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Article

Professional skepticism in the business valuation: Studies in the United States and Indonesia

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Abstract: Professional judgments in business valuation should be based on persuasive comparative data and conclusive empirical studies. However, these judgments are frequently made without these conditions, causing professional skepticism. An appraiser should explain in detail what was done to get the market value because valuation is the initial crucial step in the investment decision process. In socially responsible investment schemes, an appraiser has a fiduciary duty and a vital role in protecting the public from fraud and the risk of asset value destruction. Professional skepticism is essential to direct the appraiser's judgment towards independent valuation for the public interest, assisting in evaluating the relevance and reliability of information, especially relating to social, environmental, and ethical issues. This paper studies the business valuation process from a behavioral finance perspective in the United States and Indonesia, aiming to tweak business valuation practices, identify biases, and mitigate them to ensure the market value does not shift far from fairness opinion. The case study explores experiences from the professional role-learning process. The results highlight the need for an appraisal protocol in business valuation, improvements in the discount for lack of marketability application, and these findings are pertinent to business appraisers and regulators. Recommendations include enhancing the clarity of professional judgments and the integration of recent empirical studies into practice.

Keywords: professional skepticism; professional judgment; socially responsible investment; discount for lack of marketability; business valuation

1. Introduction

A business appraiser must produce reliable market value. This value should be obtained professionally through sound financial methods and adequate references. Considering the lack of academic studies, aggravated by data availability, both economic data per industry and comparative transaction data, the authorized institution must encourage more research on the valuation topics (Williamson, 2021). Academicians should support studies of the essential things, from the definition of market value to the valuation process. At the same time, the authority needs to update the rules, place them in line with the literature, and prioritize litigation for mutual learning (Sisodia, 2021). These efforts must be made to achieve Socially Responsible Investment (SRI) and align with sustainable finance principles (Arjaliès, 2010). The study aims to tweak business valuation practices, including identifying biases that make appraisers prone to error and mitigating them so that the market value does not shift far from fairness opinion. The article examines several potential weaknesses in business valuation in Indonesia compared to the United States from the perspective of skepticism. It discusses what mitigation needs to be done to achieve SRI. The choice of the United States and Indonesia for case studies stems from their distinct regulatory environments and market dynamics, providing a comprehensive perspective on the application of professional skepticism in diverse contexts (Pupentsova, 2021). The United States offers a well-documented and structured approach to business valuation, while Indonesia presents challenges due to limited data and evolving regulations. Comparing these countries highlights the necessity for robust valuation protocols and the influence of professional skepticism in achieving socially responsible investment (Gangi, 2022; San Martín, 2021).

A business appraiser must produce reliable market value through professional financial methods and adequate references (Lin-Lian, 2022). Due to the lack of academic studies and economic data, it is crucial to encourage more research on valuation topics. Business appraisers face an increasingly challenging social environment and ever-changing financial approaches (Lin, 2023). This condition should be well anticipated not only by individual appraisers but also at the policy-making level (Cadman, 2011). Globally, empirical studies and financial disclosure data to improve decision-making have been conducted, including compilations of historical financial reports per industry, detailed information on merger and acquisition transactions, availability of discount for lack of control (DLOC) data, and a model to calculate the discount for lack of marketability (DLOM) (Zakhmatov, 2022). This information is limited in Indonesia, and the appraiser must use their "professional judgment." This judgment is not ideal and will be criticized by professional skepticism because comparative data is insufficient and empirical studies are limited. Academicians should carry out more empirical studies to support the development of new concepts and approaches. Based on new methods, professionals in the financial sector, including business appraisers, develop their sound procedures (Notz, 2021). With sufficient empirical studies, concepts, and data, an appraiser can conduct their practices, protecting investors and social interests. In this article, professional means practitioners with continuous certification and accreditation, including public appraisers, accountants, investment brokers, and investment managers. According to professional standards, they have a fiduciary obligation to protect the public from fraud and the risk of destroying asset values in general.

Interestingly, the issue of professional decisions related to SRI at a global level has become the main topic of academic discussion. This argument can be read in the meta-analysis conducted Luo et al. (2022). They divided the major themes of articles about the global evolution of sustainable finance research into 12 clusters from 2001 to 2021. The SRI discussion has become the most significant issue in academic talks from 2016 to 2021—the findings in the literature support financial practitioners in upgrading their efforts to the concept of SRI (Ackert, 2014). The problem is that an appraiser can't protect the public interest since professional decisions are unsupported by sufficient data and sound literature. Professional skepticism is relevant and useful for financial professionals in improving the quality of their judgment to evaluate socially responsible investments (Cruz et al., 2020). Popova (2013) stated that more skeptical professionals focus on relevant clues and conduct rigorous evidence checks. Professional skepticism requires auditors to convey their judgment by providing critical assessments and performing their evaluations in auditing (Wafi, 2024). Thus, professional skepticism is essential in all aspects of an audit, especially for areas with a high risk of fraud, such as due diligence, merger and acquisition transactions, and public interest appraisals (Peecher et al., 2013).

