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Mezzanine momentum: A cross-continental examination of corporate financing trends

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Abstract

Aim/purpose – Aside from conventional debt financing, mezzanine debt funding is an essential, nontraditional, and innovative instrument for financing a corporation. Nonetheless, the use and discussions on this particular type of financing are still limited. This study aims to investigate the nature and patterns of mezzanine debt financing and agreements at the global and regional levels, seeking to understand the trends and differences in its funding flows and deal movements across various continents so that businesses looking to grow abroad might use this analysis to identify places where mezzanine finance is more accessible or advantageous. Moreover, investors can select the most appealing markets and conditions for mezzanine investments, thus improving their portfolios.

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Design/methodology/approach – Using seven global regions (e.g., Asia, Africa, Europe, Middle East, North America, Oceania, and rest of the world (RoW)) annual data from 2006 to 2023, this study employs descriptive analysis and applies the one-way between groups ANOVA.
Findings – The findings show notable differences in the flows of mezzanine debt fundings and deals across different geographical locations globally. Besides, it also explores that mezzanine debt financing and agreements in North America and Europe make up most of the contributions, while other regions are still at the early stage of development.
Research implications – Policymakers and governments in regions like Asia, Africa, the Middle East, Oceania, and the RoW should look into ways to increase the flow and growth of their agreements because the patterns and trends of funding and deals in those regions are considerably lower than North America and Europe.
Originality/value/contribution – The literature on mezzanine debt mainly addresses its definition, features, facilities, disadvantages, and possible borrowers. This study investigates the recent pattern and trend of mezzanine debt funding and its deals globally based on different geographical locations.

Keywords: mezzanine, mezzanine financing, mezzanine debt, mezzanine deals.
JEL Classification: D24, G11, H63.

1. Introduction

Modern companies must confront escalating competition, challenging economic circumstances, and a growing demand for substantial investments. Under such conditions, even well-managed and highly lucrative businesses have restricted choices when obtaining funds for expanding their operations and bolstering their equity reserves. Under these circumstances, alternative funding methods, such as mezzanine financing, a hybrid kind of financing that incorporates both debt and equity financing features (Casperson & Makam, 2016; Robins et al., 2012; The Urban Developer, 2017; Willis & Clark, 1989), and is a suitable source of funding in circumstances when obtaining conventional financing proves difficult for a variety of reasons (Slee, 2012). The most important forms of mezzanine financing include participating loans, subordinated loans, convertible bonds, profit participation rights, and bonds with warrants (Vasilescu, 2010). Mezzanine funding frequently fills gaps in a business's capital structure, providing room to lower the overall cost of financing by enabling a closer match between risk and return. In this instance, financial limitations between senior debt and equity – rather than temporal constraints – lead to the usage of mezzanine financing (Pratt & Crowe, 1995). Besides, this funding type is also utilized to finance industrial expansion, corporate recapitalizations, and acquisitions and,

in general, is employed when a transaction's equity component is too low to draw in senior lenders like banks and insurance providers (Anson et al., 2010).

Mezzanine financing first appeared in the United States in the 1980s and was used to support M&A transactions, stock redemption, leveraged buyouts (LBOs) or restructuring transactions, and project financing when internal finances were scarce or in situations where there was a high risk of a firm going bankrupt (Gorodnikov et al., 2022). Over the years, the mezzanine financing market has grown remarkably, and these funds now offer exposure to issuers in the U.S., Europe, and other regions of the World. PitchBook, which collected data and research about the global capital market, indicated that the global mezzanine funds raised $30.1 billion in total in 2022, nearly twice as much as in 2021 and the highest amount since 2016 (Shi & Latour, 2023). PitchBook's H1 2023 global private loan report illustrated the rapidly changing landscape of private loan fundraising. With $94.9 billion in committed capital during the first half of 2023, private debt has had a solid start to the year and is already higher than it was at this time last year. More than $200 billion is expected to be raised by the year's end. While direct lending holds the top spot at 30.2%, mezzanine debt is not far behind at 27.9%. However, mezzanine debt has only raised 12.3% of all capital on average over the previous five years; therefore, this year is particularly noteworthy for the strategy. Because mezzanine lenders are often suited to paid-in-kind agreements, which are desirable in the current market because they preserve cash flow, it is proving to be widely accepted by borrowers (Kemplay, 2023).

Conventional debt refers to mortgage loans not insured or guaranteed by the government (Consumer Financial Protection Bureau, 2024). Compared to government-backed mortgages, the qualifying standards for conventional loans are stricter; typically, borrowers must have a higher credit score, make a larger down payment, and have a lower debt-to-income ratio (DTI) to obtain financing from traditional sources (Stauffer, 2023). Mezzanine debt could play a significant role in the growth of businesses with lower credit ratings. Investors sometimes prefer mezzanine financing over conventional debt because it provides greater flexibility, higher potential returns, and even opportunities for equity involvement, which enables investors to take advantage of the company's growth potential (Cauble, 2023). Additionally, it could be a source of funding in times of financial difficulties without diluting the ownership of a company and could be structured to meet a firm's specific needs (Habiger, 2024).

Several previous studies have identified mezzanine debts' characteristics and utility. Berman (2013) asserted that mezzanine debt is a versatile financing instrument frequently employed in real estate financing. Svedik and Tetrevova (2015) investigated why some investors invest in mezzanine debt and why others

hesitate to use it. Franke and Hein (2008) as well as Jain and Myburgh (2013) explored the features and advantages of utilizing the mezzanine fund in their respective domain. In their study, Zavyalova et al. (2021) investigated the potential of mezzanine debt financing as a flexible and strategic financial tool for Russian businesses, particularly during challenging economic conditions. The findings indicated a growing interest among Russian mezzanine investors in financing various business projects. However, this study focused solely on Russian economic activities. It is characterized by certain limitations, including restricted access to reliable data on mezzanine financing activities and challenges in accurately assessing the available data. Furthermore, Soleymani et al. (2021) sought to address the challenges of financing large infrastructure projects by introducing innovative financial engineering techniques and models to achieve an optimal balance between equity and debt in the capital structure. However, the study had limitations in terms of generalizability, as it focused explicitly on transportation infrastructure projects. Additionally, the study did not consider the external factors that could impact the financing and operation of infrastructure projects, thereby limiting the comprehensive applicability. These studies, however, did not consider the trend and pattern of mezzanine debt financing across different locations worldwide.

Considering the massive growth of mezzanine debt funding and its number of agreements, it is a crucial instrument for those interested in the private debt market. Policymakers must be cognizant of and investigate this emerging issue to determine the prevalence, characteristics, and trends of mezzanine debt financing and related deals in respective regions. Although mezzanine debt financing is increasing and being used more frequently due to its many advantages over traditional debt financing, there has still been inadequate study on this issue. Until now, there has been no study about the current nature, trends, and patterns of mezzanine debt financing globally and across different geographic locations. As it is evident that mezzanine debt agreements and transactions are growing globally, policymakers and authorities need to learn about the composition, characteristics, and trends of this type of funding and its related agreements. As we still do not know if there is any substantial difference between the mezzanine debt funding flows and their deals across different continents of the world, by examining and analyzing its funding flows and agreements, this study aims to investigate the pattern and trends of the funding flows of mezzanine debt financing and its deals in the financial sector and also whether there is any notable difference in the financing flows and its deals movement at various worldwide levels. Thus, this study is crucial to bridging the knowledge gap in academia, as there is little literature on mezzanine debt financing.

The remainder of the study is organized as follows: Section 2 identifies some required and relevant literature about the study, Section 3 describes the data and methodology employed, and Section 4 explains our study's results and discussions. Section 5 offers a summary and required policies, and finally, Section 6 provides some guidelines for further study paths.

2. Literature review

2.1. Theoretical perspectives on debt financing

The dynamic field of corporate finance continuously introduces novel and innovative approaches to bridge the gap between traditional debt and equity instruments. The company's key performance indicators include its debt and debt-to-equity ratios, particularly concerning the return on capital employed (Afolabi et al., 2019). Among these, mezzanine debt financing has emerged as a crucial instrument, offering a hybrid strategy that balances the benefits of both debt and equity. The debt theory of capital structure asserts that companies could leverage debt to optimize shareholders' value up to an ideal point beyond which the costs of debt outweigh its benefits (Sharp, 1959). This theory is based on the trade-off that arises when leverage increases between the tax shelter provided by debt interest payments and the growing danger of financial distress (Abeywardhana, 2017; Graham & Leary, 2011). Several debt theories shed light on the benefits, applications, and usage of mezzanine debt financing from a business perspective. Firstly, based on the trade-off theory, a manager must strike a balance between tax deductions and increased financial risk to gain a tax advantage by adding debt to its capital structure (Frydenberg, 2004), and mezzanine financing offers tax-deductible interest payments that lower a company's tax-deductible income. However, due to its inferior status and higher risk profile, mezzanine financing usually entails higher interest rates and greater complexity than senior loans. By keeping a diverse capital structure, mezzanine debt helps businesses increase their leverage while lowering the risk of financial distress. Then, the pecking order theory suggests that businesses would instead finance new initiatives with internal resources first, debt second, and equity released as a last option (Frank & Goyal, 2007; Pandey, 2001). The higher expenses related to equity issuances and asymmetric information are the causes of this preference in the hierarchy (Frank & Goyal, 2003). Since mezzanine debt is a hybrid instrument that enables corporations to obtain extra capital without immediately diluting ownership, it is often preferred over equity. It is situated between debt and

equity in the pecking order, offering a compromise between preservation and easy access to necessary capital.

