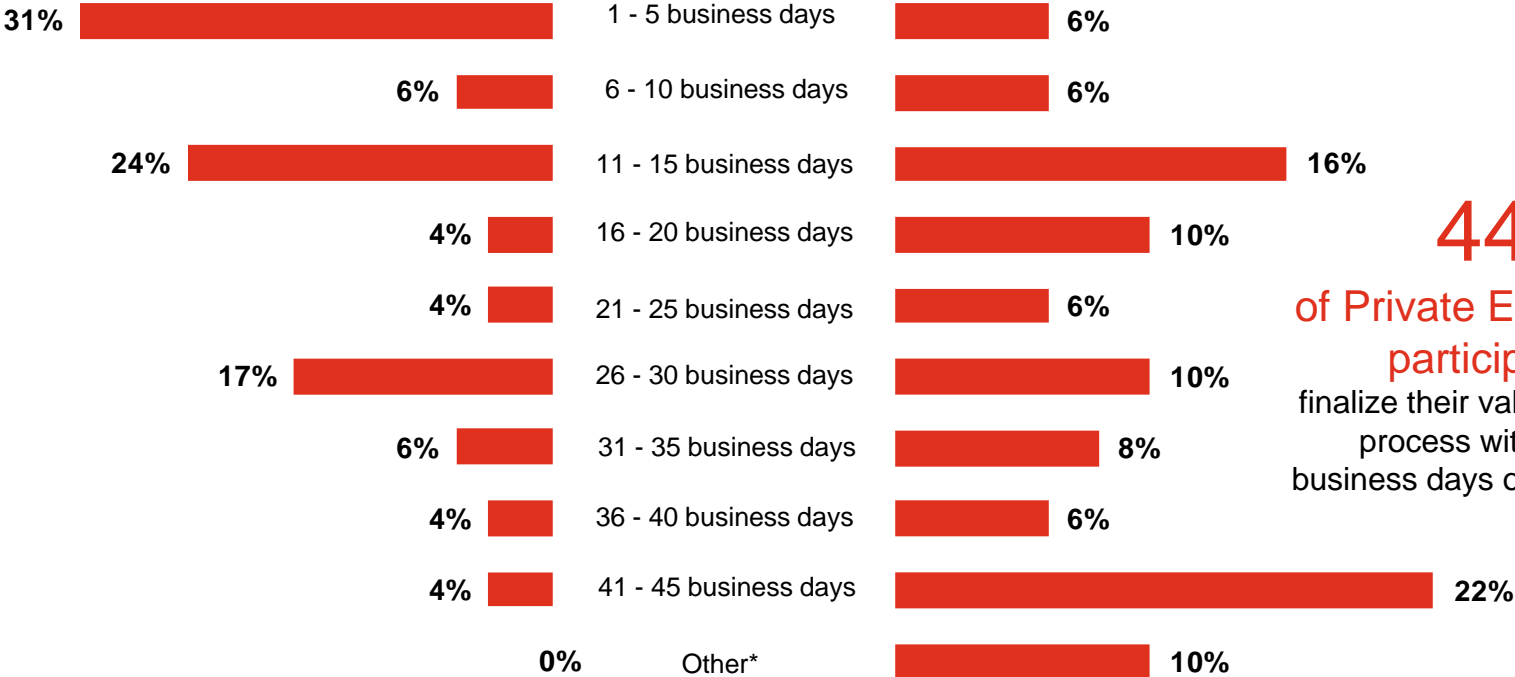
\*Other includes valuation processes that begin after the reporting date.

# Valuation Process – Timing

How many business days before the reporting date does the valuation process begin?

How many business days after the reporting date is the valuation process finalized?

## Private Equity Funds



**44%**  
of Private Equity participants finalize their valuation process within 25 business days or less.

\*Other includes valuation processes that are finalized more than 45 days after the reporting date.