Professional decisions cannot be separated from subjective, emotional, and psychological elements in behavioral finance studies. This subjectivity raises cognitive biases and heuristics when digesting information and formulating decisions. Behavioral bias is a tendency to think or feel in a certain way that leads to systematic deviations from standards of rationality or good judgment (Trejos et al., 2019). Cognitive bias generally arises because the considerations are irrational, and the reasons are not strong. Heuristics is a decision-making process that relies more on experience and intuition and is decided with limited information (Fromlet, 2001). Some examples of the tendency to make mistakes in decisions can manifest in various forms of thinking errors to give more weight to information consistent with initial beliefs, overestimating one's ability to perform a decision, making judgment by starting from initial values and then adjusting only a few from those initial values, and considering information that is easily accessible as more relevant. These issues will be discussed in the literature review. These tendencies and biases cause market values to shift away from their actual values. Limited data and owner-directed to certain values exacerbate this value shift. Moreover, outdated regulations and lack of supervision of the relevant institutions could shift the value further. These problems will be examined using a United States and Indonesia case study.

The case study is carried out by highlighting the business valuation process, including the application of DLOC and DLOM. In practice, a partial decision of DLOM leads to potential tax losses. When an appraiser only states that the valued business entity has a market and then concludes the discount value in the accepted range regulated by authorized regulation, it is not ideal. The appraiser must thoroughly study the appraisal object's uniqueness to figure out the discount's level. As we know, this discount directly reduces the indicated equity value after the controlling discount is applied. What if the subject entity has a purchase agreement stipulating that a third party must immediately purchase the entity when offered? Wouldn't that reduce this discount to close to 0%? Why don't OJK regulations accommodate private valuation discounts below 20%? Wouldn't it be better to relax those rules and strengthen existing litigation institutions? In the United States, the tax service generally observes business appraisal and asks for discounts that are not in line with the profile of the appraisal object. When an appraiser fails to explain the discount's rationality, the tax service could initiate litigation.

2. Literature review

The growing behavioral finance literature helps us uncover various financial decision-making biases. Professional skepticism is an attitude that includes a questioning mind, alertness to conditions that could indicate possible misstatements due to error or fraud, and critical assessment of audit evidence (Nolder and Kadous, 2018). The professional skepticism in this paper arises from professional decisions that are critically questioned and checked for validity from the perspective of behavioral finance. The author applies professional skepticism in business valuation because the appraiser faces difficult choices, including companies that do not match the financial statements condition, unfocused core businesses, businesses without historical financial records, early-stage companies' valuation, and the absence of an appraisal protocol (Wang, 2024). Learning from accountants and auditors who might face these issues when making financial reports and audits, they make notes on adjustments, normality, and materiality decisions. Notes are presented as a crucial part of the main report. It may be necessary for a business appraiser to do so by developing a valuation protocol. This study expands the existing financial management literature on skepticism towards professional decisions that cannot be separated from tendencies and biases in a business valuation.

One of the problems in Indonesia's business valuation process is the DLOM (Jalil et al., 2015). As revealed in the introduction, at the level of the individual analysis unit, the partial decision of a business appraiser can result in tax losses (Koh, 2023). In an organizational unit analysis, the authority should update the rules on the latest empirical studies because the old references and laws can prevent appraisers from thoroughly studying the DLOM (Zakhmatov, 2022). The literature DLOM in OJK regulation refers to the initial studies of restricted shares in the United States in the 1980s. There is a potential decrease in the DLOM level due to advances in information technology, which is very different from the early study period when all transactions were recorded on paper up to simple computer recording with e-filling. At this time, information can be accessed quicker, thus potentially reducing the DLOM level. This finding is based on the research by Comment (2012), who stated that the actual DLOM level is 5-6%. Apart from the potential reduction in the discount rate, it would be better if this empirical study of market liquidity discounts were also carried out with data on the IDX so that there is confirmation of potential changes to the DLOM that must be updated in Indonesia.

This paper uses professional skepticism to direct thoughts toward independent valuation that is responsible for the public interest. This issue, which concerns professional skepticism and socially responsible investment, will be discussed further in the first part. The second part discusses professional decisions that are prone to subjective, emotional, and psychological elements. Several studies show that finance professionals often make decisions influenced by predispositions and biases. The third part discusses the need to understand the context of fiduciary obligations because appraisers have a shared responsibility to protect the public interest. These issues are addressed to make investment value independent and socially accountable.

2.1. Professional skepticism and socially responsible investment

Professional skepticism encourages professionals to show a curious mind, critically assess the reliability of evidence and information, and be alert to fraud and inconsistency indicators (Gangi, 2022; Luo et al., 2022). Peecher et al. (2013) stated that professional skepticism can take the form of inner (inward skepticism) and outer (outward skepticism), both of which are useful in evaluating evidence and the process of forming judgments. Inward skepticism makes professionals self-critical and considers all possible information, evidence, and arguments. Furthermore, Harding and Trotman (2017) stated that by using outward skepticism, professionals are challenged to examine the truth and relevance of the representations and information presented to them. Forming a judgment involves examining all relevant outcomes and evaluating the consequences at all stages to arrive at the best decision. Thus, skeptical professionals question the relevance and usefulness of any evidence and information they encounter. Both outer and inner skepticism encourage individuals to reflect on and evaluate information, obtain sufficient persuasive evidence, and improve the decision-making process to arrive at a final decision. This condition can lead to the proper exercise of professional judgment, thereby enhancing the outcomes and quality of professional choices. Professional skepticism encourages professionals to evaluate their assessments and gather more evidence to support those decisions. This attitude encourages making appropriate assumptions and avoids careless generalizations, which can substantially add to the quality of professional decisions (Nolder and Kadous, 2018)

The widespread international influence of sustainable finance has made SRI one of the most significant development trends in finance. By studying the global evolution of sustainable finance research found that academics and practitioners will understand the need for sustainable finance evaluation. Financial professionals' decision complexity and rationality problems can result in judgment errors when making SRI decisions (Ding et al., 2017). This argument is seconded by Lanteri (2017), who revealed that implementing SRI is a complicated process exacerbated by the complexity of information, which requires further analysis steps, complicating assessment, and investment decisions. Responding to this challenge, Cruz et al. (2020) state that professional skepticism is relevant for financial professionals regarding making decisions for socially responsible investment purposes. They suggest that professional skepticism can improve their evaluation of information reliability and relevance by referring to social, environmental, and ethical considerations (Harding and Trotman, 2017). These considerations can reduce the complexity of the information. Professional skepticism allows the analyst to search thoroughly for evidence and reliability of information, carefully considering the relevant circumstances to exercise professional judgment.

