International Valuation Standards Council

IVS 500
Financial Instruments

Exposure Draft

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Comments Due: **19 April 2021**

Notice to Recipients of this Exposure Draft

The IVSC Technical Boards invite feedback on all matters in this Exposure Draft. We request comments by 19 April 2021 by one of the following methods:

- Emailing comments to comments@ivsc.org.
  File reference **IVS 500 Financial Instruments: Exposure Draft 2020**

  or

- Respond using the IVS 500 Financial Instruments Exposure Draft Feedback Form and send to comments@ivsc.org.

All comments received are part of the IVSC's public file and are available at www.ivsc.org.

A copy of this Exposure Draft is also available at www.ivsc.org.

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GAVIN FRANCIS

Chair, IVSC Financial Instruments Board

Dear All

This Exposure Draft represents a significant milestone. It proposes a significantly different approach for an international standard to underpin the valuation of financial instruments. This will enhance the credibility and reliability of valuations of financial instruments, which is a globally systemic matter of importance to investors, regulators and others. The consultation runs for four months, closing on 19 April 2021. Details of how you can provide feedback are included within.

Background

How to ensure a relevant and reliable valuation of financial instruments has long been an area of significant focus for investors, regulators and others. Market dislocations, such as that caused recently by COVID-19, continue to illustrate the importance of this topic.

Financial instruments, which often trade across international borders, require a valuation approach which is internationally consistent and carried out to a high standard. The IVSC is the independent global standard setter for the valuation profession, responsible for setting the International Valuation Standards (IVS) which are applied in more than 100 countries through national and regional profession and standard-setting bodies. The IVS sets clear, internationally-accepted standards for the valuation of all asset types, including financial instruments.

In December 2018, the IVSC constituted a new Financial Instruments Board, tasked with reviewing and improving IVS 500 *Financial Instruments*. That Board - which brings together senior representatives from global banks and other institutions, regulators, auditors, analysts and others - has now concluded the first of two phases of a proposed new standard, resulting in the publication of this Exposure Draft.

If the standard is to have the desired impact of building confidence in valuations, the standard needs to be credible and implementable. That requires the Exposure Draft to be informed by those that commission, prepare, review and ultimately use valuation information. In arriving at the Exposure Draft the IVSC has worked with many interested parties, but in order to ensure that the standard is of the highest quality it is vital that all constituents feedback their comments on the Draft.

Therefore, on behalf of the IVSC, the IVSC's Financial Instruments Board, and all those involved in this important project, we would encourage you to review the Draft and share your feedback to help inform the final standard.

Kind regards

Gavin Francis

Chair, IVSC Financial Instruments Board

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I. Introduction and Objectives

The IVSC Financial Instruments Board (FI Board) was formed in December 2018. The FI Board initially conducted an Agenda Consultation to obtain feedback from stakeholders on how to modify and enhance the existing Standard, IVS 500 *Financial Instruments*. Based on the responses received on the Agenda Consultation, the FI Board decided to review IVS 500 and the proposals in this Exposure Draft represent the first stage of the project to significantly improve it.

In developing its proposals, the FI Board aims to establish principles that will enable entities to derive fit-for-purpose valuations of financial instruments in all market conditions and circumstances, and for whatever purpose it is required, including for financial, tax and regulatory reporting. The proposed guidance aims to achieve this by requiring valuation processes that may be tailored to an entity's evaluation of its requirements and the market conditions and circumstances prevailing at the date of the valuation in a consistent manner using the concepts outlined in IVS 500 *Financial Instruments*.

The aim of the Standard is to outline the principles that will enable an entity to arrive at a fit-for-purpose valuation of financial instruments. It is the entity that is ultimately responsible for arriving at any such valuation, be it for financial reporting, prudential reporting or other purpose. In designing the relevant processes and functions, an entity may outsource parts of the valuation exercise to external vendors. These outsourced activities could be performed by individual valuers or by entities providing expert valuation services or the data needed for the valuations. Any such delegation, however, does not absolve the entity of its ultimate responsibility for the valuation. Consequently, the Standard is designed from an entity perspective. In the event an entity outsources any valuation-related functions or processes externally it must ensure that they all comply with IVS 500 *Financial Instruments* in the same way as it would for all internal functions and processes utilised in arriving at a fit-for-purpose valuation of financial instruments. In order to ensure that this difference in focus does not create conflicts with requirements in other IVS, the Standards Review Board is also proposing consequential amendments to IVS 101 *Scope of Work* to IVS105 *Valuation Approaches and Methods* in its IVS Additional Technical Revisions Consultation Document.

In taking into account the comments received in response to IVS 500 *Financial Instruments*, the FI Board has ensured that its proposals are principles-based. In addition, the FI Board has included definitions in the proposals to help ensure that ambiguities regarding the application of the Standard are minimised in practice.

The FI Board has decided that the improvements to IVS 500 *Financial Instruments* will be considered in stages, and has agreed that the Exposure Draft on the improvements to IVS 500 *Financial Instruments* will be published in stages covering each of the following areas:

- Governance
- Data
- Methods and Models; and
- Controls and Reporting

Governance and Data will be addressed first, followed by Methods and Models, and Controls and Reporting. The FI Board noted that the proposals in the Exposure Draft need to address the interdependencies between the areas. Consequently, it decided that while the Exposure Drafts will be published in stages, they will be cumulative and the subsequent Exposure Draft containing the

proposals on Methods and Models, and Controls and Reporting will also include the sections included in this Exposure Draft to address any interdependencies and facilitate stakeholder comments on the proposals.

Improving the current IVS 500 *Financial Instruments* will entail revisions that will bring significant implementation challenges for users. To address these challenges, the FI Board will provide guidance in the final Standard which will include an effective date for its implementation so as to allow users sufficient time to manage the transition process.

In addition to containing the proposals on Methods and Models, and Controls and Reporting, the second Exposure Draft will contain revised proposals on Governance and Data that will incorporate comments received from stakeholders on the sections included in this Exposure Draft. The FI Board expects that this will enable stakeholders to form a view on the complete set of revisions to IVS 500 *Financial Instruments* prior to their being finalised in a Standard. To accommodate this process, the FI Board aims to publish the second Exposure Draft no later than the final quarter of 2021.

Invitation to comment

1. The FI Board invites comments on the proposals in this Exposure Draft, particularly on the questions set out below. Comments are most helpful if they:

   (a) address the questions as stated,
   (b) indicate the specific paragraph(s) to which they relate,
   (c) contain a clear rationale,
   (d) identify any wording in the project proposals that is difficult to translate, and
   (e) include any alternatives the FI Board should consider, if applicable.

