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1. Preface

1.1. Today, the value of a business is no longer represented by the balance sheet *assets* and liabilities as more companies are generating value from their *intangible assets*. Trends such as sustainability, Artificial Intelligence (AI) and digital assets are leading to the creation of new types of *intangible assets*, making *intangible assets* increasingly relevant in today's economy.

1.2. While *intangible assets valuation* standards and guidelines by international, regional and local organizations exist, they differ in, amongst other things, the scope and depth. To support *intangible asset* commercial and business activities, there is a need for credible, consistent and trusted *valuation* of *intangible assets*, including intellectual property. In this regard, there is merit in developing a *valuation* guideline based on the International Valuation Standards ("IVS") that can be widely adopted internationally.

1.3. To this end, a study was conducted in 2023 to identify key focus areas in existing intangible asset valuation practices where more detailed considerations and guidance could be provided to existing principles-based standards additional guidance would be useful to improve the credibility of valuation standards and support informed commercial and business decisions. The study was conducted via interviews with stakeholders such as lenders, investors, intellectual property legal practitioners and valuation practitioners across Canada, Singapore, the United Kingdom and the United States.

1.4. Based on the study, stakeholders have expressed that unlike *tangible assets*, *intangible assets* are hard to comprehend in terms of their characteristics, resulting in the valuation inputs being highly judgmental and its value being more volatile. Therefore, stakeholders have also expressed a need to understand the risks associated with the *intangible asset* and a preference for more disclosures that should be in the *intangible asset valuation* report.

1.5. Accordingly, nine (9) focus areas ("Focus Areas") were identified as areas whereby a guideline should be developed. The nine Focus Areas relates to the characteristics of *intangible assets*; the risk factors of *intangible assets*; determination of standalone and grouped *intangible assets*; *valuation inputs* such as hypothetical royalty rate; economic lives; and additional analysis/disclosure such as sensitivity and/or scenario analysis; corroborative analysis; disclosure of subsequent events and additional report disclosures.

1.6. This intangible asset guideline (the "Guide") is developed to reflect current best practices in the *valuation* of *intangible assets* for the Focus Areas. In the development of the Guide, technical working groups of various national Valuation Professional Organizations ("VPO"s) were engaged. In addition, public consultation feedback from a diverse range of stakeholders were considered in refining the Guide.

1.7. The objective of the Guide is to provide a practical and interoperable framework that supports credible *valuations* of *intangible assets*. With credible *valuation*, enterprises will be a step closer to unlocking their *intangible assets* value, as *valuations* are often a pre-requisite to *intangible asset* related transactions, including licensing, investing and collateralization.

1.8. The Guide is intended to reflect the best practices in *intangible assets valuation* at the time of publication, with the understanding that they will be revisited, and, if necessary, revised to reflect changes in regulation or relevant standards.

1.9. The Guide also does not seek to address any geographic-specific nuances. Where there is conflict between the content of the Guide and the requirements of any applicable laws and regulations, the latter requirements *should* take precedence.

2. Introduction

2.1. The purpose of the Guide is to provide guidance on the Focus Areas for *valuers* to apply when valuing *intangible assets*. They serve as a reference for our *valuation* professionals, offering clarity on approaches and considerations pertinent to their unique *valuation* needs.

2.2. The Guide does not aim to replace or modify the principles of *intangible assets valuation* set out in the existing International Valuation Standards.

2.3. The Guide provides supplementary best practice guidance and *should* be read in conjunction with the following sections from the IVS 2025, which provide the foundational principles for *intangible assets valuation*:

(i) IVS 100 Framework
(ii) IVS General Standards (IVS 101 to IVS 105)
(iii) IVS 210 *Intangible assets*

2.4. When the *valuer* is expected to adhere to the recommended guidance, terms such as "*should*" are used to indicate the *valuer* is expected to comply unless the *valuer* can demonstrate that alternative actions are adequate. If terms like "may" are used, *valuers* are responsible for considering those recommended guidance. However, the application of such guidance in the *valuation* engagement will depend on the *valuer's* professional judgment.

2.5. The Guide makes references to IVS 210 *Intangible assets*, which is structured around the following sections:

(i) Overview
(ii) Introduction
(iii) *Bases of Value*
(iv) *Valuation Approaches and Methods*
    (a) Market Approach
    (b) Income Approach
    (c) Cost Approach
(v) Special Considerations for *intangible assets*
    (a) *Discount Rates*/Rates of Return for *intangible assets*
    (b) *Intangible Assets* Economic Lives
    (c) Tax Amortisation Benefit (“TAB”)

2.6. The identified nine (9) Focus Areas builds on the foundational principles and structure of IVS 210 by providing additional guidance in the following sections:

(i) IVS 210 Introduction:
   (a) Characteristics of *intangible assets* and the environment in which they are utilised;
   (b) *Risk factors of intangible assets*; and
   (c) Determining whether to value the subject *intangible asset* as a standalone *asset* or grouped with other *assets (*including other *intangible assets*).

(ii) IVS 210 *Valuation Approaches and Methods*, specifically on Relief-from-Royalty method under Income Approach on Determining a hypothetical royalty rate for *intangible assets valuation*.

(iii) IVS 210 Special Considerations for *intangible assets*:
   (a) Application of legal, functional, technological and economic factors in determining the economic lives of intangible assets.

(iv) Additional analysis/disclosures within *Intangible Assets Valuation* Report
   (a) Performing sensitivity and/or scenario analysis;
   (b) Performing corroborative analysis for *intangible assets valuation*;
   (c) Disclosure of subsequent events post the *valuation date*; and
   (d) Additional report disclosures when performing *intangible assets valuation*.

2.7. The Guide for the Focus Areas are included in their respective sections. The Guide is included in the grey box and further explanations and examples (where applicable) are provided.

2.8. The Guide is specifically for *intangible assets* and applicable for all purposes. Nevertheless, should there be additional considerations for *valuations* relating to specific purposes, such as financial reporting, licensing, technology transfer and collateralisation, these additional considerations have to be considered on a case-by-case basis, and should be advised or confirmed by the *client* and/or company owning the *intangible asset* or any other *intended users* and their relevant advisors (e.g. financing institutions).

2.9. It is recognized that the guidance provided cannot encompass every possible scenario or circumstance. Consequently, *valuation* professionals *should* always consider the specific facts and circumstances of each individual assignment when forming their *valuation* judgments.

3. Characteristics of *intangible assets* and the environment in which they are utilised

Understanding the characteristics of *intangible assets* and their operating environment is crucial for several reasons. These *assets* drive competitive advantage and value creation, influencing strategic planning and investment decisions. Market dynamics, globalization, and technological changes impact their value and utility, requiring companies to adapt and innovate. Efficient resource allocation, legal protection, and effective risk management are essential due to the significant investments and unique risks associated with *intangible assets*. Proper *valuation* and reporting are crucial for financial reporting, taxation, and transactions. This requires a comprehensive understanding of these *assets* and the application of suitable *valuation methods*.

3.1. IVS 2025 states that "an *intangible asset* is a non-monetary *asset* that manifests itself by its economic properties. It does not have physical substance but grants rights and/or economic benefits to its owner"[1].

3.2. IVS 2025 further states that "*intangible assets* are defined and described by their characteristics such as their ownership, function, market position and image. These characteristics differentiate *intangible assets* from one another". In addition to the characteristics of the *intangible assets*, the environment in which the *intangible assets* are used also influence their earnings capability and risk profile.

3.3. In performing a *valuation* of *intangible assets*, a *valuer should* assess these *intangible assets* characteristics together with the environment in which they are utilized.

3.4. The ownership, function, market position, image and all other characteristics of the *intangible asset should* be assessed and considered collectively within the four (4) categories – legal, technological, functional and economic characteristics. It is important to note that not all *intangible assets* will exhibit all four (4) categories of characteristics. For example, legal, technological, and functional characteristics may not be as relevant as economic characteristics for relationship-based *intangible assets*.

3.5. Legal characteristics relate to the legal rights and protections that govern the ownership of the *intangible asset* such as scope and strength of the legal rights, exclusivity of rights conferred, renewal provisions. They also include whether the ownership is direct or indirect, whether ownership vests in multiple parties, the method by which ownership is granted, i.e. whether ownership is automatic or requires examination by appropriate body and whether ownership is transferable.

3.6. Technological characteristics relate to its innovativeness, scalability, compatibility and dependency. Innovativeness is the ability to introduce new ideas or methods that offer novel solutions or advancements to existing alternatives. Scalable *intangible assets* are those that can handle increasing demand without requiring *significant* capital investment. Compatible *intangible assets* are those that can integrate or function seamlessly with existing systems, technologies, or standards. Dependency describes the extent to which an *intangible asset* relies on other *assets*, technologies, or external conditions for its functionality, effectiveness, or value generation.

[1] International Valuation Standards (IVS) Effective January 2025, IVS 210 Intangible Assets para 20.01

3.7. Functional characteristics relate to the ability to perform its intended purpose. The specifications of the *intangible asset*, e.g. technical features, process steps and methodology contribute to the functional characteristics.

3.8. Economic characteristics relate to the *intangible asset*'s ability to generate future economic benefits, which includes both revenue generation and cost saving potential. These characteristics arise from the market position, market reputation, image and the manner in which the *intangible asset* is monetized. This ability to generate economic benefits is dependent on the *intangible asset*'s unique legal, technological and functional characteristics, the owner's strategy for the *intangible asset* and the competitive environment.

3.9. These characteristics *should* be assessed together with the environment in which they are utilized which includes:

(i) Competitive environment. The size of the market for *intangible assets*, availability of realistic alternatives, number of competitors, barriers to entry, presence (or absence) of switching costs.

(ii) Importance of the individual subject *intangible asset* to the owner. Whether the individual subject *intangible asset* is a key factor of differentiation from competitors, the importance it plays in the owner's marketing strategy, its relative importance compared with other tangible and *intangible assets*, and the amount the owner spends on creation, upkeep and improvement of the subject *asset*.

(iii) Life cycle of the subject *intangible asset*. The expected economic life of the subject *intangible asset* and any risks of the individual subject *intangible asset* becoming obsolete.

3.10. This assessment of the *intangible asset* characteristics and environment in which it is utilized *should* be used as a starting point for the *intangible asset valuation*, specifically in the risk assessment, which will impact the selection of approach and / or *inputs* used in the *valuation*.

It is important for *valuers* to understand how the legal, technological, functional and economic characteristics of the *intangible asset*, including the ownership, function, market position and image, affect the *value* of the *intangible asset*.

Legal characteristics

The legal characteristics of an *intangible asset*, including ownership, relate to the legal rights associated with the *intangible asset* which enable the owner to protect, control and generate future economic benefits from the *intangible asset*, which affect the share of economic returns and value of the *intangible asset*.

In understanding the legal characteristics associated with the *intangible asset*, it is important to understand whether the *intangible asset* can be legally protected. Certain *intangible assets*, such as non-contractual customer relationships, may not be legally protected, while other *intangible assets*, such as data, trade secrets and patents, can be protected by law. Intellectual property is a specific subset of *intangible assets* that can be protected by law.

The considerations relating to the legal characteristics of *intangible assets* include, but are not limited to:

(i) Scope and strength of the legal rights which underpin the *intangible asset*. The scope of legal rights defines the boundaries of how an *intangible asset* can be used, which includes the *jurisdiction* in which the *intangible asset* can be used, the class of products or services it can be applied to and the duration over which the *intangible asset* is protected. The strength of these rights refers to the legal enforceability of these rights, which is crucial in protecting the *asset* from infringement or unauthorized use. A broader scope opens up more markets and monetization opportunities for the *intangible asset*, and stronger legal rights reduce competition, enhancing the *intangible asset*'s income-generating potential and making the *intangible asset* more attractive as an investment or collateral.

(ii) Exclusivity of rights. The nature of the rights is determined by the legal provisions underpinning the *intangible assets* such as licenses, contracts and agreements and can be exclusive or non-exclusive. Exclusivity refers to the owner's or operator's ability to restrict others from using the *intangible asset* without permission, while non-exclusivity allows for potential use by other licensees. This exclusivity or non-exclusivity may be defined by jurisdiction, the class of products or services, and the duration of rights. With exclusive rights, there is limited market competition, enabling the *intangible asset* to generate a higher return than if it did not have exclusive rights.

(iii) Method by which ownership is granted. Ownership of *intangible assets* can be granted automatically, as in the case of copyright, or require examination and approval by an appropriate body, such as patents. This affects the time, cost, and certainty of obtaining and maintaining legal rights. *Intangible assets* that require examination for ownership rights, like patents, often provide stronger protection and exclusivity, translating into higher potential economic benefits.

(iv) Renewal provisions for the rights. Renewal provisions determine how and under what conditions the legal rights associated with an *intangible asset* can be extended. This is particularly relevant for *assets* where legal protection is time-bound. The ability to renew legal rights extends the duration over which economic benefits can be derived from the *intangible asset*.

(v) Direct or indirect ownership of the rights. Direct ownership is where an entity owns the *intangible asset* outright and has full legal title to the *intangible asset*. Indirect ownership is where the entity has a licence or other right to use the *asset*. The distinction is crucial in determining how the *asset* can be exploited, transferred, or used as collateral. Direct ownership grants the owner complete autonomy over how the *intangible asset* is used, licenced or sold and allows the owner to enjoy all economic benefits derived from the monetization of the *intangible asset*. Therefore, direct ownership of the *intangible asset* may be perceived as more valuable by investors and lenders due to the greater control and potential for revenue generation.

(vi) Transferability of rights. Transferability refers to the ability to sell, assign, or otherwise transfer ownership or rights associated with an *intangible asset* to another party. The ease of transferring these rights can *significantly* impact the *intangible asset's* value and marketability. *Intangible assets* with high transferability can attract more investors and potential buyers, as they can be easily sold or licensed to generate revenue. Conversely, *intangible assets* with restrictions on transferability may limit the owner's ability to monetize the *intangible asset*, potentially reducing its value.

Technological characteristics

The technological characteristics of an *intangible asset* relate to its relative level of technological advancement, which determines its capacity to generate economic benefits and consequently, affects its *value*. A technologically advanced *intangible asset* can provide the owner or operator a competitive advantage, by increasing revenue or reducing cost, enhancing the *asset*'s economic benefits. The considerations relating to the technological characteristics of *intangible assets* include, but are not limited to:

(i) Innovativeness. Innovativeness is the measure of the *intangible asset*'s ability to drive progress and create new opportunities in its respective field or industry. Innovative *assets* can command a premium in the market due to their potential to create new revenue streams, disrupt existing markets, or establish new standards. Their uniqueness and advancement over competitors can lead to a strong competitive position, attracting investment and enabling higher returns.

(ii) Scalability. Scalability refers to the ability of an *intangible asset* to handle increased levels of demand or to be applied across various contexts without a *significant* need for additional capital investment. Scalable *assets* are adaptable and can grow with the business, meeting expanding market needs efficiently. Scalable *intangible assets* are particularly valuable as they can lead to exponential growth in revenue with relatively low incremental costs. This scalability supports wider market penetration and can quickly multiply the economic benefits derived from the *asset*.

(iii) Compatibility. Compatibility refers to the ability of an *intangible asset* to integrate or function seamlessly with existing systems, technologies, or standards. It measures how well the *asset* can be adopted within current infrastructures or alongside other *assets* without requiring *significant* modifications or causing disruptions. Highly compatible *intangible assets* can *significant*ly reduce integration costs and accelerate adoption rates, making them more attractive to potential users and partners. This ease of integration can expand the *asset*'s market potential and enhance its value. Compatibility signals a lower barrier to entry for the *asset*'s utilization, potentially leading to quicker returns on investment.

