24 October 2024 | ValuAsia Connect: Financial Instruments

International Valuation Standards Council

Building trust in valuation

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Objectives

- Overview of International Valuation Standards Council (IVSC)
- Introduction to International Valuation Standards (IVS) 500 - Financial Instruments Standard
- Why IVS 500 is relevant

Our Mission

Working with other standard setters, regulators, Valuation Professional Organisations, valuation service providers, asset managers, investment banks and other end-users of valuation information.

The IVSC's mission is to build trust in valuation by:

- Creating robust International Valuation Standards (IVS) that ensure consistency, transparency, and comparability in valuations.
- Promoting the adoption of IVS and fostering valuation professionalism worldwide.

The IVSC works for the public good.

Board of Trustees

Provides independent oversight

Memberships & Standards Recognition Board

Leads market-facing efforts to embed IVS

Advisory Forum

Acts as a conduit between VPOs and the technical boards

Standards Review Board

Oversees and ensures full coordination between technical boards; leads on ITC has responsibility for the 'General Standards' chapters of the IVS

Europe Committee

Leads market-facing efforts to promote and embed IVS across European markets

Asia Committee

Leads market-facing efforts to promote and embed IVS across APAC markets

Tangible Assets

Business Valuation

Financial Instruments

Technical Boards responsible for drafting and consulting on asset-specific standards

These boards are comprised of global valuation experts from more than 30 countries. They lead development of and public consultation on the standards, meeting physically three times a year and virtually through monthly calls to review and propose updates to the IVS.

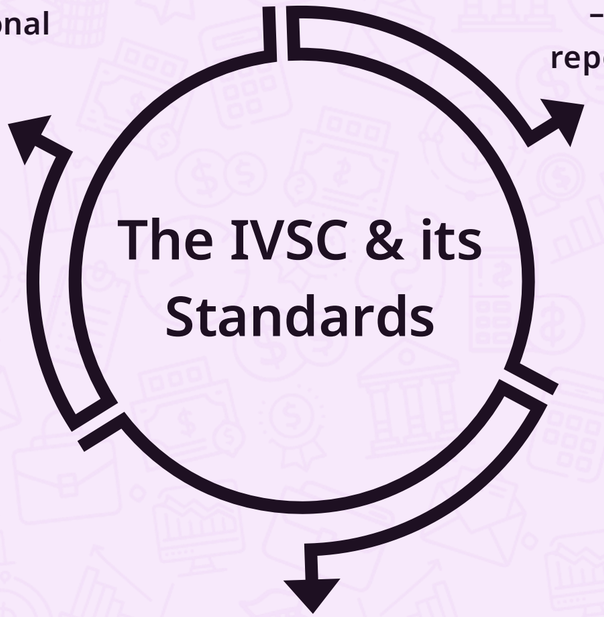
What are the International Valuation Standards ("IVS")?

- IVS are a set of high-level, **principles-based standards** for the practice of valuation,
- They cover the valuation of all assets and liabilities.
- IVS provide an internationally-agreed 'best practice' framework and are widely recognised as the global standard for valuation today.

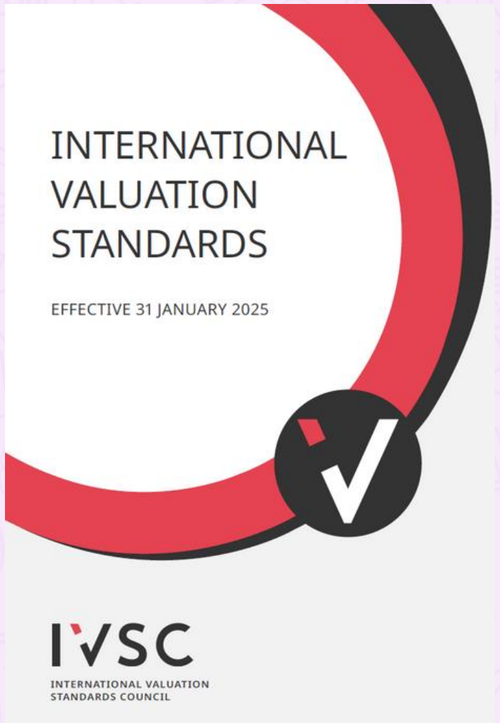
With no enforcement mechanism, the IVSC depends on local members and regulators, and “Best Practices”

Executed formal agreements with IOSCO and UN WIPO, focused on promoting international standards and professionalism

Principle-based standards applicable for valuations of any company, asset or liability – relevant for financial reporting and non-financial reporting purposes