2. The FI Board also welcomes views on whether the project proposals are drafted clearly. Respondents need not comment on all the questions.

Questions for Respondents

Objective

As outlined in this introduction, the objective of IVS 500 *Financial Instruments* is to establish principles that will enable entities to derive fit-for-purpose valuations of financial instruments in all market conditions and circumstances, and for whatever purpose it is required, including for financial, tax and regulatory reporting.

Question 1: Do you agree with the proposed objective? Why or why not? If you agree with only parts of the proposed objectives, please specify what you agree and disagree with. If you disagree with the proposal, please explain what you propose instead and why.

Question 2: The Exposure Draft is focused on the requirements that have to be met for two elements, Governance, and Data, of the proposed standard in order for an entity to arrive at a fit-for-purpose valuation of financial instruments. Do you agree that the requirements are clear, complete and provide adequate guidance to ensure compliance? Why or why not? If you agree with only parts of the requirements, please specify what you agree and disagree with. If you disagree with the requirements, please explain what you propose instead and why. If you think the requirements are incomplete, please explain what you propose should be included and why.

Scope

Para 20.1 outlines the scope of application of IVS 500 *Financial Instruments*. In arriving at the proposed scope the FI Board focused on limiting the application of IVS 500 to only those instruments intended by the Board and on ensuring, as far as possible, that all definitions are clear to avoid ambiguity in practice.

In addition, in order to avoid overlaps with extant IVS requirements and the inclusion of instruments that could potentially meet the definition of a financial instrument but are not valued as such within the scope of IVS 500, the FI Board has proposed a number of exceptions to the scope requirements in IVS 500 as outlined in para 20.1 of this Exposure Draft.

Question 3: Do you agree with these proposals? Why or why not? If you agree with only parts of the proposals, please specify what you agree and disagree with. If you disagree with the proposals, please explain what you propose instead and why.

Definitions

Paras 30.1 to 30.5 provide definitions for the purpose of applying IVS 500 *Financial Instruments*. More specifically they define:

- fit-for-purpose valuations
- financial assets
- financial liabilities; and
- equity instruments

Question 4: Do you agree with these proposals? Why or why not? If you agree with only parts of the proposals, please specify what you agree and disagree with. If you disagree with the proposals, please explain what you propose instead and why.

In paras 30.6 to 30.8, valuation uncertainty and valuation risk are defined for the purposes of IVS 500 *Financial Instruments*. This Exposure Draft uses valuation risk to set proportionality parameters (para 30.9) that determine the level of effort and the nature and extent of processes and controls needed in order to arrive at a fit-for-purpose valuation of a financial instrument. The objective of the FI Board in outlining the above concept is to enable constituents to evaluate in a consistent manner the extent and rigour of the processes necessary to ensure a fit-for-purpose valuation of financial instruments given the requirement for which it is needed, market conditions and other circumstances prevailing at the valuation date.

Question 5: Do you agree with these proposals? Why or why not? If you agree with only parts of the proposals, please specify what you agree and disagree with. If you disagree with the proposals, please explain what you propose instead and why.

Governance

The Exposure Draft provides guidance on the processes that entities should follow to ensure proper governance around financial instrument valuations. The guidance requires that a valuation process should be:

- systematic
- consistently applied
- economically sound; and
- controlled

In order for the valuation process to meet the above objectives it should require:

- ownership
- accountability
- transparency
- consistency
- review and challenge
- diversity; and
- documentation

Question 6: Do you agree with these proposals? Why or why not? If you agree with only parts of the proposals, please specify what you agree and disagree with. If you disagree with the proposals, please explain what you propose instead and why.

Data

For the purposes of this Exposure Draft, data is considered to be any input to a process undertaken to arrive at a fit-for-purpose valuation. Firstly, the section on data outlines the principles for creating a data taxonomy or dictionary to categorise, assess and control all data that is used in valuations. Secondly, the specific requirements that need to be met for the following data types are outlined:

- internally sourced data
- market data
- transaction data
- model-based/indicative market data
- judgement-based data;
- historical data; and
- performance data

The section further describes the controls necessary for aggregating and managing data in an organisation and how the concept of proportionality applies in determining the requirements concerning the use of data.

Question 7: Do you agree with the principles outlined in paras 60.5.1 to 60.5.3 regarding the development of a data taxonomy? Why or why not? If you agree with only parts of the proposals, please specify what you agree and disagree with. If you disagree with the proposals, please explain what you propose instead and why.

Question 8: Paras 60.6.2 to 60.6.8 outline the specific requirements for the data-types listed above. Do you agree with these proposals? Why or why not? If you agree with only parts of the proposals, please specify what you agree and disagree with. If you disagree with the proposals, please explain what you propose instead and why.

Question 9: Paragraphs 60.7.1 to 60.7.6 outline the principles for controlling and aggregating data across an organisation. Do you agree with these proposals? Why or why not? If you agree with only parts of the proposals, please specify what you agree and disagree with. If you disagree with the proposals, please explain what you propose instead and why.

Next steps

As next steps the FI Board will consider the comments received on this Exposure Draft as part of its re-deliberation process in conjunction with developing the proposals on Methods and Models, and Controls and Reporting for exposure.

II. Draft Standard

IVS 500 *Financial Instruments*

10. Objective

10.1 The objective of this Standard is to provide guidance on the principles and procedures to be adopted in developing a fit-for-purpose valuation of a financial instrument.

20. Scope

20.1 This Standard will be applied by all entities to *valuations* of financial instruments as defined in this Standard used for, but not limited to, financial, tax or regulatory reporting, except for:

- the impairment of financial assets under relevant GAAP
- pension liabilities
- insurance contracts
- equity instruments and contracts on such instruments if the measurement being undertaken is for the purpose of valuing a business or a business interest as outlined in IVS 200 *Business and Business Interests*; and
- lease contracts

30. Definitions

30.1 A **fit-for-purpose valuation** is one that is produced, controlled and used in full compliance with the requirements of this Standard at a given valuation date. Fit-for-purpose *valuations* include *valuation*s for financial, tax and regulatory reporting.

30.2 A **financial instrument** is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

30.3 A **financial asset** is any asset that is:

(a) cash
(b) an equity instrument of another entity
(c) a contractual right
  - to receive cash or another financial asset from another entity; or
  - to exchange financial assets or financial liabilities with a third party under conditions that are potentially favourable to the entity; or

(d) a contract that will or may be settled in the entity's own equity instruments.

30.4 A **financial liability** is any liability that is:

(a) a contractual obligation
  - to deliver cash or another financial asset to another entity, or
  - to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the entity; or

(b) a contract that will or may be settled in the entity's own equity instruments.

