Asset Valuation and Management: A Bibliometric Analysis

Abdurrauf Umar, Denny Andriana, Elis Mediawati

Universitas Pendidikan Indonesia

ABSTRACT

The article explores the critical role of asset valuation and management in investment decision-making, emphasizing their significance in navigating both prosperous and challenging times. The aftermath of the 2008 financial crisis underscores the importance of accurate valuation, with erroneous assessments contributing to market imbalances. The evolving landscape, including emerging asset classes like cryptocurrencies, demands continuous scholarly attention. This study employs bibliometric analysis, leveraging VOS viewer software, to map the research trends in asset valuation and management from 2018 to 2023. The methodology involves using Google Scholar and Publish or Perish for data collection, resulting in 104 relevant articles. The analysis reveals a declining trend in research output, raising questions about the current emphasis on this field. Visualizations categorize research into four clusters, highlighting key themes such as corporate social responsibility, big data, and risk. Network, overlay, and density visualizations provide nuanced insights into the relationships and trends within the literature. The study concludes by emphasizing the need for further research, guided by the identified gaps and trends in asset valuation and management. This bibliometric analysis serves as a valuable tool for researchers, aiding in topic selection and enhancing understanding within this dynamic field.

INTRODUCTION

The phrase "bad times" is the most crucial one in investment. The fundamental issue is that asset owners typically experience the pain of bad times more keenly than the joy of good times. Various investors have different definitions of "bad times," which are determined by their liabilities, income streams, constraints, and beliefs, as well as how they view and respond to various risks (Andrew, 2014). Around the world, haphazard developments in asset valuation have been linked to imbalances and bearish distress in the financial market. Rating agencies' inaccurate assessment of the value of financial products such as asset-backed securities and collateralized debt obligations during the global financial crisis of 2008 resulted in a bubble and the subsequent collapse of financial markets (Aspers & Jens, 2013). This is where the concepts of asset valuation and management becomes paramount, having rigorous insight into these fields is key to investors, whether individuals; corporates or even nations/governments, because the investors' decision-making process while making an investment is greatly influenced by their asset valuation and management expertise. In a nutshell, asset valuation and management are fundamental aspects of the investment process. They provide investors with the necessary information and tools to make informed decisions, manage risk, optimize portfolios, measure performance, plan strategically, report financial information as well as boosting their confidence in achieving their financial goals.

According to (Hitchner, 2003), valuation is a very broad field in finance that includes everything from the valuation of startups to the value of very sophisticated financial products like derivatives contracts. Simple financial assets like corporate bonds are also included in this scope. To satisfy investors' long-term needs, asset managers must select sustainable products at the right price, with minimal transaction costs, and in the

most tax-efficient manner. Additionally, it needs to be in the right market and at the right time. The efficiency with which the "assets" are managed in the user's best interests determines the success of an investment, especially during periods of declining yields. Therefore, ensuring successful and profitable investment highly and significantly depends on accurate asset valuation and management expertise, however, asset valuation and management field continue to evolve through expansion of scope, as more classes of assets continue to emerge, (such as cryptocurrencies and other virtual assets stored in blockchains, intellectual capital, natural capital and ecosystems etc.,) these are drawing new retail investors into the market and are increasingly being included in established portfolios. Thus, it is against this background, that researchers now have the chance to enhance their studies in this area. Research in any field, including asset valuation and management, has to be bibliometrically analysed in order to identify the vast opportunities for study on particular themes.

