

The Future of Business Valuation: How Technological Advancements are Influencing the Valuations Industry

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Abstract EN

This study explores the transformative impact of technological advancements, particularly Artificial Intelligence (AI) and automation, on business valuations. With a focus on evolving dynamics within the valuations industry, this research examines how AI technologies, such as Machine Learning (ML) and Natural Language Processing (NLP), are reshaping traditional valuation methodologies. It also considers stakeholders' concerns, including regulatory challenges and the integration of Environmental, Social, and Governance (ESG) factors. Through an abductive, deductive, and inductive research approach, this study incorporates qualitative primary data from expert interviews and supportive secondary data from industry reports and academic literature. The findings indicate that AI enhances the efficiency and accuracy of financial modelling, peer selection, and qualitative assessments. However, it also introduces complexities related to model transparency and bias, necessitating scrutiny by valuation professionals. The research highlights the critical role of continuous improvement and training in adapting to these technological shifts. Moreover, it underscores the importance of data disclosure and transparency in enhancing the reliability of valuations. Study concludes that the future of business valuations lies in a hybrid approach, where AI-driven tools augment, rather than replace, human expertise. This approach promises to enhance valuation practices by providing deeper insights and improving decision-making processes. By addressing the challenges and leveraging the opportunities presented by AI and automation, the valuations industry can achieve a greater performance and maintain credibility in a rapidly evolving market. This comprehensive analysis provides valuable insights for stakeholders aiming to navigate the future of business valuations amidst technological advancements and shifting industry standards.

Keywords: business valuations, finance, accounting, artificial intelligence, ESG

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Sumário PT

Este estudo explora o impacto transformador dos avanços tecnológicos, particularmente da Inteligência Artificial (IA) e automação, nas avaliações de negócios. Focando na dinâmica em evolução da indústria, examina como tecnologias de IA, como aprendizado de máquina (ML) e processamento de linguagem natural (NLP), estão remodelando metodologias tradicionais de avaliação. Considera também preocupações dos stakeholders, desafios regulatórios e a integração de fatores Ambientais, Sociais e de Governança (ESG). Usando uma abordagem de pesquisa abductiva, dedutiva e indutiva, incorpora dados primários qualitativos de entrevistas com especialistas e dados secundários quantitativos de relatórios da indústria e literatura acadêmica. As descobertas indicam que a IA melhora a eficiência e precisão da modelagem financeira, seleção de pares e avaliações qualitativas. No entanto, introduz complexidades relacionadas à transparência e viés dos modelos, exigindo escrutínio cuidadoso pelos profissionais. A pesquisa destaca a importância da melhoria contínua e do treinamento para adaptação a essas mudanças tecnológicas, além da divulgação de dados e transparência para aumentar a confiabilidade das avaliações. Conclui que o futuro das avaliações de negócios reside em uma abordagem híbrida, onde ferramentas de IA complementam, em vez de substituir, a expertise humana, aprimorando práticas de avaliação e processos de tomada de decisão. Ao abordar desafios e aproveitar oportunidades da IA e automação, a indústria pode alcançar melhor desempenho e manter a credibilidade em um mercado em rápida evolução. Esta análise oferece insights valiosos para stakeholders navegarem pelo futuro das avaliações de negócios em meio a avanços tecnológicos e padrões industriais em mudança.

Palavras-chave: avaliações de negócios, finanças, contabilidade, inteligência artificial, ESG

Título: O Futuro da Avaliação de Negócios: Como os Avanços Tecnológicos Estão Influenciando a Indústria de Avaliações

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Table of Contents

Table of Contents	VI
Table of Figures	IX
List of Abbreviations	X
1. Introduction	1
2. Literature Review:	3
2.1. Stakeholders	3
2.2. Nature of Value	5
2.3. Valuation Approaches	6
2.3.1. Income Approach	6
2.3.2. Market Approach	7
2.3.3. Cost Approach	8
2.4. The Art, Science, and Craft of Valuation	9
2.4.1. Analytical Techniques (Science)	9
2.4.2. Professional Judgment (Art)	9
2.4.3. Practical Application (Craft)	10
2.5. The Role of Standards and Guidelines	10
2.5.1. Key Components and Principles	10
2.5.2. Compliance and Consistency	11
2.5.3. Adapting to Technological Changes	11
2.6. Changing role of technology over time	12
2.6.1. Past developments	12
2.6.2. Automation vs augmentation – integrating AI in practice	13
2.6.3. Foundations of AI	15
2.6.4. AI in Finance	17
2.6.5. AI in Business Valuations – State of Research	18
2.7. Other Trends Impacting Business Valuations	24
2.7.1. ESG, Sustainability, and Their Influence on Risk	24
2.7.2. Risk Management in Business Valuations	25
2.7.3. Data Disclosure & Transparency in Business Valuations	26
2.7.4. Accuracy, Consistency, and Compliance	27
3. Research Methodology	29

3.1. Research Design	29
3.2. Data Collection.....	30
3.2.1. Secondary Data – Software Providers	30
3.2.2. Secondary Data – Review of Research	31
3.2.3. Primary Data – Expert Interviews.....	31
3.2.4. Data Analysis	33
4. Findings & Discussions	33
4.1. Valuations Reflecting Unclear Nature of Value	34
4.1.1 Source of Value	34
4.1.2. The Art, Science, Craft Debate	35
4.2. Human-Machine Collaboration	36
4.2.1. Examples of Augmentation	37
4.2.2. Examples of Automation	37
4.2.3. Examples of Tasks Reserved for Humans	38
4.2.4. Future of Human-Machine Collaboration	39
4.3. Software of Tomorrow	39
4.3.1. Benefits of Using Technological Advancements.....	39
4.3.2. Main Tensions	41
4.3.3. Raised Concerns	44
4.3.4. Balancing Efficiency with Thoroughness	45
4.5. Shifts in Valuation Process	46
4.5.1. Evolving from Traditional to Modern Valuations	46
4.5.2. Current Adoption of AI and Machine Learning.....	47
4.5.3. Use Cases.....	48
4.5.4. Future Outlook: Fully Automated Valuation Models or Supportive Tools?	50
4.6. Adaptation of Industry Standards to New Technologies	50
4.6.1. Standards & Regulations – Support or Limitation?	50
4.6.2. Role of IVSC, Professional Associations, and Regulators.....	51
4.7. Integrating ESG and Sustainability Considerations in Business Valuations	52
4.7.1. Real-Life Impact of ESG	52
4.7.2. Stakeholder Perceptions	53
4.7.3. Inherent Conflicts and Opportunities.....	53
4.8. Critical Perspective: Challenges and Opportunities in Changing the Process	54
4.9. Other Impact of Changes on Stakeholders.....	55

4.9.1. Continuous Improvement and Training	55
4.9.2. Contradictory Motivations and Conflicts of Interest	56
4.9.3. Societal Benefits	57
4.9.4. Conclusion	57
4.10. Summary of Findings & Discussion	58
5. Conclusion	58
5.1. Summary of Key Findings	58
5.1.1. Technological Advancements and Efficiency Gains	58
5.1.2. Balance Between Quantitative and Qualitative Factors:.....	58
5.1.3. Human-Machine Collaboration	59
5.1.4. Transparency, Trust, and Customization	59
5.1.5. Integration of ESG Factors	60
5.1.6. Stakeholder Dynamics and Conflicts	60
5.2. Implications for Practice	60
5.3. Implications for Policy	60
5.4. Limitations	61
5.5. Future Research Directions.....	61
Appendices	69

Table of Figures

Figure 1 Stakeholders Groups Overview	4
Figure 2 Examples of companies belonging to Stakeholder Group	5
Figure 3 DCF Formula.....	6

List of Abbreviations

AI	Artificial Intelligence
ML	Machine Learning
DL	Deep Learning
NLP	Natural Language Processing
LDA	Latent Dirichlet Allocation
LLM	Large Language Model
GenAI	Generative AI
ESG	Environmental Social Governance
IVSC	International Valuation Standards Committee
GPT	Generative Pre-Trained Transformer

Readers are advised that an AI tool was used to clean language but is not responsible for content or ideas.

1. Introduction

Business value is shaped by a complex interplay of market trends and tensions, each exerting distinct and often conflicting influences on the final price estimate. Elements such as management quality and product innovation determine the company's risk profile, while financial projections affect its profitability. Concurrently, industry trends and macroeconomic conditions sway investor confidence and willingness to invest. The rapid pace of change, market volatility, and an ever-increasing volume of available data have compounded the intricacy of the valuation process. To navigate these subtleties, the industry has increasingly turned to Artificial Intelligence (AI), particularly Large Language Models (LLMs), to enhance specific aspects of the valuation process, including peer selection and qualitative risk assessment.

Conversely, the financial markets and their associated professions are characterized by stringent regulation, rigorous scrutiny, and a fundamental aversion to risk. Due diligence processes, designed to mitigate information asymmetry and prevent future oversights, are both extensive and meticulous. Consequently, the financial industry and regulatory bodies have established and widely adopted several valuation techniques and approaches deemed to provide the highest accuracy.

There are three primary valuation approaches: income, market, and cost. Each approach is underpinned by different principles, which will be elaborated upon in subsequent chapters. Among these, the income and market approaches are predominantly employed for mergers and acquisitions (M&A) and investment purposes, while the asset approach is frequently used in audits and legal proceedings, such as insolvency. Finance professionals specializing in business valuations engage in diverse activities to support these processes, including conducting industry research to determine risk profiles, discounts, and cost of capital. They also validate growth assumptions, which are critical for developing financial projections based on available financial statements and anticipated market conditions. This often involves leveraging major financial databases to support the analysis.

Traditionally, these processes converge in complex financial models, typically constructed in Microsoft Excel, which has long dominated the industry. However, numerous studies have identified significant inaccuracies in a substantial number of spreadsheets, with error rates ranging from 11% to over 88% in models with numerous sheets (Dorrell, 2014).

The challenges associated with creating accurate financial models and integrating diverse inputs have spurred the growth of the business valuations software industry. Initially, these software solutions focused on producing error-free Excel models. Despite some providers having been in the market for nearly 40 years, there has been a notable acceleration in the adoption of valuation software by professionals over the past decade. Currently, these providers are developing holistic end-to-end (E2E) solutions that leverage modern technologies, including AI, to facilitate more efficient, faster, and accurate valuations. Some providers have reported compound annual growth rates (CAGR) exceeding 15%, and leading global firms in M&A, corporate finance, auditing, and equity funding have integrated these tools into their daily operations.

This trend underscores the growing significance of specialized business valuation software within the industry. However, these new, technology-driven approaches have disrupted the traditional methods of valuation taught in academia and challenged strict valuation standards set by countries like Germany, exemplified by regulations such as IDW S1 (Institut der Wirtschaftsprüfer in Deutschland, 2017). Tensions are emerging between investors and deal brokers, who seek greater efficiency, and conservative regulators and auditors, who prioritize maintaining established standards.

Although research on new trends in business valuations—particularly the implementation of AI, ESG considerations, and dynamic financial projections—is expanding, there remains a gap in understanding how the industry will adapt to these technological advancements. Thus, this study examines the diverse dynamics shaping the future of business valuation and explores the implications for industry practices and stakeholders. Accordingly, the central research question guiding this investigation is:

Research Question:

How are advancements in AI and automation, combined with stakeholder concerns, reshaping business valuations?

This study aims to provide a comprehensive analysis of how technological advancements, particularly AI and automation, are transforming business valuations, including methodologies, stakeholder reactions, regulatory challenges, and the integration of ESG considerations. By doing so, it seeks to offer valuable insights into the evolving landscape of business valuations and the future trajectory of this critical industry.

2. Literature Review:

This chapter delves into extensive research on the emerging trends shaping business valuations, with a particular emphasis on the role of artificial intelligence (AI). By drawing from leading finance and accounting journals, this review provides a thorough understanding of the current landscape in business valuations, the evolving impact of technology, and the implications for different stakeholders. This chapter explores the complexities of defining value, the various methodological approaches to valuation, and the balance between quantitative and qualitative assessments. Additionally, it highlights the crucial role of standards and guidelines in ensuring the consistency and reliability of valuations across diverse contexts.

2.1. Stakeholders

Understanding the impact of new trends in the financial industry on business valuations requires a comprehensive look at the various stakeholders involved. This section outlines the key stakeholders in business valuations, detailing their roles and how these valuations affect them. By examining the influence of these trends on different stakeholder groups, we gain insight into the broader implications for the industry. Expanded version of the list with example companies is in Appendix 1. Figure 1. also showcase some companies which represents various groups of stakeholders

Figure 1 Stakeholders Groups Overview

Stakeholder Group	Description	Relation to Valuations
Private and Public Companies	Entities ranging from privately owned firms to publicly traded corporations, each with distinct transparency and financial disclosure requirements.	Engage in valuations for a variety of financial purposes, including compliance, reporting, and strategic decision-making.
Advisors	Includes business brokers, corporate finance advisors, and investment banks, each facilitating different scales and types of financial transactions.	Utilize valuations to guide transactions, assess company health, and ensure fair deal structuring.
Investors and Fund Managers	Encompasses a spectrum from individual angel investors to large institutional asset managers, each investing at different stages of company growth.	Depend on accurate valuations to assess potential investments, manage risks, and strategize exits.
Certified Professionals	Independent valuers and large practices offer specialized valuation services across various contexts.	Provide essential, defensible valuations for compliance, transactional, and litigation purposes.
Regulatory and Standards Agencies	Authorities and bodies that enforce compliance and set standards for valuation practices.	Ensure the consistency, reliability, and integrity of valuation processes across the industry.
Academia and Qualification Bodies	Universities and professional associations that contribute to the educational and ethical standards in the valuation field.	Support the development of valuation methodologies and certify professionals to uphold industry standards.
Software Providers	Firms offering software, databases, and specialized tools crucial for modern valuations.	Enhance the efficiency, accuracy, and accessibility of valuation processes through technological solutions.

Figure 2 Examples of companies belonging to Stakeholder Group



Source: Own Analysis; References in section 2.6.1.

2.2. Nature of Value

Understanding the value of a business is essential in valuations, blending objective metrics and subjective perceptions. Holbrook (1999) argued that value is relativistic because it is comparative (preferences-driven), personal (varying among people), and situational (context-specific). Objectively, value is seen as the monetary worth derived from technical, economic, service, and social benefits (Anderson and Narus, 1998). This includes tangible factors such as financial performance and market conditions. Subjectively, value hinges on individual perceptions, where "the consumer's overall assessment of the utility of a product" plays a crucial role (Sánchez-Fernández and Iniesta-Bonillo, 2007).

Mercer and Harms, (2020) bridge these views with their Integrated Theory of Business Valuation, arguing that a business's value is a function of expected cash flows, growth, and associated risks. This approach acknowledges that while financial metrics are critical, the perception of these metrics can vary among stakeholders.

Different stakeholders prioritize different aspects of value. Investors may focus on growth potential and market comparisons, while regulators emphasize compliance and methodological consistency. Recognizing these diverse perspectives is crucial for accurate valuations.

Defining the value of a business involves balancing objective financial data with subjective perceptions. This balance and related trade-offs are crucial to understanding how value is created and assessed, providing a comprehensive framework for business valuations.

2.3. Valuation Approaches

Due to the dichotomic nature of value, practitioners use various methodological approaches to determine the main principles of valuing different asset classes. According to the International Valuation Standards (IVS), there are three main ones: income, market, and cost (IVSC, 2024b). Each of these include a subset of methods that guide valuers in conducting their valuations.

2.3.1. Income Approach

Income approach is predicated on the assumption that the valued asset, in this case, a company, can produce predictable future cash flows. Thus, its present value can be calculated. Variations in the Discounted Cash Flow (DCF) method is the most frequently employed under the income approach (Damodaran, 2012; IVSC, 2024a).

The DCF method projects future cash flows and discounts them back to their present value using a discount rate that reflects the risk associated with those cash flows. This discount rate is often the weighted average cost of capital (WACC), which accounts for the cost of equity and debt financing. The formula used in DCF is the following:

Figure 3 DCF Formula

$$\text{Value} = \sum_{t=1}^{t=n} \frac{CF_t}{(1+r)^t}$$

where n = Life of the asset

CF_t = Cash flow in period t

r = Discount rate reflecting the riskiness of the estimated cash flows

Although the income approach is often seen as the more objective approach to valuation, both cash flows and the discount rate are subjective factors of this formula. Cash flows are calculated from the financial projections prepared for the valued company, which should adhere to widely accepted Financial Planning & Analysis practices (Chieffe and Rakes, 1999; Lee, Lee and Lee, 2009). Valuers must analyse the Prospective Financial Information, verify its assumptions, and ensure its relevance to the intended use of the valuation (IVSC, 2024b). Accurate cash flow growth estimates are crucial as they drive stock market trades and market stability (De La O and Myers, 2021).

The discount rate is derived from the cost of capital, which essentially, is the pricing of risk (Pratt and Grabowski, 2010). The main premise is that market participants will invest in a project only if the expected return, adjusted for risk, outweighs their alternative investment opportunities. This involves calculating the present value of a project's expected cash flows (Brealey *et al.*, 2023).

The DCF method has variations depending on whether the goal is to value only the equity of the company or include debt to arrive at the enterprise value. Different end goals lead to changes in which cash flows are considered and how calculations are done (Pratt & Grabowski, 2010). The equity value uses the equity cost of capital, while the enterprise value considers the tax advantages of debt financing, such as Interest Tax Shields.