# Valuation Committee

79%

of all participants have a formal valuation committee

93%

Hedge  
Funds

94%

Credit  
Funds

77%

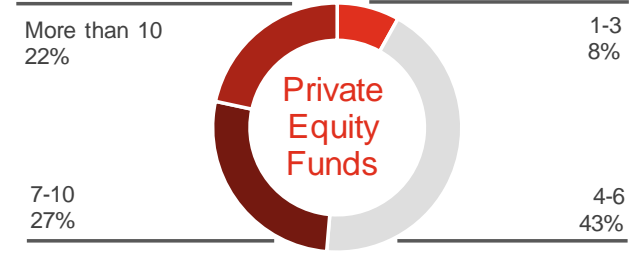
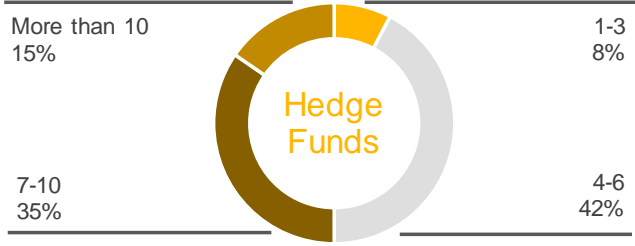
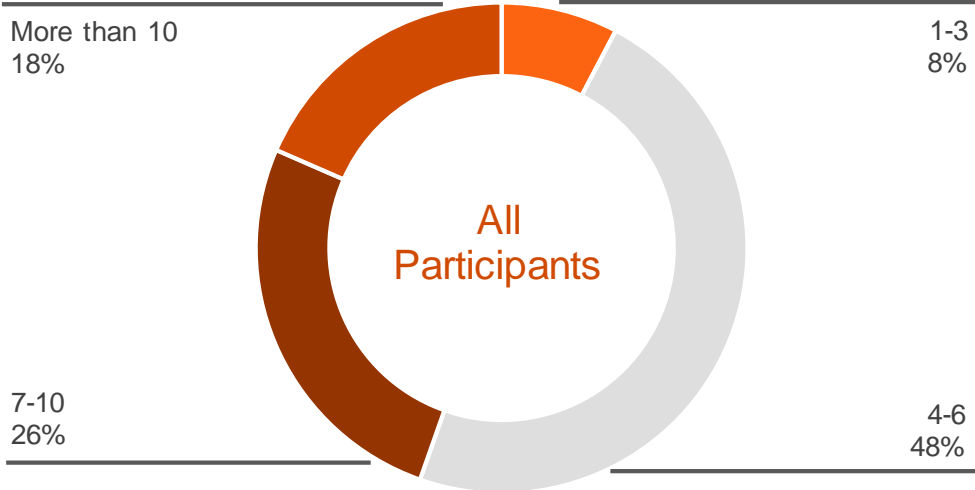
Private  
Equity

In carrying out its responsibility for oversight over the valuation process, management of many asset management firms have created a formal **valuation committee**.

The valuation committee typically consists of senior individuals within management and has responsibilities ranging from oversight of pricing vendors, administrators, and advisor personnel involved in the valuation process to reviewing specific valuations.

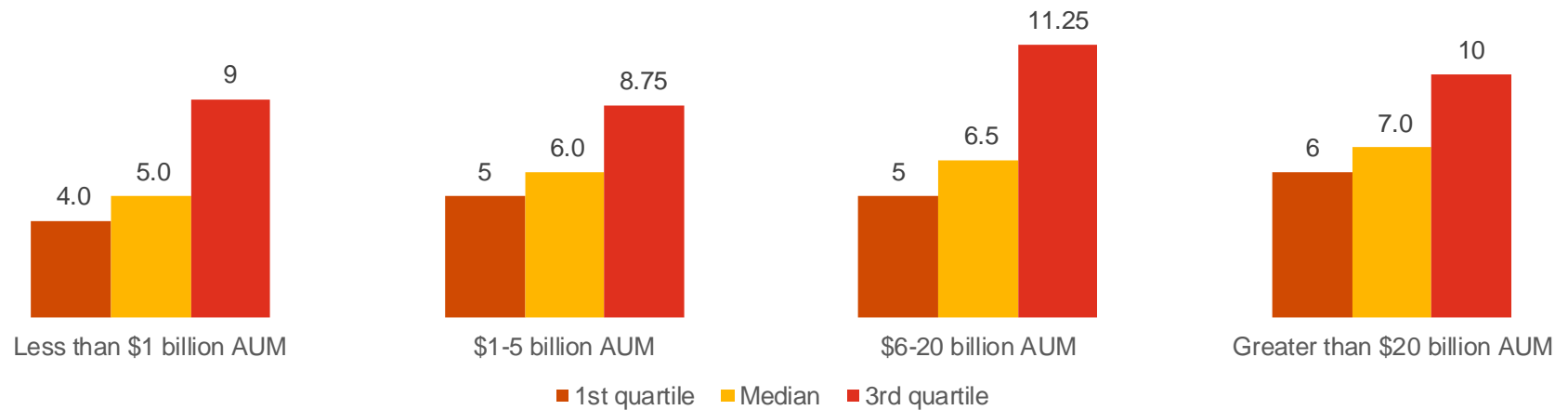
# Valuation Committee

Number of professionals that sit on the valuation committee



# Valuation Committee

Number of professionals that sit on the valuation committee (by AUM):