The reason for this is that bibliometrics has been used to both provide a representative summary of the selected topic and to categorize a particular topic in the form of a bibliography. Among the instruments available for performing a bibliometric study is VOS viewer. Software called VOS viewer is capable of creating, displaying, and analyzing bibliometric maps. VOS viewer is able to assess many types of bibliometric network information, such as linkages between journal citations or publications, correlations between scientific terms, and cooperative partnerships among researchers (Senny et al., 2022). Previous researches have studied asset valuation/pricing and or asset management, the research of (Chen et al., 2023) for example discussed about Deep learning in asset pricing; additionally, the research by (Kabak & Benjelloun, 2022) discussed Artificial Intelligence Technologies Applied to Asset Management: Methods, Opportunities and Risks; research by (Suakanto et al., 2021) studied Conceptual Asset Management framework: A Grounded Theory Perspective; (Rizvi et al., 2020) in his research, studied Covid-19 and asset management in EU: A preliminary assessment of performance and investment styles; another research by (Rani et al., 2020) dealt with Economic valuation and conservation, restoration &management strategies of Saint Martin's coral island, Bangladesh. Also the research of (Bullmann et al., 2019) studied In search for stability in crypto-assets: are stablecoins the solution?. Gârleanu & Pedersen also in 2018 gave insights into Efficiently inefficient markets for assets and asset management. Wong et al., 2018, provided a literature review and directions for future research on digitisation in facilities management. Whereas on bibliometric analysis, (Rahmawati & Subardjo, 2022) performed one, which discussed Accounting in the Blockchain Era. Nevertheless, there is currently a dearth of study on bibliometric analysis with reference to asset value and management, particularly when using the VOS viewer software to perform the mapping analysis. Therefore, by integrating mapping with VOS viewer software, this research aims to conduct bibliometric analysis research in the field of asset value and management. The reason for this is that figuring out the quantity and freshness of the data depends on this analysis. It is intended that this study will serve as a useful tool for academics doing research and selecting topics, especially those related to asset appraisal and management.

METHODOLOGY AND LITERATURE GATHERING

In this study, descriptive quantitative and bibliometric methodologies were used. We used Google Scholar to index published publications to obtain data for this investigation. The reason for this is that among the readily available journal sources is Google Scholar. We also used the Publish or Perish software to perform a literature review on the subject of the study

we conducted. We selected the Publish or Perish software to locate the bibliometric information related to our topic of study. Additionally, we saved the information from the Publish or Perish program into *ris files, which the VOS viewer application could use. In this study, VOS viewer 1.6.20 and Publish or Perish 8 were the programs we utilized to gather data. We limited the materials we used in this study to those that were pertinent to asset management and valuation. We obtained the information from Google Scholar by using

the term "asset valuation and management" in accordance with the parameters specified by the Publish or Perish software for the title, keywords, and abstract. In relation to asset valuation and management studies, we gathered 410 data points. Nonetheless, 104 relevant journals were found once the data was filtered. The studies that were taken into account in this analysis were released between 2018 and 2023. After that, the collected articles are saved in *.ris format. After that, we created the visualization and conducted trend analysis using bibliometric maps using the VOS viewer program. The article data was mapped using the ready-made database sources. Three categories of mapping data are distinguished by the VOS viewer software: network, overlay, and density visualization. We also refine the phrases that are displayed in the VOS viewer mapping representation.

RESULTS AND DISCUSSION

Research trends in the field of asset valuation and management

The figure 1 below depicts the progression of research in asset valuation and management from 2018 to 2023. As it can be seen in Figure 1, the development of asset valuation and management research during the previous six years was interesting, specifically from 2018 to 2023; the research trend within this period has continued to take a downward direction. the researches conducted in 2018 alone, stands at 56 followed by a sharp decline to 17 in 2019, a period when Covid-19 was about to set in, again in 2020, the Covid-19 period, though the decline wasn't as sharp as the previous year, the number of researches recorded was 16. However, in 2021, the number of publications reduced drastically to just half of the previous year, as the figure stands at just 8. Subsequently in 2022, the quantum of the studies conducted continued to decline by half of the number of the studies of the year preceding it amounting to just 4, and lastly in 2023, only 3 were gotten, making a total of 104 articles altogether.
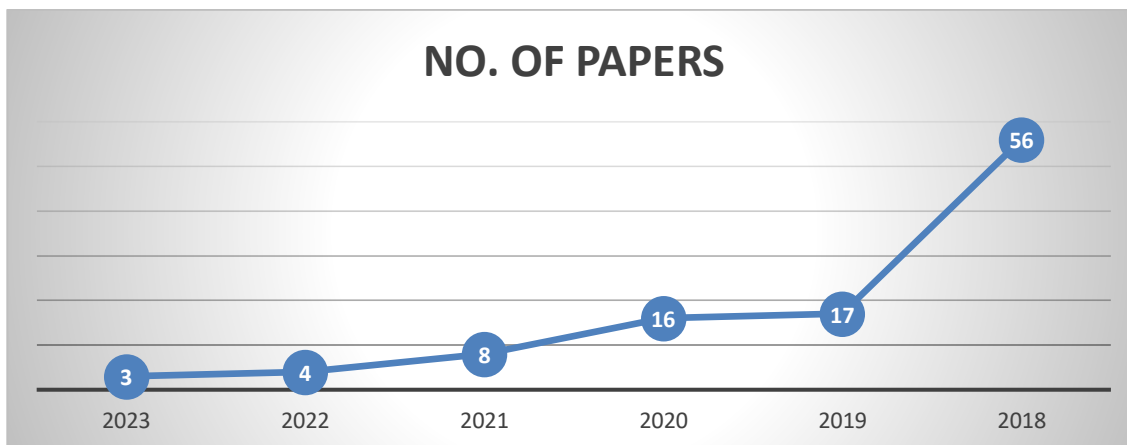