(iv) Dependency. Dependency refers to the interconnectedness of the *asset* with broader systems or platforms and the potential risks associated with such dependencies. *Intangible assets* with high dependency may face risks related to the stability and availability of the *assets* or conditions they depend on, which can affect their reliability and income-generating potential. On the other hand, an *asset* that forms a critical dependency for other valuable systems or products can become indispensable, *significant*ly enhancing its value. The level of dependency of *intangible assets* influences the *intangible assets*' resilience to changes in market or technological conditions and its future income-generating potential.

Functional characteristics

The functional characteristics of an *intangible asset*, such as the specifications of the *intangible asset*, enable the *intangible asset* to serve its intended purpose and generate economic benefits. The considerations relating to the functional characteristics of *intangible assets* include, but are not limited to:

(i) Specifications of the *intangible asset*. The specifications of the *intangible asset*, such as its technical features, process steps and methodology define the functionality of the *intangible asset*. The type of specifications may vary depending on the type of *intangible asset*.

(ii) Technical features of an *intangible asset* refer to the specific technological attributes or capabilities that enable the *asset* to perform its intended functions. These can include software algorithms, engineering designs, or any other technical specifications that define how the *asset* operates.

(iii) Process steps involve the sequence of actions or operations that an *intangible asset* utilizes to achieve its intended outcome. This can relate to manufacturing processes, software development lifecycles, service delivery methodologies, or any systematic approach that the *intangible asset* employs.

(iv) Methodology refers to the underlying principles or strategies that guide the development, use, or application of an *intangible asset*. This can encompass research methodologies, analytical frameworks, or any foundational concepts that the *asset* is based upon.

Advanced technical features, well-defined process steps and robust and innovative methodology can *significant*ly enhance the performance and efficiency of an *intangible asset*, making it more competitive and desirable in the market. This can lead to increased adoption, higher sales, and the potential for premium pricing due to the ability to capture market share and generate substantial returns.

Economic characteristics

The economic characteristics, including market position and image can affect the economic benefits generated by the *intangible asset* in the environment in which it is utilized, thereby affecting its *value*. The considerations relating to the economic characteristics of *intangible assets* include, but are not limited to:

(i) Market position. Market position represents the portion of a market controlled by a particular entity and its products or services, often directly attributable to an *intangible asset* such as a brand or proprietary technology. An *intangible asset* that has a higher market position can significantly enhance a company's ability to generate revenue. This is because a higher market position usually indicates a strong customer base, higher sales volumes, and potentially, the ability to command premium pricing. The dominance in the market can also provide a competitive edge, making it more challenging for new entrants or competitors to erode the company's position.

(ii) Market reputation or image. Reputation, often linked to brand strength or intellectual property such as trademarks, is an *intangible asset*'s perceived value in the eyes of consumers, partners, and stakeholders. A strong reputation can lead to customer loyalty, allowing for consistent revenue streams and the potential for premium pricing due to the perceived higher value of the products or services offered. Additionally, a reputable brand can attract business partnerships, investment opportunities, and talented employees, all of which contribute to the company's income-generating potential.

(iii) Monetization strategy. The approach to monetizing an *intangible asset* is a critical economic characteristic that defines its value creation mechanism. Monetization strategies can be direct, indirect, or based on forbearance of use:

(a) Direct monetization: Direct monetization of the *intangible asset* occurs when the owner of the intangible is also the operator, and therefore the *intangible asset* directly generates revenue (or reduces costs) for the owner/operator. For example, using a trademark to sell branded products allows the owner/operator to generate revenue from the use of the trademark.

(b) Indirect monetization: When the owner licences the use of the *intangible asset* to a third-party operator, the *intangible asset* generates royalty income for the owner. In this strategy, the *intangible asset* contributes to revenue generation indirectly. For example, licensing a third-party to use the trademark which allows the licensee to generate revenue from sale of the branded products generates a royalty income stream for the owner.

(c) Forbearance of use of *intangible asset*: Owner/operator does not use the *intangible asset* but also does not allow any other party to use the *intangible asset*. Such use often involves a defensive use of the *intangible asset*, as it protects the income being generated by the owner/operator's other *assets*. For example, holding a patent but choosing not to produce the patented product can prevent competitors from entering the market, maintaining the owner's market position in related areas. This forbearance can be part of a broader competitive strategy to maximize the overall value of the company's *asset* portfolio.

Not all *intangible assets* will exhibit all four (4) categories of characteristics. Relationship-based *intangible assets*, such as customer relationships, primarily derive their value from economic characteristics, which encompass the revenue generation potential, customer lifetime value, and the ability to drive repeat business. In contrast, legal characteristics are less relevant for relationship-based *intangible assets* because their value stems from the trust and loyalty established with customers, rather than ownership rights or patents. Similarly, functional and technological characteristics are also less relevant, as the effectiveness of the underlying relationships relies more on interpersonal connections than specific functionalities or technological features. Therefore, understanding the economic characteristics of such relationship-based *intangible assets* is essential for accurately assessing their *value*.

The above characteristics of *intangible assets should* be assessed together with the environment in which they are utilised, including the competitive environment, importance of the subject *intangible asset* to the owner and the life cycle of the *intangible asset*.

Competitive environment

The competitive environment encompasses various market dynamics and aspects that can *significant*ly influence an *intangible asset*'s ability to generate income. The competitive environment in terms of legal, functional, technological and economic aspects are as described below.

Legal aspect

(i) Regulatory framework for *intangible assets*: The legal landscape governing *intangible assets* includes a variety of laws and regulations that protect and define the rights associated with these assets across different *jurisdictions*. This regulatory framework can *significantly* influence the value and income-generating potential of *intangible assets*. For example, in *jurisdictions* where legal protections are weak or poorly enforced, the risk of infringement may be higher, which can erode the *asset*'s exclusivity and diminish its potential income, thereby depleting the *intangible asset's* value and reducing its attractiveness as an investment or collateral. Conversely, *jurisdictions* with robust legal protections provide a secure environment for the *asset*'s exploitation, which bolsters confidence in the consistent and reliable generation of economic benefits by the *intangible asset* and its value. Understanding the legal landscape in which the *intangible asset* operates is crucial for accurately

assessing the potential risks associated with an *intangible asset*, which influence the *intangible asset*'s ability to generate economic benefits and its *value*.

(ii) Industry-specific regulations: Certain industries have industry-specific regulations which play a crucial role in shaping the value and utility of *intangible assets*, particularly in highly regulated sectors like technology, pharmaceuticals, and telecommunications. Regulatory approvals are often a prerequisite for bringing products associated with these *assets* to market, and compliance with industry standards is essential for ensuring that products can effectively interact within a broader ecosystem. While such regulations can result in *significant* costs to obtain approvals and maintain compliance, they can also enhance the revenue that can be generated by these regulatory body-approved *intangible assets* and boost the attractiveness of the *intangible assets* as an investment or collateral. For example, regulations may require that patents be licensed on Fair, Reasonable, and Non-Discriminatory (FRAND) terms, which aim to promote widespread adoption of technology while balancing the rights of patent holders. While such terms can increase market penetration, they may also limit the profitability of the *intangible asset*, as patent holders must offer licenses on the same terms to all parties. Understanding such industry-specific regulations aids *valuers* in assessing the cash flows that can be derived from the *intangible asset*, and therefore its *value*.

Technological aspect

(i) Rate of technological change: The rate of technological change refers to the speed at which new technologies are developed and existing technologies are improved or become obsolete. The rate of technological change affects the *intangible asset*'s lifespan and relevance. Rapid technological change can quickly reduce the demand for an *intangible asset* if it becomes outdated, reducing its value and attractiveness as an investment or collateral. For example, the demand for a proprietary software platform may reduce if a new operating system or programming language becomes the industry standard and the platform cannot be easily updated, resulting in a decrease in its value. Understanding the rate of technological change in the industry in which the *intangible asset* operates is crucial for accurately assessing the obsolescence risk associated with an *intangible asset*, which affects its *value*.

Functional aspect

(i) Emergence of substitutes or alternatives which replace the *intangible asset*'s functionality: The emergence of substitutes refers to the introduction of new products, services, or processes that can perform the same or similar functions as an existing *intangible asset*. This emergence can *significant*ly affect the *intangible asset*'s market position and value. When substitutes offer improved efficiency, cost-effectiveness, or other advantages, they can quickly attract customers and reduce the demand for the original *intangible asset*. For example, the value of a patented manufacturing process may decline if a new, more sustainable and cost-effective method is developed, leading to a shift in industry preference. The ability to anticipate and respond to the potential for substitutes is essential for ensuring the function of an *intangible asset* remains relevant.

Economic aspect

(i) Size of the market for *intangible assets*. The size of the market for a particular *intangible asset* indicates the potential customer base and the revenue opportunities available. A larger market size generally suggests a higher potential for revenue generation, as there are more users or consumers to target. This can enhance the value of the *asset*, making it a more attractive investment or collateral.

(ii) Number of competitors. The number of competitors in the market affects the competitive pressure faced by the *intangible asset*. A market with numerous competitors might lead to *price* wars, reduced margins, and a need for continuous innovation to maintain market share. If many competitors own similar *intangible assets*, the *intangible asset* may lose its competitive advantage, resulting in diminished value for the owner. This can impact the profitability and sustainability of the income generated by the *asset*.

(iii) Barriers to entry. Barriers to entry refer to the obstacles that new competitors need to overcome to enter the market. High barriers to entry, such as *significant* capital requirements, proprietary technology, or stringent regulatory hurdles, can protect the market position of an *intangible asset*. This protection can lead to more stable and predictable income streams, increasing the *asset*'s value.

(iv) Presence (or absence) of switching costs. Switching costs are the expenses that customers incur when changing from one product or service to another. If an *intangible asset* is associated with high switching costs, customers are less likely to move to a competitor, leading to a more loyal customer base and a steadier revenue stream. This can enhance the *asset*'s value as both an investment and collateral. For example, a subscription-based service that offers personalized content or unique

experiences creates high switching costs for its users. If users have invested significant time and effort into curating their preferences within the platform, they may be reluctant to switch to a competitor, even if alternatives are available. This enhances the overall value of the technology platform as an *intangible asset*.

Importance of the individual subject *intangible asset* to the owner

When assessing the value of an intangible asset, it is essential to consider its importance to the owner, as this can significantly impact the intangible asset's inherent characteristics which will affect its potential to generate income and its overall valuation.

Attributes of the importance of the individual subject *intangible asset* to the owner include, but are not limited to:

(i) Whether the individual subject *intangible asset* is a key factor of differentiation from competitors. An *intangible asset* that serves as a primary differentiator in the market can be invaluable to a business. It may provide a competitive edge, such as a unique brand identity, proprietary technology, or exclusive rights that set the company apart from its competitors. This differentiation can lead to customer loyalty, premium pricing, and increased market share, all of which enhance the *asset*'s ability to generate income and its *valuation* as an investment or collateral.

(ii) The importance the *intangible asset* plays in the owner's marketing strategy. An *intangible asset* that is central to a company's marketing strategy is likely to be highly valuable. For example, a well-recognized trademark or a strong brand can attract customers and drive sales. If the *asset* is integral to promoting the company's products or services and achieving its marketing objectives, it can *significant*ly contribute to the company's revenue and profitability, thereby increasing its value.

(iii) The *asset*'s relative importance compared with other tangible and *intangible assets*. An *intangible asset* that is more critical to the business's success than other *assets* will likely command a higher *valuation*. Its loss or impairment could have a more substantial impact on the company's operations and financial performance, reflecting its importance in the overall *asset* hierarchy.

(iv) The amount the owner spends on creation, upkeep and improvement of the subject *asset*. The level of investment in the creation, maintenance, and enhancement of an *intangible asset* can be indicative of its value to the owner. *Significant* expenditure on research and development, legal protection, branding, or continuous improvement suggests that the *asset* is expected to provide substantial returns or competitive advantages. These investments can enhance the *asset*'s income-generating potential and its attractiveness to investors or lenders as a valuable *asset*.

Life cycle of the subject *intangible asset*

The life cycle of the subject *intangible asset* is affected by the specific characteristics of the *intangible asset* and the environment in which it is utilized. The life cycle of an *intangible asset* impacts the *asset*'s ability to generate future income and, consequently, its value. Understanding the expected life of the subject *intangible asset* and the risks of the *intangible asset* becoming obsolete enables *valuers* to understand its remaining income-generating duration.

Attributes of the life cycle of the subject *intangible asset* include the period of contractual or other legal rights and functional, technological and economic obsolescence (refer to section 7. Application of legal, functional, technological and economic factors in determining the economic lives of *intangible assets*).

4. Risk factors of *intangible assets*

Similar to business *valuation*, *valuers should* also perform an assessment of the risks associated with the individual subject *intangible asset*.

However, the assessment of risks for an *intangible asset* generally requires *significant professional judgement*. The risk profile will generally differ for each individual subject *intangible asset* as each individual *intangible asset* has its own unique characteristics, challenges and uncertainties.

Understanding the risks associated with the *intangible asset* allows users of the *valuation* report to assess the risk-return profile of the *intangible asset* and make informed decisions.

4.1. In assessing the risks for an *intangible asset*, the *valuer should* (i) identify risks; (ii) assess the significance of the identified risks and (iii) consider the identified risks in the *valuation*.

Identifying risks for an *intangible asset*

4.2. In identifying the risks for an *intangible asset*, the *valuer should* consider the risks associated with the characteristics of the *intangible asset*, the environment in which they are utilised and the importance of the *intangible asset* to the owner *(refer to Section 3. Characteristics of intangible assets and the environment in which they are utilised).*

4.3. The *valuer should* consider the following types of risks:

(i) Legal

Legal risks relate to the risk associated with the protection of the *intangible asset*, which encompasses its *jurisdictional* coverage and enforceability. *Intangible assets* may be exposed to risk of infringement, where external parties may infringe on the *intangible asset* or the *intangible asset* may inadvertently infringe on other *intangible assets*. Regulatory and compliance risks are also important where changing laws and regulations may impose new restrictions that could affect the use of the *intangible asset*.

(ii) Technological

Technological risks relate to the possibility that the technology may become obsolete due to the advent of newer, more advanced alternatives. The *intangible asset* might also face scalability challenges if the underlying technology cannot accommodate growing demand or broader applications. Additionally, there are compatibility risks if the technology does not integrate well with existing systems, as well as security risks from potential cyber threats. Dependency risks can also arise from the *intangible asset*'s reliance on external vendors, platforms, or technologies for its functionality.

(iii) Functional

Functional risks relate to the emergence of new competing *intangible assets* which could replace the subject *intangible asset*'s function, including availability of alternatives that could serve the same function. This also includes the risk that the owner or operator of the *intangible asset* may not invest adequately in capital expenditure to maintain the *intangible asset*'s operational efficiency and its potential for continued use over time.

(iv) Economic

Economic risks relate to the risk that the *intangible asset* may fail to deliver the anticipated financial returns. This could result from various factors, including but not limited to insufficient demand due to the market not developing as expected or a downturn in the demand for products or services that utilize the *intangible asset*, as well as the introduction of new competing *intangible assets*.

4.4. If the *valuer* does not possess all of the necessary technical skills, experience and knowledge to identify the risks, it is acceptable for the *valuer* to seek assistance from a *specialist* to identify certain risks, provided this is disclosed in the scope of work and the report. When a *specialist* or *service organisation* is used, the *valuer must* obtain an understanding of the process and findings to establish a reasonable basis to rely on their work based on the *valuer's professional judgement*.

Legal risks

Intangible assets, by their nature, do not possess physical substance and therefore often rely on legal mechanisms and frameworks for protection. These mechanisms and frameworks provide the necessary structure to establish and enforce the rights that underpin the *intangible assets*' identification and their ability to generate value.