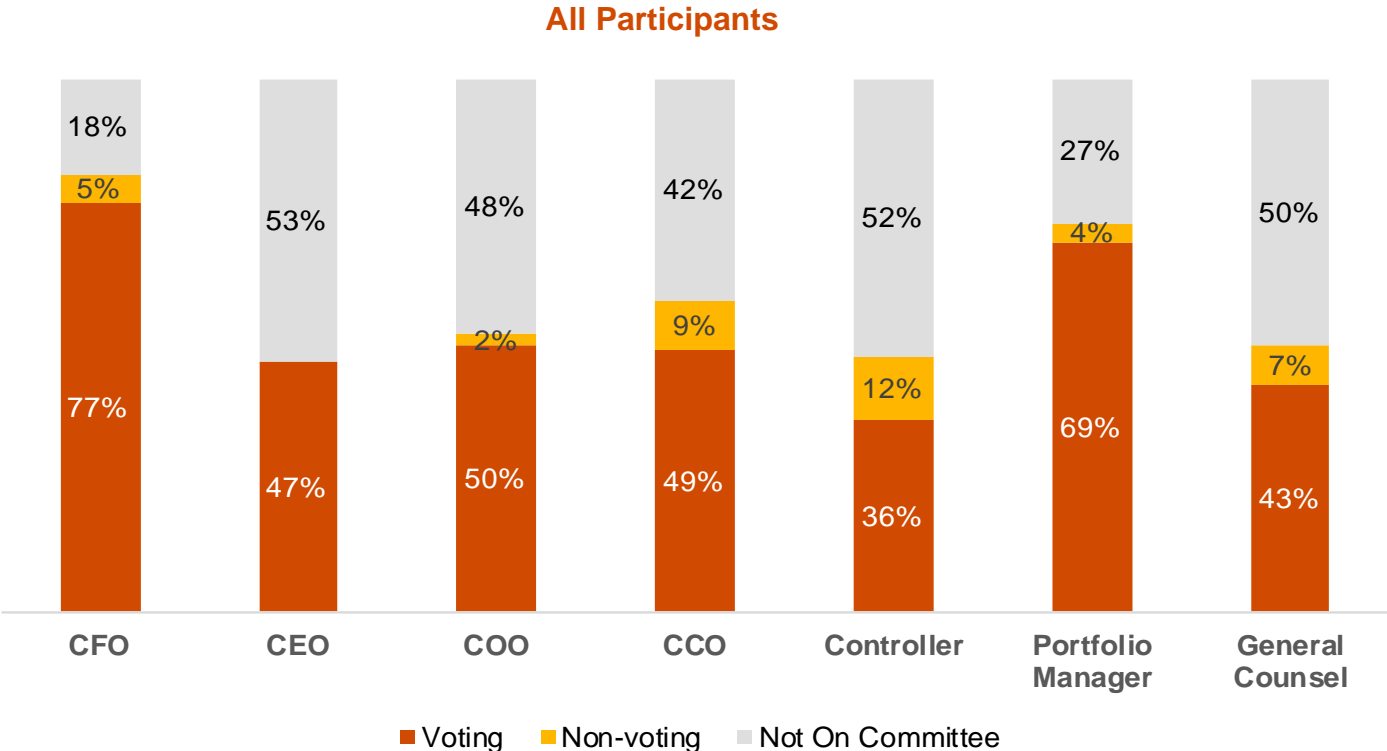
## Valuation committee headcount

The chart above shows the 1<sup>st</sup> quartile, median, and 3<sup>rd</sup> quartile of the headcount of the valuation committee based on AUM bands. While the median increases marginally as the AUM bands increase, there is not a significant difference in valuation committee headcount between firms with less AUM and those with greater AUM.



# Valuation Committee

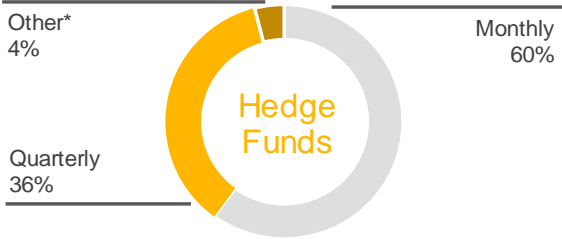
Individuals which comprise the valuation committee



Although the titles and responsibilities may vary by organization, the roles above are those that most commonly have a seat on the valuation committee. Individuals on the valuation committee may sometimes be responsible for oversight of the models as well. In that case, there should be controls and processes in place to ensure that there is an independent signoff separate from the group/individual directly responsible for preparation/review of the model.

# Valuation Committee

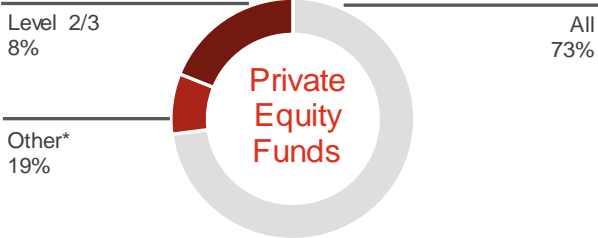
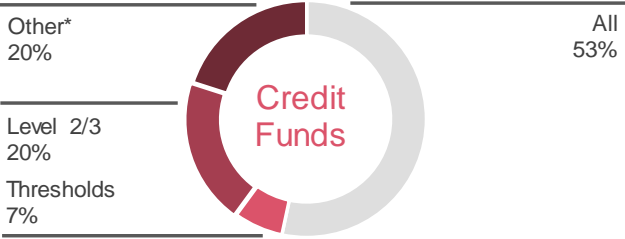
## Frequency of valuation committee meetings



\* Other represents annually, semi-annually, twice a month, or ad-hoc.

# Valuation Committee

## Level of detail in valuation committee review



**All:** All investments are subject to valuation committee review  
**Level 2/3:** Only level 2 and level 3 investments are subject to valuation committee review  
**Thresholds:** Valuations outside of predetermined thresholds are subject to valuation committee review

\* Other represents respondents who use a combination of the three options.

# Valuation Methodology

62%

of all participants may use more than one valuation methodology in a typical valuation model

57%

Hedge  
Funds

63%

Credit  
Funds

65%

Private  
Equity

The following slides detail various aspects of the **valuation methodology** applied by participating firms in determining the fair value of their investments.

