



GUIDE TO SOUND PRACTICES FOR THE VALUATION OF INVESTMENTS 2018 Edition

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FOREWORD

This Guide to Sound Practices for the Valuation of Investments (the 'Guide') is the initiative of AIMA's Sound Practice Committee, in conjunction with the Alternative Credit Council.

This Guide is the fourth edition of this AIMA Guide to Sound Practices. The alternative investment industry has developed and matured significantly in the twelve years since the original guide was published in 2005. Financial markets have also undergone significant times of stress and illiquidity. Meanwhile, alternative investment fund managers have responded to the requirements of an increasingly institutional investor base while delving into new strategies and new asset classes in search of returns. This has resulted in some tough challenges as to how to best approach valuation culminating in a series of regulatory and accounting-standard updates. In light of these developments, we feel it is time to revisit our guidance to reflect these changes as well as to demonstrate how the industry has reacted to the same.

As a general resource, the Guide should not be regarded as a substitute for professional advice, which should still be obtained where appropriate. The working group has written the main text of this Guide to be as jurisdiction neutral as possible for it to be of the most use to manager members around the world. However, where specific regulatory requirements apply to investment managers, funds or administrators operating in certain regions or countries, the working group has striven to identify the relevant requirements. Further, the recommendations in the Guide do not replace any applicable legal or regulatory requirements, which are likely to be more detailed than the sound practices described.

We would like to thank the members of the working group (who are listed in **Appendix F**), all of whom have volunteered their time and worked hard to produce this Guide.

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GLOSSARY

AICPA	American Institute of Certified Public Accountants
AIF	an alternative investment fund as defined in the AIFMD
AIFM	an alternative investment fund manager as defined in the AIFMD
AIFMD	Directive 2011/61/EU of the European Parliament and the Council of 8 June 2011 on Alternative Investment Fund Managers, as amended
ATR	administrator transparency report
ESMA	the European Securities and Markets Authority
EU	European Union, consisting of 28 member states as of the date of publication of this Guide
FASB	the Financial Accounting Standards Board
fund governing body	a board of directors for a fund entity established as a company or, with respect to other types of entities, the body performing similar functions, which could include a management company or general partner. For purposes of this Guide, references to the fund governing body also apply to a properly constituted fund valuation committee established and empowered by the fund governing body
hard-to-value investments	investments for which valuation inputs (such as transaction activity) are not directly observable. This will include all Level 3 investments as well as some Level 2 investments, depending on the circumstances
IASB	the International Accounting Standards Board
IFRS	International Financial Reporting Standards
independent valuation expert	a service provider engaged to introduce independence and objectivity to the fund's valuation process for hard-to-value or illiquid assets by providing independent valuations that may validate or corroborate the valuation assertions made by the investment manager. A further description of the role of an independent valuation expert is included in Appendix A
investment manager	the entity that is generally responsible for the day-to-day portfolio and risk management of a fund. An investment manager for purposes of this Guide may be: (i) a discretionary investment manager; (ii) a non-discretionary investment advisor; (iii) a registered investment adviser under the Advisers Act; (iv) an AIFM; and/or (v) a UCITS management company as defined in Article 2(1)(b) of the UCITS Directive
investment manager governing body	a board of directors for an entity established as a company or, with respect to other types of entities, the body performing similar functions, which could include a management committee, management company or general partner
market data vendors	third parties engaged by the fund or the administrator to provide data inputs and/or valuations for securities on a regular basis, based on readily available market data
middle office provider	an entity that performs services such as trade processing, treasury services, cash management and collateral management which involves independent variation margin calculations
NAV	net asset value

offering document	a collective phrase for all fund offering documentation, including an investment memorandum, a private placement memorandum, an offering memorandum, a prospectus, etc. The offering document is the formal document providing essential information to a prospective investor
OTC	over-the-counter
PCAOB	Public Company Accounting Oversight Board
PWERM	probability weighted expected returns model
SEC	the U.S. Securities and Exchange Commission
UCITS	Undertakings for Collective Investments in Transferable Securities
UCITS Directive	Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to Undertakings for Collective Investments in Transferable Securities, as amended
US GAAP	U.S. generally accepted accounting principles
Valuation Policy Document	a written summary of a fund's pricing and valuation policies, procedures and controls
valuation service provider	the party who is responsible for calculating the NAV of the fund in accordance with the Valuation Policy Document. Depending on the circumstances, this may be an administrator or it may be the investment manager

1. Introduction

AIMA is pleased to present this updated version of the Guide to Sound Practices for the Valuation of Investments (the 'Guide'). The alternative asset fund industry has continued to develop and mature since the last version of the guide was published in October 2013. Although the significant challenges that arose immediately following the financial crisis have been moderated by new regulatory requirements and the passage of time, valuation remains a continuing area of regulatory, accounting and investor scrutiny. In addition, a significant increase in the numbers and types of alternative asset funds investing in and holding illiquid assets has heightened interest in valuations processes. In light of these developments, we feel it is time to revisit our guidance to reflect these changes as well as to demonstrate how the industry has reacted to the same.

When AIMA published its initial guidance on Asset Pricing and Fund Valuation Practices in the Hedge Fund Industry, the intention was to gain an understanding of perceptions and practices in this area. Central to this, AIMA issued twenty practical recommendations for sound valuation practices within the industry. We revised this guide in 2007, streamlining the twenty recommendations into fifteen but without diluting them and then in 2013 increased those again to sixteen recommendations.

This fourth edition of the guide seeks to reflect the changes in the markets and industry with respect to valuation since 2013. We have expanded the number of recommendations by one, to seventeen, and enhanced and updated a number of the existing recommendations to reflect trends in valuation processes during that period. This version of the guide also better reflects the valuation practices that have developed in the wake of the implementation of the AIFMD.

AIMA believes that the enhancement of sound practices in the area of valuation is an ongoing process, given the evolution of the different types of instruments, and developments in valuation techniques in the context of a changing regulatory environment.

These recommendations on hedge fund valuation, which AIMA has developed over time, have been recognised and acknowledged globally by regulators. The recommendations reflect sound practice in alternative asset fund valuation in the current environment. A more detailed commentary on these recommendations follow.

1.1 Valuation

For any portfolio of investments, accurate, fair and timely valuation is a pre-requisite for investment managers and investors alike. From an investment manager's perspective, proper valuation of a portfolio is essential to making informed investment and risk management decisions. From the investor perspective, fair valuation is the foundation on which analysis of the portfolio's performance and volatility of returns is based. More fundamentally, an investor would normally expect that the amount paid to take an equity interest in the portfolio and the amount received on withdrawal of an equity interest is based on a formal and fair valuation of the portfolio's assets and liabilities.

The absence of procedures and controls around valuation can lead to misstatements of a portfolio's value, which in turn may have a detrimental impact upon the decision-making processes of investment managers and investors. In certain scenarios, persistent overstatements or understatements of the value of a portfolio's net assets may hide or facilitate misappropriation of those assets.

The assessment of risks inherent in valuing certain instruments should drive the fund structure (with respect to liquidity and trading frequency), pricing policies and procedures, the selection and engagement of service providers and the related disclosures. Where valuation tasks are delegated to a third-party service provider, the fund governing body and investment manager should expect that the service provider will provide a challenge or cross-check against valuation assertions

provided by the investment manager, but, absent a specific agreement from the service provider to the contrary, should not expect the service provider to accept any of the inherent valuation risks. The Guide provides useful considerations to enable fund governing bodies to evaluate the adequacy of the valuation control framework applicable with respect to their funds when it comes to avoiding, mitigating and managing valuation risks.

1.2 Alternative funds

The alternative fund industry continues to experience considerable and steady growth, both in terms of the number of individual funds in existence and the assets under management across the sector. Currently, the total assets invested in alternative funds are estimated at approximately \$6.5 trillion.¹ As the level of assets increases, continued focus is being maintained by all stakeholders on a number of matters including valuation, risk management, compliance and operational risk.

Much of the debate on these subjects is well-informed and stimulating. As in any industry, it is natural for media attention to focus on the small minority of failures and irregularities but the vast majority of alternative fund managers behave in a responsible manner and take their fiduciary duties very seriously. Their reputation and future success relies upon their reliability, transparency and credibility in the eyes of existing and potential investors. Such investment managers have an obvious vested interest in the ongoing stability of financial markets and the equitable treatment of investors. AIMA's previous valuation guides have demonstrated that opinions and techniques may vary but that most stakeholders understand the issues that arise and seek to address them as diligently as those who operate in other financial sectors. The valuation of financial assets is an area where inherent risks can never be eliminated, regardless of how simple the asset class or investment vehicle may appear.

Alternative funds have certain characteristics which make the valuation of their portfolios potentially more complex than the valuation of more traditional collective investment schemes, including the following:

- The typical remuneration structure of an alternative fund, while aligning the interests of the investment manager with the investor in a transparent way, means that the investment manager is likely to receive a material portion of its fee income based on performance, calculated using the NAV of the fund, which may include significant unrealised gains.
- Because of their sophistication and flexibility of investment style, alternative asset managers are more likely than traditional asset managers to make material investments in complex, hard-to-value instruments, including derivative products and private or illiquid positions.
- Although the amounts of leverage employed by alternative asset managers have reduced in recent years, some alternative asset managers apply high levels of leverage or portfolio concentration, which can increase the materiality of misstatements of valuations should they occur.
- Alternative funds typically undergo a formal valuation process at least once a month (although the practice of releasing weekly estimates is commonplace), whereas more traditional collective investment schemes tend to be valued more frequently.
- The valuation policies of each alternative fund, while often very similar, are enshrined in each individual fund's offering document and constitution, and in most jurisdictions, are not subject to a standardised rules-based approach. The detailed pricing and valuation practices, procedures and controls for each fund should be included in a Valuation Policy Document.

These characteristics should be considered when assessing the level of valuation risk in alternative funds, but other features of the industry – and ongoing trends – are also relevant:

¹ Source: Willis Towers Watson, Global Alternatives Survey (2017), available at date of publication at <https://www.willistowerswatson.com/en/insights/2017/07/Global-Alternatives-Survey-2017>.

- A fundamental principle of alternative fund philosophy is that investment managers should be substantially co-invested alongside their investors.
- The majority of capital invested into alternative funds is from institutional investors. Their increased presence has led to greater operational demands placed on investment managers who have responded by strengthening their own infrastructure. Consequently, valuation practices have improved. Developments in fund administration and specialist pricing services are enhancing the quality of procedures. Many valuation service providers now operate a daily reconciliation process, which tends to make the formal NAV calculation exercise smoother. Such reconciliations involve comparing the investment manager's position to the counterparty's position and cash files, and investigating/resolving differences with documented explanations. In addition, for certain products and for managed accounts, there is an increasing tendency for valuation service providers to calculate weekly and/or daily formal or indicative NAVs. Furthermore, independent valuation experts are continually improving their coverage of hard-to-value assets, and more investment managers are using their services.
- With respect to governance and transparency, investment managers have embraced sound principles, which they have found did not compromise their investment flexibility in the way that a prescriptive rules-based approach might. Regulators have now started to demand greater transparency in both regulation and reporting (e.g., Form PF, AIFMD).
- In periods of exceptional quantitative easing and low interest rates, investor risk appetites can increase. Investment managers' search for attractive returns can lead to a move up the risk curve to more illiquid, longer duration and hard-to-value investments. In some jurisdictions, regulations require investment managers to revisit remuneration structures to demonstrably link pay with long-term performance in light of these factors. Deferrals, claw backs and "carry" style arrangements may be required depending on the relevant regulatory environment and/or investor demands and such requirements can be a further incentive to ensure that accurate, timely and consistent valuation practices are applied.

Consistent with the previous AIMA valuation guides, this Guide refers to the NAV of a fund, as this is the generally understood term for the valuation upon which investor subscriptions and redemptions are based. The Guide concentrates on issues relating to the investment portfolio, rather than the mechanics of expense accruals and performance fee methodologies, as it is issues affecting the valuation of investments of a fund that are likely to cause material NAV misstatements. Although a full Valuation Policy Document may address issues such as income/expense accruals and the calculation of performance fees, these parts of the Valuation Policy Document are outside the scope of this Guide.

While the Guide touches on the subject of controls over the existence of investments in a fund portfolio, the Guide is primarily concerned with specific valuation issues. Furthermore, the main focus of the Guide is not on any informal valuation processes carried out between formal valuations. The portfolios of many funds are valued on a frequent (sometimes daily) basis by the investment manager and/or some of the fund's service providers. These valuations are produced for a variety of reasons, such as ongoing profit-and-loss reporting, risk management, collateral management/margin calculation and additional transparency for investors. These informal NAVs should be "struck" to high standards, and are clearly important for the purposes of management and control. While it may refer to these informal valuations in passing, the Guide is primarily concerned with the formal month-end process.²

² Alternative funds are required by their constitutions to carry out periodic formal valuations of their assets and liabilities. By convention, alternative funds formally value their portfolios at each month-end. Even if a fund's official dealing days are less frequent than monthly, the monthly valuation should be formal and consistent because most alternative fund investors use monthly NAVs for their analysis of performance and volatility. Of course, if a fund has dealing days at points in time other than month-end, the production of the underlying NAV should be subject to the same controls as month-end NAVs.

On occasion, there are also emerging valuation considerations for new asset classes. The valuation of digital assets fits in this category. A number of investment managers and service providers working with this asset class have formed a group called the Digital Assets Working Group. This group is actively working on sound practices in this asset class and has provided the text in **Appendix E** which is a first glance at some aspects of digital assets which deserve particular attention in the valuation process. **Appendix E** may be updated from time to time as developments warrant, independent of updates to the Guide as a whole.

2. AIMA's revised recommendations for valuation

Recommendations on governance

1. In advance of a fund's launch, a summary of practical and workable pricing and valuation practices, procedures and controls should be enshrined in a Valuation Policy Document and approved by the fund governing body in consultation with the investment manager and any other relevant stakeholders. The Valuation Policy Document, which may be based in whole or in part on the investment manager's and/or the valuation service provider's valuation policies, should address the universe of instruments in which the fund may invest, and should be reviewed at least annually (and more frequently where the circumstances warrant) by the investment manager and the fund governing body.
2. The Valuation Policy Document should explicitly:
 - a. clarify the role of each party in the valuation process;
 - b. identify price or other valuation information sources for each instrument type;
 - c. outline the basis on which instruments are classified as Level 1, 2 or 3³ (and the policy in respect of any movement between levels);
 - d. identify circumstances when a price is not indicative of fair value and judgment may need to be applied to establish a price (e.g., stale prices, unusually low transaction volumes, other liquidity constraints and value impairments) and the process for exercising such judgment;
 - e. describe, if applicable, the process around side-pocketing of investments or run-off/realisation classes; and
 - f. include a practical escalation or resolution procedure for the management of exceptions.
3. The fund governing body is ultimately responsible for the fair valuation hierarchy. The classification of the fund's portfolio positions within the fair valuation hierarchy can be delegated to the valuation service provider or an independent valuation expert but should not be subject to undue influence by the investment manager (or the investment manager's portfolio management team in cases where the investment manager is a valuation service provider). Such classification should be consistently applied and monitored on a regular basis by the valuation service provider. The process for determining the classifications of instruments in the fair valuation hierarchy should be enshrined in the Valuation Policy Document. When in doubt regarding instrument classifications within the hierarchy, the fund governing body should seek guidance from the auditor, the valuation service provider and/or an independent valuation expert.
4. There should be adequate segregation of duties in the NAV determination process. Segregation of duties should usually be achieved by delegating the calculation, determination and production of the NAV to a suitably independent, competent and experienced third-

³ See *Recommendation 16* for more detail on fair valuation hierarchy ("levelling").

party valuation service provider. If the investment manager is responsible for determining the NAV, and/or acts as the fund governing body, robust controls over conflicts of interest should be established.

5. Oversight of the entire valuation process and, in particular, resolution of pricing issues associated with hard-to-value or illiquid positions and exotic instruments, remains the ultimate responsibility of the fund governing body, notwithstanding the contractual, legal or regulatory responsibility that may also devolve to the investment manager, a third-party valuation service provider, an independent valuation expert or other service providers.

Recommendations on transparency

6. The fund's offering document should disclose (i) the name of the party to whom responsibility for the calculation, determination and production of NAV has been delegated, (ii) the frequency of valuation, and (iii) a broad outline of the methodology to be used by the valuation service provider. This disclosure should include reference to the existence of a formal Valuation Policy Document (including, if relevant, the use of any third party or industry valuation norms) and a description of the role of each party involved in the valuation process. A copy of the valuation policies (set out in the Valuation Policy Document) should be made available to the investors in the fund upon request.
7. Any material involvement by the investment manager in the pricing of underlying portfolio positions or otherwise in the calculation, determination or production of the NAV should be clearly disclosed.
8. Regular NAV reports should be addressed directly to investors by the third-party valuation service provider, where a third-party valuation service provider is used, and any NAVs produced by the investment manager should be disclosed as such.

Recommendations on procedures, processes and systems

9. The procedures enshrined in the Valuation Policy Document should be designed to ensure that the parties controlling the fund's valuation process are segregated from the parties involved in the fund's investment process.
10. In certain instances, the investment manager will have the best insight with respect to the valuation of particular instruments. Wherever prices and fair valuation hierarchy level classifications are provided or sourced by the investment manager, the investment manager should furnish the third-party valuation service provider with sufficient supporting information and documentation.
11. Procedures described in the Valuation Policy Document must be capable of practical implementation by a third-party valuation service provider. The valuation policies outlined in the Valuation Policy Document should be as consistent as possible with the chosen accounting standards of the fund.
12. The valuation service provider should use reasonable endeavours to apply a fund's pricing policy as set out in its Valuation Policy Document consistently. The fund governing body should approve any deviations from the policy in advance of any NAV being released.
13. The Valuation Policy Document should describe the controls put in place to identify inaccurate vendor-sourced prices, and the mechanisms by which price challenges are made. Service agreements with pricing vendors should detail how the price challenge process should be conducted, expected timelines for resolution and appropriate escalation channels. The Valuation Policy Document should make clear who is responsible for raising price challenges and the process that should be followed.

Recommendations on sources, models and methodology

14. Wherever possible, the valuation of each position in the fund's portfolio, as derived from the primary source, should be checked against at least one secondary price source. A price matrix should outline the primary source and one or more secondary sources to be used for each security type and the hierarchy of sources where multiple sources exist.
15. Broker quotations should, wherever possible, be multiple, sourced consistently and accessed by the valuation service provider independently without intervention by the investment manager (or the investment manager's portfolio management team in cases where the investment manager is a valuation service provider).
16. The use of a pricing model for a particular product type should be approved by the fund governing body and documented in the price matrix. The price matrix should also indicate, where possible, the source of inputs into that model. Model outputs should be compared on an ongoing basis to other available data to ensure they represent fair value. Such comparative data may include actual trade levels, broker quotes, counterparty valuations, pricing services or other sources.
17. The fund governing body should agree to and periodically review the fund's policies regarding the side-pocketing of illiquid and/or hard-to-value investments. The criteria for side-pocketing individual positions should be as consistent as possible and should be clearly communicated to all investors in the fund's offering document and Valuation Policy Document. Side-pocketed assets should in principle be fair valued on a regular basis.

3. Overview of valuation issues

3.1 Responsibility for valuation

A fund's offering document will generally set out the guiding principles for the valuation of the assets and liabilities of the fund. Usually included in these principles is the disclosure that the ultimate responsibility for the valuation of the fund's assets and liabilities from a corporate governance perspective rests with the fund governing body, but in some jurisdictions, this may go on to acknowledge that the investment manager may have ultimate responsibility for the valuation from a regulatory perspective (see, e.g., the discussion in **Section 3.2** below in this regard).

While responsibility cannot be delegated, the practical mechanics employed in calculating the fund's NAV and sourcing prices for all or parts of the fund's portfolio in accordance with the Valuation Policy Document are usually delegated by the fund governing body (and, where required, by the investment manager) to a third party. The Guide describes the third party performing this role as the valuation service provider.

For any portfolio with hard-to-value instruments, the investment manager will usually have significant input into the valuation process. In certain circumstances, an affiliate or division of the investment manager performs the administration and valuation functions (and, in this regard, will be a valuation service provider to the fund for purposes of this Guide without engaging the services of an independent third-party valuation service provider (an arrangement sometimes referred to as "self-administration"). Previous AIMA guides referred to the conflicts of interest which should be carefully managed where investment managers self-administer. In recent years, there has been a noticeable shift away from the practice of self-administration and this arrangement would now be considered unusual. However, for some fund types (real estate and private equity, for example), self-administration is still used sometimes and the resultant conflicts of interest should be carefully managed.

3.2 Responsibility for valuation under AIFMD

Although this Guide has been drafted to be broadly applicable regardless of where the investment manager has been established, a substantial number of investment managers will be subject to the valuation requirements under AIFMD, which places ultimate responsibility for valuation from a regulatory perspective on the authorised AIFM. Specifically, where the fund has appointed an authorised AIFM since Article 19 of the AIFMD, as transposed in the various EU Member States, places responsibility (and liability) for valuation on the AIFM.

Under AIFMD, an authorised AIFM is responsible for the valuation functions and those functions make up a part of the bundle of obligations delegated by the fund governing body to the AIFM when an authorised AIFM is appointed. As a result, an authorised AIFM will be a valuation service provider to the fund in the parlance of this Guide. Subject to the delegation provisions of AIFMD, the authorised AIFM is permitted to (and authorised AIFMs often do) engage the services of a third-party valuation service provider to perform some of the valuation tasks for which the authorised AIFM is responsible, although the AIFM will always have to be the one making final determinations of the valuation of investments under the requirements of AIFMD. Where this Guide discusses the input from the investment manager and the need for independence, in an AIFMD context these translate into input from the portfolio management function of the investment manager and independence of those performing the valuation functions from those performing the portfolio management functions.

A further discussion of what AIFMD requires in relation to valuation is included in **Appendix C** and any requirements of AIFMD (or other similar regulatory requirements of other jurisdictions) that apply that conflict with anything in this Guide should be complied with, regardless of the recommendations in this Guide.