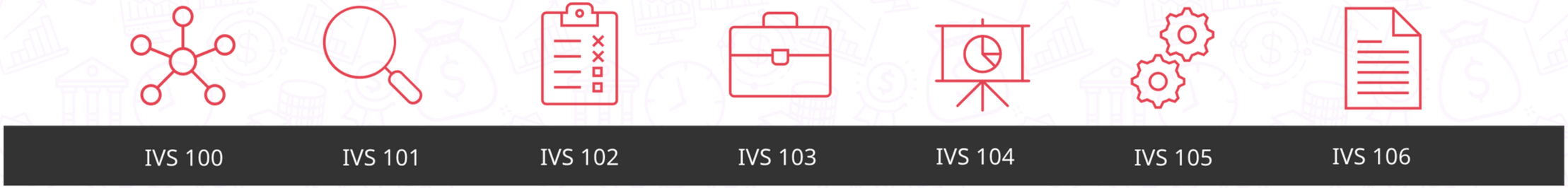


Collaborates with regulators, valuation professional organisations, valuation service providers and the end users of valuations

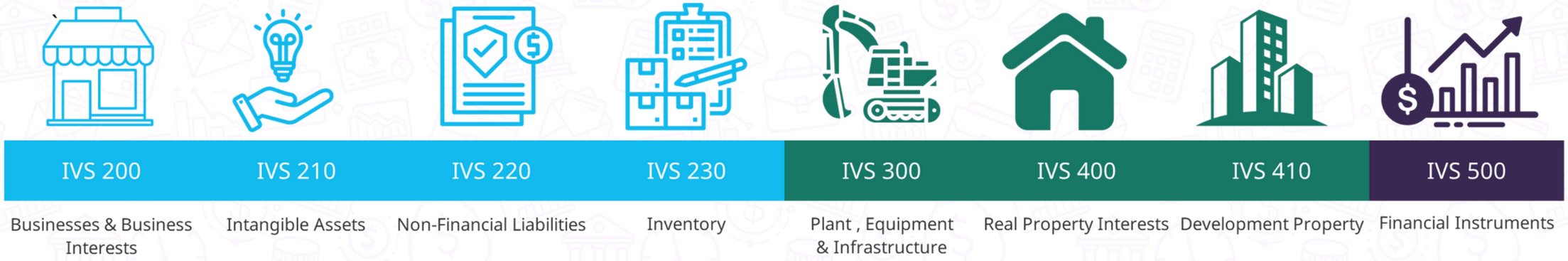


https://www.ivsc.org/iosco-and-ivsc-sign-cooperation-agreement-to-advance-valuation-standards/
https://www.ivsc.org/ivsc-and-world-intellectual-property-organisation-wipo-announce-collaboration-to-promote-intellectual-property-valuation/

IVS General Standards



IVS Asset Standards



The General Standards apply to all Asset Standards

IVS get implemented in many ways

International Valuation Standards
(internationally-agreed 'best practice' framework that are principles-based)

Legislation	Regulation derived from Law, where licensing is compulsory	Referred to as principles for valuation; enforced by VPOs or private firms	Referenced by adjudicators and parties in judicial proceedings
Slovenia (Audit Law)	Masyarakat Profesi Penilai Indonesia (MAPPI)	• E.g. ACRA-IVAS Singapore • VPOs: e.g. Red Book - Royal Institution of Chartered Surveyors or • Private firms: Big Four	• Referenced in opinions. • Used as “best practices” by experts • occasional formal compliance

IVS Compliance implies compliance with other applicable regulations

Compliance hierarchy – Compliance is a Function of:

IVS General Standards

+

IVS Asset Standards

+

Legal, statutory, and regulatory or other authoritative requirements appropriate to the purpose and jurisdiction of the valuation. If in conflict with IVS the requirements should be prioritized, explained, documented and reported

Any other deviations would render the valuation not compliant with IVS

IVS 500

Financial Instruments

Introduction to IVS 500

The valuation process, including quality controls, must ensure that values developed are appropriate based on the requirements of the users needs, intended use, basis of value and the financial instrument being valued, while managing valuation risk.

The valuation process may vary due to the data available, the model used, and the complexity and significance of the financial instrument being valued.

Professional judgements made during the valuation must be transparent and documented.

Quality controls should include a degree of independent review and challenge. Review and challenge should assess the professional judgements made during the valuation and in determining the value.