This includes the methods by which multiple methodologies are factored into the valuation, how **interim data** is utilized, how information identified subsequent to the reporting date is evaluated, the extent of back testing procedures, and the consideration of recent transactions.

The AICPA Guide on “Valuation of portfolio company investments of venture capital and private equity funds and other investment companies” states that if only one valuation methodology is used, it is a best practice to document the reason why the other approaches were not used.

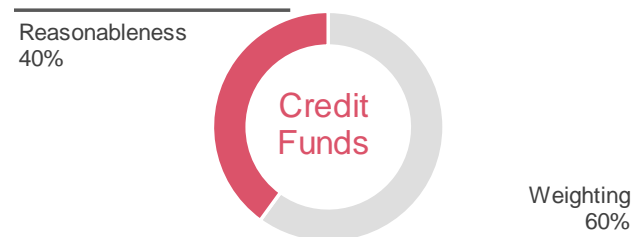
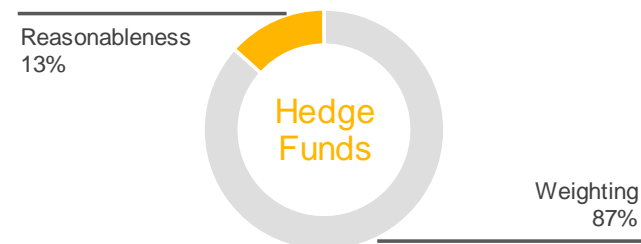
# Valuation Methodology

If more than one valuation methodology is utilized, the advisor typically concludes on the valuation by:



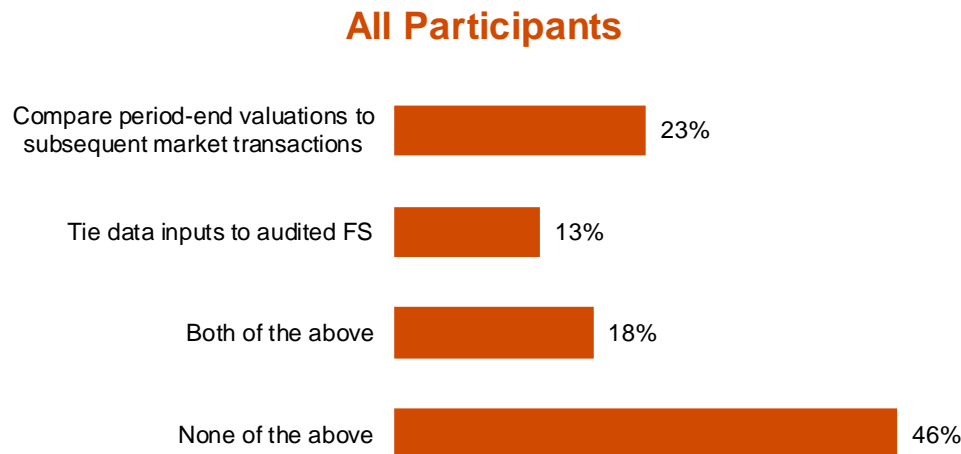
**Weighting:** The advisor applies a weighting of the various valuation methods to conclude on the valuation

**Reasonableness:** The advisor uses one of the valuation methods as a reasonableness check on the concluded value from the other



# Valuation Methodology

To what extent are participants performing back-testing?



Back-testing, also commonly referred to as a retrospective review, typically refers to the process of comparing the price of a security in a liquidity event to the fair value estimate for that security as of a prior valuation date. Another form of back-testing is targeted at assessing the reliability of portfolio company estimates, whereby data inputs utilized in valuation models which are derived from unaudited portfolio company data are ultimately compared to those same data inputs as measured in the portfolio company's audited financial statements.

Although such back testing procedures are not required, they are recommended as a way to monitor the investment manager's process of estimating fair value. The chart above shows whether participants are performing either of these back-testing procedures. While the methods of retrospective review shown in this chart are examples of back-testing procedures, there may be other ways to perform retrospective reviews that are not captured in this data.

# Valuation Methodology

## Timing of data inputs

The valuation process for alternative investment advisors may be subject to significant time pressures as management closes the books for period-end or year-end. In some situations, the investment advisor is ultimately dependent upon the timely receipt of performance data from portfolio companies. Management may design their valuation process such that it is completed before some portfolio companies may report their period-end actuals, while others may wait for portfolio companies to report their period-end actuals prior to finalizing valuations and closing the books.

If the valuation process is finalized before all portfolio companies have reported actual results, management may prefer to use interim data as a proxy for period-end data, or instead to use projected period-end data. There is also a decision to make once actual results are reported – should management re-open the books to reflect any valuation changes implied by differences between interim and final data? While some advisors may prefer to not re-open the books and record any updates for the next period's valuation, it is important to always consider the magnitude of the impact on the current period's valuation.

For each of these questions, our results show diversity in practice. Regardless, these considerations should be well thought out and policies should be applied consistently. Management should also consider the whether their process is producing reliable estimates over time which could be achieved through back-testing or other procedures.