Lastly, the DCF approach assumes perpetual cash flow generation, which is not practical for predictions beyond a few years. Therefore, practitioners estimate a Terminal Value at a certain future point. Commonly, the Gordon Constant Growth DCF Model is used, which assumes cash flows grow at a constant rate into perpetuity (Canessa and Jarrell, 2022).

2.3.2. Market Approach

Alternatively called relative valuation, market approach is based on the premise that similar companies will have analogous values derived from their key financial indicators. Common multiples used include EBITDA, earnings, revenue, and book value (IVSC, 2024b).

This approach involves applying a market multiple from a peer or group of peers to the valued company's financial estimate. The process is divided into two main methods: the guideline

publicly-traded comparable companies analysis and the precedent comparable transactions method (Damodaran, 2012; IVSC, 2024b; Schmidt, 2024).

The guideline publicly-traded comparable method values both private and public companies by selecting a group of publicly traded peers that closely resemble the valued company based on multivariate characteristics (IVSC, 2024b). Peers should be "sufficiently similar" to allow for "meaningful comparison" (IVSC, 2024b, p. 38). Researchers have focused on improving peer selection through factors like industry classification, financial structure, and risk profile (Alford, 1992; Bhojraj and Lee, 2002).

The precedent transactions method, like the comparable companies' method, bases valuations on actual transactions of similar companies, especially relevant for private companies. This method confirms market perceptions of value and introduces Levels of Value, which consider control premiums and discounts for lack of control or marketability. These are mediating factors which impose different levels of value based on specific context of valuation, which again, highlights the complex nature of estimating business value (Mercer and Harms, 2020).

2.3.3. Cost Approach

Cost approach, or asset-based approach, is based on the premise that a buyer would not pay more for an asset than the cost to obtain an asset of similar utility, whether by purchase or creation (IVSC, 2024b). In business valuations, this method is often called the asset approach as it takes an accounting-based view. The value of the company is derived from either the balance sheet book value of the company with some adjustments or the sum of replacement and reproduction costs of each individual asset it owns (IVSC, 2024b; Damodaran, 2012).

Replacement cost method estimates the cost to replace the company's assets with similar assets of equivalent utility, considering current market prices and adjusting for depreciation and obsolescence (IVSC, 2024b). Reproduction cost method estimates the cost to reproduce the company's assets exactly as they are, using the same materials, design, and construction standards (IVSC, 2024b).

In companies where physical assets generate cash flows through production and sales of physical products, such as those using heavy machinery or accessing natural resources, e.g., in

the Oil & Gas industry, the asset approach is particularly useful (Srivastava and Rajgopal, 2022). However, modern companies with large market capitalizations often derive significant value from intangible assets, such as innovations, patents, trademarks, brands, software, and human talent, making the cost approach less applicable for many contemporary businesses (Srivastava & Rajgopal, 2022). Thus, in specific cases it's always recommended to triangulate the outcomes against each other.

2.4. The Art, Science, and Craft of Valuation

This debate, whether business valuations are more of a science, an art, or a craft, has persisted among industry professionals and academics. This discussion hinges on the nature of value and how it is perceived and calculated.

2.4.1. Analytical Techniques (Science)

Analytical techniques in business valuations rely on systematic and quantitative methods. These techniques include widely accepted models such as the Discounted Cash Flow (DCF) and Comparable Company Analysis (CCA includes both Guideline Publicly-Traded Companies and Precedent Transactions, as a group of methods within market approach). These methods are grounded in financial theory and involve rigorous calculations to estimate the value of a business. As mentioned, the DCF method projects future cash flows and discounts them back to their present value using a discount rate reflective of the risk associated with those cash flows (Damodaran, 2012). Such systematic approaches lend a scientific aspect to valuations, emphasizing objectivity and precision.

2.4.2. Professional Judgment (Art)

Despite these scientific methodologies, valuations often require significant professional judgment. This aspect of valuation is considered an art, where intuition, experience, and subjective assessment play crucial roles. Practitioners must evaluate non-quantitative factors such as market trends, management quality, and strategic positioning. Bhojraj and Lee (2002) highlight the subjective nature of selecting peer firms for comparison, stating that it can be considered an "art form" due to the level of judgment involved.

2.4.3. Practical Application (Craft)

Valuation as a craft involves the practical application of both scientific techniques and artistic judgment. This perspective acknowledges that while valuations are underpinned by rigorous models and data, they also require the valuer's skill and experience to interpret and apply these methods effectively. (Damodaran, 2015) suggests that valuation is "akin to cooking or carpentry, where one learns what works through practice and experience". This craft perspective balances quantitative analysis with qualitative insights, integrating both to produce a well-rounded valuation.

2.5. The Role of Standards and Guidelines

Globalization of industries has led to the unification of standards across various professions, including accounting, to facilitate global trade and the rise of multinational corporations. This unification has necessitated uniformity in business valuations, driven by market needs and regulatory requirements. International Valuation Standards Committee (IVSC) is currently the leading force pushing towards global adoption of standards in this spectrum.

International Valuation Standards (IVS)

2.5.1. Key Components and Principles

The International Valuation Standards (IVS) provide a comprehensive framework for conducting business valuations. These specifications ensure consistency, transparency, and reliability in valuation practices worldwide (IVSC, 2024b). IVS outlines six key components crucial to the valuation process:

Valuation Framework: Establishes the general principles and requirements for conducting valuations. Valuers must possess the necessary knowledge, skills, experience, and training, and they must adhere to ethical and objective standards (IVSC, 2024b).

Scope of Work: Defines the fundamental terms and conditions under which valuations are performed. This includes the company's details, the valuation's intended use, the author and recipient of the valuation, currency, date, limitations, assumptions, and considerations for IVS compliance (IVSC, 2024b).

Bases of Value: Different bases of value, such as Market Value, Equitable Value, Synergistic Value, Investment Value/Worth, and Liquidation Value, cater to various valuation scenarios (IVSC, 2024b).

Valuation Approaches: IVS identifies three main approaches to valuation—Income Approach, Market Approach, and Cost Approach. Each approach includes specific methods applicable to different valuation contexts (IVSC, 2024b).

Data and Inputs: Emphasizes the importance of data sourcing, including macroeconomic trends, industry analysis, risk assessment, and ESG considerations. Specialized software and AI tools support the data collection and analysis process (IVSC, 2024b).

Valuation Models: Financial models, usually created in Excel or specialized software, transform inputs into outputs through relevant calculations. These models must be complete, transparent, and flexible to accommodate various valuation contexts (IVSC, 2024b).

2.5.2. Compliance and Consistency

Ensuring compliance and consistency with valuation standards is crucial for maintaining accuracy and reliability in business valuations. Valuers must adhere to the IVS guidelines, which provide a structured approach to valuations and promote best practices. This includes thorough documentation, transparent reporting, and adherence to ethical standards (IVSC, 2024b).

2.5.3. Adapting to Technological Changes

As they play a critical role in standardizing business valuations across the globe, IVSC's framework is evolving to incorporate new technologies that enhance the valuation process. Technological advancements, such as AI and specialized valuation software, are transforming how data is collected, analysed, and reported. IVS guidelines are continually updated to integrate these technologies, ensuring that valuations remain accurate, efficient, and relevant in a rapidly changing environment (IVSC, 2024b).

2.6. Changing role of technology over time

2.6.1. Past developments

Initially, valuations were conducted manually, relying heavily on pen-and-paper methods. This process was time-consuming and prone to human error. The introduction of digital tools significantly improved the efficiency and accuracy of valuations and dramatically transformed the field of business valuations over the past several decades.

The advent of spreadsheets, particularly Microsoft Excel, revolutionized financial modelling by automating calculations and providing a platform for more sophisticated analyses. Excel allowed valuers to build complex models that could be easily adjusted and updated, reducing the time required for valuations and increasing their accuracy (Dorrell, 2014; Sonne, 2022). Excel and its predecessors, such as VisiCalc and Lotus, marked the first major technological shift by automating repetitive elements of the process (Seale, 2020).

Following the initial transition to digital tools, the creation of financial databases like S&P CapitalIQ and Bloomberg for public company or later Pitchbook for private company data, represented another breakthrough. These databases enabled valuers to save significant time on data search and extraction by providing direct access to extensive financial data (Sonne, 2022). The integration of these databases into valuation models further streamlined the process, enhancing both speed and precision.

Simultaneously, the industry witnessed the growth of specialized valuation software that aimed to support either specific elements of the process or provide holistic end-to-end (E2E) valuation solutions. For example, ValuSource, established in 1984, is among the oldest companies producing E2E valuation software and is widely used in the US, endorsed by the National Association of Certified Valuation Analysts (NACVA) (ValuSource, 2024). Other prominent E2E software in the US include ProfiCents, Moneysoft, and ValuAdder (O'Bannon, 2023).

Despite these advancements, many valuers still prefer developing their own financial models with support from external resources. These professionals often use tools like Business Valuation Resources (2024) (BVR), which was founded in 1995 to provide industry insights, news, expert opinions, and market data. BVR's product portfolio includes DealStats (formerly Pratt's Stats). Interestingly, another commonly used tool is Kroll's Cost of Capital Navigator, developed by Pratt's co-author Grabowski (Grabowski, Harrington and Nunes, 2018).

Currently, more providers aim to incorporate the latest technological advancements and industry trends into their tools. You can also see a higher level of specialisation of each looking for their niche. For instance, 73strings introduced Qubit X Equity for portfolio valuation, which combines multiple datasets and industry insights, utilizing AI models to determine and calculate the most applicable valuation methods (73strings, 2024). Equidam (2024) targets, the other spectrum of the market, utilising AI to advance start-up valuation which are one of most difficult asset class to measure. Valutico software focuses on E2E private and public company valuations and uses AI for peer recommendation systems, as well as ValutECO, an automated tool to include ESG considerations in the valuation process (Harris, 2023). Bloomberg has also initiated a new tool for sustainability screening (Lahey, 2024). Other providers also try to adapt and find their place. BizEquity (2024) moved more towards simplifying calculations directly targeting the business owners, not advisors, while Valu8 (2024) moved from valuation being a software into a private company provider. Based upon investigation and individual professional experience, the author sees this segment as a very dynamic market with strong growth potential.

Noticeably, Business Valuation Resources, Kroll, 73strings, Valutico, and Bloomberg are the only software providers that are active members of the IVSC, further demonstrating their commitment to ensuring their products' highest level of compliance with industry standards. Their involvement in international boards is vital for fostering further adoption of AI-driven efficiencies in finance and valuations (IVSC, 2024a).

2.6.2. Automation vs augmentation – integrating AI in practice

Integrating artificial intelligence (AI) into the financial sector has sparked significant debate about the roles of automation and augmentation. “Whereas automation implies that machines take over a human task, augmentation means that humans collaborate closely with machines to

perform a task” (Raisch and Krakowski, 2021, p.192). This distinction underscores the ongoing transformation in the valuation industry, where both automation and augmentation are essential for achieving peak performance.

AI has been part of academic and practical discussions since 1955, but its prominence in finance has surged recently. For instance, the number of journal articles on AI in finance tripled between 2018 and 2020, reflecting the growing interest and application in this field (Goodell *et al.*, 2021). This surge is driven by AI's potential to enhance accuracy, efficiency, and insight, e.g., in financial analyses.

Automation involves machines taking over repetitive and data-intensive tasks. In the context of business valuations, automation can streamline processes such as data collection, calculation, and initial evaluation. For example, AI-powered tools can automate the extraction of financial data from various sources, reducing the time and effort required by human valuers. This automation not only increases efficiency but also minimizes human error, leading to more reliable valuations (Kolbjørnsrud and Amico, 2016).

Augmentation, on the other hand, focuses on enhancing human capabilities with AI. This approach enables valuers to leverage AI for deeper insights and more nuanced examinations. According to Wilson and Daugherty (2018), successful partnerships between humans and AI have led to significant improvements in other areas of professional services such as recruitment, customer service, and design. In valuations, augmentation allows practitioners to use AI to identify patterns and anomalies that might not be immediately apparent through manual analysis. This collaborative approach ensures that human expertise remains central to the valuation process, with AI providing valuable support (Martela and Luoma, 2021).

2.6.2.1. Potentials and Risks

Implementing AI in valuations offers several benefits when used for both creative and administrative activities. However, there are also risks associated with AI in valuations, such as over-reliance on AI, where human judgment is overshadowed by algorithmic outputs. This can result in a loss of critical thinking and scepticism, which are essential for accurate valuations (Prettner and Bloom, 2020, IVSC, 2024b).

To mitigate these risks, companies should focus on combining augmentation and automation strategically. This involves educating valuers about AI capabilities, fostering a collaborative environment between human experts and data scientists, and ensuring continuous training and development in AI-related skills (Raisch and Krakowski, 2021). By doing so, organizations can harness the full potential of AI while maintaining the crucial human element in the valuation process.

2.6.3. Foundations of AI

Artificial Intelligence (AI) is a branch of computer science designed to enable machines to perform complex tasks traditionally done by humans. AI achieves this through various techniques, primarily through Machine Learning (ML), which includes both supervised and unsupervised learning. ML enables machines to recognize patterns in datasets, providing the foundation for many AI applications (Goodell et al., 2021).

2.6.3.1. Machine Learning and Deep Learning

Machine Learning (ML) is a key component of AI, allowing machines to learn from data and improve their performance over time. Within ML, Deep Learning (DL) stands out as a more advanced subset. DL uses neural networks with multiple layers—input, hidden, and output layers—to process large, unstructured datasets more accurately. This architecture mimics the human brain, creating clusters of knowledge in the hidden layers, which enhances scalability and processing speed (IBM Data and AI, 2024).

2.6.3.2. Natural Language Processing (NLP)

Recent advancements in AI have significantly improved Natural Language Processing (NLP). NLP algorithms are designed to understand and analyse textual relationships in human language, making it a crucial tool in finance for tasks such as sentiment assessment and automated report generation (Cao, Yang, and Yu, 2021).

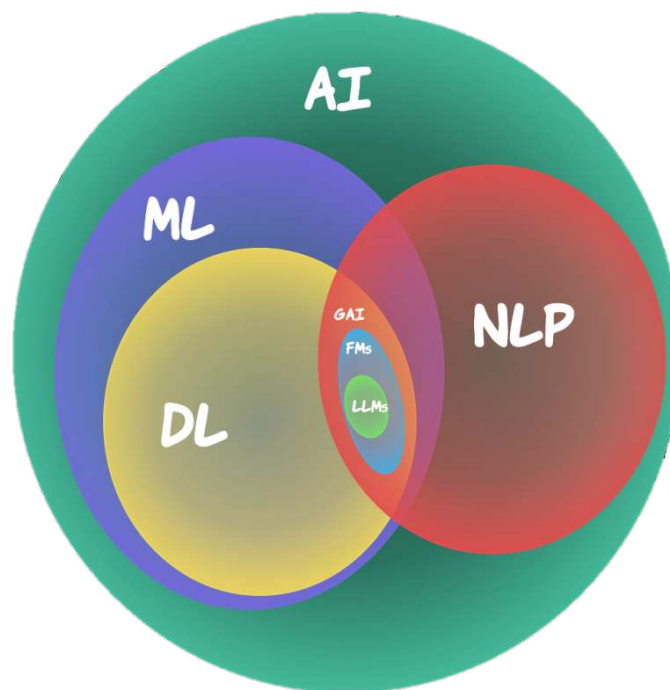
2.6.3.3. Generative AI and Large Language Models (LLMs)

Generative AI (GenAI) builds upon NLP to create various forms of content, including text, images, videos, and sounds. Large Language Models (LLMs) are a specialized subset of GenAI, focused on generating human-like text using pre-trained foundational models. ChatGPT, based on GPT-3.5 engine (and newer), released in November 2022, is one of the most prominent examples of LLMs. It has brought AI's advanced capabilities to a broader audience, making it accessible even to those with limited technical expertise (OpenAI, 2022; Maheshwari, 2024).

2.6.3.4. Interconnected Nature of AI Techniques

It is important to note that these AI techniques—ML, DL, NLP, GenAI, and LLMs—are not mutually exclusive. They are interconnected and jointly reinforce the broader spectrum of AI capabilities. This interconnectedness allows for more robust and versatile AI applications, particularly in intricate fields like finance (Visweswaraiah, 2023).

Figure 4 Interconnected AI Techniques



Source: Visweswaraiah, 2023

2.6.4. AI in Finance

The financial industry has seen significant benefits from AI advancements. For example, tailored Large Language Models (LLMs) such as FinBERT and BloombergGPT, which are specifically trained on financial data, enhance relevance and accuracy in financial applications. These models assist with tasks ranging from generating financial reports to predicting market trends, showcasing AI's transformative potential in the industry (Huang, Wang, and Yang, 2023; Wu et al., 2023).

FinBERT and BloombergGPT are just two of the many examples of novel AI solutions in finance. Goodell's et al. (2021) systematic review of articles¹ identified several main themes in AI finance research: Financial Distress and Corporate Failure, Algorithmic and High-Frequency Trading, Forecasting and Predictive Analytics, Text Mining and Sentiment Analysis, Financial Fraud, Pricing and Valuation, Scheduling, and Investor Behaviour and Trade Classification. The increasing interconnectedness of thematic nodes in more recent publications exemplifies the notion of mutually reinforcing algorithms and models (Goodell et al., 2021).

