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Influential Factors Shaping the Development of Iran's Secondary Mortgage Market

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Abstract

The establishment of the Mortgage Bond market is facilitated and promoted through collaborative planning and design by all parties involved. Mortgage Bonds serve as a tool to enhance banks' credit potential and increase liquidity within the real estate sector. Despite the strict regulations imposed on their issuance and supervision following the 2007-2008 financial crisis, Mortgage Bonds have continued to exist. However, Iran has yet to develop a well-established market in this area, although it has gained some experience. This study aims to analyze the various factors that influence and contribute to the development of the secondary mortgage market in Iran. The necessary data was collected through a questionnaire, and factor analysis and logistic regression were applied to classify and estimate the impact of these factors. The analysis revealed a total of 23 factors, of which 16 were found to be significant. These factors were categorized into three classes: Laws and Regulations, Economic-Management Circumstances, and Bond Characteristics. Together, these classes encompass twelve drivers of effectiveness. The study found that the influence of managerial and legal elements on success is insignificant, while changes in economic conditions and bond characteristics increase the hazard ratio by 3.5.

Keywords

MBS, factor analysis, ordinal logistic regression, credit risk, default risk

1. Introduction

Mortgage-backed securities are a way of investing in loans. Almost until the 1980s, loans remained and savings on banks' balance sheets until maturity. Today, securitization makes it possible to trade mortgages around the world (Deku, Kara, and Zhou 2019a). The first MBS issuance dates back to the Railway mortgage in the mid-19th, after which Fannie Mae Tech issued the first tax-advantaged real estate mortgage investment opportunity in 1985 (Roodposhti,۲۰۱۸). Since now, with the development of all components, includes diversification, rating and guarantee method, MBS became known as a common instrument of the capital market.

Securitization offers advantages to all three parties involved: the financial institution, the real sector of the economy, and the investor. Mortgage bonds play a crucial role in generating resources without compromising liquidity. By converting paid loans into stagnant assets, banks effectively mitigate their credit risk. Furthermore, the separation of the bank's credit rating from the bond's credit rating reduces the cost of capital. Additionally, securitization enhances liquidity and facilitates credit availability, thereby contributing to economic growth. Moreover, it enables investors to diversify their investment portfolios, promoting financial stability (European Systemic Risk Board 2022).

There are inherent risks linked to the utilization of these bonds, with the utmost significance placed on late risk, early payment risk, and default risk. Furthermore, the ongoing empirical study of mortgage bonds' impact on market stagnation and prosperity poses a significant challenge. It is crucial to note that the mismanagement of mortgage bond risks can disrupt economic stability (Ted Hong and Wang 2022).

various studies have explored the economic and social factors that influence the growth of the mortgage bond market in both the public and private sectors. For instance, Fabozzi's book delves into various aspects such as risk assessment, valuation, ranking, and the publication process, all aimed at enhancing economic financing (Fabozzi 2006). Additionally, other studies have examined the investment potential of this financial instrument in the debt market. The interplay between these bonds and the housing market's financing has consistently captivated the attention of domestic researchers (کاوند ۱۳۹٦), as well as international scholars like Castro and Sousa (2020). As theoretical foundations have evolved and experience has been gained, the utilization of this tool in other industries, such as insurance, has been recommended and occasionally implemented (payvandi,2023).

The utilization of mortgage bonds was introduced in Iran's scientific literature during the 1970s, focusing on various aspects such as introduction, legal-shari'a cases, and the publication process (Abdollah Tabrizi, 1373). This trend has persisted until recently with the publication of the book (Urmia, 1397). Additionally, thematic laws, including the production boosting law, also acknowledge the use of this financial instrument (Islamic Consultative Assembly).

In practice, two notable cases have been published. The first case occurred in 2015, involving an amount of 3 trillion Rials, an effective interest rate of 18.5%, and collateral consisting of 49,000 mortgage loans with interest rates ranging from 13% to 15%. The second case took place in 2019, with an amount of 10 trillion Rials, an effective interest rate of 16%, and collateral comprising 137,010 mortgage loans with interest rates ranging from 9% to 18.5% (Bank Maskan's financial statement).

Despite these developments, mortgage bonds have yet to establish a presence in the financial market, and the economy has not reaped the benefits of their effects. This raises the question of why the mortgage bond market has not been formed, despite the existing knowledge, experience, and demand for such bonds. What economic and financial factors contribute to the absence of these bonds? To explore these inquiries, the experiences of the secondary mortgage market worldwide have been examined initially. The subsequent section reviews the theoretical foundations and studies conducted in this field. Finally, the collected data is analyzed, leading to the presentation

of the discussion's conclusion (European Systemic Risk Board, 2022).