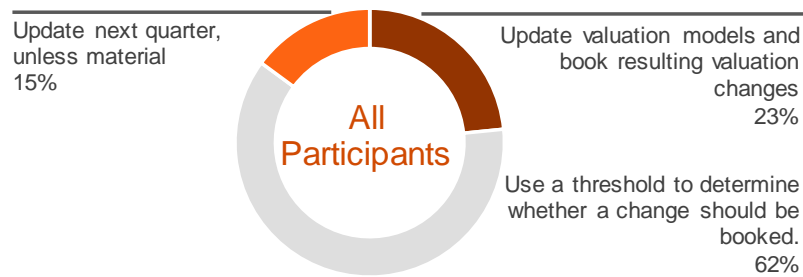
**For period-end valuations, does the advisor wait for coterminous data to be made available, or is interim data used?**



**When interim data is used, does the advisor use interim data as a proxy for period-end, or does the advisor use projected period-end data?**



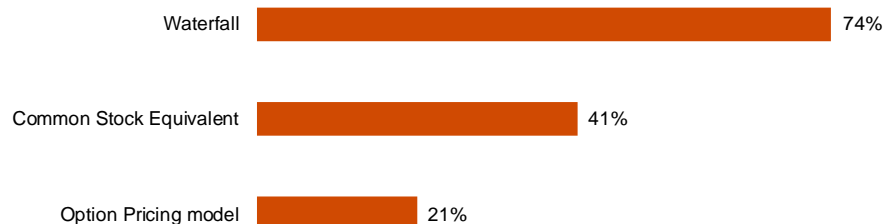
**When period-end actuals are eventually reported by portfolio companies, what does the Advisor do with that information?**



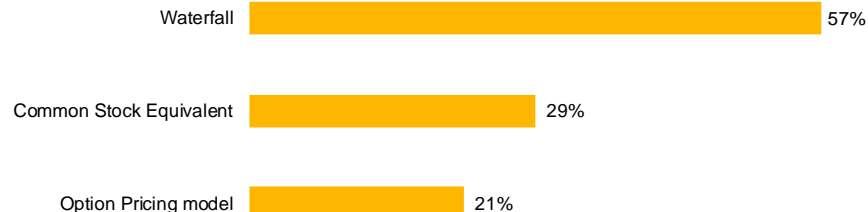
# Valuation Methodology

## The typical method used for allocation of equity value

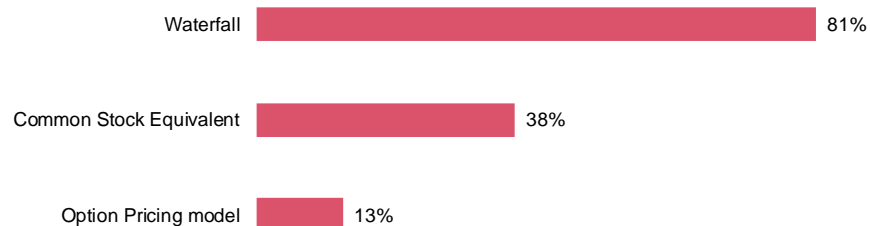
### All Participants



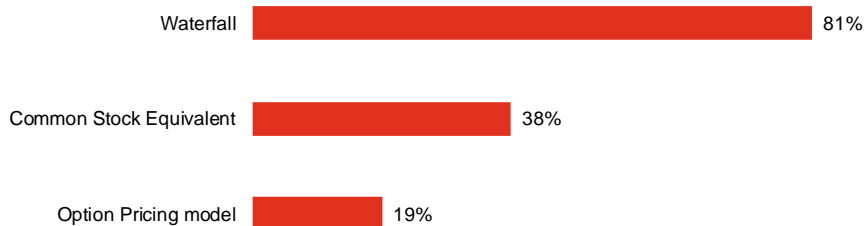
### Hedge Funds



### Credit Funds



### Private Equity Funds



**NOTE:** Participants were given the option to select multiple responses. Therefore, percentages will not sum to 100%.

## Allocation of equity value

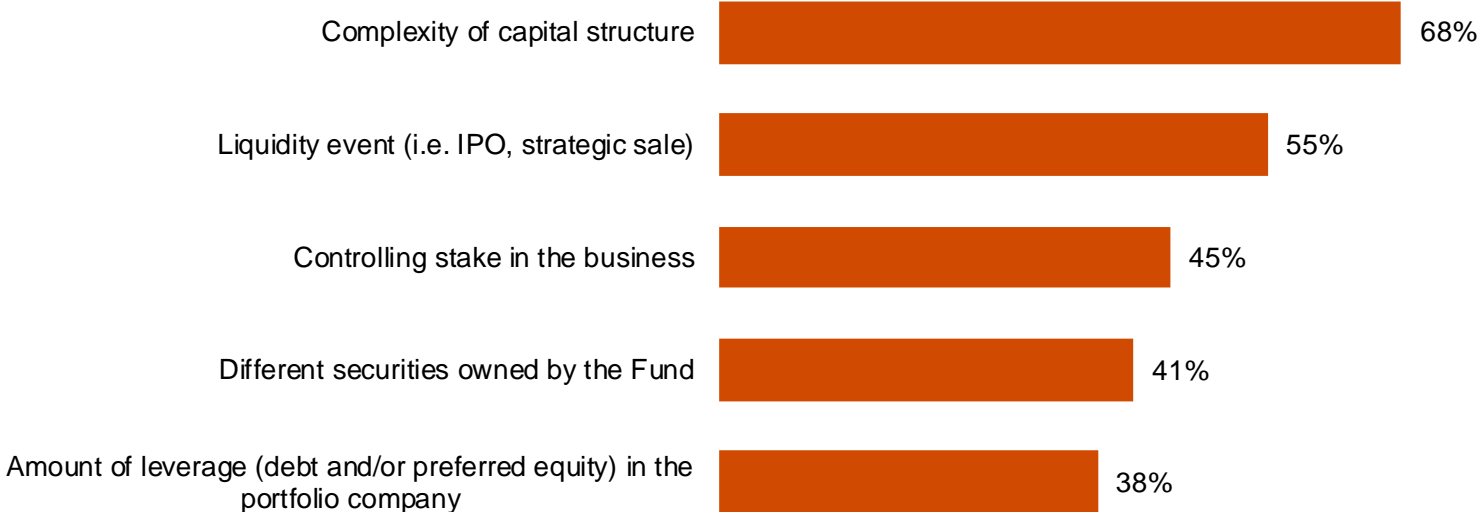
While there are different approaches to calculating the allocation of equity value, it is not as simple as choosing one approach and applying that as a matter of policy. The appropriate allocation method depends on specific facts and circumstances, particularly the complexity of the capital structure, anticipated time to exit, whether the Advisor exerts control over the portfolio company, among other factors.