Popular models and their respective techniques include Supervised Machine Learning (ML) models such as Artificial Neural Networks, Ensemble Bagging and Boosting, Decision Trees, Support Vector Machines, and Logistic Regression. Natural Language Processing (NLP) techniques include Naïve Bayes, Text Mining, and Latent Dirichlet Allocation. Unsupervised ML models include Reinforcement Learning and Markov Decision Processes (Goodell et al., 2021).

Cao (2020, 2022) also provides his comprehensive overview of AI-based techniques applicable to Economics and Finance. According to his research, the most applicable AI and data science methods for valuations include Numerical Methods, Document Analysis, Text Mining, NLP, Neural Computing Methods, Event and Behaviour Analysis, Deep Learning (DL) Methods, and Parallel Ensemble Techniques (Cao, 2022). These insights are corroborated by the thesis author's own examination of related research papers, which are presented in the next section.

¹ All of them published before April 2021 – prior to Chat-GPT

2.6.5. AI in Business Valuations – State of Research

Application of AI in business valuations is a growing area of research, with numerous studies exploring how AI can enhance various aspects of the valuation process. Individual assessment, based upon synthesising an assembly of 100+ research papers ranging from journal articles to other dissertations, revealed several thematic categories where AI has been proposed to improve existing valuation workflows, surpass current data providers, specialized software, and even human judgment. This section covers these thematic groups and provides examples of the models used.

2.6.5.1. *Comparable Peers and Transaction Selection*

One of the most prominent themes, represented by over 40 sources, is the selection of comparable peers and transactions, primarily tied to the market approach to valuations, but also used for DCF (Beta calculation for cost of capital). Selecting the right peers is crucial for ensuring that the correct multiples are applied to cash flows, resulting in accurate value estimates.

2.6.5.1.1. Industry Classification

Traditional methods of industry classification, such as the Standard Industrial Classification (SIC), North American Industry Classification System (NAICS), and Global Industry Classification Standard (GICS), have been enhanced by AI techniques. Studies have shown that clustering methods, which create industry groups based on financial structures, offer more accurate peer selection. For example, Fodor, Jorgensen, and Stowe (2021) used clustering to group companies by their financial characteristics, while Park et al. (2019) utilized LinkedIn data to create geo-industrial clusters.

Natural Language Processing (NLP) models have further revolutionized industry classification. By evaluating business and product descriptions from SEC filings and other sources, NLP models can group companies more accurately. Techniques such as Latent Dirichlet Allocation (LDA) for topic modelling and text mining for similarity scoring have been used to enhance industry classification (Fang, Dutta, and Datta, 2013; Shi, Lee, and Whinston, 2016; Hoberg and Phillips, 2016).

2.6.5.1.2. Public Company Peers Selection

AI has significantly improved the selection of comparable companies for public entities. Traditional methods often relied on broad industry classifications or simple financial metrics, but AI-driven approaches now offer more refined analyses. For instance, NLP techniques extract deeper semantic meanings from large textual datasets, enabling more precise comparisons. Cao et al. (2023) used a large-scale knowledge graph to integrate multiple data points from company descriptions and inter-company relations, enhancing the granularity of comparisons.

Noels et al. (2023) also developed a graph of distance metric using financial statements to identify peers accurately. This approach employs the earth mover's distance to quantify dissimilarities between companies, improving both accuracy and computational efficiency. Yang et al. (2021) explored the use of heterogeneous multimodal graph neural networks, integrating different data types into a unified framework for assessing corporate relative valuation.

Machine learning innovations further enhance peer selection by uncovering non-obvious patterns and correlations across extensive datasets. Geertsema and Lu (2020) demonstrated that machine learning models could adapt to dynamic market conditions, continuously updating peer recommendations to maintain relevance. Kee (2019) utilized Word2Vec to inspect financial news, developing a dynamic method for peer firm identification that adapts to changing market conditions.

2.6.5.2. *Qualitative Assessment in Business Valuations*

Qualitative assessment in business valuations traditionally focuses on non-financial factors such as market position, brand strength, management quality, and competitive environment. Its primary aim is the correct holistic determination of company's growth potential and risk profile. Due to these elements being based on complicated, real life cooccurrences, the integration of Artificial Intelligence (AI), particularly advanced Natural Language Processing (NLP) and machine learning models, is transforming this subjective analysis into a more structured and quantifiable approach.

AI enhances qualitative assessments by converting subjective factors into quantifiable data. For example, FinBERT, developed by Huang et al. (2023), uses a large language model tailored for the finance sector to enhance sentiment analysis in financial texts. This tool extracts nuanced sentiments related to Environmental, Social, and Governance (ESG) criteria from vast amounts of unstructured data, providing deeper insights into qualitative factors that impact valuation.

Machine learning models are also being leveraged to quantify and predict qualitative aspects with greater accuracy. Kim (2021) demonstrates the application of machine learning to assess risk premiums, traditionally a qualitative aspect, by using predictive analytics. This approach offers a data-driven basis for evaluating qualitative factors, leading to more accurate valuations and better decision-making.

Graph-based analytics add another dimension to qualitative assessments by visualizing and studying complex inter-company relationships. Jen (2021) explores the construction of a domain-specific knowledge graph from financial texts, which helps identify

The integration of behavioural analysis into the qualitative assessment of startups is also gaining traction. Singhal et al. (2023) discusses how machine learning algorithms evaluate founders' backgrounds and behaviours, critical qualitative aspects in early-stage investments. By investigating behavioural patterns and predictive indicators, AI tools offer venture capitalists deeper insights into the potential success of startups beyond traditional financial metrics.

If it can be ensured that valuations are not only accurate but also fair and equitable, adoption of AI technologies in qualitative business valuations will mark a shift from subjective interpretation to a more evidence-based, quantifiable approach. By harnessing AI's power, valuation professionals can achieve a deeper and more accurate understanding of qualitative factors, leading to more precise and reliable business valuations. Ongoing advancements in AI promise further innovations, potentially transforming qualitative assessment into a fully integrated, data-driven process.

2.6.5.3. Financial Modelling and Projections

Financial modelling and projections are critical in business valuations, providing a foundation for assessing company performance and predicting future financial outcomes. The integration of Artificial Intelligence (AI), particularly through machine learning and predictive analytics, is transforming traditional methodologies, offering new perspectives and enhanced accuracy in financial predictions.

AI advancements, such as ensemble forecasting methods in Discounted Cash Flow (DCF) modelling, exemplify significant progress. By integrating multiple predictive models, including neural networks and XGBoost, ensemble methods refine predictions of crucial financial metrics like inflation rates and product prices. This approach not only improves the accuracy of financial projections but also offers a robust method for handling uncertainties in financial forecasting (Viedenieiev, 2021).

Deep learning enhances financial modelling by automating the extraction of information from business documents. Transitioning from rule-based methods to deep neural networks allow for more nuanced extraction of financial information, essential for accurate financial models and projections. This shift improves the ability to autonomously interpret complex financial documents, significantly enhancing the efficiency and reliability of financial analysis (Sage, 2021).

Combining product text analysis with network theory and topological machine learning offers new insights into predicting company performance. By constructing networks based on product similarity and exploring their features, this method provides deeper insights into market dynamics and company performance, which are crucial for sophisticated financial modelling (Fan et al., 2019).

Machine learning techniques for earnings prediction also play a crucial role in financial modelling. Research shows that gradient boosting models outperform traditional methods in forecasting earnings, highlighting the potential of machine learning to revolutionize financial projections and valuation practices (Choi et al., 2021).

Predictive analytics, particularly using machine learning models to predict future financials, substantially enhances the accuracy of business valuations. Models predicting earnings or

assessing the fair value of enterprises based on historical data and predictive analytics are becoming integral to strategic decision-making, providing stakeholders with a more dynamic and predictive approach to valuation.

The integration of AI into financial modelling and projections represents a transformational shift but also opportunity in business valuations. Leveraging advanced analytics, machine learning, and predictive methodologies allows financial professionals to achieve greater accuracy, efficiency, and depth in their valuation practices. This evolution reflects ongoing technological advancements and aligns with the strategic needs of modern businesses, ensuring that valuation practices remain relevant in a rapidly changing economic landscape.

2.6.5.4. Other Uses of AI in Valuations

Application of Artificial Intelligence (AI) in business valuations extends beyond traditional financial projections and modelling, impacting various aspects of economic analysis and decision-making. Recent research highlights AI's expansive influence across different facets of valuation activities.

AI significantly enhances the mergers and acquisitions (M&A) process by examining press releases to cluster acquisitions based on textual similarities. This approach helps predict strategic alignment and potential synergies between merging entities, crucial for accurate valuation (Li, 2017). Similarly, Named Entity Recognition (NER) and Relation Extraction (RE) automate the extraction of transaction information from financial press releases, reducing manual labour and increasing efficiency and accuracy in processing transaction data (Sjöberg, 2021). Access to exclusive private company data poses a significant leverage for valuers because it generates possibility to find even better comparable transactions and justify the value for interested parties.

In company discovery, AI tools integrate various techniques to provide comprehensive analysis of company data. This enhances the discovery process and potentially impacts the valuation of identified companies by offering deeper insights into their market positioning and operational dynamics (Bhamidipaty et al., 2018). For instance, text-based analysis of 10-K product descriptions can reveal synergies in M&As, indicating transactions are more likely and

potentially more successful between firms with similar product range (Hoberg & Phillips, 2010).

AI models are also valuable in venture capital investments. Predictive models using time-series signals and Gated Recurrent Units (GRU) forecast the likelihood of startups securing future funding, enabling investors to make more informed decisions regarding potential returns and investment risks (Hermann & Stahl, 2021). Deep learning techniques enhance the accuracy of intrinsic value assessments by inspecting large datasets to uncover undervalued firms, reshaping traditional valuation methodologies (Haich, 2021).

A data-driven framework for early-stage investments blends machine learning with traditional investment criteria. This approach enhances decision-making by processing extensive datasets to identify predictors of success, revolutionizing how early-stage entities are valued and selected for investment (Corea et al., 2021).

These AI applications illustrate a significant shift towards integrating advanced computational techniques to address complex valuation challenges. By leveraging AI, valuation professionals can enhance the accuracy and efficiency of their analyses while uncovering deeper insights into the financial and strategic aspects of the entities being evaluated. This holistic approach supports more informed decision-making and aligns with the broader trend of digital transformation in financial services.

2.6.5.5. Practical Applications and Challenges

The integration of AI into business valuations enhances the precision and efficiency of these processes. This transformation impacts various stakeholders, from valuation professionals to investors, regulators, and software providers.

Valuation professionals benefit from AI's ability to process vast amounts of data and apply advanced analytical methods, leading to more accurate and insightful valuations. For example, AI techniques improve peer selection and financial modelling, offering precise projections and deeper insights into qualitative factors. These advancements ensure compliance with evolving industry standards and regulatory frameworks, addressing the needs of regulators and standard-setting bodies for transparency and accuracy.

Investors and venture capitalists gain from AI-driven behavioural analysis and predictive models, which provide a more nuanced understanding of startup viability and market dynamics. This helps in making informed investment decisions, reducing risks, and enhancing potential returns.

Software providers are also impacted as they integrate AI technologies into their products, offering more sophisticated and comprehensive valuation tools. These advancements allow software providers to meet the increasing demand for robust, AI-enhanced valuation solutions, setting new benchmarks for industry standards.

In conclusion, technology driven shift in valuations realm enhance accuracy, compliance, and decision-making, addressing the specific needs of all stakeholders. As AI continues to evolve, its integration into valuation practices will likely become more pervasive, driving innovation, and establishing new benchmarks for precision and reliability in the field, which might not be matched anymore by archaic pen and paper, or Excel based processes.

2.7. Other Trends Impacting Business Valuations

This chapter is based on an analysis of journal articles from top finance and accounting journals, identifying trends that have significant implications for the business valuations industry and its stakeholders. Here is an overview of key themes.

2.7.1. ESG, Sustainability, and Their Influence on Risk

Incorporating Environmental, Social, and Governance (ESG) considerations into business evaluations is an evolving imperative that significantly influences risk assessments and company valuations. Integration of ESG criteria into risk management strategies is increasingly recognized as a critical factor in enhancing corporate financial stability. Higher ESG ratings correlate with lower financial risks due to proactive management of operational, reputational, and compliance-related risks, contributing to overall financial stability (Landi et al., 2022).

The mandatory CSR reporting within the EU reveals significant effects on corporate behaviour, including improved risk mitigation strategies. These mandated disclosures can lead to better risk assessments and more informed investment decisions, potentially enhancing the overall

market value of compliant firms (Sjöberg, 2021). Sustainable development and good ESG performance may enhance company market value through the mediating effect of financial performance, emphasizing the importance of operational efficiency and capacity (Zhou et al., 2022).

However, the integration of ESG into business practices is not without its challenges. There is a potential risk of saturation and misapplication of ESG principles in investment strategies, highlighting the need for a more nuanced and fundamentally driven approach (Edmans, 2022). Geographic variations also influence the effectiveness of ESG policies on firm value, as local factors and regional investor behaviour can significantly affect the reception of CSR initiatives (Chintrakarn et al., 2017).

The influence of ESG and sustainability on risk assessment and valuation is multifaceted. Sound ESG practices are shown to reduce corporate risks and enhance market value, but their effectiveness varies based on regulatory environments, corporate transparency, geographic factors, and market conditions. Therefore, while ESG factors are increasingly integral to business valuations, their application requires careful consideration to avoid potential pitfalls associated with misapplication or superficial integration. This underscores the importance of a balanced and informed approach to incorporating ESG in corporate evaluations and investment decisions.

2.7.2. Risk Management in Business Valuations

Risk management plays a crucial role in business valuations, influencing strategic decisions and operational frameworks. For both the objects of valuation and the valuers themselves, understanding and managing risk is essential.

Enterprise Risk Management (ERM) provides a comprehensive approach to identifying, assessing, and responding to risks affecting a company's assets and earnings. Beasley et al. (2021) argue that a well-implemented ERM framework enhances decision-making and boosts stakeholder confidence by offering a clearer view of corporate risks and mitigations.

Understanding past failures in risk management is also vital. Smith (2020) emphasizes the importance of continuous monitoring and updating practices to adapt to new threats and avoid

significant financial or reputational damage. Rajan et al. (2019) critique traditional models for their static nature and advocate for more integrated and proactive risk management strategies, suggesting that considering the interconnected nature of modern business risks can lead to more effective threat anticipation and mitigation.

Innovative methodologies for evaluating risk factors are essential. Johnson (2022) introduces a novel approach for assessing the relevance of various risk factors, emphasizing the need for empirical evidence to support their selection and prioritization. This continuous assessment ensures that risk management practices remain pertinent in an ever-changing business landscape.

Integrating advanced risk management practices and learning from past failures allows organizations to enhance their resilience against potential threats. These methods are critical as they directly influence the qualitative assessment in the valuation process. The cost of capital, closely correlated to risk perception, relies on accurate risk measurement. Effective risk management helps determine the appropriate cost of capital, leading to more precise valuations.

In conclusion, risk management is foundational to robust business valuations. Adopting comprehensive and proactive approaches ensures that valuations are based on a thorough understanding of potential threats, benefiting both valuation professionals and stakeholders by fostering trust and enabling informed decision-making.

2.7.3. Data Disclosure & Transparency in Business Valuations

Data disclosure and transparency are essential in modern business valuations, driven by regulatory requirements and stakeholder demands. Access to accurate data impacts qualitative assessment, screening, projections, and comparable selection, transforming the valuation industry.

A significant debate exists on whether private companies should have the same disclosure requirements as public companies. Phalippou (2021) advocates for increased disclosure to align incentives between private equity fund managers and limited partners, enhancing transparency and honesty. Conversely, Brown (2021) warns that increased reporting costs could burden smaller firms and stifle innovation.

Information asymmetry in private firm acquisitions is a notable barrier. Jansen (2021) suggests that well-designed contracts can mitigate these asymmetries, promoting balanced risk-sharing and transparency. Regulatory oversight also plays a crucial role. Costello et al. (2021) found that stringent regulations enhance financial reporting standards, particularly during economic downturns and in banks with riskier assets.

Mandatory disclosure of audited financial statements improves corporate behaviour, particularly in M&A activities involving privately held targets. Chen (2021) shows that such transparency leads to better managerial decisions, especially where external monitoring is challenging. Technological advancements like the EDGAR system further improve transparency by facilitating broader access to corporate disclosures, enhancing market efficiency (Goldstein et al., 2021).

These studies highlight the importance of data disclosure and transparency in business valuations. Enhanced transparency, through regulatory frameworks, technological advancements, or strategic contracts, aligns with ethical practices and positively influences firm valuations by providing a clearer, more accurate picture of financial health and risks.

In conclusion, data disclosure and transparency are foundational to effective business valuations. They ensure valuations are based on comprehensive information, benefiting stakeholders by fostering trust and enabling informed decision-making. Maintaining high transparency standards is crucial for accurate and reliable valuations in a rapidly evolving industry.

2.7.4. Accuracy, Consistency, and Compliance

In business valuations, the principles of accuracy, consistency, standardization, and compliance are essential for reliable and credible financial assessments. These elements foster trust among investors, regulatory bodies, and other stakeholders, forming the backbone of sound financial analysis.