Attributes of legal risks include, but are not limited to, the following:

(i) Protection risk. The risk that the *intangible asset* is not adequately protected and safeguarded through legal registration or enforcement mechanisms in the *jurisdiction* that it operates in. This may arise from weak, insufficient or expired legal protections, e.g. failure to register trademark in all relevant *jurisdictions*. Without adequate protection, the owner or operator of the *intangible asset* cannot prevent others from using the *asset*. Consequently, the *intangible asset* may have a lower earnings potential and generate a lower return compared to if it had been adequately protected.

(ii) Infringement risk. The risk of unauthorised use or exploitation of the subject *intangible asset* by a third party, e.g. counterfeit products, unauthorised reproduction of copyrighted material. Unauthorised use of the *intangible asset* can lead to loss in revenue and damage the reputation of the owner or operator of the *intangible asset*. Addressing infringement often requires litigation, which can be time-consuming and expensive, with no guaranteed favourable outcome. Consequently, the *intangible asset* may lose its attractiveness as an investment or collateral.

Additionally, it is important to consider the risk that the subject *intangible asset* inadvertently infringes on other *intangible assets*. For example, a new product or service may overlap with existing patents or trademarks held by other entities, leading to potential legal disputes. Such infringement can result in costly legal battles, the need for licensing agreements, or even the cessation of the *intangible asset's* use, further diminishing its value and utility. Therefore, understanding both the risks of infringement by third parties and the potential for the subject *intangible asset* to infringe on other *intangible assets* is crucial for a comprehensive risk assessment.

(iii) Regulatory and compliance risk: The risk of failing to comply with relevant laws and regulations, which may arise when laws and regulations governing the use of *intangible assets* change, sometimes rapidly. Non-compliance with regulations can result in penalties and mandatory corrective actions, such as modifications to the *intangible asset* or forced withdrawal of an *asset* from the market. For example, new stricter data privacy and protection laws, which allow individuals

the right to request deletion of their data may require the owner or operator of customer data, a valuable *intangible asset* for targeted marketing and analytics, to abide by such requests. This can result in deletion of large portions of the database or cease data-driven marketing activities altogether, leading to a loss of the *intangible asset*'s earnings potential and ability to monetize the *intangible asset*. Consequently, the *intangible asset* may lose its appeal for investment purposes or as a security for loans.

Technological risks

The rapid pace of innovation and evolution in technology can abruptly render *intangible assets* obsolete, causing their value to decline. As new technologies emerge which are more technologically advanced, the existing *intangible asset* may lose its relevance. This risk is particularly acute in industries characterised by rapid technological change, such as software, telecommunications, and biotechnology.

Attributes of technological risks include, but are not limited to:

(i) Technological obsolescence risk. Risk that the technology will become obsolete due to new innovations which will restrict the time period during which the *intangible asset* can generate revenue over as well as the level of future revenues, limiting the *asset*'s future income-generating potential.

(ii) Scalability risk. Risk that the technology cannot handle increased loads or adapt to broader applications in line with market demands, leading to performance degradation, restricting the ability of the *intangible asset* to capitalize on growth opportunities and limiting the *asset*'s future income-generating potential. This risk is particularly relevant for *intangible assets* such as mobile applications and software as a service (SaaS) platforms, whose value is tied to their ability to handle increasing volumes of work, transactions, or users, or to be applied across a wider range of uses as the business or market grows.

(iii) Compatibility risk. Risk that the *intangible asset*'s technology cannot be integrated seamlessly into existing systems and standards, resulting in low utility and adoption. Such incompatibility can lead to additional costs for modification or replacement and may even result in the *asset* being sidelined in favor of other alternatives.

(iv) Security risk. Risk of cyber threats, such as hacking, data breaches, and malware, which can compromise the integrity and confidentiality of the technology and the data it handles. Security incidents can lead to significant financial losses, legal liabilities, and reputational damage.

(v) Dependency risk. Risk associated with reliance on third-party vendors, platforms, or technologies. If a critical supplier fails to deliver, or if third party's technology licensing agreements are terminated, it can have a direct impact on the continuity and performance of the subject *intangible asset*, thereby impacting the *intangible asset*'s ability to be monetized.

Functional risks

Intangible assets often provide the owner or operator a competitive edge. The loss of the *intangible asset*'s utility may result in an erosion of the owner's or operator's competitive position and future earnings potential.

Attributes of functional risks include, but are not limited to, the following:

(i) Functional obsolescence risk. Risk that the function of the *intangible asset* will become obsolete, such as the emergence of new competing *intangible assets* resulting from the development of more efficient processes, cost-effective solutions, or breakthrough innovations that offer superior functionality, or due to a loss in utility. This may limit the time period during which an *intangible asset* is able to generate income.

(ii) Substitution risk. Risk of availability of substitutes or alternative *assets* or solutions that could serve the same function as the subject *intangible asset*. These substitutes or alternatives may not necessarily be direct replacements but could provide similar benefits or outcomes.

(iii) Inadequate investment risk. Risk that inadequate investment in the *asset* causes the *intangible asset* to become less competitive, less effective, or even inoperable. This underinvestment could be due to financial constraints, shifts in strategic focus, or a lack of awareness of the *intangible asset*'s maintenance needs. However, additional investment may not always translate to an increase in the value of the subject *intangible asset*, as the investment may result in newer *intangible assets* and thus making the subject *intangible asset* obsolete.

Economic risks

Economic risks can diminish the profitability of *intangible assets*, undermining the *intangible asset's* future earnings potential. For example, an economic downturn or shifts in consumer preferences can lead to a decrease in demand for products protected by patents or erode the strength of a brand. This potential reduction in future earnings and cash flows can *significant*ly lower the value of *intangible assets*.

Attributes of economic risks include, but are not limited to:

(i) Consumer demand risk. Risk of adverse change in consumer demand or consumer demand not materializing as expected. Consumer preferences and market trends are highly dynamic and can shift rapidly due to various influences such as technological advancements, cultural shifts, or economic downturns. An *intangible asset* that is critical to products or services today may become less relevant if demand for those offerings declines. Consumer demand may also fail to develop as anticipated for early-stage *intangible assets*, such as a new technology, which may lead to a decline in the value of the *intangible asset*.

(ii) Competition risk. The introduction of new *intangible assets* by competitors or changes in business strategies associated with existing *intangible assets* can disrupt the market and erode the competitive edge provided by the *intangible asset*. This could lead to a loss of market share and a decrease in the expected returns from the subject *intangible asset*.

Assessing the significance of the identified risks for an *intangible asset*

4.5. Based on the identified risks of the subject *intangible asset*, the *valuer should* assess the significance of these risks.

4.6. Some identified risks may be more *significant* than others. *Significant* risks are risks whose impact on the *valuation* could, in the *professional judgement* of the valuer, greatly impact the resultant *value*. It is important to perform risk assessment to uncover *significant* risks which may impact the *intangible asset*, and to consider such risks in the *valuation*.

4.7. The significance of the identified risk *should* be analysed taking into consideration, amongst others, inherent and external factors and mitigating controls, as detailed below:

(i) Inherent factors. Relates to the intrinsic characteristics or elements that exist within the *intangible asset*.

(ii) External factors. Relates to the environment in which the *intangible asset* is utilised, which is typically beyond its direct control.

(iii) Mitigating controls. The owner or operator of the *intangible asset* may put in place risk controls to mitigate the risks associated with the *intangible asset*. The presence and extent of the controls is related to the importance of the *intangible asset* to the owner or operator. A more important *intangible asset*, such as an *intangible asset* that is a key driver of the business, may be prioritised and controls may be put in place to reduce the risk of disruption to the *intangible asset*'s use and monetization.

The *valuer should* overlay the considerations for each of the above components in assessing the significance of the identified risk. A risk matrix may be adopted to aid the risk assessment process.

Some examples of mitigating controls are as follows:

(i) The amount the owner spends on creation, upkeep and improvement of the subject *intangible asset* to reduce technical and functional obsolescence risk of the subject *intangible asset*.

(ii) Active management of the *intangible asset*, including (i) ensuring that the *intangible asset* is adequately registered in the relevant *jurisdictions*, thus reducing the legal protection risk (ii) strict monitoring and swift enforcement of infringement such that the *intangible asset*'s monetisation strategy and potential financial performance are less impacted.

(iii) Implementation of robust operational controls to protect the use and monetization of the *intangible asset*, (e.g., robust IT security measures digital *intangible assets* from unauthorised access and cyber threats which maintain the subject *intangible asset*'s technology and data integrity and confidentiality).

A risk matrix, such as the one shown below, *may* be adopted to assess the significance of the risks to the *intangible asset*.

Types of risk	**Inherent risk (characteristics of the *intangible asset*)**	**External risk (environment in which it is utilised)**	**Mitigating controls (mitigating controls put in place by the owner/operator)**
Legal			
Technological			
Functional			
Economic			

Considering the identified risks in the *valuation*

4.8. The valuer should consider the identified and assessed risks in the selection of the valuation approach and/or by adjusting the inputs used in the valuation, which include but are not limited to:

(i) *Valuation approach*. If there is substantial risk associated with the *asset*'s ability to generate those cash flows, such as commercialisation or development risk, the *valuer* may consider adopting the cost approach instead of the income approach. The *valuer* may also consider adopting real options method to value the *intangible asset*.

(ii) *Cash flows*. The risk associated with the *intangible asset* can be factored into the cash flows by (i) the selection of the type of cash flows - single most likely set of cash flows or probability-weighted expected cash flows; (ii) adjusting the assumptions underpinning the cash flows e.g. financial metrics such as revenue growth rates, cost and profit margins as well as non-financial metrics such as period of development of the intangible asset.

(iii) *Discount rate*. Since single *intangible assets* may have more risk than group of *assets* or businesses, the *valuer* may adjust for the identified risks in the *discount rate* by analysing the relative importance and contribution of the *intangible asset* relative to the other *assets* contributing to the value of the business.

(iv) *Economic life.* There is a need to factor in the obsolescence rate and/or lack of legal protection or changes in regulations.

4.9. In considering the risks in the *valuation* of an *intangible asset*, care *must* be taken to ensure the *discount rate* is consistent with the cash flows selected. For example, if conditional cash flows are selected, the discount rate should consider the appropriate risk adjustments associated with such cash flows. Care *should* also be taken to avoid the double counting of risks in the *valuation*. For example, the risk *should* not be incorporated in both the cash flows and *discount rate* if the income approach is adopted to value an *intangible asset*.

Valuation Approach

When valuing an *intangible asset*, the *valuer should* select the most appropriate *valuation approach* based on the characteristics and risks associated with the *asset*. If there is substantial risk associated with the *asset*'s ability to generate those cash flows due to factors like market acceptance, competition, or technological viability, or with the *intangible asset*'s stage of development, the *valuer* may decide that the

income approach is less suitable. In such cases, the cost approach or real options method might be more appropriate.

Cost Approach. It is often used when there is a high degree of uncertainty regarding the future economic benefits of the *asset*, such as when an *asset* is in the early stages of development or when there is *significant* commercialization risk. It is particularly relevant when future income streams are difficult to predict or when the *asset* has yet to generate income. When utilizing the cost approach, the *valuer should* ensure the functional, technological and economic obsolescence risks have been considered. For example, when the reproduction cost is higher than the replacement cost, it may indicate that the *intangible asset* has become less efficient or less desirable compared to newer alternatives, indicating some form of obsolescence.

Real Options Method. It is particularly useful for valuing *assets* with a high degree of uncertainty such as *significant* development risk, and where the decision to continue investment can be made at various stages, depending on how uncertainties resolve over time. This method assumes that the owner of the *intangible asset* has the ability to make changes to the development, utilisation or monetisation of the *intangible asset* to adapt to the evolving market conditions, technological advancements, regulatory changes, and competitive dynamics, in a non-static set of assumptions about the future. When utilizing the real options method, the *valuer* may consider the development risk in *inputs* such as the time to maturity and variance in value of the *intangible asset.*

Cash Flows

The expected cash flows from an *intangible asset* are a critical *input* in the income approach. The *valuer should* consider the appropriate way to project these cash flows, taking into account the risk profile of the *asset*:

Type of Cash Flows:

(i) Single most likely set of cash flows that may be conditional on certain future events, e.g. when the *intangible asset* has a track record of stable and predictable cash flows.

(ii) Expected cash flows or probability-weighted cash flows that incorporate the likelihood of various scenarios occurring instead of relying on a single-point estimate. Probabilities are then assigned to each scenario based on the risk profile of the *asset* and the expected cash flows are calculated by weighting each scenario's cash flows by its probability.

Adjusting *Input*s

The assumptions underlying the cash flow projections, such as revenue growth rates, costs, and profit margins, may be adjusted to reflect the risks associated with the *intangible asset*. For example, if there is a high risk of technological obsolescence, the *valuer should* discuss with management and adjust forecasts provided to lower revenue growth rates or shorter product life cycles and any other additional capital or operating cost required to prevent or reduce the impact of such technological obsolescence.

Discount Rate

In determining the *discount rate* for an *intangible asset*, the *valuer* may consider performing the following:

(i) Determine an appropriate benchmark rate. Some benchmark rates that the *valuer* may consider include but are not limited to risk-free rate with similar maturities to the life of the *intangible asset* being valued, cost of debt or borrowing rates with maturities similar to the life of the *intangible asset* being valued, cost of equity of the entity owning/using the subject *intangible asset*, weighted average cost of capital (WACC) of the entity owning/using the subject *intangible asset*, internal rate-of-return (IRR) in context involving a recent business acquisition including the subject *intangible asset*, and weighted-average-return-on-*assets* (WARA) in contexts involving a *valuation* of all *assets* of a business.

(ii) Using the benchmark rate as a starting point, adjust for the risks of the *intangible asset* by assessing the relative riskiness of the *intangible asset* to the benchmark rate. When WACC is used as the benchmark rate, common factors considered in assessing the relative riskiness of the *intangible asset* to the riskiness of the business include, but are not limited to:

(a) Economic life of *intangible asset*: If the *intangible asset* has a relatively short economic life, the *intangible asset* may carry less risk than the whole business, which includes other tangible and *intangible assets* with a longer life. This is because businesses are typically assumed to operate indefinitely as a going concern, and are therefore exposed to a longer period of risk. In contrast, a short-lived *intangible asset* is only exposed to risk for a limited duration compared to a long-lived *intangible asset*. For example, customer contracts usually have a defined term, such as one to three years, during which the business has guaranteed revenue from its customers, compared to the business is expected to continue to perpetuity.

(b) Level of diversification of business in which the *intangible asset* is used: In a well-diversified business, the *intangible asset* is just one of many contributors to economic benefits. If the *intangible asset* is concentrated to a specific segment of the business, the risk associated with the *intangible asset* could be higher than the overall risk of the entire diversified business.

(c) Operational dependencies. If the intangible asset's value (eg, know-how or trade secret) is highly reliant on specific individuals or teams with specialized expertise, it may carry more risk than the business as a whole. The business might have broader operational capabilities and less dependency on any single individual or team, thereby reducing its overall risk.

(d) Growth profile and profitability of *intangible asset*. When the growth trajectory and profitability of the *intangible asset* differ *significant*ly from those of the business, the *asset* may be seen as either more or less risky. If the *intangible asset* exhibits higher volatility or uncertainty in its growth and profitability compared to the stable performance of the business, it may be considered riskier. Conversely, if it shows more stable and predictable growth, it may be seen as less risky.

In addition to the above, care *should* be taken to ensure consistency between the *discount rate* and cash flows used. For example, if conditional cash flows are utilized, then the *discount rate* may incorporate the additional risk associated with the conditions.

(iii) Perform analysis to assess the appropriateness of the *discount rate* such as WARA analysis. A WARA analysis involves evaluating whether the *discount rates* used to estimate the values of the individual *assets* that were valued using an income approach and the implied return on goodwill are reasonable in the context of the IRR and the WACC. The WARA is calculated as the sum of the required rates of return of all assets including normal working capital, fixed *assets*, and *intangible assets*, weighted by each *asset*'s proportionate share of the total value of the business.