Figure 1: level of research progression in asset valuation and management

Table 1. Research Articles in the Field of Asset Valuation Management

No.	Authors	Title	Year	Cites
1	S Corbet, B Lucey, A Urquhart, L Yarovaya	Cryptocurrencies as a financial asset: A systematic analysis	2019	963
2	V Grover, RHL Chiang, TP Liang…	Creating strategic business value from big data analytics: A research framework	2018	936
3	A Fatemi, M Glaum, S Kaiser	ESG performance and firm value: The moderating role of disclosure	2018	913

4	CE Helfat, RSRaubitschek	Dynamic and integrative capabilities for profiting from innovation in digital platform-based ecosystems	2018	816
5	C Boje, A Guerriero, S Kubicki, Y Rezgui	Towards a semantic Construction Digital Twin: Directions for future research	2020	685
6	JH Dyer, H Singh, WS Hesterly	The relational view revisited: A dynamic perspective on value creation and value capture	2018	599
7	A Aouadi, S Marsat	Do ESG controversies matter for firm value? Evidence from international data	2018	591
8	LW Cong, Y Li, N Wang	Tokenomics: Dynamic adoption and valuation	2021	576
9	B Dattée, O Alexy, E Autio	Maneuvering in poor visibility: How firms play the ecosystem game when uncertainty is high	2018	540
10	O Jeanne, A Korinek	Managing credit booms and busts: A Pigouvian taxation approach	2019	536
11	F Jiang, J Lee, X Martin, G Zhou	Manager sentiment and stock returns	2019	461
12	O Müller, M Fay, J Vom Brocke	The effect of big data and analytics on firm performance: An econometric analysis considering industry characteristics	2018	436
13	RN Ilham, I Sinta, M Sinurat	The Effect Of Technical Analysis On Cryptocurrency Investment Returns With The 5 (Five) Highest Market Capitalizations In Indonesia	2022	411
14	H Chesbrough, C Lettl, T Ritter	Value creation and value capture in open innovation	2018	410
15	R Atan, MM Alam, J Said, M Zamri	The impacts of environmental, social, and governance factors on firm performance: Panel study of Malaysian companies	2018	391
16	RM Redlich, MA Nemzow	System and method to identify, classify and monetize information as an intangible asset and a production model based thereon	2022	385
17	L Chen, M Pelger, J Zhu	Deep learning in asset pricing	2023	377
18	A Moghar, M Hamiche	Stock market prediction using LSTM recurrent neural network	2020	354
19	E Bouri, O Cepni, D Gabauer, R Gupta	Return connectedness across asset classes around the COVID-19 outbreak	2021	353
20	A Damodaran	Equity risk premiums (ERP): Determinants, estimation and implications–The 2019 Edition	2019	337

Source: Authors' computation

VISUALIZATION OF ASSET VALUATION AND MANAGEMENT TOPIC AREA USING VOS VIEWER

Al Husaeni and Nandiyanto claim that two terms determine the minimum number of relationships in the VOS viewer application. Nonetheless, in this investigation, three associations between terms in the VOS viewer are the bare minimum. As a result, there are 23 entries in the results, totaling 4 clusters. Based on visualization mapping analysis, research on asset valuation and management is categorized into four clusters, which are as follows:

Cluster 1 is made up of 10 items which consist of book value, corporate social responsibility, equity, evidence, financial performance, firm value, profitability, ratio, ROA, and total asset.

Cluster 2 is made up of 8 items; which include; asset, big data, data, intellectual capital, model, order, value, and value creation.

Cluster 3 is made up of 4 items which comprises of book, management, risk and valuation. Cluster 4 comprised of 1 item- asset management.