Additionally, with the principle of market timing, businesses must plan their financing decisions according to the state of the market to save expenses and increase profits (Baughier, 2023). When the market is favorable, companies could issue additional senior debt (Peters, 2021) or mezzanine debt instead of equity. For instance, mezzanine debt will provide investors with outstanding returns at low interest rates while giving businesses a reasonably priced financing option. Moreover, as per the signaling theory, companies use their funding decisions to communicate with the market (Nusantara, 2024). Since mezzanine debt frequently entails higher interest rates and possible equity conversion, issuing it indicates confidence in the company's prospects. This assurance attracts investors who interpret the use of mezzanine debt as a positive indicator of the firm's growth potential and financial health. Overall, mezzanine debt financing demonstrates a comprehensive tool that aligns with the broader principles of debt theory. Understanding the theoretical foundations of mezzanine debt could help investors make more informed decisions by utilizing its unique features to support growth and optimize capital structures, thereby reflecting its distinctive position within the hierarchy of corporate finance instruments.

2.2. Mezzanine debt: So far as we know

Mezzanine debt is a hybrid asset that combines features of both debts and equity (Vasilescu, 2010). Typically, mezzanine financing takes the form of an intermediate-term bond with equity participation, added as a bonus for attracting investors. The debt component provides a portion of the company's high cash payments, while the equity component provides the investor's share of the company's growth potential (Anson et al., 2010). In terms of structure, it is higher in rank than common stock or equity but lower in priority of payment and security than senior debt (Bean, 2008). Mezzanine debt has the potential to broaden its definition to include convertible debt, junior debt, subordinated debt, private "mezzanine" instruments (debt with preferred stock or warrants), second-lien debt, and quasi-equity (Silbernagel & Vaitkunas, 2012). Additionally, equity participation is almost always included, whether in common shares, warrants, or stock appreciation rights (Shen et al., 2016). It has an intermediate period that often spans five to twelve years and is generally put privately. A comprehensive analysis of mezzanine capital and how it compares with other funding options is done by Kuryłek (2017), which elucidated the attributes of financing costs, con-

sidering several kinds of remuneration for the investor. The study further demonstrated that the recipients of mezzanine financing are primarily medium and large firms from emerging nations. When seeking this particular finance, the firms possessed consistent cash flows.

Mezzanine financing emerged as a specialized form of debt funding in the 1980s as management buyouts (MBOs) became more common. Pratt and Crowe (1995) identified the rules and conditions that apply to the provision of mezzanine financing. Although this study mainly focused on the U.K. region, it also discussed mezzanine usage in the continental U.S. and Europe. According to Pershin (2020), mezzanine debt financing is not as common or established in Russia as in developed nations. However, it might be a helpful supplement to more traditional methods of securing capital for innovative projects. Besides, based on metrics including beta, cash flow, return on assets, and earnings before interest and taxes, Gorodnikov et al. (2022) found that less desirable financial profiles in Russia are more likely to be chosen for mezzanine financing. Yatsenko (2022) also stated that mezzanine debt accelerates the funding flows in the Russian real estate sector but does not consider the nature of funding and the patterns of mezzanine debt-funding flows in Russian industries.

Svedik and Tetrevova (2015) conducted a study to identify the use of mezzanine debt in the Czech Republic, and the results explored that from 2006 to 2012, public mezzanine debt was marginally used in the Czech. The main obstacles preventing the broader use of mezzanine debt instruments are the potential issuers' fear of high costs associated with the issuance process and the issue's life cycle, as well as their fear of investors' lack of interest in participating bonds and subordinated bonds, owners' fear of control extensions in convertible bonds and bonds with warrants, and the difficulty of estimating the cost of capital in participating bonds. Another study by Berman (2013) identified mezzanine debt as non-conventional real estate financing that offers funding and financial flexibility to property owners. The study also concluded that these alternative forms of financing are more complicated and come with distinct risks and advantages than conventional mortgage loans. Additionally, this financial asset provides liquidity, increases the owner's leverage, and allows them to borrow more money than usually available through a conventional mortgage loan. Franke and Hein (2008) and Yoo et al. (2018) presented a comprehensive examination of the expanding industry. They evaluated the advantages of mezzanine transactions for portfolio firms, originators, and potential investors in Germany. They found this financing attractive to investors as it has the capacity to generate appealing profits with relatively low risk.

Mezzanine debt, which has evolved in response to various financial needs, stands out for its flexibility in offering unsecured loans (Gross & Amiri, 1990). Jain and Myburgh (2013) also identified and examined investment features of mezzanine debt, differentiating it from high-yield debt and highlighting the parallels and disparities in its application between the United States and Europe. Additionally, it emphasized critical points for investing in mezzanine capital. A recent study was conducted by Sazonov et al. (2016) on the characteristics of mezzanine finance, including its advantages and disadvantages, its position in the global investment landscape, and an evaluation of its level of implementation in the Russian national capital market. The result highlighted the restricted potential for the advancement of mezzanine funding in Russia due to the inactivity of credit organizations and the inadequacy of the laws governing loan subordination and home loan securitization.

Bean (2008) elucidated that organizations seeking to fund a leveraged buyout should contemplate the option of mezzanine financing and disclose essential information that one should be aware of before entering into this financial agreement. Although mezzanine finance has provided clear benefits for mergers and acquisitions, it is not the ideal choice for every business. Finding a way to maximize cash flow and ROE while keeping financial or managerial authority is the key to a successful deal-making process. However, in a different study, to understand how the financial crisis has affected mezzanine financing for medium-sized businesses in Europe, Amon and Dorfleitner (2013) performed an empirical study. This study found that privately positioned mezzanine loans are still an option despite the crisis and that mezzanine funding is a backup plan when senior debt funding is not an option because there is insufficient equity. Besides employing blue bond-based mezzanine debt as a vehicle, Gonzalez-Ruiz et al. (2019) designed an investment appraisal method that directly references public-private partnerships and project financing. The findings demonstrate that creditors can profit from the operational and administrational phases by turning their existing loans into equity. To examine the conversion options provided by the lender in a mezzanine loan for a sustainable infrastructure project, Aguilar et al. (2022) developed a model to assess the right to execute the conversion option under the terms of a call option by using the binomial approach and real options analysis (ROA). Their finding indicated the potential of applying this model across the globe. However, a significant limitation of this study was restricted attention to sustainable infrastructure projects, and the absence of data on related projects that would enable results comparison.

Furthermore, Fisch et al. (2011) examined two prevalent subordinate financing structures in real states – mezzanine loans and preferred equity and evaluated whether the market's preference toward mezzanine debt rather than preferred equity is warranted or needs to be reevaluated. The findings revealed that mezzanine debt is generally perceived as more marketable and liquid compared to preferred equity investments. Nevertheless, this study did not consider the complexities and possible variations in mezzanine debt and preferred equity structures. Moreover, it did not consider the development or recent changes in regulatory policies that could influence mezzanine loans and preferred equity in real estate financing. In addition, Vasilescu (2009) explored the advantages and difficulties of using mezzanine financing as an alternative source of capital for startups and company expansion. The outcomes indicated that mezzanine finance offers financial flexibility to borrowers and attractive risk-adjusted returns to investors and will improve the balance sheet structure of a firm. However, there is limited practical evidence and few case studies to back up the statements about the advantages and difficulties of mezzanine financing. This study's main limitation was that it only considered theoretical issues rather than offering practical implementation strategies for businesses considering mezzanine financing. Moreover, Tetrevova and Svedik (2018) performed an analysis based on data from a survey in the Czech Republic to understand, describe, and evaluate mezzanine financing possibilities in connection with traditional corporate financing sources and suggest its usage in special situations like mergers and acquisitions.

The existing literature on mezzanine debt primarily addresses its definition, features, facilities, disadvantages, and possible borrowers. Additionally, some other recent studies try to determine the best type of financing for specific organizations by comparing mezzanine debt with traditional debt financing; however, these studies tend to be country-specific. While previous studies have explored mezzanine debt, they have not adequately examined its trends and patterns across different global regions. Finding the best markets, industries, and conditions for mezzanine investments requires understanding regional patterns and variations in mezzanine loan financing. Moreover, investors can better allocate capital by comparing the risk profile and attractiveness of mezzanine financing offers in various regions. Thus, understanding the importance of and gaps in existing studies of mezzanine debt financing, this study tries to discover the recent trend and pattern of mezzanine debt funding and its deals globally and based on different geographical locations. Besides, in this study, we also explore whether there is any noteworthy difference in the funding flows of mezzanine debt and its deals across different continents worldwide.

3. Methodology

3.1. Estimation process

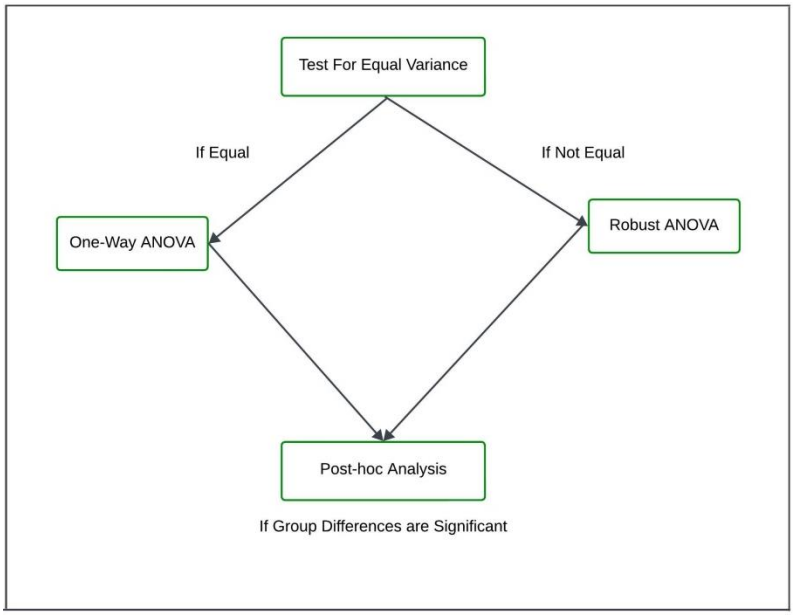
This study uses descriptive analysis and one-way between-groups ANOVA to explore whether the average mean of different groups is statistically different from another, more specifically, if the average distribution of mezzanine debt funding and deals significantly differs across different areas of the world. Besides, it uses several charts to understand the nature and trends of mezzanine debt funding and deals globally and in various regional areas simultaneously. One-way ANOVA is widely utilized across various fields to assess differences in variables such as effectiveness, frequency, or outcomes across distinct categories or groups within the data set. For instance, Alaqlobi et al. (2024) conducted an extensive content analysis of existing literature to categorize perspectives on AI in linguistics and employed non-parametric one-way ANOVA tests to identify patterns and correlations in the data. Similarly, FaqeAbdulla (2023) applied ANOVA to analyze the use of deictic expressions across three different fields and their impact on the clarity of the academic paper. In addition, Likando and Chipandwe (2024) used ANOVA to investigate seasonal variations in the physicochemical properties of leachate from the Kupferberg landfill site. Furthermore, Getu et al. (2024) conducted a systematic review to thoroughly examine the impact of context-based Chemistry teaching on students' academic achievement and employed ANOVA for data analysis.