# Allocation Methodology

In selecting the equity allocation method the following are typically considered

## All Participants



**NOTE:** Participants were given the option to select multiple responses. Therefore, percentages will not sum to 100%.

# Use of Discounts

56%

of all participants use discounts in private equity valuations

43%

Hedge Funds

38%

Credit Funds

50%

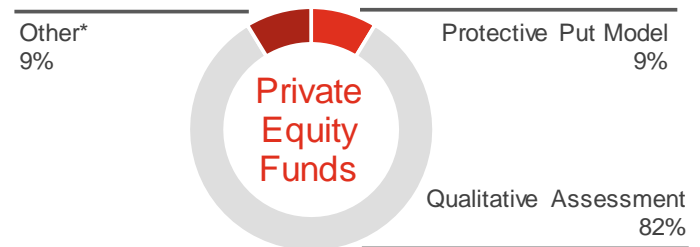
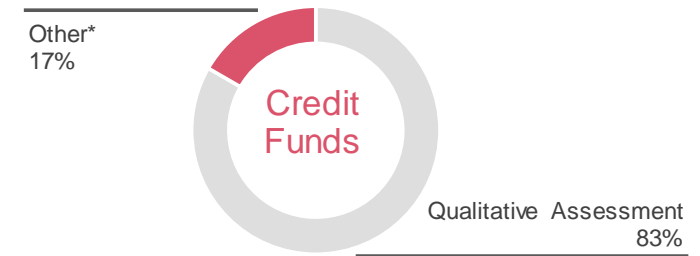
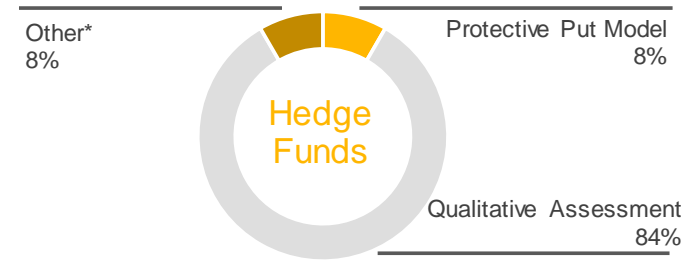
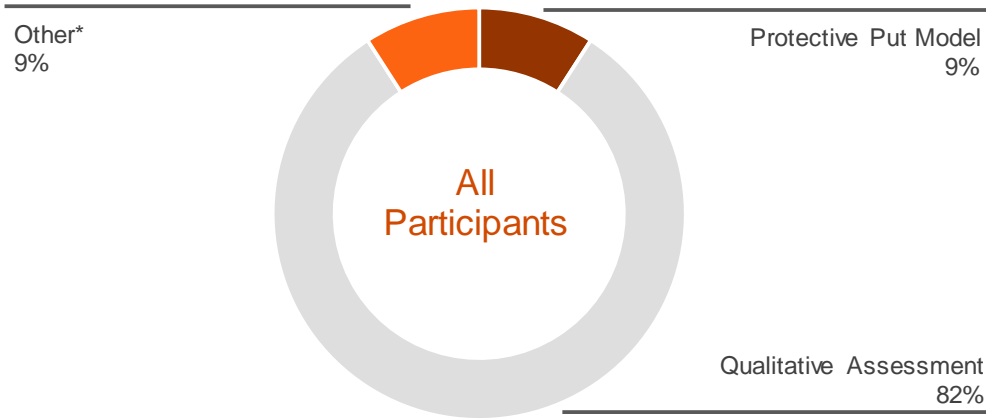
Private Equity

**Discounts** may be applied to the valuations of private equity investments or to comparable asset valuations to account for lack of marketability of the investment or other characteristics such as growth, size, margins, and diversification.

There is diversity in practice regarding the **method for calculating discount rates** to be applied in private equity valuations, as further described on the next page.