30.5 An **equity instrument** is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities.

30.6 **Valuation risk** is the risk that a financial instrument is mis-valued for its intended use. Factors contributing to valuation risk include the complexity of the financial instrument, incomplete or inaccurate data, market instability or lack of liquidity, financial modelling uncertainties and inadequate infrastructure, processes and controls. The level of valuation risk will vary by the type of financial instrument being valued and the processes and controls that the entity valuing the financial instrument has implemented.

30.7 **Valuation uncertainty** is a component of valuation risk and is the possibility that there exists a range of equally reasonable estimated *values* for a financial instrument. Examples of this are:

- different estimates of prices that could be obtained in a transfer of the same financial instrument taking place at the same time under the same terms and within the same market environment; and
- different estimates of *values* of the same financial instrument under stressed market conditions.

30.8 **Valuation risk appetite** is the level of valuation risk that an entity is prepared to accept in pursuit of the objective of developing a fit-for-purpose valuation before action is deemed necessary to reduce this risk. The valuation risk appetite will be determined based upon the intended use of the *valuation*.

30.9 **Proportionality** is the determination of the amount of effort and the nature and extent of processes and controls needed to be performed in order to arrive at a fit-for-purpose valuation based upon the financial instrument's valuation risk and the entity's valuation risk appetite.

30.10 An entity developing a *valuation* and its related controls must address **valuation risk**. Valuation risk *should* be measured, monitored, managed and incorporated into the organisation's Valuation Governance Framework (see section 50.5), as well as into the broader enterprise-wide risk management framework.

40. Principles of Valuing Financial Instruments

40.1 The following principles are discussed below: governance and data.

50. Governance

50.1 In developing *valuation*s of financial instruments, the entity *should* implement processes that are:

- **systematic**: there should be a process to develop financial instrument valuations;
- **consistently applied**: the process should be consistent with portfolios of similar financial instruments and across the institution over time;
- **economically sound:** the approach should be consistent with financial principles, the market or industry practice, the market environment and the requirements for which the financial instrument is being valued; and
- **controlled:** the approach should be documented from end to end and controls implemented to ensure fit-for-purpose valuations.

50.2 Principles covering governance and controls over the *valuation* of financial instruments

50.2.1 In order to exercise governance and controls over the *valuation* of financial instruments, the entity *should* implement processes that ensure:

- **ownership:** clear responsibility for ensuring implementation and execution;
- **accountability:** clear delineation of responsibilities between different functions and individuals within the entity;
- **transparency:** clear understanding and documentation of how instruments are being valued, the assumptions that have been made and the observability of the testing and challenge processes;
- **consistency:** alignment of valuation methods and practices across an organisation;
- **review and challenge:** the organisation should foster and support the independent assessment of processes to develop the *valuation*s and the results of these processes by seeking differing views and opinions, often through escalation and other control processes;
- **diversity:** the involvement of multiple disciplines within the valuation process should ensure both that the procedure is free of bias and that the potential impact of information from different data sources is captured in the *valuation*; and
- **documentation:** a description of the approach adopted to valuing a financial instrument, including the intended use the *valuation* will be put to, the data used, the assumptions made and their limitations.

50.3 Components of *valuation* for financial instruments

50.3.1 There are a number of approaches to valuing financial instruments. In certain cases, prices for financial instruments are observable and readily available based on documented trading in the exact security. In other cases, prices are developed using industry-standard models based on inputs and adjustments with varying degrees of observability. For more complex or less liquid products, prices may require bespoke models or be developed using internally developed inputs or assumptions.

50.3.2 For the purposes of this Standard, any approach to developing a fit-for-purpose valuation of financial instruments will have one component or a combination of the following components:

- **market component:** the portion of a financial instrument valuation based on observable and readily available trade prices and executable market levels (eg, spreads),
- **model component:** the portion of a financial instrument valuation using a model based on direct, calibrated or estimated inputs,
- **judgemental component:** the portion of a financial instrument valuation for which there are insufficient market or model components.

50.3.3 Examples of these components are:

- A financial instrument with a large market component would be one with documented trades and/or executable two-way markets in identical instruments. This would be the most straightforward to value and consequently would require the least amount of effort, followed by items that have trades in closely comparable items.

- A financial instrument valuation with a large model component is one in which a systematic algorithm is used to develop the *valuation*.
- A *valuation* in which there is large judgemental component is one that is complex, covering a financial instrument with few observable transactions in similar financial instruments or for which little or no market data exists.

50.3.4 The model and judgemental components are required to estimate the *value* of a financial instrument or make analogies with other financial instruments and translate this information into a *value*, when a *value* for a financial instrument cannot be determined directly by observing a market price.

50.3.5 In assessing the appropriateness of these components, or a combination thereof, to be used in developing a *valuation* and implementing associated governance and controls, the entity must understand the contractual, structural, and performance features of the financial instrument to be valued as well as its liquidity and other information about the market in which it would trade.

50.3.6 For each of these components, valuation risk exists. As such, the three valuation components require procedures and controls to be put in place that enable valuation risk to be assessed and managed in accordance with the Valuation Governance Framework (see section 50.5).

50.4 Roles and responsibilities in the financial instrument valuation process

50.4.1 The roles and responsibilities within this Standard rest with the individuals or groups of people who are instrumental in creating an entity's ability to produce fit-for-purpose valuations. There are five roles involved; Developers, Challengers, Assessors, Management, and the Board of Directors.

50.4.2 The task of developing and assessing the result of a *valuation* frequently requires the involvement of a number of people within an organisation and/or outside it (eg, data providers, model vendors and pricing services). There should, however, be a single individual within the entity who is ultimately responsible for the satisfactory execution of the valuation process.

50.4.3 It may be considered appropriate to delegate within the entity the *valuation* of insignificant, liquid, and non-complex financial instruments. The roles and responsibilities related to any such delegation should be clearly described, documented and understood by all parties involved.

50.4.4 *Developer*

50.4.4.1 The Developer is responsible for the development and execution of the valuation methodologies, covering:

- **Approach:** this involves identifying, designing, implementing and executing an appropriate approach to developing a fit-for-purpose valuation. The Developer is responsible for identifying the data, methods and models, systems and processes and utilising them in the development of the valuation. All these elements should be documented. To the extent trade-offs are made or limitations exist in any of the elements, they should be recorded in the documentation supporting the approach taken to the valuation.