Besides, Golder and Barua (forthcoming) also applied descriptive statistics and ANOVA analysis to visualize the FinTech equity funding activities and the number of FinTech agreements across the globe in a prominent way. All of these previously mentioned studies employed ANOVA to investigate if there were significant differences across more than three groups of their studies. Thus, following those previous studies, we also utilized ANOVA analysis to explore whether there are any significant differences between the mezzanine funding and its associated agreements.

For empirical analysis, we use one-way between-groups ANOVA. It is the statistical test for comparing the means of more than two groups. It is often utilized when comparing the impact of several factors or treatments on a continuous outcome variable (Ostertagová & Ostertag, 2013). However, the homogeneity of variance is a critical assumption in ANOVA analysis. So, in the first step, ensuring the equality of variance is critical. Second, if there is proof of equal variance, we can proceed with ANOVA. However, if the assumption of equal variance is violated, we cannot trust the results of ANOVA. In this case, a probable solution is to use robust ANOVA methods, such as Welch's and Brown-Forsythe's ANOVA, which are less sensitive to violating the homogeneity of

variance assumption. Welch's and Brown-Forsyth's ANOVA adjust the degrees of freedom, which is more appropriate when variances are unequal. Lastly, post--hoc analysis ought to be done to compare the pairwise differences between the group means. These procedures are presented in Figure 1.

Figure 1. Authors' conceptualization of the empirical procedures



Source: Authors' own conceptualization.

Moreover, ANOVA is a sophisticated statistical approach for testing significant differences between three or more independent group means. It divides dataset variance into between-group and within-group variance. This partitioning helps determine if mean differences are attributable to the factor under consideration or random chance. ANOVA tests the null hypothesis that all group means are equal versus the alternative hypothesis that one is different. Between-group variance divided by within-group variance is the *F*-statistic. Other means are more likely to be statistically significant with a larger *F*-statistic.

3.2. Variables

The study uses time series data to investigate the characteristics and patterns of mezzanine debt in the diverse industrial sectors to expand their business or fund new projects and the number of mezzanine debt deals globally.

Table 1. Variable's description

Variable	Definition	Measurement scale
Mezzanine debt funding	Mezzanine debt financing in various regions of the World	The total size of mezzanine debt financing in U.S. dollar
Mezzanine debt deal	Number of mezzanine debt contracts held	Total quantity of mezzanine debt contracts in a region

Source: Authors' own computations.

In addition, the study investigates whether the pattern of mezzanine fundraising differs depending on geographic region. The criteria and data utilized to calculate mezzanine debt funding and deals are explained in Table 1.

3.3. Data

This study incorporates data from seven regions, namely, Asia, Africa, Europe, the Middle East, North America, Oceania, and the rest of the world (RoW), worldwide and covers 2006 to 2023 based on the data availability. All the countries, excluding Asia, Africa, Europe, the Middle East, North America, and Oceania, are from the RoW panels. We obtained the data from PitchBook, a source of venture capital, private equity, private debt capital, and mergers and acquisitions data. Companies, investors, deals, fund performance, and industry trends are covered in this database. However, before conducting a formal analysis, we checked the data outliers. We found that the data had extreme values (Appendix A1 and A2) that may influence our results. Thus, we use the natural logarithm value of mezzanine debt funding and the number of its agreements to normalize the data and eliminate the impact of extreme values (Appendix A3 and A4).

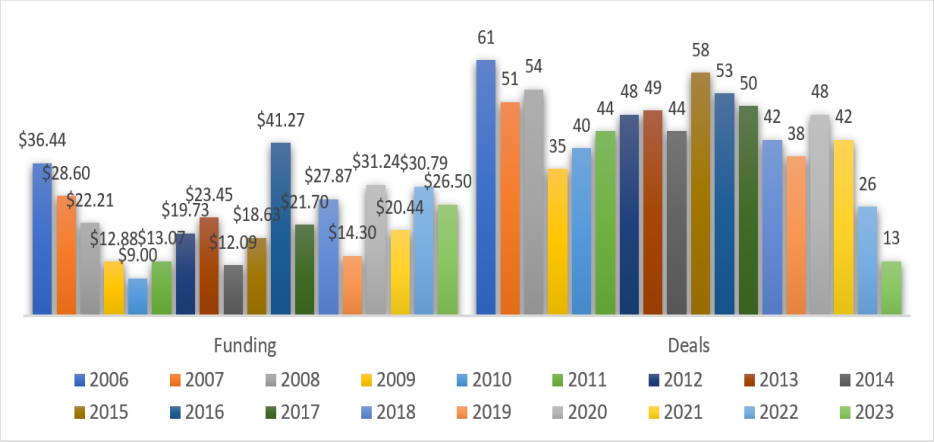
4. Result and discussions

Nowadays, one of the most creative and adaptable ways for large business institutions to raise capital is mezzanine financing. This cutting-edge idea was developed in the United States more than 40 years ago and is currently applied globally, particularly in nations with developed financial markets; its scope encompasses a broad spectrum of projects carried out using project finance and balance sheets. Currently, infrastructure, energy, agriculture, business, and residential and commercial real estate investments are all made possible by mezzanine financing (ESFC Investment Group, 2023), and its existence has been essential for the survival of various industries, especially for those that do not have

access to traditional funding sources. Generally, the United States and Europe dominate the global mezzanine debt market. Despite the substantial economic, political, and social shocks experienced by the European Union and the eurozone over the past decade (Dąbrowska-Gruszczyńska & Gruszczyński, 2021), countries such as the UK, France, and Germany continue to dominate the mezzanine debt market in Europe. The mezzanine debt market has expanded its influence to include Spain, Italy, and the Nordic region. Figure 2 indicates that the total worldwide funding in mezzanine debt was $36.44 billion in 2006, and then there was a downward trend until 2010, when the total funding came down to only $9 billion. This downward trend might have occurred due to the global financial crisis (Thakor, 2015). However, in 2011, the funding slightly increased to $13.07 billion, and there was an upward trend until 2013, when the total funding reached $23.25 billion. Again, there was a downward trend in the financing, and a substantial amount of funding occurred in 2016, which was $41.27 billion. Then, the trends followed random directions, with upward trends in some years and downward trends in others. In 2023, the total funding was $26.50 billion worldwide. In the case of mezzanine agreements, a noteworthy number of transactions occurred in 2006, which was 61 (Figure 2), but the transactions decreased in the following years, and in 2015, they were 58. Subsequently, the transactions followed random trends as of the total mezzanine funding, and in 2023, only 13 transactions occurred compared to 26 transactions of the previous year. Mezzanine debt financing per deal was $0.60 billion in 2006, but in the following year, it came down to $0.56 billion, and then it followed a downward trend until 2010, and, again, it could have occurred due to the global financial crisis of 2008 (Thakor, 2015). However, after the global financial crisis and when the global economies began to strengthen, the funding per deal again increased from 2011 to 2013; after that, it followed haphazard trends till 2022, when the financing per deal rose to $1.18 billion. In 2023, it was slightly raised to $2.04 billion.

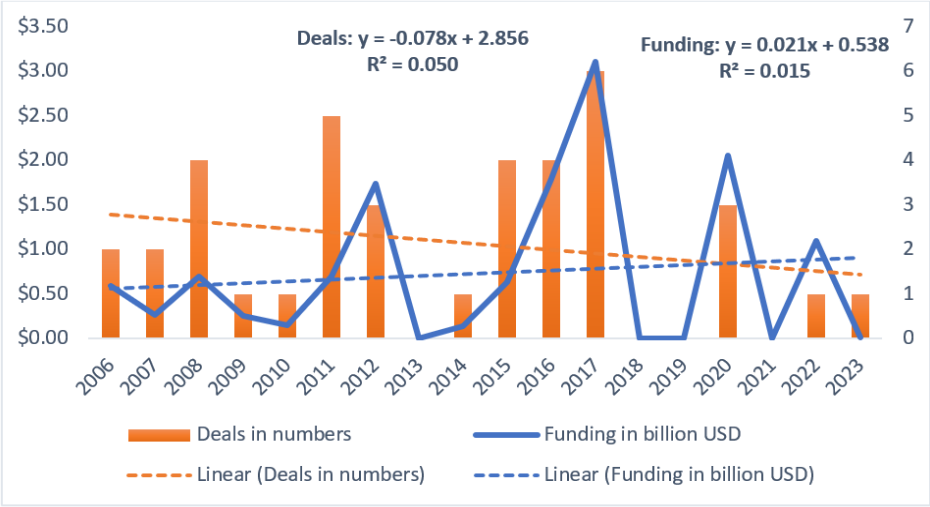
The nature and patterns of mezzanine debt funding and its deals in seven geographical locations of the World: Asia, Africa, Europe, the Middle East, North America, Oceania, and the RoW, reveal some fascinating trends around the World. Figure 3 shows the distribution of mezzanine debt funding and deals in Asia, where the funding flow shows a positive trend. According to Jackson (2017), China and Southeast Asian countries are major players in Asia's mezzanine debt funding sector. The popularity of mezzanine debt financing is increasing regularly because of the rate of return and downside protection. The Indian market has also recently witnessed an increase in mezzanine debt transactions.