# Use of Discounts

How is the discount determined?

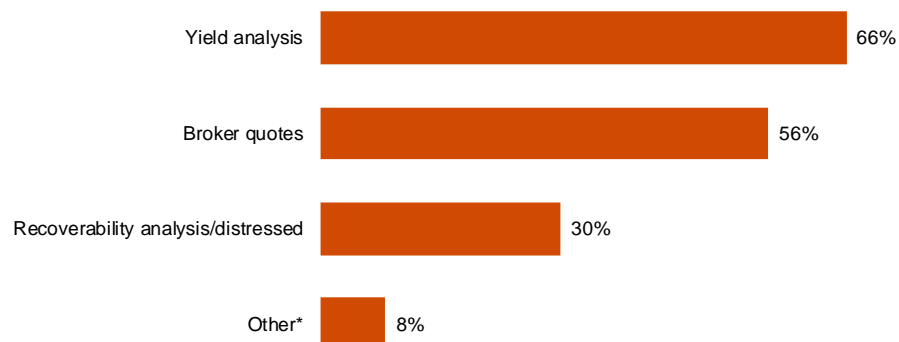


\* Other includes Finnerty Model (most commonly used for calculation of discounts for lack of marketability), or either one of the two main options depending on facts and circumstances.

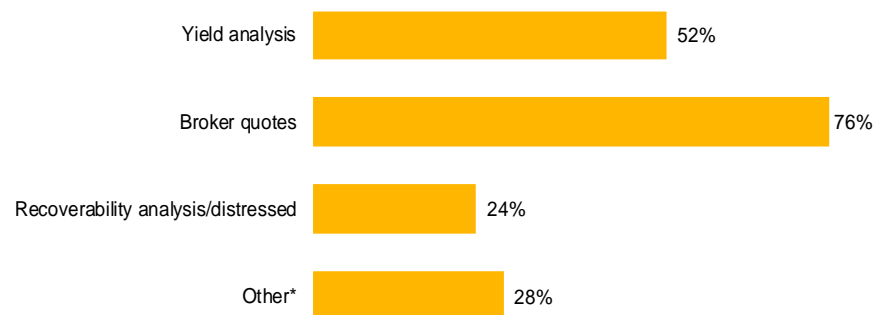
# Debt Valuation

## Valuation approach utilized for debt securities

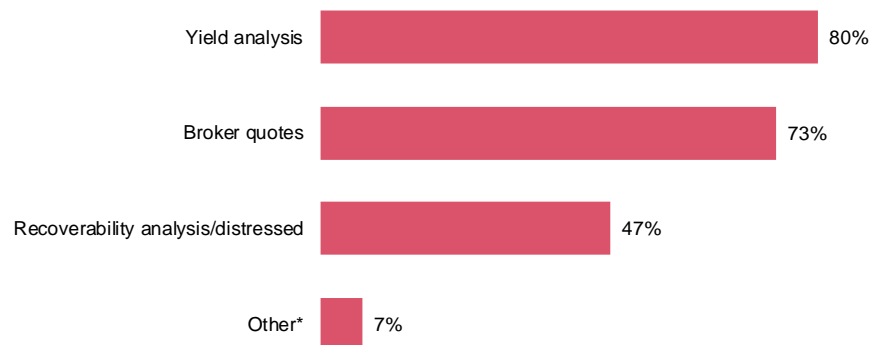
### All Participants



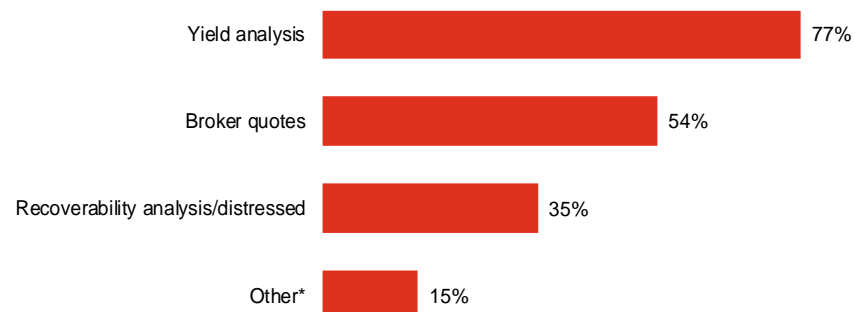
### Hedge Funds



### Credit Funds



### Private Equity Funds



\* Other includes vendor pricing and discounted cash flow analysis.