3.3 Fund governing bodies and valuation committees

The triangular relationship of the fund governing body, third-party valuation service provider and investment manager will vary from situation to situation, for example, where the investment manager has regulatory responsibility for valuation (e.g., under AIFMD), but is fundamental to the dynamics of fund valuation. If the third-party valuation service provider is well-resourced and fully independent of the investment manager, the fund governing body may serve in a high-level oversight role only. In the cases where the investment manager practices self-administration, investors may look to the fund governing body to act in a stronger oversight role.⁴ If both the third-party valuation service provider and the fund governing body are peripheral influences (or if the investment manager assumes their roles), the onus falls squarely on the investment manager to convince investors that compensating controls, such as reviews by independent parties, greater transparency and a robust segregation of duties, are sufficient to manage any conflicts of interest. Where the investment manager (or the investment manager's portfolio management team in cases where the investment manager is a valuation service provider) has a material role in the valuation of the fund's portfolio, independent control reports, like those produced by most third-party valuation service providers, can be one way of providing investors with comfort in this regard.

In many circumstances, a fund governing body or an investment manager may delegate oversight of the valuation process to a sub-committee or separate committee, usually known as a valuation committee (or pricing committee). A valuation committee may be formed when the fund governing body concludes that it lacks specific valuation experience or when the valuation of the fund's portfolio, or any subset of such, is considered complex and requires regular review by an oversight body.

⁴ This is one of several reasons why fund governing bodies should have sufficient stature. AIMA's Fund Directors' Guide (3rd Edition, 2015) provides guidance on forming a suitably qualified and competent board of directors. The Guide is available to AIMA members and institutional investors at no charge, and available for purchase by non-members at www.aima.org.

The appointment of an investment manager valuation committee is also common where an authorised AIFM is responsible for valuation or where the fund is a partnership or a limited liability company structure and the investment manager or one of its affiliates acts as the fund governing body. The appointment of an independent investment manager valuation committee in these circumstances is one way of mitigating the clear conflict of interest which exists when the investment manager is also the general partner or managing member (and therefore the governing body) of the fund or is responsible for valuation because of AIFMD.

Fund valuation committee/fund governing body

Depending on the nature of the fund's assets and the likely frequency with which assessments and decisions of the fund governing body are expected to be needed, the fund governing body may want to consider the establishment of a fund valuation committee. When assessing whether a fund valuation committee is necessary, the fund governing body should consider its own expertise, the strength of the internal function at the investment manager and the likely need for substantial direct input and oversight from the fund governing body and tailor the makeup of any fund valuation committee to address any perceived deficiencies.

Operating as a sub-committee of the fund governing body, a fund valuation committee could have responsibility for fund valuations at a more granular and "hands-on" level than would be normally possible, or desirable, for the full governing body in its normal governance role. In addition, a fund valuation committee may also take a greater role in the review and monitoring of any party to which the fund delegates any part of the valuation process including the investment manager.

AIMA's Fund Directors' Guide (3rd Edition (revised), 2015) provides guidance on forming a suitably qualified and competent board of directors (see footnote 5 in section 3.1 of that guide). However, there may be circumstances where the fund governing body does not have the necessary skills or capacity to operate a fund valuation committee, so consideration should be given to expanding the fund governing body's membership to ensure suitably qualified members, with sufficient time capacity, are available to serve on the fund valuation committee. If material valuation issues are likely to be encountered, the fund governing body may consider the appointment of an additional specialist advisor to the fund valuation committee, in addition to any delegate already used in the valuation process, to provide the necessary level of oversight, expertise or capacity.

While a fund governing body may choose to establish a fund valuation committee, it is not required. For ease of reference, this Guide talks about the role of the fund governing body without mentioning the possible role for a fund valuation committee each time. However, many of the tasks ascribed to the fund governing body in this Guide could be performed by a fund valuation committee if the fund governing body were to delegate responsibility for those matters to the fund valuation committee.

Investment manager valuation committee

In most situations, the investment manager will have a significant influence on, and an interest in, the valuation process, regardless of any third-party valuation service providers being appointed. Additionally, there may be a regulatory requirement upon the investment manager to bear responsibility for the valuation process, which has become the case for many European investment managers post-AIFMD (See **Appendix C**).

To manage these responsibilities, the investment manager should consider appointing an investment manager valuation committee, answerable to the senior management team and the investment manager governing body.

Typically, an investment manager valuation committee acts in an advisory capacity to the senior management team of the investment manager, but may also have decision-making authority delegated to it by the fund governing body regarding valuation determinations.

The AIFMD guidelines in **Appendix C** describe the membership, attributes and expertise that should be considered when forming an effective investment manager valuation committee when the investment manager is an authorised AIFM.

In addition to having a responsibility to the investment manager's senior management team and the investment manager's governing body, an investment manager valuation committee will typically have a line of responsibility to the fund governing body from a corporate governance perspective regardless of the responsibility that may be imposed on the investment manager from a regulatory perspective.

Even in the absence of regulatory responsibility for valuation and/or self-administration, it is common for investment managers to have a valuation committee. Where hard-to-value assets exist, seldom will a third-party valuation service provider (if appointed) or independent valuation agent take responsibility for the valuation of these hard-to-value assets, leaving the responsibility to assess any recommendations such service providers make with the investment manager.

The investment manager valuation committee will have a responsibility to:

- review the valuation of all fund portfolios and determine whether the pricing is in accordance with the Valuation Policy Document;
- determine fair value of positions held for which market quotations are not available and where independent third-party valuations are not practical or economical to obtain or are considered unreliable for any reason; and
- make valuation recommendations in accordance with the Valuation Policy Document.

On at least an annual basis, the investment manager valuation committee should also review and recommend updates to the investment manager's valuation policy, as appropriate, for consideration by the investment manager's governing body, and, where the fund's Valuation Policy Document references or incorporates all or a portion of the investment manager's valuation policy, (as a result of AIFMD or otherwise), the fund governing body. The investment manager valuation committee should report its conclusions and recommendations to the investment manager's governing body and, where relevant, the fund governing body, on a periodic basis.

Although fund valuation committees and investment manager valuation committees have been discussed separately above, hybrid committees fulfilling the functions of both types of committees through a single committee membership are also possible.

3.4 Independence and expertise

The primary tension in the valuation of the complex assets which alternative funds sometimes trade is that between independence and expertise. From a pure corporate governance and conflicts of interest point of view, it is clearly preferable that the responsibility for the valuation of a portfolio, position-by-position, is taken by a valuation service provider which is not only independent of the fund and the investment manager (or the investment manager's portfolio management team in cases where the investment manager is a valuation service provider), but has no other interests that materially conflict with any duties it has to the fund.

For those funds investing in hard-to-value instruments, however, it is unrealistic to expect that the investment manager (or the investment manager's portfolio management team in cases where the investment manager is a valuation service provider) will have no input into valuation. The level of valuation capability and expertise among third-party valuation service providers have increased significantly in recent years, with many having teams with sufficient expertise dedicated to the area of risk and valuation. However, the investment manager (or the investment manager's portfolio management team in cases where the investment manager is a valuation service provider) can have

a unique perspective on how to value a position most appropriately due to complexity, illiquidity or some other factor. If the investment manager (or the investment manager's portfolio management team in cases where the investment manager is a valuation service provider) prices even a subset of a portfolio, there should be at the very least independent checks carried out by the valuation service provider the frequency of which may vary depending on the materiality of the investments involved and the frequency of fund dealing days where subscriptions and redemptions may be made based on the NAV. These checks should consider the appropriateness of the valuation of each portfolio security with comparison made both to a value independently computed by the valuation service provider and a counterparty mark. In cases where the investment manager is a valuation service provider and in cases of self-administration, (where the practice still exists), an appropriate level of oversight by an independent party should take place.

Delegation of NAV production to a suitably experienced third-party valuation service provider is usually the preferred solution to the tension between independence and expertise inherent in the valuation process. This is not to say that the appointment of an independent provider should be viewed as a panacea for all the risks in the valuation process, or that other stakeholders in the process should abdicate their responsibilities. (See, for example, **Section 8** regarding valuation due diligence on pricing providers.)

In certain circumstances an alternative fund portfolio may be so esoteric that the investment manager (or the investment manager's portfolio management team in cases where the investment manager is a valuation service provider) may be best placed to value a subset of the portfolio, augmented by an independent valuation expert and oversight by the fund governing body. These valuations could be verified by the backtesting performed by the independent valuation service provider or another party. (See **Section 6.7** of the Guide for a further discussion of backtesting). In these cases, good governance, transparency and meaningful controls over potential conflicts of interest are even more crucial. It is certainly not sound practice for a fund governing body to approve self-administration without a clear Valuation Policy Document being in place which outlines robust segregation of the investment manager's front and back offices.⁵ In such cases, consideration should also be given to obtaining an independent controls report on the investment manager's operations, which should cover the relevant valuation processes and controls.

Even when a third-party valuation service provider is delegated responsibility for the overall NAV production process, material input from the investment manager may still be required. The investment manager may also wish to consider a "shadow" NAV process managed by the investment manager's non-investment team. Again, in these situations, the role of governance, transparency and robust written procedures becomes even more important. Wherever possible, the input of the investment manager should be checked and reviewed by the third-party valuation service provider and/or the fund governing body (assuming the investment manager is not acting as the fund governing body). Sometimes the valuation of certain instrument types, or the review of the investment manager's valuation of the instrument type, can be delegated to an independent valuation expert or to an independent accountant as a check.

3.5 Prudence and fairness

Prudence is not only a fundamental accounting concept but a natural attribute of responsible investment managers. If there is an element of contingency to the value of an investment because of its illiquidity or the subjectivity of valuation assumptions, many investment managers are understandably reluctant to mark up or mark down a position until there is clear evidence of a substantive and sustainable change in circumstances.

⁵ The terms "front office" and "back office", used colloquially throughout the asset management industry, implicitly recognise the segregation of duties which should exist between those involved in investment decisions/trading (the "front-office") and those responsible for reconciliations/accounting (the "back-office"). The Guide sometimes uses these shorthand terms when discussing the internal procedures of an investment manager.

However, alternative funds do not have the luxury of automatically applying a conservative approach to valuation. They are often established as open-ended vehicles, and investors subscribe or redeem at each dealing point based on the same NAV. The value assigned to any particular position will therefore have a direct impact on the number of units or shares that a subscriber receives or the proceeds which will be paid to an investor who is exiting the fund. Regulators globally are very focused on the equitable or fair treatment of investors. Alternative funds are no exception. A good example of where fairness to investors must be considered is with “side-pocketing”.

The practice of “side-pocketing” of private, illiquid or hard-to-value investments became more prevalent in 2008 and 2009. This was a consequence of an increase in illiquidity driven by the financial crisis, compounded by the unprecedented volume of redemptions experienced by open-end alternative funds. Although many of the financial crisis-related side-pocketing arrangements have since been unwound, it is important that lessons are learned from this period. Despite the negative association many people have with side-pockets, side-pocketing remains relevant in times of non-crisis. Side-pocket arrangements segregate illiquid or hard-to-value positions from the main pool of assets in a fund until they are realised or are no longer difficult-to-price. Because less liquid assets rarely fit neatly into the traditional open-end alternative fund model (which often offer monthly or quarterly liquidity), the side-pocket must serve to fairly and equitably attribute these illiquid investments to existing investors at the time the side-pocket is created (absent a provision that they be excluded (i.e., an “opt-out” provision)).

3.6 Consistency and flexibility

Fund stakeholders (a description of the same is provided in **Appendix A** of this Guide) are entitled to expect that valuation policies are applied consistently so that they can perform analysis in the knowledge that the information goalposts are not being moved unreasonably. A lack of consistency in the application of policies applied can lead to inaccurate and potentially misleading information being distributed and relied upon by investors and other third parties. One of the aims of a good Valuation Policy Document should be to provide a framework for consistent valuation policies and price sources.

However, because of their broad mandates and innovative investment styles, alternative funds may utilise newly-created instrument types and hold positions subject to technical developments or changes in circumstances. Flexibility, usually attractive from an investment point of view, may present challenges from a valuation (as well as a governance) perspective. When an investment manager contemplates investing in a security type which has not been included in a fund's portfolio previously or argues that the most influential market makers for a thinly-traded security have changed, it should engage with the various relevant stakeholders to ensure consensus on the fairest valuation of the position.

The Valuation Policy Document should outline the procedures to be followed when changes to the policies or sources are requested and when new instrument types are being considered. Changes to the Valuation Policy Document should ideally precede changes in practice and should be subject to the approval of the fund governing body. For a further discussion of deviations, please see **Section 6.4** of this Guide.

3.7 Accounting standards and valuation policies

The emphasis placed by international accounting authorities on fair value is discussed in **Appendix D** of this Guide. *Recommendation 11* notes that valuation procedures should be as consistent as possible with the chosen accounting standards of the fund. IFRS and US GAAP have an identical definition of fair value and the disclosures required around fair valuation are broadly consistent. The requirements and implications of financial reporting standards

and, in particular, IFRS and US GAAP, have been considered in the preparation of this Guide. Given that most funds use either IFRS or US GAAP, this Guide focuses particularly on those standards. The *Recommendations* contained in the Guide, with accompanying examples, are intended to represent current sound practice and, therefore, will be revisited from time to time and, if necessary, revised to reflect changes in accounting standards or international regulation.

4. Recommendations on governance

4.1 Adoption of a Valuation Policy Document

In advance of a fund's launch, a summary of practical and workable pricing and valuation practices, procedures and controls should be enshrined in a Valuation Policy Document and approved by the fund governing body in consultation with the investment manager and other relevant stakeholders. The Valuation Policy Document, which may be based in whole or in part on the investment manager's and/or the valuation service provider's valuation policies, should address the universe of instruments in which the fund may invest, and should be reviewed at least annually (and more frequently where the circumstances warrant) by the investment manager and the fund governing body.

Regardless of how simple a fund's valuation procedures may appear, proper documentation of the valuation process removes the scope for dispute or uncertainty in the future and provides a clear framework for governance in the area.

By convention, the offering document, which a fund issues to prospective investors before and after its launch, contains a section on valuation. These disclosures are important and are discussed in more depth under *Recommendation 6* in **Section 5.1** of the Guide. However, the disclosures traditionally made in an offering document do not usually address the full detail of the policies and procedures applied in the production of the fund's formal dealing NAV. Inclusion of such detail would probably require the offering document to be frequently revised, costing the fund's stakeholders time and its investor's money. While it is therefore reasonable for the offering document to provide a high-level overview of valuation principles, this should be on the understanding that a more detailed summary of valuation policies and processes is in existence and available for review by investors upon request.

The fund governing body should therefore ensure that an appropriate written Valuation Policy Document is in place for the fund. The Valuation Policy Document is often prepared based in whole or in part on the investment manager's own valuation policy and/or the valuation policies in place at the chosen valuation service provider. The valuation service provider may facilitate the preparation of the Valuation Policy Document by issuing standard valuation procedures which the fund governing body, in consultation with the investment manager, may accept are appropriate for the fund after due consideration. In the alternative, the investment manager's own valuation policy may form the core of the fund's Valuation Policy Document.⁶

The Valuation Policy Document should address the policies applied when valuing each investment type that can be held in the fund. Even if the investment manager prepares the Valuation Policy Document, it must still be approved by the fund governing body prior to its application for purposes of the fund's valuation, ideally before the fund's launch and after consultation. The chosen policies should also be agreed with any third-party valuation service provider to ensure that the third-party valuation service provider will be able to follow the Valuation Policy Document as written.

⁶ Indeed, where an authorised AIFM has been appointed, the valuation policies and procedures applied in relation to a fund must be those of the authorised AIFM. As a result, in those instances, the Valuation Policy Document contents will be based in whole on the investment manager's policies and procedures.

For a fund that may hold hard-to-value investments, it is also sensible for the fund's auditor to be involved in the consultation process, given that it will be performing work on valuation policies and procedures in its year-end audits. See also **Section 6.4** of the Guide regarding approval of deviations from the Valuation Policy Document.

The regularity of review of the Valuation Policy Document by the investment manager and the fund governing body will depend upon the fund's complexity. Sound practice would be to review the document at least annually and, in any case, when the fund's activities involve new types of instruments. Input from the third-party valuation service provider should be sought and considered at the time of policy reviews. Developments in accounting standards or valuation practices should also be reflected in the document on a timely basis.

Without prejudice to requirements under national law, investment managers should ensure that fair, appropriate and transparent valuation methodologies are applied to the funds they manage in accordance with the funds' rules and instruments of incorporation.

4.2 What should be in the Valuation Policy Document

The Valuation Policy Document should explicitly:

- clarify the role of each party in the valuation process;
- identify price or other valuation information sources for each instrument type;
- outline the basis on which instruments are classified as Level 1, 2 or 3⁷ (and the policy in respect of any movement between levels);
- identify circumstances when a price is not indicative of fair value and judgment may need to be applied to establish a price (e.g., stale prices, unusually low transaction volumes, other liquidity constraints and value impairments) and the process for exercising such judgment;
- describe, if applicable, the process around side-pocketing of investments or run-off/realisation classes; and
- include a practical escalation or resolution procedure for the management of exceptions.

The Valuation Policy Document should be worded as clearly as possible and should act as a practical guide for all stakeholders involved in the formal NAV process. The Valuation Policy Document may also include guidelines for the delivery of information or completion of a process, although this is more related to the service levels agreed between the parties.

For the accuracy of the NAV process specifically, it would be sound practice for a Valuation Policy Document to include guidance in the following areas, where applicable:

- the identification, role and responsibilities of all parties involved (see **Section 3.1** of the Guide);
- the forums for, and frequency of, oversight of the valuation policies;
- the accepted valuation processes, price sources and cut-off times for each type of instrument expected to be traded by the fund;
- determination of the principal market from which to source a price (as per ASC 820 and IFRS 13);

⁷ See *Recommendation 3* for more detail on fair valuation hierarchy ("levelling").

- an outline of the approval process for the use of pricing models;
- identification of the fair value hierarchy and levelling (see **Section 4.3** below for a further discussion on this topic);
- an outline as to how fair valuation hierarchy disclosures will apply to the fund, the party responsible for their processes, the process to be followed for authorising movement of securities between hierarchies and the format and frequency of reporting to the fund governing body;
- if applicable, guidance on how frequently Level 3 (and/or side-pocketed) positions should be formally valued (by an independent valuation expert or otherwise), framed in the context of the frequency of NAV calculations;
- an outline of the process for formulating policies when the fund starts to trade a new investment type;
- the accepted tolerance levels for any differences between price sources, both at position and portfolio level;
- a clearly defined escalation or arbitration process for situations in which tolerance levels are breached, prices are not substantiated due to absence of a secondary price source, material use of stale prices, disagreement or inadequate explanation regarding Level 3 conclusions, or where the degree of subjectivity in pricing is such that the fund governing body should periodically review in detail;
- additional procedures to be followed where securities are the subject of large price movements (see **Section 6.6** of the Guide);
- a definition agreed by all stakeholders as to what constitutes a “stale” price;
- procedures for authorising changes between pricing sources or sources of valuation information, including backtesting and stress testing of the impact of using an alternative pricing source;
- the process around side-pocketing of investments and the movement of securities into or out of a side-pocket. The impact on the valuation basis to be applied and the assignment of a level in the fair value hierarchy for the side-pocketed asset should also be covered, if not already covered elsewhere;
- for each type of hard-to-value instrument, a proposed set of methodologies that may be considered in valuing the subject investment to ensure consistent valuations to be included in the NAV. The valuation methodologies should be outlined as clearly as possible along with a formal process to be used to approve changes in the valuation methodology or price/information source;
- the processes for periodic due diligence on and monitoring of valuation service providers and independent valuation experts; and
- a pre-determined process for effecting changes to the valuation policy and the Valuation Policy Document.

Appendix B provides an example outline of a Valuation Policy Document.

4.3 Setting a fair value hierarchy

The fund governing body is ultimately responsible for the fair valuation hierarchy. The classification of the fund's portfolio positions within the fair valuation hierarchy can be delegated to the valuation service provider or an independent valuation expert but should not be subject to undue influence by the investment manager (or the investment manager's portfolio management team in cases where the investment manager is a valuation service provider). Such classification should be consistently applied and monitored on a regular basis by the valuation service provider. The process for

determining the classifications of instruments in the fair valuation hierarchy should be enshrined in the Valuation Policy Document. When in doubt regarding instrument classifications within the hierarchy, the fund governing body should seek guidance from the auditor, the valuation service provider and/or an independent valuation expert.

Accounting standards, including both IFRS and US GAAP, require all portfolio positions which are fair valued to be included within a fair valuation hierarchy. The fair valuation hierarchy consists of three levels. Level 1 fair valuations are based upon quoted prices in active markets. Level 2 fair valuations are based upon inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices). Level 3 fair valuations are based upon unobservable inputs. See **Appendix D** of the Guide for a more specific discussion of the relevant accounting standards.

When a Valuation Policy Document is being drafted initially or being revised during the life of the fund, the level designation process and the fair value hierarchy should be agreed between the fund governing body, the investment manager, any third-party valuation service provider and any other relevant stakeholders and documented in the Valuation Policy Document. This will avoid any ambiguity around the level designation process (colloquially known as the “levelling” process). The fund’s auditor should also be included in these discussions to ensure the approach is as consistent as possible with that followed in the annual financial statements.

Due to the reliance placed on the fair valuation hierarchy by brokers, market participants and the investor community, it is imperative that the valuation service provider is not unduly influenced by the investment manager (or the investment manager’s portfolio management team in cases where the investment manager is a valuation service provider) in determining and allocating the levels to the price sources.

Staff members at the valuation service provider should be competent in the levelling process and there should be sufficient training in place to ensure that the levelling process is applied on a consistent basis. Levelling for complex products, including illiquid securities, structured products and exotic derivatives, requires specialist competence. A third-party valuation service provider may need to liaise with the investment manager and auditor in these cases to determine the appropriate level in the hierarchy. When this is the case, the third-party valuation service provider should be furnished with sufficient supporting information by the investment manager, which should be validated to an independent source if possible (see *Recommendation 10*). The level to be determined in such instances should be approved by the fund governing body.

On an on-going basis, the levelling process should be independent of the investment manager (or the investment manager’s portfolio management team in cases where the investment manager is a valuation service provider). In instances where level overrides occur, a clear protocol for handling overrides requested by the investment manager (or the investment manager’s portfolio management team in cases where the investment manager is a valuation service provider) should exist, and any overrides should be reported to the fund governing body. Valuation service providers should ensure that they can record the levels in their pricing and valuation systems so that accurate reporting and disclosures can be produced upon request.

Since the introduction of the fair valuation hierarchy, the frequency of requests from existing and prospective investors for a breakdown of a fund’s portfolio by the fair valuation hierarchy has increased from annual to semi-annual to quarterly. Requests for monthly fair valuation hierarchy reporting are also now commonplace. Fund governing bodies and investors seek established procedures and controls from the service providers around the fair valuation hierarchy process during due diligence visits. It is not uncommon for investors to request further in-depth details on the valuation of Level 3 positions.