In addition to information complexity, financial professionals are subject to behavioral biases that ultimately influence investment decisions. This paper proposes the relevance of professional skepticism for business assessors to improving SRI decisions (San Martín, 2021). Professional skepticism allows assessors to improve their evaluation of the reliability of information and SRI relevance by referring to specific social, environmental, and ethical considerations, and this is expected to reduce the complexity of information related to SRI decisions (Stankevičienė, 2014). We suggest appraisers use outward skepticism to question the relevance and reliability of information and inward skepticism to question their judgments to improve decisions (Cadman, 2011). External skepticism will help reduce financial professionals' reliance on heuristics when making screening decisions and enhance the evaluation of the reliability of information, which is very important in SRI decisions (Arjaliès, 2010). Sufficient sources of information from both formal and informal sources help business appraisers use professional skepticism to evaluate the relevance and reliability of information, especially those relating to social, environmental, and ethical issues in investment decisions.

2.2. Professional decisions in behavioral finance

Professional decisions are made in the appraisal process; according to the assumptions of traditional financial theory, professionals in investment appraisal make financial decisions rationally, but the discipline of behavioral finance shows that they often act irrationally. The traditional approach provides many valuable insights, something is missing because decision-makers consistently suffer from certain behavioral biases, while the conventional method cannot provide a satisfactory explanation (Ackert, 2014). García (2013) revealed that when traditional financial theories are tested in actual contexts, anomalies lead to the understanding that the natural behavior observed is not as modeled. This condition led to the emergence of behavioral finance to overcome certain limitations of traditional financial theory by incorporating economic psychology, which could explain the existence of irrational potential, utility maximization, and the ability to evaluate complete sets of information (Costa, 2017).

Kahneman and Riepe (1998) state that bias is a systematic error in judgment. This condition violates the principle of rational choice and prevents individuals from maximizing their utility. These bias clouds judgment and leads decision-makers to take unnecessary risks, resulting in failed transactions or bad results. Solution to mitigating the presence of bias by stating that advances in behavioral finance also provide a framework that allows us to explore better and understand the preferences of decision-makers and investigate the biases that influence the way we make decisions and how these may lead to we deviate from rational assumptions (Shanmuganathan, 2020).

According to Kahneman and Tversky (1979), cognitive biases can result from reliance on heuristics that help people make judgments in the face of uncertainty. Shefrin (2002) explained that people's beliefs and preferences can lead to biased decisions. Haselton et al. (2009) state that psychological influences, including fear, greed, security needs, and individual choices, cause decision-makers to become more subjective. Haselton et al. (2009) state that biases can be heuristics, management error effects, or experimental effects and highlight how humans think. As decision-making becomes more complex, heuristics will be more effective. Fairchild (2012) revealed that bias has resulted from affective and emotional influences apart from cognitive limitations. Fairchild further stated that the preferences of the decision-maker could create distortion.

Behavioral biases can cause systematic deviations from good judgment (Trejos et al., 2019). The divergence occurs in business valuation and the initial process of creating financial reports carried out by accountants. Doupnik and Richter (2003) found significant differences in the judgments made by accountants in the United States and Germany in interpreting verbal expressions and their likelihood. The results show that culture influences the interpretation of verbal probability expressions used in assessment. Chand and White (2006) disputed this finding, stating that the strong influence of the profession makes the value of cultural differences in making decisions increasingly meaningless. Penno (2008) suggests a rules-based structure solution by implementing strict rules for financial reporting, taxes, and audit processes. In operations, problems can be exacerbated by rapid technological changes, financial engineering, creative minimization of tax payments, and changes in how business is conducted. We look at the DLOM application as regulated by the OJK, which will be discussed in section 4.2. If the environment is static, a rule can be developed for each category; the problem is when the DLOM is in a dynamic environment, a rule could reflect ambiguity.

García (2013) revealed a tendency to overreact to events, especially dramatic ones. Johnson et al. (2013) states that decision-makers tend to show excessive confidence in their abilities and knowledge. Kahneman and Tversky (1979) demonstrate that people react positively when information is framed, whereas the same information can be damaging when presented in a negative frame. Shefrin (2002) explain the disposition effect in decision-making. Examples of the disposition effect are being too hasty in selling good stocks because of fear of regret if profits are lost and holding on to stocks that perform poorly for too long because they are reluctant to admit investment mistakes. Shanmuganathan (2020) state that decision-makers can become overconfident in their valuation process. With biased self-attribution, the decision-makers' excessive self-confidence and higher trading volumes were found, so they concluded that there was evidence of decision-maker overconfidence and the emergence of a disposition effect. This effect can be used to explain market crashes because even good stocks will be sold due to excessive fear.