Figure 2. Global distribution of mezzanine debt funding, deals, and per-deal mezzanine debt



Source: Authors' own calculation based on data from Pitchbook.

Figure 3. Distribution of mezzanine debt funding and deals in Asia



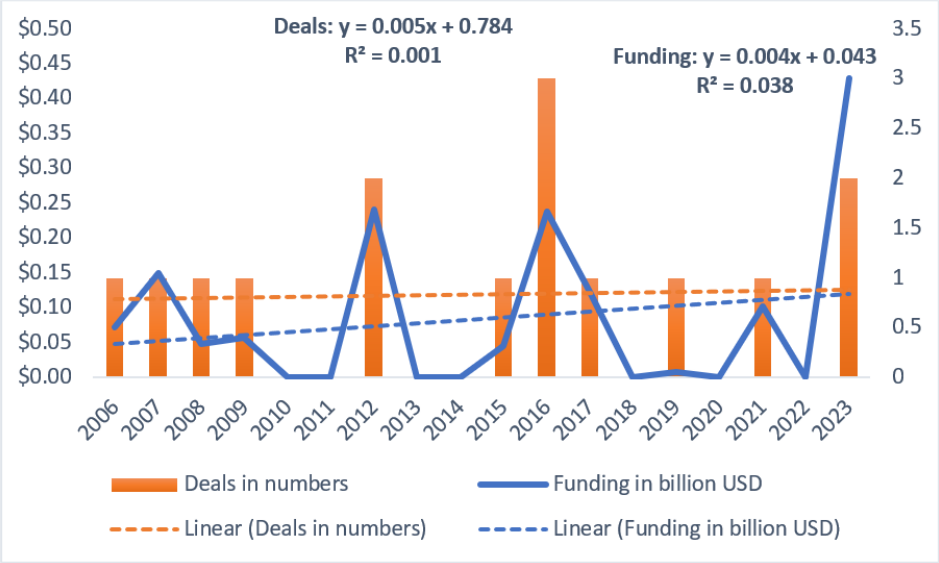
Source: Authors' own calculation based on data from Pitchbook.

With a growing number of private equity deals and a vibrant start-up ecosystem, mezzanine financing has become a valuable tool for companies seeking a mix of debt and equity capital. Mezzanine debt funding in Asia has been volatile over the years. In 2006, the mezzanine debt funding was approximately $0.59 billion. It saw a considerable decrease in the following year. Nevertheless, it rose again to $0.70 billion in 2008. After that, the funding followed a random

trend until 2012, and the financing was $1.73 billion in 2012. However, there was no funding in the following year. From 2014 to 2017, there was a remarkable increase in mezzanine debt funding; in 2017, it was $3.11 billion, making it the all-time highest throughout the years. This growth was accelerated by the increasing demand from developers in a fragmented market, especially in nations like China and Indonesia (Jackson, 2017). Again, there was no funding in 2018 and 2019. Subsequent years showcase a drastic reduction, with the funding descending rapidly from $2.06 billion in 2020 to only $0.01 billion in 2023. In the case of mezzanine debt deals in Asia, they also followed a haphazard pattern, like the funding. Two mezzanine debt deals were recorded in Asia in the first two years. In the following year, there was a dramatic increase to four deals. Then, it decreased slightly, and the highest number of mezzanine debt deals was recorded in 2017, which was six. However, the growth was not sustained for long as there was a noteworthy decrease in mezzanine debt deals in the following years, and there was only one deal for each subsequent year of 2022 and 2023. The mezzanine debt funding per deal had been fluctuating over the years. The financing per deal was decreased dramatically from 2006 until 2012. In 2012, the funding per deal was $0.58 billion; next, it followed a random trend over the years, and there was a noticeable peak in 2020 and 2022. Nevertheless, in 2023, it decreased dramatically to $0.01 billion.

Mezzanine loan funding and agreements in Africa are displayed in Figure 4, showing a clearly positive and upward trend. This type of debt financing has been applied to infrastructure projects and corporate finance deals in several African nations. Africa's diversified and dynamic financial landscape is reflected in the adoption of mezzanine structures across the continent. In Africa, Vantage Capital, a well-known private equity firm and financial institution, is the region's leading mezzanine fund provider. According to the company, Vantage Capital's mezzanine segment is the continent's most prominent and most experienced independent mezzanine financier, having made 33 investments across four funds into 11 African nations since 2006 (Mutimawase, 2023). The financing from Vantage Capital has been provided to several nations, including Egypt, Namibia, Botswana, Mauritius, Ghana, Nigeria, Uganda, Kenya, Morocco, and Ivory Coast. African countries, like Tunisia, Senegal, Ethiopia, and Rwanda, are also possible markets for mezzanine debt financing.

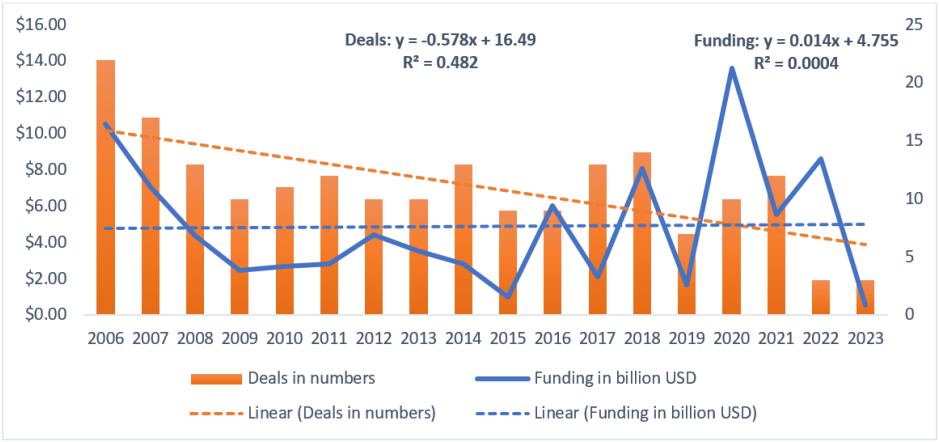
Figure 4. Distribution of mezzanine debt funding and deals in Africa



Source: Authors' own calculation based on data from Pitchbook.

In 2006, the amount of mezzanine debt funding in Africa was $0.07 billion, which increased slightly in the following year to $0.15 billion. Following that, there was a substantial decrease in funding for two years. From 2010 to 2014, the funding occurred only in 2012, which was $0.24 billion. The funding followed a random pattern in the following years, but in 2023, there was a notable increase in funding with $0.43 billion. The number of mezzanine debt deals in Africa fluctuated over the 18 years. However, the number of mezzanine debt deals remained constant in the first four years, with only one deal. Afterward, it fluctuated remarkably in the following years. The highest number of deals was counted in 2016, which was three. In 2023, it was two. The mezzanine debt funding per deal was $0.07 billion in 2006, increasing more than twice in 2007 to $0.15 billion. After that, there was an up-down pattern with $0.12 billion in 2012. The funding per deal increased dramatically from 2021 to 2023, reaching a peak of $0.21 billion in 2023. In African markets, mezzanine finance is still developing due to a lack of dedicated fund managers and available capital, compounded by the complexity and leverage requirements of mezzanine loan agreements, which is making it costly and intricate, thereby prompting investor caution and potentially discouraging its usage in Africa (Benatar et al., 2017).

Figure 5. Distribution of mezzanine debt funding and deals in Europe

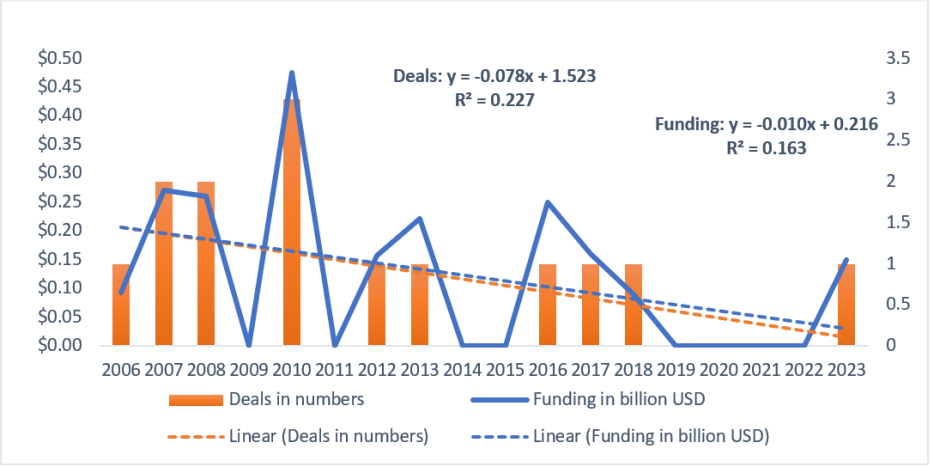


Source: Authors' own calculation based on data from Pitchbook.