The use of a valuation model does not automatically qualify the price as a Level 3 price. If the inputs to the model are observable and the price model used is industry standard, then this could indicate a Level 2 measurement in the hierarchy. The fair valuation hierarchy focuses on the significance of the inputs used in arriving at fair value rather than the valuation method. On occasion, it may be appropriate to adjust inputs to reflect the fair value of an asset or liability. If an adjustment is significant to the fair value measurement, or if it is derived from unobservable inputs, then the position would be considered a Level 3 measurement.

The price sources that are used during the calculation of the NAV should also feed into the process when the financial statements for the fund are being prepared. The availability of retrospective price sources should not influence the measurement levels at the reporting end date.

4.4 Segregation of duties

There should be adequate segregation of duties in the NAV determination process. Segregation of duties should usually be achieved by delegating the calculation, determination and production of the NAV to a suitably independent, competent and experienced third-party valuation service provider. If the investment manager is responsible for determining the NAV, and/or acts as the fund governing body, robust controls over conflicts of interest should be established.

In any organisation, adequate segregation of duties should exist across the control environment. In the context of valuation, the individuals responsible for the valuation of a portfolio should be appropriately independent from those responsible for its portfolio management.

It is standard industry practice for a fund to appoint a third-party valuation service provider (which is often a fund administrator) which will be responsible for valuation services including pricing, calculation and dissemination of the fund's NAV.⁸ The investment manager and fund governing body should perform due diligence to assure themselves that the selected third-party valuation service provider has the infrastructure and expertise to support the particular requirements of the appointment, including any special valuation needs the fund may have as a result of the types of instruments in which it invests.

The regulatory requirements around fund valuation continue to rise in line with the requirements imposed by the Foreign Account Tax Compliance Act, AIFMD, the Dodd Frank Wall Street Reform and Consumer Protection Act and the second EU Markets in Financial Instruments Directive, among other regulations. Therefore, it is crucial that the selected third-party valuation service provider is operationally capable of assisting the fund in meeting these obligations.

Appointment of a third-party valuation service provider

While the fund governing body has overall responsibility for the fund, it is typically the investment manager who will assemble the most appropriate operational infrastructure for the fund. If the production of the dealing NAV is to be delegated by the fund (or the investment manager where circumstances or regulations require) to a third-party valuation service provider, detailed due diligence should be carried out on any prospective candidate before committing the fund to any relationship.⁹ There should be a "beauty parade" during which the qualifications, competence, pricing and suitability of the providers are assessed. During the due diligence process, members of

⁸ In circumstances where an authorised AIFM has been appointed by the fund, it will be necessary for the authorised AIFM to appoint the chosen third-party valuation service provider to perform any specific valuation tasks which AIFMD deems to be the responsibility of the authorised AIFM.

⁹ See AIMA's Illustrative Questionnaire for the Due Diligence Questionnaire of Administrators (available to AIMA members and certain institutional investors only).

the fund governing body will likely rely on advice and guidance from the investment manager but will retain ultimate discretion over the decision where the fund is the one making the delegation.

It is sound practice to conduct on-site visits to meet the team at the third-party valuation service provider that will be responsible for the valuation of the fund to “walk through” the valuation process, review management information produced and discuss the timeline to finalise the periodic valuation of the fund. During these visits, a number of factors should be considered, including, but not limited to:

- evidence of the robustness of its control environment (this may take the form of an independent accountant’s report such as an SSAE 16, SSAE 18 or ISAE3402);
- access to the senior personnel of the valuation service provider who will be responsible for managing the valuation process;
- evidence of experience in valuing the investment types which the fund trades (this may include references from other funds which trade the same instrument types);
- evidence of sufficient systems, infrastructure and business continuity/disaster recovery to support the valuation process and provide effective and timely reporting to interested parties including the investment manager, fund governing body and investors;
- financial stability of the valuation service provider (including any material litigation/regulatory action where a negative outcome has impaired or may impair the valuation service provider’s ability to act for the fund); and
- evidence that any internal conflicts of interest are sufficiently managed (for example, a valuation service provider that is part of a group that has a prime brokerage arm should ensure that information ethical walls exist between the two divisions of the organisation and that the fund has separate legal agreements with each entity if it receives services from both).

Where the administrator is the valuation service provider, it is sometimes argued that the valuation service provider has a conflict of interest because they usually receive remuneration in the form of a percentage of a fund’s assets under management. This is true to the extent that a growth in assets through performance will feed through to its fee income, but most third-party valuation service providers mitigate this and follow sound practice by not receiving any remuneration directly linked to performance. However, the fund governing body should be alert to other threats to a third-party valuation service provider’s independence. For example, a conflict might exist if a third-party valuation service provider was dependent on a particular fund group for the majority of its income. In such cases, the conflict could be mitigated by the fund group appointing more than one third-party valuation service provider. This is a factor to be considered along with any other conflicts of interest caused by the nature of the investment manager’s relationship with the third-party valuation service provider. If the investment manager is a shareholder in a third-party valuation service provider, or if the two organisations share personnel or have a common parent company, the independence of the third-party valuation service provider could be compromised. Investors expect to be notified of such conflicts.

Once the third-party valuation service provider has been selected, the precise details of its terms of engagement will be agreed, and are often enshrined in a service level agreement. Another benefit of producing a Valuation Policy Document is that this can be included as part of the service level agreement.

After the fund is launched, the fund governing body, with the assistance of the investment manager, should periodically (at least annually or before the fund starts using new instruments) refresh the due diligence on the third-party valuation service provider to assure that the third-party valuation service provider is still able to perform its duties to the expected standards. The fund governing

body, with the assistance of the investment manager, should also ensure that the service level agreement between the fund and the third-party valuation service provider is kept up to date.

The fund governing body should insist on participation (typically via a call) from the third-party valuation service provider at each scheduled meeting of the fund governing body. This will provide an opportunity for the fund governing body to have regular dialogue and ensure issues are being addressed effectively by the investment manager.

Self-administration by the investment manager

Although independent fund administration has become the norm, there remain some situations where self-administration, either for historical or other reasons, still exists. The valuation service provider in instances where self-administration persists is often either an entity affiliated with the investment manager or the back office of the investment manager itself.

Where these arrangements exist, the fund governing body should periodically satisfy itself that it continues to be in the fund's best interests for valuations to be produced by the investment manager. The fund governing body should also ensure that written procedures, segregation of duties and proper oversight are all in place. The fund governing body should insist upon a Valuation Policy Document which sets out the specific methods and sources to be used, and information on which personnel at the investment manager (by name and title) will be responsible for valuation. In addition, wherever possible, the fund governing body should push for the appointment of an independent valuation expert for hard-to-value assets.

In structures where the investment manager is the fund governing body, additional measures should be taken to address potential conflicts of interest in the sphere of governance. Increasingly, in partnership, limited liability company and corporate/trust structures where the investment manager or one of its affiliates acts as the general partner, managing member or trustee (i.e., the fund governing body), the investment manager will establish an investment manager valuation committee which acts as a *de facto* governing body on matters relating to valuation. Sound practice suggests that in these instances:

- the investment manager valuation committee should have an established charter that covers its role and responsibilities, the makeup of the committee's membership and the frequency of the committee's meetings;
- it is preferable that the investment manager valuation committee should include members who are independent of the investment manager, although it may be difficult to source suitably competent members who are available at each valuation day;
- wherever possible, a majority of the investment manager valuation committee should be comprised of non-executives and/or staff of the investment manager who do not report to those involved in investment decisions;
- members of the investment manager valuation committee should have a level of expertise, seniority and gravitas that is sufficient to counterbalance the strong influence the investment team is likely to have within the investment manager's organisation;
- it is sound practice for staff in compliance and risk management functions to be represented on the investment manager valuation committee;
- it is also preferable that staff of the investment manager who sit on the committee are not remunerated directly based on fund performance; and
- the meetings should be documented, including reasons to support any decisions made.

Use of independent valuation experts

If a fund's investments are illiquid or private positions, consideration may be given to the use of an independent valuation expert for the fund. There has been a long-running trend for funds to

engage independent valuation experts for hard-to-value private positions and this has greatly increased since the events of 2008 led many funds to side-pocket certain illiquid positions and AIFMD was adopted encouraging the use of such experts.

The due diligence process for selecting an independent valuation expert should follow the same process used when appointing a valuation service provider (see **Section 8** of this Guide for a further discussion of pricing provider due diligence). In addition, the fund governing body and investment manager should consider including the following in the Valuation Policy Document:

- a minimum threshold value for the underlying investments to be valued using this approach;
- rules about the frequency of an independent valuation expert's review, preferably framed in the context of the fund's investor redemption cycle;
- reports produced by the independent valuation expert should be made available to the fund governing body for their review; and
- if there is a material difference between the investment manager's valuation and that of the independent valuation expert, how that difference will be reported to the fund governing body and the process to be followed to determine the fair value.

Disclosure of the use of independent valuation experts

At a minimum, the fund should disclose to underlying investors:

- the scope and nature of the involvement of any independent valuation experts;
- the percentage of the fund that has been valued by independent valuation experts; and
- the percentage that has been valued by the investment manager (or with the input of the investment manager's portfolio management team where the investment manager is acting as a valuation service provider).

Such disclosures should be more frequent if there are material changes to the valuation process, such as a significant increase in the portion of the fund's investments valued by the investment manager (or with the input of the investment manager's portfolio management team where the investment manager is acting as a valuation service provider). Material changes in valuation process and persistent exceptions to valuation policy should be disclosed as frequently as monthly, consistent with fund dealing frequency. These disclosures, while not mandated by accounting standards would be consistent with the accounting standards' requirements to be more transparent around the valuation of Level 3 investments.

An independent valuation expert may be engaged to perform verification work (e.g., validating or corroborating the investment manager's valuation recommendations) periodically and to produce a report to provide some level of extra check upon valuations performed by the investment manager for the fund governing body and investors. These exercises were originally used as a tool of governance when self-administration took place. However, they are increasingly being used by funds where a material proportion of the assets are invested in illiquid instruments. This is considered to provide investors with a degree of independent oversight over the valuation process between annual audits, but such exercises should not be relied upon in isolation. The work of independent valuation experts is independent of the audit and should be done in parallel.

The controls to manage potential conflicts of interest and to ensure segregation of duties are further discussed under *Recommendations 4* and *8*.

4.5 Oversight of the valuation process by the fund governing body

Oversight of the entire valuation process and, in particular, resolution of pricing issues associated with hard-to-value or illiquid positions and exotic instruments, remains the

ultimate responsibility of the fund governing body, notwithstanding the contractual, legal or regulatory responsibility that may also devolve to the investment manager, a third-party valuation service provider, an independent valuation expert or other service providers.

To fulfil its responsibilities in this area, the fund governing body should ensure that the fund's Valuation Policy Document allows the fund governing body to review any positions where the investment manager (or the investment manager's portfolio management team where the investment manager is acting as a valuation service provider) has material input into the valuation of a position or where the investment manager wishes to override the price provided by a third-party valuation service provider applying the terms of the Valuation Policy Document.

In practice, escalation to the fund governing body will tend to arise when an independent valuation service provider is not utilised. In this regard, there may be two cases when escalation occurs. Firstly, there will be positions where it is accepted that the investment manager (or the investment manager's portfolio management team where the investment manager is acting as a valuation service provider) will effectively be the primary source of the valuation (for example, a position in the convertible debt of a private company, where the investment manager (or portfolio management team) may have better insight into expected future cash-flows than any other stakeholder in the valuation process). Secondly, and probably more rarely, there may be instances where the investment manager and a third-party valuation service provider have a genuine disagreement about the proposed valuation.

In the first case, where documented procedures will be important, the fund governing body may choose to delegate a regular review of the valuation of the specific instruments to a fund valuation committee (or to a suitably qualified member of the fund governing body who is independent of the investment manager) and the third-party valuation service provider. In addition, the fund governing body may perform a periodic review to ensure that the investment manager's (or portfolio management team's) involvement continues to be required and that the assumptions behind its input continue to be valid and reasonable.

In the second case, there should be a clearly defined escalation procedure in the Valuation Policy Document by which the fund governing body should receive representations from the various parties involved to reach a decision on the fairest price to be used. In these circumstances, the "burden of proof" for an override should lie with the investment manager, not with the fund governing body or the third-party valuation service provider.

The reasons for any final decisions taken by the fund governing body should always be formally documented.

As discussed above, the fund governing body should be appropriately independent from the investment manager, and have the required expertise to enable it to adequately oversee the entire process, even if the process is outsourced. In carrying out its role, the fund governing body may seek the advice of (or may appoint) an independent valuation expert to provide confirmation and oversight of valuation inputs. The independent valuation expert engaged by the fund might be a specialist organisation, a professional services audit firm or the third-party valuation service provider.

The fund governing body should ensure that the investment manager (chief compliance officer or internal committee) and/or the valuation service provider affirm on a suitably frequent basis that the valuation policies set out in the Valuation Policy Document are being followed. It is now commonplace for the valuation service provider to revert to the fund governing body on material valuation or operational matters including valuation exceptions. A sound practice to follow would be to seek frequent reporting from each of the investment manager and valuation service provider directly on the valuation process.

5. Recommendations on transparency

Transparency on valuation is a key area on which investors have increased focus in the years since the financial crisis. It is customary for investors to require substantial insight into who is determining the valuation of positions on the portfolio, how these valuations are sourced and how frequently valuations are made available from the pricing sources. It is expected that the valuation policy applicable to the fund is shared by the investment manager as part of due diligence. In addition to the transparency provided in the offering document and the administrator's transparency report (both of which are discussed further below), many investment managers provide regular reporting to investors in the form of risk reports, monthly letters and reports on the levelling of fund assets.

5.1 Disclosure in the offering document

The fund's offering document should disclose (i) the name of the party to whom responsibility for the calculation, determination and production of NAV has been delegated, (ii) the frequency of valuation, and (iii) a broad outline of the methodology to be used by the valuation service provider. This disclosure should include reference to the existence of a formal Valuation Policy Document (including, if relevant, the use of any third party or industry valuation norms) and a description of the role of each party involved in the valuation process. A copy of the valuation policies (set out in the Valuation Policy Document) should be made available to the investors in the fund upon request.

From a corporate governance point of view, ultimate accountability for the determination and production of the NAV resides with the fund governing body, even if responsibility from a regulatory point of view is required to rest with the investment manager. With the increased scrutiny of valuations by investors and regulators and the expectation for consistent and fair valuation inherent in new regulations, it is common to delegate certain responsibilities for some or all of the calculation, production and determination of NAV to an independent third-party valuation service provider. Disclosures in the offering document should include details of the frequency of the production of the NAV, headline valuation policies to be applied to each major category of assets/liabilities and disclosures about risks inherent in the valuation process.

The offering document should be augmented by a separate Valuation Policy Document (which would typically be made available to investors during the operational due diligence process) that contains greater details of the valuation policies, procedures and controls. Transparency with respect to the more detailed Valuation Policy Document is particularly relevant for funds that pursue "hybrid" investment strategies where the range of potential investments may be much broader than in a more traditional open-ended fund, and where the valuation of underlying assets is correspondingly more complex. For example, offering documents often include a statement that the fund's valuation policies may be altered or overridden "at the discretion" of the fund governing body or investment manager (or its portfolio management team or sometimes requiring consent of investor representative bodies where these have been constituted), while the Valuation Policy Document describes more precisely how such discretion may be exercised. Similarly, details outlining the valuation process may be reserved for the Valuation Policy Document to allow the fund governing body to periodically review and update the Valuation Policy Document for changes in the availability of market data, service providers used, tolerances applied, new trading instruments or strategies, etc.

When the fund governing body relies on a Valuation Policy Document to describe details of the valuation process, the existence of that Valuation Policy Document should be disclosed in the offering document together with confirmation that the Valuation Policy Document is available to

investors for review upon request. The fund governing body should expect a request for valuation policies to form part of investors' due diligence questions.

Other disclosures in an offering document to help investors better understand the valuation process might include:

- clear disclosure of the oversight process for the valuation of the fund's assets and liabilities. This should include: (i) explanation of the role of the fund valuation committee, if there is one; (ii) the procedure for escalating issues to the fund governing body and the process for resolving escalated issues; (iii) the process for reviewing and updating the Valuation Policy Document from time to time; and (iv) clear disclosure of the oversight process for the valuation of the fund's assets and liabilities;
- the role of the investment manager in the valuation of the portfolio, including the role of any investment manager valuation committee (see also *Recommendation 7* below);
- guidance as to how fair value will be ascertained in practice, if the fund has non-exchange-traded or other hard-to-value positions; and
- detailed disclosure of policies relating to side-pockets (which should be linked to how investors' continued holding of side-pocketed assets, both from a liquidity and fees perspective, is treated) and/or run-off classes, if either or both are allowed as per the terms of the offering document.

The process for changes to the Valuation Policy Document should be clear, and should include both (i) an active review of the document in response to changes in, for instance, the types of assets in which the relevant fund invests and any external valuation guidelines, principles or policies on which the fund relies, and (ii) a periodic review of the document at least on an annual basis, which will also assist in identifying, and minimising, future repetitions of deviations from the adopted valuation policy.

5.2 Investment manager involvement in the pricing and valuation process

Any material involvement by the investment manager in the pricing of underlying portfolio positions or otherwise in the calculation, determination or production of the NAV should be clearly disclosed.

Investors have the right to expect disclosure of any material involvement by the investment manager (and its portfolio management staff) in the process. Notwithstanding any delegations made by the investment manager or the fund to a third-party valuation service provider, investors may still have recourse against the investment manager and/or the fund for any errors made in the valuation process. What constitutes material involvement in this context should be strictly adhered to and should include the provision of any pricing information to the third-party valuation service provider by the investment manager. It should be assumed that it is preferable that an investment manager is never the sole source of information in relation to the pricing of any underlying assets of the fund as any involvement by the investment manager may give rise to conflicts of interest.

A valuation service provider should, where possible, use third-party sources (and multiple third-party sources, if available, to provide the most informed valuation of a given asset), as well as indicating what any "fallback" valuation process will be if primary valuation sources become unavailable but the fund does not want to have to formally suspend valuations. This is especially important where the fallback may rely on the investment manager's involvement in the process. The absence of the use of other third-party pricing sources should be disclosed as material to

investors. Disclosures of an investment manager's (or portfolio management team's) involvement do not have to take the form of a prescriptive "health warning" about the level of valuation risk in the fund, but sufficient information should be disclosed to investors for them to be able to draw their own conclusions and make appropriate decisions.

Disclosures around price sources and verification of those sources would typically be made in an administrator transparency report. This topic is covered in more detail in **Section 5.4** of this Guide. Examples of relevant disclosures that highlight the extent of the investment manager's (or portfolio management team's) involvement in pricing and valuation include the number of positions, their associated asset/liability value and the percentage of the total fund asset/liability value of fund holdings priced from:

- a single independent source;
- information solely provided by the investment manager (or portfolio management team where the investment manager is acting as a valuation service provider);
- information solely procured by the investment manager from an independent valuation expert; and/or
- an independent price source instructed to be used by the investment manager that is inconsistent with the price source determination process instructed in the Valuation Policy Document.

It is also sound practice for the fund's audited financial statements to contain a note outlining the percentages of NAV as at the balance sheet date which are valued by the investment manager (or portfolio management team where the investment manager is acting as a valuation service provider), disclosing the methods used and the nature of the investment manager's (or portfolio management team's) involvement. Since the introduction of the fair valuation hierarchy in 2007-2008, such disclosures are less common given that the general assumption is that the investment manager (or portfolio management team) will have some involvement in the valuation of Level 3 assets. However, it is still useful for the financial statements to disclose the percentage of NAV for which the investment manager (or portfolio management team) is the sole source of valuation.

5.3 Administrator transparency reports

Transparency reporting, in the form of administrator transparency reports or otherwise, typically provides an insight into the existence of positions, pricing sources, ASC820 fair valuation hierarchy levels and counterparty exposures. Where this service is provided, the administrator should address the administrator transparency reports directly to investors. NAV transparency reporting can assist also in streamlining investor operational due diligence processes. Transparency about the existence of fund positions on prime broker and counterparty statements may provide comfort to investors regarding existence risk, and transparency about what percentage of assets are placed with various counterparties may provide comfort to investors regarding counterparty exposure and concentration.

Clarification of independent reconciliation and valuation of fund positions can result in investors gaining comfort about the degree to which the fund's NAV has been determined independently. Administrator transparency reports should distinguish between the percent of the fund's NAV that has been determined independent of the investment manager versus the extent to which the fund's NAV is determined from prices that have been provided by the investment manager and confirmed by the administrator using prices received directly from independent pricing providers.

NAV transparency also provides an increase in the level of granularity available in the investor due diligence process. A fund's Valuation Policy Document clearly outlines the instances in which the investment manager may be involved in determining valuations, as well as the safeguards and checks that will be in place to ensure approval of the fund governing body of any such valuations

that are exceptions to the requirements set out in the Valuation Policy Document or are required to be escalated to the fund governing body under the terms of the Valuation Policy Document.

5.4 NAV reporting

Regular NAV reports should be addressed directly to investors by the third-party valuation service provider, where a third-party valuation service provider is used, and any NAVs produced by the investment manager should be disclosed as such.

The offering document usually gives an indication as to the frequency of NAV reporting, which will be at least as frequent as dealing days. Typically, a formal NAV will be calculated at each month-end. However, there is a trend towards more regular, or weekly, NAV calculations (either formal or indicative), and in some instances, where the strategy permits, daily. To facilitate the process, most administrators now have web-based reporting infrastructures, which can be directly accessed by investors.

There should be as little scope as possible for the manipulation of a fund's NAV once the formal NAV process has been completed. When (as is now usually the case) the administrator is the valuation service provider, the administrator should be the entity which disseminates the NAV to investors. When the investment manager is the valuation service provider, there should be a clear segregation between both entities, and controls should be in place to ensure that the NAV cannot be influenced or amended by unauthorised personnel once it has been finalised. Regulatory requirements frequently mandate such segregation.

Investment managers may wish to give investors an idea of performance before the completion of the formal NAV process. In such cases, preliminary indicative estimates may be sent directly to investors by the investment manager prior to the final formal NAV statement for the period, if suitable disclosures are made. There should be no room for confusion between these "flash" estimates and the formal NAV on which the fund is traded.