Experience of MBS in other Countries

The mortgage bond market worldwide is estimated to be around 11 trillion dollars by the end of the second quarter of 2021. Out of this, approximately 9.6 trillion dollars, accounting for 87.1%, is located in the United States, while Europe holds around 7 trillion dollars, which is nearly 6% of the market. Over the past decade, the European Union's mortgage bond market has experienced a significant decline of 40% from 1.2 trillion dollars in 2012. This decline can be attributed to the implementation of stringent regulations following the financial crisis of 2007-2008. As per the 2021 statistics, nearly 80% of the bonds issued in the European Union belong to Spain, France, Italy, and the Netherlands, with the majority being purchased by European banks. European banks have only invested 28 billion dollars, which accounts for 3% of bonds from other countries. The primary reason for European banks' investment in mortgage bonds is the possibility of collateralization with the central bank. In comparison to the total assets of the EU banking system, the mortgage bond market represents approximately 2% of the overall assets. The situation is similar in the UK stock market, which has also witnessed a decline of almost 50%, from 0.5 trillion euros to 0.2 trillion euros. Australia's share in the mortgage bond market is reported to be 63 billion dollars, representing 1% of the total market (European Systemic Risk Board 2022).

Other Asian countries are also implementing their own plans and strategies in this area. In Saudi Arabia, a program has been devised to achieve a 70% self-ownership rate by 2030, leading to the development of a mortgage bond issuance program. This initiative has resulted in a significant increase in the ownership ratio, rising from 47% in 2017 to 67% in 2022 (Arabia 2022). The responsibility for this lies with the Real Estate and Real Estate Reimbursement Company of Saudi Arabia, similar to the role played by May Technical Company in the United States. These entities aim to provide a 30-year mortgage loan and expand their balance sheet through the issuance of mortgage bonds. It is worth noting that the global mortgage bond market conditions have also impacted the market in Saudi Arabia, causing its size to decrease from approximately 7 billion Saudi Riyals to 4.1 billion Saudi Riyals in recent years (Alissa 2018).

Cagamas, a private institute in Malaysia, plays a crucial role in Islamic finance by overseeing the issuance, purchase, and sale of mortgage bonds. As a result, a significant amount of 24.9 billion-ringgit worth of mortgage bonds has been issued thus far. Notably, the highest issuance of conventional mortgage bonds occurred in 2007, amounting to 2.41 billion-ringgit, while government employee mortgage bonds reached 1.5 billion ringgits in 2010 (Seng et al., 2020).

In Japan, another private institute is responsible for issuing two types of mortgage bonds: monthly and transferable (private sector mortgages). The Japanese mortgage bond market has a size of 186 billion dollars, accounting for 2% of the total secondary mortgage market. When examining the characteristics of mortgage bonds in Japan, it is observed that the average coupon rate stands at 0.54%, the average remaining period to maturity is 18.6 years, the average loan-to-value ratio of mortgages is 69.3%, and the average debt-to-income ratio of mortgages is 30.9% ("Japan Housing Finance Agency (Jhf.Go.Jp)," n.d.).

The total market value of mortgage bonds in China stands at $255 billion, accounting for a mere 2% of the overall mortgage market. In a significant development, China's mortgage bonds were internationally recognized by the renowned rating agency S&P Global for the first time in 2018 (Ratings 2021). Additionally, the Naya Pakistan Housing Company has taken the responsibility of implementing a program aimed at providing affordable and accessible housing to 4 million low-income groups, with mortgage bonds serving as the foundation for this initiative (Akhtar, Habib, and Madni 2022). Moving on to India, the secondary mortgage market is valued at $34 billion, equivalent to 3% of the total mortgage market value. In 2012, India established a regulatory framework that is on par with leading countries such as England and

the U.S. Furthermore, the Indian state corporation is entrusted with the issuance of mortgage bonds (Chand 2022). It is worth noting that these bonds encounter various challenges and opportunities across all countries, including the need for standardization, transparency, risk management, diversification of investors, market infrastructure, and legal and tax reforms.

Based on the conducted investigations, it is evident that nations possess a national strategy in place to utilize this financial tool. By effectively managing risks, they can reap the advantages associated with it. However, the extent of these programs varies depending on the economic, social, and cultural framework. Subsequently, an examination of mortgage bond studies follows.

Literature Review

Mortgage bonds are a form of debt securities that represent the bond holder's entitlements to the issuer's receivables. Essentially, this financial instrument is a type of asset-backed security that generates cash flow through the principal and interest payments from a portfolio of mortgage loans. These payments are typically collected on a monthly basis until the loans reach maturity. The bond issuer acquires and combines mortgage facilities from various banks, mortgage companies, and other providers, and then sells these bundled assets to investors in the form of bonds. To facilitate this process, the issuer categorizes these assets based on their shared characteristics and subsequently offers the securities to the public (Fabozzi 2006).