While certain factors may lead to increased or decreased risk (and therefore higher or lower *discount rates*), these factors *should* not be viewed as a checklist. Rather, these factors should assist the *valuer* in determining an appropriate *discount rate* by enabling a more complete understanding of the *valuation*.

In the context involving a *valuation* of all *assets* of a business, the returns indicated by IRR, WACC, and WARA *should* be reviewed for reasonableness. If there are any material differences between the IRR, WACC and WARA, the *valuer should* reevaluate the reasonableness of the selected *discount rates*.

Economic Life

When considering risks in determining the economic life, the following factors may be considered:

(i) Obsolescence Rate. The rate at which an *intangible asset* becomes outdated or less valuable due to technological advances, market changes, or other factors *should* be considered. A higher obsolescence rate may shorten the economic life of the *asset*.

(ii) Legal Protection. The duration and strength of legal protection, such as patents or copyrights, can affect the economic life of an *intangible asset*. If legal protection is weak or nearing expiration, the economic life may be reduced.

In summary, the *valuer should* carefully consider the identified risks and how they impact the selection of the *valuation approach*, the projection of cash flows, the determination of the *discount rate*, and the estimation of the economic life of the *intangible asset*. These considerations ensure that the *valuation* reflects the true economic potential and risk profile of the *asset*.

5. Determining whether to value the subject *intangible asset* as a standalone *asset* or grouped with other *assets* (including other *intangible assets*, where applicable)

Intangible assets can hold greater value individually or, conversely, when considered as part of a group. Valuing *intangible assets* together could show synergies or a collective value that exceeds the sum of their individual parts, which can influence business decisions. In contrast, separate *valuations* highlight each *intangible asset*'s independent contributions, ensuring that risks or dependencies are not obscured when *intangible assets* are grouped.

5.1. IVS 2025 states that *intangible asset valuations* are performed for a variety of *intended uses*. It is the *valuer's* responsibility to understand the *intended use* of a *valuation*. It is also the *valuer's* responsibility to understand whether *intangible assets should* be valued separately or grouped with other *assets*[2].

5.2. In determining whether to value an *intangible asset* separately or grouped with other *assets*, the *valuer should* consider the context of the *intended use* and *basis of value*, together with the characteristics, risk profile and environment in which the *intangible asset* is utilized. The following considerations can be considered collectively or individually:

(i) Purpose of *valuation* and the specific legal/regulatory requirements. Depending on the purpose of the *valuation*, consider if there are legal, statutory, and regulatory or other authoritative requirements requiring standalone *valuation*. If no such requirements, there is flexibility to perform grouping with other *intangible assets*.

(ii) *Basis of value* and premise of *valuation*. If the basis and premise of value is best reflected by utilising the *intangible asset* separately, then consider performing the *valuation* separately. For example, the *intangible asset* highest and best use under *market value* is determined to be on a standalone basis

(iii) Distinct and identifiable characteristics. Generally, for an *intangible asset* to be distinct and identifiable, it can be separated from other assets, have a unique proposition and have a separate economic benefit. If the *intangible asset* is distinct and identifiable, it leans towards separate *valuation*.

(iv) Independent use and function. The *intangible asset* can function autonomously and can be used without assistance of other *intangible assets*. If the *intangible asset* is used independently, it leans towards separate *valuation*. If the *intangible asset* use and function is integral to other *intangible assets*, consider performing a group *valuation*.

(v) Standalone owner strategy. Where the owner of *intangible asset* has a strategic plan to monetize or invest and enhance the *intangible asset* independently of other *intangible assets*, it leans towards separate *valuation*.

(vi) Independent and distinct risk profile. Generally, where the *intangible asset* possesses a unique set of risks that can be independently evaluated and managed, separate from other assets, it leans towards separate *valuation*. Conversely, where the risks are similar or intertwined with those of other assets, such as operational dependencies, strategic

[2] International Valuation Standards (IVS) Effective January 2025, IVS 210 Intangible Assets para 20.11

alignment, financial interconnections, or reputational impacts, grouping may be more appropriate.

(vii) Normal market practice. If there are comparable market transactions which indicates sale of standalone assets (instead of a portfolio), it leans towards separate *valuation.*

(viii) Significant contribution. If the *intangible asset* significantly contributes to a business or asset group, it is likely that the *intangible asset* worth is substantial enough to warrant a separate *valuation*.

5.3. When an *intangible asset* is assessed to be valued as a group of *assets* (including other *intangible assets*), the *valuer should* determine if the *intangible assets* in question are:

(i) Similar in nature whereby the *intangible assets* have comparable characteristics or support the same product or service.

(ii) Interdependent whereby a group of *intangible assets* that are mutually dependent to fully maximise potential economic contributions.

(iii) Complementary in function whereby a group of *intangible assets* that are not mutually dependent, but when used together enhances the potential economic contributions.

In performing the *valuation* of *intangible assets* that are similar in nature, interdependent, or complementary, the *valuer should* assess the identified economic benefits and risks. This assessment can influence the adjustments to *valuation inputs*, such as cash flows, *discount rates* and economic life.

Similar *intangible assets*

When *intangible assets* exhibit similar characteristics or functions, their usage, the associated risk and economic benefits tend to be the same.

In determining whether the *intangible assets* are similar in nature, the *valuer should* consider the following:

(i) Purpose and use. Evaluate whether the *intangible assets* contribute to the business in comparable ways. For example, if both *intangible assets* are used to generate customer engagement, enhance brand identity, or protect proprietary technology, they can be similar in function.

(ii) Operational functionality. Analyze whether the *assets* are within similar business processes or functions. For example, a telecommunications company that has two major customer contracts. Both contracts involve providing high-speed internet services, and they have similar terms, such as service duration, pricing structure, and revenue-generating capacity.

(iii) Risk profile. Determine if the *intangible assets* are exposed to similar risks, such as market competition, regulatory environments, or operational dependencies. Shared risk characteristics reinforce the similarity in economic impact.

(iv) Monetization strategy. Consider if the *intangible assets* generate revenue through the same or a similar method, such as licensing, direct sales, or subscription fees. Identical monetization approaches often indicate comparable economic impacts.

(v) Economic output. Assess whether the *intangible assets* produce similar economic benefits, such as similar revenue streams, profit margins, or cash flow stability.

When valuing *intangible assets* that are similar in nature, the *valuer should* consider these factors which include:

(i) Cash flow analysis. Examine the anticipated cash flows for each *intangible asset*, ensuring that the forecasts reflect similarities in expected revenue generation, risk exposure, and timing. This analysis should align with the specific economic contributions and value drivers of the assets.

(ii) *Discount rate*. When valuing *intangible assets* that are similar in nature and justified based on their similar risk characteristics, the same *discount rate* is generally appropriate.

(iii) Economic life. Similar *intangible assets* should have the same economic lives.

Interdependent *intangible assets*

Interdependent *intangible assets* function together and separating them would disrupt their combined economic contribution. These *assets* have interdependent revenue, shared cost structure and an aligned economic life.

In determining whether the *intangible assets* are interdependent, the *valuer should* consider the following:

(i) Purpose and use. Assess whether the *intangible assets* serve a combined purpose that cannot be easily separated. For example, a proprietary algorithm and its corresponding data set that need to be used together to deliver value would illustrate integrated use and purpose.

(ii) Operational functionality. Evaluate whether the *intangible assets* rely on each other to function effectively. For example, two software modules that are designed to work together to deliver a complete product or service would be interdependent because the performance of one *asset* directly affects the functionality of the other.

(iii) Risk profile. Examine whether the risks associated with one *asset* are inherently tied to the risks of the other. For example, if a negative change affecting one *asset* would immediately impact the value or risk profile of the other, this interdependency indicates a shared risk structure.

(iv) Monetization strategy. Consider whether the *assets* are monetized as a single unit or if their revenue generation strategy requires them to function collectively. If an *asset* cannot generate revenue independently without *significantly* affecting the financial performance of the other, they are likely interdependent.

(v) Economic output. Evaluate whether the *assets* generate economic benefits that are intrinsically linked. Specifically, consider whether they share substantial costs, such as development, maintenance, or support expenses. If adjusting the costs for one *asset* directly influences the other, this indicates a cost structure that underscores their interdependency.

When valuing *intangible assets* that are interdependent, the *valuer should* consider these factors which include:

(i) Integrated cash flow analysis. The *valuer* should project cash flows on an integrated basis to capture combined benefits like shared revenue, cost savings, or efficiencies.

(ii) *Discount rate*. Apply a *discount rate* that reflects the combined risk profile of the interdependent *assets*. Since the *assets* are linked in performance and risk factors, one *discount rate* incorporating the risks factors of the interdependent *intangible assets* is generally justified.

(iii) Economic life. Determine if the economic life of one *asset* is dependent on the continued existence or performance of the other. If the economic life of one *asset* would change *significant*ly without the other, this reflects interdependency.

Complementary *intangible assets*

Complementary *intangible assets* enhance each other's value when used together, although each *intangible asset* retains independent functionality. Individually, they each contribute value but when combined they generate additional benefits or synergies.

In determining whether *intangible assets* are complementary, the *valuer should* consider but are not limited to the following factors:

(i) Purpose and use. Evaluate whether the *intangible assets* work together to enhance value or performance. For example, a software platform and its complementary user training materials, which together improve user adoption and effectiveness, demonstrate a synergistic relationship.

(ii) Operational functionality. Assess whether the *assets* are used in conjunction to optimize processes or operations. For example, a CRM system that integrates seamlessly with a sales analytics tool to improve sales performance suggests operational interdependence.

(iii) Risk profile. Analyze how the risk characteristics of each *asset* align. Complementary *assets* may help balance or mitigate risks when combined, potentially creating a more robust economic profile.

(iv) Monetization strategy. Review how each *asset* contributes to revenue generation separately and when bundled. A monetization model that leverages the combined use of the *assets*, leading to higher revenue or market advantage, is an indicator of complementarity.

(v) Economic output. Assess the incremental value produced when the *assets* are used together, as compared to their standalone economic contributions. The greater the additional economic output, the stronger the case for classifying them as complementary.

When valuing *intangible assets* that are complementary, the *valuer should* consider these factors which include:

(i) Synergistic cash flow analysis. The *valuer* may consider cash flows on synergistic basis to capture combined benefits like shared or increased revenue, cost savings, or efficiencies.

(ii) *Discount rate*. Use a *discount rate* that reflects the specific risk profile of each *asset* but also account for potential risk mitigation benefits when the *assets* are used together. If the combined use of the *assets* reduces overall risk exposure, an adjusted *discount rate* may be appropriate.

(iii) Extension of economic life. Consider whether the economic life of one *asset* enhances or extends the value of the other. For example, if a patented product extends the demand for a related trademark, this can be reflected in the *valuation* of both *assets*. However, unlike interdependent *assets*, each *asset* can still have its own economic life, even if benefits are maximized when used together.

6. Determining a hypothetical royalty rate for *intangible assets valuation*

Intangible assets possess a unique nature, which can lead to varying royalty rates when assessing their value or licensing potential. As a result, *valuers* often face challenges when determining an appropriate royalty rate due to factors such as the *intangible asset*'s distinct characteristics, market conditions, and industry-specific nuances. This guidance outlines key considerations that *valuers* may take into account, offering helpful insights for establishing a hypothetical royalty rate.

6.1 IVS 2025 states that one of the steps a *valuer should* perform in applying a relief-from-royalty method is to develop a royalty rate for subject *intangible asset*.

6.2 There are three common methods that can be used to derive a hypothetical royalty rate.

(i) The first is based on market royalty rates for comparable or similar transactions. A prerequisite for this method is the existence of comparable *intangible assets* that are licenced at arm's length on a regular basis.

(ii) The second method is based on the split of profits that would hypothetically be paid in an arm's length transaction by a willing licensee to a willing licensor for the rights to use the individual subject *intangible asset*.

(iii) The third method assumes a hypothetical return on Research and Development ("R&D") costs. This approach estimates the hypothetical royalty rate by determining how much money was spent on the development of the *intangible asset* and add to that a return on cost.

The use of comparable or similar transactions method to determine royalty rate is recommended as these transactions provide market-based *data* points which reflect the negotiated rates that market participants are willing to pay. Such transactions would have considered the specific context of the industry, including economic conditions, competitive landscapes, and technological advancements of the relevant *intangible asset*. From a legal and regulatory perspective, market-based methods are also generally preferred as it allows for benchmarking and comparison in legal disputes and when negotiating with the regulatory authorities such as tax authorities.

Profit split is a method used to determine a hypothetical royalty rate based on the division of profits that would hypothetically be paid between a willing licensor and licensee from the use of the *intangible asset*, particularly when the *intangible asset* plays a significant role in the product or service's success.

The R&D cost method for determining royalty rates focuses on the costs incurred in creating and developing the *intangible asset*. The method offers a transparent justification of the royalty rate based on actual costs incurred. This method is often used in technological related *intangible assets* when the *intangible asset's* value is closely related to the development costs and when there is limited market *data* available for comparable. It is also applicable where a market participant would not be willing to pay a significant premium for the ability to use the subject *intangible asset* immediately.

6.3 In deriving a hypothetical royalty rate based on comparable or similar transactions method a *valuer should* undertake the following steps in analysing the identified list of comparable or similar transactions, such as licensing agreements:

(i) Understand the terms of the licensing agreements.

The terms of licensing agreement would include but are not limited to:

(a) Specific rights transferred to the licensee and any limitations:

- Scope rights;
- Territory;
- Exclusivity;
- Duration of the licence period;
- Termination clauses;
- Technical assistance;
- Fields of use;
- Sublicensing;
- Improvements and derivatives, and
- Restrictions.

(b) The payment structures:

- Minimum guarantees;
- Upfront payments*;*
- Performance milestone payments*;*
- Royalty rate on gross or net sales
- Puts/calls to acquire the licenced property outright; and
- Royalty rate structure.

(ii) Analyse the differences between the identified comparable licensing agreements and how such differences affect their royalty rates. For example, a global licence may warrant a higher royalty rate than one limited to a narrower region.

(iii) Where applicable, make adjustment to the observed royalty rate in relation to the specific rights of the *intangible asset*, external environment as at *valuation date*, and cash flows applicable to the *intangible asset.*

(a) Where the scope of the subject *intangible asset* is observed to be less advantageous than that of the comparable licensing agreements, it may justify applying a lower royalty rate.

(b) If the external environment pertaining to the *intangible asset* as at the *valuation date* is observed to be more advantageous than that of the dates of the comparable licensing agreements, it may warrant applying a higher royalty rate.

(c) For the varying payment structures, the *valuer should* ensure that the estimated royalty rates are adjusted to be consistent with the cash flows.

- In the event where the cash flows for the subject *intangible asset* have not been adjusted to account for payment structures observed in the comparable licensing agreement, the royalty rate will need to be adjusted to reflect these differences.

- Conversely, if the cash flows have been adjusted to factor in the payment structures observed in the comparable licensing agreement, the royalty rate can be utilised without further modification from the observed royalty rate.

In order to determine the hypothetical royalty rate, the *valuer should* also assess all relevant factors collectively in addition to characteristics and the environment in which it is utilized.

While the comparable or similar transactions method can provide valuable insights, it also has several limitations. It can be challenging to find truly comparable licensing agreements, especially for unique or highly specialized *intangible assets*. The lack of publicly available *data* on private transactions further complicates this issue. Even when comparable or similar transactions are available, variations in key terms such as exclusivity, territory, field of use, and duration can make direct comparisons challenging. Additionally, market conditions evolve over time, and a rate that is considered standard in the past may no longer be applicable today. Economic factors, industry trends, and changes in consumer demand can all affect the relevance of historical agreements.

Therefore, understanding the terms of the licensing agreement is crucial when analysing the royalty rate as they provide context on the scope of rights, limitations, and payment structure between the licensor and licensee. A thorough understanding of these terms is essential to appreciate the value exchanged in the licensing arrangement which is reflected in the form of royalty payments.