6. Recommendations on procedures, processes and systems

An investment manager's valuation policy may not achieve its expected outcomes without sound procedures, processes and systems, as these are the backbone of effective fund valuation.

6.1 Valuation process segregated from investment process

The procedures enshrined in the Valuation Policy Document should be designed to ensure that the parties controlling the fund's valuation process are segregated from the parties involved in the fund's investment process.

As discussed under *Recommendation 4*, segregation of duties in the valuation process is usually achieved by delegating the calculation of the fund's NAV to an independent third-party valuation service provider, with clear procedures enshrined in a Valuation Policy Document. The precise way in which the valuation service provider verifies instrument prices will vary from fund to fund. For each position in the portfolio, the third-party valuation service provider will usually be responsible for checking prices to at least one of the sources listed in the Valuation Policy Document, so that it can check the variance with the other sources.

The crucial point is that the valuation service provider should control the process of reconciling price sources without unsolicited interference from the investment manager (except in the case of an independent investment manager valuation committee). Formal intervention by the investment manager in the NAV reconciliation process should not be permitted but, after its own

review of the valuation service provider's NAV calculation, the investment manager may request a price override following the procedure outlined under *Recommendation 13*.

The Valuation Policy Document should make clear the circumstances in which the investment manager's portfolio management team may become involved in the valuation process. An emphasis on segregation of duties does not imply that portfolio management professionals at the investment manager will never be consulted about valuation issues. It is also entirely sensible for portfolio management professionals to review a NAV calculation prepared by the valuation service provider before its release to investors, provided any objections it raises are made through a proper channel such as the fund governing body or the investment manager valuation committee, as applicable and as prescribed by the Valuation Policy Document.

At the investment manager, clear segregation of duties between those responsible for investment decisions and trading (the portfolio management team) and those responsible for trade settlement, portfolio reconciliations and accounting (back office) should be in place for many operational reasons.

These segregation controls become even more important when the back office of the investment manager is in effect the valuation service provider. In those cases, there should be a dedicated team responsible for valuation which is not involved in any investment process. Members of this valuation team should be the only members of staff authorised to input prices directly into the investment manager's portfolio accounting system. In the normal course of business, they should also be responsible for sourcing quotations from brokers and counterparties for model generation/approval, and for inputting data into pricing models if they are used. Where one has been appointed, these functions would normally be performed by the valuation service provider.

6.2 Price sourcing and fair valuation levelling by the investment manager

In certain instances, the investment manager will have the best insight with respect to the valuation of particular instruments. Wherever prices and fair valuation hierarchy level classifications are provided or sourced by the investment manager, the investment manager should furnish the third-party valuation service provider with sufficient supporting information and documentation.

Although some valuation service providers and independent valuation experts have considerable expertise in the valuation of complex instrument categories, situations arise where it might be accepted by the fund governing body that the investment manager should act as a primary source for the valuation of a particular instrument. Such instruments would typically be Level 3 assets such as:

- illiquid or very thinly traded bonds, convertible bonds and equities;
- complex OTC derivatives;
- private equity or quasi-private equity positions; and
- structured products.

For the first category, the investment manager may furnish the third-party valuation service provider with broker quotations (see *Recommendation 15*) or a report on recent trading activity which provides evidence for its view of fair value. For OTC derivatives, the investment manager will usually be able to provide supporting details of its own model-based calculations (see *Recommendation 16*). Increasingly, third-party valuation service providers are now able to obtain the broker quotes independently of the investment manager and/or have independent modelling capabilities. Structured products are often structurally opaque and technically complex and, as a result, investment managers may choose to engage an independent valuation expert specialising in structured products to value those assets.

The need for supporting evidence can be more pronounced for positions where a fund has provided finance to a private company in return for debt or equity. The investment manager may illustrate its view of the current fair valuation with peer-group revenue multiple models, reports on recent liquidity events for similar positions, discounted cash flow models or a weighted combination of those approaches. The use of such tools, common in private equity valuation, is based on sound economic principles. However, many of the parameters used in such models are subjective. Therefore, the resulting valuation can vary widely depending upon a particular investment manager's perspective of the current market risk *premia* and the probability distribution of future cash flow estimates.

If the fund is expected to invest in private positions on a regular basis, the Valuation Policy Document may enshrine a procedure, such as a discussion of each investment at a monthly meeting of the fund governing body and/or the investment manager's valuation committee, as applicable. The minutes of this meeting should be provided to the third-party valuation service provider as supporting evidence for current fair value. Where Level 3 positions are material to the fund's NAV, either individually or in the aggregate, it is considered sound practice to engage an independent valuation expert to perform suitably frequent valuation appraisals to provide appropriate assurance to the fund governing body and/or the investment manager's valuation committee, as applicable.

It is not uncommon for the third-party valuation service provider to source prices independently of the investment manager and then reconcile these prices to the investment manager's prices. Once the prices are within a predefined threshold, the Valuation Policy Document should specify whether it is the valuation service provider's or the investment manager's prices which are used in the final NAV determination. When the prices are outside the predefined threshold, there should be a well-defined escalation procedure to enable resolution independently with oversight by the fund governing body.

Typically, when a fund is launched or new investments are introduced, the third-party valuation service provider will determine the appropriate fair valuation hierarchy level in consultation with the investment manager and the auditor. On an ongoing basis, the valuation service provider typically classifies the investment by level, independent of the investment manager (or the portfolio management team where the investment manager is acting as a valuation service provider). In the case of a disagreement, the auditor should adjudicate. There can be some grey areas which are more subjective but such instances are limited. Whenever an investment manager is involved in determining the fair valuation hierarchy, sufficient documentation support should be provided to the third-party valuation service provider. The third-party valuation service provider, in turn, should escalate the matter to the fund governing body if there is inadequate documentary support for the investment manager's valuation or fair valuation hierarchy classification which the third-party valuation service provider cannot validate by other means. In addition, the investment manager's input should be reported to the fund governing body and to investors with a transparency report.

Where there is a high proportion of Level 3 assets in the portfolio, an independent valuation expert should be engaged to provide valuation assurance on the valuation for a sample of investments. When a portfolio contains a Level 3 investment of significant size, an independent valuation expert should be engaged to perform an independent valuation of that specific investment. Investment manager-valued investments greater than a pre-defined size and frequency (or another appropriate trigger) should be subject to positive assurance or valuation by an independent valuation expert at least once within a 12-month period.

6.3 Practical and consistent with the fund's accounting standards

Procedures described in the Valuation Policy Document must be capable of practical implementation by a third-party valuation service provider. The valuation policies outlined in the Valuation Policy Document should be as consistent as possible with the chosen accounting standards of the fund.

Practicality

Prior to the selection of a third-party valuation service provider the investment manager will typically perform due diligence to ensure that the third-party valuation service provider has the requisite skills, systems, processes and procedures in place to value a typical portfolio of investments. Sufficient time should be given for the fund governing body to perform due diligence on the third-party valuation service provider and for the third-party valuation service provider to undertake the necessary due diligence when the other fund stakeholders are unknown to them. The third-party valuation service provider should be provided with the draft Valuation Policy Document as early as possible during the inception of the fund (a minimum of four weeks prior to launch) and the Valuation Policy Document should ideally be finalised and approved by the fund governing body before launch of the fund.

All stakeholders involved in the valuation process should be comfortable before launch that the procedures enshrined in the Valuation Policy Document are realistic and can be carried out by the designated party in practice. It may, for example, be assumed that a third-party valuation service provider can source two broker quotations for distressed debt positions by itself. If this is not the case and ongoing involvement from the investment manager is required to encourage the brokers to cooperate, it is better to enshrine a workable but robust procedure into the Valuation Policy Document rather than insisting on a more rigid policy which means that in practice virtually every position priced using broker quotations would have to be escalated for review by the fund governing body.

Consistency with accounting standards

Accounting standards (IFRS 13 and ASC 820) require the application of "fair value" to measurements of a fund's portfolio of positions (see **Appendix D**). The use of an "exit price" for valuation purposes is a consistently applied approach across the industry. Therefore, it is advisable that the Valuation Policy Document be aligned with the chosen accounting standards. This enhances consistency throughout the industry, thereby enabling investors to have confidence in the valuation policies and facilitating comparison of valuations between investment managers and funds. It also ensures there is consistency between the valuation for dealing and reporting purposes.

One important issue for the valuation service provider (whether it is independent of the investment manager or not) is the competence of staff detailed to the valuation process. If complex instrument types are to be added to the fund's investment mandate, the valuation service provider should ensure that sufficient training has been given to the staff assigned to work on those instrument types. The fund governing body should monitor the adequacy of staff training in its ongoing reviews of the valuation service provider as well as its own competence and ensure that the Valuation Policy Document is appropriately updated. If the valuation service provider is effectively the back office of the investment manager, the firm's senior controller(s) (COO, CFO) together with compliance need to ensure there are adequate skills and experience within operations and fund accounting to consistently produce an accurate NAV.

6.4 Consistent application of procedures and approval of deviations

The valuation service provider should use reasonable endeavours to apply a fund's pricing policy as set out in its Valuation Policy Document consistently. The fund governing body should approve any deviations from the policy in advance of any NAV being released.

A crucial component of the valuation service provider's processes will be to check that the price sources for each security type as outlined in the Valuation Policy Document are being consistently applied. The valuation service provider may also conduct further checks on the consistency of valuation, using the following tools, among others:

- a stale price report which highlights any security where the price has remained the same month-on-month. The securities on this list would then be investigated further to ensure that the price is not out-of-date and that the valuation is appropriate;
- a large variances report which highlights any variances over a set percentage from the previous formal monthly NAV. Again, the securities on this list would then be investigated to ensure that the large price movements month-on-month were genuine; and/or
- a report listing security prices from sources other than those listed in a Valuation Policy Document which can highlight any material variances between the average of all sources.

Instances where a pricing policy enshrined in the Valuation Policy Document would not be applied should be rare. For example, the document may state that a bid/ask spread of an instrument should be obtained and the midpoint used for valuation, but in practice only the bid price may be available. In cases where an asset is illiquid, and there are no observable indications of fair value, the use of an alternative valuation technique which requires the use of judgment may be required. The fund governing body should approve any deviations from the usual policy set out in the Valuation Policy Document or the Valuation Policy Document should have a set policy on what should happen when there are no observable indications of fair value.

Circumstances may arise from time to time that are not covered by the Valuation Policy Document, for example, where new instrument types are created and therefore do not yet have an official valuation policy incorporating them. In the case of new security types, a written policy should be formulated as soon as practicable and approved by the fund governing body. Sound practice would be for the Valuation Policy Document to be updated and approved prior to the commencement of trading in new securities/strategies. Some third-party valuation service providers have internal procedures which do not allow them to accept a deviation from the documented policy without receiving a written resolution from the fund governing body.

The policies and procedures should also be applied consistently over time, unless an update is required and made in accordance with a pre-determined amendment process.

6.5 Price challenge controls

The Valuation Policy Document should describe the controls put in place to identify inaccurate vendor-sourced prices, and the mechanisms by which price challenges are made. Service agreements with pricing vendors should detail how the price challenge process should be conducted, expected timelines for resolution and appropriate escalation channels. The Valuation Policy Document should make clear who is responsible for raising price challenges and the process that should be followed.

The Valuation Policy Document is designed to ensure that all positions in a fund's portfolio are measured at fair value. This can be achieved by determining the most suitable pricing sources or vendors to be used for each asset type in a portfolio and consistently applying those. However,

controls should be in place to recognise instances when the preferred source is not the best indicator of fair value, and processes for challenging the provider of those prices.

As the scrutiny and expectations of the valuation processes of funds has increased in recent years, it has become clear that simply pricing positions based on a price provided by independent price vendor is not a robust enough method of establishing fair value. Sound practice has progressed to require those charged with the valuation of a portfolio to understand how an independent price is derived, any models and inputs used, and to ensure it is corroborated by secondary sources and other market data at each valuation date.

Where a variance between a preferred source and secondary sources or other market data exceeds a pre-determined threshold, a price challenge should be raised to the relevant vendor. A price challenge is a request made to the vendor of a price by the fund or the fund's valuation service provider to confirm the accuracy of it. Service agreements between the fund's valuation service provider and price vendors should include details of (i) the mechanism by which price challenges are raised; (ii) expected timeframes for a response; (iii) the level of pricing support (i.e., details to support the procedures) to be provided by the vendor; and (iv) escalation contacts.

Following a price challenge, a vendor may affirm or adjust their price, or conclude they are unable to provide a price at the valuation date.

Where a price is affirmed by the vendor following a challenge, the vendor should provide sufficiently detailed support to satisfy the valuation service provider of the quality of the price. In this instance, the user of the price must decide whether to: (i) accept the affirmed price for the valuation date and document the reasons for variances to secondary sources, or (ii) make a price override, where permissible within the fund's Valuation Policy Document. In both cases, the valuation service provider must ensure it has satisfied all review and approval processes in the Valuation Policy Document.

6.6 Large price movements

Large price movements warrant further vetting prior to NAV signoff, as well as a post-close review. Large price movements should be reviewed as part of a variance analysis and tolerance review prior to the close of the valuation process. An example includes identifying price movements that cause profit and loss exceptions greater than an established basis points threshold of the total NAV of the fund, or a defined percentage price movement. These large price movements should be highlighted and the reason for the movement should be corroborated with back-up price sources and/or public news when available.

From a post-close best practice perspective, backtesting should be conducted to isolate large price movements. During a defined timeframe in the following month, the valuation service provider should review the trading activity of securities held by the fund as of month-end. Trade pricing should be compared to prior month-end marks to verify whether the marks are reasonable and highlight large variations. Any variance exceptions should be further explained, documented in any corresponding records and signed off by the fund governing body.

All large price movements should be escalated to the fund governing body or to persons employed by the investment manager who have been delegated authority by the fund governing body to provide pricing/valuation instructions to the valuation service provider on behalf of the fund. In addition to the pricing hierarchy set in the Valuation Policy Document, the valuation service provider should rely upon additional price sources to verify large price movements that exceed certain thresholds established in the Valuation Policy Document.

6.7 Backtesting and stress testing

It is becoming common practice that investment managers, and in some cases independent valuation service providers, perform backtesting procedures to incorporate a thorough review of recent trades for positions that are difficult-to-price or are priced using a single pricing source.

The purpose of backtesting is to identify any significant bias in the valuation procedures and evaluate the reasonableness of using valuations provided by vendors, brokers and other valuation service providers. The testing permits the investment manager to review and assess the valuation policies and procedures for hard-to-value securities over a period of time so that these procedures can be updated accordingly in amendments to the Valuation Policy Document approved by the fund governing body.

Backtesting methods

- **Testing actual trades** - This procedure compares the prices used in valuations against trades that occurred after the NAV date. If the trade price is above a pre-defined threshold documented in the Valuation Policy Document, these exceptions would be reported to the fund governing body.
- **Testing against future valuations** - This procedure compares the fair values against the next available prices from pricing sources. Future market prices may not represent a valuation that was fair valued, however, they can provide a good indication to assist in defining and reviewing valuation policies and procedures.

The investment manager should regularly report any exceptions and any deviations of the prior valuation price to the traded price to the fund governing body. These exception reports should detail the specific nature of the trade, if available, and the related impact to the fund. The fund governing body should discuss and approve (where appropriate) these exceptions on a monthly basis in advance of the NAV being finalised.

Backtesting of valuation providers

As part of a due diligence process on a pricing vendor, the investment manager should assess the ability of the pricing vendor by requesting valuations on hard-to-value securities based on historical data. The investment manager should take the necessary time and steps to validate the nature of the backtesting that the pricing vendor employs.

Stress testing

Performing stress tests on valuation models based on changes of the economic or valuation inputs can provide additional analysis to the investment manager and the fund governing body which may be of benefit when reviewing and determining the valuation of hard-to-value assets, e.g., commercial real estate.

7. Recommendations on sources, models and methodologies

The sources, models and methodologies are as important as the policies, processes and systems. Prices for different types of investments will need to be sourced or produced in different ways.

7.1 Principles for pricing sources

Wherever possible, the valuation of each position in the fund's portfolio, as derived from the primary source, should be checked against at least one secondary price source. A price matrix should outline the primary source and one or more secondary sources to be used for each security type and the hierarchy of sources where multiple sources exist.

In establishing the price sources, the Valuation Policy Document should focus primarily on independence and consistency of application. It should also establish the appropriate procedures for changing price sources and the frequency of review of the price matrix. Such objective measures are necessary to preclude "cherry picking" with respect to the inclusion or exclusion of pricing sources, along with the methodology for determining the price.

The Valuation Policy Document should set the tolerance levels for variances between the sources, as well as describe the process for resolution of such tolerance breaches. Such thresholds would normally be measured in terms of percentage difference between the sources, the basis points impact on fund NAV, a monetary amount, a risk exposure or a combination of these factors. Some Valuation Policy Documents include an aggregate threshold as a proportion of fund NAV, in addition to the line level thresholds.

7.2 Exchange-traded instruments

For exchange-traded instruments, pricing should be sourced from a set of market data vendors which have been approved by the fund governing body as being supportable. Most investment managers and third-party valuation service providers have direct feeds from one or more of these vendors. Even for instruments which are normally easy-to-value, it is advisable to validate against a secondary source, as long as the pricing sources are derived independently from an "active market" (i.e., there is sufficient volume and frequency to determine a price). Given the number of market data vendors, the valuation of exchange-traded instruments should not be based on only one price source.

Consideration should be given as to whether trading activity in the relevant instrument type is sufficient for the market in that instrument to be considered "active". Generally, a market is considered active if transactions are taking place regularly at an arms-length basis with sufficient volume and frequency to determine a price on an on-going basis. The necessary level of trading required to meet these criteria is a matter of judgment. Block discounts (which are discounts applied because the normal daily trading volume on the exchange where the security trades is not considered to be sufficient to absorb the quantity held by the fund) are not permitted under US GAAP or IFRS.

7.3 Other quoted securities

For instruments that have quotes, but do not have a definitive closing price, the availability and abundance of pricing can determine the depth of the market. While two securities may be similar in structure and function, the way they are priced may differ depending on the market and their level of distress. For these securities, the Valuation Policy Document should specify the standard practice for how to deal with the liquid and quoted securities, including source of pricing and pricing logic (e.g., bid/ask/last/mid), and how thinly-traded or illiquid securities should be treated. Regardless of the source used, pricing should be based on actual transaction data and, if it is not, then it is preferable (where possible) that the transaction data is used in conjunction with other market-based observations (such as comparable securities) or using other valuation techniques.

7.3.1 Market data feeds

Liquid, quoted instruments that are not exchange-traded can often be priced via the same market data feeds as listed securities. In these cases, prices should be periodically examined to ensure that the levels being quoted could be executed upon. The prices should also be applied consistently by the valuation service provider.

7.3.2 Broker quotes

Broker quotations should, wherever possible, be multiple, sourced consistently and accessed by the valuation service provider independently without intervention by the investment manager (or portfolio management team where the investment manager is acting as a valuation service provider).

The Valuation Policy Document should establish a principle stating that, if a valuation for a security cannot be sourced from the fund's chosen market data feeds, broker quotations may be used.

For thinly-traded or illiquid securities, quotations from market makers (usually brokers) may sometimes be deemed to be reflective of fair value. However, such broker quotations may be based on limited or non-existent observable or actionable transactions. Therefore, it is preferable, where possible, to collate other observations of fair value such as the valuation that is implied by observations of trades in comparable securities or through collaboration with the use of alternative valuation techniques.

When broker quotations are used, it is essential to ensure as much independence as possible from the investment manager, and specifically the portfolio management team, in sourcing the quotations and to ensure that the quotations provided are the most accurate and relevant.

The minimum number of quotations required and the method of calculating a price may depend on the nature of the instruments. The methodology for determining the appropriate price, including how the data is scrubbed (e.g., discarding of outliers) and how a final price is reached (e.g., average, median), should be described in the Valuation Policy Document. In addition, the Valuation Policy Document may be augmented to include certain tests, which may be used to qualify and/or prioritise broker quotations. These tests can include (but should not be limited to) backtesting of month-over-month movements in the broker quotations to ensure that they are sufficiently refreshed, and comparing the movements of broker quotations to movements in comparable indices or securities.

When broker sources are used, the valuation service provider should, where possible, procure quotations directly from those sources for the valuation date to ensure a proper chain of custody. In practice, some of the larger valuation service providers receive multiple quotations during other NAV exercises, and log them onto a database or other system. In certain circumstances, the valuation service provider may lack sufficient leverage over the broker to ensure a quotation is sent directly. In these cases, it is sometimes possible for the valuation service provider to be copied in directly on e-mail correspondence so that it does not have to rely on information forwarded by the investment manager. Some third-party vendors also provide services aggregating market maker quotations for certain asset classes.

In normal circumstances, quotations from the same brokers should be used at each month-end to ensure consistency in the valuation of the relevant instruments. It is not sound practice, in cases where it has been customary for two or three brokers to provide the month-end quotations for a particular instrument, for another source to be substituted without proper explanation and consultation. The Valuation Policy Document should establish the appropriate procedures and approvals required for broker substitutions. These reasons should be documented to the satisfaction of the fund governing body as a control against possible "cherry picking" of broker sources by the investment manager.

It is also preferable (although not always feasible) to ensure that the quotations received are not merely indicative but are current and could be realistically traded. The investment manager is usually best placed to have an opinion if a quotation from a market maker is unrealistic for a transaction. Therefore, the fund governing body, as part of its ongoing monitoring of valuation

procedures, may wish to receive a periodic report comparing prices achieved on the sale of securities with their most recent formal valuations before sale if derived from broker quotations (i.e., backtesting and assessing reliability).

When a fair value measurement is based on a quote from a broker or dealer, the relevance and reliability of the evidence provided by the broker quote depend on whether:

- the broker or dealer is free of relationships with the fund through which the investment manager can directly or indirectly control or influence the broker or dealer;
- the broker or dealer making the quote is a market maker that transacts in the same type of financial instrument;
- the broker quote reflects market conditions as of the financial statement date;
- the broker quote is binding on the broker or dealer; and
- there are any restrictions, limitations, or disclaimers in the broker quote and, if so, their nature.

Broker quotes generally provide more relevant and reliable evidence when they are timely, binding quotes, without any restrictions, limitations, or disclaimers, from unaffiliated market makers transacting in the same type of financial instrument. If the broker quote does include these characteristics, the fund would need to obtain relevant and reliable pricing information from another source or to develop fair value estimates using appropriate models.