Figure 5 shows the distribution of mezzanine debt fundings and deals in Europe where the funding has a positive upward trend, but the number of agreements is downward trending. Osborne Clarke, a well-known international law firm, identified that mezzanine financing is returning to the U.K. and Europe as direct lenders and private equity companies look for alternatives to unitranche funding, which has dominated the mid-market leveraged finance space. Particularly in the current market situation where interest rates are rising, and liquidity is becoming scarcer, mezzanine financing offers greater flexibility and cheaper cost than unitranche financing. Nevertheless, the mezzanine is still a niche sector in Europe. To act as a catalyst in this market segment, the European investment fund (ETF) has established the mezzanine facility for growth, a 1 billion euro fund mandated to invest in hybrid debt/equity across Europe. Small and medium-sized businesses (SMEs) across various industries and geographical areas are the focus of established and growing mezzanine players supported by ETF (European Investment Fund, 2023). In 2006, the amount of mezzanine debt funding was $10.52 billion. In the following years, there was a marked decrease of the financing until 2020, when the funding dramatically reached $13.61 billion compared to only $1.65 billion in 2019. However, in 2023, the lowest amount of funding was recorded, only $0.54 billion. In the case of deals, the highest number of deals was in 2006, with 22 agreements, which was the peak of the mezzanine boom. Subsequently, the number of deals followed a random trend, but the number of deals in most years was more than 10. The lowest number was recorded in 2022 and 2023, only three deals. Besides, the mezzanine debt funding

per deal also shows a haphazard trend with $0.48, $0.44, and $1.36 in 2006, 2012, and 2020 respectively. The highest value was in 2022 at $ 2.87 billion, more than six times the value in 2015 at $0.11, which was the lowest. The mezzanine debt funding activities are increasing rapidly in Europe because mezzanine debt provides attractive risk-adjusted returns for investors and supports the robust private equity market. Moreover, the favorable regulatory environment and mature financial markets contribute to its widespread use in Europe.

Figure 6. Distribution of mezzanine debt funding and deals in the Middle East

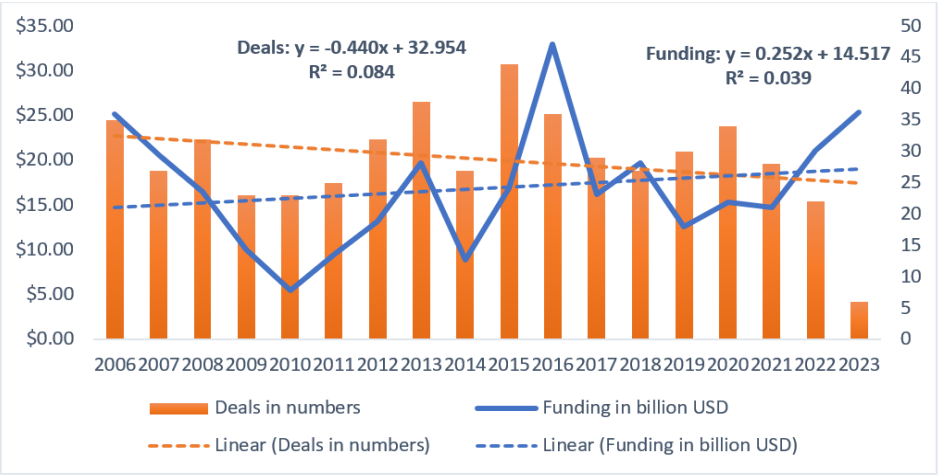


Source: Authors' own calculation based on data from Pitchbook.

Figure 6 displays the distribution of agreements and funding for mezzanine loans in the Middle East. In this region, mezzanine financing remains a niche business compared to other parts of the World and shows a decreasing trend in funding amount and agreements. According to Galani (2012), the nonbank lenders in this area have the potential to contribute approximately 1 billion over the next three to five years. This amount could include convertible bonds, preferred shares, mezzanine debt, and secured loans. That is a tiny portion of the global market; in the first half of 2016, private funds disbursed $58 billion in capital globally (Arnold & Barbuscia, 2017). Several Middle Eastern countries are at the forefront of mezzanine debt funding: the United Arab Emirates, Saudi Arabia, Bahrain, Kuwait, Qatar, and Oman. These nations' debt and private equity markets are more developed and mature, and mezzanine fund managers are more skilled and varied. However, other nations like Turkey, Israel, and Jordan, where there is a gap in the capital structure of SMEs and a growing need for alternative funding sources, also present potential for mezzanine finance. In the Middle

East, mezzanine debt funding was $0.09 billion in 2006. Nevertheless, it increased three times greater the following year at $0.27 billion. The highest amount of funding was recorded in 2010 at $0.47 billion. Consequently, the funding followed a haphazard trend from 2011 to 2022, with the highest $0.25 billion in 2016. In 2023, the mezzanine debt funding was $0.15 billion. The number of mezzanine debt deals in the Middle East fluctuated substantially from 2006 to 2023, with a decreasing pattern or trend. The highest number of deals was recorded in 2010, with three deals, followed by 2007, with two deals.One deal was concluded in 2023, the same as in 2006, 2012, 2013, and 2016 to 2018. In the case of mezzanine debt funding per deal in the Middle East, the amount increased from $0.09 billion in 2006 to a peak of $0.25 billion in 2016, which was the highest. After 2016, there was a sharp decline in mezzanine debt funding per deal, reaching $0.09 billion in 2018, the lowest recorded. From 2019 to 2022, there was no funding occurred. In 2023, the funding per deal was $0.15 billion.

Figure 7. Distribution of mezzanine debt funding and deals in North America



Source: Authors' own calculation based on data from Pitchbook.

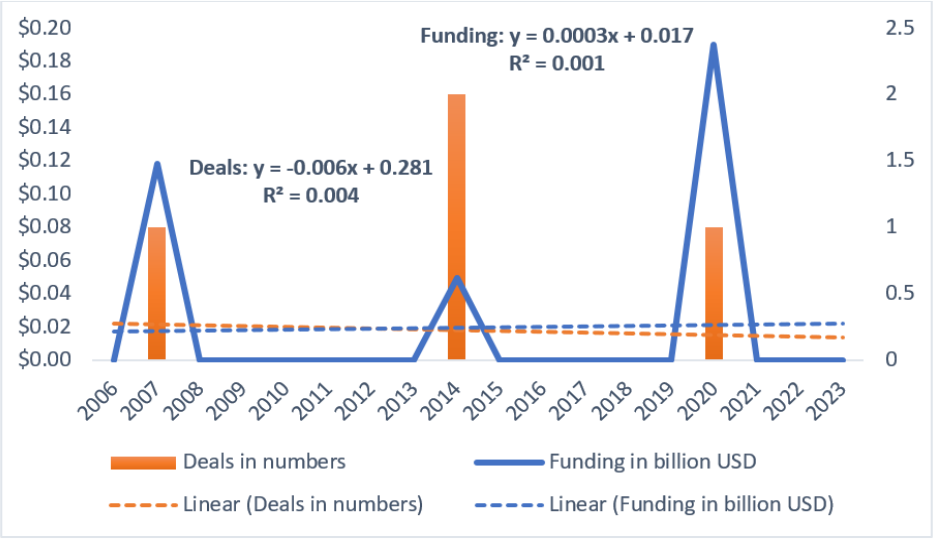
Mezzanine loan funding and agreements in North America are displayed in Figure 7. This type of debt in North America has been a well-liked option for businesses looking for flexible financing, frequently utilized in growth capital, leveraged buyouts, mergers, and acquisitions. The North American mezzanine debt market was anticipated to provide greater profits for reduced-risk loans in 2021; the COVID-19 pandemic economic recovery has given mezzanine lenders a chance to fund growth-oriented businesses. The U.S. is the world's most prominent and advanced mezzanine market, with various lenders and borrowers

from different industries and geographical areas. Canada is a minor but developing market emphasizing real estate, infrastructure, and energy sectors. In the first half of 2023, the United States accounted for 40% of all private debt fundraising worldwide, with mezzanine and direct lending being the two most widely used instruments (Kemplay, 2023). Mezzanine debt funding in North America has fluctuated substantially over the years but clearly shows a positive and upward trend, and its funding in this region was $25.16 billion in 2006. After that, it experienced a sharp decline from 2007 to 2010, dropping from $20.66 billion to $5.52 billion due to the global financial crisis. Then, it recovered rapidly, peaking at $32.97 billion in 2016 before falling again in the following years. The funding for 2023 shows a rebound from the COVID-19 pandemic, with $25.38 billion in funding. Regarding mezzanine debt deals in North America, the number of deals was 35 in 2006. Consequently, a random trend was followed, but in most periods, the number of deals was more than 20, and the highest number of deals was counted in 2015, which was 44. In 2023, the number decreased dramatically to 6 deals only. The mezzanine debt funding per deal was $0.72 billion in 2006. After that, there was a haphazard trend in funding from 2007 to 2015, followed by a peak in 2016 with $0.92 billion; then, there was another decline until 2021, when the funding per deal was $0.53 billion. However, there was a substantial spike in 2023, reaching an all-time high of $4.23 billion.

Figure 8 illustrates the distribution of mezzanine debt funding and agreements across Oceania. Although the mezzanine debt market in Oceania shows a positive trend in the case of funding, it is not very established because there are few prospects for mezzanine investments and few sources of mezzanine capital. Nonetheless, a few nations in Oceania, including Australia, New Zealand, and Papua New Guinea, have demonstrated some activity in the mezzanine debt market. Australia has the biggest and most developed mezzanine debt market in Oceania, with various mezzanine lenders and borrowers from different industries and geographical areas. Besides, New Zealand is a small but developing market for mezzanine financing, emphasizing the real estate, renewable energy, and infrastructure sectors. Additionally, several overseas mezzanine investors, particularly from Asia and Europe, have shown interest in New Zealand. With opportunities for mezzanine financing in the mining, oil, gas, and agricultural sectors, Papua New Guinea is a growing mezzanine debt market in Oceania. The mezzanine debt funding in Oceania fluctuated remarkably over the years, reaching its highest point in 2020 at $0.19 billion. In 2007, there was a peak of $0.12 billion, followed by a sharp decline to $0.05 billion in 2014. In most of the years, no funding has been recorded. From 2008 to 2013, funding was absent; this could have happened due to the global financial crisis. Moreover, mezza-

nines are not in a condition of wide spreading in Oceania because of the tax regulations and undeveloped market for mezzanines. The total number of deals recorded in Oceania throughout the period was only four, with two deals in 2014 and one for each of 2007 and 2020, with a negative trend. Besides, the mezzanine debt funding per deal was $0.12 billion in 2007. However, it decreased markedly to only $0.03 billion in 2014; in 2020, it increased dramatically to $0.19 billion, and in other years, there was no funding recorded in Oceania.