(i) Scope of Rights. The agreement outlines the specific rights being licenced, such as the ability to use a patent, trademark, or copyright. The breadth and depth of these rights can impact the value of the licence and, consequently, the royalty rate.

(ii) Territory. Refers to the geographic scope in which the licenced *intangible asset* can be used. A global licence may warrant a higher royalty rate than one limited to a narrower region, as it offers access to a larger market with greater revenue potential.

(iii) Exclusivity. Exclusive licences typically command higher royalty rates because the licensee gains the sole right to use the *intangible asset* within a certain territory or market, which can provide a competitive advantage. Non-exclusive licences may result in lower royalty rates since the licensor can grant similar rights to multiple parties.

(iv) Duration of the licence period. The length of the licensing agreement can influence the royalty rate. Longer agreements provide the licensee with extended access to the *intangible asset*, potentially increasing the overall market potential and justifying a higher royalty rate to reflect this benefit. Conversely, shorter agreements may reduce the market potential and utility for the licensee, which may support a lower royalty rate to account for the limited timeframe.

(v) Termination clauses. Conditions under which the agreement can be terminated which include breach of contract or failure to meet sales thresholds, can affect the royalty rate, especially if there are penalties involved.

(vi) Technical assistance. The support provided by the licensor to the licensee, which include training, expertise in product development, ongoing technical support, and assistance in maintaining quality standards. Technical assistance in a licensing agreement enhances the value of the licence and supports the licensee's success, which can justify a higher royalty rate.

(vii) Field of use. Some licences restrict the use of the *intangible asset* to specific fields or industries. A broader field of use can increase the royalty rate due to the greater commercial opportunities available to the licensee.

(viii) Sublicensing. The ability to sublicence can affect the royalty rate. If the licensee can sublicence the *intangible asset*, the licensor may seek a higher rate or a share of sublicensing revenues.

(ix) Improvements and derivatives. The handling of improvements to the *intangible asset* or derivative works can influence the royalty rate. If the licensee is allowed to retain rights to improvements, the licensor may require a higher royalty rate to compensate for the additional value created by the licensee.

(x) Restrictions. Restriction clauses can *significant*ly affect the royalty rate by limiting how, where and by whom the licenced *intangible asset* can be used. These limitations can either increase or decrease the perceived value of the licence to the licensee, which in turn influences the royalty rate.

The different payment structures may also affect the royalty rate. This could be a percentage of sales, profitability measures such as gross operating profit, a fixed amount per unit, or a combination of different payment structures. It may also include minimum guarantees, upfront payments, or lump-sum payments, all of which impact the overall financial return for the licensor.

(i) Minimum Guarantees. Minimum annual royalties guarantee the licensor a certain income regardless of sales. Minimum guarantees reduce the licensor's risk if the licensee's sales underperform. This security can sometimes justify a lower royalty rate because the licensor is assured of receiving a certain revenue regardless of sales.

(ii) Upfront Payments. An initial lump-sum payment can be credited against future royalties or considered separately, influencing the ongoing royalty rate. Upfront payments provide immediate cash flow to the licensor, which can be attractive, especially if there is a need for immediate funding. This might allow for a lower ongoing royalty rate since the licensor receives a portion of the compensation upfront.

(iii) Performance milestone payments. Agreements may include performance milestones that the licensee are required to meet, such as minimum sales targets or development benchmarks. These milestones may potentially include a lower rate for initial periods followed by higher rate upon achieving certain goals.

(iv) Gross or net royalty rate. The definition of the base upon which royalties are calculated such as net sales, gross sales, or a different base will directly impact the effective royalty rate.

(v) Puts/calls to acquire the licenced property outright. A put/call option in a licensing agreement gives one party the right (but not the obligation) to sell (put) or buy (call) the licenced property outright at a predetermined *price* within a specified timeframe. If the licensee has a call option, they may be willing to accept a higher royalty rate knowing they have the option to acquire the *intangible asset* outright later. Conversely, if the licensor has a put option, they might accept a lower royalty rate with the security of being able to sell the *intangible asset* in the future.

(vi) Royalty rate structure. A tiered rate that changes with the level of sales, or a combination of a fixed fee per unit plus a percentage of sales.

The above terms are often interrelated, and changes in one aspect can lead to adjustments in others. It is important to consider the entire context of the licensing agreement when determining the appropriate royalty rate.

To analyse the differences between identified comparable licensing agreements and how such differences affect their royalty rates involves a systematic approach to evaluate and compare various factors that influence the royalty rates. The following steps can be adopted:

(i) *Data* collection and selection of comparable. The *valuer should* use *data* from licensing agreements that are comparable to the subject *intangible asset* in terms of industry, technology, market, and other relevant factors. Select comparable with similar characteristics.

(ii) Detailed analysis of agreement terms. Identify and list the key variables that affect royalty rates, such as exclusivity, territory, field of use, duration, sublicensing rights, and any other relevant terms to facilitate comparison amongst the licensing agreements.

(iii) Royalty rate comparison. Compare the royalty rates of the agreements, considering the differences in terms and conditions. Identify any factors that may require adjustments to the royalty rates for a fair comparison, such as market conditions at the time of each agreement. Additionally, determine any correlation between the terms of the agreements and the observed royalty rates.

(iv) Identify differences and impact on royalty rates. For each comparable, identify how the terms differ from the subject *intangible asset*'s potential monetization terms. Assess how these differences may affect the subject *intangible asset*'s royalty rate, such as in cases of perpetual versus fixed-term agreement.

When adjusting the observed royalty rates to account for differences in agreement terms, market conditions, and other variables that could skew a direct comparison, the following considerations can be adopted:

(i) Terms adjustment. Evaluate the terms of the subject *intangible asset* relative to the comparable. If the subject *intangible asset*'s terms are less advantageous where there is a narrower field of use, consider applying a lower royalty rate to reflect the reduced utility and market potential. For agreements with perpetual terms, consider how the lack of an expiration date might justify a higher royalty rate compared to fixed-term agreements and adjust the royalty rates to account for differences in term length, ensuring a like-for-like comparison.

(ii) External environment adjustment. Analyze the external environment at the *valuation date*, including market conditions, regulatory changes, and economic factors. If conditions are more favorable than at the time of the comparable, adjust the royalty rate upwards to reflect the improved environment. Some of the examples of the analysis include but not limited to:

   (a) Market condition analysis such as market demand/trends, competition and technological advancements. High demand can command a higher royalty rate, while increased competition may justify a lower royalty rate. New technologies may make the *intangible asset* more valuable, supporting higher royalty rates.

   (b) Regulatory change assessment such as legal environment and compliance costs, which can impact the profitability of the *intangible asset* and consequently, the royalty rate.

(c) Economic factors analysis such as overall economic environment, including factors like inflation rates, interest rates, and economic growth. Economic downturns may lead to lower disposable incomes and reduced sales, affecting royalty rates. Also, a licensor may grant a licensee a lower royalty rate in a new or untested market.

For example, consider a valuation for CloseAI, a patented Artificial Intelligence ("AI") software designed for Natural Language Processing ("NLP") and generative AI applications. The valuer identifies a comparable licensing agreement from RoyaltySource from five years ago, where a similar AI technology was licensed at a 5% royalty rate. However, change in the external environment today supports an upward adjustment based on the following factors:

Market condition analysis:
Growth in AI adoption: Five years ago, AI was mainly used for basic NLP tasks such as chatbots. Today, generative AI is integral to mission-critical business applications across industries such as finance, healthcare, legal, and customer support. This broader, strategic integration of AI exemplified by CloseAI makes licensing agreements more valuable today than five years ago.

Regulatory change assessment:
Stricter AI regulations now demand higher compliance for transparency, bias mitigation, and data privacy. These increased compliance costs mean that AI developers, including those behind CloseAI, incur greater expenses than five years ago.

Economic factors analysis:
Licensees now face higher operational costs due to higher inflation but benefit from cheaper financing due to the low-interest rate environment. As a result, they are more inclined to invest in premium, cost-saving technologies like CloseAI.

These shifts all point toward a higher royalty rate for CloseAI compared to the historical 5% rate. While a precise range requires further analysis, the current environment clearly justifies an upward adjustment to better reflect CloseAI's enhanced value and strategic importance.

(iii) Cash flow consistency. Examine the payment structures of the comparable and align with the projected cash flows of the subject *intangible asset*. Ensure that the royalty rates are consistent with the cash flows applicable to the subject *intangible asset* and adjust the royalty rate to reflect the differences in cash flows between the subject *intangible asset* and the comparable. For example, when the subject *intangible asset*'s cash flows cannot be adjusted for expenses observed in the comparable, adjust the royalty rate to account for these differences. If cash flows have been adjusted for such expenses, the observed royalty rate can be adopted without further modification.

(iv) Adjustment to royalty rates. Rather than subjectively adjusting the royalty rates, *valuer* can consider the following possible ways to account for the adjustments in determining the royalty rates:
   (a) Modified royalty rates to account for the observed differences. For example, where there is an upfront payment, imply what would the royalty rate be, without the upfront payment, keeping sales constant.
   (b) Use of regressions on the key variables to predict the royalty rate for the *intangible asset*. This approach works when the number of comparables is large and the relationship between the royalty rate and the variable can be established.

(c) Scoring and rating techniques by determining the key variables that influence royalty rates and assigning *weight* to each variable based on their relative importance in affecting royalty rates, thereby quantifying the difference between the subject intangible and comparable transactions.

For example, consider a situation where post discussion with the management, the valuer determined that revenue-based computations should be used to derive the royalty rate for a patent.

The valuer identified a comparable licensing agreement that includes an upfront fee, necessitating an adjustment for meaningful comparability. The comparable licensing agreement have the following terms which includes a $15,000 upfront fee, 3.5% stated royalty rate, $40,000 annual net sales and a license term of 4 years.

The valuer calculates the royalty income based on the stated 3.5% rate and with an annual net sales of $40,000 which results in $1,400 royalty income per year. Over the four-year term, the total royalty income amounts to $5,600. To determine the total expected royalty income, the valuer incorporates the $15,000 upfront fee, bringing the total expected royalty income which includes the upfront fee to $20,600.

The valuer then computes the adjusted royalty rate excluding the upfront fee by dividing the total expected royalty income which includes the upfront fee of $20,600 by the total net sales over the license term ($40,000 x 4 years), which totals to $160,000. The adjusted royalty rate is determined to be 12.88%.

In this example, while the original agreement states a royalty rate of 3.5% with a $15,000 upfront fee, the effective rate on annual net sales is higher when the upfront fee is factored into the total expected income. By spreading the total income over the license term, the adjusted royalty rate is calculated to be 5.65%. This adjustment ensures that, when comparing with other licensing agreements, the economic substance of the fee structures is properly accounted for, resulting in a more meaningful comparison.

6.4 Profit split analysis intends to split (or allocate) some measure of owner/operator income and assign that allocated income to the *intangible assets*.

6.5 When determining a royalty rate using the profit split method, a *valuer* can consider the following methods:

(i) Comparable Profit Split. This method analyses profit splits in comparable agreements within the same industry for similar types of *intangible assets*. Adjustments are made for differences in terms and conditions, and the profit split ratio from comparable is used as a benchmark to determine the royalty rate.

(ii) Asset Class Split Method: This method determines a royalty rate by allocating excess profits to each *intangible asset* based on its respective economic contribution, determined by the invested capital and its required rate of return.

(iii) Premium Contribution Method: In this approach, the royalty rate is determined by assessing the additional premium contributed by the *intangible asset* in terms of its average selling price, operating profit, incremental income stream.

(iv) Rule of Thumb Method: The Rule of Thumb method in the context of profit split refers to a method used to allocate profits such as a percentage of EBIT, EBITDA, gross profits based on general industry practices, historical precedents, or commonly acceptable ratios.

It is important to note that the profit split method is applicable in the following circumstances:

(i) Either or both parties make unique and valuable contributions to overall profit of the business transaction.

(ii) Contributions of the licensor and/or licensee cannot be reliably evaluated in isolation from each other.

(iii) The parties either share responsibility for economically *significant* risks or individually take on closely related risks.

When determining a profit split, various profitability measures (such as net profit, gross profit, EBIT, contribution margin, etc.) can be used to assess the financial performance of the product or service that incorporates the *intangible asset*. These measures help in calculating the share of profits that is allocated to each party and can be considered in the following manner:

(i) Net Profit. Royalty rates determined by net profit ensure that the licensor shares in the success of the product or service only after the licensee has covered all costs and ensured the business's sustainability.

(ii) Gross Profit. Using gross profit to determine royalty rates focuses on the profitability of the core business activities and can be suitable when the *intangible asset* is directly tied to the production process or product itself.

(iii) EBIT. Using EBIT to determine royalty rate is relevant when the licensor and licensee want to split profits based on the operational success of the business, independent of financing decisions or tax strategies.

(iv) Contribution margin. Using contribution margin to determine royalty rate is relevant for products or services where variable costs are a *significant* portion of the total costs, and the *intangible asset* has a direct impact on sales volume or pricing. Royalty rates based on the contribution margin ensure that the licensor shares in the profits from each unit sold after variable costs are covered.

The Comparable Profit Split method involves analyzing profit splits from comparable agreements to determine an appropriate royalty rate. Depending on the transaction's specifics, additional methods such as contribution analysis and residual analysis, may provide further insights to refine the profit split. The steps in applying the method involve:

(i) Identify comparable joint venture, partnership or similar agreements by defining criteria for what constitutes a comparable agreement, such as industry, *intangible asset* type, market, and size of the entities involved.

(ii) Analyze the agreements for the key terms from each agreement that impact profit splits, such as exclusivity, territory, field of use, duration, and sublicensing rights.

(iii) Gather specific *data* and assess the profit split percentage based on the following ways:

(a) Gather specific *data* from agreements and account for variations in the terms, market conditions and *intangible asset* significance. After making adjustments, analyze this profit split percentage and establish a range of profit split percentages based on these comparable agreements;

(b) Consider using contribution analysis to assess the relative value of each party's contributions. This can involve analyzing *asset*-based factors such as operating *assets*, production *assets* or *intangible assets* contributed, and cost-based factors such as R&D, marketing, or operational expenses incurred, which influences the profit split allocation; or

(c) When considering using residual analysis, this involves dividing the contributions into two categories. For contributions that are simpler, such as routine distribution services and can be reliably benchmarked, a return can be estimated by comparing net profit margins of the parties being evaluated to those of independent entities engaged in similar transactions that are representative of industry standards. The second category involves more complex, unique contributions that are harder to benchmark. In this case, any remaining residual profit is allocated based on the relative value of these contributions, often using *asset*-based factors or cost-based factors.

(iv) Determine the royalty rate range by applying the profit split percentage to the projected profits from the monetization of the *intangible assets* to determine a range of potential royalty rates.

The asset class split method focuses on an economic value-added perspective by capitalizing certain costs which have an economic benefit beyond the period in which they are incurred, rather than expensing them. This method can be applied as follows:

(i) Identify the *intangible assets* and related expense categories such as R&D expenses or advertising and promotional expenses, that will be reclassified as investments and capitalized.

(ii) Identify and analyze historical expenses for each of the *intangible asset* from a market participant perspective, which may involve removing certain excess inefficiencies from historical costs. The period over which the expenses would be accumulated depends on the period of the economic benefit of the respective capitalized expenses.

(iii) Estimate the economic lives for the *intangible assets* based on its period of economic benefit.

(iv) Capitalize the identified relevant expenses over their estimated economic lives and apply amortization to determine the average balance of the capitalized amount. This balance reflects the reasonable level of invested capital for the *intangible assets*.

(v) Estimate the after-tax rate of return to apply to each of the *intangible asset's* invested capital amounts. The selection of these rates considers the related risk associated with achieving the expected return on investment.