7.3.3 Securities pricing services

In cases where quoted instruments are not available through standard market data feeds or direct broker quotes, it is possible to utilise pricing services that specialise in the instruments in question. These services capture market data and present them impartially allowing for an unbiased view of the instruments they price. They often also provide a depth of quotation that can inform how many sources they have incorporated into the price being delivered. The factors to consider in selecting a securities pricing service are discussed in **Section 8** of this Guide.

7.4 OTC derivatives

For OTC instruments, the absence of a secondary market means that direct exchange or broker feeds are not an available source for valuation. Whether centrally cleared or traded bi-laterally, OTC derivatives require the use of alternative methods for valuation. These methods would normally involve one, or a combination, of models, counterparty/clearer valuations and derivative pricing services.

Generally, in these cases, multiple valuation techniques should be utilised (where possible) as well as multiple sources. Moreover, the indicated fair values from multiple valuation techniques should be corroborative of each other. Differences in values between valuation techniques may be indicative of inappropriate assumptions, errors in the model or both. Therefore, where differences exist, an investigation into the cause of the differences should be performed and documented by the valuation service provider and investment manager, with appropriate escalation to the fund governing body as necessary.

7.4.1 Models

The use of a pricing model for a particular product type should be approved by the fund governing body and documented in the price matrix. The price matrix should also indicate, where possible, the source of inputs into that model. Model outputs should be compared on an ongoing basis to other available data to ensure they represent fair value. Such comparative data may include actual trade levels, broker quotes, counterparty valuations, pricing services or other sources.

For most OTC transactions, models may be used as the most appropriate pricing source. For vanilla OTC transactions, standard models that are utilised by market participants are normally in place. Increasingly valuation service providers have the expertise to determine valuations using such models instead of, or in addition to, the investment manager's modelling techniques. In practice, the more straightforward and standardised OTC derivative contracts would include interest rate swaps, equity swaps, foreign exchange options and many single name credit default swaps. For these instruments, pricing models with readily available data-input parameters are routinely used by market counterparties.

More complex OTC derivatives include long-dated out-of-the money swaptions, long-dated equity index options, some variance swaps, credit default swap options, synthetic collateralised debt obligations and mortgage-backed derivatives. Valuation models exist for these types of instrument but the assumptions and data inputs used are likely to involve subjective judgment. The relevant stakeholders should agree, when drafting or revising the Valuation Policy Document, whether it is appropriate for a pricing model to be a primary or secondary source, depending on the availability of other sources with observable inputs.

When using models for valuation purposes, certain levels of judgment are required, particularly for the following aspects:

- the choice of the model itself;
- the assumptions that are embedded within the model;
- the sources of inputs into that model; and
- where appropriate, the technique for translating those inputs into a form that is useable for the model (for example, interpolation and extrapolation techniques).

It is also considered sound practice to establish and document a governance framework for the use of models. The aspects covered by the framework may include the following:

- responsibilities for maintaining, developing and approving models used in the valuation process;
- model selection criteria;
- source code controls;
- model validation procedures;
- ongoing model calibration procedures;
- model risk and mitigating controls;
- curve fitting techniques;
- approval process for changes to models and/or input sources;
- model release controls;
- independent challenge; and
- ongoing monitoring.

7.4.2 Counterparties

Counterparties (which for this purpose include OTC central clearers) may be a useful source of valuations, more commonly for secondary pricing or to validate model outputs. One of the main advantages of counterparty valuations is that they are readily available in most cases. However, counterparty valuations have some potential limitations which should be fully considered before deciding whether and how to use them in the valuation process:

- counterparties are not independent to the transaction;
- counterparties may use a different pricing point to that used by the fund;

- identical trades with two or more counterparties may have different valuations;
- there may be a disconnect between the latest front office market levels and the back office valuations;
- there often is limited transparency as to the observability of inputs used by the counterparty, therefore a higher reliability may be placed on the valuation than the counterparty itself places; and
- there may be delays in new trades appearing on counterparty statements.

Some of these counterparty limitations can be partly mitigated with further downstream processes, such as pricing identical trades to one counterparty or delta adjusting the counterparty valuation to account for timing differences. The fund governing body, in establishing the Valuation Policy Document, should assess these factors in determining the reliance it wants to place on counterparty valuations. The role of counterparty statements in the valuation process should be documented in the price matrix and be assigned an appropriate position in the pricing hierarchy.

7.4.3 OTC pricing services

A number of vendors, including some fund administrators, provide services for valuing OTC derivative portfolios, which may be a valid primary or secondary source for valuations. The best vendors could be an important source of valuations as they may have established necessary connections to input sources that the investment manager might not otherwise have access to, or may be able to do so at a lower net cost than the investment manager can achieve. There are several factors to weigh up when considering the use of a pricing vendor, including their methodologies, data security arrangements, control environment, accuracy, suitability and price challenge process. The recommended procedures for performing due diligence on those vendors are described in detail in **Section 8** of this Guide under those broad headings, so it is important to consider the matters raised in that section if this is a route which the fund governing body is considering for the valuation of OTC derivatives.

7.5 Fair valuation considerations for difficult-to-price securities

For some types of instruments where the transactions take place privately between market participants, or where there are not transactions taking place at all, valuation inputs (such as transaction activity) are not directly or indirectly observable, and it is more difficult to determine a fair value than it would be if such data points were available.

Funds that invest in unlisted equity (e.g., private equity, infrastructure, real estate), unlisted credit (e.g., private loans, loan pools, certain structured products), contingent assets (e.g., bankruptcy claims, litigation claims) and fund interests, each of which is covered in this section, often face this problem.

The valuation of such investments should start with an understanding that the most relevant accounting frameworks require financial statements to reflect assets and liabilities at fair value (as determined by the applicable accounting standards).

Although certain accounting standards may allow a fund to report certain debt investments at other than fair value (e.g., lower of amortised cost or impaired value), investors in the alternative funds sector overwhelmingly require a fair value-based approach and most funds use IFRS or US GAAP, each of which requires the investor's fund interest to be reported at fair value.

Investors need fair value because:

- fair value is the basis that many fund investors use (and are often required to use under their relevant GAAP) to report periodic (monthly/quarterly/yearly) performance to their own

investors, beneficiaries, boards, other stakeholders, etc.;

- fair value is the basis upon which many investors make asset allocation decisions;
- fair value is an important consideration in making investment (investment manager selection) decisions on a comparable basis;
- fair value is often used to make incentive compensation decisions for both the investment manager and the investor;
- investors need consistent and transparent information to exercise their own fiduciary duties; and
- fair value is an important component of subscription/redemption transactions ensuring equitable treatment of investors.

Fair value is the value standard prescribed by US GAAP and IFRS. Under both IFRS and US GAAP fair value is defined as:

"[T]he price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."

Fair value is the exit price, or the price which would be received at the valuation date to sell the asset or paid to transfer a liability. The historical amount paid for an investment (or amortised cost) may not represent the price that would be received if the investment were sold in an orderly transaction at the measurement date. The pricing of the asset or liability should consider all of the assumptions (both market conditions and investment performance) that market participants would use as of the valuation date.

In this regard, cost (or amortised cost) should not be considered as a "proxy" for fair value, since the price historically paid for an investment may not represent the price that would be received if the investment were sold in an orderly transaction at the measurement date. An appropriate fair value exercise which assesses changes in market conditions and investment performance is required at each measurement date.

This Guide does not provide a "step-by-step" guide for determining fair value for hard-to-value instruments. There are numerous other sources for more granular guidance on specific methodologies, inputs and assumptions used in the valuation of certain asset classes, including, but not limited to:

- the International Private Equity and Venture Capital Valuation (IPEV) Guidelines;
- PEI Definitive Guide to Valuing Private Equity Investments;
- the International Valuation Standards issued in 2017 by the International Valuation Standards Council;
- the AICPA guide on the Valuation of Portfolio Company Investments of Venture Capital, Private Equity and Other Investment Funds (in development as of the writing of this Guide);
- the AICPA guide on the Valuation of Privately Held Company Equity Securities Issued as Compensation; and
- the INREV real estate valuation guidelines (INREV is the European Association for Investors in Non-Listed Real Estate Vehicles).

These guides are helpful non-authoritative resources in relation to fair value for purposes of financial reporting under IFRS or US GAAP. Most of the materials presented in the resources listed above are principle-based. There may also be other appropriate resources available, and the list above is not exhaustive.

Valuing hard-to-value investments is subjective and requires the use of professional judgment. A consultation with an independent valuation professional may help to determine or corroborate the valuation and provide guidance on the derivation of subjective inputs or assumptions required to value the investment. The use of external experts also demonstrates the incorporation of an independent point of view in the valuation process to investors and regulators.

Valuation overview

The determination of fair value for the more difficult-to-value investments at each measurement date includes the following considerations:

- identifying the unit of account – what is the investment being valued (equity interest, debt interest, option, etc.);
- determining the principal or most advantageous market;
- applying one or more valuation methodologies (i.e., replacement cost, market approach and/or income approach);
- maximising the use of observable inputs, to the extent available;
- calibrating inputs used in the valuation; and
- backtesting valuation conclusions to improve the valuation process and validate the identification of valuation inputs.

The following sections highlight certain considerations when applying these general valuation principles for difficult-to-value investments.

Addressing a broad array of considerations requires significant judgment, which introduces the potential for bias and misrepresentation. Thus, a sound governance framework to maximise objective and independent valuation assessments of unlisted and unquoted credit and/or investments is essential.

Unlisted/Non-quoted credit, credit-like and hybrid financial instruments including securitisations

The universe of credit and credit-like instruments is expansive. The valuation models, methodologies, inputs and assumptions for credit and credit-like instruments is equally expansive. Moreover, one of the more significant challenges faced by valuation professionals is in selecting a set of benchmark financial instruments or indices to use for comparison purposes. A principles-based approach is critical to the selection of an appropriate valuation methodology and the inputs and assumptions to that valuation methodology.

When selecting a valuation methodology for a credit instrument, as noted above, the accounting standards in US GAAP and IFRS call for the use of an exit price concept: “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.”

In the credit world, this often means considering whether the market participant would invest in the subject instrument with a view towards achieving a target yield for performing credit instruments, or alternatively a target recovery, for a credit instrument that is non-performing or impaired. In some instances, market participant buyers may evaluate investments based on yield on expected cash flows and any, recovery value. Where potential buyers have multiple views, fair value is determined by the most advantageous market participant view as to what a buyer would pay in an orderly transaction.

An income approach using a market-based discount rate is common practice for instruments when market participants would estimate the fair value of the investment based on a yield expectation.

Determination of a market-based discount rate is often based on the calibration of the implied spread based on changes in credit quality and changes in market conditions (considering comparable market indices or comparable instruments), or built-up by starting with a risk-free base rate and adding credit spread components to reflect the security specific risk using market participant assumptions.

In performing the selected valuation methodologies, valuers often encounter credit-specific issues including, among other things, original issue discounts ("OIDs"), prepayment provisions, "clean" versus "dirty" pricing, margin ratchets, cash flow sweeps, profit participations, so-called "free" warrants or other equity participations and/or fees on unfunded capital commitments. Additional complexities arise when valuing complex securitisation vehicles, loan pools and non-performing loan ("NPL") portfolios such as collateral cash flow expectations, transaction structural features, risk bifurcation, reserve accounts, and risk retention rules.

An inherent challenge faced in valuing all forms of unlisted and unquoted credit is selecting an appropriate comparable instrument or index to use to develop a market-based discount rate. The differences in the profile of the issuer, interest rate terms, duration, covenants, and other features, make it nearly impossible to find a perfectly comparable instrument. The on-going credit quality and overall borrower performance of the instrument should be re-evaluated at each measurement date to identify comparable benchmark instruments of similar credit quality.

The market-based valuation of non-performing or impaired credit instruments may require a recovery analysis. In certain cases, a probability weighted expected return method ("PWERM") or an option-based approach may be useful methods for estimating the fair value of such instruments. The estimation of the recoverable amount requires an assessment of underlying collateral value, or the likelihood of a favourable or non-favourable outcome to a restructuring or litigation process. Observable prices, if any, would also be incorporated into the analysis.

Unlisted equity

This Guide groups together a variety of types of unlisted equity instruments including investments in companies in different stages of development (early stage, later stage, distressed, etc.) and different industries.

Equity valuations are typically performed by determining the enterprise value of the business, and subtracting the debt (although equity is sometimes valued directly). As noted above, there are several industry guides available that provide additional insight when identifying relevant considerations for estimating fair value of unlisted equity instruments.

Accounting guidelines (US GAAP and IFRS) set forth valuation methodologies and techniques for valuing unlisted equity securities, including the "market approach" and the "income approach". These two approaches are the most commonly used in valuing unlisted equity, and each has several variations.

The market approach leverages valuation indications provided by transactions in the market involving comparable securities or businesses, and comprises the "guideline public company method" and the "guideline company transactions method".

The income approach, commonly referred to as a "discounted cash flow (DCF) method", develops a valuation estimate by discounting projected economic benefits (typically an entity's free cash flows) at a discount rate that reflects investors' required rate of return.

Once an enterprise value is estimated, multiple approaches exist for allocating enterprise value to the equity securities within a company's capital structure, based on the current facts and circumstances of the company, including:

- the current value method, which assumes the company is sold at the valuation date, and assigns each equity security outstanding a price equal to the greater of its liquidation preference (if applicable) or its as-converted value;
- the common stock equivalent method, which treats all classes of equity as if they had converted to common stock and allocates value to the various securities based on their fully-diluted ownership percentages;
- the option pricing method, which models each class of equity's value as a call option on the business' total value, with strike prices equal to the preferred stock's liquidation preferences; and
- the PWERM, which involves projecting future exit scenarios (e.g., IPO, sale, liquidation), estimating the value of each equity security under these different scenarios, assigning a probability to each scenario, and discounting the probability-weighted prices per share to the valuation date using a risk-adjusted discount rate.

In performing the valuation methodologies described above in practice, one will encounter a variety of considerations. Some of the more common considerations include the following:

- discounts (or premiums):
 - marketability,
 - control,
 - size,
 - management quality,
 - customer concentration, and
 - country risk;
- complex capital structures;
- transaction and exit fees (excluded from fair value);
- management earn-outs and incentive programs; and
- industry specific business and valuation concerns.

Contractual rights, contingent claims, etc.

Increasingly, alternative investment managers have beneficial rights to cash flows resulting from a variety of types of claims, including but not limited to earn-outs, litigation claims, and other contractual rights. Investment managers should consult the appropriate accounting guidelines with respect to when to recognise (or not recognise) a contingent claim.

The investment strategy of the fund may include claims from other entities. Alternatively, the investment manager negotiates the right to future cash flows such as earnouts as part of the exit transaction. The fair value of any contractual rights must be estimated. Estimating the fair value of such rights requires consideration of how a market participant would consider a transaction to acquire the subject right.

- **Valuation methodology:** "The PWERM" is an approach that may be appropriate to capture how a market participant would underwrite a purchase of a contingent claim which has a range of potential outcomes.

A PWERM analysis requires the determination of the potential permutations of outcomes, assigns probabilities to each outcome, and discounts the amounts to present value using a market-based discount rate.

A contingent claims analysis may be an appropriate approach if there are a range of potential values where the variability of outcome can be modelled based on a documented volatility. The contingent claims analysis is based on the principles of option theory and treats a subject

security as a call option on an underlying asset (or pool of assets), where the strike price equals the liquidation preference of all securities senior to the subject equity security.

- There is a relatively high degree of subjectivity inherent in valuing claims. The claims are not always complex; however, they often have binary outcomes – which means that a valuation based on a probability weighting of potential outcomes will inevitably not be the same as (or even close to) the eventual outcome itself. The process should seek to estimate fair value based on what a market participant would pay for the claim. An estimate based on the present value of a probability weighted outcome is not the same as predicting the ultimate outcome. Exercising professional judgement and demonstrating independence are paramount in this effort.
- Price quotes or indications of value provided by brokers or others may only be useable to estimate fair value to the extent that they represent binding quotes without limitations.

Fund interests

Some funds invest as limited partners/shareholders/members into funds managed by other investment managers. Funds of funds can sometimes hold dozens or hundreds of fund interests with hundreds or thousands of underlying investment positions. Determining the fair value of every underlying investment position could be impractical and cost prohibitive given the volume of underlying investments often held by funds of funds. Moreover, given the limited degree of transparency into the underlying positions held within the funds in which the fund of funds holds an interest, often the fund of funds is sub-optimally positioned relative to the underlying funds and their investment managers with respect to determining the fair value of underlying investments.

The IASB does not provide specific guidance on using the NAV when valuing an interest in an underlying fund. The US Financial Accounting Standards Board (FASB), however, provides guidance under ASC 820 and such guidance is endorsed by the IPEV guidelines. A concept referred to as a “practical expedient” under ASC 820 has been developed by the accounting standard setters to provide guidelines as to when a valuer of a fund of funds may rely on the NAV as provided by the underlying funds as a starting point in the determination of the fair value of the fund of fund interest. See further discussion in **Appendix D**.

Under ASC 820, a valuer is permitted, as a practical expedient, to estimate the fair value of a fund-of-fund interest using the NAV per share (or its equivalent, such as member units or an ownership interest in partners’ capital to which a proportionate share of net assets is attributed) of the investment, if the NAV per share of the investment (or its equivalent) is calculated in a manner consistent with the measurement principles of an investment company as of the valuer’s measurement date. This guidance applies only to an investment that meets both of the following criteria as of the reporting entity’s measurement date:

- the investment does not have a readily determinable fair value; and
- the investment is in an investment company or is an investment in a real estate fund that measures its investment assets at fair value on a recurring basis and issues financial statements that are consistent with the measurement principles of an investment company.

If these criteria are not met, NAV may not be appropriate as a basis for measuring fair value. Rather, an income approach, or a market approach (if transaction data is available), would be used.

As part of the fair value determination, a valuer should independently evaluate the fair value measurement process utilised by the investee fund manager to calculate the NAV. This evaluation is a matter of professional judgment and includes determining that the investee fund manager has an effective process and related internal controls in place to estimate the fair value of its investments that are included in the NAV calculation. The valuer’s controls used to evaluate

the process of the investee fund manager may include initial due diligence, ongoing monitoring, and financial reporting controls. Only after considering all relevant factors can the valuer reach a conclusion about whether the reported NAV is calculated consistent with the measurement principles of an investment company. The valuer may consider the following key factors, among others, relating to the valuation received from the investee fund manager:

- the investee fund's fair value estimation processes and control environment and any changes to those processes or control environment;
- the investee's fund policies and procedures for estimating fair value of the underlying investments and any changes to those policies or procedures;
- the use of independent third-party valuation experts to augment and validate the investee fund's procedures for estimating fair value;
- the portion of the underlying securities held by the investee fund that are traded on active markets;
- the professional reputation and standing of the investee fund's auditor (this is not intended to suggest that the auditor is an element of the investee fund's internal control system but as a general risk factor in evaluating the integrity of the data obtained from the investee fund manager);
- qualifications, if any, of the auditor's report on the investee fund's financial statements;
- whether there is a history of significant adjustments to the NAV reported by the investee fund manager as a result of the annual financial statement audit or otherwise;
- findings in the investee fund's adviser or administrator's control report (i.e., Type II SOC1 Report), if any;
- the use of an administrator to produce the NAV;
- whether the NAV has been appropriately adjusted for items such as carried interest and clawbacks; and
- comparison of historical realisations to the last reported fair value.

If the NAV obtained from the investee is not as of the valuer's measurement date or is not calculated in a manner consistent with the measurement principles of an investment company, the reporting entity should consider whether an adjustment to the most recent NAV is necessary.

The objective of this adjustment would be to estimate a NAV per share that is consistent with the measurement principles above.

7.6 Side-pockets

The fund governing body should agree to and periodically review the fund's policies regarding the side-pocketing of illiquid and/or hard-to-value investments. The criteria for side-pocketing individual positions should be as consistent as possible and should be clearly communicated to all investors in the fund's offering document and Valuation Policy Document. Side-pocketed assets should in principle be fair valued on a regular basis.

The use of side-pockets increased in 2008 due to the financial crisis. In subsequent years, some investment managers continued to utilise side-pockets as a means of dealing with illiquid securities. The creation of new side-pockets in the current environment is much less common, although many funds' governing documents provide for the flexibility to create side-pockets, should the need arise.

There are advantages and disadvantages to side-pockets. Side-pockets are designed to lock investors into the illiquid part of a portfolio until the illiquid investments are realised and allow for the liquid part to continue freely without any drag from the illiquid investments. Side-pockets can be a solution to treating both redeeming and on-going investors equitably. By limiting participation in side-pockets, funds can also protect investor interests by avoiding having them enter or exit such investments in the absence of reliable valuations. Side-pockets also allow the investment manager to pursue attractive investment opportunities that may not be correlated with the remainder of the fund's portfolio and offer investors exposure to assets across a liquidity spectrum, without incurring the transaction costs of pursuing these investments separately.

The introduction of side-pocket provisions into a fund's constitution is a material change and should be given careful consideration. A fund governing body should weigh up the advantages and disadvantages of side-pockets, in the context of the fund, and may wish to consult investors as well as the investment manager and the valuation service provider. If it is decided that side-pocket classes are to be a feature of the fund, the mechanisms surrounding them should be clearly disclosed in the fund's offering document (as mentioned under *Recommendation 6*). The fund governing body should also have formulated and disclosed its policies on opt-outs, fee-charging arrangements and the maximum percentage of fund net assets allowed in side-pockets.

It is difficult to propose prescriptive rules for each specific decision to side-pocket an investment, because subjective judgment will always be required. However, the fund governing body should aim for as much consistency as possible in its criteria for side-pocketing and should require the investment manager to justify any request to side-pocket a position. Factors to be considered will include the materiality of the position, the fair value measurements available, the likely time horizon to realisation of the investment and the nature of exit strategies. Proposals to side-pocket a position which is already in the fund's portfolio should be carefully scrutinised.

Although there may be relevant reasons to side-pocket certain fund positions, care needs to be taken to ensure that the side-pocket is not being used to serve the investment manager's interest or to disadvantage fund investors. Furthermore, side-pockets should be fair valued on a regular basis in line with the relevant accounting standards and the fund's Valuation Policy Document. In addition, the investment manager should not abuse the use of the side-pockets to separate underperforming positions from the fund's NAV. Accordingly, the decision to approve provisions for side-pocketing is not one which the fund governing body should take lightly.

Policy for creation

Policies and procedures in relation to the creation and operation of side-pockets must be clearly disclosed and made transparent to investors within the offering document. Distinction should also be made between side-pockets created because of a crisis or specific need, and side-pockets created in the normal course of business as part of the fund's overall strategy.