A significant challenge is the underutilization of accounting information by individual investors. Research by Blankespoor et al. (2021) highlights frictions that impede investors' use

of earnings data, questioning the effectiveness of regulations aimed at enhancing investor awareness and access to financial information.

Consistency in audit methodologies across global networks is crucial. Ege et al. (2021) find that clients audited by member firms of the same network have more comparable financial reports than those audited by different networks. This consistency is notable in jurisdictions with strong investor protection and those adopting International Standards on Auditing.

Financial reporting transparency plays a key role in mergers and acquisitions (M&A). Chen (2021) shows that mandatory disclosure of financial statements leads to better managerial decisions during M&A activities, particularly when external monitoring is challenging. This transparency enhances acquisition decisions, contributing to more accurate valuations.

Furthermore, "Rethinking Risk Management" by Rajan et al. (2019) critiques traditional risk management models, advocating for a more integrated and dynamic approach. This approach improves the accuracy and applicability of risk assessments in business valuations, ensuring they remain relevant under varying economic conditions.

The application of consistent financial reporting standards, such as IFRS, enhances the comparability and reliability of financial information across jurisdictions. Becker et al. (2021) demonstrate that these standards improve the predictive power of financial reports regarding future economic performance, contributing to greater transparency and standardization.

Accuracy, consistency, standardization, and compliance in financial reporting and auditing are crucial for maintaining the integrity and reliability of business valuations. These principles support better investment decisions, ensure regulatory adherence, and enhance trust in financial markets. As the field evolves with technological advancements and changing regulations, ongoing research and adaptation are essential.

In summary, these themes are integral to effective business valuations. They ensure valuations are based on precise and consistent information, benefiting all stakeholders by fostering trust and enabling informed decision-making. Maintaining high standards is critical for reliable and credible valuations in a dynamic economic landscape.

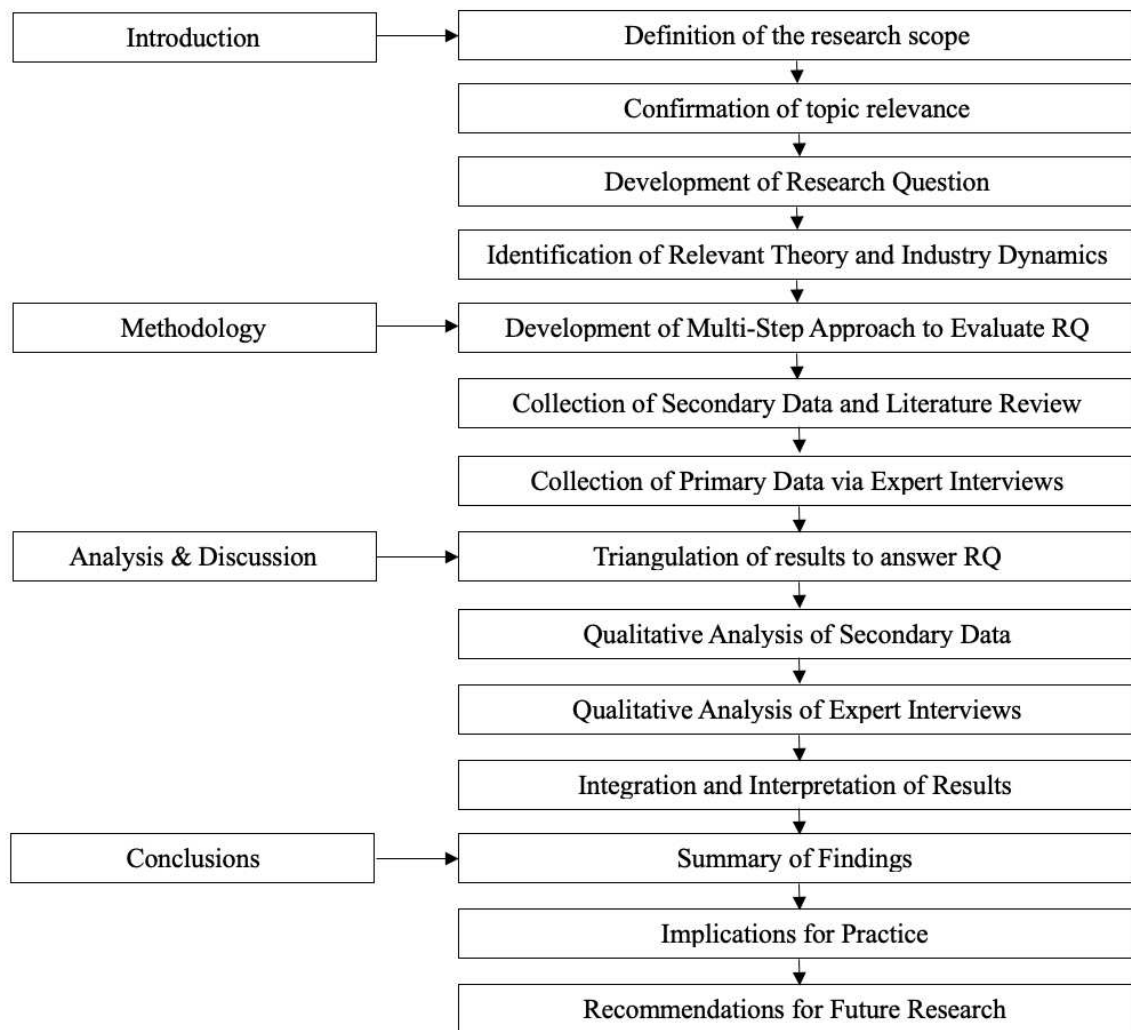
3. Research Methodology

3.1. Research Design

To explore the impact of AI and other emerging trends on specialized valuation software and its adoption among professionals, this study employs abductive, deductive, and inductive methods (Bryman & Bell, 2018; Saunders et al., 2019). However, the author adopts primarily an interpretivist philosophy, emphasizing the subjective meaning of stakeholder experiences in the evolving landscape of business valuations (ibid). This approach allows for a deeper understanding of the nuanced and context-specific insights provided by industry experts and stakeholders.

This research also integrates qualitative primary data and qualitative and quantitative secondary data.

The initial stage involved a detailed analysis of various software providers, supplemented by desk research focusing on AI in valuations to identify factors challenging the status quo. Expert interviews with various stakeholders validated and contrasted perspectives on the future of the industry, considering software development, new research, and trends in finance. Triangulation of these approaches provided a comprehensive understanding of the dynamics shaping the industry and potential developments.



3.2. Data Collection

3.2.1. Secondary Data – Software Providers

Preliminary research and professional experience revealed that major valuation software providers have driven technological advancements in valuations over the past decades. To supplement the modern perspective of valuation, author enrolled in professional valuation qualification course, to better understand nuances of traditional approaches. Using an abductive approach, the study examined the current state of software development, particularly the integration of AI and new trends, and the competitive landscape and niches in which providers operate. Data was collected from provider websites (including Internet Archive – Wayback Machine), software demos, industry news, and social media. However, due to confidentiality

agreements and secrets of trade being revealed in some of the demos with providers, some of the outcomes of the analysis need to remain private. Nevertheless, analysis of software providers significantly increased understanding of changing landscape of industry over time and is reflected in section 2.6.1. of Literature Review.

3.2.2. Secondary Data – Review of Research

An extensive literature search identified 250 relevant papers on valuations and future trends. Initially, top ranked journals in accounting and finance (incl. Journal of Finance, Journal of Accounting Research, Accounting Review, Journal of Accounting and Economics, and some others) were reviewed for years 2019-2024, identifying 100 applicable articles mentioning current trends affecting finance and accounting industries and with relevant impact on business valuations. An additional 150 articles specifically addressing AI in valuations were included to understand the status quo and theoretical developments in the field.

3.2.3. Primary Data – Expert Interviews

The research design addresses the conflicting perspectives of different stakeholders on the evolution of the valuations industry. A purposive non-probability sampling approach was used to select recognized contributors to business valuations (Saunders et al., 2019; Wilson, 2013). The goal was to recruit 12-18 participants, with empirical evidence suggesting that 12-18 interviews achieve satisfactory saturation (Guest et al., 2006).

Seventy-three key stakeholders were contacted via LinkedIn and email, resulting in 22 agreeing to participate. Due to scheduling conflicts, 16 semi-structured interviews were conducted, each lasting around 45 minutes. These interviews provided in-depth insights into various aspects of business valuations, enhancing the understanding of the research question. Furthermore, the semi-structured format allowed for detailed responses and cross-referencing among interviewees' replies.

#	Stakeholder Type	Current Position	Expertise	Years of Experience in Valuations
1	Corporate Finance Advisors (mid-level)	Board of Directors at international mid-cap M&A network	Transaction advisory; former management consulting, turnaround management, and large bank	>25 years
2	Corporate Finance Advisors (mid-level) & Professional Associations	Director of Valuation at Big4 & Chairman at international professional association	Performed >200 valuations, teaching business valuations courses	>15 years
3	University & Qualification Bodies	Co-founder of professional accreditation organisation & Professor at University	Manages curriculum of one of leading valuation qualification courses	>25 years
4	Specialized Valuation Software	Co-founder at specialised valuation software provider	Prior to software company, executive in large international practice	>15 years
5	Certified Professionals (Large practices) & Professional Associations	Executive at large global specialised valuation firm	Performed numerous valuations for largest global companies, Business Valuations, Board at professional accreditation organisation	>25 years
6	Institutional Investor	Public Market Analyst at one of largest pension funds	Evaluates new investment opportunities for pension fund	<5 years
7	Corporate Finance Advisors (mid-level)	Global Leader of Valuation at large international accountancy network	Advised on transactions with aggregate value >\$2 billion, thought leadership and coaching for 200 team members globally	>25 years
8	Specialized Valuation Software & University	AI researcher at specialised valuation software provider	Applied research for 2 various specialised valuation software providers, former high valuation role at large bank	>15 years
9	Corporate Finance Advisors (mid-level)	CEO at international mid-cap M&A network	Transaction advisory, VC, and strategic consultancy; coordinating efforts and thought leadership of 60 offices; Academic engagements	>25 years
10	Academia and Qualification Bodies	Professor at leading DACH business school	highly cited research in Audit & Accounting; Author of business valuations textbooks and articles	>15 years

11	Specialized Valuation Software	Founder at specialised valuation software provider	Led the software's global adoption	>10 years
12	Specialized Valuation Software	Founder at specialised valuation software	Previous background in legal for large investment funds	<5 years
13	Specialized Valuation Software	Founder at specialised valuation software provider	Led the software's global adoption, previous background at large investment bank	>10 years
14	Corporate Finance Advisors (mid-level) & Professional Associations	Macroregion Leader of Valuation Services at Big4 firm	Hundreds of valuations projects across continent, Business Valuations Board at professional accreditation organisation, Academic engagements	>25 years
15	Standards Creators	Leadership at IVSC	Prior to responsibilities related to IVS, experience in transaction advisory, financial modelling, corporate finance, and equity sell-side	>25 years
16	Professional Associations	ESG Expert at professional accreditation organisation	Manages ESG related curriculum for leading finance and valuations qualification courses	>10 years

3.2.4. Data Analysis

Thematic analysis was employed to identify and analyse patterns within the qualitative data from interviews. This process was facilitated using MAXQDA24 software, which enabled efficient coding and categorization of the data. The outcomes of the coding exercise will be presented in the **Appendices section**, along with **summaries of the interviews**.

4. Findings & Discussions

This chapter delves into the insights gained from interviews with industry practitioners, focusing on the transformative impact of AI and machine learning on business valuations. It reveals how these technologies have improved efficiency and accuracy, while also highlighting the challenges of integrating ESG factors and adapting to evolving regulatory standards. Practitioners' perspectives provide a nuanced understanding of the dynamic interplay between technological advancements and human expertise, emphasizing the necessity of continuous improvement and training. These insights offer a comprehensive view of the current and future landscape of business valuations, identifying both opportunities and challenges brought about by these changes.

4.1. Valuations Reflecting Unclear Nature of Value

Subsequent sections visualise Holbrook's (1990) argument on the relativistic and multifaceted nature of value, subjective to each of its recipients, and how it affects the profession of business valuations with the potential impact of these intricacies on technology adoption in the future.

4.1.1 Source of Value

The evolving nature of value in business valuations encompasses both quantitative and qualitative dimensions. Interview insights underscore the complexities and subjective elements inherent in valuation processes.

For instance, Participant 1 emphasized this subjective nature of valuation, noting that "real value is determined by how much someone is willing to pay." This aligns with the academic debate on perceived value, where individual assessments and market conditions influence value (Sánchez-Fernández & Iniesta-Bonillo, 2007). Participant 1 gave two real-life examples to illustrate this idea. For one, they knew a family office buyer preferred multiples of 8, so they adjusted the model accordingly. Participant 12 corroborated the prevalence of this practice in the industry, stating: "Usually, valuations are reverse-engineered based on the desired amount, and then the financials are backtracked to fit that figure."

Participant 1 then referred to yet another case, in which his colleague tried to inform the client that the building's market value was zero due to its very unattractive location and state. To

which the owner replied that it cost 20M PLN to build it. Thus, not understanding that you cannot use the asset replacement cost approach, because no one is willing to buy it. These examples accentuate the challenges in standardizing valuation practices and echoes Mercer and Harms' (2020) Integrated Theory of Business Valuation, which emphasizes that value is derivative of expected cash flows, growth, and associated risks. In certain cases, also simply a result of individual preference and subjective perspectives.

Additionally, the divergence in valuation approaches was humorously captured by Participant 7, who remarked that "five valuers in one room will give you seven different answers".

In conclusion, the integration of both quantitative and qualitative factors is essential for capturing the full spectrum of value. The subjective nature of valuation, influenced by market perceptions and individual assessments, highlights the need for a balanced approach that combines rigorous data analysis with nuanced qualitative insights. This comprehensive understanding of value is critical for effective business valuations in today's sophisticated and dynamic market environment.

4.1.2. The Art, Science, Craft Debate

This academic debate was equally pronounced during the interviews, with participants expressing a full array of views and perspectives, reflecting the complexity and subjective nature of the valuation process. This section synthesizes interview insights to illustrate the diverse perspectives on this topic.

Participants 1, 12, and 13 agreed that nowadays, it resembles more an art than a science, with the latter "hoping science will make a comeback soon".

A large percentage of interviewees stated that business valuation exhibits characteristics of both features simultaneously. Participant 80 remarked, "Valuation is both art and science—50/50". To this, Participant 5 noted: "Over time, valuation has become more scientific, especially in financial reporting where there is less diversity and variance in practice. However, in deals, not everyone looks at valuations the same way, so there is an element of art"

.Participant 2 supported this with: "The final judgment is a feeling, so it is more art but based on rules".

This highlights the blend of structured methodologies and intuitive insights that characterize the valuation process. Similarly, Participant 14 noted,

"Valuation is a mix of both art and science. Judgment plays a significant role, which leans more towards art. You don't learn judgment from a book; it comes from years of experience".

This further reinforces the importance of experience and professional judgment in achieving accurate valuations.

Moreover, Participant 2 took it further in this direction by quoting Damodaran (2015) from memory, "Valuation is neither art nor science. It is a craft because it has no old, natural rules like gravity and it isn't environment-dependent like art".

Participants 14 and 2 also align with Damodaran's (2015) assertion that practitioners use specialized tools and judgment honed through experience. The craft perspective thus integrates both scientific principles and artistic intuition, positioning valuers as skilled professionals navigating between these realms.

This last notion is further exemplified by Participant 10 who added that

"Valuation is predominantly science, about 80%. It involves a range of precision with the last 20% being challenging to reduce, where human knowledge becomes essential".

This perspective suggests that, while scientific methods provide a strong foundation, the final stages of valuation require human insight to account for nuances and uncertainties.

The mere existence of the debate over whether valuations are an art, a science, or a craft accentuates the multifaceted nature of the field. Valuations require a balance of scientific rigor and artistic intuition for which the craft perspective offers a comprehensive approach, recognizing the value of experience and professional judgment in navigating the complexities of the valuation process.

4.2. Human-Machine Collaboration

The evolving collaboration between humans and machines in business valuation is transforming how valuations are conducted. This section explores various aspects of this

collaboration, including augmentation, automation, and tasks reserved for humans, culminating in a synthesis of future human-machine collaboration.

4.2.1. Examples of Augmentation

Human-machine collaboration often involves augmentation where technology enhances the capabilities of human valuers.

Participant 10 highlighted the complementary nature of data science and human judgment:

"Data science doesn't substitute judgment but helps to have more profound insights. The data you use always analyses the past and present, and you need the future outlook of experienced people."

This underscores the need for human expertise to interpret and project data-driven insights into future scenarios. Thus, emphasizing the essential balance between AI and human expertise for comprehensive and accurate valuations. (Kolbjørnsrud, Amico & Thomas, 2016).

Furthermore, Participant 1 provided a practical example of augmentation: "AI for regression, extracting and supplying relevant information, suggesting comps, and performing initial analysis—activities of the junior analysts." With a hint of provocation, participant 3 illustrated a common perspective: "AI acts like a junior analyst, overconfident 17/18 years old teenager requiring supervision." This analogy highlights the necessity of human oversight to ensure the quality and accuracy of automated outputs.