Bias occurs when professionals make a decision. Kiymaz et al. (2016) found that professionals in Turkey take higher risks in the form of equity investments when investing in home country companies (geographic bias) and investing in companies headquartered in their home city (home bias). Professionals who rely on their predictions when making investment decisions and those with emotional biases invest less in equities. The findings further show that younger professionals with less education, lower risk aversion, and a single brokerage account are more likely to invest in equities. Bailey et al. (2011) demonstrate the influence of behavioral biases on mutual fund choices in the United States, and they show that biased decisions tend to result in poor investment performance and frequent trading at the wrong time.

The professional decisions of business appraisers will depend mainly on the results of audits and financial reports prepared by auditors and accountants. Hence, appraisers face problems like theirs when making decisions. Riedl (2022) stated that accounting standards in Germany often contain measurement and recognition alternatives, including expressions that require profound interpretation. The implementation of professional decisions depends on specific accounting models and standards. In this case, business appraisers also face the problem of the valuation method used. Concerns about how far the damage goes when interpreting expressions play out in market value debates. The value approach has received limited support in Germany, especially regarding the increasing importance of models and estimates in creating fair market value. The use of market value is supported when comparable data exist. Market value estimates are considered too subjective to provide reliable financial accounting information.

In an investment, uncertainty and risk are inherent in each decision option since it involves future predictions. Olsen (2007) states that bias is not necessarily bad if it leads to the results desired by the decision-maker. However, Johnson et al. (2013) state that all biases result in costs and are false beliefs. Behavioral finance studies document a variety of biases that influence professional decision-making processes. Many people make systematic errors in how they think and their preferences. Therefore, it becomes essential to identify the biases that make decision-making vulnerable to enable us to correct them to develop SRI decisions.

2.3. Fiduciary duties

A fiduciary is a transfer of property rights in trust, generally defined as someone who manages assets on behalf of another person or trustee. In other words, it's a person who works for the benefit of that beneficiary. On an organizational unit level, company directors have a fiduciary responsibility to act in the shareholders' best interests. Fiduciary obligations must be carried out. If not, or if a violation occurs, the beneficiary is entitled to compensation. According to Sandberg (2011), the important concept of this obligation is that the assets are held in trust, with separate management rights from the beneficiaries, and are managed by the trustee on behalf of the designated beneficiaries. While the trustee initially had little power, this role has expanded dramatically in modern finance.

In financial literature, fiduciary duty is a dynamic concept. The changes in thinking show that fiduciary law is not a static concept and is not tied to a particular investment theory. Instead, the idea is a flexible set of principles subject to varying interpretations over time. Obligation contains standards with a process orientation that guides investment decisions (Aier, 2014). This understanding has encouraged the view that fiduciary duty is an obligation to be considered in investment decisions. In practice, there is no accepted prescriptive alternative, and there has always been strong resistance to a dynamic understanding from a legal perspective, making these standards subject to specific regimes (Rauterberg, 2017).

Brown (2013) reminds investors that they are responsible for preserving the world, increasing the quality of life, and reducing climate change risk. He then suggests investors consider SRI goals and propose the importance of sustainability investment. He poses some questions, including what the use of a maximum rate of return on investment is if it pollutes the air, poisons the water, damages the land, changes the climate, and contributes to greater inequality. Is it enough for some of us to reap financial benefits and consume the products and services resulting from these investments, while the rest of us, and our children and grandchildren, face the possibility of increased morbidity and mortality and reduced quality of life? If society, including the economic system, is disrupted, this is also not good for the company. Investing is not just about how much to make; investing is also about risk, how much we lose, and how much universal owners will suffer due to climate change risks.

Fiduciary obligations must be a shared responsibility, exceeding the company's or investor's efforts to maximize profits (Latif, 2020). These obligations must consider the social and environmental consequences for investors, beneficiaries, and society. We are all universal owners, as shareholders and stakeholders. Sustainable investments must be essential in helping communities and individuals mitigate and adapt to climate change (Richardson, 2011). Advancing social, environmental, and financial benefits is a new fiduciary obligation, so we need to redefine fiduciary obligations to promote SRI in Indonesia. This mandate can be stated in the appraisal protocol, for example, by declaring that the business appraiser is socially responsible and participates in protecting society from fraud and the risk of destroying asset values in general, and stated clearly as an ethical thing that must be carried out.

3. Methods

The effectiveness of business valuation methods is highly context-dependent, influenced by the unique economic, cultural, and regulatory environment in each country (Ahmad et al., 2024). This means that a valuation method effective in the United States may not yield the same results in Indonesia due to these differing contextual factors. By comparing the applications and outcomes of business valuation practices in both countries, we aim to understand how these contextual variables impact valuation accuracy and reliability. Ultimately, this proposition suggests that adapting valuation methods to fit specific contexts can lead to more accurate and meaningful business valuations.

We use a case study to collect and analyze qualitative data from in-depth investigations (Tsang, 2013). This paper applies a descriptive case study to business valuation in the United States and Indonesia. The data for this study is collected from multiple sources to ensure a comprehensive analysis. Data is obtained from existing literature, including academic journals, industry reports, and relevant case studies. Business valuation reports and financial documents from selected companies in both countries are also reviewed to provide practical insights (Albrecht, 2017).

The study compares existing to new applications in the same field. We then find out which one is ideal by looking at the analysis of the sequence of events. (Tellis, 1997) explains that this method refers to the system of actions carried out rather than the individual himself or a particular institution. The unit of analysis is the most critical component in applying case studies and could vary between individuals and institutions. The interesting thing about case studies is that the emphasis is on exploration through skeptical thinking of a phenomenon. So, this study does not focus on cause and effect or the goal of finding truth that can be generalized or predicted in advance.