**NOTE:** Participants were given the option to select multiple responses. Therefore, percentages will not sum to 100%.

# Co-Investments

79%

of all participants with co-investments are developing their own model

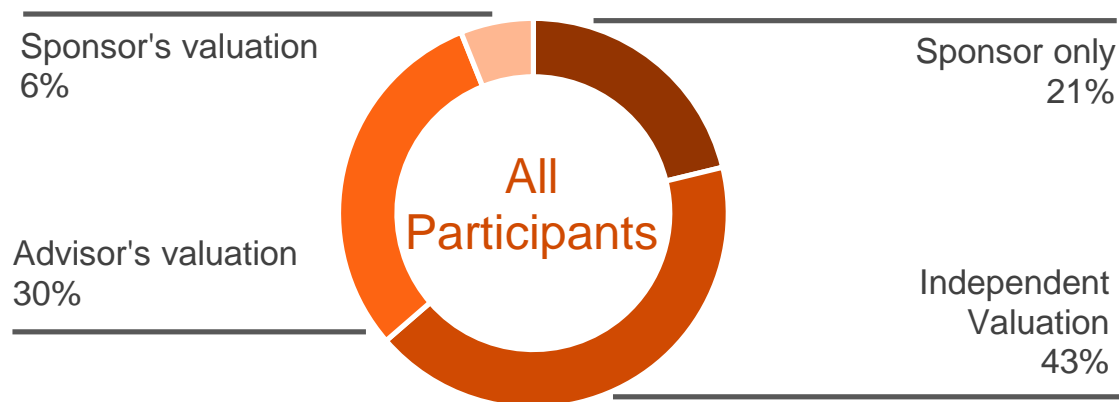
For those participants that have portfolio investments **sourced on a co-investment basis** where there is a third-party lead sponsor in the deal, most prepare their own independent valuation model for these investments.

In some cases, the independent model is used to record the value of the investment on the fund's books; in others, the co-investor's value is recorded, with the independent model serving as a method by which the co-investor value is assessed.

Even when an independent model is not developed, organizations must have robust processes and controls in place to perform a formal assessment of the co-investor value, as management is ultimately responsible for concluding on the value.

# Co-Investments

In the case of a co-investment, does the fund utilize the lead sponsor's valuation analysis or do they prepare an independent valuation analysis?



Note this is for instances in which there is no audited holding vehicle for which management would be able to use NAV as a practical expedient for fair value.

- Independent Valuation:** The fund does not utilize the lead sponsor's valuation and instead develops its own valuation.
- Sponsor Only:** The fund fully relies on lead sponsor's valuation analysis.
- Advisor's valuation:** The fund prepares its own analysis and uses lead sponsor's valuation as a reasonableness check.
- Sponsor's valuation:** The fund prepares its own analysis as a reasonableness check to assess value provided by lead sponsor.

# Valuation Documentation

73%

of all participants prepare a formal valuation memo

68%

Hedge  
Funds

81%

Credit  
Funds

79%

Private  
Equity

The majority of participants prepare a **valuation memo** or some other form of formal documentation in addition to the valuation model.

There has been an increased focus by regulators in recent years around ensuring that management has an adequate level of support for the inputs and assumptions used in its valuation models.

Accordingly, a formally documented process and clear documentation summarizing the investment valuation approach applied and key assumptions has become increasingly commonplace.

# SPACs

17%

of all participants hold SPAC-related investments.

25%

Hedge Funds

25%

Credit Funds

10%

Private Equity

Special Purpose Acquisition Companies (“SPACs”) have existed for some time but have more recently arrived in a significant way in the alternative investments industry. There are a few different avenues through which to invest in SPACs, as will be further explored on the next page, and different valuation considerations for each type of security.

While the volume of SPAC activity has declined some from its peak in late 2020/early 2021, this remains an area of interest for many alternative asset managers.

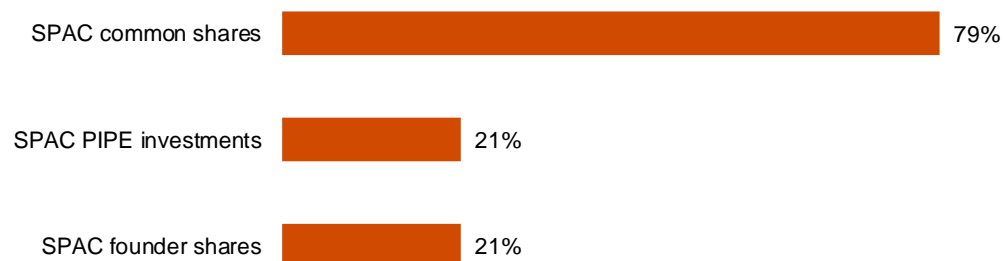


# SPACs

## Which SPAC-related investments are held?

Avenues of SPAC investments available to alternative asset managers include common shares (publicly traded SPAC shares), PIPE investments (private investments in the public equity), SPAC warrants, and founder shares, whereby the security holder has a portion of the privately held founders' equity. Common shares are the most common form of SPAC investment among our survey participants, where 79% of those invested in SPAC-related securities hold common shares.

### All Participants



**NOTE:** Participants were given the option to select multiple responses. Therefore, percentages will not sum to 100%.

## Does the advisor hold SPAC investments in a SPAC-specific fund, or are they held among a larger portfolio within a multi-strategy fund?

While some alternative asset managers have launched funds specifically for making SPAC investments, the majority of survey participants that have invested in SPACs are currently doing so within a larger multi-strategy fund.



# PwC Contacts

**Joe Wiggins**

*Partner*

*Global Alternative Funds Leader*

joe.wiggins@pwc.com

**Allen Minzer**

*Partner*

allen.h.minzer@pwc.com

**Shaan Elbaum**

*Partner*

shaan.elbaum@pwc.com

**Adam Cunningham**

*Director*

adam.b.cunningham@pwc.com

US\_AWM-Benchmarking-Insights@pwc.com

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