- **Processes and controls:** the Developer is responsible for ensuring that the valuations are appropriate in the first instance and, if the valuation is to be performed repeatedly, on an on-going basis. This entails identifying, implementing and executing processes and controls to address the valuation risk of the financial instrument being valued, including assessing the resulting valuation and performing ongoing monitoring of the appropriateness of data, methods and models, systems and procedures. The design and implementation of these procedures should include an appropriate segregation of duties. Processes and controls that govern and ensure the production and maintenance of fit-for-purpose valuations should be documented and be monitored to determine on-going effectiveness. To the extent trade-offs are made or limitations identified, an assessment should be included in the documentation supporting the valuation.
- **The assessment of vendors:** this involves identifying and assessing the suitability of vendors included in the process of developing a fit-for-purpose valuation. Vendors could include data providers, methods and model developers, systems providers or third-party preparers employed or engaged externally to conduct valuation work for an entity. The assessment of the suitability of a vendor should be performed as part of an initial valuation, and periodically updated for subsequent valuations. Assessments should consider the vendors' experience and expertise, and should be documented.

50.4.4.2 In performing the above steps, the Developer should take into account the entity's Valuation Governance Framework (see section 50.5) and be independent of the Challenger and the Assessor.

50.4.5 *Challenger*

50.4.5.1 The Challenger is responsible for:

- **Reviewing:** this entails gaining an understanding of the processes and activities that have been put into effect in developing a fit-for-purpose valuation. Reviewing should form part of the standard processes of the entity and should focus on the approach, the procedures and the other controls and reporting developed and implemented by the Developer and recorded in the supporting documentation. As part of this exercise, there should be an assessment of whether an appropriate segregation of duties exists. The processes and assessments of the Challenger should also be documented. To the extent trade-offs are made or limitations noted, the Challenger should assess them, taking into account the assessment made by the Developer and the documentation of analyses performed and conclusions drawn.
- **Challenging:** this involves applying an independent perspective to the valuation decisions and choices made by the Developer. Individuals involved in the Challenge process should have sufficient knowledge of:
  - the features of the financial instrument,
  - the fit-for-purpose requirements and context for the *valuation*,

- the market or environment in which the *valuation* is being developed, and
- the data, methods, models, systems and processes used.to enable them to critically challenge the approach, assumptions, methods and models used.

- Any limitations identified should be assessed and the trade-offs included in the documentation.

50.4.5.2 In performing the above tasks, the Challenger *should* be cognisant of the entity's Valuation Governance Framework and the expectations of other stakeholders (eg, regulators, shareholders and auditors) in challenging the *valuation*. The Challenger should be independent of the Developer and Assessor and be free of any conflicts of interest.

50.4.6 *Assessor*

50.4.6.1 The Assessor is responsible for:

- **Assessing:** this requires an understanding of the processes and activities implemented and executed by the Developer and the Challenger in undertaking their responsibilities. The Assessor's procedures are typically performed periodically and should be focused on ensuring compliance with the entity's policies and procedures. This effort should focus on the documentation produced by the Developer and the Challenger to record their approaches and the processes they have undertaken to arrive at the *valuations*, and the appropriateness of the results. In addition, the Assessor's review should determine whether there exists a suitable segregation of duties. Assessors should have sufficient knowledge of the financial instruments being valued and the data, methods, models, systems and procedures used to enable them to judge the suitability of the approach, assumptions, methods and models used. To the extent any limitations are identified, the Assessor should ensure that they are reviewed, concluded on and documented. The Assessor's own processes and conclusions should be documented.

- **Monitoring:** this involves appraising the overall effectiveness of the Valuation Governance Framework as applied to the financial instrument being valued. Monitoring should also include an appraisal of the Valuation Governance Framework's ability to address valuation risk and valuation uncertainty for both individual and aggregate valuations. This process should be documented.

50.4.6.2 In performing the above tasks, the Assessor *should* be cognisant of the institution's Valuation Governance Framework and the expectations of other stakeholders (eg, regulators, shareholders, and auditors) in developing and appraising the approach, processes, controls and documentation supporting the *valuation*. The Assessor should be independent of the Developer and the Challenger.

50.4.6.3 In certain cases, it might be appropriate to combine the roles of Challenger and Assessor based on an assessment of proportionality as outlined in para 30.9.

50.4.7 *Management*

50.4.7.1 To support the development of fit-for-purpose valuations, Management *should* establish a Valuation Governance Framework (see section 50.5).

50.4.7.2 Management is ultimately responsible for the validity of all assertions relating to the *valuation* of a financial instrument and for maintaining sufficient internal controls to ensure that the *valuation*s are fit-for-purpose. In this respect, Management is responsible for the development and assessment of:

- **Valuation processes:** these entail ensuring the Valuation Governance Framework is effectively applied to develop and control fit-for-purpose valuations consistent with the firm's policies and procedures. The assessment should determine that the people involved are appropriately skilled and experienced and the applicable controls and processes are sufficient to allow the *valuation* to be considered fit for purpose. Input to this assessment should be obtained from the Developer, Challenger and Assessor. Where there is significant valuation risk, Management should gain an understanding of the reasons, the trade-offs and the assumptions made in the assessment. This exercise should be documented.
- **Results of *valuation*s:** this involves assessing and approving the decisions and assumptions made in determining a *valuation* in addition to judging the suitability of the Valuation Governance Framework. The degree of Management's direct involvement or the degree of delegation to others within the organisation should be based on an assessment of the proportionality of the *valuation*. If there is valuation risk and valuation uncertainty with regard to an individual *valuation*, Management *should* ensure it understands and assesses such risks. This process *should* be documented.

50.4.7.3. Management should be conscious of the expectations of other stakeholders (eg, regulators, shareholders, and auditors) in developing and challenging the approach, processes, controls and documentation supporting *valuation*s.

50.4.8 *Board of Directors (if applicable)*

50.4.8.1 The Board of Directors is responsible for an assessment of:

- **Governance and valuation processes**: the Board of Directors should assess the decisions of Management regarding the governance and valuation processes. This exercise should include reviewing Management's assessment of the appropriateness of people, processes and controls to ensure the *valuations* are fit for purpose. To the extent required, input for this assessment should be obtained from the Developer, Challenger or Assessor. The process should be documented.
- **Results of significant valuations:** this requires the Board of Directors to assess the significant decisions and assumptions made by Management in determining material valuations. To the extent there is valuation risk, the Board should ensure it understands Management's assessment of such risks. This should be documented.

50.4.8.2 The Board of Directors *should* be aware of the expectations of other stakeholders (eg, shareholders, regulators and auditors) in developing and challenging the approach, processes, controls and documentation supporting the fit-for-purpose valuation.