4. Results and discussion

Business appraisers face an increasingly complex and challenging environment, with more and more information coming from formal and informal sources. Professional skepticism helps business appraisers evaluate the relevance and reliability of information while still paying attention to and upholding social, environmental, and ethical values (Jansson et al., 2014). In this case, professional skepticism is expected to improve SRI decisions. Behavioral finance studies document various biases that influence professional decision-making processes, making it essential to identify biases in decision-making to aid better investment decisions (Shefrin, 2002).

Fiduciary obligations must be a shared responsibility, exceeding the company’s or investor’s efforts to maximize profits. These obligations must consider the social and environmental consequences for investors, beneficiaries, and society (Wang, 2024). This fiduciary duty supports sustainable investments that play an essential role in helping communities and individuals mitigate and adapt to climate change.

Advancing social, environmental, and financial benefits is a new fiduciary obligation, so we need to redefine fiduciary obligations to promote SRI. This mandate can be stated in an appraisal protocol that the appraiser is socially responsible and protects the public from fraud and the risk of destroying asset values in general. The following is a discussion of skeptical thinking about business valuation in Indonesia compared to the United States.

4.1. Study of business valuation in the United States and Indonesia

Business valuation is a critical component of financial analysis and investment decision-making (Shefrin, 2002). The methods and practices employed in different countries can vary significantly due to differences in regulatory environments, market conditions, and professional standards (Ahmad et al., 2024). The valuation process consists of stages to determine a company's value, which briefly consists of five steps: assignment identification, collecting and selecting data, due diligence, valuation using three methods, and reconciliation of value indications (Pupentsova, 2021). The assignment identification is a critical initial step to avoid confusion in the appraisal. Several issues must be understood, including identifying the client and report user, determining the purpose of the valuation, specifying the basis of value, recognizing the valuation object, placing the valuation date, and identifying the limiting conditions. The data and information obtained will significantly determine the following stages of the valuation process. Three data types must be collected: industry data, company data, and comparison companies. In the due diligence, the appraiser analyzes the industry, general company information, adjustments to financial reports, and the fairness of projections. In this stage, the valuation approaches commonly used are the market, income, and asset methods.

The market approach is a valuation approach that compares the valued entity with comparable companies with similar characteristics and values. The market approach consists of three primary methodologies: the guideline company transaction method, including rules of thumb; the guideline public company method; and the subject company transaction method (Wafi, 2024). The analysis is carried out by measuring the level of similarity and difference to determine the subject company's value. Comparative elements often considered include the rights attached to the entity and financial issues, including financing terms, sales conditions, market conditions, location, and physical. In the United States, market data per industry, M&A transactions, specific industry comparisons, and private company research are available in detail. This data is still unavailable in Indonesia, so an appraiser must use their professional judgment.

The income approach utilizes an economic benefit stream of the subject company, typically based on historical or projected cash flow, which is reasonably reflective of the company's most likely future operations, which is then capitalized to convert the income stream into company value. In a financial projection, net operation loss calculation is widely used in the United States while uncommon in Indonesia. The option methods, including the back-solved approach, are commonly utilized in the United States, while in Indonesia, this application is still limited; one possible reason is that the option transaction in IDX is unavailable (Witjara, 2019). The authority must support the option transaction running again in IDX to make the option valuation run in Indonesia. If the stakeholders couldn't comprehend the option transaction, even leaving the market unattended in 2008, they still wouldn't accept the logic of option valuation. One of the crucial uses samples of option application is in the early-stage company valuation.

The asset approach derives the adjusted equity value from the balance sheet. It changes a company's tangible and intangible assets to market value. Financial report adjustments include normalization, non-recurring, and cash adjustments (Peecher et al., 2013). The asset approach application in the United States and Indonesia is similar. In the valuation, applying one or more research methods is doable. Using more than one method usually results in different values, and a reconciliation is needed to get a final value estimate. Value reconciliation is carried out by reviewing data and assessment techniques, examining differences in value indications from each valuation approach, and relating them to the purpose of the valuation. The appraiser must decide on the value conclusion as the result, and the decisions must be taken honestly, impartially, and reasonably. The appraiser must be accountable for their decision in an appraisal report. The report must be clear, brief, logically acceptable, and meet valuation ethics.

The role of the appraiser and the detailed methodologies employed in the asset approach set the foundation for understanding broader business valuation practices (Dierkes, 2021). Business valuation is a critical component of financial analysis and decision-making, playing a significant role in mergers, acquisitions, and investment strategies (Shefrin, 2002). In the United States, business valuation practices are well-established, supported by robust regulatory frameworks and extensive empirical data, ensuring precision and consistency (Cordano, 2010). Conversely, Indonesia's business valuation practices are still developing, facing challenges such as limited data availability and evolving regulations (Witjara, 2019). These differences in valuation methodologies and regulatory environments highlight the need for a comparative study to understand the strengths and areas for improvement in each country's approach. The comparative analysis result for business valuation between United States and Indonesia can be seen in **Table 1**.

Table 1. Comparative analysis of business valuation practices between the United States and Indonesia.