(vi) Apply the selected rates of return to the calculated invested capital amounts for the *intangible assets* to arrive at the return on invested capital (ROIC). This serves as a proxy for splitting the excess profits and provide an indication of the relative contributions of the *intangible assets*.

(vii) Allocate the excess profits according to the return on invested capital (ROIC) for each *intangible asset*. The valuer should also include the total development expenses when calculating the total excess profits allocated to the *intangible assets* which represents the return of invested capital. The total implied excess profit should encompass both the return on and return of invested capital.

(viii) Calculate the total implied excess profit which includes the return on invested capital and the total development expenses.

(ix) Determine the royalty rate based on the calculated total implied excess profit attributable to the *intangible assets* which can be represented as a percentage of sales.

The premium contribution method for determining royalty rates involves estimating the additional value or "premium" that the *intangible asset* contributes to a product or service and then calculating the royalty as a share of that premium. The steps in applying the method involve:

(i) Identify the unique benefits or advantages the *intangible asset* provides to the product or service. This could be brand recognition, technological innovation, or any other feature that enhances the product's appeal or functionality.

(ii) Estimate the incremental revenue through new market opportunities or product lines enabled by the presence of the *intangible asset*, or higher selling price that can be attributed to the *intangible asset*. This could involve market research, consumer surveys, or analysis of sales *data* for similar products without the *intangible asset*.

(iii) Assess the incremental profits by estimating the additional revenue generated by the premium associated with the *intangible asset* and deducting any additional *costs* incurred in producing or marketing the *intangible asset* -enhanced product from the incremental revenue. The result is the incremental profit attributable to the *intangible asset*.

(iv) Determine the royalty base by selecting whether the royalty will be based on incremental revenue, incremental profit, or another financial metric that reflects the premium contribution of the *intangible asset*.

(v) Determine the royalty rate based on the calculated premium contribution (based on incremental revenue, incremental profit, or another financial metric) which can be represented as a percentage of sales.

The Rule of Thumb method typically involves using generalized, often simplified, benchmarks or ratios to determine royalty rates. These benchmarks are based on conventional wisdom or common practices observed across various deals within or across industries. It often lacks precision, not reflective of the unique value of the subject *intangible asset* and industry averages *data* may be outdated. Nonetheless, rule of thumb benchmarks can still play a role in informing or supplementing the profit split analysis by providing a reference point for what might be considered standard or acceptable in the industry.

Rule of Thumb Method should not be given substantial *weight* unless it can be justified by the *valuer* as to why significant reliance is placed. *Valuers should* exercise professional discretion in selecting the most appropriate primary method for determination of the hypothetical royalty rate. In cases where the Rule of Thumb method is deemed suitable for use beyond cross-checking purposes, the *valuer's* judgment and rationale *should* be well documented to ensure clarity and compliance with best practices.

6.6 In determining the hypothetical royalty rate using the R&D cost method (that is, hypothetical return on R&D costs approach), the key steps are:

(i) Determine the total R&D *costs* associated with the *intangible asset*.

(ii) Determine the R&D *costs' returns*, reflecting the compensation that market participants would require for investing in the *intangible asset* which accounts for the following components of return:

(a) Return of R&D *costs*

(b) Return on R&D *costs*

(iii) To determine the hypothetical royalty rate, the total of both the return on and return of R&D *costs should* be divided by the total projected revenue expected to be generated by the *intangible asset* over its economic life.

The total R&D *costs* elements may differ depending on the type of *intangible asset* and the *valuer should* include the direct and indirect *costs* that would be required during the R&D process. Some common items to consider include, but are not limited to:

(i) Direct *costs*:
- (a) Materials, and
- (b) Labour

(ii) Indirect *costs*:
   (a) Transport costs
   (b) Installation *costs*
   (c) Professional fees (design permit, architectural, legal, etc.)
   (d) Overheads
   (e) Taxes
   (f) Finance costs (eg., interest on debt financing), and
   (g) Other fees (commissions, etc.)

In determining the R&D costs' returns, the *valuer should* calculate the appropriate returns, namely:

(i) The return of R&D costs. This refers to the recovery of total investment made throughout the R&D process to develop the *intangible asset*, whether it is completed or still in process. For completed *intangible asset*, this ensures the investor recovers the initial investment made to develop the *intangible asset*. For in-process *intangible asset*, the *valuation* will need to consider the investments incurred to date and project the future investments required to bring the *intangible asset* to completion. This component ensures that the investor recovers the total amount spent on research and development over the *asset*'s economic life. The return of R&D costs is calculated by the total R&D expenses over the economic life of the *intangible asset*.

(ii) The return on R&D costs. This represents an appropriate profit or compensation for the risks and efforts associated with developing the *intangible asset*. This return *should* reflect the opportunity cost of capital for the level of risk undertaken during the R&D process. The *valuer should* consider the following key factors when determining the return on R&D costs such as:
   (a) Level of risk and uncertainty. The return on R&D costs should reflect the inherent, external and mitigating control risk factors explained in *Section 4: Risk factors of intangible assets*. If the *valuer's* assessment identifies *significant* inherent or external risks with limited effective mitigating controls, the required return should be higher than that of an *intangible asset* with lower risk and uncertainty. This higher return reflects the need to compensate for the additional uncertainty, potential variability in outcomes, and the substantial risks and efforts associated with developing the *intangible asset*.

   (b) Stage of development of the *intangible asset*. The return on R&D costs should reflect the *intangible asset's* stage within the development lifecycle. Early-stage *intangible assets* involve high uncertainty and risk, requiring higher returns. As the *intangible asset* advances and risks are mitigated, such as after prototype testing or regulatory approval, the required return may decrease, though it remains higher than for established *intangible assets*.

   (c) Financing and capital structure. When R&D is financed through debt, the cost of debt and the related financial risk need to be considered. On the other hand, if the project is funded with equity, the required return needs to align with the higher cost of equity, reflecting the greater risk borne by equity investors. If the R&D project is financed using a combination of debt and equity, the return on R&D costs can incorporate the weighted influence of both funding sources, typically represented by the company's Weighted Average Cost of Capital (WACC).

Thereafter, the hypothetical royalty rate can be determined based on the total R&D costs and the projected revenue.

Similar to the Rule of Thumb Method, the R&D *costs* approach should not be given substantial *weight* unless the *valuer* can provide justification for significant reliance on it, as the R&D costs often lacks precision and is based on historical expenditures rather than future economic benefits which may not directly correlate with the intangible asset's value.

7. Application of legal, functional, technological and economic factors in determining the economic lives of *intangible assets*

An important consideration when valuing an *intangible asset* is its economic life. The economic life of an *intangible asset* is crucial because it provides insight into the duration whereby the *asset* remains viable and productive, thereby affecting its expected risk, returns and corresponding value. Understanding an *intangible asset*'s economic life aids the owner or operator in strategic planning, including investment timing, resource allocation, and lifecycle management of products or services. For investors and lenders, the economic life of an *intangible asset* is used to determine suitable investment horizons and financing terms, ensuring they align with the expected lifespan of the *intangible asset*.

The economic life of an *intangible asset* in the context of a *valuation* is a different concept than the remaining useful life for accounting or tax purposes.

7.1. Economic life is how long it is anticipated that the *intangible asset* could generate financial returns or provide a non-financial benefit in its current use. It can be finite or indefinite.

7.2. Unless otherwise affected by the functional, technological or economic obsolescence, the economic life of an *intangible asset should* generally commensurate with that of the period of the contractual or other legal rights, because upon the expiry of the legal protection, the *intangible asset* becomes vulnerable to imitation or replication in the market, which can *significant*ly diminish its value and the financial returns it generates.

7.3. In determining the period of the contractual or other legal rights, *valuer should* consider the following:

(i) Legal protection period

(ii) Contractual term associated with the use of the *intangible asset*

(iii) Ease of renewal of such protection period or contractual terms

7.4. When the contractual or other legal rights that are conveyed for a limited term can be renewed, the economic life of the *intangible asset should* include the renewal period(s) only if there is evidence to support renewal by the entity is both likely and economically feasible.

Many legal rights to *intangible assets* are granted for a limited term, with options for renewal. The process, conditions, costs, and limitations on the number of renewals can *significant*ly affect the duration of these rights. For example, trademarks in many *jurisdictions* can be renewed indefinitely, but this typically requires active use and periodic renewal fee payments. The evaluation of economic life *should* include the renewal periods only if renewal is both likely and economically feasible. To justify including renewal periods in the economic life, there *should* be evidence indicating that market participants would intend to renew and that such renewal can be achieved at a cost that is economically beneficial to the extended economic benefit.

7.5. If the *intangible asset* is affected by functional, technological, or economic obsolescence prior to the expiry of the period of contractual or other legal rights, the economic life of the *intangible asset should* be shorter than that of the period of contractual or other legal rights.

7.6. In assessing the impact of functional, technological and economic obsolescence on the *economic life*, *valuers should* consider the following non-exhaustive list of factors:

(i) Functional. When there is loss of utility resulting from ineffectiveness and inefficiencies in the subject *intangible asset's* characteristics such as its design, specifications as compared with its replacement.

(ii) Technological. When a technology, product, or service becomes outdated or no longer useful due to advancements in technology.

(iii) Economic. When there are changes in the economic environment, market conditions and other external influences that negatively impact the *intangible asset*'s ability to generate income or maintain its value.

In order to determine the impact of functional, technological or economic obsolescence on economic life, *valuers* will need to understand the (i) external environment such as market trends, competitive landscape, consumer preferences, (ii) characteristics of the subject *intangible asset* as compared to the competition, and (iii) importance of subject *intangible asset* to owner of the asset. *Valuers* may consider the following non-exhaustive list of methods:

(i) Enquire the Research & Development ("R&D") team who developed the *intangible asset*: The R&D team responsible for developing the *intangible asset* can provide valuable insights into the *asset*'s design, intended use, and adaptability to changing market demands or technological advancements, which can influence its susceptibility to obsolescence.

(ii) Enquire the commercial team involved in monetizing the *intangible asset*: The commercial team can provide insights into the *intangible asset*'s monetization strategy as well as the competitive environment in which the *intangible asset* operates, which enables *valuers* to understand the potential for economic obsolescence associated with the *intangible asset*.

(iii) Engage an industry *specialist*: Consult with an industry *specialist* to understand the economic life of the *intangible asset* and the pattern of decay of value due to obsolescence over the economic life. An industry *specialist* can provide insights into industry trends, competitive dynamics, and technological advancements that could affect the *asset*'s utility and longevity. An industry *specialist* can also offer perspective on regulatory changes, market shifts, and consumer behavior patterns that may not be immediately apparent to those outside the industry. By leveraging the expertise of an industry *specialist*, the *valuer* can better understand the factors that contribute to the *asset*'s economic life and make more accurate predictions about its potential obsolescence.

(iv) Analysis of survival curves: Survival curves are statistical tools used to model the economic life of an *asset* by analyzing the rate at which similar *assets* have historically ceased to be used or have become obsolete. For example, the rate of obsolescence can be straight line or double declining. Some common types of survival curves include Iowa curves and Weibull distributions. Survival curves are usually based on physical assets. However, if the *intangible asset* is used in conjunction with a physical asset, such as a product, the rate of obsolescence of the physical product may serve as an indication for the rate of obsolescence for the associated *intangible asset*. The *valuer* should

determine an obsolescence pattern and period that best fits the characteristics of the product that the *intangible asset* is used in conjunction with and the industry the product relates to. The chosen curve should reflect the product's historical patterns of obsolescence. By analyzing survival curves, the *valuer* can estimate the decline in value of an *intangible asset* due to obsolescence.

(v) Analysis of historical financial performance and market share of products or services which the *intangible asset* is used in: Assessing the market share of the products or services which the *intangible asset* is used in relative to its competitors can provide an indication of the rate of obsolescence. *Intangible assets* associated with products or services that have a smaller market share tend to be more susceptible to competitive pressures and are likely to be phased out more rapidly compared to those that are market leaders. Another factor is relative revenue growth. If the *intangible asset* experienced slower growth or a more rapid decline than the market average, it is likely to become obsolete more quickly than other *intangible assets*. Lastly, profitability of the *intangible asset* may also affect how quickly the *intangible asset* becomes obsolete. The more profitable an *intangible asset* is relative to its competitors, the more likely that it will survive until the final consolidation in its category. The relative historical speed of change in market share, revenue growth and profitability may provide a proxy for the rate of obsolescence.

(vi) Analysis of industry consolidation cycle: The industry concentration, which refers to the number of firms serving the total production, sales, or market share within a particular industry, affects the speed of industry consolidation, which in turn influences the obsolescence rate. During the emerging phase of an industry, the concentration rate tends to be quite high, characterized by a limited number of competitors. As this new market becomes more attractive, an increasing number of competitors will enter, leading to a reduction in the concentration rate. However, as growth rates begin to decline, the industry will likely consolidate through mergers and, in some cases, business failures for certain firms. This will result in fewer competitors and an increase in the concentration rate until it reaches its peak. Based on the current concentration rate, current number of remaining players and historical consolidation rate of the industry, the *valuer* may develop a projection of the likely average annual consolidation rate for the next period, until a mature and stable stage is reached. Such consolidation may provide an indication for the rate of obsolescence for the *intangible asset*.

For example, consider a patented health monitoring technology named HealthPulse. HealthPulse is used in a specific model of a medical device that treats kidney disease and is used in hospitals and dialysis clinics. HealthPulse's patent has been registered for 10 years from December 20X6. As the *valuation date* is as at December 20x9, the remaining legal protection period is 7 years. The patent is not expected to be renewed.

In assessing the functional, technological and economic obsolescence of HealthPulse, the valuer considers the following:

(i) Based on discussions with the R&D team, the valuer learns that HealthPulse incorporates advanced sensors and machine learning algorithms to provide accurate health data. Although these features were novel when HealthPulse was first introduced, they have since become standard in the market. The R&D team also shares that HealthPulse will require a major upgrade in about 3 years' time from *valuation date* based on historical development cycles, anticipated technology advancements and competitor products.

(ii) As the technology will be used in conjunction with the hardware device, the valuer speaks with an industry *specialist* and understands that similar devices typically have an economic life of 5 years. As the device has been around in the market for 3 years, the device can continue to be used for another 2 years. The *specialist* highlights that the rapid pace of innovation in the health tech sector presents opportunities for continuous improvement and updates to the technology. The *specialist* highlights that based on technology trends and advancements, newer technologies will take 2 to 3 years to be more mainstream.

Based on the above, the valuer concludes that the economic life of the technology is 5 years, with a remaining economic life of 2 years which is shorter than the remaining legal protection period of 7 years.

After assessing economic life, the valuer assesses the rate of obsolescence. Based on discussions with management, the valuer assess that similar devices typically experience a gradual obsolescence during the initial 1-2 years from introduction due to hospitals and clinics preferences of using a familiar existing device before switching to a new device. A steeper decline is expected in the next 2-3 years before servicing is no longer provided at the end of 5 years. As the technology will be used in conjunction with the hardware device, the valuer also considers survival curves for similar devices and assesses the curve which best reflects the expected decline in value of the devices as described by the pattern above. The valuer applies this curve to determine the obsolescence of the technology.

7.7. However, there may be exceptions whereby the period of contractual or other legal rights is not a key consideration to determine the economic life:

(i) When certain *intangible assets* may not have a defined period of legal rights such as non-contractual customer relationships which are not granted any legal protection.

(ii) When certain *intangible assets* may be protected through other legal mechanisms such as common law which do not grant a defined period of legal or contractual rights. For example, unregistered trademarks which may be protected through common law but do not have a legally mandated duration or expiration.

(iii) When the *intangible asset* is so unique that it is difficult to replicate, or even if there are imitations or replications, the *intangible asset* continues to maintain its value and relevance.