Figure 8. Distribution of mezzanine debt funding and deals in Oceania

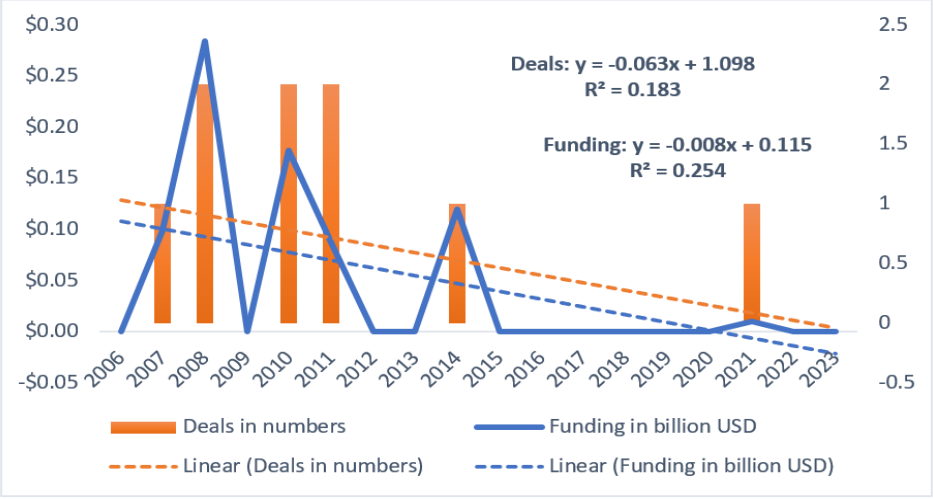


Source: Authors' own calculation based on data from Pitchbook.

Figure 9 shows the distribution of mezzanine debt funding and deals in the RoW, revealing a clear negative trend in funding and deals. This decline could be attributed to the economic downturn experienced by various countries in this region. For instance, Argentina witnessed a sovereign debt crisis in 2001 and a currency shock in 2018 (Gruszczyński & Majczak, 2020). Nevertheless, Brazil, Colombia, Venezuela, Chile, and other Latin American countries have shown interest in mezzanine debt funding. However, this area's debt market is not as that of well established compared to different regions of the world. Brazil has comparatively few mezzanine debt funding activities, but they have grown recently, particularly in the energy, agribusiness, and infrastructure sectors. In addition, corporate finance transactions in Chile use mezzanine debt financing, which is part of a well-developed financial system. Mezzanine debt is used in capital structures because of the nation's steady economy and welcoming in-

vestment climate. The mezzanine debt funding in RoW was $0.10 billion in 2007. It peaked at $0.28 billion the following year and sharply declined to $0.18 billion in 2010. The funding level continued to drop to $0.09 billion in 2011 and slightly recovered to $0.12 billion in 2014, and, following that, funding activities dropped dramatically. From 2015 to 2023, the funding happened only in 2021, which was $0.01 billion, and it was the lowest funding recorded in the RoW throughout the period. This suggests that mezzanine debt funding has become less attractive and viable for companies in the RoW over the past decade. The mezzanine debt deals were very low and sporadic over the period in the RoW. There were only two deals each in 2008, 2010, and 2011 and one deal each in 2007, 2014, and 2021. No deals were recorded for the other years. The mezzanine debt funding per deal was highly volatile and fluctuated over the years. There was a peak in 2008 at $0.14 billion, followed by a decline until 2011, when it reached $0.04 billion. It increased again to get another peak in 2014 at $0.12 billion and then sharply declined to almost negligible amounts of $0.01 in 2021.

Figure 9. Distribution of mezzanine debt funding and deals of the rest of the world (RoW)

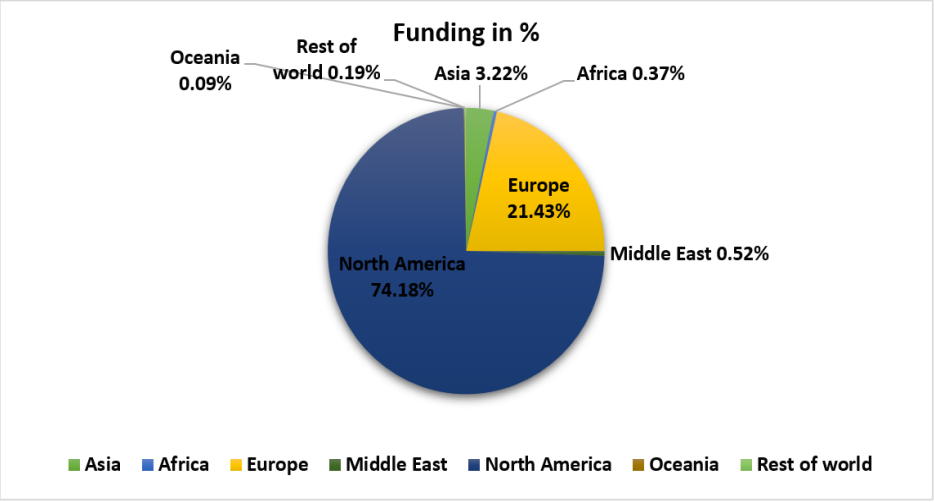


Source: Authors' own calculation based on data from Pitchbook.

The region-based contribution of mezzanine debt funding is displayed in Figure 10, with North America occupying the top spot with 74.18% of the total mezzanine debt funding. European nations occupy the second spot, accounting for 21.43% of all mezzanine debt funding. Despite being the world's third and fourth most prominent users of mezzanine debt funding, Asia and the Middle East only make up 3.22% and 0.52% of the total, respectively. Besides, Africa, Oceania, and

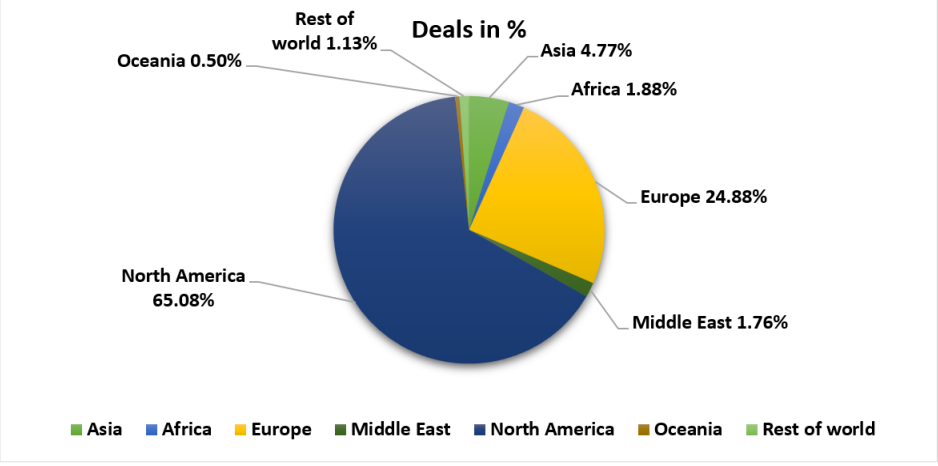
the RoW contributed the remaining 0.64%. The region-based contribution of mezzanine deals is displayed in Figure 11, and the outcome is similar to mezzanine debt funding, wherein North America and Europe secured the top two spots, with respective contributions of 65.08% and 24.88%. With 4.77% and 1.88%, respectively, Asia and Africa are ranked third and fourth, while the Middle East, the RoW, and Oceania contributed 1.76%, 1.13%, and 0.50%, respectively.

Figure 10. Region-based contribution of mezzanine debt funding



Source: Authors' own calculation based on data from Pitchbook.

Figure 11. Region-based contribution of mezzanine debt deals



Source: Authors' own calculation based on data from Pitchbook.

Moreover, a one-way between-groups ANOVA is utilized to determine if there is a significant difference between the financing flow and agreements of mezzanine debt funding across different regions of the world. However, before running the ANOVA, it is crucial to ascertain whether the groups' variances are homogeneous. Therefore, Table 2 shows the variance results' homogeneity to identify the magnitude of variance. In this study, we use two methods to test the homogeneity of variance, and the reason for this is to cross-validate the results. The statistical significance of mezzanine debt funding of both Levene's and Bartlett's tests for equal variance suggests that the variations in mean results among the various locations are unequal. However, for mezzanine debt deals, the homogeneity of variance is confirmed. In this case, for mezzanine debt financing, although the results of ANOVA presented in Table 3 show significant *F* statistics, we cannot make any decision depending on it, and, in this case, we cannot apply a one-way ANOVA; instead, we have to use robust ANOVA which often provide additional tests or adjustments to account for potential violations of assumptions. However, for mezzanine debt deals, as there is equal variance among different groups, and the *F* statistic is significant, we can trust ANOVA to decide whether there is any significant difference among the number of funding agreements of mezzanine debts in different continents.