Typical disclosure requirements relevant to the creation of a side-pocket include: clear language in the offering document that defines its usage; clear reporting to investors of the assets which have been side-pocketed and how they have been valued; and compensation that is properly matched to the risks and potential conflicts attributable to holding investments in a side-pocket.

The constitutional and offering documents should sanction the use of side-pockets and they should require disclosure in the event of a side-pocket allocation. Failing that, investors should at least consent to a side-pocket. A fund that intends to side-pocket should consider the interests of all its investors and review existing side letters for side-pocket terms and/or automatic opt-outs.

Structure

While some funds may treat the side-pocket simply as an accounting entry, others may provide a designated share class for the side-pocket (such as a Class S share) to better facilitate the accounting of such positions as well as provide for customised investor participation (such as an opt-out provision). In certain cases, a separate vehicle may be established to formally segregate the side-pocket positions from the remaining fund positions. However, because of the added costs associated with such an approach, a separate vehicle is more commonly used to facilitate a major redemption whereby a *pro rata* allocation of all the fund's positions, including the side-pocket positions, are attributed to redeeming investors.

While there are several variations in side-pocket methodologies, the usual practice for alternative funds is that only those investors who hold a position in a fund at the time that the investment was designated for a side-pocket are permitted to participate in the subsequent gain or loss when the position is eventually realised. In some funds, participation in side-pockets is mandatory. Alternatively, others allow investors to opt out of side-pockets entirely, while others give investors the opportunity to decide whether to participate on a case-by-case basis.

The structure of the side-pocket is relevant because its framework ultimately has a bearing on the determination of its value.

For example, a new stand-alone side-pocket fund may have additional directors' fees whereas a structure that adds a side-pocket class would more than likely not incur additional directors' fees.

Valuation

Global accounting standards (whether US GAAP or IFRS) require certain methods and disclosures regarding the fair value of positions held by the fund. The investment manager cannot presume that using the cost or a "hold-to-maturity" method of valuation is the appropriate approach to value a side-pocketed position. The initial fair value of an asset may not equal the price that the asset was transacted due to related party transactions, fire sale, etc. The objective of the guidance is to provide greater comparability of returns among funds as well as consistency between US GAAP and IFRS.

Even though investments in side-pockets are typically not open for dealing purposes, investors require that side-pocketed investments be reported at fair value for purposes of financial reporting and monitoring. Therefore, the valuation policy should require that all investments are revalued at a frequency corresponding to the timing of financial reports to investors. Significant changes in fair value of side-pocketed investments should be communicated to investors on a timely basis.

Disclosure

Procedures for the valuation of investments placed in the side-pocket should be established. Typically, the policies for valuation should be the same as the policies applied to investments not held in side-pockets as required by accounting standards. The offering document may prescribe the methodology and procedures to follow when valuing assets in a side-pocket. Failing that, the side-pocket should have its own valuation policy (which has been approved by the fund governing body).

All fees together with set-up costs (and amortisation thereof) should be disclosed to investors and considered when valuing side-pockets.

Responsibilities of the fund governing body

The fund governing body should have ultimate responsibility for the side-pocket's valuation but it may delegate the valuation activity to an independent valuation expert or another valuation

service provider. The fund governing body should be satisfied that any independent valuation expert or other valuation service provider selected is competent and experienced enough to deal with technical issues and that they will flag matters which are material or require subjective judgment. The investment manager may assist the independent valuation expert or the valuation service provider in producing the fair valuation, however, an independent valuation expert should have support for all valuation inputs used in custom models.

The fund governing body should be well-versed in resolving valuation and pricing issues and it should be included in all pricing decisions relating to side-pockets.

Other responsible parties

All the parties involved in the valuation process should be identified. Parties may include the investment manager, the investment manager's governing body or its valuation committee, the prime brokers, the independent valuation expert and members of the fund governing body. The roles of each party should be segregated and disclosed in the fund's Valuation Policy Document. Investors should satisfy themselves that all the parties involved have the appropriate experience and knowledge of valuing hard-to-value assets and/or side-pockets.

Review frequency

The nature and frequency of review of particular side-pockets should be appropriate to the type of investment and market conditions that may be expected to have an impact on that investment. Generally, the valuation of the side-pocket and/or underlying hard-to-value illiquid assets should occur at each valuation point.

The valuation policy should be consistent and any changes should be supported with a documented rationale. Frequent changes in the valuation process, models or data sources used for valuation can be warning signs of potential problems.

Fair valuation hierarchy

Side-pocket assets that are easily distinguishable from the fund's other assets (e.g., a separate share class) are more likely to be valued using significant unobservable inputs which implies that the side-pocket assets should be classified as Level 3.

Side-pocket costs and fees

Costs and other fees associated with the establishment and maintenance of the side-pockets should be considered when valuing side-pockets. The following questions should be kept in mind:

- Are there any set up costs and what is the amortisation policy for any such set up costs?
- Are on-going costs agreed upfront and budgeted annually?
- Are costs accrued in the valuation process?
- Are there any management fees and/or performance fees and how are they calculated?
- How does the investment manager establish the rate used to determine valuation service provider expenses? (Side-pockets may involve more work initially but that tails off at the end)
- Have any reserves been set aside to cover costs and fees?
- Have any holdbacks been applied to redemption proceeds to offset future expenses?
- What fees (if any) might be levied on investors who are fully redeemed apart from the side-pocket (and how will these be collected)?
- Are there any break-up fees or dissolution costs to consider?
- Is there any accounting for cash and near cash in side-pockets?

When accounting for cash and near cash in side-pockets, the following questions should be considered:

- What is the process for distributing cash realised on a sale of underlying assets?
- What is the minimum amount distributed and frequency of distribution?
- Have cash reserves been set aside for on-going side-pocket expenses?
- Are cash distributions either capital or income in nature?
- Are there any taxation implications, i.e., ASC 740 or withholding tax?
- What is being communicated and how often?

Side-pocket policies and changes thereto should be clearly communicated to all investors. The criteria for side-pocketing should be as consistent as possible and communication should reflect that. Side-pocket investors should receive status updates and regular statements sent by the valuation service provider. Statements should reflect reconciled holdings at appropriate fair value.

The timing and components of an investment manager's compensation may vary with respect to side-pockets. Some investment managers receive a management fee based on cost and payable currently. Others may accrue fees, which only become payable at the time positions in the side-pocket are liquidated; some may not charge fees on side-pockets at all. Generally, performance fees are only payable upon liquidation of the side-pocket assets. If the sale price is more than the asset's adjusted cost, the offering document should clearly disclose the policy for charging fees.

Other items in relation to side-pockets

A fund's auditor should be consulted before the creation of a side-pocket and when determining that side-pocket's valuation policy. Side-pockets (that have been carved out and are a separate entity) should be audited at least annually.

The size of a side-pocket may be subject to a cap and the fund governing body should approve the designation criteria for side-pocket assets. The size of the side-pocket is proportionate to its running costs. All funds, including side-pockets, have an optimum minimum value. The side-pocket should always have a positive NAV and costs should not be allowed to continue when a side-pocket's NAV is close to zero.

The split methodology and process of reconciling the initial split between the side-pocket and the fund should be thoroughly scrutinised by the fund governing body, the investment manager, the valuation service provider and the custodian (if applicable). The split is easily determinable where prices are final. However, for most funds of funds, prices are not always known at month-end so estimated prices are used instead. Such estimates have a decided bearing on the split between the fund and the side-pocket. Funds of funds can use an estimated split followed by final split, once a "true up" between estimates and final prices is known. The final split may be used to allocate realised and unrealised profit and loss on foreign exchange hedging, income distributions and other common expenses to both the fund and its side-pocket.

All assets pertaining to the side-pocket must be accounted for by the custodian and the valuation service provider. Assets should be clearly marked as belonging to the side-pocket. Positions should be verified and reconciled regularly.

7.7 Contingency planning

Broadly speaking, contingency planning in the context of valuation means extending the price source matrix by properly securing and utilising alternative third-party price sources or opinions. This will help the investment manager minimise disruptions occurring because of unplanned or

unusual situations, such as when unexpected significant changes in the liquidity or volatility of the underlying markets renders customary price sources untenable. For example, extreme volatility on Chinese stock exchanges in mid-2015 resulted in a spike in the number of unexpected public company stock suspensions, which in some cases lasted for multiple fund dealing dates. To formally utilise alternative third-party pricing sources, procedural details should be memorialised in the price source matrix section of the Valuation Policy Document. With oversight from the fund governing body, a properly constructed and empowered valuation committee should manage the contingency pricing process, and develop and review its execution as needed. This includes working with responsible parties within the investment manager, such as those who lead the investment manager's day-to-day valuation effort, and key external stakeholders, such as the fund auditor and the fund administrator.

To ensure that contingency planning is enacted quickly and effectively, all procedures should be comprehensively described and appropriately customised to the instruments in the fund's portfolio. This is critical given that the circumstances under which contingency procedures are invoked are likely to be situations which attract greater scrutiny. All interactions with external parties should be formally documented and made subject to agreements. For example, a detailed description of the process for engaging third-party valuation agents that specialise in structured credit instruments should be governed through a service level agreement between the valuation agent and the investment manager. Contingency planning not tailored to the investment manager's specific requirements will likely fail, and may result in reporting delays or worse.

Furthermore, properly testing the information transmission as well as compatibility between the investment manager and the engaged third-party will validate the effectiveness of the valuation process and identify important issues if they exist.

Contingency planning is not static, and should be reviewed and updated on an appropriately frequent basis to reflect internal or external changes. The contingency plan should be reviewed at least annually as part of the overall Valuation Policy Document review.

8. Valuation due diligence on valuation service providers and independent valuation experts

The valuation process inevitably requires reliance on information from valuation service providers and/or independent valuation experts. Regulators and auditors expect that the fund governing body and the investment manager understand the methodologies being used by any third-party valuation service providers and independent valuation experts, as well as the source data and input assumptions used to determine and deliver pricing information. This section of the Guide focuses on the key areas that should be considered when selecting and using third-party valuation service providers and independent valuation experts. Similar considerations may be applied when performing due diligence on market data vendors.

8.1 Objectives of the due diligence process

Before conducting due diligence on potential third-party valuation service providers or independent valuation experts, the investment manager needs to establish the objectives for which that provider will be used. Such considerations would include the product coverage, the frequency of use and whether the prices will be used as a primary or secondary source. Having established the aims, the due diligence process should focus on gathering information about the provider's availability of pricing, transparency, documentation, expertise, processes and internal controls. This process also allows the investment manager to understand:

- professional qualifications and objectivity of the third-party valuation service provider or independent valuation expert;
- a general understanding of the methodologies, source data, and input assumptions employed;
- a comparison of the methodologies and input assumptions used by the third-party valuation service provider or independent valuation expert with those applied in preceding periods and with those employed by other providers for the same asset class;
- the appropriateness of using the third-party valuation service provider or independent valuation expert's work for the purpose of developing fair value estimates for investment securities and derivatives; and
- the third-party valuation service provider or independent valuation expert's review processes and controls (e.g., security and technology (SOC I), backtesting, price challenges).

A goal of the due diligence process should be to identify any potential risks arising from incorporating the third-party valuation service provider or independent valuation expert's valuations as either a primary or secondary valuation method into the investment manager's procedures. Investment manager-specific facts and circumstances should be considered in the context of the prices which are delivered by the provider. For example, a fund which transacts directly with a provider, such as a broker or bank, may create independence issues related to valuation of investment manager's positions. Policies and procedures to eliminate or mitigate this risk should be discussed. Is the provider's pricing intended for institutional-size round-lot positions, and does this create an inconsistency for small clients who tend to hold retail-size odd-lot positions? If the client performs valuation on an exit price basis, does an adjustment need to be made to the provider's pricing (from mid to bid, for example, or from bid to ask in the case of short positions)? Any potential risks identified should be discussed in detail with the provider, to understand the likelihood and potential for adverse impact resulting from the risk, and the mitigating controls the provider has in place.

Finally, the process involves documentation of procedures performed during the review, and an assessment of the valuation service provider or independent valuation expert's procedures and pricing quality. The documentation should include a conclusion of whether sufficient comfort was gained with the provider's methodologies and input assumptions, accuracy of pricing, and processes and controls for the investment manager to incorporate the provider's pricing in its own valuation procedures. Identified risks should be documented in detail, alongside a conclusion as to whether the risk is tolerable given its potential for adverse impact and the mitigating policies and procedures in place.

8.2 Procedures performed in the valuation due diligence process

Having identified the need for an external valuation service provider or independent valuation experts and established the objectives for engaging such facility, the next step is to identify potential valuation service providers and/or independent valuation experts, as applicable, and evaluate their services.

Whether the investment manager initiates contact with a series of valuation service providers and/or independent valuation experts as part of a tender process or is responding to solicitation from a particular provider, there are a number of questions which the investment manager may want to consider in the due diligence process. The relative importance of each factor is a matter for the investment manager to determine based on its own requirements and constraints. Some factors may be more or less relevant depending on the type of asset being valued. For example, the features of a service providing access to a large universe of securities will be very different to those of a more specialised independent valuation expert.

The key concerns would normally be covered and measured in two stages, namely an (i) initial meeting and (ii) follow-up actions.

Initial meeting

The factors discussed below should normally be addressed at an initial meeting with a potential provider, though some may have been covered in pre-meeting materials or on the provider's website. The asset classes and investment types chosen for a fund will have material impact on the numbers and types of processes necessary to properly value the fund's assets. In addition to the asset classes and types of process that are necessary, other key matters which the investment manager should consider are: (i) methodology(ies); (ii) data security; (iii) policies, procedures and controls; (iv) suitability and accuracy; (v) the price challenge process; and (vii) transparency and documentation.

Methodology

Investment managers should consider the following questions about the methodology(ies) used by proposed valuation service providers and independent valuation experts.

- What is the core methodology that the provider utilises to derive its prices? For example, is it consensus pricing from parties who submit prices, the averaging of freely available quoted data using a statistical approach, or theoretical prices derived from in-house models?
- If it is a model-based methodology, what models are used? Are they market-standard or bespoke?
- What data sources are used as inputs into models or statistical analyses?
- How are the output valuations calibrated to real market prices?
- What data cleansing occurs to ensure the outputs are not skewed by inaccurate data?
- What modelling assumptions are used when generating output?
- What is the process for initiating coverage of a new security?
- Under what circumstances will the provider drop coverage for a security?
- Does the provider price securities on a daily basis, multiple times a day or real time?
- Is pricing provided on a bid side, mid, or two-way basis? Are bid-ask spread data or estimates available? How are they determined?
- Are all methodologies, models, sources and assumptions fully documented in papers that are available to clients?

Data security

Some relevant considerations in relation to data security include:

- Do any potential conflicts of interest exist within the ownership structure of the valuation service provider or independent valuation expert? For example, if the service is run by an investment bank which is also a counterparty, do appropriate controls exist to protect position data from other areas of the business?
- What is the file submission and receipt process? Is it appropriately encrypted or otherwise protected?
- What are the provider's own data storage security procedures for their clients?
- What measures are in place to detect, respond to and recover from a cyber security attack?

Policies, procedures and controls

Operationally, the investment manager should consider the following questions in connection with its policies, procedures and controls.

- Does the provider have appropriate internal controls to ensure the quality of its output?
- Has the provider undertaken a SOC1, SSAE16, SSAE 18 or similar external review over its controls and procedures?
- What contingency plans does the provider have in place to ensure that it has no failover of service during critical periods?
- What dependency does the provider have on its own relationships for sourcing data? What protections does it have that those sources cannot be unilaterally removed?
- Does the provider obtain pricing for any asset classes from a third party (outsourced pricing)? If so, what controls and oversight does the provider apply to the outsourced process?
- What quality control processes and procedures are in place to identify inaccurate or inconsistent pricing, and in what situations might those processes break down?
- If there are any pricing or database errors determined by the provider, are notices provided to investment managers?
- What processes are in place to ensure that the existing methodology/method is appropriate for specific asset classes in light of changing market dynamics?
- Are price challenges tracked by the provider and reflected within internal performance reviews?
- What is the review process before the pricing gets published or releases?
- How is stale pricing addressed?
- What materiality thresholds are in place for review of significant day-over-day and month-over-month price changes? How do these thresholds accommodate trading days which exhibit significant market volatility?
- Does the provider perform its own backtesting of its prices against actual trade data? What are the results from the backtesting?
- What contingency/continuity plans and procedures are in place to ensure pricing is available during an emergency (e.g., extreme weather, power outages, cyberattack)?

Suitability and accuracy

The suitability and accuracy of the prices are also key considerations.

- Can the provider accommodate a valuation point that might be different from market close?
- Is the universe of products covered by the provider sufficient?
- Is the quality of service consistent across all markets?
- What percentage of coverage is available relative to the overall universe of securities?
- How quickly are newly-issued securities incorporated into the coverage population?
- What are the turnaround times for receiving the valuations?
- Is the cost competitive and within budget?
- Are there any factors which may hamper the receipt of information, such as volume limits?
- Does the provider suffer from bottlenecks at certain periods (e.g., month ends) which may prevent timely receipt of valuations?
- What other data analytics (e.g., yield, duration, "greeks") are provided in addition to the valuation itself?

- What information is provided which may enable a determination of the quality of the valuation (e.g., number of sources, assumptive data used, confidence score, range of outputs)?
- Is it a requirement that the investment manager's information be used as part of the provider's data set? Is the fund governing body comfortable with this arrangement?
- Are the provider's primary and secondary sources being derived from the same provider?
- How does the provider's valuation compare to the investment manager's internal pricing?
- Is the front-end interface easy to use?

Price challenge process

Investment managers should consider adopting a price challenge process and ask themselves:

- To what extent would it be automated (e.g., price challenge portal)?
- How quickly are price challenges turned around?
- Are challenged prices affirmed automatically based on certain criteria (e.g., tolerance threshold, source of price challenge)? If so, what are the criteria?
- How does the valuation service provider or independent valuation expert, as applicable, check prices that have been challenged?
- How are the provider's clients made aware of prices that have been challenged and where challenges have resulted in adjustments? Does the provider adjust prices retroactively to the challenge date or going forward only? If retroactive adjustments may be made, are there any time limits after which adjusted prices will not be accepted into a NAV?
- When an investment manager submits price challenges and presents trade tickets/ confirmations or broker quotes, how quickly and often does the provider's initial price get revised? This information should be provided at an instrument-type level if available.

Transparency and documentation

Along with the pricing process itself, transparency and documentation are also key considerations.

- Are the inputs which are employed to conclude on the price displayed on-screen, or must they be requested (and when requested, must they be manually compiled by an analyst)?
- How available and transparent is the provider's customer support regarding its valuation policies, procedures, methodologies, input assumptions, and any subjective decision points?
- Does the provider provide a quantitative or qualitative indication of the relevancy/amount/ consistency of market inputs used in the price determination, as an indication of liquidity and/or expected accuracy of the price?
- Are notices provided to clients in cases of new or revised valuation methodologies (both for individual securities and for overall asset classes)?
- Does the provider's methodology documentation cover all asset classes? How thorough is the documentation? How often is the methodology updated?
- Does the provider's methodology documentation cover all potential methodologies used to price a given asset class, or just the most common methodology?

Follow-up actions

If satisfied with the matters raised in the initial due diligence meeting, or if weighing up alternative services, investment managers should consider taking a few key follow-up actions before signing up to the engagement.

Confirm credibility of the valuation service provider/independent valuation expert

Through background checks and contacts with other market participants, the investment manager should establish whether the valuation service provider or independent valuation expert has credibility in the field.

- Does the provider have a strong reputation in the market?
- Does the provider have a culture of transparency and pricing challenge?
- Do the employees of the provider have the relevant expertise and experience to undertake the promised service?
- Does the provider hold an appropriate professional certification or license?
- Who are other clients of the provider? Can the investment manager liaise with the provider's other clients to gauge their experience of the provider?
- Are the results of the provider's SOC1, SSAE16 or similar report satisfactory?

Testing the service

Any valuation service provider or independent valuation expert should agree to the investment manager testing of the service prior to committing to any contract. Some important factors to cover in the testing process are as follows:

- ensure a non-disclosure agreement is in place to share both the fund's data and the provider's data for testing purposes on a strictly confidential basis;
- test the connectivity to the provider's front-end;
- testing should be done on a live or aged sample of actual positions;
- test the quality of the provider's valuation to the investment manager's own pricing or other sources, such as other vendor pricing or observed trades; and
- have a follow-up meeting to discuss results and quality of the testing.

Contractual terms

Having agreed to proceed with the engagement, the investment manager should consider the acceptability of the contractual terms.

- Is the provider attempting to include unreasonable indemnities in the contract?
- Does the contract include service levels that the provider needs to meet, in terms of deliverables, timing, data, etc.? Is the investment manager comfortable with the onus placed on it to enable the provider to meet those service levels (e.g., providing position data by a specific time)?
- Does the contract contain appropriate cancellation clauses or ratcheting clauses if the investment manager reduces trading in the specific product or is unhappy with the service?
- Are the commercial terms (such as pricing, discounts, inflation clauses, etc.) satisfactory?
- Does the contract contain appropriate provisions around confidentiality of data?

8.3 On-boarding and terms of engagement

Once the due diligence process is completed and the third-party valuation service provider or independent valuation expert identified, it is necessary to draw up a contract with the chosen provider. While almost every provider has a standard contract that should not stop investment managers from insisting on terms and conditions that work for them. The main areas to examine are:

- deliverables in terms of data, format and delivery time;
- fees, including monthly or annual minimums, setup fees and variable fees (such as data);

- contract duration – be aware of any minimum contract period;
- liability and indemnification; and
- the on-boarding process – This should clearly layout the timetable and deliverables for both sides with a defined “go live” date.

Once the contract is agreed, the investment manager needs to make sure it has adequate resources to on-board the new provider and that this is based on a detailed project plan with a realistic timeframe. It is advisable to have a project manager assigned on both sides, who is accountable for all deliverables and keeps management on both sides informed on their joint progress.

8.4 On-going due diligence process and monitoring of risks identified

As soon as the contract is signed, and while the third-party valuation service provider or independent valuation expert, is being on-boarded, the investment manager is responsible for setting up an internal monitoring plan. This monitoring plan should have defined targets and deliverables that have been clearly communicated to the provider and included in the contract. The frequency of the review needs to be based on any pre-identified risks and should include plans for giving the provider formal feedback on a regular basis. This should help avoid any service delivery issues becoming a significant problem.