Participant 5 also elaborated on the supportive role of AI:

"This might help us be better at what we do, raising issues that we might have missed otherwise. It doesn't replace anyone. It's like a doctor who gets a patient with a bunch of symptoms that they might not anticipate as an illness. It helps to narrow down the range and spectrum of valuations, closing bookends as much as possible."

This view aligns with the literature, emphasizing that AI assists rather than replaces human expertise (Raisch & Krakowski, 2021).

4.2.2. Examples of Automation

Automation in business valuation involves using technology to perform routine and repetitive tasks, thereby freeing human experts to focus on more complex and nuanced aspects of valuation. Participant 2 explained,

"I myself tried doing some AI-supported calculations. Frameworks are being used, but just not in the correct way. For public data models are not trained properly yet, and for private data, it will be even harder."

This reflects the broader trend of automating routine tasks to improve efficiency (Goodell et al., 2021).

Automation has the added benefit of saving human effort, which has previously been allocated to low-value activities, as mentioned by a few participants. As Participant 12 visualises it:

"AI is just a productivity tool. The "I" in AI is not intelligent in itself. It extracts information and makes it palatable. It allows tasks that would normally take three hours to be done in two minutes, which is immensely useful when human resources are limited." (12)

For Participant 4 and his team it was seen as a major market opportunity:

"We noticed that the timing was right for disruption to enter this niche. Increased demand combined with groundwork being done by various stakeholders was full of low value-add activities. Semi-automation offers significant advantages, especially given the increasing demand for valuations due to awareness and regulations."

Other participants representing software providers mentioned similar motivations for entering the market. Despite the augmentation element, there is an abundance of administrative, search or other mundane activities that can be simply automated via software, as they highlighted.

4.2.3. Examples of Tasks Reserved for Humans

Despite advancements in AI and automation, certain tasks in business valuation remain the domain of human experts. These tasks typically involve judgment, creativity, and a deep understanding of the business context. Participant 1 stressed the critical interplay between human judgment and AI: "Human judgment and strategic perspective are much more important. In M&A, strategy fit and people fit are way beyond the numerical valuation of the company." He is supported by another M&A advisor, Participant 9. They both reiterated that their primary role is to show the value beyond the numbers by providing this unique strategic perspective, which allows them to reflect the true value of an opportunity to the client. This underscores the importance of human expertise in areas requiring complex decision-making.

Therefore, human valuers are particularly important in assessing qualitative factors such as management quality, market positioning, and competitive dynamics. Participant 2 noted,

"All data must be defended by the professional even if sourced from AI. Professionals must know where to review and check the data and information."

This view is echoed in the literature, which highlights the limitations of AI in replicating human judgment and experience (Wilson & Daugherty, 2018).

4.2.4. Future of Human-Machine Collaboration

The future of human-machine collaboration in business valuation will likely entail seamlessly integrating of AI and human expertise. AI and automation will handle routine data processing and initial analysis, providing a solid foundation of accurate and timely information. Human experts will then build on this foundation, applying judgment and strategic insights to produce comprehensive and nuanced valuations.

In this future scenario, continuous learning and adaptation will be crucial. As AI systems become more sophisticated, human valuers will need to persistently stay updated with technological advancements and refine their skills. This perspective suggests that the most effective use of AI involves complementing, rather than replacing, human expertise (Raisch & Krakowski, 2021).

4.3. Software of Tomorrow

The use of advanced software in business valuation is revolutionizing the industry. This section explores the benefits of technological advancements, the main tensions they bring, raised concerns, and synthesises the balance efficiency and thoroughness.

4.3.1. Benefits of Using Technological Advancements

4.3.1.1. Efficiency and Scalability

Technological advancements have significantly improved the efficiency and scalability of business valuations. Pa instance, Participant 8 observed, "In the future I see more automation and speed. Valuations will be faster, taking seconds instead of minutes or hours". Participant 5 explained how motivation is being driven from the demand side. With a shift from annual or quarterly valuations to monthly, weekly, or even daily valuations, there is a clear need for scalable solutions.

Efficiency improvements are also noted in the automation of repetitive tasks. Participant 4 mentioned, "The objective is to automate mundane tasks and make data analysis more efficient". Moreover, technological advancements facilitate scalability. Participant 4 stated, "Tech was the only reply for scalability to enable private users to perform private companies' valuations".

4.3.1.2. Proprietary Data as a Competitive Advantage

The use of proprietary data has become a crucial competitive advantage. Participant 5 highlighted the importance of proprietary data in maintaining a competitive edge:

"Our practice is still in a good spot - with thousands of projects performed over the years of each size and tens of thousands of securities valued, we have a lot of data there, supported by our presence on the market for many decades now. Automated data providers have tech but not experience or proprietary data they have".

The unique and innovative use of data is crucial. Participant 9 added,

"Especially unique data, so you need to find ways, targets, and angles that are new and innovative that no one thought about. To give you an example - imagine you have the capacity to search for a person in Malaysia, analyse YouTube in the local language, search the internet for any phrase to identify potential targets based on old interviews, automate the current status to see if they are potential sellers and if they have an M&A track record, and whether these potential targets could qualify. Then you call Mr.X and say: 'Hello, based on your interview for local newspaper in 2010, we believe you are ready to expand and buy new business and we have prepared two best opportunities for you'. That could be the future of M&A screening.

The integration of proprietary data also supports a better decision-making process. Participant 5 noted,

"More relevant and reliable information. We know things change, but having this information is useful for investors to make better decisions".

Nevertheless, Participants 6 and 8 mentioned the double-edged sword: while proprietary data can provide a competitive edge for some, it also serves as a barrier to entry for many who are unable to access these vast amounts of data. Data providers might profit significantly from it, while smaller practices may be disadvantaged.

4.3.1.3 Software UX & Regular Updates

User-friendly interfaces and continuous improvement cycles are essential for effective software utilization. Participant 13 reflected on the progression of valuation tools:

"When we started, there was nothing there; valuation software was either Excel-based models or static software. There was nothing cloud-based or connected to data sources. You gathered sources, mixed them together, and built something simpler, breaking down complexity by hiding it under the hood".

Participant 11, on the other hand, mentioned how they use AI to simplify or create initial models. GPT support industry selection and input simplification. "It helps to translate what is

in people's heads into financials, making it easier for non-experienced people to achieve a higher level of accuracy".

Regular updates and quality assurance processes enhance the reliability of software tools.

Participant 8 explained,

"There is automatic testing where upon any software release you test automatically to ensure all other elements bring the same output from the same input. There is more quality assurance there. It's repeatable. In Excel, it's never repeatable".

Yet, Participant 8 also notices that this advantage can be a partial obstacle for the faster deployment of AI solutions. The suggested novel approaches, which worked in specific research situations identified in the Literature Review, are usually not implementable in commercially available software due to an overburden of scenarios to consider, use, and code.

4.3.2. Main Tensions

4.3.2.1. *Transparency and auditability*

Most interviewees emphasised the importance of transparency and auditability in all types of software to prevent the "black box" effect and ensure compliance with regulatory standards. This is particularly important for auditing firms and legal contexts because increased transparency generates positive externalities for the whole market and economy, as mentioned by Chen (2021) or Goldstein et al. (2021).

Participant 1 reflects on the scepticism of auditors:

"The Big Four do not like third-party software because of the black box effect. We prefer software where you can review and trace the data that leads to assumptions".

He also mentions that in a litigation context, "you need to testify and justify your assumptions. When you say that AI derived the valuation, this will become challenging".

Participants also see this from the software side. "Our goal is to make analysts' lives easier, ensuring valuations are defensible and not black-box solutions", states Participant 4 –

"and contrary to concerns, software that tracks changes and provides transparency is seen positively by auditors and regulators. This helps in unifying and maintaining a clear audit trail. Regulators also want to go in this direction."

On the other hand, as Participant 15 rightly pointed out, many participants in the industry may lack technical knowledge to understand AI tools fully, which will maintain the need for people to explain the outcomes and how to interpret them. It is simply not feasible for court

representatives, auditors, or other stakeholders to learn about each use case of AI in finance and the differences across all models (even if only those mentioned in this work alone).

4.3.2.2. Consistency and Trust

Consistency and trust in software solutions are essential for their widespread adoption and reliability in critical applications. Stakeholders demand solutions that provide dependable and verifiable results. The interplay between established data providers and newer software platforms underscores this dynamic, with stakeholders placing a premium on proven reliability and comprehensive auditability.

Participant 2's trust in established tools like Excel encapsulates this sentiment:

"If you open Excel today the formula is input. You never question whether the output is correct; you take it for granted".

He further underscores the reliability of CapIQ, "No need to trace the price per share if CapIQ provides particular data points," illustrating confidence in these established software providers.

However, the transition to newer technologies is not without its challenges. Participant 12 points out the widespread scepticism, still prevalent within the industry: "Even if you provide the best output, people tend to double or triple-check it because it is about money". This is why investors and regulators push for a higher coherency and comparability of financial statements and projections across jurisdictions. Drawing on Ege (2021) and Participant's 7 statement about the sandwich adoption of solutions (global players -> small practices -> mid-market), it is safe to assume that global networks will continue to be the drivers of the unification of outputs.

4.3.2.3. Customisation and configuration

Customization and configuration are necessary to meet the diverse needs of different stakeholders. It has a strong justification in reasoning and perceptions of value discussed earlier. Participant 5 explains that professional valuers rarely use and customise someone else's models, because a model reflects someone's way of thinking.

Software providers also agree that addressing such needs is among their priorities but recognise that industry-wide changes are happening. "The perception of software being inflexible is changing with more adoption and fast growth" as noticed by Participant 4. Participant. 12 supports this notion, emphasizing the importance of enabling software to be customizable not

only from the front-end but also allowing for inter-software connectivity in the back-end through APIs and other solutions. This demand has also been raised, especially by participants from larger accountancy networks, who would prefer to integrate particular solutions as embedded in their own systems, instead of external 3rd party software.

4.3.2.4. Standardisation vs Flexibility

The tension between standardization and flexibility in valuation software solutions highlights a critical challenge in balancing the need for consistent, reliable processes with the diverse requirements of various stakeholders. This balance is particularly crucial in ensuring that the software remains useful across different contexts while providing the necessary customization to meet specific needs.

Participant 10 articulates the current reliance on Excel due to its adaptability: "We use sophisticated Excel models connected to data sources because flexibility is needed". This underscores the difficulty specialized software faces in displacing Excel, as the latter's flexibility and familiarity are deeply embedded in business practices. Participant 12 brings up a critical challenge associated with Excel: "People love Excel because it gives them a sense of control, but this can damage operations by increasing errors".

The necessity of standardization is highlighted by Participant 7, who states, "In the context of international networks, peer risk control and standardization are crucial themes, especially as firms scale, which showcase a stronger business case for adopting standardized tools". This perspective underscores the importance of standardized processes for consistency and scalability, as highlighted by Ege (2021), particularly for large firms operating across multiple jurisdictions. However, in the case of Participant's 1 network, there are no main guidelines and prescriptions. "Recipes are similar, but products and processes are different". Participants 14 and 2 also mention that ensuring that everyone across the network use the same approaches or models remains an issue, because of e.g., regional differences in accessible peers' data.

However, enforcing standardisation can also lead to significant drawbacks, as illustrated by Participant 7:

"This tension becomes evident when firms go too far in mandating specific tools and methodologies. An example involves my mentor who had to value a single coffee shop

using public comparable, forcing him to build a model based on Starbucks and other large peers. This approach was highly rigid and lacked practical comparability, leading to frustration and him quitting the company".

Through a close relationship with his mentor, he emphasizes the ongoing struggle to find an equilibrium between maintaining individual professional judgment and adhering to standardized procedures.

4.3.3. Raised Concerns

4.3.3.1. Traditional Resilience

"Leaders in finance tend to be traditionalists in their forties and fifties which like to stick to the old ways of doing things" claims Participant 3. This sentiment is also echoed by Participant 7, who does not foresee significant changes in the industry over the next few years:

"The industry will operate on the status quo remaining very fragmented... Movement will be preserved by practitioners making it difficult to systematically overcome".

These perspectives highlight the challenges of introducing innovative solutions to a traditionally conservative industry.

Furthermore, Participant 13, represents the providers side and raised concerns about over-reliance on technology: "A huge disadvantage is that people might switch off their brains, similar to what happened when spreadsheets were implemented". This is why senior management of prospective customers express apprehension about implementing software – they want their employees to fully understand the process and underlying principles. As a creator of accredited courses, Participant 3 also mentioned that such an approach dominates his work, where he focuses on teaching people fundamentals first and then supplements with technological advancements. These views could be a significant potential risk for software adoption.

4.3.3.2. Cybersecurity & Compliance

As an argument against software utilisation, Participant 12 stated, "Ensuring that clients' and their own information is secure makes it hard to rely on third-party developments".

To address these concerns, companies are taking proactive measures. Participant 4 highlighted that their CTO comes from a background where cybersecurity is treated with the highest priority as they hired a GDPR compliance person early on. He emphasized the critical importance of security, noting, "Security will also be critical as valuations have significant societal and professional impacts". This is an example of an effective Enterprise Risk Management strategy.

4.3.4. Balancing Efficiency with Thoroughness

The future of valuation software must strike a delicate balance between leveraging advanced technologies and maintaining essential human oversight. While AI and automation significantly enhance efficiency, reducing the time required for complex tasks, the indispensable role of human judgment in nuanced analysis remains evident. The integration of proprietary data is a game-changer, offering unparalleled insights that can redefine competitive advantages in the valuation industry. This is particularly crucial as more accurate and comprehensive data leads to more informed and precise valuations.

However, the journey towards adopting these advanced tools is full hurdles. Traditional resistance and scepticism about over-reliance on technology underline a significant barrier. For instance, concerns about AI biases and the ethical implications of "black box" solutions underscore the need for transparency and accountability in software design. These concerns are particularly pronounced in high-stakes environments like M&A and court settings, where the ability to explain and justify valuations is pivotal.

Interestingly, the demand for user-friendly interfaces and continuous software improvements, primarily emphasized by software providers, is not uniformly valued across all stakeholders. This discrepancy points to a potential misalignment between the developers' focus and the users' practical needs. Additionally, the tension between standardization and flexibility is a recurring theme. While standardization is crucial for consistency and scalability, excessive rigidity can stifle the practical relevance and adaptability of software solutions.

Most notably, the discussions reveal that the successful integration of AI in valuations hinges on combining technological advancements with robust risk management strategies. This includes proactive measures like hiring cybersecurity experts and ensuring compliance with

regulations like GDPR, which are essential for gaining stakeholder trust. The literature supports these insights, emphasizing the importance of balancing efficiency with thoroughness and maintaining transparency and auditability.

In summary, the software of tomorrow must not only enhance efficiency and scalability but also provide customizable, secure, and transparent solutions. By addressing traditional resistance, ensuring ethical AI practices, and aligning with the practical needs of diverse stakeholders, these advanced tools can revolutionize the valuation industry while maintaining the necessary human touch.

4.5. Shifts in Valuation Process

This section explores the evolution from traditional to modern valuation techniques, the current adoption of AI and machine learning, various use cases, and the outlook of valuation methodologies.

4.5.1. Evolving from Traditional to Modern Valuations

All participants agreed that the process of change that industry has experienced over the past 20-30 years reshaped completely valuations and stakeholders' dynamics. Each participant highlighted the pivotal role Excel and databases played in this. Interestingly, from practitioners interviewed, none of them beyond providers use 3rd party software for their work.

These transitions are not just technological but also methodological. Majority of interviewees agreed, that when it comes to choosing methodologies, it is primarily case by case basis, without any of them being drastically outdated nowadays.

Traditional methods such as the Discounted Cash Flow (DCF) and the use of EBITDA multiples have been supplemented and sometimes replaced by more sophisticated models. Participant 9 emphasized the widespread acceptance of EBITDA multiples, while others noted the significant use of market models in the US, particularly emphasizing multiples such as EBITDA and P/E.

However, the literature and interviews also reveal limitations in these traditional approaches. Participant 6 criticized the over-reliance on DCF in public equity valuations, aligning with

Damodaran's (2012) caution against the method's potential biases if not applied judiciously. This reflects a broader academic perspective that while DCF is fundamental, its application must be context-specific to avoid misvaluation (Damodaran, 2012).

4.5.2. Current Adoption of AI and Machine Learning

The adoption of AI and machine learning in valuations is a rapidly advancing trend reflecting both optimism and caution among practitioners. The integration of these technologies promises significant efficiency gains and enhanced analytical capabilities, yet it also raises concerns about reliability and the need for human oversight.

For instance, Participant 3 noted, "AI has been used for over 20 years in stock trading," emphasizing its roots in technical analysis. However, the adoption of AI in valuations remains uneven across different sectors, more prevalent in fintech, banking than valuations.

Despite the promise of AI, some stakeholders remain hesitant. Participant 6 mentioned, "Certain organizations like US pension funds are slow to adopt AI due to bureaucratic inertia and regulatory constraints," predicting a five-year timeline before widespread adoption. This delay contrasts with more progressive entities like Singapore's GovInvestCorp, which has "nearly automated its HR processes and is exploring AI applications in ESG and valuations"

In conclusion, the current adoption of AI and machine learning in valuations reflects a landscape of both promise and caution. The successful integration of these technologies hinges on balancing technological advancements with vigorous training, education, and regulatory frameworks.