Aspect	United States	Indonesia
Business Valuation Practices	Well-documented, structured methodologies	Limited data, evolving regulations
Identification of Biases	Based on extensive empirical studies	Predominantly heuristic and judgment-based
Mitigation Practices	Established protocols, regulatory oversight	Developing protocols, limited oversight
DLOM and DLOC	Detailed guidelines, variable application	Fixed guidelines, rigid application

The comparative analysis between the United States and Indonesia reveals distinct differences in business valuation practices. The United States employs structured methodologies, extensive empirical data, and strong regulatory oversight, while Indonesia relies on heuristic approaches with evolving regulations and limited data access. In terms of bias identification, the United States has advanced recognition and training programs, whereas Indonesia is less systematic and influenced by cultural norms. Mitigation practices in the United States include advanced models and peer reviews, contrasting with Indonesia's developing regulations and professional development efforts. Additionally, the application of DLOM and DLOC is flexible and data-supported in the United States, but rigid and less empirically based in Indonesia.

4.1.1. Discount for Lack of Control (DLOC)

The application of Discount for Lack of Marketability (DLOM) and Discount for Lack of Control (DLOC) varies significantly between the two countries. In the United States, detailed guidelines exist for the application of these discounts, allowing for flexibility based on the specific circumstances of each valuation. Appraisers can adjust the discounts according to market conditions and empirical data, resulting in more accurate and tailored valuations. In Indonesia, the guidelines for DLOM and DLOC are more rigid, often leading to a one-size-fits-all approach. This rigidity can result in less accurate valuations that do not fully account for the unique aspects of each case. There is a need for more flexible guidelines that allow appraisers to adjust based on specific factors and empirical evidence.

The following is a discussion of skeptical thinking about business valuation in Indonesia compared to the United States. Minority interest is like a non-controlling interest because minorities usually do not have control. In other situations, it might be different as minority interests have control. In this case, a minority is not like non-controlling, so we use the non-controlling term for the subsequent discussion to show a discount for lack of control. Non-controlling shareholders are generally worth less, while controlling interests in a company are more valuable because they can influence the company's policies and operations. Investors pay more for controlling interests than for non-controlling ones. How large a premium is paid for gaining control is difficult to quantify. One of the methods developed to quantify this is the Mergerstat Premium Control Study (Gangi, 2022). This study calculates the purchase premium paid above the market price five working days before the public announcement. Calculating the discount from the premium uses the following formula.

$$\mathrm{DLOC} = 1 - (1/(1 + \mathrm{Premium\ Control})$$

The business appraiser determines the DLOC from a study of empirical data and then adjusts it to suit the specific control attributes of the interest being valued. A critical issue to consider when evaluating DLOC is the inability of non-controlling interest holders to control and take power attributes.

In the United States, the tax litigation case for minority shareholders were designed to reflect a reduction in the value of shares that do not cede control of a closely held corporation (Kling, 2010). Minority discounts are recognized because minority interest holders have no control over corporate policies, cannot direct dividend payments, and cannot force the liquidation of corporate assets (Zakhmatov, 2022). In practice, some exceptions stem from the logic that some valuation methods produce non-controlling value levels, and no adjustment is necessary when the subject being valued is a non-controlling interest. In Indonesia, the DLOC application is based on professional judgment.

4.1.2. Discount for Lack of Marketability (DLOM)

According to the IRS, DLOM is related to the absence of a market entity that immediately purchases or absorbs the securities offering. In theory, investors will choose an investment value that can be converted into cash directly or liquidly without reducing the value of the investment compared to investments with material time and costs or even those that are difficult to disburse (Sandberg, 2011). The comparison referred to this discount is transactions in shares of public companies that are actively sold on the capital market. Shareowners can call their broker or sell shares online and get cash within three working days (San Martín, 2021). The period comparison is the rationale for applying DLOM because the level is assumed to be close to 0% in this position. The greater the DLOM percentage, the longer businesses can obtain cash from their assets. Selling a business entity takes longer than three days. It can take weeks, months, or even years. Shares that cannot be immediately converted into cash are bridged by implementing DLOM.

In Indonesia, this discount for lack of marketability is translated into a market liquidity discount and defined as "usually used as a general reference for the percentage deducted from the value of each type of ownership to reflect the relative lack of marketability." This regulation states the discount percentage within a specific value range for private and public companies, a summary of which is presented in **Table 2**.

Table 2. Summary of DLOM in Indonesia.

Companies	Majority	Minority
Private	20%–40%	30%–50%
Public	≤20%	10%–30%

Source: OJK Regulation Number 35/Pojk.04/2020.

Apart from this regulation, product developments on the Indonesian Stock Exchange and SRI principles of openness have encouraged the development of business valuation science, with more and more financial data being published (Witjara, 2019). Unfortunately, academics in Indonesia have not fully supported the development of business valuation science. There are few empirical studies conducted by academics that business appraisers in Indonesia can use. Research in this area is important and is expected to become a reference for public appraisers and professions related to appraisal, such as financial analysts, equity analysts, investment bankers, and parties who need knowledge about company valuation.

The DLOM application in Indonesia should be evaluated because the appraiser must estimate the discount magnitude based on the uniqueness of the entity, not merely based on the range permitted by the regulator. The literature review shows several ways to calculate DLOM, including restricted stock, pre-IPO, option, and acquisition methods. In Indonesia, studies that can be performed are restricted stock and pre-IPO methods, while data problems hamper the application of option and acquisition methods. DLOM regulation potentially reduces tax revenue since appraisers cannot apply DLOM below 20% for private companies. Based on the 2022 tax amnesty rates, disclosure of assets acquired before 31 December 2015, will be taxed at 6%–11% on net assets. If the appraiser determines an indication of a market value of Rp 10 billion and applies a 20% DLOM, the value is IDR 8 billion. If he can use a 10% discount, the value is IDR 9 billion, and the potential state tax revenue would be greater (from

Rp 8 billion to Rp 9 billion times a minimum of 6%). In this case study, the DLOM regulation reduces the indication of fair market value because appraisers could not apply DLOM under 20% for private companies.