It is advisable that onsite visits (or extensive conference call with video sharing) be conducted periodically – typically annually. Such due diligence events should include updates from the provider regarding methodology, processes, controls and new services/asset class coverage. Annual due diligence visits are an opportunity to conduct “deep dive” reviews of selected pricing examples directly with evaluators to get substantive understanding of the pricing process, particularly for hard-to-value instruments. Such visits also provide an opportunity for the investment manager to give feedback, both qualitative and quantitative, such as challenge response metrics, price affirmation/adjustment ratios, stale prices, backtesting results, etc.

The monitoring program itself should be reviewed on a regular basis to ensure it is addressing the most relevant current risks, including any which may not have been identified during the on-boarding process.

Appendix A: Valuation Stakeholders

Please find below an outline of the key stakeholders involved in the fund valuation process. We recommend that users of this Guide review these definitions, which are fundamental to the interpretation of the recommendations that we present on fund valuation.

Stakeholder	Definition	Typical Involvement in Valuation Process
Administrator	<p>A service provider who contracts with the fund for the provision of certain administration services to the fund.</p> <p>An administrator is contracted by the fund and operates independently of other service providers including the investment manager(s)*.</p> <p>Typical administration services include:</p> <ul style="list-style-type: none"> • NAV calculation/valuation service provider • shareholder services/registrar and transfer agency • anti-money laundering/know your customer • asset reconciliation • cash reconciliation <p>Additional services may include:</p> <ul style="list-style-type: none"> • collateral/cash management • risk reporting • daily profit and loss reporting • trade settlement operations • financial statements preparation • tax support services • regulatory reporting services <p>In addition, some administrators may act in an independent verification or valuation capacity for Level 1 and Level 2 assets. (See independent valuation expert below).</p> <p>Also, some administrators may act as a middle office provider. (See below).</p> <p>* In certain limited cases, the investment manager and the administrator are owned or controlled by the same entity. This is described as self-administration.</p>	<p>The administrator will usually fulfil the role of valuation service provider. (See below).</p> <p>The administrator may also act as independent valuation expert. (See below).</p>
Auditor	<p>The auditor issues a written opinion upon the truth and fairness or the fair presentation of the fund’s annual financial statements, which are produced and distributed to investors, on the basis of a year-end audit of the fund’s books and records. This audit involves a review of the valuation process at year-end, and normally includes some substantive testing of position valuations.</p>	<p>The audit opinion cannot be relied upon as a full verification of a fund’s formal NAV throughout the year. However, in conducting its procedures, the auditor will review the valuation process in place during the period under audit to gain assurance that subscriptions or redemptions were conducted at a fair NAV and therefore fairly stated in the year-end financial statements. Substantive testing of year-end position valuations may also be conducted.</p> <p>Sometimes the fund governing body will engage an auditor to provide specific verification of all or part of a fund’s NAV, or to perform “limited scope” work on a periodic basis to provide extra comfort to investors.</p>

Stakeholder	Definition	Typical Involvement in Valuation Process
Counterparty/ market maker	Capital markets organisations on both the buy and sell side who are active in trading securities. They are the major source of trades for alternative funds. They include trading desks at investment banks, broker/dealers and other funds.	Funds often use counterparties, market makers, and/or brokers as a source for securities pricing in connection with the calculation of NAV. This is particularly common where the security is illiquid or thinly traded and pricing information is not otherwise readily available. While it is preferable that these quotes are based on trading, they may only be indicative.
Custodian	A bank, trust company or other financial institution that holds and protects a fund's assets and provides other services, including collecting money from investors, distributing redemption proceeds, maintaining margin accounts, registering investments and exercising options. Usually a fund's prime broker(s) will perform the role of custodian.	While a custodian has an important role to play in verifying the existence of investments, it is unusual for them to become involved in the formal NAV process. Custodian statements commonly report market values but often contain disclaimers as to the accuracy of the values or reliability for the purposes of fund accounting.
Fund valuation committee	Some fund governing bodies delegate oversight of the valuation process to a valuation committee. This may be a sub-committee of the main fund governing body, or a separately constituted committee	Fund valuation committees are a particularly useful intermediate oversight body when the portfolio contains Level 3 assets or other assets where subjective judgment is required.
Governing body	<p>A fund's governing body generally supervises and oversees the conduct of its fund's affairs, even though it will delegate day-to-day functions to other parties such as the investment manager and administrator.</p> <p>The composition of the fund's governing body will depend upon the fund's structure and jurisdiction. For example:</p> <ol style="list-style-type: none"> 1) A fund established as a company will have a board of directors as the governing body. The board may include representatives of the investment manager, and directors selected by the investment manager, although there is an increasing trend for independent non-executive directors of stature to be appointed to fund boards. 2) A fund established as a partnership or a Delaware limited liability company structure will usually have a general partner or managing member as governing body. Typically, the general partner or managing member will be the investment manager or one of its affiliates. 3) A fund established as a trust will have a trustee as the governing body. The trustee is usually an independent licensed company. 	<p>The fund's governing body will have overall responsibility for the valuation of the fund. It will typically delegate day-to-day responsibility for the production of the NAV to a valuation service provider.</p> <p>Note that, in partnership or Delaware limited liability company structures, the general partner or managing member (and therefore the governing body) may be the investment manager. In these circumstances, a valuation committee is often established to oversee the valuation of the fund.</p>

Stakeholder	Definition	Typical Involvement in Valuation Process
Independent valuation expert	<p>Where judgment is required in the determination of fair value (such as in the case of hard-to-value illiquid assets), an independent valuation expert may be engaged to introduce independence and objectivity to the fund's valuation process. Services may include:</p> <ol style="list-style-type: none"> 1) consultative services to assist in developing a valuation technique for a particular asset type; 2) positive assurance opinion, in which the independent valuation expert provides an independent and objective opinion as to the reasonableness of the conclusions on fair value; 3) an opinion expressing a range of fair value independently estimating fair value for individual securities; or 4) a fairness opinion, which may be relied upon in the context of a transaction involving an asset(s) within the fund. An independent valuation expert may be engaged on a periodic basis (e.g., monthly, quarterly, semi-annual or annual). <p>Independent valuation experts may include:</p> <ul style="list-style-type: none"> • specialised vendors; • advisory/consulting firms (a firm separate from that which carries out the audit process); and • valuation service providers (primarily in the case of Level 2 assets). <p>Independent valuation experts may be engaged to provide advisory or consultant services, guidance related to valuation procedures and processes and/or a form of opinion on fair value measurements.</p>	<ul style="list-style-type: none"> • The independent valuation expert will usually assist the investment manager on behalf of the fund in the determination of fair value for individual assets held by the fund, or may provide the design, development and implementation of valuation policies and procedures affecting hard-to-value assets/liabilities. <p>An independent valuation expert most commonly provides reports for individual investments expressing an independent opinion of:</p> <ol style="list-style-type: none"> 1) negative assurance – an opinion expressing that the investment manager's conclusion on fair value is "not unreasonable"; 2) positive assurance – an opinion expressing that the investment manager's conclusion on fair value is "reasonable"; or 3) an estimated range of value, which the investment manager and/or governing body may use to determine a point estimate on fair value. <p>The frequency of the above services will ideally be the same frequency as investor redemption terms.</p> <p>It is sound practice for both the investment manager and the valuation service provider to receive the independent valuation expert report directly. Additionally, it may be prudent for the governing body to receive the report upon request directly from the valuation service provider.</p>
Investment manager	<p>The investment manager enters into an agreement with the fund to make investment decisions on its behalf, usually on a discretionary basis, in return for a management fee (based on NAV) and, in most cases, a performance fee (a percentage of NAV appreciation over a given period). The performance fee is sometimes also referred to as an incentive fee.</p>	<p>In some cases, the investment manager will act as valuation service provider.</p> <p>For portfolios with a hard-to-value component, the investment manager is likely to have material input into the valuation process and may be the primary source for the valuation of certain positions.</p>

Stakeholder	Definition	Typical Involvement in Valuation Process
Investor	<p>Investors in alternative funds can be categorised in many ways but the clearest distinction is between funds of funds and direct investors:</p> <ol style="list-style-type: none"> 1) funds of funds: These entities invest in diversified portfolios of alternative funds (usually in the form of collective investment schemes), and provide their investors with services such as fund selection and risk management in return for a fee. 2) direct investors: Alternative funds are aimed primarily at institutional and sophisticated investors. More recently, funds have been selling interests to retail investors. Direct investors include, among others, high net worth individuals, pension funds (public and private), endowments, foundations and family offices. <p>Sophisticated institutional investors often engage consultants to act as their agent in connection with their alternative fund investments. Fund consultants typically develop a preferred list of funds with due diligence performed on that list for a fee. The investors then choose from that list to develop their own portfolio. When a consultant removes a fund from its list, investors employing that consultant often redeem from that fund.</p>	Investors, especially funds of funds managers, may perform due diligence on the integrity of a fund's valuation process, but they will not be involved in the formal NAV process.
Market data vendor	'Market data vendors' are third parties engaged by the fund or the administrator to provide data inputs and/or valuations for securities on a regular basis, based on readily available market data.	The primary role of a market data vendor is to provide a source where funds can obtain market data for liquid securities based on observable market data. This often involves aggregating and reviewing market data, then making it available to funds or their service providers. A variation on providing aggregated data is for the vendor to provide observable market data to enable valuation of OTC derivatives, e.g., swaps and options.
Middle office provider	<p>An administrator or other financial institution that is formally engaged by the investment manager to provide a range of services, under the terms of an agreement, including trade processing, treasury services, cash management and collateral management, which involves independent variation margin calculations.</p> <p>Sometimes the investment manager performs this function internally.</p>	Where the middle office provider is not the administrator, it is common for the middle office provider to have direct interface with the administrator to validate trade position, cash completeness and position valuations for the independent calculation of variation margin.

Stakeholder	Definition	Typical Involvement in Valuation Process
Prime broker	<p>A large bank or securities firm that provides various administrative, back-office and financing services to funds and other professional investors. Prime brokers can provide a wide variety of services, including, but not limited to, trade reconciliation (clearing and settlement), custody services, risk management, margin financing, securities lending for the purpose of carrying out short sales, recordkeeping and investor reporting.</p> <p>A prime brokerage relationship does not preclude funds from carrying out trades with other brokers, or employing others as prime brokers.</p>	<p>Prime brokers will typically provide investment managers with informal pricing for a fund's portfolio. However, it is unusual for prime brokers' valuations to be relied upon in the formal NAV process.</p> <p>Some prime brokers have affiliates who act as administrators and/or valuation service providers.</p>
Registrar	<p>The organisation that maintains a registry of the holders of interests in the fund and number of units, shares or other interests held for a fund. Usually, the administrator also performs the role of registrar.</p>	<p>The registrar and transfer agent will process all fund capital transactions in order to confirm the number of units, shares or other interests in issue to facilitate the calculation of a NAV per unit, share or other interest.</p>
Regulator	<p>Independent organisation, usually governmental, that oversees financial markets, transactions and/or participants. Often seen as the protector of investors. Most investment managers are registered with their local regulator.</p>	<p>Regulators may impose local requirements in respect of the valuation of assets of funds established in their jurisdictions, which may affect the application of the <i>Recommendations</i> in some instances.</p>

Stakeholder	Definition	Typical Involvement in Valuation Process
Valuation service provider	<p>'Valuation service provider' is the term used throughout this Guide for the party who is responsible for calculating the NAV of the fund in accordance with the Valuation Policy Document.</p> <p>The administrator will usually fulfil the role of valuation service provider, however, an authorised AIFM may itself be the valuation service provider.</p>	<p>The valuation service provider should consistently and independently apply the valuation process that is described in the fund's governing documents and the Valuation Policy Document (which should be consistent with the fund constitutive documents). In executing this process, the valuation service provider will typically provide the following services as a matter of their contract:</p> <ul style="list-style-type: none"> • Obtain a price for each position held by the fund. <ul style="list-style-type: none"> o Prices are obtained by the valuation service provider in accordance with the Valuation Policy Document which is adopted by the fund governing body. o Prices for Level 1 assets are usually obtained directly from a market data vendor. (See above). o Prices for Level 2 and Level 3 assets are often obtained from an independent valuation expert, although for OTC derivatives, there is widespread use of model valuations from various specialist market vendors. (See above). o Due to the nature of some investments, input from the investment manager may be required. The process around any such input should be documented and preferably approved by the governing body and consistently followed by the valuation service provider when producing the NAV. • The Valuation Policy Document may require that prices are obtained from more than one source and compared for consistency within tolerances agreed in the Valuation Policy Document. • The Valuation Policy Document may require that the valuation service provider also checks for stale asset prices. • The valuation service provider will usually calculate the total value of the portfolio of assets. • The valuation service provider will usually calculate any fees or accruals. • The valuation service provider will usually calculate the NAV per unit or share, as applicable.

Appendix B: Valuation Policy Document Outline

This outline is for guidance only. The suggestions listed are not intended to be comprehensive; conversely, they will not all be appropriate in each individual case.

Valuation Policy Document of [NAME OF FUND/INVESTMENT MANAGER]

This document remains the sole property of [NAME OF FUND/INVESTMENT MANAGER]. The Valuation Policy Document was prepared by the [INVESTMENT MANAGER] and [VALUATION SERVICE PROVIDER] of [NAME OF FUND/GROUP OF FUNDS]. The Valuation Policy Document was approved by the [FUND GOVERNING BODY] on _____.

Objective

For example:

The fund's valuation policies and procedures are designed to ensure that all instruments are valued in accordance with the fund's offering document and sound practice standards (NB: if only relying on the fund's offering documents then it is still very easy to abuse the system as the fund's offering documents are usually very broadly drafted). The value of those securities will form an integral part of the NAV calculation on which investors subscribe and redeem on each dealing day. The aim of the policies and procedures is fairness to all investors in the fund.

Responsibilities

This section would define the various stakeholders involved and outline their responsibilities:

- fund governing body;
- fund valuation committee (if applicable);
- investment manager;
- investment manager valuation committee (if applicable);
- other (e.g., auditor, independent accountant, independent valuation expert).

If an affiliate or division of the investment manager is the valuation service provider, the document may be expected to provide information on the personnel/departments assigned responsibility.

Oversight

This section would set down guidelines for the body responsible for oversight of valuation:

- identity (i.e., fund governing body or fund valuation committee);
- quorum;
- normal frequency of meetings;
- reports to be presented (e.g., exception reports from valuation service provider);
- outline of approval process for new models/sources;
- frequency of review of the Valuation Policy Document.

If the fund governing body delegates its oversight function to a fund valuation committee, it may set out in this section matters that remain reserved for its approval.

This outline covers escalation under a separate heading but that subject may also be dealt with here.

Valuation sources

This section might list a price source matrix, perhaps configured as follows:

Type of Asset	Primary Source	Secondary Source	Accounting Policy	Cut-off time	Tolerable Variance

For certain instruments, there should be a hierarchy of three or more sources, especially for hard-to-value assets. The "Accounting Policy" column would typically state which part of any price spread should be used (i.e., bid, ask, last traded or mid).

The document may indicate which party would usually be responsible for accessing each price source. Notes may be provided if the accounting policy is complicated or access to a source requires a procedure with several steps.

For more complex instruments, the section may provide guidance such as:

- method of deriving an average price from broker quotes;
- method of acquiring data straight from source and or whether via the investment manager;
- data to be input to pricing models (including details of sources, steps in the input process and the party responsible for such input).

Approved independent valuation expert (to be consulted if the usual sources are unavailable).

Fair valuation hierarchy

This section should include details on how positions should be classified within the fair valuation hierarchy. The classifications should be based upon the sources used to price the positions and the observability of market trading on the prices.

The party responsible for the classifications within the hierarchy, the process to be followed for authorising movement of positions between hierarchies or changes to pricing providers and the format and frequency of reporting to the fund governing body should also all be stated.

Control procedures

The size of this section may depend on the complexity of instruments traded, but it could include:

- procedures for backtesting;
- definition of stale prices and procedures for isolating them;
- monitoring of trading volume for less liquid instruments;
- process around side-pocketing of investments or run-off/realisation classes and when they are permissible;
- additional procedures to be followed where securities are the subject of large price movements.

Escalation

This section would outline as clearly as possible the fund's escalation procedure if the investment manager or other party requests a deviation from the fund's usual policies:

- definition of an investment manager override;
- definition of materiality;
- governing body (or valuation committee) quorum;
- acceptable format and deadline for representations;
- timescale for decisions;
- guidance on possible adjudication/arbitration by independent valuation experts;
- protocol for minute-taking.

The escalation procedures may be used as the basis for a procedure to approve side-pockets, should the fund have side-pocket provisions.

Other

This section would outline as clearly as possible the fund's procedures for:

- periodic due diligence on and monitoring of valuation service providers and independent valuation experts;
- effecting changes to the valuation policy.

The document may also address subjects outside the scope of this Guide, such as:

- policies on income recognition, expense accruals and performance fee calculation;
- details of method of recording any breaches or when policy was not followed;
- agreed timetables for delivery of NAV reporting.

Appendices

Possible appendices may include:

- Excerpts from the offering document relating to valuation policies;
- Latest accounting policies note from the audited financial statements;
- Contact details for all relevant parties.

Appendix C: Summary of Recent Developments in Regulations and Industry Guidelines Impacting Valuations in the Alternative Investment Sector

In recognition of continued evolution of standards of governance and best practice with respect to the valuation of assets held within alternative investment fund vehicles, professional, legislative and regulatory bodies around the world have sought to further develop common standards to encourage best practice for the valuation of investments. There has been significant progress to develop guidance and, in some cases, formal legislation to promote the implementation of appropriate and consistent valuation procedures across the investment management industry.

This appendix therefore presents an updated summary of regulations and industry guidelines that have an impact on valuation governance and best practices in the alternative investment management sector. It is important to note that regulations and industry guidelines are constantly evolving. Thus, this appendix captures the state of affairs as of the writing of this Guide, but we encourage the reader to consult directly with regulatory bodies and standard setters for up-to-date guidance.

North America

In the United States, in order to promote transparency and consistency for investors, there has been recent concerted efforts by professional bodies to encourage valuation professionals to obtain relevant qualifications and to require those professionals to adhere to uniform standards for the performance of valuation assignments.

Mandatory Performance Framework

Over the last three years, professional bodies in the United States have developed a Mandatory Performance Framework (the "Framework"). This was developed by the three valuation professional organisations ("VPOs"); the AICPA, the American Society of Appraisers and the Royal Institution of Chartered Surveyors, with the intention of enhancing consistency and transparency in the fair value measurement process.

The Framework was developed following roundtable discussions between members of the SEC, the FASB, the PCAOB and representatives of the VPOs. Following these consultations, the Framework was finalised in January 2017.

The Framework is a non-binding, practical framework of standards for fair value measurement, which provides a roadmap to valuation professionals to conduct more consistent, higher quality, and better documented valuation engagements. In other words, the Framework helps valuation professionals to determine how much analysis to perform and how to document valuation methodologies and conclusions.

It is now considered best practice that all valuation professionals adhere to the Framework and its Application Guidance. It is expected that, over time, as auditors, regulators and investors start to realise the benefits associated with the Framework, these stakeholders will begin to expect consistency with the framework as a minimum standard for all investments measured at fair value.

Certified in Entity and Intangible Valuations (CEIV) credential

Simultaneously to the work undertaken to develop the Framework, the AICPA, the American Society of Appraisers and the Royal Institution of Chartered Surveyors have also developed a new professional training program and qualification for valuation professionals; the CEIV credential.

Members of these VPOs must meet strict academic and professional experience requirements to be eligible to qualify for the CEIV, including taking a national exam and performing 3,000 hours of valuation work experience in the five years prior to obtaining the credential.

Professionals eligible to apply for the CEIV credential may include employees of investment managers, as well as independent valuation professionals.

Once obtained, it will be mandatory for holders of the CEIV credential to follow the Framework (while this is considered best practice for non-CEIV valuation professionals).

Industry experts consider it possible that, in the future, there may be an expectation for a valuation professional holding the CEIV credential to assist in any estimation of fair value prepared for financial reporting purposes.

Securities and Exchange Commission (SEC)

Over the last 15 years, regulatory authorities in the United States have expressed concern over historical inconsistencies observed in the valuation profession.

The SEC has, in the past, expressed concerns that fragmentation across the valuation profession had created an environment where expectation gaps exist between management, auditors, standard setters, regulators and valuation professionals. To resolve these issues, the SEC has articulated a desire for stakeholders to work together to foster common understanding of how valuations can be used.

The development of the Framework and the CEIV credential were driven, in part, as a response to the concerns expressed by the SEC and the need to standardise the approach used by valuation professionals in performing fair value measurements.

In 2014, the SEC issued valuation guidance for all investment and business development companies, which imposed restrictions on the use of amortised cost valuation of debt securities for all funds. The guidance also outlines specific fund governing body responsibilities for the overseeing of valuations by third party practitioners.

The SEC has also taken practical steps to improve the detection of fraudulent or improper financial reporting and audits by launching the Financial Reporting and Audit Task Force. The SEC has indicated its intention to increase its attention in this area, having already brought several investigations and enforcement actions against individuals and organisations for fraudulent valuation practices.

Public Company Accounting Oversight Board (PCAOB)

In 2014 and 2015, the PCAOB issued consultation papers for public comment on various topics, including fair valuation. Once it has had an opportunity to consider public comments on the consultation papers, it is expected that the PCAOB may release new audit standards focused on the audit of fair value assessments.

Europe

Europe has made significant progress in terms of introducing valuation standards into formal legislation. Most notably in this regard, the AIFMD establishes a robust valuation framework for alternative investment managers and funds based in the European Union.

Alternative Investment Fund Managers Directive

Overview

The AIFMD came into force in July 2011, requiring member states of the European Union to draft its provisions into national law by 22 July 2013.

The AIFMD is broad legislation which impacts on issues ranging from the authorisation to the ongoing operation of alternative investment managers and funds. Article 19 sets out relevant standards related to valuation, including independence, policies and procedures, and review processes. This section focuses solely on the key valuation principles outlined in Article 19 without taking into account any specific variations that may have resulted from the way AIFMD was transposed into national law.

The AIFMD is based on similar principles to those of this Guide. It recognises that the optimal way of managing the tension between independence and expertise at the heart of the valuation of complex assets is delegation of the valuation function to an independent party. However, unlike this Guide, the AIFMD as transposed by each Member State has the force of law. Authorised AIFMs must comply with the AIFMD's valuation requirements, (as transposed into relevant national law), even if this Guide would treat the same matter as a voluntary sound practice.