7.8. In assessing the economic life for such *intangible assets*, the key consideration for the *valuer should* be the functional, technological and economic obsolescence of the *intangible asset*.

For *intangible assets* which do not have a defined period of legal rights, the economic life may not be constrained by the period of the contractual or other legal rights, but rather the functional, technological and economic obsolescence affecting the *intangible asset*. For example, the economic life of a non-contractual customer relationship is based on the period over which the relationship is expected to generate economic benefits, considering factors such as customer retention rate, market conditions, competitive dynamics, and the overall economic environment within the industry. Similarly, the economic life of an unregistered trademark depends on the duration over which the trademark can continue to generate economic benefits through its recognition, distinctiveness and level of consumer loyalty it commands, constrained by functional, technological and economic factors in the environment within the industry in which it is utilized.

In addition, for certain *intangible assets*, the economic life may be longer than the period of contractual or other legal rights. This can occur when the *intangible asset* is integral to the production of goods or services

that continue to be in demand and retain their market relevance even after the legal protections have lapsed. For example, in determining the economic life of a brand, the period of legal protection of the trademark associated with the brand may be considered. However, the brand itself can have enduring value that outlasts the duration of trademark protection. Consumers may remain loyal to a brand due to its reputation, quality, or other characteristics, and continue to choose its products or services based on brand recognition alone. Therefore, the duration over which the brand can generate *significant* economic benefits may exceed the period of legal rights of the trademark associated with the brand.

7.9. Accounting useful life is the period over which an *asset* is expected to contribute directly or indirectly to future cash flows of that entity. Hence, accounting useful life is an entity specific determination. There will be a difference between accounting useful life and economic life, when an entity's own assumptions about the period over which the *asset* is expected to contribute directly and indirectly to the future cash flows is different from the assumptions market participants would use in pricing the *asset*.

7.10. Tax amortisation life is determined by the prevailing tax regulations, which is different from the economic life of the *intangible asset*.

In determining the economic life, the *valuer* should not adopt the accounting useful life as the economic life. Accounting useful life is influenced by an entity's accounting policies, which aim to allocate the *cost* of an *asset* over its useful life in a systematic and rational manner and reflect the period over which the *asset* will contribute both directly and indirectly to the expected future cash flows of the entity, rather than market participants. As such, when assumptions regarding how the entity intends to use the *asset* differs from how market participants would use the *asset*, the accounting useful life will differ from the economic life. For example, an entity develops a software system, which has an economic life of 7 years based on the period during which it is expected to generate economic benefits. However, the entity may plan to use the software for a shorter duration of time. As a result, the entity determines the accounting useful life to be 5 years instead, which differs from the economic life.

In determining the economic life, the *valuer* should not adopt the tax amortisation life as the economic life. Tax amortisation life is determined by tax regulations and is used for tax amortization purposes. Tax authorities establish specific life spans for different types of *assets* to standardize the tax treatment across businesses and therefore may not consider the unique circumstances of an individual *intangible asset*, unlike economic life which is tailored to the subject *intangible asset*. Tax amortisation lives may also be influenced by broader economic or political goals, such as encouraging investment in certain industries. Following the same example above, the tax amortisation life of software based on the tax regulations may be 3 years, which is different from the economic life of 7 years. Therefore, the tax amortisation life should not be adopted as the economic life of the *intangible asset*.

Conditions in determining if the economic life is indefinite

7.11. To determine if an *intangible asset* has an indefinite life, the following conditions *should* be met:

(i) The individual subject *intangible asset* is well-established with historical track record of generating economic benefits;

(ii) There are no legal, regulatory, contractual, competitive, economic or other factors that limit the economic life of the individual subject *intangible asset*; and

(iii) The individual subject *intangible asset* has renewal cost, maintenance costs which are economically beneficial compared to the expected economic benefits and there is intention to renew and use the individual subject *intangible asset* indefinitely;

In assessing if the economic life of an *intangible asset should* be indefinite, the following conditions have to be met:

(i) A well-established *intangible asset* is one that has a demonstrated track record of generating economic benefits. The *intangible asset* should also be expected to continue generating similar levels of economic benefits in the future. For example, a proprietary software platform that has become the industry standard which has been historically generating *significant* economic benefits could be considered a well-established *intangible asset*.

(ii) Absence of legal, regulatory, contractual, competitive, economic or other factors: For an *intangible asset* to have an indefinite economic life, there can be no foreseeable limit on the period over which the *intangible asset* can generate economic benefits. Such limits may be due to legal, regulatory, contractual, competitive, economic or other factors, such as but not limited to, patent expirations, actual or anticipated regulatory changes, or shifts in consumer preferences. If there are no such limiting factors, an indefinite economic life may be justifiable.

(iii) Renewal and maintenance costs and intent to renew and continued use: For an *intangible asset* to have an indefinite economic life, the renewal costs associated with the *intangible asset*'s legal rights should be low enough such that there would be intent to use and renew the *intangible asset*. For example, registered trademarks can usually be renewed continually as long as the fees are paid and the trademark remains in use. In addition, the *intangible asset*'s maintenance costs should be economically beneficial. Therefore, there would be intent to incur such maintenance costs to retain the *intangible asset*'s function, such that the *asset* can continue to provide economic benefits without being a financial burden and the *intangible asset* can continue to be used. For example, maintenance costs associated with a trademark, such as brand advertising, promotion and design expenses should be relatively low compared to the expected revenue generated by the products or services utilizing the trademark.

Corroborating the appropriateness of the determined economic life

7.12. The *valuer* can corroborate the appropriateness of the economic life of the subject *intangible asset* determined through the following non-exhaustive list of methods:

(i) Benchmark economic life of similar *intangible assets*

(ii) Analyse economic life of previous versions of the subject *intangible asset*

(iii) Compare the economic life of the *intangible asset* to the life cycle of the goods and services produced with the *intangible asset* input.

7.13. When performing the corroborative analysis, the *valuer* may need to explain the differences between the subject *intangible asset* and these other assets used for corroborative analysis in order to substantiate the determined economic life.

In assessing the appropriateness of the economic life of the *intangible asset*, the *valuer should* consider the following non-exhaustive list of methods:

(i) Benchmark economic life of similar *intangible assets*: This method involves comparing the assessed economic life of the subject *intangible asset* with the economic lives of comparable *intangible assets* within the same industry. While economic lives of comparable *intangible assets* usually cannot be directly observed, accounting useful lives of comparable *intangible assets* may serve as reference points in estimating the economic life of the subject *intangible asset*. Some sources through which accounting useful lives of comparable *intangible assets* can be obtained include financial statements of publicly traded companies with similar *intangible assets*. By identifying and analyzing comparable *intangible assets*, the *valuer* may gauge whether the estimated economic life is supportable.

(ii) Analyse economic life of previous versions of the individual subject *intangible asset*: For *intangible assets* that are updated or replaced over time, such as software or patented technologies, analyzing the economic life of prior versions can provide insights into the potential economic life of the current *asset*. The *valuer* may review the historical performance, including how long previous versions remained competitive and generated economic benefits before being superseded or becoming obsolete. The historical economic life can aid in establishing a pattern or trend that might be indicative of the future economic life of the newer version of the *asset*. For example, for a software company that has released multiple versions of its patented technology, analyzing the economic life of earlier versions, such as how long Version 1.0 was actively used and generated revenue before the launch of Version 2.0, can help the *valuer* estimate the expected economic life of the current Version 3.0, especially if previous versions showed a consistent pattern of obsolescence after a certain number of years.

(iii) Compare the economic life of the *intangible asset* to the life of the product in which the *intangible asset* is used: *Intangible assets* may be used in specific products and the economic life of the *asset* may be closely linked to the lifecycle of that product. For example, a patented adhesive formula used in a particular line of construction materials may have an economic life that corresponds with the product life of those materials. If the construction materials are replaced by newer, more advanced products that offer better performance, the economic life of the patented adhesive formula may also shorten, reflecting the lifecycle of the construction materials and the industry's shift towards innovation. In determining the product life, it is important to understand the total length of the product lifecycle as well as the current position of the products or services in which the *intangible asset* is used in the product lifecycle, depending on the industry in which the *intangible asset* is utilised. For example, in rapidly evolving industries, such as technology, product lifecycles can be notably short due to swift advancements and high rates of innovation. Conversely, in more stable industries where product evolution occurs at a slower rate, such as consumer staples, products might reach the maturity or saturation stage of the lifecycle but continue to generate economic benefits without a clear sign of decline. Therefore, the product life may extend much longer.

8. Performing sensitivity and/or scenario analysis for *significant* risks

Sensitivity and scenario analysis can be critical in the *valuation* of *intangible assets*, providing a structured way to understand how variations in key *inputs* can impact the *intangible asset*'s *value*. These analyses enhance risk assessment by identifying key *inputs* or assumptions, allowing for a more focused evaluation of the *asset*'s exposure to specific risks. Additionally, they offer quantifiable measures of risk, enabling *valuers* to communicate the degree of uncertainty and potential outcomes effectively. This clear communication helps stakeholders better consider risks in their decision-making. By testing *valuations* against a range of alternative *inputs* and assumptions, sensitivity and scenario analysis also increase the credibility and reliability of the *valuation* process.

8.1. Sensitivity analysis involves changing one *input* or variable at a time to measure its impact on the *valuation* outcome, while keeping all other factors constant.

8.2. In contrast, scenario analysis involves changing multiple *inputs* simultaneously for each potential future state or scenario to evaluate the combined impact on *valuation*.

8.3. The *valuer* may consider performing sensitivity and/or scenario analysis under the following non-exhaustive circumstances:

(i) High levels of uncertainty surrounding key *valuation input(s).*

(ii) Change in *input(s)* results in a *significant* variation in *intangible asset value.*

8.4. The *valuer* may follow the following general approach when conducting sensitivity analysis:

(i) Based on the significance of risks identified through the risk matrix in *Section 4: Risk Factors of Intangible Assets*, identify the most critical *input* that would impact the *valuation* of the *intangible asset*.

(ii) Determine the range of the identified *input* to be sensitised. The *valuer* may not employ arbitrary sensitivity ranges and consider the risk associated with the *input* in determining the possible range of the *input* by referencing to historical *data*, market trends, or industry benchmarks.

(iii) Adjust the identified *input* within its determined range to evaluate its effect on the *valuation* of the *intangible asset*.

8.5. In contrast, the *valuer* may follow the following general approach when conducting scenario analysis:

(i) Based on the significance of risks identified through the risk matrix in *Section 4: Risk Factors of Intangible Assets*, identify different potential future states or scenarios that would impact the *valuation* of the *intangible asset*.

(ii) Identify the key *inputs* likely to change within each scenario, including:

(a) Forecast drivers such as growth rate, profit margins, and working capital days.

(b) *Valuation inputs* including royalty rate, obsolescence factor, *discount rate*, and terminal growth rate.

(c) Probability assignments which is applicable for multiple scenario analysis or decision tree method (as per next step).

(iii) Utilize methods such as:

(a) Best case/worst case analysis. Evaluates the impact on *value* under extreme positive and negative assumptions to understand the range of potential outcomes.

(b) Multiple scenario analysis. Assess various plausible scenarios by adjusting key drivers and assigning probabilities to these scenarios to understand the spectrum of possible impacts on *value*.

(c) Decision tree analysis. A decision tree systematically evaluates different possible decisions and uncertainties by mapping them as branches in a sequential process. Each branch represents a potential scenario, with assigned probabilities and corresponding payoffs. By incorporating probabilities and expected values, decision trees provide a quantitative way to assess risks and rewards, making them particularly useful for analysing complex, multi-stage scenarios.

In the following circumstances, *valuers* may consider performing a sensitivity and/or scenario analysis:

(i) High levels of uncertainty surrounding key *valuation inputs*: Uncertainty arises when *inputs*, whether observable like market *data* or unobservable like cash flow projections, have a high likelihood of variability due to external and inherent factors that make estimation difficult. This variability increases the range of possible values for each *input*, leading to a broader spectrum of potential *valuation* outcomes. For example, volatility in macroeconomic conditions might cause *significant* fluctuations in revenue projections.

(ii) Change in *input* resulting in *significant* variation in *intangible asset value*: Certain key *inputs* can have a substantial impact on the *intangible asset*'s *value*, making it essential to assess their effect. For example, a small adjustment in the *discount rate* can result in a large fluctuation in *valuation*.

9. Performing corroborative analysis for *intangible assets valuation*

In circumstances where there are insufficient factual or observable *inputs* for a single method to produce a reliable conclusion, a *valuer should* consider the use of multiple approaches and methods to arrive at an indication of *value*.

However, for *intangible assets*, there are limitations in using more than one *valuation approach*. For example:

(i) The market approach is rarely adopted to value *intangible assets* as it is difficult to find market evidence of transactions involving identical *assets* due to the uniqueness of *intangible assets*. The market approach is also less relevant because *intangible assets* are seldom transacted on a standalone basis as it is typically bundled together with other *assets*, making it difficult to isolate the *intangible asset* value.

(ii) For *intangible assets* that are in early stages of development, it could be difficult to assess the income producing ability of the *asset* due to various reasons such as, rapid technological shifts making the *intangible asset* obsolete before the *asset* is fully developed and regulatory and legal challenges such that necessary approvals may not be granted. This will result in the income approach being less relevant.

(iii) *Intangible assets* are often developed for their income producing ability such as additional sales, lower *costs*, royalties or licensing fees. As such, the cost approach could potentially result in undervaluation, and therefore not viewed as ideal.

9.1. If the *value* of a subject *intangible asset* relies heavily on a single *valuation approach* and no secondary *valuation approach* can be performed, a corroborative analysis may be performed to assess the appropriateness of the *valuation* subject to the availability of information or *data* points A corroborative analysis is not meant to be considered as a *valuation approach* or *method* to determine the *value* of *intangible assets*.

9.2. A corroborative analysis refers to the process of using multiple sources of information or methods to support the concluded *value*. This type of analysis is often used to increase the reliability and validity of results by cross-verifying information from different alternate perspectives. The goal of corroborative analysis is to ensure that the conclusions drawn are well-supported and less likely to be biased or erroneous.

9.3. To corroborate an *intangible asset*'s *value*, the *valuer* can consider adopting a "drill-down" analysis or benchmarking analysis. The drill-down analysis involves analysing broader indicators/metrics (industry level) before drilling down to more detailed levels (company level and *asset* level) whereas benchmarking analysis involves comparing the indicators/metrics across comparable companies or transactions. The following indicators/metrics at the respective levels can be considered:

(i) Industry level metrics, such as different types of market sizes that the *intangible asset* can capture.

(ii) Company level metrics, such as the value of the business owning/using the *intangible asset*.

(iii) *Intangible asset* level metrics, such as *intangible asset* expenditures or investments which are made to develop and protect the *intangible asset*.

9.4. There are two methods in performing a corroborative analysis. The two different methods are:

Method 1: Relative positioning of subject *intangible asset value* versus industry/company/*intangible asset* level metrics

(i) Select relevant industry/company/*intangible asset* level metrics and where necessary, perform adjustments to reflect the relevant revenue or income contributions achievable by the business unit which utilises the *intangible asset* in its product and/or services.

(a) Industry level metrics represent the broadest (or ceiling) measure of possible value because it represents the maximum potential that the entire market (including the subject *intangible asset*) could possibly achieve over a defined period. It reflects the aggregate demand from all potential customers in the market and is often used as a key metric to gauge the potential for businesses operating within that space. Given that it is the broadest form of measure, it is useful for an intangible asset that either is a key market player or contribute to a significant market share in the industry. It should not be the only metric that is adopted when performing the corroboration.

(b) Company level metrics represents the business value for all employed *assets* (including the subject *intangible asset*) because it encapsulates the collective worth of all the *assets*, both tangible and intangible, and their synergistic potential within the business context. It is therefore expected that the business value will be higher than that of the subject *intangible asset value*.