Logically, the current DLOM magnitude should be less than the early days of restricted stock studies conducted. Back then, all transactions were still recorded on paper, up to simple computer recording with e-filling. Currently, information can be accessed in a matter of seconds, thus potentially reducing DLOM levels; this logic is written by Comment (2012). We second this idea and insist that the DLOM study be performed using transaction data on the IDX. The local data is important to indicate a DLOM proxy for updating DLOM regulations in Indonesia, not just relying on the references around 1980 in North America.

4.2. Socially responsible investing emergence in the business valuation

Business appraisers are prone to tendencies and biases as errors in their decisions. Understanding tendencies and biases helps individuals make better decisions, given the uncertainty of financial decisions. Investments depend on business appraisers who provide market value. An appraiser is critical in investment (Horobet, 2012). Collectively, they have social duties and fiduciary obligations. Deriving market value by paying attention to social duties and fiduciary responsibilities is a mandate for sustainable financial development. To achieve this goal, existing tendencies and biases must be mitigated with valuation protocols. Based on the results of the study of this research, a flow chart in social responsibility investment is developed which is shown in **Figure 1**.

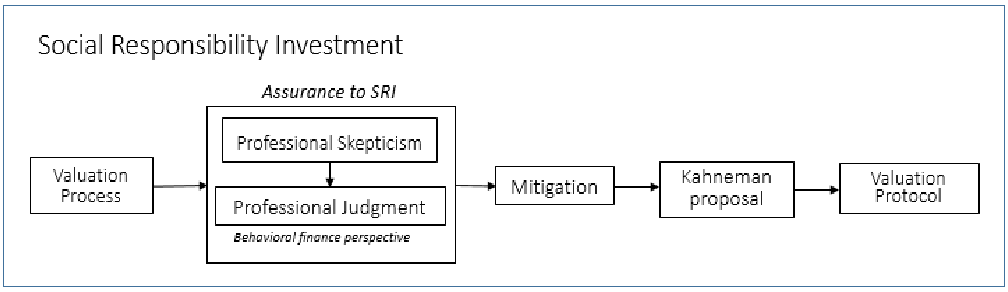

Figure 1. Critical thinking flow chart in social responsibility investments.

The flow chart showed comprehensive framework for enhancing the rigor and reliability of business valuations, particularly in the context of social responsibility investments. By systematically incorporating professional skepticism, judgment, and behavioral finance insights, the process aims to produce more accurate and trustworthy valuation outcomes, ultimately supporting better investment decisions. Professional skepticism and judgment are important aspects of the business assessment process to improve the reliability of social responsibility investments, especially in terms of mitigating behavioral biases, improving reliability and decision-making (Ahmad et al., 2024; Shefrin, 2002). Behavioral Bias Mitigation can address behavioral biases that can distort valuations, such as overconfidence, anchoring, or confirmation bias, by integrating insights from behavioral finance (Kiymaz et al., 2016). Enhanced Reliability can help provide assurance and confidence to stakeholders that the valuation is accurate and reflects true economic value (Bailey et al., 2011). Meanwhile, Better Decision Making is used in applying Kahneman's principles to ensure that decision-making in valuation is more rational and less prone to error.

As we know, the purpose of appraisal is to obtain market value. The definition of market value should reflect a deep understanding of efficient market theory and symmetric information markets or align with definitions that already exist internationally (Koklev, 2022). The definition of market value in Indonesia, according to the 2018 Indonesian Valuation Standards, is an estimate of the amount of money that can be obtained or paid in exchange for an asset or liability on the valuation date between a buyer who is interested in buying and a seller who is interested in selling, in a free transaction, where marketing is carried out appropriately, where both parties act based on their own understanding, prudence and without coercion (Witjara, 2019). The phrase "act based on their own understanding" brings us to an information asymmetric market, whereas, in general, the definition of market value assumes of a symmetric market. This assumption is essential because information asymmetric markets will lead to market collapse, so there is a weakness in the definition of market value in Indonesia (Wafi, 2024). This definition resembles the description from the United States Tax Service or IRS, except for that phrase.

Professional skepticism is needed to improve the decision-making process to achieve SRI (Cruz et al., 2020). It makes an appraiser focus on relevant clues and thoroughly examine the evidence. SRI is a complex investment decision that requires deep analysis (Arjaliès, 2010). To disentangle this complexity, an analyst should tweak the quality of their judgment. Professional skepticism as a way of thinking could help appraisers by improving evaluations of information reliability and still referring to social, environmental, and ethical considerations. Apart from the problems in the valuation process and the scarcity of data, decision-makers are also prone to subjectivity, emotion, and psychology issues, which ultimately influence the decision to achieve SRI. These issues can shift market value. We propose the application of professional skepticism in the business valuation process to improve SRI decisions.