However, it can be seen from the figures below, cluster 1 is coloured red; cluster 2 is coloured green; cluster 3 is coloured blue whereas cluster 4 is coloured yellow.
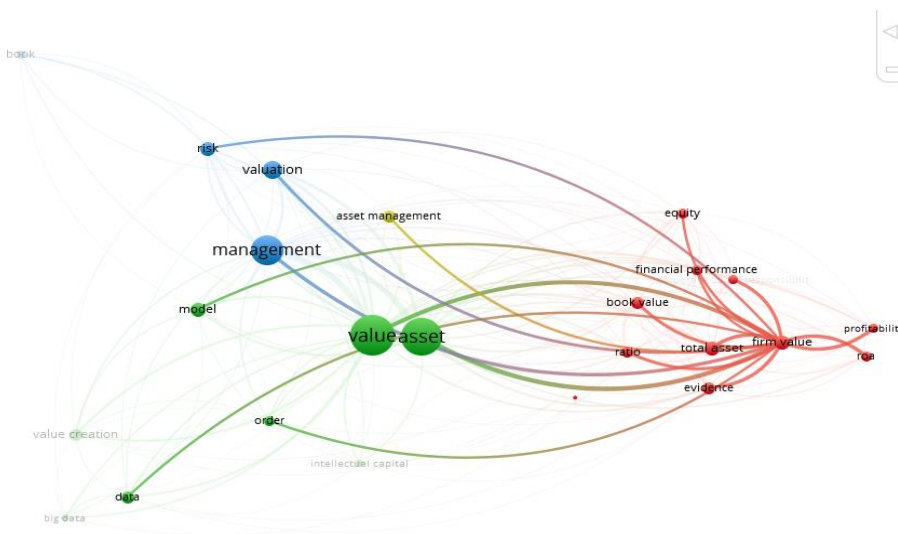
Figure 2. Cluster 1 Asset valuation and management's network visualization.
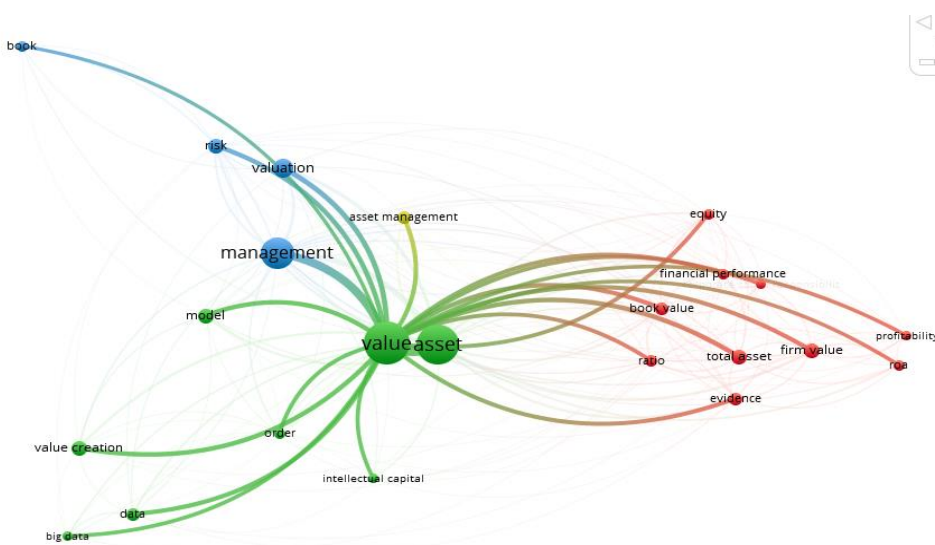

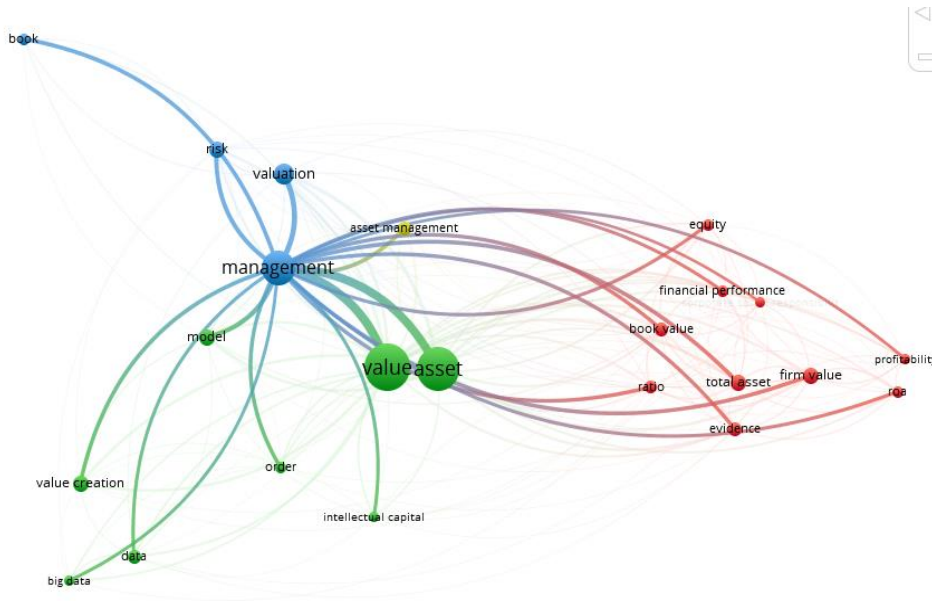Figure 3. Cluster 2 asset valuation and management network visualization