50.5 Valuation Governance Framework

50.5.1 The Valuation Governance Framework sets out guiding principles and defines roles and responsibilities in developing fit-for-purpose valuations. It provides guidance on the source and measurement of valuation risk and valuation uncertainty and the assessment of these elements in relation to an entity's valuation risk appetite and proportionality.

50.5.2 The Valuation Governance Framework is established by Management and assessed by the Board of Directors and describes the entity's valuation risk appetite. An assessment of valuation risk, valuation uncertainty and proportionality *should* be incorporated in the design and implementation of the Valuation Governance Framework.

50.5.3 The Valuation Governance Framework *should* cover both the valuation development process and the assessment and challenge of the resulting *valuation*. Using the Valuation Governance Framework, the entity should develop and implement appropriate policies and procedures. These policies and procedures should address people, data, models and methods, controls, reporting and documentation. The Valuation Governance Framework *should* describe how an entity determines how the three valuation components impact the processes and controls for the financial instrument to be valued. In addition, the Valuation Governance Framework *should* describe how to apply the principle of proportionality to determine the level of effort required to develop and control a fit-for-purpose valuation.

60. Data

60.1 For the purposes of this section, data is considered to be any input to a valuation process undertaken to arrive at a fit-for-purpose valuation. Data is integral to developing a fit-for-purpose valuation of a financial instrument. The careful selection of appropriate inputs to ensure objectivity and an absence of bias, coupled with the implementation of appropriate processes and controls over data, mitigates valuation risk. Furthermore, it ensures that the degree to which valuation risk is present as a result of the valuation decisions by the Developers is effectively communicated to and assessed by the Challengers, Assessors and Management. This latter group rely on the data in their processes, so its quality and provenance must be defensible and readily available.

60.2 The data incorporated into a fit-for-purpose valuation, and the associated processes and controls implemented over such data, *should* be considered within the overall Valuation Governance Framework and must support stakeholders in the valuation process to help them effectively perform their respective roles. Much, although not all, of the data used will be numeric or structured data and its quality may be interrogated using statistical methods. A well-developed *valuation* will consider how to apply these unique properties of numeric or structured data in the control and governance framework.

60.3 A well-designed valuation process will be able to categorise and govern data within a taxonomy (a data dictionary) to standardise best practice and participant expectations both within an entity and across the wider world of valuation activity. The major distinction within this taxonomy is between the categories of static data and dynamic data. Static data is observed once and is unchanged for the life of the valued instrument. Dynamic data is derived over time and the challenges involved in its collection will occupy many of the principles in this document.

60.4. Section 6.5 (Aspects of Data) describes the principles necessary to categorise, assess and control the data required to develop a fit-for-purpose financial instrument valuation, and presents a data taxonomy for consideration by entities. While the Standard does not mandate the use of the taxonomy outlined in this section, any taxonomy developed and used by an entity *should* be consistent with the principles discussed in this section.

60.5. **Aspects of data**

60.5.1 The quality of a *valuation* may be assessed by comparing the accuracy of its results with a theoretical standard of perfect information. A fit-for-purpose valuation, by definition, incorporates data which falls short of this standard but includes mitigants, compensations, and controls which reduce the uncertainty inherent in the data elements used in the *valuation*. The table which follows outlines this continuum by characterising the deficiencies of available data compared with theoretically perfect data:

Perfect Information	**Characteristic Continuum**	**Imperfect Information**
Specific	Exact or unique, *moving towards* general or shared	Indicative
Current	Recent or contemporaneous, moving towards obsolete or inconsistent	Historical
Observed	Highly and immediately accessible to many, moving towards expert opinion	Judgement
External	Transparent to large numbers of market participants, moving towards captured by a proprietary or closed system limited to one or a few members	Internal

60.5.2 In developing a fit-for-purpose valuation, the Developer should assess where in the above continuum the available data sits and then implement the necessary processes and controls in order to use the data to arrive at a fit-for-purpose valuation of the financial instruments. The objective *should* always be to incorporate as much data as possible that is specific, current, and observed and validated by many market participants and document the same to make transparent to challengers, assessors and management.

60.5.3 In order to select and incorporate data which is most appropriate for a fit-for-purpose valuation, the Developer must understand the key aspects of the transaction being valued, including key terms, data availability and quality, valuation conventions and the

overall context. In order to ensure at the outset that the data used for the fit-for-purpose valuation reflect these characteristics, the Developer should consider three major categories of data:

i. **Static data:** This describes the key contractual terms, legal definitions and economic terms that characterise the transaction, instrument, security, or contract. This data is generally known at the commencement of the transaction, but may be modified or amended over the term of the transaction. In addition to describing the transaction, this data should help in describing the valuation context for the transaction.

ii. **Dynamic data:** These are the prices, rates and other market-based data as at the valuation date used in the fit-for-purpose valuation.

iii. **Performance data:** This describes the economic, cash flow, loss or behavioural features of the valuation data that are collected over time and are needed to develop the *valuation* as at the effective date.

60.6. Types of data

60.6.1 Data used in a fit-for-purpose valuation could be obtained from a number of sources.

60.6.2. *Internally sourced data*

60.6.2.1 Internal data is that which is derived from the entity's own observed transactions, *valuation*s, spread matrices, and other calculated or transacted markets where data is collected but remains private or proprietary. These data points or series can be used to provide proxy data. The characteristics of observability and integrity common to a multi-contributor/multi-user environment, lacking in an internal data set, imply that additional procedures must be considered before internal data can be attributed the same level of quality as external data. Consequently, internal data is by definition lower in reliability than external or public data.

60.6.2.2. In such instances it is essential that the identification of the data source and the owner should be recorded and maintained. Provenance is required to maintain confidence in the methodology of data collection and to assure its integrity.

60.6.2.3. Developers and Challengers should have access to the documentation concerning internal data in order to evaluate whether such data is appropriate in arriving at a fit-for-purpose valuation. To the extent that the data must be anonymised or aggregated, it should be done in a way that preserves as much of the metadata as possible.

60.6.3 *Market data*

60.6.3.1 Market data is data captured directly from market transactions or executable bona fide quotes, with related information on market conditions and metadata about the chronology, source and other attributes which help determine the quality of the data itself. An assessment of the reliability of a market quote *should* be based on the following:

i. The quote must be binding and not indicative. A binding quote is one from an actionable market (an executable, bona fide offer to buy or sell) whereas an indicative quote may be a month-end mark or other non-executable quote which does not provide strong support for a fair value price and may require further information. A quote should be binding if it is to be used as market data. If the quote is not binding and is merely indicative, it is less reliable as an indication of *value*.

ii. There should not be a relationship between the data provider and the entity which would enable the entity's management to directly or indirectly control or significantly influence the broker or dealer.

iii. A broker quote should reflect market conditions on the valuation date and represent a tight range.