Realizing these various challenges, collectively, we need to mitigate the risks from fallacies that could shift the market value (Pupentsova, 2021). To make sound mitigation, we need to understand the tendencies or biases that occur. Some tendencies and mitigations include, first, giving more weight to information that matches initial beliefs, which is mitigated by making the opposite case and considering alternative explanations; second, overestimating one's abilities when performing tasks, mitigation is by confronting other experts' opinions or challenging underlying assumptions; third, making judgments by starting from an initial value and then adjusting only slightly from that initial value; which is mitigated by asking for input from others and considering bias; fourth, viewing information that is easy to retrieve or what is easily accessible as more likely or more relevant, mitigating includes obtaining and evaluating objective data, consulting with other analysts, and making the opposite case. In practice, business appraisers can explain these mitigations in a valuation protocol.

Daniel Kahneman, Nobel Prize winner in Economics, is one of the figures in behavioral finance who challenges rational models of judgment and decision-making. In line with the decisions made by individuals and protocol, he stated:

"When there are marginal situations where there is some predictability but poor formulas do better than individuals, that is the domain where formulas beat

individuals regularly. It is a domain of fairly low predictability because when there are weak cues, people are not very good at picking them up and are not good at using them consistently. But formulas can be generated on the basis of experience, and they will do a better job than individual judgment.

A formula or protocol can be generated based on experience, which will do a better job than individual decisions (Nolder and Kadous, 2018). With more information, professional skepticism helps business valuers evaluate the relevance and reliability of information while considering social, environmental, and ethical issues in investment decisions. The authors suggest that professional skepticism be used to help reduce behavioral biases, thereby improving the quality of financial professionals' decision-making. The actual application of professional skepticism is the application of valuation protocol. Some of the essential points described in the business valuation protocol are discussed in the following sections.

The material discussed in a valuation protocol explains the adjustments and normalization of historical financial statements. If the financial statements are not from the auditor, then why the appraiser trusts the financial statements also needs to be explained. The appraiser should not be ultimately confident in unaudited financial statements. The protocol also discusses financial projection rationality, presenting the material assumptions that support the projection and why those assumptions are appropriate (Peecher et al., 2013). It is necessary to explain the company's strengths or weaknesses to achieve the expected performance in the future. The next subject discusses the multiplier method in a market approach. It is necessary to explain how each company can be compared in size, customer concentration, and revenue volatility. The explanation also includes adjustments to the multiplier and the arguments for choosing the average instead of the median value because this metric can have a material effect on the equity value indication.

The valuation protocol guides the use of discounted cash flow analysis, and the appraiser should thoroughly explain the cost of equity or weighted average cost of equity used and the logic of the company's growth figures. Then, it is necessary to clarify the reasons for weighing the selected methods in determining the indication of equity value. Defining the DLOM reasonability is also required so that the DLOM value does not depend only on the rules without thorough review (Richardson, 2011). The material assumptions must be described, including the cost of capital, depreciation, and amortization during the projection period, how cash and debt affect market value, and excessive cash treatment (Bailey et al., 2011).

Implementing the protocol can prevent the appraiser from being pushed by the entity owner who orders the market value. An important issue raised under sustainable investing is the statement of fiduciary obligations in the protocol. This mandate could bring SRI to a good market value. In general, litigation cases in the valuation will only occur when a prosecution occurs. This prosecution can be avoided by clarifying the information the appraiser has and its limitations. The form of clarification is included in a valuation protocol. The appraiser can avoid litigation when the protocol has been carried out correctly.

5. Conclusion

In this essay, we propose the relevance of professional skepticism in the business valuation process and its mitigation to improve socially responsible investment decisions. The valuation must produce sound and robust fair market value. Since this value is an initial essential information in investment decisions, it must be made by business appraisers based on empirical studies and sufficient data in the industry. Business appraisers have a social duty and fiduciary obligation to achieve a sustainable financial condition. In their practice, appraisers face problems in the valuation process, including information scarcity, bias issues, and intervening owners that potentially shift the market value.

Skeptical thinking is used to improve SRI decisions. The thoughts carried out by practitioners to enhance decisions can be called professional skepticism. The actual application of professional skepticism is in the application of valuation protocols. This protocol serves as a guideline and increases the appraiser's awareness of reducing or eliminating existing risks as a mitigation effort. Suppose comparative data is unavailable and empirical studies in the industry have not been conducted. In that case, the appraiser must provide a valuation protocol explaining why they dare to make a particular market value opinion. So, if market data is not persuasive and empirical studies are unavailable, valuation without protocol is socially irresponsible.

Mitigation can be formulated by studying biases and tendencies, so we suggest that professional skepticism should be used to reduce behavioral biases and improve the quality of professionals' decision-making. In a valuation protocol, the appraiser must explain adjustments in the financial reports and material assumptions influencing market value to promote sustainable investing. This mandate should be done to create a SRI that starts from a fair market value.

In the DLOC discussion, we must develop a proxy to determine the discount magnitudes. In the United States, they quantify this discount from the purchase premium paid above the market price five working days before the public announcement. The business appraiser determines the DLOC from a study of empirical data and then adjusts it to suit the specific control attributes of the interest being valued.

The regulation of DLOM should be evaluated because the appraiser should apply a discount according to the entity's condition. The existing rules can make the tax revenue much smaller because this discount directly reduces the indication of equity. Empirically, there is a potential decrease in the DLOM level due to advances in information technology, which is very different from the early days of restricted stock studies. Currently, information and disclosure can be accessed in a matter of seconds, thus potentially reducing the DLOM level. This rule also does not follow the purpose and definition of DLOM, and the appraiser should apply discounts according to the uniqueness of the object of assessment, not depending on references in the United States from the 1980s. We recommend a study of DLOM values using data on the Indonesian Stock Exchange as a proxy for updating DLOM regulations in Indonesia.

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