Figure 4. Cluster 3 Asset valuation and management network visualization.
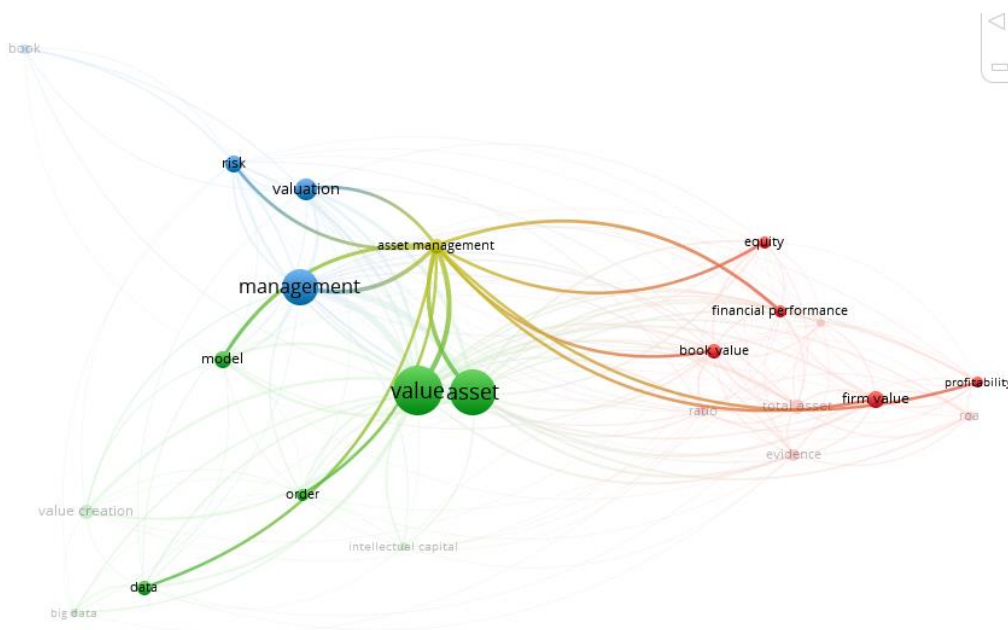

Figure 5. Cluster 4 asset valuation and management's network visualization

NETWORK VISUALIZATION FOR ASSET VALUATION AND MANAGEMENT

There are three categories for each term mapping in VOS viewer, and Network Visualization is one of them. With network visualization, the relationships between terms on a map are explained. Networks or lines connecting terms illustrate the relationships present in the visualization network. The Network Visualization of the term " Asset Valuation and Management " from the VOS viewer application is displayed in Figure 6. A representation of every cluster in each of the studied topic areas can be found in Figure 6. Asset Management; and valuation are contained in cluster 4 and cluster 3 respectively with a total strength of 50 and an occurrence of 22 for asset management while valuation had a total strength of 124 and 57 occurrences, as shown in Figure 6. Asset management is connected with cluster 3, namely valuation and management; as well as cluster 2, namely asset and value.
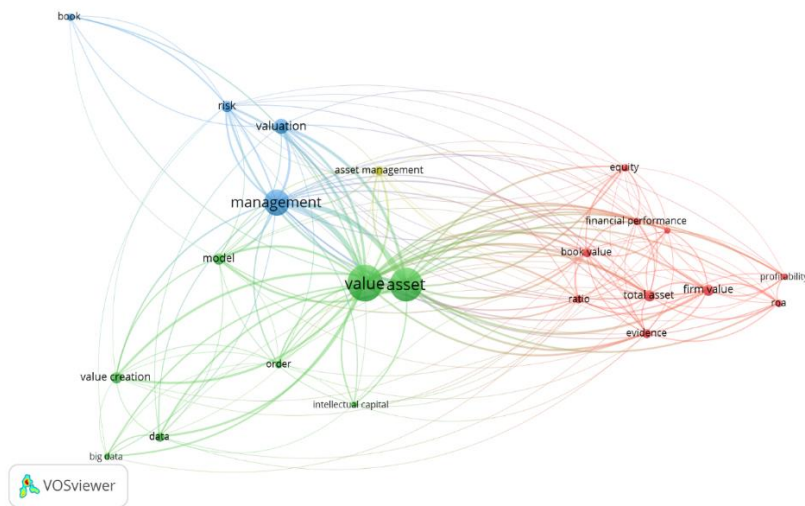
Figure 6. Network visualization for asset valuation and management