Table 2. Homogeneity of variances

Category	Levene statistic	df1	df2	Bartlett statistic	df
MDF	2.636**	6	73	24.640***	6
MDD	2.151	6	73	5.900	6

Notes: Significance level: *** 1% and ** 5%. MDF and MDD refer to mezzanine debt funding and mezzanine debt deals, respectively.

Source: Authors' own computation.

Table 3. Results of ANOVA

Category	Sum of squares	df	Mean square	*F*
MDF	315.009***	6	52.501	59.317
MDD	122.994***	6	20.499	84.972

Notes: Significance level: *** 1%, ** 5%, and * 10%. MDF and MDD refer to mezzanine debt funding and mezzanine debt deals, respectively.

Source: Authors' own computation

In this study, for mezzanine debt financing, we use the Welch and Brown--Forsythe test to evaluate the equality of means, and Table 4 shows the results of robust tests of equality of means. The Welch and Brown-Forsythe statistics for mez-

zanine debt funding indicate significant regional funding differences ($p < 0.001$). However, as the homogeneity of variance in the number of mezzanine debt deals is confirmed, there is no need to test the robustness of equality of means.

Table 4. Robust tests of equality of means

Category	Welch statistic	df1	df2	Brown-Forsythe statistic	df1	df2
MDF	112.829***	6	16.920	58.529***	6	37.520
MDD	–	–	–	–	–	–

Notes: Significance level: *** 1%, ** 5%, and * 10%. Note: MDF and MDD refer to mezzanine debt funding and mezzanine debt deals, respectively.

Source: Authors' own computation.

Table 5 displays the results of multiple comparisons of mean differences of mezzanine debt financing and deals. Compared with Asia and Africa, Asia is better positioned in terms of funding and deals. The reasons could be that Asian companies that issue mezzanine debt are more stable and have diversified sources of income, lower default risk, and higher credit ratings than the companies of other regions. This makes Asian mezzanine debt more attractive and accessible to lenders, who can charge lower interest rates and offer longer maturities than the debt markets of Africa. Other reasons could be that the Asian mezzanine debt is more secure and flexible for lenders, who can benefit from tax advantages, regulatory arbitrage, or professional treatment from the government.

However, Asia and Africa lag far behind Europe and North America in mezzanine debt funding and deals. This could happen due to various factors, such as the financial markets in Europe and North America being both developed and established. The maturity of financial institutions has enabled the creation and acceptance of mezzanine debt as a feasible instrument, and these markets offer a wide array of financial possibilities. Moreover, countries like Italy, the UK, France, and Germany lead this sector in Europe, and countries like the USA and Canada lead the mezzanine debt sector in North America, which is economically much more robust than other countries. Institutional investors, private equity firms, and other financial institutions in Europe and America are also knowledgeable about a wide range of financial products.

Table 5. Multiple comparisons of mean difference

Region	Variables	Asia	Africa	Europe	Middle East	North America	Oceania
Africa	MDF	1.718** (0.511)	–	–	–	–	–
	MDD	0.570* (0.198)	–	–	–	–	–
Europe	MDF	–1.999*** (0.436)	–3.716*** (0.384)	–	–	–	–
	MDD	–1.503*** (0.175)	–2.073*** (0.188)	–	–	–	–
Middle East	MDF	0.974 (0.422)	–0.744 (0.368)	2.973*** (0.254)	–	–	–
	MDD	0.547 (0.203)	–0.023 (0.215)	2.050*** (0.194)	–	–	–
North America	MDF	–3.438*** (0.403)	–5.156*** (0.346)	–1.439*** (0.221)	–4.412*** (0.192)	–	–
	MDD	–2.503*** (0.175)	–3.073*** (0.188)	–1.000*** (0.164)	–3.050*** (0.194)	–	–
Oceania	MDF	1.571 (0.552)	–0.147 (0.512)	3.570** (0.437)	0.597 (0.423)	5.009** (0.404)	–
	MDD	0.565 (0.312)	–0.005 (0.320)	2.068*** (0.306)	0.017 (0.323)	3.068*** (0.306)	–
RoW	MDF	1.719 (0.612)	0.001 (0.576)	3.717*** (0.512)	0.744 (0.499)	5.157*** (0.483)	0.147 (0.613)
	MDD	0.449 (0.240)	–0.121 (0.249)	1.952*** (0.232)	–0.098 (0.254)	2.952*** (0.232)	–0.116 (0.347)

Notes: Figures in () are std. error. Significance level: *** 1%, ** 5%, and * 10%. MDF and MDD refer to mezzanine debt funding and mezzanine debt deals, respectively.

Source: Authors' own computation.

Comparing Europe with the Middle East, Oceania, and the RoW, Europe's funding flow and deals were greater than those of others. The vast knowledge and preference for alternative and innovative financial instruments of the European people are likely to be the probable cause of mezzanine financing growth in Europe compared to other countries. However, comparing North America with Europe and the Middle East, in both cases, North America is in a far better position than the two, indicating a more robust financial market in North America. Lastly, comparing North America with Oceania and the RoW, North America's funding flows and overall deals were more remarkable than those of Oceania and the RoW in both cases. In the case of Oceania and the RoW, a possible factor in mezzanine debt's low appeal is the lack of knowledge and comprehension of the instruments among financial professionals and enterprises. Overall, the mezzanine debt market in Africa, the Middle East, Oceania, and the RoW is still at the early stage of development but has the potential to use this form of financing in various sectors of economic development in the future.

5. Conclusions and policy implications

This study uses data from seven worldwide areas from 2006 to 2023 to investigate the nature, trends, and patterns of mezzanine debt financing and agreements on a global and regional scale. Our findings indicate a global increase in funding for mezzanine debt and the number of mezzanine agreements. Developed economies contribute more to this mezzanine loan sector than developing and less developed economies. Besides, our study shows that North America dominates this private debt market. More precisely, North America accounts for 74.18% and Europe 21.43% of worldwide mezzanine debt funding, respectively, and other parts of the world contribute the remaining 4.38%. With their respective contributions of 65.08% and 24.88% to the total number of mezzanine debt agreements, these two continents (e.g., North America and Europe) dominate the market; Asian influence accounts for 4.77% of all mezzanine debt deals. Furthermore, noteworthy regional variations exist in the average mezzanine debt funding distribution pattern and mezzanine debt agreements.

The findings of this study have considerable policy implications. Analyzing the specific diversity of mezzanine financing is theoretically essential for improving the understanding of hybrid financial instruments and their applications in various contexts while practically aiding firms and investors in making informed decisions and optimizing financing strategies in diverse market conditions. Our findings could assist policymakers and governments of various nations in formulating legislation and policies that foster the expansion and stability of mezzanine lending markets. By incorporating this unique form of debt into their capital structures, they can maintain an optimal balance of debt and equity. Policymakers and governments in regions like Asia, Africa, the Middle East, Oceania, and the RoW should look into ways to increase the flow and growth of their agreements because the patterns and trends of funding and deals in those regions are considerably lower than North America and Europe. In the context of those lagged-behind areas mentioned above, governments must allocate resources towards educational initiatives to enhance the knowledge and awareness about mezzanine debt funding within their respective populations. It will improve individuals' level of comfort in utilizing private debt services. Governments should be able to establish a conducive atmosphere for the growth of mezzanine fund providers by implementing regulatory frameworks that foster innovation while concurrently safeguarding the interests of consumers. The measures above encompass streamlined licensing protocols and explicit directives for the mezzanine debt industry. In the context of emerging economies like India, China, South Korea, and Japan in Asia, and Australia and New Zealand in

Oceania, it is plausible that government-supported endeavors are necessary to enhance the availability of mezzanine debt funding for businesses in those regions. One such strategy entails the establishment of investment funds with a specific focus on mezzanine debt or implementing incentives to encourage venture capital companies to allocate their investments toward this industry. The establishment of collaborative efforts across nations, particularly those within proximity, has the potential to facilitate the expansion of the mezzanine debt sector. Governments should promote establishing cross-border collaborations and aligning regulatory frameworks, thereby enabling the worldwide expansion of mezzanine debt industries.

Furthermore, governments could consider providing incentives to encourage mezzanine financing, such as tax credits or other financial benefits. This could potentially increase the availability of mezzanine financing and encourage more companies to use it to finance their growth. Mezzanine financing is a high--risk form of debt often used to fund the expansion of established companies. As such, policymakers need to ensure that mezzanine financing is used responsibly and does not contribute to systemic risk in the financial system. Lastly, policy--makers likely institute mechanisms for periodic assessments and reports on the mezzanine debt market. These assessments can help policymakers stay informed about market trends, risk factors, and emerging issues, enabling them to respond proactively to market dynamics. So, it is imperative that respective authorities consistently evaluate the condition of their mezzanine debt sector, closely observe emerging patterns, and adjust legislation accordingly to sustain the sector's ongoing expansion and stability. Besides, it is possible for stakeholders to recognize developing patterns, changes in investor behavior, and alterations in the availability of finance. Also, by comparing the risk and attractiveness of mezzanine loan opportunities in various countries, investors may make better decisions about where to put their capital. Moreover, gaining insight into worldwide and local patterns enables investors to enhance the diversification of their portfolios, thereby distributing risk across various markets and minimizing vulnerability to economic downturns peculiar to specific regions. Additionally, companies can enhance their finance strategies by selecting places where mezzanine financing is more advantageous or economically efficient. Finally, this study contributes to the existing information on mezzanine financing, offering significant insights for scholars, professionals, and learners.