The valuation process, including quality controls, must be reassessed over time since financial instruments and the environment in which they can change

IVS 500

Financial Instruments

Relevant for:

- All sizes of firms throughout the world
- Level 1, level 2 and level 3 securities
- One financial instrument as well as a portfolio
- One time and recurring (i.e., daily) valuations
- Internal and external valuation specialists and service organisations

Must be applied in all valuations of financial instruments including financial, tax and regulatory reporting

Identifies requirements that must be followed in all valuations and those that should be followed in certain circumstances

IVS 500

Financial Instruments

The updated IVS 500 aims to provide more guidance in key areas including:

- Data and Inputs,
- Valuation Models,
- Quality Control,
- Review and Challenge, and
- the Valuation Control Framework

The combination of Quality Control, Review and Challenge, and a Valuation Control Framework are intended to provide guidance on implementing an appropriate valuation governance structure with consideration for the size and complexity of portfolios and the frequency of valuation reviews.

IVS 500

Financial Instruments

Why is this important now?

Technological advances and artificial intelligence are changing the valuation process. Impacting data, inputs, models, methods and governance. This evolution has become a priority for many institutions that value financial instruments.

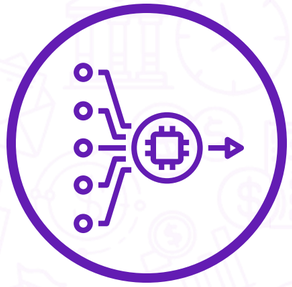
There is no shortage of examples of market volatility in recent years. Stakeholders are increasingly focused on valuations and the need for strong governance through economic cycles and market events.

The rise of investments in private capital has led to an increased focus on valuation in this area; which may be perceived as less transparent when compared to public institutions or public markets.

The 4 Core Principles of IVS 500 – Financial Instruments

Governance

- A process that enables the valuer to fulfill their obligations.
- Includes a review and challenge process.
- Enable a bias free and independent valuation process.



Data & Inputs

- Dependent on the structure and liquidity of the financial instrument.
- Data and inputs may include observable market data but may also incorporate the use of: (a) proxies; and, (b) judgment.

Methods & Models

- A method is a specific technique, within a valuation approach, to develop a value.
- A model is a quantitative implementation of a valuation method in whole or in part that converts input data into outputs used in the development of a value.

Quality Control

- For instruments of high valuation risk, the level of quality control and documentation required will be significantly greater than that required for valuations with low valuation risk.

Summary of 4 Core Principles

Attribute	Data & Inputs	Methods &	Governance & Quality
Accuracy	Free from error and bias	Error free and valued consistent with the valuation's objectives	Valuations are prepared in a manner that is bias-free and objective; values are similarly free from error and bias while reflecting the financial instrument's characteristics
Appropriateness	Relevant for the financial instrument	Suitable for the financial instrument given market conditions	Result in values that are relevant to the users of the valuation
Completeness	Based on the financial instrument's attributes	Addresses all features of the financial instrument	Valuation processes are consistently followed
Observability	Information is obtainable and visible to market participants	Reflect market conditions as of the valuation date	The review process affirms that the valuation reflects market conditions as of the valuation date
Timeliness	Reflect valuation date market conditions	The method and model is appropriate based on market conditions as of the valuation date	Controls executed in a time frame that enables effective remediation of issues without impacting the timeliness of the reported valuation
Transparent	Information traced to their origin	Understand how the valuation model works and any inherent limitations are disclosed	All persons preparing and relying on the valuation model understand how the valuation model works and its limitations
Documentation	To ensure the valuation produces a value consistent with the intended use in a transparent manner while identifying significant valuation risks based on the use of selected data	Addresses alternate valuation methods considered, rationale for model(s) selected, model validation, recalculation and back testing	Identify Include all relevant communications, assessment of risks, degree of judgment used, and quality control and governance procedures followed, review and challenge process, and the basis for conclusions reached

Governance

The governance framework should:

- Define roles and responsibilities of each party in the valuation
- Identify responsible parties, including quality control, review and challenge, with sufficient capabilities and resources to fulfil their responsibilities
- Provide for escalation, and remediation procedures
- Consider:
  - basis of value,
  - types and extent of valuation risk
  - type of data, inputs, methods and models to perform the valuation
  - documentation requirements
  - timeline and frequency
- The responsibility for the performance of individual processes within the valuation may vary depending on an organization's structure.
  - Regardless, responsibilities must be documented and reviewed periodically to ensure accountability for the execution of the valuation.
- A critical component of the valuation process starts a progression which allows for the initial valuation conclusion to be evaluated in a manner maximizing an independent and bias-free fair value conclusion.
- In instances where the valuation is not approved, the valuation should:
  - evaluate the information obtained from the review process,
  - modify the valuation as deemed appropriate, and,
  - submit the valuation for re-review.