OVERLAY VISUALIZATION FOR ASSET VALUATION AND MANAGEMENT

The VOS viewer application offers network visualization in addition to a mapping depiction in the form of an overlay. Overlay visualization mapping concentrates on a term's uniqueness in the study. Figure 7 illustrates a term's uniqueness in asset valuation and management-related research. The popularity of a term over time can be observed in the Overlay Visualization type term mapping. Different colours in Overlay Visualization signify a term's renewal inside a specific time frame. We use the time frame from 2018 to 2023 in our analysis. A term whose coloration is becoming closer to purple indicates that its study was completed around 2018. Conversely, a paler colouring that is getting close to yellow is used to indicate terms appearance in recent studies around 2023. As seen in the figure, valuation is the most sought-after research keyword, followed by value, asset, and management; asset management, on the other hand, is used sporadically. Figure 7 indicates that value creation, data, intellectual capital, equity, total asset, firm value, book value, risk, and profitability are all strongly correlated with valuation as well as management.
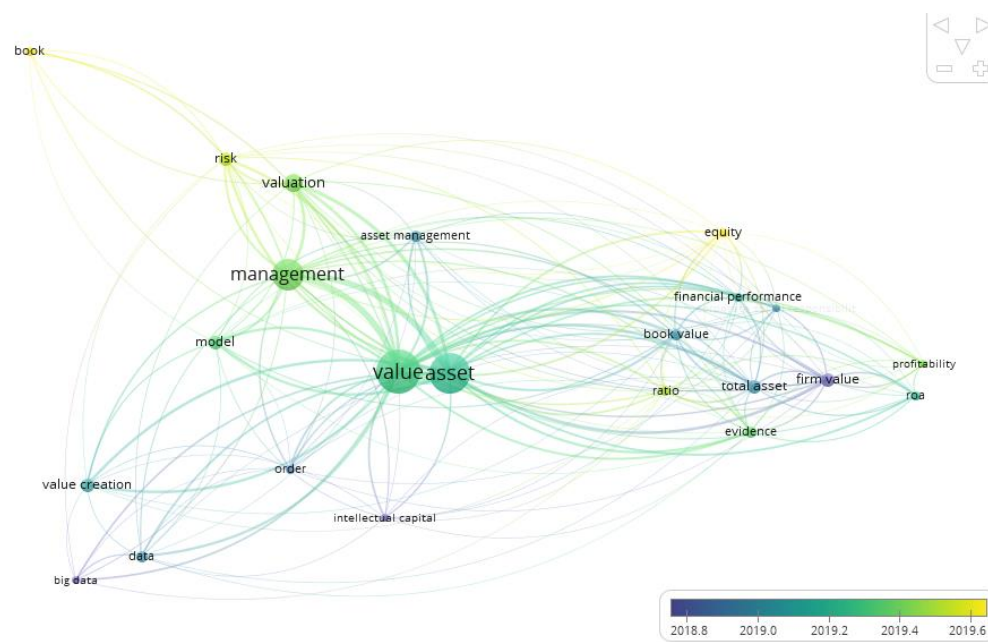