60.6.3.2 Market data may be derived from either external or internal sources if transactions are private or otherwise not readily observable in the marketplace. Market data can also be transaction data that is obtained from the market for a specified security or cohort and at a time which is contemporaneous with the valuation date.

60.6.3.3 Market data must be consistent with the best practices and recognized standards of the markets from which it is drawn. Developers and Challengers must be continually aware of market structure and conditions to be able to determine the quality of data and the uncertainty of valuation output. Conventions such as quoted prices, spread or yield, ticks or basis points, full or flat prices, cash flow standard assumptions and the inclusion of mark-ups or discounts should be understood and documented to ensure that prices are appropriately adjusted or compared in valuation activities. Trade and settlement conventions should be documented to support Challengers in researching observed trades.

60.6.3.4 To establish a fit-for-purpose valuation, the Developer must consider the type of market that exists for the financial instrument: for example, whether it is a two-way market or a wholesale broker-dealer market or the data arises from new originations.

60.6.3.5 The determination of the above should enable the Developer to determine the unique characteristics of the market from which the data is being sourced. Valuation data should, where possible, reflect the market where the instrument is traded, but its reliability will vary with the nature of the market.

60.6.3.6 Financial markets are dynamic so entities *should* ensure that there are adequate processes in place to regularly monitor them in order to capture any changes that could influence the decision to use data from particular markets in deriving fit-for-purpose valuations.

60.6.3.7 The assessment of instrument liquidity and the market price of liquidity (ie, bid/offer width) can be important indicators of the reliability of market data. It should be noted that there may be large differences between observability and liquidity. For example, prices may be observable via indicative quotes but observability does not necessarily translate to market liquidity unless the quotes are binding or transactions occur.

60.6.3.8 In addition, the Developer should assess if the data being used represents normal or unusual market conditions such as stressed conditions, liquidity constraints and otherwise unusual market activity.

60.6.4 Transaction data

60.6.4.1 Transaction data may be available from several different sources depending on the market structure of the instrument being evaluated. Sources may include:

- Exchanges,
- mandatory reporting systems,
- observable trade information from brokers or dealers that meet transaction criteria, and
- pricing services that provide prices based on transaction data in the exact instrument, as opposed to non-transactable quotes or matrices, and provide information on the price development that enables its origin to be known.

60.6.4.2 The entity is responsible for ensuring that the collection and use of transaction data is tested, reviewed and challenged. All transaction data must be obtained from reliable and verifiable sources. All such data reviews *should* be clearly documented and consistently followed. Such documentation should include the date range of observed trades, variances in trade prices, transaction sizes and market participant information if applicable.

60.6.4.3 In evaluating the appropriateness of transaction data the following factors *should* be considered:

i. The source of trade data, which should be observable and verifiable.

ii. The level of market activity should indicate sufficient volume for the position over a suitable period of time. A readily traded asset may have hundreds of trades each day, providing high quality valuation information. For less liquid assets with only a few trade prices, additional information may be required before their acceptance as a suitable indicator of *value*. A security trading in relatively small amounts before a reporting period merits critical scrutiny and the application of judgement before the trade price may be considered reliable evidence of fair value.

iii. The data should be reflective of current market information between willing buyers and willing sellers.

iv. A wide range of prices may require further review, as it may be an indication of a distressed market or other situation to be investigated.

v. Market participant information should be assessed, including the types of participants and the direction of trades. The strongest observable data incorporates both buys and sells from a variety of market participants. In addition, trades that result from a seller in distress or a seller undergoing liquidation may not be appropriate under all circumstances.

60.6.5 Model-based data/Indicative data

60.6.5.1 Indicative data is market data that is intended to be for a specified security but is an estimate and not a bona fide transaction. As such it carries greater potential for valuation uncertainty. It is developed to be contemporaneous with the valuation date. This data may have the characteristics of market data, but it is not captured specifically from actual market transactions, instead being sourced from pricing data vendors, brokers, and proxies. For example, an indicative quote may be a month-end quote or other non-executable quote which cannot be used as transaction data and will require further support, while a binding quote may be used for valuation.

6.6.5.2 Indicative data may be made available by several different sources, but its shared characteristic is that none of it represents executable quotes or transactions in the exact security. Sources may include:

i. brokers who sold the investment and provide a month-end mark as a service,

ii. other broker-dealers, and

iii. pricing services that provide contributed pricing based on matrices and the like, provided that there is transparency of origin of the pricing data (eg, non-binding broker quote, matrix, etc).

60.6.5.3 Indicative data may be used as an indicator but its use in developing a fit-for-purpose valuation will entail additional work. The entity is responsible for creating and executing procedures that:

i. identify indicative pricing data and ensure it is not used as transaction data,

ii. assess the provider of the data for an indication of potential bias and exclude data that may be biased,

iii. demonstrate an understanding of the market in which the instrument would trades and how widespread and readily observable the indicative quotes are in the market,

iv. document related market transactions or other market support to substantiate the indicative price, and

v. collect and document corroborative and opposing market and economic data to support the use of indicative data.

60.6.5.4 The collection and use of indicative data *should* be reviewed and challenged to ensure there is appropriate observable market data to support the incorporation of such data. If trading in a comparable item is used as support, there should be a demonstrable understanding of how closely the it relates to the instrument being valued using indicative data.

60.6.6 Judgement-based data

60.6.6.1 Judgement-based data is data that has been manipulated into a form required by the valuation process. The development of judgement-based data involves using available market data and modifying the same using assumptions, interpolation, extrapolations and other techniques required to generate data that is appropriate for the *valuation* being performed.

60.6.6.2 In the absence of market data for a specific financial instrument, a Developer may resort to using judgement-based data or proxies. The decision to use proxy or judgement-based data is based on the Developer's professional experience, knowledge and understanding of the valuation elements. The use of any judgement-based data or proxy data should result in a consistent and coherent measurement over time.

60.6.6.3 Proxy data is a substitute for the data that would have been used to value an instrument if available. Proxy data *should* only be used if there is a lack of market, transaction and indicative data, and if it may be assumed to share enough features with the original instrument to be sufficiently similar to the latter to be its proxy. The precision of this approximation depends on the degree of similarity between the proxy and the subject.

60.6.6.4 The assumption of similarity should be supported by evidence. Among the features to be considered in determining the degree of such similarity are: type of instrument, sector or nature of the underlying asset, the currency of denomination, issuing amount, term, market conditions (being spatial - the jurisdiction and market size - and temporal - historical or intraday data, as applicable), credit risk, contingent payments or other optionality, and any peculiarities or restrictions relevant to the instrument.