Definitely there are some uses of AI in the industry, but so far academic progress is faster than industry's readiness for its adoption but even for preparing the software itself, like mentioned e.g. by Participant 8 who spent past 20 years researching AI in valuations for finance organisations or software providers so is very knowledgeable about limitations and chances each of the use cases bring.

4.5.3. Use Cases

4.5.3.1. *Comparable Peers and Industry Classification*

Practitioners generally acknowledge AI's potential to significantly enhance the peer selection process. Participant 7 emphasized, "AI can be trained to analyse and interpret regulatory filings, which is particularly useful for guideline public comps. This application leverages the standardization of SEC filings, allowing AI to handle tasks like sales channel analysis and asset proportion comparisons more efficiently than humans". This perspective aligns with the literature, which suggests that AI's ability to process large volumes of structured data can improve the accuracy and speed of peer selection (Cao et al., 2023).

The integration of AI for industry classification also presents mixed perspectives. Participant 8 noted, "Traditional industry classifications are outdated, advocating for a dynamic approach that reflects modern business models where companies often engage in multiple activities". This view supports the academic findings that suggest clustering and NLP methods can provide more accurate and dynamic industry groupings (Hoberg and Phillips, 2016).

Furthermore, the use of AI for clustering and regression in peer selection was highlighted by Participant 8, who argued, "These methods could outperform other AI models due to their alignment with human cognitive patterns". This aligns with Fodor, Jorgensen, and Stowe's (2021) suggestion that clustering based on financial structures can yield more accurate industry groups than traditional classification systems.

4.5.3.2. *Qualitative Assessment*

The challenge of integrating AI into qualitative assessments is further complicated by the need to translate vast amounts of data into meaningful insights. Participant 7 emphasized the difficulty in automating the process of placing a company within its industry landscape due to the nuanced nature of risk assessment and the lack of credible AI tools for this task.

On the contrary, Participant 13 suggested that AI could revolutionize the valuation business by providing a more accurate cost of capital estimates and addressing the limitations of traditional models like CAPM. Together with Participant 10, they even see a chance in a Blackbox holistic

solution as an answer to rigid approach to valuations in DACH region, especially CAPM calculations, which are one of the main use cases for Qualitative Assessment.

Their optimism for this is echoed in the literature, where advanced NLP models like FinBERT have been shown to enhance sentiment analysis and provide deeper insights into qualitative factors impacting valuation (Huang et al., 2023).

4.5.3.3. Financial Modeling and Projections

Participant 3 highlighted that private companies often lack the robust data required for accurate AI-driven financial projections: “Private companies often lack good information, making accurate AI-driven projections challenging due to fewer inputs and lower quality data”

Participant 10 says that: “AI will be helpful to sync various data points into one model, supporting plausible checks on our forecasting without taking away the expertise but enhancing it”. This aligns with the literature's findings on ensemble forecasting methods, which integrate multiple predictive models to refine financial projections (Fan et al., 2019).

4.5.3.4. Screening and Other Purposes

AI's role in screening vast resources to identify potential investment prospects is gaining traction. Participant 3 emphasized,

“If AI can generate a reliable database of private companies, it will be a game-changer. Currently, private company data is hard to access, with limited open sources and transaction information”

This aligns with academic findings that suggest AI can enhance data collection and analysis, providing a more comprehensive view of potential investment opportunities (Li, 2017). But participant 6 argued, that for instance for pension funds this will not be an applicable use case.

Participant 11 noted, “In VC, where thousands of startups are launched daily, AI can help scope through these startups, enhancing the efficiency and accuracy of the screening process”. This supports the use of AI to predict startup success, providing valuable insights for investors (Hermann & Stahl, 2021).

4.5.4. Future Outlook: Fully Automated Valuation Models or Supportive Tools?

The future of Automated Valuation Models (AVMs) in the business valuation landscape is a topic of considerable debate, characterized by diverse perspectives on the feasibility and desirability of fully automated versus supportive tools.

Participant 13 envisioned this future: "A fully automated engine won't be accepted for a long time because too many stakeholders are involved. It's hard to say if there will be one global solution or national solutions"

Overall, opinions of stakeholders ranged from Participant 13 seeing a reality in which machines coordinate investment decisions directly among themselves to a more down to earth perspectives where some tool might be adopted but with dominance of professional judgement perspective.

4.6. Adaptation of Industry Standards to New Technologies

In the rapidly evolving landscape of business valuations, adapting industry standards to technological advancements is crucial for maintaining the integrity and relevance of valuation practices. This section explores the dual role of standards and regulations as both support mechanisms and potential limitations, along with the influential roles of key organizations in shaping these standards.

4.6.1. Standards & Regulations – Support or Limitation?

The valuation industry is governed by a myriad of standards and regulations designed to ensure consistency and reliability. However, these standards can sometimes pose challenges, particularly when adapting to new technological advancements. Participant 2 highlights this variability: "Everyone has a different perspective and there's no unified view within the network".

Standards such as the International Valuation Standards (IVS) provide a necessary framework but also allow for flexibility. This flexibility is essential for addressing unique valuation scenarios. For example, Participant 7 described valuing a single coffee shop using public comparables, necessitating adjustments to fit the specific context

Academic literature also underscores this tension. According to Schmidt (2024), valuation standards must balance between providing comprehensive guidelines and allowing for professional judgment. This balance is critical in ensuring valuations are both accurate and contextually appropriate.

Further complicating this balance is the need for compliance with various international standards. For instance, the adoption of International Financial Reporting Standards (IFRS) has been shown to enhance financial reporting accuracy and comparability but also imposes stringent requirements on practitioners (Becker, Bischof, and Daske 2021). Standards' dual nature as both enablers and constraints are a recurring theme in the literature and practice.

4.6.2. Role of IVSC, Professional Associations, and Regulators

The role of the International Valuation Standards Council (IVSC) and other professional associations is pivotal in guiding the valuation industry towards greater standardization and compliance. Participants emphasize the need for these bodies to facilitate the adaptation of standards to accommodate technological advancements.

However, the adaptation process is often seen as lagging behind technological developments. A common sequence observed in the industry is that "the adoption curve starts with practitioners, followed by standards, and finally regulators are pulled to implement changes" as observed by Participant 7.

Participants engaged directly in various board including IVSC, international or national bodies all highlighted how there are currently debates related to the topics of this thesis. But as Participant 10 observes: "In DACH standards are 10 years old. They are struggling with definitions always lagging behind current business standards and procedures"

Despite these delays, efforts to update standards are ongoing. Stakeholder consultations play a crucial role in this process, ensuring that new guidelines reflect both technological advancements and practical needs. Adaptation of standards involves maintaining a balance between reliability, consistency, and the flexibility required for unique valuation scenarios: "Adaptation of standards is ongoing, often involving stakeholder consultation, like investor

forums on our meetings" mentioned Participant 15. He highlights how IVS standards provide a framework that enhances the credibility and reliability of valuations across different contexts, contributing significantly to the integrity of the valuation profession.

Furthermore, regulatory perspectives on AI adoption reveal a complex landscape. While AI offers potential improvements in areas like cost of capital calculation, it also presents challenges in principles-based environments where flexibility is paramount. One participant noted, "AI will find it much harder in principles-based environments". The regulators' role therefore is to find a balance that leverages AI's strengths while maintaining the nuanced judgment required in valuations.

4.7. Integrating ESG and Sustainability Considerations in Business Valuations

The integration of Environmental, Social, and Governance (ESG) and sustainability considerations into business valuations is becoming increasingly important. This section explores the real-life impact of ESG factors, how various stakeholders perceive them, and the inherent conflicts and opportunities they present.

4.7.1. Real-Life Impact of ESG

Incorporating ESG factors into business valuations has tangible impacts on investment decisions and company performance. Participant 10 emphasized the growing importance of ESG: "Investors are increasingly looking at ESG factors as a critical component of their decision-making process". This trend is supported by literature indicating that ESG considerations can influence long-term financial performance (Eccles, Ioannou, & Serafeim 2014). Participant 4 emphasized, "ESG is associated with longevity and resilience of the company. CAPEX is an investment into the future. At short term it doesn't add value but has a strong impact on terminal value"

Participant 14 also noted, "Companies with strong ESG performance often enjoy better risk management and operational efficiencies". This sentiment aligns with research suggesting that high ESG ratings are associated with lower capital costs and improved financial performance (Friede, Busch, & Bassen 2015).

For example, Participant 16 pointed out, "Governance failures such as those seen with FTX

and SVB highlight the significant impact of poor governance on company performance". He also highlighted recent UPS labour strike as the most evident example of real-life impact of ESG on business world, with losses estimated at \$11 billion.

4.7.2. Stakeholder Perceptions

Different stakeholders perceive the importance of ESG factors in varying ways. Participants 12 and 16 see this more as an opportunity to use new business related to compliance and seeing the necessity to adjust as a driver for positive change.

Participants highlighted that the seriousness of ESG's impact on valuations hinges on how strongly stakeholders push for it.

"ESG in valuations reflects societal values. Whether something is judged good or bad depends on people. The seriousness of the impact of ESG on valuations will depend on how strongly various stakeholders push it" (Participant 4)

Participant 6 notices how regional differences also play a significant role. In Texas, for example, ESG advocacy faces strong opposition from oil and gas lobbies. In contrast, companies in regions that embrace ESG, such as California and New York City, are more likely to integrate these factors into their business models. That later translates into their potential investment opportunities as an institutional investor coordinating responsible money.

4.7.3. Inherent Conflicts and Opportunities

While the integration of ESG factors presents opportunities, it also introduces conflicts. Participant 5 discussed the conflict of interest in ESG reporting: "There's a tension between short-term financial performance and long-term ESG goals" This is consistent with literature highlighting the potential conflicts between financial and non-financial performance metrics (Eccles, Ioannou, & Serafeim 2014).

Participant 6 emphasized the opportunity for differentiation: "Companies that excel in ESG can differentiate themselves in the market and attract more investment". This aligns with research indicating that strong ESG performance can be a source of competitive advantage (Friede, Busch, & Bassen 2015).

However, the integration of ESG factors is not without challenges. Participant 16 noted, "One of the biggest challenges is the lack of standardized metrics for measuring ESG performance". This view is supported by academic findings on the difficulties of standardizing ESG metrics (Haan 2020). This notion of subjective ESG is linked tightly to overall theme of balancing subjectivity and objectivity in the industry.

4.8. Critical Perspective: Challenges and Opportunities in Changing the Process

The integration of advanced technologies, ESG factors, and evolving regulatory standards is fundamentally reshaping business valuations, presenting both significant opportunities and notable challenges. The shift from traditional to modern valuation techniques, evolving from manual calculations to sophisticated tools like CapIQ and Bloomberg, has markedly increased efficiency and accuracy. AI and automation streamline data processing, allowing professionals to focus on high-value strategic tasks. However, this reliance on technology necessitates enhanced transparency and auditability to ensure reliability.

ESG considerations are increasingly recognized for their impact on long-term financial performance and risk management. These factors, however, suffer from a lack of standardized metrics and inherent subjectivity, complicating their integration into valuations. Practitioners must skilfully balance these elements, using professional judgment to appropriately weigh ESG factors within each valuation context. Participant insights underscore that maintaining human oversight alongside technological advancements ensures nuanced and accurate valuations.

The adoption of AI and machine learning is approached with both enthusiasm and caution. These technologies promise efficiency gains and enhance analytical capabilities, but practitioners emphasize the importance of understanding underlying processes. Training and education are crucial for successful integration, and flexible regulatory frameworks can accelerate AI adoption while necessitating robust guidelines to prevent misuse.

Specific use cases, such as comparable analysis and qualitative assessments, reveal varied perspectives. AI enhances the peer selection process and qualitative assessments but has limitations in data quality and the necessity for human oversight. Financial modelling complexities further highlight the need for a balanced approach, integrating AI tools to streamline processes while relying on human expertise for interpretation.

Looking ahead, a hybrid approach where Automated Valuation Models (AVMs) serve as supportive tools rather than replacements for human expertise is anticipated. Successful AVM integration depends on transparency, explainability, and stakeholder acceptance. The consensus suggests AVMs will enhance valuation practices by providing efficiency and deeper insights, yet human judgment remains critical.

The evolving landscape of business valuations underscores the dynamic interplay between technological advancements and human expertise. Ensuring data quality, maintaining regulatory compliance, and balancing flexibility with standardization are ongoing challenges. However, leveraging technology to enhance efficiency, accuracy, and analytical capabilities presents substantial opportunities. The industry must adapt continuously, ensuring the synergy between AI and human expertise shapes the future of business valuations, maintaining relevance and credibility in an increasingly complex market.

As technological advancements and ESG considerations integrate, the need for robust regulatory standards becomes more pressing. This synergy ensures that while efficiency and innovation are pursued, the core values of transparency, reliability, and nuanced judgment are preserved. The future of business valuations hinges on this balance, making continuous learning and adaptation essential for practitioners aiming to stay ahead in a dynamic environment.

4.9. Other Impact of Changes on Stakeholders

This section explores the various impacts of technological and methodological changes on stakeholders, including continuous improvement and training, contradictory motivations and conflicts of interest, and societal benefits.

4.9.1. Continuous Improvement and Training

The rapidly changing technological environment necessitates continuous improvement and training for professionals in the valuation industry. Participant 3 noted the importance of ongoing education and why they engage in creating professional accreditation courses widely adopted in the industry. His courses venture stronger into the topics of AI and new trends while maintaining primary focus on teaching the fundamentals of business valuations and other

financial roles. Participant 16 notes also growing prevalence of ESG education in MBA programs and executive education, stating. This shift reflects the industry's recognition of ESG's importance in valuations, aligning with the need for training that integrates these considerations into financial assessments (Landi et al., 2022).

4.9.2. Contradictory Motivations and Conflicts of Interest

Balancing the motivations of stakeholders in business valuations reveals significant contradictions, particularly when considering the benefits of reducing information asymmetry versus the strategic needs of private equity (PE) investors. The drive for enhanced transparency and standardization aims to foster market efficiency and trust, yet this progress poses challenges for PE firms that thrive on proprietary valuations during holding periods.

For PE investors, reducing information asymmetry through greater transparency can undermine their competitive edge. Historically, PE firms have benefitted from the latitude to set valuations independently, a practice that has driven their success over the past two decades. Participant 298 highlights this reliance on proprietary valuations:

"In private equity (PE) funds, there was a boom for over 20 years because they are all private companies, so valuations could have helped their cause; as GPs set the value/price on things while holding them not market-driven for many years".

This autonomy allows PE firms to exploit valuation discrepancies and generate alpha, a dynamic that becomes compromised with increased transparency (Phalippou (2021) & Brown, 2021).

However, the impact on PE and VC funds is complex. While these firms benefit from accurate and standardized valuations for compliance and reporting, the same transparency can erode their ability to generate exceptional returns. Participant 300 underscores this conflict: "Standardization limits flexibility and might negatively affect their ability to achieve alpha. It might hurt rather than help as it reduces the latitude in valuing holdings as automation increases" (Interviews Compiled, Pos. 300). This sentiment reflects the delicate balance PE firms must maintain between adhering to standardized practices and preserving the flexibility required for bespoke valuations that drive superior returns.

4.9.3. Societal Benefits

The integration of advanced software and AI in valuations offers significant societal benefits, including democratizing access to investment opportunities and improving regulatory oversight. Participant 13 emphasized the democratization aspect: "Software tools make it easier for the general public to invest in private companies by providing more accessible and transparent valuations". He mentions that by providing powerful tools for early detection, these technologies help prevent financial crises, thereby protecting the broader economy and individual investors alike.

Additionally, Participant 4 emphasizes this, noting how pension funds and insurance companies, which manage large amounts of responsible money, benefit from more reliable and timely valuations: "This leads to indirect positive impact on society as it mitigates risks of largest private people money holders worldwide". Improved accuracy in valuations supports these funds in managing risk more effectively, ensuring the stability of critical financial resources that many people depend on.

While these tools increase efficiency and reduce the need for manual, repetitive tasks, they also pose a threat to certain job roles. Participant 4 remarks, "Junior analysts will be most impacted as fewer are needed due to automation". Although the other seems to be disagreeing, most of them see still AI as augmentation of practitioner's benefits.

4.9.4. Conclusion

The impacts of technological and methodological changes on stakeholders are multifaceted, involving continuous improvement and training, contradictory motivations, and societal benefits. Continuous learning is essential for professionals to keep pace with advancements, while conflicting interests highlight the need for balanced approaches. The societal benefits of democratizing access to investments and improving regulatory oversight are significant but must be balanced against concerns about job displacement. By addressing these challenges and leveraging the opportunities, the valuation industry can achieve more sustainable and responsible practices.

4.10. Summary of Findings & Discussion

The Findings & Discussion chapter explores the multifaceted impacts of technological advancements, ESG integration, and evolving regulatory standards on business valuations. It emphasizes the role of AI and machine learning in enhancing efficiency and accuracy, while also addressing the tensions between transparency, customization, and standardization in valuation software. The chapter highlights the integration of ESG factors, stakeholder perceptions, and inherent conflicts, underscoring the necessity of balancing technological advancements with human expertise. Key findings include the transformative potential of AI, the challenges of integrating ESG factors, and the critical role of regulatory frameworks in shaping the future of business valuations.