Figure 7. Overlay visualization for asset valuation and management

DENSITY VISUALIZATION FOR ASSET VALUATION AND MANAGEMENT

Density Visualization is the final kind of mapping portrayal available in the VOS viewer tool, each term will be categorized in this description based on how frequently it appears in research. Figure 8 displays the Density Visualization of asset valuation and management. The colour that occurs in a term indicates this kind of mapping. Research on that term is becoming more popular or extensive if the colour that appears is becoming lighter. On the other hand, if the colour is becoming duller or fading, there is a decrease in the frequency of research on that term. As observed in Figure 8, a few yellow words with a sizable diameter are present. Value, asset, and management are these terms. This indicates that these are terms that are frequently found in previous research. Figure 8's illustration illustrates how the density map displays the analysis's findings utilizing every article published between 2018 and 2023 on asset management and valuation. The map displays yellow patterns, where keywords appear more frequently the yellower the colour and the larger the circle's diameter. Conversely, if colours on the map are fading or blending into the green background, then keywords appear less frequently (Senny et al., 2022). This outcome further supports the usefulness of bibliometric analysis as a tool for exploring and visualizing the body of recent literature to determine the need for further study.
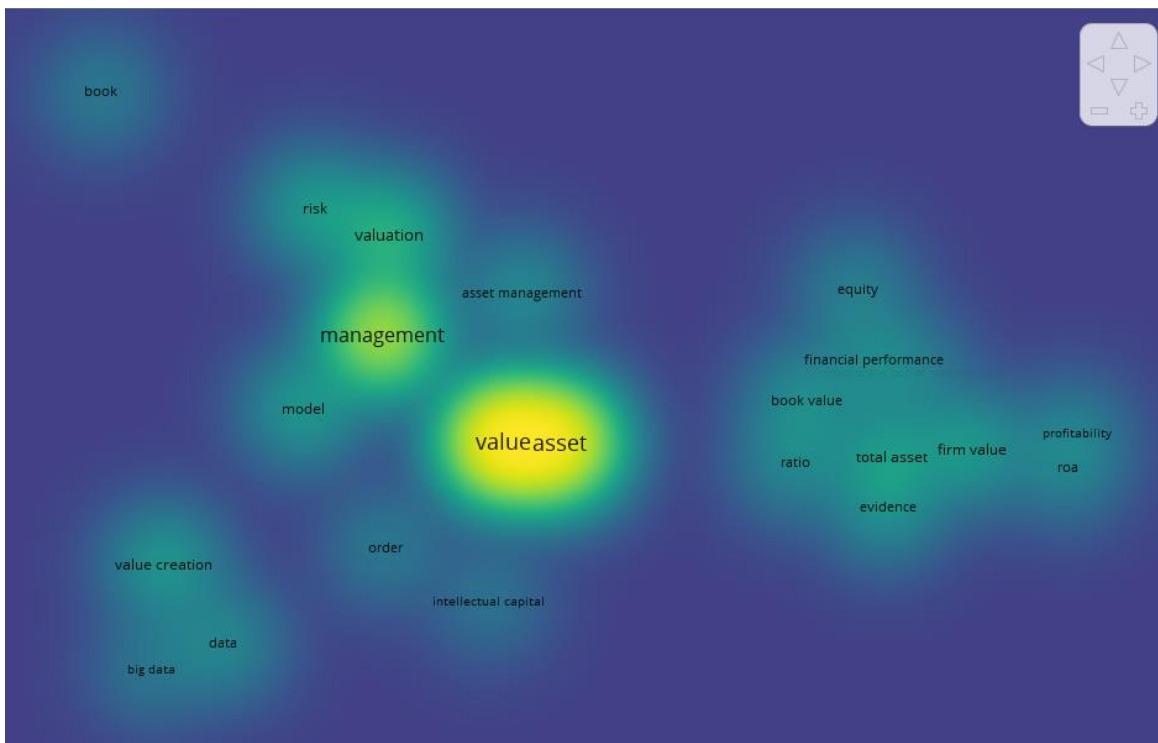

Figure 8. Density visualization for asset valuation and management

CONCLUSION

Examining the bibliometric literature on asset valuation and management is the goal of this study. The data, which is based on the topic area with keywords, abstracts, and titles, was obtained by using the keyword "asset valuation and management". Following our data filtering, 104 pertinent articles were found. To create the mapping data, we used the VOS viewer program. Using the mapping data, network; overlay; and density visualizations were produced. According to the results of the mapping and analysis done with VOS viewer, one of the most explored topics in financial management between 2018 and 2023 was valuation and asset management. To determine the main themes in each of the earlier research, we employed bibliometrics in this work, which is helpful for evaluating novelty in future research

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