Data & Inputs

- Data and inputs should be assessed for objectivity, and procedures performed to determine any limitations, assumptions or bias.
  - The valuer and the review process must apply professional skepticism and evaluate the valuation in a bias free manner.

- The use of factual information should be maximized but valuations may include the need for professional judgment and analysis in order to complete the valuation.

- The characteristics of the selected data must be fully understood by the valuer and throughout the review process.

- The valuation may include observable market data such as stock prices and yields from liquid debt and equity markets; however, it may also require the use of information and assumptions that require adjustments.

- Documentation should describe professional judgements made during the valuation to assess and manage valuation risk and to promote:
  - consistency
  - professionalism
  - transparency
  - comparability
  - trust in valuation

- Characteristics of Relevant and Observable Data
  - The valuer must apply professional judgement to balance the characteristics of relevant data as identified below:
    - accuracy
    - completeness
    - timeliness
    - transparency

Methods & Models

- A model is a quantitative implementation of a method in whole or in part that converts input data into outputs used in the development of a value. A model may rely on other models to derive its inputs or adjust its outputs.

- For a valuation model to be appropriate, it must be suitable for the intended use of the valuation with suitable inputs as of the valuation date.

- The use of valuation models inherently presents valuation risk. Valuation risk may arise due to:
  - fundamentally incorrect models; or,
  - misapplication of models.

- The potential for error in valuation models necessitates the importance of a comprehensive process around valuation model development and quality control.

Methods & Models (continued)

- A valuation model may not capture all the qualitative and quantitative variables that impact value.
  - Maximizing the quality of the information and assumptions will reduce estimation uncertainty but cannot reduce exposure to information that is difficult to capture in a valuation model.
  - Assumptions and limitations must be transparent to all parties involved in the valuation.
  - As the amount of relevant information omitted from the valuation increases, the potential for valuation risk and measurement error increases.

- Models should be tested and validated prior to use and over time.

- Qualitative information and professional judgment must be evaluated, including the logic, amount of professional judgment, and types of information used, to establish the conceptual soundness of the model.
  - The validation process must ensure that qualitative and professional judgment assessments are conducted in an appropriate and systematic manner, are supported, and documented.

- Characteristics of Appropriate Valuation Models
  - The valuer must apply professional judgement to balance the characteristics of a valuation model in order to choose the most appropriate valuation model as identified below:
    - accuracy
    - completeness
    - timeliness
    - transparency

Quality Control

- Quality controls must be implemented to address the valuation risk throughout the entire valuation process. The nature and extent of the quality control process depends on the nature and complexity of the valuation.
- Quality controls must be appropriately designed, executed and documented in a manner that is commensurate with the level of valuation risk and affirms the completeness and integrity of the valuation process.
- Procedures should be designed to validate that the valuation processes are performed consistently in compliance with IVS and allow for the assessment of the valuation and the resulting value.
- Valuation risk must be mitigated through the implementation of robust quality controls.
- Quality controls should include a degree of independent review and challenge. Review and challenge should assess the professional judgments made during the valuation and in determining the value.
- Quality controls should be reassessed over time since financial instruments and the environment in which they can change.
- The review process should ensure that the valuation is appropriate based on the requirements of user needs, intended use, basis of value, characteristics of the asset or liability being valued, complexity of the financial instrument, and the financial instrument being valued.

IVS 500

Financial Instruments

Example:
Valuing Derivatives Congruent with IVS 500

Valuation Issues When Valuing Derivatives

- Multitude of structures
  - Vanilla (Futures, Forwards, Swaps, European options)
  - Complex (American or Bermudan and structures combining any or all of the above with numerous price paths)
  - Bespoke (transactions designed to address a user's needs)

- Different ways derivatives are transacted
  - Exchange traded; or,
  - Over-the-counter (OTC).