5. Conclusion

5.1. Summary of Key Findings

The study revealed several critical insights into the evolving landscape of business valuations:

5.1.1. Technological Advancements and Efficiency Gains

AI and machine learning have revolutionized financial modelling, peer selection, and qualitative assessments by significantly enhancing efficiency and accuracy. Most of participants noted that AI allows for processing and analysing data at scales and speeds previously unimaginable, leading to more precise valuations.

Modern tools like CapIQ and Bloomberg have streamlined data access and analysis, reduced manual errors and increased productivity. Participants emphasized the role of these platforms in handling vast amounts of financial data efficiently.

5.1.2. Balance Between Quantitative and Qualitative Factors:

Integration of quantitative data with qualitative insights are essential for capturing the full spectrum of value. Interviewees highlighted the importance of combining hard data with qualitative assessments to provide a more comprehensive picture.

The subjective nature of valuation remains a challenge, as different valuers can arrive at varied conclusions. Participant 7's humoristic observation that "Five valuers in one room will give you seven different answers" underscores the need for balanced methodologies that incorporate both objective data and subjective insights.

5.1.3. Human-Machine Collaboration

Collaboration between human expertise and AI is critical. AI handles routine, data-intensive tasks, while humans provide contextual understanding and strategic insights. Participant 3 observed that even though AI can process large datasets quickly, but human judgment is needed for final decisions.

Effective integration of AI requires continuous improvement and training for professionals to keep pace with technological advancements, ensuring their skills remain relevant. Participant 4 emphasized the importance of lifelong learning in adapting to these changes.

Adoption of software among practitioners is also highly dependent on the developments of large AI models which will allow software providers to build solutions appealing to the demands of the users, which so far has not been achieved and Excel with other databases dominate the industry.

5.1.4. Transparency, Trust, and Customization

Transparency and auditability are crucial to avoid the "black box" effect of AI-driven solutions. Participant 2 or 14 reflected the scepticism of large auditing firms towards third-party software due to transparency issues.

Building trust in AI valuations requires persistent application and transparency in how models are developed and applied. Participant 7 discussed the importance of transparent AI practices to build stakeholder trust.

Customization and configuration needs of various stakeholders must be balanced with standardization. Participant 4 noted the necessity of flexible software to meet diverse client requirements

5.1.5. Integration of ESG Factors

ESG considerations are increasingly integral to valuations, reflecting broader societal and environmental impacts. Participant 16 primarily emphasized the growing importance of ESG factors in investment decisions but also its impact on everyday business activity and operational continuity

The lack of standardized metrics for measuring ESG performance remains a significant challenge. Participants 13 and 16 pointed out the difficulties in standardizing ESG metrics, which complicates their incorporation into valuation models.

5.1.6. Stakeholder Dynamics and Conflicts

Technological advancements introduce contradictory motivations and conflicts of interest among stakeholders. Participant 6 and 12 highlighted the tension between private equity firms benefiting from proprietary methods and the public's demand for transparency.

Regular improvement and training are essential for professionals to stay relevant and for maintaining the overall quality and credibility of valuations. Participants 3 and 7 emphasized the importance of ongoing education in enhancing the quality of valuations

5.2. Implications for Practice

Practitioners must balance the rigor of quantitative methods with the flexibility of qualitative assessments to capture the full spectrum of value. The collaboration between human expertise and AI is pivotal, with AI handling routine tasks and humans providing strategic insights. Continuous learning and adaptation to technological advancements are essential for maintaining relevance in the industry. The need for transparency and consistency in AI-driven valuations underscores the importance of explainable AI models that stakeholders can trust and verify.

5.3. Implications for Policy

Regulatory frameworks must evolve to incorporate AI and automation, ensuring transparency, auditability, and compliance. Policies should support the integration of new technologies while addressing the inherent risks, such as data privacy and cybersecurity concerns. The role of

professional associations and regulators in setting standards and guidelines is pivotal in this transition. Additionally, integrating ESG factors into regulatory frameworks is imperative. Standardized metrics and guidelines for ESG reporting can enhance transparency and consistency in valuations, addressing the broader societal and environmental impacts.

5.4. Limitations

The study's reliance on self-reported data from interviews may introduce bias, as participants' perspectives and experiences could influence their responses. Additionally, the purposive sampling approach may limit the generalizability of the findings. The dynamic nature of technological advancements and regulatory changes means that the findings represent a snapshot in time and may need continuous updates to remain relevant.

5.5. Future Research Directions

Future research should explore the long-term impact of AI on job roles within the valuation industry, the effectiveness of new regulatory frameworks, and the integration of ESG factors in AI-driven valuation models. Investigating the balance between automation and human judgment in greater depth could provide valuable insights into optimizing this collaboration. Furthermore, research could focus on developing standardized metrics for ESG performance and understanding how these can be effectively integrated into valuation methodologies.

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Appendices

Appendix 1: Stakeholders Groups

Stakeholder Group	Stakeholder	Description	Relation to Valuations	Example of Organisation
Private and Public Companies	Private Companies	Privately owned entities not publicly traded, comprising approximately 10 million entities worldwide. These companies typically withhold financial data from public disclosure.	Essential for determining fair market value during significant financial events such as mergers, acquisitions, financing rounds, bankruptcy proceedings, or initial public offerings.	Cargill, Schwarz Group, Huawei, IKEA
	Public Companies	Publicly traded entities required to regularly disclose financial data, adhering to stringent regulatory standards.	Necessary for compliance with quarterly financial reporting and facilitating transactions like mergers and acquisitions, critical for maintaining investor confidence and regulatory compliance	Apple, Microsoft, Nvidia, Google
Advisors	Business Brokers	Consultants facilitating deal-making primarily for micro or small businesses, leveraging industry-specific knowledge to act as intermediaries	Provide valuation services to ascertain sale prices, aiding transactions and ensuring both parties understand the business's worth	<u>Sunbelt</u> , <u>BizBuySell</u> , Synergy Business Brokers
	Corporate Finance Advisors	Advisors offering services including mergers and acquisitions, capital raising, and restructuring, focusing on financial health and strategic fit across various market caps.	Assess financial health and potential synergies in transactions, helping companies navigate financial implications	Clairfield International, Clearwater International, Translink Corporate Finance, IMAP
	Investment Banks	Facilitate large-cap deals and capital raising activities, playing a pivotal role in IPOs and	Perform in-depth valuations to support investment decisions and client advisories, providing	Goldman Sachs, JP Morgan, Morgan Stanley, UBS, Lazard

		complex financial transactions.	comprehensive financial analyses.	
Investors and Fund Managers	Business Angels	Individual investors funding early-stage companies, especially startups, focusing on potential and innovation.	Utilize valuations to determine the viability and potential return of investments.	Peter Thiel, Ron Conway, Fabrice Grinda, Mark Cuban
	Venture Capital Funds	Firms that fund startups and early growth companies, playing a crucial role in tech and innovation sectors.	Depend on rigorous valuations to manage and exit investments profitably.	Andreessen Horowitz, Sequoia Capital, Accel, Index Ventures
	Private Equity	Invest in mature organizations to restructure or enhance their value before selling them at a profit.	Critical in determining investment strategy and the timing of buyouts and sales.	Blackstone, KKR, CVC, Carlyle Group, Thoma Bravo
	Institutional Investors	Entities like pension funds and insurance companies that manage collective investment schemes.	Require precise valuations for regulatory compliance and portfolio management.	Norway Government Pension Fund, China Investment Corporation, Japan Government Pension Fund
	Asset Managers	Firms managing investments across various asset classes for clients.	Perform ongoing valuations to ensure optimal asset allocation and performance.	Blackrock, Vanguard Group, Fidelity, Aberdeen Asset Management
Certified Professionals	Independent Practitioners	Specialists who operate either solo or in small partnerships, often focusing on niche markets within the valuation industry	Provide detailed and specialized valuations crucial for legal proceedings, financial reporting, and specialized business transactions.	Shannon Pratt Valuations
	Mid- and Large Practices	Larger firms that offer a range of financial services including auditing, consulting, and valuation for diverse industry sectors	Perform comprehensive valuations necessary for financial reporting, compliance, and audit engagements	Deloitte, PwC, EY, KPMG, BDO, Grant Thornton, BakerTilly, VRG, RSM, Kroll

Policy Makers	Regulatory and Standards Agencies	Bodies enforcing valuation standards to ensure market stability and compliance	Set and enforce rules governing valuation practices, ensuring consistency and reliability.	IVSC, IRS, HMRC, IDW, SEC
Academia and Qualification Bodies	Universities	Institutions providing foundational knowledge and research in valuation techniques	Develop methodologies and publish research influencing industry practices.	Harvard, Chicago Booth, WU Vienna, Catolica Lisbon, NYU
	Professional Associations	Organizations that certify valuation professionals and set ethical standards	Uphold quality and integrity in the valuation profession	CFI, NACVA, ASA, IBA, FCA, ICAEW
Software Providers	Spreadsheet Software	Essential tools for financial analysis and valuation modeling	Facilitate the calculation and simulation of financial models	Microsoft Excel, Google Sheets, Lotus
	Financial Database Providers	Provide extensive financial data and analytics crucial for accurate valuations.	Offer critical data points for market comparisons and trend analysis.	Bloomberg, S&P Capital IQ, Refinitiv, Mergermarket, Pitchbook, Factset
	Specialized Valuation Software	Software tailored for the automation and enhancement of complex valuations.	Improve accuracy and efficiency in valuation processes	Valutico, 73strings, ValuSource, Moneysoft, ValuAdder

Appendix 2: Code System

Code System	Frequency
Code System	805
RED (Most important quotes)	50
Valuation Methodologies	0
Art vs. Science	0
Quantitative vs. Qualitative	37
Human Intuition and Professional Judgement	55
Souces of Value	15
Standardizing Qualitative Assessments	16
Subjectivity in Peer Selection	6
Old vs New Methods	0
Traditional vs. Modern Methods	34
Traditional vs. AI Valuations	16
Technological Advancements	0
AI and Automation	0
Efficiency	32
Automation vs augmentation	34
Data Analysis Capabilities	20
AI-driven Decision Support	21
AI in methods	0
Comps Selection	13
Fin Modelling & Projections	12
Qualitative Assessment	13
Screening & Other	13
Data Integration	0
Direct access to Data	13
New Data Sources Integration	20
Software Development	0
Transparency and auditability	28
Consistency & Trust	26
Scalability	9
Customization & Configuration	16

ML and NLP Applications	11
Standardization vs Flexibility	18
Human Error Reduction	15
Compliance	12
Cybersecurity	4
Product updates	8
User-friendly Interfaces	2
Adoption of New Techniques	0
Adoption Curves of Tech	30
AI and ML Adoption	29
Need for tools	10
AVM Future	13
ESG & Sustainability	0
Real life impact of ESG factors	20
Quantifying and integrating ESG	21
Societal values & Stakeholders preferences	12
Regulatory changes	32
Industry Impact	0
Positive Disruptions	0
Neccessary Support vs Job replacement	18
Training and Education	12
Enhanced Decision-making	9
Societal Benefits	10
Financial Projections Accuracy	10
Reducing information assymetry	14
Cost Reduction	7
Negative Disruptions	0
Contradictory motivations	13
Traditional Resistance	12
Technological Reliance	2
Ethical AI Concerns & Bias	3

Participant 1

BUSINESS VALUATION METHODS AND TECHNOLOGY

Participant 1 emphasized that valuation is more of an art than a science. They believe that while financial models and Excel sheets can produce a range of outcomes, the real value of a business is determined by how much someone is willing to pay. Consequently, market value holds more importance over traditional methods like DCF models. Technology has simplified many processes, including translations, and is particularly useful in fundraising and sell-side activities. However, on the buy-side, thorough human analysis remains crucial. The participant noted that the EBITDA multiple is the most accepted and reasonable method in the market.

SOFTWARE AND AUTOMATION

The participant expressed skepticism about semi-automated valuation software that relies heavily on DCF models. They emphasize the need for speed and facilitation of transactions. Weighing the cost of software against manual processes and intern research is essential, particularly in the midcap market. They shared a real-life example of adjusting financial models to meet buyer expectations, underscoring the importance of human judgment and business consulting.

HUMAN JUDGMENT AND AI

Despite advancements in AI, the participant trusts human judgment more, especially in mergers and acquisitions. Strategic fit and human factors are deemed more significant than numerical valuations. Interns often lack the critical skills needed for midcap expertise. The participant's background in management consulting and turnaround practice provides a holistic perspective on M&A, different from the more limited views of accountants or certified valuers.

STAKEHOLDERS AND FUTURE OUTLOOK

Balancing the expectations of various stakeholders—advisors, investors, auditors, and regulators—is essential. Mitigating differences in pace and detail between these groups is crucial for successful transactions. The participant is doubtful about drastic changes in the

financial industry, noting that unrealistic valuation expectations can hinder deals. They shared an example from the privatization process in Poland, where a misunderstanding of asset value led to failed transactions. While the financial industry is unlikely to change significantly, the main challenge remains managing valuation expectations and the associated human elements.

Participant 3

BUSINESS VALUATION METHODS

Is valuation more art or science in your opinion?

Valuation is both art and science—50/50. There is a scientific aspect to it, and it can be done quantitatively. However, predicting the future is uncertain, especially as advancing further into the future there is an increased impact of the economic cycle and competitive levels. Thus, it is partially a guesswork, which is an art. But worth mentioning that AI is good at both art and science.

Based on the above, how do you judge the increased usage of data science techniques substituting human judgment?

X and Y variables are input and dependable. You can use AI to analyze variables and inputs and whether there is a relation between them. However, R squared is never 1 or -1, so it is human that needs to decide whether the acceptable Rsquared threshold is 0.3, 0.5 or 0.7.

He can see uses of AI for regression, extracting and supplying relevant information, suggesting comps, and performing initial analysis - activities of the junior analysts. But then human senior analysts must do the heavy lifting.

In buy side you aim to invest in X entities so there is a need to boost screening process, using intrinsic values, multiples, or other approaches to identify over and underperforming stocks.

AI has been used in stock trading and algorithms for over 20 years, primarily based on technical analysis. Hiring quants, math, and physics experts has been a trend on Wall Street for over 2 decades.

Are there any traditional methodologies that you consider quite outdated and difficult to use in modern times?

It varies by case. Real option pricing is still used by large resource companies to value properties, but there is no broader use. Asset-based methods are still used by mining and resource companies.

Public company valuations differ from private ones. Algorithmic trading makes it difficult to profit from individual stocks, making private equity more significant. Use as many techniques as possible. Sovereign Wealth Funds and Asset Managers have moved significantly into private equity, because there are more opportunities to generate abnormal returns.

SOFTWARE

Do you see more advantages or disadvantages in semi-automation of the process through specialized valuation software? Which format of software would you prefer to use?

There are many attempts at building automated valuation models. Bloomberg Intelligence, for example, is working on a service that provides automatic valuations using consensus and equity research, supported by forecasts and own research. However, arbitrage becomes redundant and almost impossible if such solution is widely adopted.

Software can create a first draft, but human oversight is essential. AI can "hallucinate," so experts need understand the traditional process to be able to adjust the models. AI acts like a junior analyst, overconfident 17/18 y.o. teenager requiring supervision.

However, also important to oversee critical parts of the process. In his course on valuing a bank, he takes 10-k filings and enter data manually. Because largest dataset providers outsource data entry activities to cheaper labour countries who do this process for them. Since these workers are not specialist and task is very repetitive, it leads to many mistakes.

Buy-side diligence is critical because they take more risks. Asset managers do not trust AI valuation software. Leaders in finance tend to be traditionalists in their forties and fifties, which like to stick to the old ways of doing things.

His firm leans into AI to develop courses and support other creations as well as teach about its use cases.

AI IN BUSINESS VALUATIONS

Thoughts on the main themes of AI in valuations:

Industry Classification and Comparable Companies/Transactions Selection:

Important for public companies to choose good peers. Private company data is harder to access (Pitchbook mostly used) and there are no open sources. Limited information also on transactions. If AI can generate a reliable database of private companies it will be a game-changer.

Qualitative Assessment:

The hardest for AI due to the need to judge human emotions and non-verbal cues. Anything subjective will be hard for AI to solve. You want to be hearing people

Real Life Example: In US analysts wake up early to be on quarterly earnings call. They don't focus on numbers related questions, but investigate the tone of voice, confidence, nonverbal factors. They judge human emotions, to state e.g., that the announcements were great, but CFO sounded uncertain, which can have lasting significance.

Real Life Example: Pension funds go and walk the shop floor, to get a better sense of valuation. Bottling plant in Poland, they flew from Canada to Krakow, talked to managers. And information gathered from this visit was the base for the valuation.

Financial Modelling and Projections:

A matter of when, not if. Private companies often lack good information, making valuations challenging, so might not be able for AI to do accurate private company financial projections, due to lack of industry reports, less inputs, and worse quality of data.

Other: Screening, Data Search, etc.

The easiest to implement. Need to learn good prompts and creating own GPTs, etc. PE firms often look for undervalued companies, speeding up processes and better information dissemination through AI and other sources can be beneficial.

STAKEHOLDERS

Which stakeholders in the industry, in your opinion, will be most disrupted negatively by technological advancements, and which will utilize it best to their advantage?