To the extent that AIFMs do not comply with the provisions of the AIFMD as transposed into national law, national regulators may take enforcement actions where there are perceived failings in relation to independence, process or documentation with respect to valuations. There have already been a number of examples of this across Europe, most notably in France where the French regulator (the *Autorité des Marchés Financiers*, or the "AMF") has taken enforcement action on a number of occasions against firms investing in illiquid assets where failings in the valuation process have been observed. The regulator has been concerned about the lack of clarity, formalisation and independence of a number of firms in internal valuation processes.

The Sanctions Committee at the AMF has been critical of these types of failings in the valuation process particularly where they have resulted in a breach by the investment manager of its fiduciary duty to act in the best interests of investors. Subscriptions or redemptions for open-ended funds vehicle, secondary trades and misallocations of capital in closed-ended vehicles could all result in financial losses for investors where the valuation of illiquid assets is subject to challenge and not conducted by a fully independent valuation function.

Accordingly, AIFMs should first comply with AIFMD requirements as transposed into applicable national law and then consider adopting the sound practices set out in this Guide to the extent these go beyond the requirements of AIFMD as transposed into national law.

As of the writing of this Guide, the United Kingdom (where the predominance of the European alternative investment management sector resides) was in the process of negotiating its exit from the European Union pursuant to the UK's referendum vote of 23 June 2016. As of the writing of this Guide, the degree to which the UK would retain some or all portions of the EU regulation remained unclear.

Independence

The valuation of alternative investments entails a certain degree of subjectivity, which may give rise to conflicts of interests or incomplete information, and thus may lead to valuation bias with potentially heavy consequences for investors. In recognition of this, the AIFMD seeks to reinforce the governance and control framework surrounding AIFMs' valuation processes with a key objective to manage conflict of interests to mitigate bias and achieve transparent valuation results.

Under AIFMD the valuation function must be independent from portfolio management. However, it is important to acknowledge that achieving a complete segregation of duties internally can be challenging or impossible in cases where the firm lacks qualified resources or where the portfolio management function provides most of the information required as inputs into the valuation process.

Thus, while alternative investment managers have historically valued investments internally, this practice could potentially trigger actual or perceived conflicts of interest or bias, thereby attracting criticism as to the transparency and objectivity of valuation conclusions. Therefore, the AIFMD requires that alternative investment managers implement a proper segregation of duties to ensure a strictly independent valuation function. This can be achieved: (i) through the creation of an independent internal valuation function, (ii) through delegation of the valuation function to a formally appointed "external valuer"¹⁰, or (iii) through the appointment of an independent valuation expert who may be used to either validate or corroborate the valuations prepared by the investment manager.

¹⁰ An "external valuer" is a legal or natural person independent from the AIF, the AIFM and any other persons with close links to the AIF or the AIFM. Where an external valuer performs the valuation function, the AIFM must ensure that specific requirements are met, the required due diligence has been done and the appropriate delegation arrangements are in place.

Under AIFMD the final responsibility for valuations ultimately remains with AIFMs, irrespective of whether the valuations are performed internally or whether an external valuer is appointed. This responsibility results in many AIFMs choosing to adopt a hybrid solution, whereby the AIFM can benefit from the outside assistance of an independent valuation expert while at the same time remaining closely involved in the valuation process. Where the valuation function is performed internally, it is often considered sound market practice for internal teams to refer to independent valuation expert to perform independent reviews of valuation processes and internally-prepared valuation models, to ensure these are reasonable.

Policies and procedures

An AIFM is legally responsible for the proper valuation of the assets of the AIFs that it is appointed to manage. Accordingly, under the AIFMD, AIFMs must ensure that they have adopted a valuation policy document (see **Section 4** of this Guide for further guidance on valuation policy documents). Note that this is the AIFM's valuation policy document, rather than the AIF's valuation policy document under the requirements of AIFMD.

Once the valuation policy document is implemented, AIFMs must ensure that the AIFM's valuation policies and procedures and the designated methodologies shall be applied consistently to all investments, considering the investment strategy, the type of asset and, if applicable, the use of external valuers or independent valuation experts. An AIFM should not invest in a new asset type for the first time without first identifying an appropriate valuation methodology for that specific type of asset.

Detailed investor disclosures and robust valuation documentation is an efficient way to promote transparency and limit potential issues around valuation. Accordingly, the AIFMD includes disclosure requirements in respect of valuation procedures, pricing methodologies and the calculation of NAV.

AIFMs should document for each type of investment the way it assesses the fairness of individual asset values and should, at all times, be able to demonstrate that investments are properly valued.

Finally, the AIFM's valuation policy document should also specify a review process for the valuations of models, policies and procedures and individual asset values, as discussed further below.

Review

AIFMs have a responsibility to ensure properly performed valuations. This requires the AIFM to implement strict supervision and review processes with respect to its valuation function. The AIFM's valuation policies and procedures should ensure that valuation models are validated by a person with sufficient expertise who has not been involved in the process of building the model.

In order to meet the requirements to be able to at all times demonstrate the appropriateness of individual asset values, AIFMs typically have an investment manager valuation committee and/or use independent valuation specialists.

For example, it is recommended that AIFMs consider establishing an investment manager valuation committee where the majority of voting members are not part of the investment or portfolio management function and where all individuals on the committee have the appropriate experience and technical skills to be able to review data and challenge assumptions used as part of the valuation process.

In addition, independent valuation specialists may act as a sounding board to challenge valuation methodologies, models and inputs and their compliance with financial reporting standards and commonly accepted valuation guidelines and assist the investment manager valuation committee in case of escalation of valuation issues.

Asia

There have also been recent developments in valuation standards in Asia, with the Securities and Futures Commission of Hong Kong (the "SFC") issuing a consultation conclusion in November 2017, which has resulted in amendments to the Fund Manager Code of Conduct.

Fund Manager Code of Conduct

In November 2016, the SFC issued a Consultation Paper on Proposals to Enhance Asset Management Regulation and Point-of-Sale Transparency, which covered many different aspects of operational regulation including the required standards of governance and controls around valuation.

The consultation conclusion was released in November 2017. The proposals were supported by a majority of the respondents, which includes asset management firms, various industry associations, service providers and law firms.

In the consultation paper, the SFC is focused on updating the Fund Manager Code of Conduct, which contains standards on valuation policies and procedures. In particular, the SFC proposed bringing the existing requirements and industry requirements into line with the standards set out in the Principles for the Valuation of Collective Investment Schemes published by the International Organization of Securities Commissions (the "IOSCO") in May 2013. The IOSCO Objectives and Principles of Securities Regulation set out three objectives of securities regulation: protecting investors; ensuring that markets are fair, efficient and transparent; and reducing systemic risk.

The updated version of the Fund Manager Code of Conduct includes provisions for the independent valuation of fund assets and periodic review of valuation policies and procedures and fund valuation processes. It is generally considered that independence in the valuation process can be achieved either through the separation of the valuation and/or pricing function from the investment function or through the appointment of a suitably qualified person to be involved in the valuation process. In either case, the intention would be to ensure that the persons who are responsible for making investment decisions will not determine the valuations of those investments (although the fund manager remains responsible for the valuation of a fund's assets and may be able to provide input as appropriate).

The updated Fund Manager Code of Conduct seeks to place the obligation for valuation onto the fund manager where it is responsible for the overall operation of the fund. In other words, regardless of whether the fund itself is legally responsible for valuation, the SFC is seeking to recognise that, in practice, the fund manager should be implementing appropriate controls around valuation, including an appropriate segregation of duties. In case of appointment of a third party to perform valuation services, the fund manager is also expected to exercise due skill, care and diligence in the selection of the third party and should ensure that the valuation activities are regularly reviewed.

Further to principles outlined above, the revised Fund Manager Code also requires that where fund managers engage in securities lending, reverse agreement (repo) and reverse repo on behalf of clients, the fund manager is required to implement appropriate collateral valuation and management policies. The revised Fund Manager Code of Conduct will be effective from November 2018.

Conclusion

Regulators, professional associations and standard setters are continuing to act in parallel to reduce conflict of interests in the valuation of alternative investments. Disclosure requirements and the needs of investors for greater transparency are creating an imperative for consistent and well-documented valuations.

Many alternative investment managers have already strengthened the process of fair value measurement in response to enhanced regulation and standard-setting pressure and in recognition of investment managers' fiduciary duties to act in the best interests of investors.

Although this appendix is not intended to be exhaustive in terms of all specific valuation standards in place around the world, it highlights some of the clear global trends towards valuations which are consistent, independently performed and appropriately documented.

Appendix D: Analysis of ASC 820 and IFRS 13

		US GAAP (ASC 820)	IFRS (IFRS 13)	Level of comparability
MEASURE	Definition of fair value	ASC 820 defines “fair value” as “the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions (that is, an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability)”.	IFRS 13 defines “fair value” as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date”, i.e., an exit price.	Similar
	Blockage discounts/factors (premiums or discounts based on the relative size of a position)	The quoted price shall not be adjusted because of the size of the position relative to trading volume. If a fund holds a position in a single asset or liability (including a position comprising a large number of identical assets or liabilities) and the asset or liability is traded in an active market, the fair value of the asset or liability shall be measured within Level 1 as the product of the quoted price for the individual asset or liability and the quantity held by the reporting entity. That is the case, even if a market’s normal daily trading volume is not sufficient to absorb the quantity held and placing orders to sell the position in a single transaction might affect the quoted price.	Premiums or discounts that reflect size as a characteristic of the position are not permitted in a fair value measurement. In all cases, if there is a quoted price in an active market (i.e., a Level 1 input) for the position, an entity shall use that price without adjustment when measuring fair value. IFRS 13 specifies that when a Level 1 input is not available, a fair value measurement should incorporate premiums or discounts if market participants would take them into account in a transaction for the asset or liability.	Similar
	Day 1 gains	US GAAP permits the recognition of Day 1 gains.	IFRS only allows an entity to recognise a Day 1 gain, by permitting an exception to the use of the transaction price as the fair value. This is permitted where there is evidence of the fair value from other observable market data in the same instrument, (whether this be a transaction in the same instrument, or the use of a valuation technique where ALL inputs are from observable data). Where this is the case, a Day 1 gain should be recognised. Where the inputs are not observable, the “transaction price” is deemed to be the fair value.	Significant differences

		US GAAP (ASC 820)	IFRS (IFRS 13)	Level of comparability
MEASURE	Practical expedient for funds of funds	<p>A fund may elect to use the NAV per share as a “practical expedient” to measure an alternative investment at fair value. This measurement basis is appropriate when:</p> <p>(i) the investment does not have a “readily determinable fair value”; and</p> <p>(ii) the investment is an entity/(investee) that meets the criteria of an investment company as stipulated in ASC 946 or does not meet criteria to be an investment company but follows industry practice and issues financial statements using guidance consistent with the measurement principles for investment companies in ASC946.</p> <p>In order to use the practical expedient, the investee must calculate NAV per share in a manner consistent with the measurement principles in ASC 946, which requires that the underlying investments be measured at fair value in accordance with the guidance in ASC 820.</p>	<p>There is nothing similar under IFRS to the “practical expedient” in US GAAP. An alternative investment must be initially recognised at its “fair value” and then at each subsequent measurement date fair valued with any gains or losses arising being taken to the profit or loss account.</p> <p>While there is no similar provision under IFRS, in practice in most instances the fair value would be the NAV per share of the alternative investment. However, in some limited cases it may be something different.</p>	<p>Technically there are significant differences. Under IFRS one cannot immediately accept the NAV per share as the best estimate of fair value. Fair value is “usually” assessed to be the “transaction price”. However, in practice IFRS and US GAAP are similar.</p>
	Fair valuation hierarchy	<p>IFRS and US GAAP both require a fair valuation hierarchy. The fair valuation hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1 inputs) and the lowest priority to unobservable inputs (<i>Level 3 inputs</i>).</p>	Similar	

		US GAAP (ASC 820)	IFRS (IFRS 13)	Level of comparability
MEASURE	Inputs, assumptions and Level 3 sensitivity analysis	Requires the disclosure of fair value measurements; fair value measurements segregated among the appropriate levels within the fair valuation hierarchy; a reconciliation of fair value measurements using Level 3 inputs, including the beginning and ending balances and gains and losses (realised and unrealised) for the period; concentration of credit risk, market risk, off-balance sheet risk, significant estimates, and their uncertainty; and key assumptions used in the determination of fair value.	Requires an entity to disclose information that helps users of its financial statements assess both of the following: (a) the valuation techniques and inputs used to develop fair value measurements. (b) for fair value measurements using significant unobservable inputs (Level 3), the effect of the measurements on profit or loss or other comprehensive income for the period. For positions categorised within Level 3 of the fair valuation hierarchy, <ul style="list-style-type: none"> • a reconciliation from the opening balances to the closing balances, disclosing separately changes during the period • a narrative description of the sensitivity of the fair value measurement to changes in unobservable inputs if a change in those inputs to a different amount might result in a significantly higher or lower fair value measurement. If changing one or more of the unobservable inputs to reflect reasonably possible alternative assumptions which would change fair value significantly, an entity shall state that fact and disclose the effect of those changes.	Similar. However, US GAAP requires only a narrative description of the sensitivity of the fair value measurement to changes in unobservable inputs if a change in those inputs to a different amount might result in a significantly higher or lower fair value measurement.
	Transfers between levels	Requires disclosure of fair valued assets and liabilities transferred between various fair valuation hierarchy levels and the reasons for such transfer.	Also, requires disclosure of the amounts of any transfers between Level 1 and Level 2 of the fair valuation hierarchy, the reasons for those transfers and the entity's policy for determining when transfers between levels are deemed to have occurred. Transfers into each level shall be disclosed and discussed separately from transfers out of each level.	Similar

Note: IFRS 9: Financial Instruments (replacement of IAS 39 – current recognition and measurement standard under IFRS)

The impact of the change from IAS 39 to IFRS 9 is not expected to be significant for Investment Funds as the vast majority of the financial assets are currently being carried at fair value through the profit or loss (FVTPL). However, IFRS 9 may have a more significant impact for investment funds who currently classify their financial assets as:

- i) available for sale (“AFS”) - the categories of classification of financial assets have been simplified and this classification no longer exists. Under IAS 39, financial assets could be classified as FVTPL, held to maturity, loans and receivables or AFS.
- ii) loans and receivables at amortised cost – a new “expected credit loss” impairment model applies which is much more complex than the current “incurred loss” impairment model under IAS 39. To value securities at amortised cost, “investment funds” will have to meet a “Business Model” test and a “Solely Payments of Principal and Interest” test.

Effective date: Accounting periods beginning on or after 1 January 2018.

Appendix E: Digital Asset Considerations

The information set out in Appendix E was developed by the Digital Assets Working Group, which is a group consisting of representatives from 60 firms representing a cross section of the asset manager and service provider community that is active in the management and servicing of funds investing in digital assets. It was designed to be read as an accompaniment to the Guide and may be updated from time to time out of sync with other updates to this Guide as conditions warrant.

The valuation of digital assets will likely follow methodologies employed by more traditional asset classes. However, funds trading a broad array of digital assets may be forced to utilise valuation methods normally reserved for Level 2 and Level 3 assets commonly purchased by private equity or venture capital funds.

<p>Competence and independence of the personnel who are effectively carrying out the valuation of assets</p>	<p>Funds need to establish whether third-party valuation agents have sufficient experience and expertise to value digital assets. This may be difficult given the nascent stage of market infrastructure and data sets/providers. Larger volume digital assets (i.e., bitcoin, ether, bitcoin cash) have more established price discovery mechanisms, though volume or liquidity adjustment may be necessary depending on the frequency of NAV calculations and distributions. For less liquid digital assets (e.g., ICO tokens), listed prices may exist, but the tenuous nature of the price discovery mechanisms means that a conservative approach would be to treat these as Level 2 or 3 assets where the listed price is a single factor in valuation and book value or market comparison valuation methodology should be utilised.</p>
<p>Specific investment strategies of the fund and assets it might invest in</p>	<p>The massive (and growing) number of digital assets will test the data access capabilities of valuation agents. As some of these digital assets may exhibit varied levels of liquidity and may be viewed as either commodities, currencies or public/private securities, clear identification and communication to investors of the nature and categorization of specific assets is necessary.</p> <p>Offering documents should specify the underlying investment strategies as well as valuation methodologies. Unlike traditional strategies where the asset mix is fairly stable over time, the offering documents should be actively amended to include new assets traded or new categorisation of existing assets as they evolve. The risk disclosures should also clearly describe the risk and should be similarly amended as the risk profile of this emerging asset class changes.</p> <p>Pre-ICO investments in particular may present valuation challenges. For example, if capital is raised just once prior to the actual ICO, subsequent rounds of fundraising will not be available to evidence changes in the discounted price.</p>

<p>Controls over the selection of valuation inputs, sources and methodologies</p>	<p>Data sources will be varied both in type and quality. Liquidity, volume, balance sheet and credit counterparty risk will have to be factored in.</p> <p>As pricing data for digital assets is in very early stage at this point, data sources should not be limited and a methodology needs to be developed to ensure that the widest possible range of data sources are utilised and weighted for quality (reliability, liquidity, latency, etc.). The chosen methodology needs to be adaptive to the liquidity of the underlying asset, such that less liquid assets are approached more conservatively than more liquid assets even if they fall within the same asset type.</p>
<p>Escalation of channels for resolving differences in values for assets</p>	<p>Given the high likelihood of widely divergent pricing for the same asset on multiple venues, pricing stops and liquidity shortages, clear rules for normalising valuations across widely divergent pricing standards will have to be developed on an asset-by-asset basis.</p> <p>It is important to have written valuation policies in place to document those rules.</p>
<p>Valuation of any adjustments related to the size and liquidity of positions, changes in market conditions</p>	<p>Given the high likelihood of pricing stops and liquidity shortages, clear rules for valuing assets in highly distressed and potentially illiquid scenarios will have to be developed on an asset-by-asset basis and utilised more frequently than normally for other types of alternative asset funds.</p>
<p>Appropriate time to close books</p>	<p>Since trading occurs around the clock, pricing will likely be available just before midnight on the last calendar day of an accounting period.</p>
<p>Appropriate frequency for valuing assets</p>	<p>The frequency should be suitable for the investment fund's liquidity and reporting to investors. This will also depend on volume and liquidity of the underlying asset.</p> <p>As with other types of alternative asset funds, valuation frequency will be driven by timing of reporting, subscriptions and redemptions and fee calculations.</p>

Additionally, digital asset trading and valuation will require a new approach towards trade matching due to non-traditional trading venues (exchanges) along with storage options for safeguarding digital assets.

<p>Exchanges</p>	<p>Digital asset exchanges currently are less regulated than traditional designated contract markets, alternative trading systems, or electronic communication networks in that no specialised regulatory construct exists to govern them and they have, as of yet, not been required to fit within an existing construct. While some have sought to self-regulate and adopt best practice, none have yet been granted regulated status as a trading venue or self-regulatory organisation. Most do not offer integrated clearing, qualified custody or similar services, which may make it difficult for funds and investment managers to comply with certain regulatory requirements.</p> <p>In addition, many of these exchanges have very low trading volume, and some have serious security concerns. Those transacting on them typically take their assets off the exchanges as soon as possible and move them into cold storage (i.e., hardware wallets) given this security concern.</p>
<p>Online Wallet Provider</p>	<p>Online wallet providers lack insurance policies, mutualised risk across clearing members, banking licenses or similar protections. Additionally, purchases of digital assets are often made with other digital assets, making verification of source of funds very difficult. Risks include losing keys, which are unrecoverable.</p> <p>Some wallet providers are attempting to install robust verification requirements which should improve security and anti-money laundering standards. Investment managers transacting in digital assets should maintain a database of wallet providers, understand their relative processes and seek to work with best in class providers.</p>
<p>Offline Wallet/Cold Storage</p>	<p>Funds will have to research the cost and safety of manual offline storage methodologies such as dual sign-off and hardware wallets.</p>

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Appendix F: AIMA Working Group Members

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Appendix G: About AIMA and the ACC

About AIMA

AIMA, the Alternative Investment Management Association, is the global representative of the alternative investment industry, with more than 1,900 corporate members in over 60 countries. AIMA's fund manager members collectively manage more than \$2 trillion in assets. AIMA draws upon the expertise and diversity of its membership to provide leadership in industry initiatives such as advocacy, policy and regulatory engagement, educational programmes and sound practice guides. AIMA works to raise media and public awareness of the value of the industry. AIMA set up the Alternative Credit Council (ACC) to help firms focused in the private credit and direct lending space. AIMA is committed to developing skills and education standards and is a co-founder of the Chartered Alternative Investment Analyst designation (CAIA) – the first and only specialised educational standard for alternative investment specialists. AIMA is governed by its Council (Board of Directors). For further information, please visit AIMA's website, www.aima.org.



About the ACC

The Alternative Credit Council (ACC) is a global body that represents asset management firms in the private credit and direct lending space. It currently represents over 100 members that manage \$350bn of private credit assets. The ACC is an affiliate of the Alternative Investment Management Association (AIMA) and is governed by its own board which ultimately reports to the AIMA Council. ACC members provide an important source of funding to the economy. They provide finance to mid-market corporates, SMEs, commercial and residential real estate developments, infrastructure projects and trade and receivables businesses. The ACC's core objectives are to provide guidance on policy and regulatory matters, support wider advocacy and educational efforts and generate industry research with a view to strengthening the sector's sustainability and wider economic and financial benefits. Alternative credit, private debt or direct lending funds have grown substantially in recent years and are becoming a key segment of the asset management industry. To find out more, visit www.lendingforgrowth.org.



Appendix H: About the Sponsor

PricewaterhouseCoopers

PwC's Alternatives Practice is unsurpassed in terms of its depth of knowledge, breadth of experience and dedication to the industry. PwC's global leadership position is measured not only by market share and practice size but also by the quality of our clients, many of them industry leaders themselves, and the quality of the services we provide. PwC's integrated global network of asset management professionals provides extensive industry experience. With offices in 158 countries we provide the global coverage and local input our clients need. PwC has over 16,150 people working in asset management worldwide, providing unique insights, industry leading practices and trends and informed perspectives on what is happening in the marketplace. Recognising PwC's position in the industry, regulators, industry associations and accounting rule-makers often seek advice from PwC. This industry-leading integrated service delivery model allows information to flow freely and smoothly. Find out more by visiting www.pwc.com.



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