- Other than when exchange traded, derivatives are valued using models (marked to model)

- Reliance on complicated valuation processes, multiple inputs, reliance on third parties and difficult to quality control review – require investment specific market data, sophisticated models, and complex recordkeeping

- Varying amounts transparency and liquidity
  - Developed versus emerging markets
  - One-way markets
  - New products

- Potential for significant model risk as correlations may change and model may become less relevant

Applying the IVS Valuation Process

IVS100 Valuation Framework	IVS101 Scope of Work	IVS 102 Bases of Value	IVS 103 Valuation Approaches	IVS104 Data and Inputs	IVS 105 Valuation Models	IVS 106 Documentation & Reporting	IVS Asset Standards	IVS Compliant
	Understand the use case and precision required Understand type of financial instrument	Purpose of valuation: • Fair value • Liquidation value • Intrinsic value	Assess whether a method or model is needed – is the financial instrument liquid or illiquid	Determine data required, its sources, limitations and judgments	The model should be consistent with market participant practice Design and test model Monitor model reliability over time	Review the method or model, inputs and outputs Evaluate results for reasonableness Review and challenge the valuation model and results	Valuation must conform to IVS 500	

- Overall goals are to ensure accuracy, completeness, timeliness and transparency
- Market conditions, operational considerations and judgmental factors need to assessed in implementing controls
- Controls will vary across institutions depending on the significance and complexity of the financial instruments being valued and the valuation processes implemented

Example of the Roles in the Valuation Process

- First line - “valuer” or ”owner”
  - Responsible for the design, implementation and execution of the valuation and ultimately the value produced
  - In large, global banks, this would be part of the trading function

- Second line - “reviewer” or “challenger”
  - Responsible for reviewing the data, models and resulting values
  - In large, global banks, this would be part of the product control function

- Third line - “assessor”
  - Responsible for reviewing the work performed by the First and Second Lines is appropriate and adequate to support the value
  - In large, global banks, this would be part of the internal audit function

- Individuals involved in any aspect of the valuation process must have the appropriate skills and knowledge, authority and accountability to fulfill their role.
- Management, with Board oversight, are ultimately responsible for the valuation process and the values used

Example: 2Y USD SOFR Swap

Valuation Component	Assessment	Reason	IVSC 500 Process	Area of Focus - Valuer	Area of Focus - Challenger	Area of Focus - Assessor	Additional Processes	Additional Reports
Data	Highly Significant	Need timely accurate data	Data	Appropriateness, timeliness, implementation of processes and controls, review of data used, development of KPIs, documentation	Review implementation of data collection and review, including supporting documentation, to access appropriateness of the data, consistency to industry standards, adequacy of controls and the identification of any limitations.	Review that the processes to collect data are consistent with design and an appropriate level review and challenge	Execution of controls and assessment of result	Reporting on KPIs
Model	Moderately Significant	Standard model, but one that has conventions and addressed need to interpolate	Methods and Modes	Industry consistent design, industry consistent implementation, user acceptance testing, model documentation and identification of limitations, develop and implement model performance KPIs	Review model implemented and supporting documentation to access conceptual soundness of model, consistency to industry standards, adequacy of controls and the identification of any limitations.	Review that the processes to develop and implement model is consistent with design and an appropriate level review and challenge	Execution of controls and assessment of results	Reporting on KPIs
Output	Insignifican	Standard terms, liquid two-way market					Valuation adjustments, such as CVA	Reporting on valuation adjustments, such as CVA

Implementation Considerations

Area	Challenge	L1	L2	L3
Data	Limited of changing liquidity	X	X	X
	Missing or incomplete data			
	Simplification of models			
	Limitations of model			
	Inability to calibrate model			
Valuation Adjustments	Need to make adjustments to modelled values (e.g., CVA)	X	X	X
	No market consistent model		X	X
	Limited liquidity		X	X
	Unclear or changing terms	X	X	X
Basis Value	Similar, but not identical, bases of value	X	X	X

Summary of IVS 500 and Derivatives

- Derivative valuations can be complex processes, with potentially a number of parties involved
- Transparency is important to ensure that the execution of the valuation is performed as intended
- Clarity is critical in establishing the roles, responsibilities and accountabilities related to the valuation
- Processes and controls should be in place commensurate to the significance and complexity of the financial instruments being valued
- Derivative valuations are full of judgements, assumptions and limitations – these need to be transparent and assessed to determine that a value is consistent with its intended use

Final Thoughts & Future Areas of Focus

- ESG
- Valuation Risk
- Valuation Certainty
- Valuation Proportionality
- Impact of New Technology on Valuation Including AI, Smart Contracts and Block Chain
- Expansion of New Types of Assets – example:
  - Digital Assets

Agenda Consultation:
Shaping the future of valuation standards

1. Environmental, Social and Governance (ESG)
2. Technology in Valuation
3. Valuation Risk

Selected Additional Topics:

- Early-Stage Businesses
- Capital Structure Considerations
- Digital Assets
- Discounts and Premia
- Internally Generated Intangible Assets
- Trophy Assets

Consultation Survey

Thank you

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For further information or to collaborate with the IVSC, please reach out to:

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