(c) Intangible asset metrics typically represents the floor value as it reflects the level of expenditure or investment that the company has consistently dedicated to develop, maintain and enhance the *intangible asset*. Generally, the key expenditure or investment which is the most *significant* component of cost in developing the *intangible asset* is used, eg. advertising and promotion (A&P) cost for trademark and research and development (R&D) cost for technology.

Method 2: Peer benchmarking of subject *intangible asset* against comparable companies or transactions via units of comparison

(i) Identify the units of comparison that are relevant to the subject *intangible assets*, such as *intangible asset value*/business value; *intangible asset value*/*intangible asset* level metric such as R&D cost, A&P cost, customer acquisition cost.

(ii) Search for comparable/benchmark *data*: The process involves searching for comparable companies within the same industry and/or business that have similar *intangible assets* and calculate the relevant units of comparison

(iii) Perform benchmarking analysis: This analysis compares the relevant units of comparison

9.5. After performing the above steps, rationalise the *intangible asset value*'s relative positioning against the corroborated values by considering the following factors (non-exhaustive):

(i) Growth potential

(ii) Regulatory Environment

(iii) Financial Performance

(iv) History of Investment

(v) Life cycle of the intangible asset

In a corroborative analysis, the following indicators/metrics at the respective levels can be considered:

Industry level metrics:
In determining the total potential income for an *intangible asset*, the *valuer* can consider the different types of market sizes that the *intangible asset* can capture.

(i) Total Addressable Market (TAM): The overall revenue opportunity available or the maximum market demand for a product or service if 100% market share was achieved. It represents the full potential of a market for a particular product or service without considering market constraints.

(ii) Serviceable Available Market (SAM): The segment of the TAM that is within the geographical reach of a company and that the company can serve with its products or services. SAM takes into account the limitations imposed by the company's current business model and distribution channels.

(iii) Serviceable Obtainable Market (SOM): Also known as Share of Market, this is the portion of SAM that a company can realistically capture or serve. SOM is influenced by factors such as competition, company capacity, market penetration strategies and certain characteristics like demographics, psychographics, and consumer behavior.

Company level metrics:
In determining the *value* of the business owning/using the subject *intangible asset*, the *valuer* can consider the following indicators based on market evidence or transactions:

(i) Market capitalisation/Enterprise value of the business owning/using the subject *intangible asset* that is listed on a stock exchange;

(ii) Recent round of fund raising for the business owning/using the subject *intangible asset*; and

(iii) Purchase consideration for the business owning/using the subject *intangible asset* that was recently acquired.

Intangible asset specific metrics:
The table below outlines the different classifications of *intangible assets* along with examples and key financial metrics/expenses associated with each of the five *intangible asset groupings*.

Categories of *intangible assets*	**Examples of *intangible assets***	**Key financial metrics / expenses**
Marketing-related	Trademarks, Trade designs	Advertising & Promotion costs,
Customer-related	Customer contracts	Customer Acquisition costs
Artistic-related	Music synchronization rights	Catalog development *costs*
Contract-related	Exclusive distributor agreement	Minimum guarantee fee
Technology-related	Patented / unpatented technology	Research & Development *costs*

Once the relevant metrics have been identified, there are two possible methods to perform a corroborative analysis.

Method 1: Relative positioning of subject *intangible asset value* versus industry/company/*intangible asset* level metrics

The industry/company level metrics, often represented by the total potential income or business value can be conceptualized as the ceiling value. The *intangible asset* level metric typically represented by the key costs to develop the *asset* can be conceptualized as the floor value assuming no inefficiencies and/or other influencing factors. These parameters provide a range within which the *intangible asset*'s *value* can be strategically assessed.

Appropriate adjustments can be made to ensure a like-for-like comparison with the parameters of the subject *intangible asset*. Industry-level metrics, such as market size, are typically presented as top-line figures on an annual basis. Adjustments are necessary to convert these figures into equivalent bottom-line numbers for the remaining economic life of the *intangible asset*. Metrics specific to the *intangible asset* can be calculated over the *intangible asset*'s entire lifecycle and then pro-rated to reflect its remaining economic life.

For example, we consider the *valuation* of SportX trademark used in athleisure apparel.

Industry level metrics:
The Total Addressable Market (TAM) for athleisure apparels is estimated to be $6 billion. Considering SportX athleisure apparel is only sold in the APAC region, which accounts for 25% of TAM, the Serviceable Available Market (SAM) is calculated as $6 billion x 25% = $1.5 billion. If we assume that SportX athleisure apparel is expected to capture 10% of SAM, the Serviceable Obtainable Market (SOM) amounts to $1.5 billion x 10% = $150 million. If we consider that the SportX have a remaining economic life span of 10 years and the historical profitability for the sale of products of 20%, the adjusted equivalent bottom-line figure is $150 million x 10 years x 20% = $300 million.

Company level metrics:
As of *valuation date*, the company which owns the SportX trademark has a market capitalisation of $1.8 billion with $0.4 billion net debt on its latest financial statement. Based on estimates from its financial statements, it is assumed that sales of SportX athleisure apparel in APAC contribute 10% of the company's overall revenue. Accordingly, the implied business value in relation to the SportX trademark is ($1.8 billion + $0.4 billion) x 10% = $220 million.

Intangible asset level metrics:
As the *intangible asset* relates to the SportX trademark, advertising and promotion (A&P) is deemed to be a suitable expense for the *intangible asset* metric. The brand building phase of the trademark took 3 years, the trademark has been used for the past 10 years and has just been renewed for another 10 years.

The total A&P cost over the initial 3 years of brand building phase amounts to $8 million and the relevant annual maintenance expenses are estimated to be $1.5 million.

Based on the above, the total A&P expense for the *intangible asset* is expected to be $8 million + ($1.5 million x 20) = $38 million. The total A&P expense is then adjusted based for the remaining life of the *intangible asset* (10 years). The adjusted key financial metric is $38 million / 20 years x 10 years = $19 million.

Method 2: Peer Benchmarking of subject *intangible asset* against comparable companies / transactions via units of comparison

Units of comparison are standardized metrics used to evaluate and compare different *assets*. These units help in making meaningful comparisons by providing a common basis for analysis. Units of comparison are particularly useful in real estate, financial analysis, and various other fields where these *assets* need to be assessed relative to each other. The common units of comparison for an *intangible asset* are:

(i) *Intangible asset value* / business value is a measure of how much a company's *intangible assets* contribute to the overall worth of the business.

(ii) *Intangible asset value* / *intangible asset* level metric measures how much value is created from the money spent on the development of the *asset*

Relative positioning:
As part of the above 2 methods, *valuer* may consider a multitude of factors to rationalize the *intangible asset value* relative to the corroborated values. Some of the considerations are:

(i) Growth potential: An *asset* that is central to a company's growth and has the potential to open new markets or expand existing ones may indicate that its value is closer to the higher end of the corroborated value range.

(ii) Regulatory environment and legal protection: The absence of a supportive regulatory environment with robust legal protections can potentially decrease the perceived stability and value of the *intangible assets* and may indicate that its *value* to be of a lower end of the corroborated value range.

(iii) Financial performance: High profit margins associated with products or services linked to the *intangible asset* suggest a competitive advantage, allowing the company to command premium

pricing or reduce costs and may indicate that its *value* to be at a higher end of the corroborated value range.

(iv) Life cycle: *Intangible assets* that are in the early stages of development or nearing the end of life may be indicative of its *value* to be of the lower range, whereas *intangible assets* that have commercialized and still have a long monetization period may be indicative that its *value* to be of a higher end of the corroborated value range.

(v) History of investment: *Significant* expenditures in the marketing and development of the *intangible asset* may enhance the *asset*'s *value*. A company that consistently invests in its *intangible asset* may be indicative that its *value* to be of a higher end of the corroborated value range.

For example, assuming the *value* of the *intangible asset* is $30 million to $32 million and the same facts as described in the above metrics adjustments, the following observations were made to the relative positioning of *intangible asset value* as compared to the other metrics:

(i) The *intangible asset value* of $30 million – $32 million is higher than its asset specific metric (floor value) of $19m as the income approach captures the asset's growth and income generating potential.

(ii) The *intangible asset value* is lower than the company level metric of $220 million (ceiling value) due to the following:

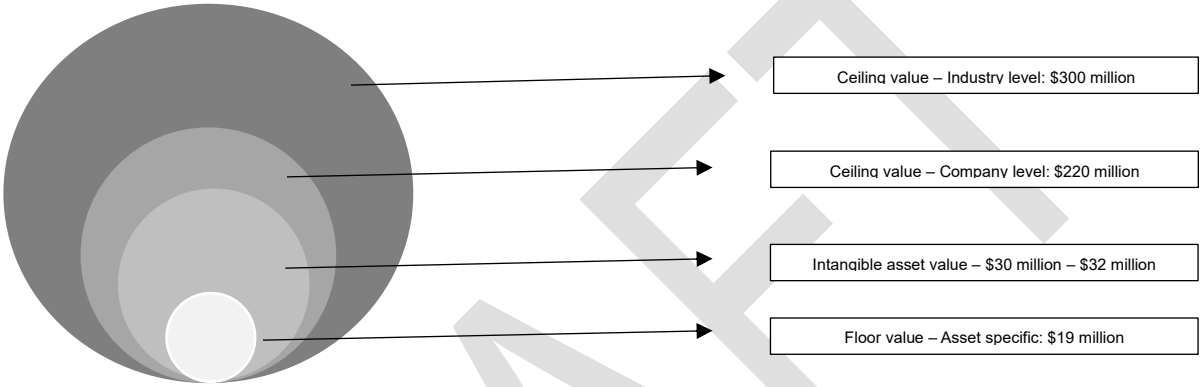
(a) The *intangible asset* contributes only in the marketing and branding part of the entire value chain of activities for the sale of product, which include design and development, sourcing and manufacturing, marketing and branding, distribution and retail, sales and customer service.

(b) The *intangible asset* only has 10 years of economic life remaining as compared to the company level metric which implicitly accounts for indefinite life due to the going concern assumption.

(iii) The *intangible asset value* is lower than the industry level metric of $300 million (ceiling value) due to the following:

(a) The industry level metric inherently assumes the maximum potential that the company can realistically capture. The *intangible asset value* is lower as there is potential for future growth towards the industry level metric.

(b) Similar to the company level metric, the *intangible asset* contributes only in the marketing and branding part of the entire value chain.



10. Disclosure of subsequent events post the valuation date

The reliability of a *valuation* report is important for its effective use, among others, in financial decision-making, business transactions, financial reporting and regulatory compliance.

Unlike a *tangible asset* whose returns hinge on its physical attributes, an *intangible asset* does not have physical substance and derive their value from their unique characteristics. However, such characteristics are often affected by external factors such as market dynamics, leading to *significant* fluctuations in the returns generated by an *intangible asset* over short periods of time.

10.1 IVS 101 requires the *valuation date* to be stated. If *valuation date* is different from the date on which the *valuation* is reported, then that date *should* also be stated.

10.2 There may be events that occur between the *valuation date* and the issuance date of the *valuation* report. Disclosures of these events allow users of the report to assess potential changes to the *value* of *intangible asset* from the *valuation date,* allowing them to make more informed decisions for purposes such as financing and investing.

10.3 From the *valuation date* to the report date, the *valuer* may consider disclosing the *significant* developments that are not known or knowable as of the *valuation date* which may impact the *intangible asset* value. These events may be company-specific and/or external events (relates to the environment in which the *intangible asset* is utilised) that are considered to be *significant* following the risk assessment performed by the *valuer (refer to Section 4. Risk factors of intangible assets).*

10.4 The above disclosure is not intended to update the *valuation* to reflect such subsequent events, as the *valuation* was performed as of a point in time and the events occurring subsequent to the *valuation date* would not be relevant to the *value* determined as of the *valuation date*. Therefore, the *valuer should* also include a statement and disclose that such events are provided for information purposes only and do not affect the determination of *intangible asset value* as of the specified *valuation date*.

Subsequent events are occurrences or developments that take place after the *valuation date* but before the issuance of the *valuation* report. These events can *significant*ly influence the relevance of the *valuation* conclusions post *valuation date*.

Disclosing subsequent events that may affect the *value* of *intangible assets* enhances the relevance and comprehensiveness of the *valuation* report and allows users to make more informed decisions.

Some examples of company-specific and/or external events:

(i) Market and economic events

(a) Announcement of trade tariffs or sanctions by a major economic power: The announcement of the United States to impose tariffs on steel and aluminium imports could trigger immediate market reactions and concerns about potential trade wars. Companies with patents or proprietary technology in industries dependent on these materials may face increased production costs and supply chain issues

(b) Interest rate hike by the Federal Reserve: An interest rate hike by the Federal Reserve, announced unexpectedly to combat rising inflation can cause an immediate change in *intangible asset* value. This abrupt increase in borrowing costs can lead to an immediate revaluation of *intangible assets* as companies face higher capital costs and altered *discount rates*.

(ii) Legal and regulatory changes:

(a) Intellectual Property Legislation: Changes in intellectual property laws can have a *significant* impact on the value of patents and copyrights. For example, stricter patent laws can increase the value of a company's patents by providing more robust protection against infringement.

(b) Data Protection Regulations: The introduction of regulations like the General Data Protection Regulation (GDPR) to standardise data protection in the European Union can impact the *value* of customer databases. Companies that fail to comply with such regulations may face fines and a loss of customer trust, thereby reducing the value of their customer-related *intangible assets*.

(iii) Technological advancements

(a) Innovation: The development of new technologies can increase the value of patents and proprietary technology. For example, a breakthrough in battery technology can *significant*ly enhance the value of patents held by a company in the electric vehicle industry.

(b) Obsolescence: Conversely, technological advancements can also lead to the obsolescence of existing *intangible assets*. For example, the rise of streaming services has reduced the value of physical media distribution rights owned by entertainment companies.

(iv) Company-specific developments

(a) Drug Approval: For pharmaceutical companies, the approval of a new drug by regulatory authorities can lead to a substantial increase in the value of patents and related intellectual property. The exclusivity to market a breakthrough treatment can translate into *significant* revenue, enhancing the value of the company's *intangible assets*. Conversely, the rejection of a new drug by regulatory authorities can lead to a *significant* decrease in the value of patents and related intellectual property. The inability to market a treatment that has failed to meet the necessary safety and efficacy standards can result in substantial financial losses as the resources invested in research and development may not yield a return.

(b) Reputation Damage: Events that damage a company's reputation, such as scandals or product recalls, can lead to a *significant* decrease in the value of brand-related *intangible assets*. For example, a major data breach can erode customer trust and loyalty, reducing the value of customer relationships.

11. Additional report disclosures when performing intangible assets valuation

Accurate and transparent reporting of the *intangible asset valuation* process, supported by a uniform set of additional report disclosures, is crucial for ensuring better comparability and consistency among *valuation* reports, thereby enabling stakeholders to make more informed decisions.

11.1. IVS 106 states that valuation reports *must* provide, in sufficient detail, a clear and well-structured description of the basis for the conclusion of *value*. The reports *should* include all necessary information to provide the *client* with a clear description of the scope of work, the work performed, *professional judgments* made and the basis of conclusions reached.

11.2. In view of recommendations suggested by this guidance, *valuer* can provide additional disclosures which may include:

(i) Key risks associated with *intangible asset*: Specifically, the types of these *significant* risks and a description of the risks. For *significant* risks that underpin the *valuation*, *valuers should* demonstrate how these *significant* risks have been given due consideration and *weight.*

(ii) Sensitivity/scenario analysis: Outcome of sensitivity and scenario analysis for *significant* and/or material risks.

(iii) Corroborative analysis: Outcome of the corroborative analysis to support the concluded value.

(iv) Subsequent events: Events that occur between the valuation date and the date on which the valuation report is issued.

Additional Information

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