6. Future research direction

The patterns, trends, and distribution of mezzanine loan agreements and financing on a worldwide and regional scale are the exclusive subject of this study. Though our findings indicate a substantial rise in mezzanine debt financing globally, our study is not without limitations. Our investigation focused solely on the available continent-wise data from 2006 to 2023. It did not account for the various determinants of mezzanine debt financing that could explain the regional variations in funding. Thus, future studies should focus on the factors influencing mezzanine debt finance to maintain the industry's long-term viability. So, it is necessary to examine the forces behind the need for this type of financing and the difficulties that investors encounter when investing in these areas. Mezzanine debt financing's function in M&A deals could be the second, as it provides a flexible financing alternative that will enhance the purchasing company's capital structure without reducing equity immediately. In addition, by understanding its role, companies could be better able to navigate complicated financial environments, optimize their financing strategies, and achieve more favorable outcomes in M&A deals. Yet, how mezzanine loan financing functions in real estate deals could be another future field of interest because it could help investors undertake a large project with limited initial capital outlay and facilitate the completion of projects that might otherwise be stagnant due to insufficient funding. Further study could entail looking into the usage of mezzanine debt financing in real estate transactions, including its patterns and trends, as well as the factors that influence these deals. Examining the effects of regulatory framework modifications on the global mezzanine debt markets, investigating how mezzanine funding supports entrepreneurs and creative ventures, as well as how its debt structures are tailored to meet the particular financing requirements of technology and innovation-related businesses, could be another interesting topic. Regulatory changes could reduce the availability, affordability, and attractiveness of mezzanine debt financing. Thus, understanding these effects will help decision-makers, investors, and businesses improve the financial markets' effectiveness and stability. Further research into the impact of global issues like the COVID-19 pandemic and the Russia-Ukraine conflict on mezzanine debt financing should also be considered. These global incidents have remarkably altered the state of the economy, impacting financial market strategies, credit availability, and risk assessments. By examining their effects, stakeholders and investors will better adjust to changing market conditions and reduce risks, preserving the sustainability of financial instruments during uncertain periods in the future. Finally, a proper understanding of regulatory frameworks, economic

conditions, and cultural factors is crucial for investors and policymakers aiming to promote the usage of mezzanine debt. Regulatory clarity can facilitate easier access to this financing option; favorable economic conditions can enhance its attractiveness by offering competitive returns, and cultural acceptance can foster trust and familiarity, encouraging broader adoption among stakeholders. These factors collectively create an environment conducive to expanding the utilization of mezzanine debt in financial markets.

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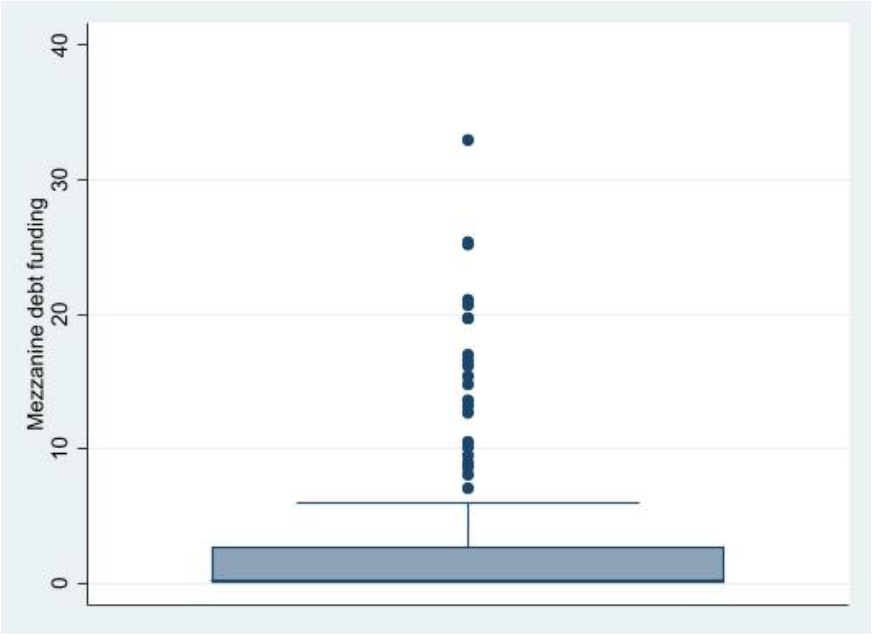
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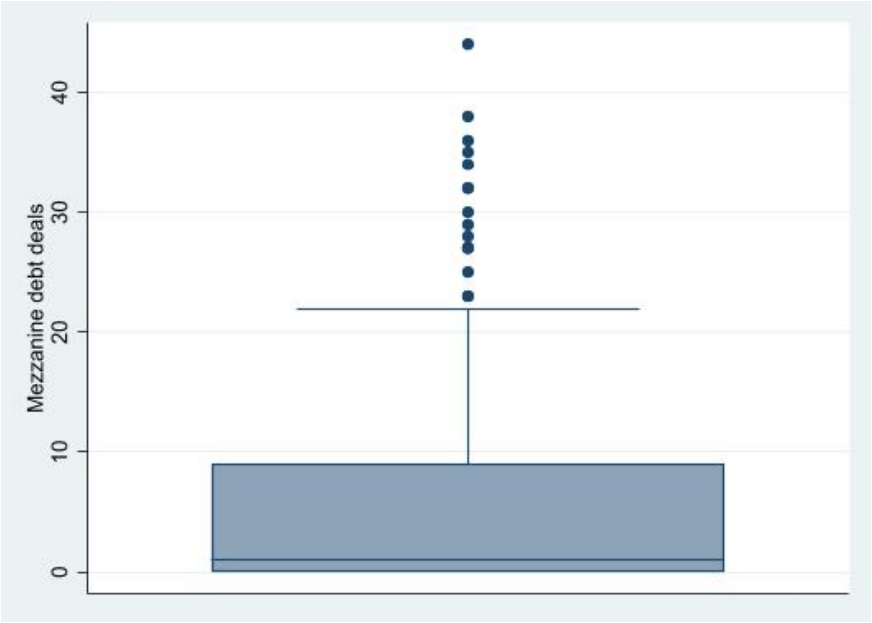
Appendix

A1. Checking the outliers of mezzanine debt funding



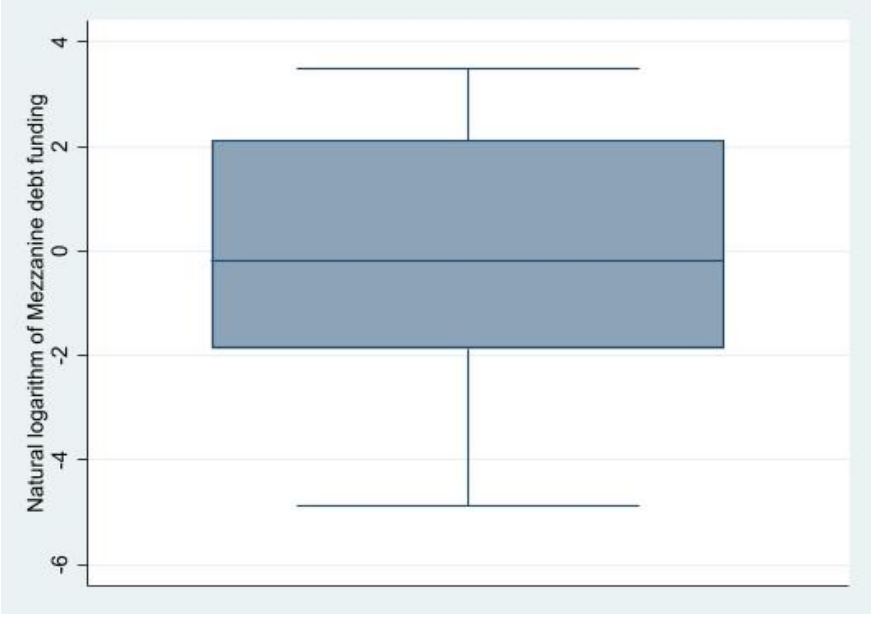
Source: Authors' own computations

A2. Checking the outliers of mezzanine debt deals



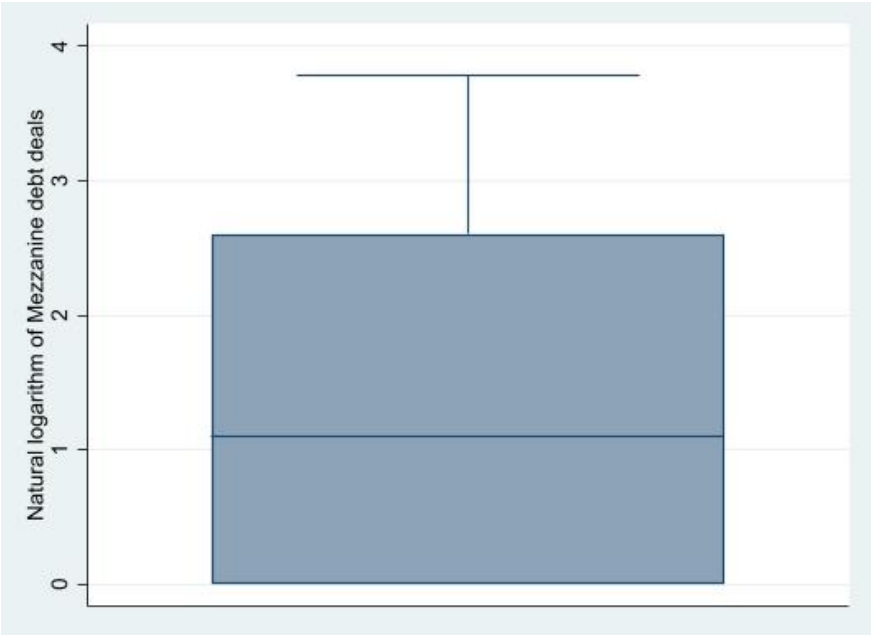
Source: Authors' own computations.

A3. Distribution of mezzanine debt funding after natural logarithm transformation



Source: Authors' own computations.

A4. Distribution of mezzanine debt deals after natural logarithm transformation



Source: Authors' own computations.