60.6.6.5 The features used to establish similarity may vary over time. Consequently, there should be processes in place that ensure the degree of similarity remains valid over time through a periodic or triggered review to confirm or reject the similarity.

60.6.6.6 While proxies may, at times, form the only basis for *valuation*, they are also necessary for the determination of valuation uncertainty. Even in more observable markets, a benchmark or proxy can provide valuation process stakeholders with additional information necessary to interpret valuation risk.

60.6.6.7 Examples of proxy data include:

- an observable security from the same issuer and with the same characteristics but with different maturity, different tranche, currency, etc,
- the same security, but traded in different markets, and
- proxies: These financial instruments may be identical to the subject financial instrument except in certain respects, like the time when the market data is taken. In that case the difference in the time stamps may result in the valuation being considered to be based on a proxy even though the data is observable and contemporaneous. This could arise if a *valuation* is of a financial instrument is at a time that is not the most representative of its prime market.

60.6.6.8 Any proxy data that is used should be selected after evaluating a range of potential proxies to ensure that the selected data represent the most reliable proxy possible. The alternatives under consideration that are deemed less appropriate should also be documented.

60.6.6.9 Proxy data should be back-tested by using methods to predict observable data points. There should be a periodic reassessment of the selected proxies. In addition, the history of reliability of any proxy data should be considered on a regular basis. The proxy may need adjusting to improve the approximation and ensure it more closely resembles the financial instruments to be valued (such as terms, structure, and market conditions).

60.6.6.10 For all proxy data used, supporting research performed by the Developer (or wider valuation field or academia) should be documented and underlying assumptions noted and made clear to Management. Changes to proxy data should be transparent and subject to appropriate review, oversight, and challenge to ensure they are justified.

60.6.6.11 Any assumption, including that of similarity in arriving at proxy data, should be tested and evaluated periodically as the conditions underpinning the original supposition might have changed. For example, the move towards negative interest rates in various economies has led to the usual lognormal distribution assumptions being questioned, and models which previously considered negative rates as unreasonable being amended to incorporate them as a possibility.

60.6.6.12 The discretionary nature of proxy data means that it involves valuation risk, even if it is assumed to be based on good, knowledgeable and experienced judgement. It is important to emphasise that where data is a proxy the reliability and associated valuation uncertainty arising from its use should be assessed and made transparent to all the valuation stakeholders in an entity, particularly Management.

60.6.6.13 The users of proxy data provided by third parties should ensure full insight into the process by which such data is derived and can comply with the above requirements if it is used to arrive at a fit-for-purpose valuation.

60.6.6.14 Challenges are essential for data quality control and assurance, providing the necessary feedback to ensure the ongoing improvement of data reliability. Documentation of best practice procedures and control guidance should ensure that appropriately granular challenge actions are taken and are not neglected. The incoming and outgoing flow of challenges and rejections requires decisive and timely responses and feedback, and should be monitored and tracked for compliance. Reporting of challenge results helps provide transparency to stakeholders and an audit of the effort made to improve the cycle of data reliability by sharing the supporting evidence to strengthen consensus.

60.6.6.15 Within reason, a full range of inputs and/or comparable data should be considered, not just a chosen selection or a sample that may skew the resulting *valuation* or present false certainty. Subsequent data cleansing or calibration may help remove outliers for a more precise range of inputs and comparable items.

60.6.7 *Historical Data*

60.6.7.1 Historical data is market data for a specified security at a time which is not contemporaneous with the valuation date. Historical data simply comprises the same data types described above, but arranged chronologically to make available other statistically relevant measurements as inputs to a *valuation*. The relevant characteristics are, in addition to the data types described above:

i. **Consistency of capture:** as many characteristics as possible of the data must remain the same in order to reduce the uncertainty inherent in time-series data.

ii. **Capture interval:** the same frequency of capture, the same time of day and the same position in the relevant market cycle.

iii. **Preservation and provenance of data:** once captured, data should not be altered or amended. If a Developer wishes to use a data set that is altered, the original data set must remain available for comparison. An error correction process may be used but must be rigorously applied and governed.

60.6.7.2 Collecting historical data into a time series has a broad set of applications that go beyond asset valuation and often encompass capital modelling, efficient portfolio construction, option valuation and risk-adjusted return determination. In addition, historical data drives the modelling of non-market data and underlies matrix valuation processes. All these applications could rely on the same set of historical data and create a significant reliance on the Developer as data manager. Some of the techniques of judgement-based data creation, including proxies, rely on the time-series data to reveal correlation and co-variance statistics used to transform market data. Mathematically, these second order statistics usually have a non-linear relationship to the final *valuation* and as such are significantly sensitive to the accuracy of the characteristics discussed above. In any *valuation* where a stochastic process is used and a *valuation* is

delivered with an associated confidence interval, the integrity of the time-series data may the largest determinant of valuation uncertainty.

60.6.7.3 For example, data elements which are mathematically derived from time-series data include:

i. **Basis:** the computation of a persistent difference between two time series, typically averaged over a relevant time period, with an accuracy metric expressed in standard deviations.

ii. **Volatility:** the computation of the variability of the time series expressed as a mean of the sum of the squares of standard deviation.

60.6.7.4 Correlation, variance, and co-variance are additional calculated data elements which may be inputs to a fit-for-purpose valuation but are determined through a statistical process. While these calculated elements could be relevant to time-series data, they may also be relevant to a contemporaneous collection of similar data where the Developer relies on persistent relationships. These statistical methods will produce error or accuracy metrics which can be attributed to the final valuation uncertainty.

60.6.7.5 Consideration must be given to the contribution to valuation uncertainty of all historical data which is further manipulated into a data input for a *valuation*, resulting from:

- the choice of relevant historical period and observation frequency;
- any change in or differences in the time series arising from differences in collection methods, processing or filtering, vendor ownership, data sourcing, etc, and
- consistency with relevant related data, such as contemporaneous collections of market conditions or index values.

60.6.7.6 As with all data, the data set should be statistically evaluated to produce a mathematical measurement of accuracy which informs valuation certainty. Data has a measurable error which should be made known to all users. Historical data in particular should be measured to inform all users as they distinguish correlation from causality in a valuation process.

60.6.8. Performance Data

60.6.8.1 Developers *should* consider at inception the types of performance data that will be necessary for the *valuation*. Since this data will be collected over time it must be available, accurately recorded and preserved, and fully inform the Developer, Assessor and Challenger regarding any drivers of expected economic results, payoffs, cash flows or other dynamic results of the instrument or contract expected to factor into the *valuation* at any point in its lifecycle.