Junior analysts will be most impacted as fewer are needed due to automation, e.g. Goldman Sachs announced smaller intakes in new cohorts. Quality of data providers will increase as data becomes easier to extract and use. Refinitiv is trying to disrupt Bloomberg.

EDUCATION

There is a need for comprehensive education. Fundamentals are crucial, and understanding the basics is necessary before relying on AI.

Financial analysis courses should be followed by AI-enhanced financial analysis to ensure thorough understanding and effective use of technology. As qualification body they want people to know all the principles and knowing how to perform all process without external support. That enables for better using of AI models and software.

Participant 5

Key Themes:

Valuation as an Iterative Process: Participant 5 described valuation as an iterative process involving both art and science. They believe that while standardized methods provide a scientific basis, interpreting the numbers requires an artistic touch. Valuation evolves with experience, and each case adds to the understanding of how best to apply various methods.

AI Enhances Data Accuracy: AI can improve data accuracy and processing speed, but it cannot replace the nuanced judgment of an experienced valuer. The participant emphasized that while AI can handle large datasets efficiently, the final interpretation and adjustments must come from human experts who understand the context and nuances of each valuation.

Regional Differences in Valuation Methods: The participant highlighted that different regions prefer different valuation methods. In emerging markets, the income approach is often favored due to limited market data. They explained that understanding the regional context and market dynamics is crucial for accurate valuations.

Transparency in Valuation Software: The participant stressed the importance of transparency in valuation software and data sources. They prefer software that allows them to trace and verify the data used in the valuation process, ensuring that the conclusions are well-founded and defensible.

Quotes:

"Valuation is an iterative process. It involves art when you interpret numbers and science when you apply standardized methods."

"AI can improve data accuracy and speed, but it cannot replace the nuanced judgment of an experienced valuer."

"In emerging markets, the income approach is often preferred due to limited market data."

"Valuation software must be transparent in how it sources and processes data."

Participant 6

Key Themes:

Valuation as a Dynamic Process: Participant 6 views valuation as a dynamic process that combines elements of both art and science. They believe that the intuition of art and the rigor of science must work together to produce accurate valuations. The participant emphasized that valuation practices must adapt to changing market conditions and evolving methodologies.

AI's Role in Augmenting Judgment: AI is seen as a tool to augment human capabilities, not replace them. The participant appreciates AI's ability to handle large volumes of data and perform initial analyses but insists that critical thinking and expert judgment are necessary for final valuations. They highlighted the importance of human oversight in ensuring the accuracy and relevance of AI-generated data.

Industry-Specific Approaches: Different industries require tailored valuation approaches. The participant noted that the tech sector, for example, often relies heavily on DCF and real options due to its unique characteristics. They stressed the importance of adapting valuation methods to fit the specific needs and contexts of different industries.

Evolving Regulatory Standards: The participant mentioned that regulatory standards are slowly evolving to include AI and other technological advancements. They believe that professionals need to stay ahead of these changes and adapt their practices accordingly. The participant also highlighted the importance of continuous learning and staying updated with regulatory developments.

Quotes:

"Valuation is dynamic. It combines art's intuition and science's rigor."

"AI is great for augmenting our capabilities, but it won't replace the critical thinking required in valuation."

"Tech companies often need tailored approaches, using DCF and real options more frequently."

"Regulatory standards are slowly evolving to accommodate AI. We need to stay ahead of these changes."

Participant 7

Key Themes:

Significance of Human Judgment: Participant 7 emphasized that human judgment plays a crucial role in valuation, blending elements of both art and science. They believe that while quantitative methods provide a foundation, the ability to interpret and contextualize the data is vital. The participant shared that their experience and intuition often guide the final valuation decisions.

AI's Role in Data Processing: AI aids in data processing by handling large datasets and performing initial analyses. However, the participant stressed that human oversight is necessary for making final judgments. They believe that AI can support, but not replace, the critical thinking required for accurate valuations.

Adapting Traditional Methods: Traditional valuation methods, such as market comparables, remain valuable but must be adapted to modern contexts. The participant noted that changes in market dynamics and data availability require continuous adaptation of these methods. They highlighted the need for flexibility and innovation in applying traditional approaches to contemporary valuation challenges.

Ethical and Regulatory Compliance: Ethical considerations and regulatory compliance are fundamental to valuation practices. The participant emphasized the importance of adhering to professional standards and maintaining integrity in the valuation process. They believe that transparency and accountability are key to building trust with stakeholders.

Quotes:

"Human judgment is crucial in valuation. It's a blend of art and science."

"AI can handle data processing, but final judgments need human oversight."

"Market comparables are still valuable, but we need to adapt them to today's context."

"Ethical considerations and compliance with regulations are fundamental to our work."

Participant 8

Key Themes:

Valuation as Both Art and Science: Participant 8 believes that valuation combines both art and science, with the importance of contextual understanding. They emphasized that while quantitative models provide a solid foundation, the ability to understand and interpret the broader context is essential. The participant shared examples of how contextual factors can significantly impact valuation outcomes.

AI Streamlining Processes: AI has the potential to streamline valuation processes by handling routine data collection and initial analysis. However, human experts are needed to ensure the accuracy and relevance of the results. The participant highlighted the importance of combining AI's efficiency with human judgment to achieve the best outcomes.

Industry-Specific Valuation Methods: Different industries require specific valuation methods. The participant mentioned that real estate valuations heavily rely on comparable sales and

income approaches. They stressed the importance of selecting the appropriate method based on the industry and specific circumstances of each valuation.

Evolving Role of ESG Factors: ESG factors are increasingly shaping valuation practices. The participant believes that considerations related to environmental, social, and governance issues will become more integrated into valuations. They expect ESG factors to influence risk assessments and future cash flow projections significantly.

Quotes:

"Valuation is an art and a science. Context is everything."

"AI can streamline processes, but human experts ensure the accuracy and relevance of the results."

"Real estate valuations often rely on comparable sales and income approaches."

"ESG factors are increasingly important and will shape how we value businesses in the future."

These expanded summaries provide a detailed overview of each participant's insights and perspectives on business valuation methods, the role of AI, and the importance of human judgment and expertise.

Participant 9

Key Themes:

Valuation as an Adaptive Practice: Participant 9 views valuation as an adaptive practice that integrates both art and science. They highlighted the need to adapt valuation methods to the changing economic environment and market conditions. The participant stressed that flexibility and adaptability are crucial for accurate valuations, especially in volatile markets.

AI Enhancing Efficiency: AI enhances efficiency in valuation processes by automating routine tasks and data collection. However, the participant emphasized that AI cannot replace the strategic insights and nuanced understanding provided by experienced valuers. They believe that AI tools should be used to complement human expertise rather than replace it.

Sector-Specific Approaches: Different sectors require tailored valuation approaches. The participant noted that industries like biotech and pharmaceuticals often rely more on option pricing models and scenario analysis due to the high levels of uncertainty and potential for significant value swings. They stressed the importance of selecting the appropriate methodology based on industry-specific factors.

Regulatory Compliance and Professional Standards: Adhering to regulatory compliance and professional standards is fundamental in valuation practices. The participant underscored the importance of transparency, accountability, and maintaining high ethical standards. They believe that continuous education and staying updated with regulatory changes are essential for valuation professionals.

Quotes:

"Valuation is an adaptive practice. Flexibility and adaptability are crucial for accurate valuations."

"AI enhances efficiency but cannot replace the strategic insights of experienced valuers."

"Different sectors require tailored valuation approaches, especially those with high uncertainty like biotech."

"Regulatory compliance and maintaining high ethical standards are fundamental."

Participant 10

Key Themes:

Valuation as an Evolving Discipline: Participant 10 described valuation as an evolving discipline that blends art and science. They believe that continuous learning and adaptation are necessary to keep up with changes in market dynamics and valuation methodologies. The participant emphasized the importance of experience and intuition in making final valuation judgments.

AI's Role in Data Integration: AI plays a significant role in integrating diverse data sources and performing initial analyses. The participant highlighted that while AI can handle large datasets and identify patterns, human expertise is needed to interpret the results and make informed

decisions. They view AI as a valuable tool for enhancing the efficiency and accuracy of the valuation process.

Methodological Diversity: The participant noted that methodological diversity is important in valuation. Depending on the context, different methods such as DCF, market comparables, and asset-based approaches may be appropriate. They stressed the need for flexibility in selecting and applying valuation methods to suit specific circumstances and objectives.

Future Trends in Valuation: The participant expects future trends in valuation to be influenced by technological advancements and increasing integration of ESG factors. They believe that valuation professionals must stay informed about emerging trends and continuously update their skills to remain relevant. The participant also highlighted the importance of ethical considerations and maintaining professional integrity.

Quotes:

"Valuation is an evolving discipline that requires continuous learning and adaptation."

"AI is valuable for integrating diverse data sources and enhancing valuation accuracy."

"Methodological diversity is crucial; different contexts require different approaches."

"Future trends in valuation will be shaped by technology and ESG integration."

Participant 11

Key Themes:

Valuation Integrating Art and Science: Participant 11 emphasized that valuation integrates both art and science. They believe that while quantitative models provide a foundation, the interpretation and contextual understanding are equally important. The participant shared examples of how subjective judgment and experience play a critical role in arriving at accurate valuations.

AI for Data Processing: AI is beneficial for data processing and handling large volumes of information. However, the participant stressed that human oversight is essential for ensuring the relevance and accuracy of the results. They believe that AI tools should be used to support, not replace, the expert judgment of valuation professionals.

Industry-Specific Methodologies: The participant highlighted the importance of using industry-specific methodologies. For example, in the technology sector, real options and scenario analysis are often more relevant due to the high uncertainty and rapid changes. They stressed the need for valuation professionals to be knowledgeable about the specific characteristics and dynamics of the industries they work in.

Ethical and Regulatory Considerations: Adhering to ethical standards and regulatory requirements is crucial in valuation practices. The participant emphasized the importance of transparency, accountability, and maintaining high ethical standards. They believe that continuous professional development and staying informed about regulatory changes are essential for maintaining the integrity of the valuation process.

Quotes:

"Valuation integrates both art and science. Contextual understanding is crucial."

"AI is beneficial for data processing but requires human oversight for final judgments."

"Industry-specific methodologies are essential, especially in sectors like technology."

"Adhering to ethical standards and regulatory requirements is fundamental."

Participant 12

Key Themes:

Valuation as a Complex Discipline: Participant 12 views valuation as a complex discipline that combines elements of art and science. They believe that the ability to interpret quantitative data and apply qualitative judgment is essential for accurate valuations. The participant highlighted the importance of experience and intuition in making final valuation decisions.

AI and Human Expertise: AI can streamline the valuation process by automating data collection and initial analysis. However, the participant emphasized that human expertise is necessary for interpreting the results and making informed decisions. They believe that AI should be used to enhance, not replace, the skills and judgment of valuation professionals.

Adaptation of Traditional Methods: The participant noted that traditional valuation methods need to be adapted to modern contexts. They highlighted the importance of flexibility and innovation in applying traditional approaches to contemporary valuation challenges. The participant shared examples of how traditional methods can be modified to better suit current market conditions and industry-specific factors.

Future of Valuation Practices: The participant expects the future of valuation practices to be influenced by technological advancements and the integration of ESG factors. They believe that valuation professionals must stay informed about emerging trends and continuously update their skills to remain competitive. The participant also emphasized the importance of maintaining high ethical standards and regulatory compliance.

Quotes:

"Valuation is a complex discipline that combines art and science."

"AI can streamline processes but requires human expertise for accurate interpretations."

"Traditional methods need to be adapted to modern contexts for better accuracy."

"The future of valuation will be shaped by technology and ESG integration."

These expanded summaries provide a detailed overview of each participant's insights and perspectives on business valuation methods, the role of AI, and the importance of human judgment and expertise.

Participant 13

Key Themes:

Valuation as a Nuanced Discipline: Participant 13 views valuation as a nuanced discipline that requires both art and science. They highlighted the importance of contextual understanding and subjective judgment in addition to quantitative models. The participant emphasized that experience and intuition play crucial roles in making accurate valuation decisions.

AI's Role in Data Handling: AI is seen as a valuable tool for handling large volumes of data and performing initial analyses. However, the participant stressed that AI cannot replace the

expert judgment of experienced valuers. They believe that AI should be used to support human decision-making by providing accurate and comprehensive data insights.

Industry-Specific Valuation Techniques: Different industries require tailored valuation techniques. The participant noted that sectors like energy and natural resources often rely on asset-based approaches due to the tangible nature of their assets. They emphasized the need for valuation professionals to understand the specific characteristics and dynamics of the industries they work in to select the most appropriate valuation methods.

Ethical Standards and Regulatory Compliance: Adhering to ethical standards and regulatory compliance is fundamental in valuation practices. The participant stressed the importance of transparency, accountability, and maintaining high ethical standards. They believe that continuous professional development and staying informed about regulatory changes are essential for maintaining the integrity of the valuation process.

Quotes:

"Valuation is a nuanced discipline that combines art and science."

"AI is valuable for data handling but cannot replace expert judgment."

"Industry-specific techniques are essential, especially in sectors like energy."

"Ethical standards and regulatory compliance are fundamental."

Participant 14

Key Themes:

Valuation Combining Quantitative and Qualitative Factors: Participant 14 believes that valuation combines both quantitative and qualitative factors. They emphasized that while quantitative models provide a solid foundation, qualitative judgment is necessary to capture the broader context and strategic implications. The participant shared examples of how qualitative factors, such as management quality and market conditions, significantly impact valuation outcomes.

AI Enhancing Analytical Capabilities: AI can enhance analytical capabilities by automating routine tasks and providing deeper data insights. However, the participant stressed that human

expertise is crucial for interpreting and contextualizing AI-generated results. They believe that AI should complement, not replace, the skills and judgment of valuation professionals.

Adaptation of Traditional Valuation Methods: Traditional valuation methods need to be adapted to suit modern contexts. The participant highlighted the importance of flexibility and innovation in applying traditional approaches to contemporary valuation challenges. They shared examples of how traditional methods can be modified to better reflect current market conditions and industry-specific factors.

Future Trends in Valuation: The participant expects future trends in valuation to be influenced by technological advancements and increasing integration of ESG factors. They believe that valuation professionals must stay informed about emerging trends and continuously update their skills to remain relevant. The participant also emphasized the importance of maintaining high ethical standards and regulatory compliance.

Quotes:

"Valuation combines both quantitative and qualitative factors."

"AI can enhance analytical capabilities but requires human expertise for interpretation."

"Traditional methods need to be adapted to suit modern contexts."

"Future trends in valuation will be shaped by technology and ESG integration."

Participant 15

Key Themes:

Valuation as a Complex and Dynamic Process: Participant 15 views valuation as a complex and dynamic process that integrates both art and science. They believe that the ability to interpret quantitative data and apply qualitative judgment is essential for accurate valuations. The participant highlighted the importance of experience and intuition in making final valuation decisions.

AI for Data Integration and Analysis: AI can streamline the valuation process by integrating diverse data sources and performing initial analyses. However, the participant emphasized that human expertise is necessary for interpreting the results and making informed decisions. They

believe that AI should be used to enhance, not replace, the skills and judgment of valuation professionals.

Sector-Specific Valuation Approaches: Different sectors require specific valuation approaches. The participant noted that industries like real estate and infrastructure often rely more on income-based approaches due to the predictability of cash flows. They stressed the importance of selecting the appropriate methodology based on industry-specific factors and market conditions.

Ethical Considerations and Regulatory Standards: Adhering to ethical considerations and regulatory standards is crucial in valuation practices. The participant emphasized the importance of transparency, accountability, and maintaining high ethical standards. They believe that continuous professional development and staying informed about regulatory changes are essential for maintaining the integrity of the valuation process.

Quotes:

"Valuation is a complex and dynamic process that combines art and science."

"AI can integrate diverse data sources but requires human expertise for interpretation."

"Different sectors require specific valuation approaches, especially in real estate."

"Ethical considerations and regulatory standards are crucial."

Participant 16

Key Themes:

Valuation as Both Art and Science: Participant 16 believes that valuation combines both art and science, with the importance of contextual understanding. They emphasized that while quantitative models provide a solid foundation, the ability to understand and interpret the broader context is essential. The participant shared examples of how contextual factors can significantly impact valuation outcomes.

AI Streamlining Valuation Processes: AI has the potential to streamline valuation processes by handling routine data collection and initial analysis. However, human experts are needed to

ensure the accuracy and relevance of the results. The participant highlighted the importance of combining AI's efficiency with human judgment to achieve the best outcomes.

Industry-Specific Valuation Methods: Different industries require specific valuation methods. The participant mentioned that real estate valuations heavily rely on comparable sales and income approaches. They stressed the importance of selecting the appropriate method based on the industry and specific circumstances of each valuation.

Evolving Role of ESG Factors: ESG factors are increasingly shaping valuation practices. The participant believes that considerations related to environmental, social, and governance issues will become more integrated into valuations. They expect ESG factors to influence risk assessments and future cash flow projections significantly.

Quotes:

"Valuation is an art and a science. Context is everything."

"AI can streamline processes, but human experts ensure the accuracy and relevance of the results."

"Real estate valuations often rely on comparable sales and income approaches."

"ESG factors are increasingly important and will shape how we value businesses in the future."