60.6.8.2 Since this data is used as the basis for many subsequent parts of the valuation process, individuals with the appropriate experience should be responsible for identifying and ensuring that these data elements are reflected accurately in the fit-for-purpose valuation, the absence of which will result in

errors that extend across all aspects of the valuation process. Examples of such data include contractual terms, legal definitions and economic terms and the specific values of those terms at inception.

60.7 Controls of Data Aggregation and Management

60.7.1 An entity's Valuation Governance Framework *should* address policies and processes for the use of data to arrive at a fit-for-purpose valuation. Such policies and processes *should* address the identification, assessment, aggregation and management of data and encompass both outsourced and internally generated data. The policies and processes outlined in the Valuation Governance Framework *should* be approved by Management and/or pricing committees and the Board of Directors of the entity.

60.7.2 An entity *should* review and update all policies and processes concerning the use of data at regular intervals to ensure that they continue to meet their objectives. At a minimum such a review *should* be conducted in the event of significant new initiatives including acquisitions, divestures and new product development, and as part of any broader process initiatives that may affect the data used for developing a fit-for-purpose valuation. In addition, the review *should* clearly identify any limitations and their possible impact on developing a fit-for-purpose valuation.

60.7.3 The policies and processes covering the use of data to arrive at a fit-for-purpose valuation *should* clearly define the roles and responsibilities as they relate to the ownership and quality of data. Such tasks will often involve a number of personnel, within and outside an entity. There should, however, be a single individual within the entity who is ultimately responsible for ensuring that all data used for developing a fit-for-purpose valuation meets the requirements of the Standard.

60.7.4 Policies and processes concerning the use of data to arrive at a fit-for-purpose valuation should ensure: (i) accuracy and integrity, (ii) completeness, (iii) adaptability, (iv) timeliness, (v) transparency, and (vi) proportionality.

60.7.5 Accuracy and Integrity

60.5.5.1 All data used should be accurate and reliable to ensure a fit-for-purpose valuation of financial instruments for all requirements, market conditions and circumstances. It should be free from unauthorised alteration and manipulation that could compromise its accuracy, completeness and reliability. To ensure accuracy and integrity of the data being used an entity should, at a minimum, maintain:

i. A dictionary to ensure that each element of data is defined consistently across an organisation.

ii. Defined processes and requirements to ensure that the data used is reconciled with their sources, wherever possible.

iii. A validation process for the identification, accuracy and integrity of the data. This should comprise integrated procedures including automated and/or manual edit and reasonableness checks, with an inventory of validation rules that are applied to data. Data validation processes, whereby the accuracy and integrity (or not) of the data is identified,

should be integrated procedures for identifying, reporting and explaining data errors or weaknesses in data accuracy and/or integrity. Such controls should be implemented to detect any errors with ongoing monitoring capable of identifying unexpected changes in data sets including unchanged valuation data, or stale data. All these controls should be tailored to the product and operational aspects of data management within an entity.

iv. Policies that establish accuracy and precision requirements for the data including acceptable thresholds within which differences may be recognised for all requirements, market conditions and circumstances.

v. Policies and processes that ensure that the necessary personnel have sufficient access to data so that they can appropriately implement the stipulated policies.

60.7.5.2 In certain instances, while the data used for arriving at a fit-for-purpose valuation may be output from other models and processes or approximations, it may be an integral part of the data used by an entity in arriving at a fit-for-purpose valuation. Valuation models are often used in order to estimate values of instruments that either trade infrequently or do not trade at all, but a modelled price is only as good as the data inputs that are used to develop that price. Model inputs should prioritise high level market data (ie, trades or executable quotes in active markets) and minimise less-observable data. An experienced valuation preparer must first assess the instrument and available market information to determine the best model, and data that is inputted should reflect the highest-level market information available.

60.7.5.3. While the expectations for approximations may differ from other types of data, entities should follow the principles in the Standard and establish expectations for the reliability of such data to ensure that the use of approximations results in a fit-for-purpose valuation. This should include the application of the above principles to the data used drive the approximations.

60.7.5.4 Completeness

60.7.5.4.1 Data used to arrive at a fit-for-purpose valuation should be complete and cover all material aspects of a valuation. In the event this data is not materially complete, the impact should not be critical to the entity's ability to arrive at a fit-for-purpose valuation. Any such determination should be arrived at using the concept of proportionality as outlined in the Standard.

60.7.5.5 Adaptability

60.7.5.5.1The policies and processes for the use of data should be flexible and adaptable to meet the entire range of valuation needs of an entity and should be able to accommodate different requirements, market conditions and circumstances and changing management, market and regulatory needs.

60.7.5.6 Timeliness

60.7.5.6.1 All data used should be timely while also meeting the principles relating to accuracy, completeness and adaptability. Although the timing of data that is needed to arrive at a fit-for-purpose valuation will depend on the nature and use of the valuation, under most circumstances and wherever possible a fit-for-purpose valuation should be based on contemporaneous valuation data. Contemporaneous valuation data should reflect the available principal market on the stated observation date for the *valuation*.

60.7.5.7 Transparency

60.7.5.7.1 Policies and processes concerning the use of data for arriving at a fit-for-purpose valuation should be documented and communicate information in a clear and concise manner. It should enable users of the data and management to evaluate the accuracy, integrity and timeliness of the data. For example, valuation data sources, inputs, assumptions and calibration methodologies should be documented, including control functions, and the management of changes to data should be appropriately reviewed and documented.

60.7.6 Proportionality

60.7.6.1 The application of all elements of this Standard is governed by proportionality. Proportionality determines the nature and extent of effort that an entity needs to expend in applying the principles in the Standard. With regard to data, the aim of proportionality is to use the relative differences in valuation risk to determine the nature and extent of processes and controls the entity must implement over the use of data to arrive at a fit-for-purpose valuation. For instruments with high valuation risk, the level of controls and processes required will be significantly higher than those required for *valuations* with low valuation risk. This Standard requires valuation risk to be measured, monitored and managed.

60.7.6.2. Decisions concerning how an entity determines the processes and controls over the use of data using proportionality *should* be documented and reviewed on a continuous basis. If the level of valuation risk changes, the entity *should* ensure it is in a position to change the processes and controls around the use of data for such *valuation*s in a timely manner.

60.7.6.3 In order to comply with the above requirements, entities *should* evaluate, in the context of all data used for developing a fit-for-purpose valuation, the elements outlined in this Standard.

III. Financial Instruments Board

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