As per the regulations set forth by the Board of Directors of the Securities and Exchange Organization on 09/24/1394, mortgage bonds are financial instruments issued by the issuer to facilitate the acquisition of mortgage claims. These bonds can be traded on stock exchanges or over-the-counter markets, specifically the Tehran Stock Exchange Organization. Mortgage claims refer to the long-term obligations of legal entities resulting from contractual agreements like installment sales, lease with possession and sale (excluding the predecessor), which are backed by mortgage collateral (Shiravi, Rahmani, 2018).

Financial instruments are complex and multifaceted, with each researcher focusing on a specific dimension based on their desired objective. Consequently, the utilization of definitions and the consideration of relevant theories are contingent upon the hypothesis or research question at hand. For instance, certain studies have explored the interplay between the characteristics of the financial market and secondary mortgage bonds. In this particular scenario, we can assess the market's impact on the value of mortgage bonds (Baghai, Economics, and 2020 n.d.), the role of agency theory in the issuance of mortgage bonds (Huang and Nadauld 2019), the management of credit risk and its influence on the issuance of mortgage bonds (Rodpashti, Gholamreza 2017), or the performance of mortgage bonds in relation to information asymmetry (Kuncl 2019). Another category of studies delves into the measurement and utilization of mortgage bonds as a financing tool, serving their primary purpose (Qureshi, Roudpashti 2018). Lastly, there are comprehensive examinations of mortgage bonds, with some undergoing thorough scrutiny.

The examination of legal and Shariah issues is crucial when it comes to mortgage bonds. All financial instruments must undergo a thorough legal and Shariah review to ensure compliance with fundamental principles. This type of research is commonly conducted in Islamic countries, and it often leads to proposed changes in the pillars or criteria for mortgage transactions. In the case of mortgage bonds, three specific issues are scrutinized: the sale of debt, conversion, and transfer (Moazi 1401). Furthermore, international law has also been taken into consideration during the evaluation process (Jamali 2013). Additionally, there have been research studies comparing Islamic mortgage bonds to conventional bonds (Salehi, Barzani 2019).

Gete's research delves into various aspects of mortgage loan securitization, shadow banking, financial stability, and social welfare. The article by Gete and Reher (2021) focuses on the resilience of

mortgage bonds, analyzing them in light of legal requirements. Foster and Lucca's article, on the other hand, explores the impact of risks on the valuation and performance of mortgage bonds, as well as the strategies employed by investors to hedge and manage these risks. Their empirical study, presented in Fuster, Lucca, and Vickery's article (2022), sheds light on how securities influence the behavior and outcomes of borrowers and lenders. Anillo's article takes a different approach, utilizing a retrospective analysis to examine the duration of housing market cycles in 20 OECD countries from 1970 to 2015, with a particular focus on securitization. The findings reveal that an increase in mortgage provision is associated with longer boom periods, while issuing more bonds is linked to shorter recessions.

Furthermore, housing financing does not impact the duration of economic booms and busts under normal circumstances. However, it does have a notable effect during other periods. It is important to note that government support measures do not necessarily prevent housing stagnation and may even prolong housing booms, which can pose risks of financial instability (Agnello, Castro, and Sousa 2020). Ray's study focuses on the influence of systematic risk and liquidity on the performance of subprime mortgage bonds prior to and during the 2007-2008 financial crisis. The research evaluates the impact of various financial crises, including the collapse of Bear Stearns, Lehman Brothers, AIG, and the Troubled Asset Relief Program (TARP), on the performance of mortgage bonds. The findings indicate that the systematic risk and liquidity of mortgage bonds associated with invalid collateral or low-income borrowers significantly increased during the crisis, contributing to the deterioration of market conditions (Dungey, Dwyer, and Flavin 2013).

The research conducted by Iglesias-Casal et al. focuses on the sustainability of European banks that issued mortgage bonds from 2000 to 2017. Through the use of modeling, the study examines how these securities disrupt financial stability by increasing leverage and subsequently raising systemic risk. To analyze this, the researchers utilized data from 97 European banks between 2006 and 2015, considering various financial indicators including bank profitability, debt solvency, liquidity, credit risk, and systemic risk (Iglesias-Casal et al. 2020).

Deku has addressed the question of which banks are more inclined to issue mortgage bonds. The findings of the study indicate that prior to the financial crisis of 2007-2009, banks with higher credit and market risks were more likely to engage in such bond issuance. Consequently, this led to a decline in bank lending standards due to the misrepresentation and misreporting of credit quality. However, it is important to note that the article states there is no evidence of the impact of bond issuance on lenders' behavior in European countries. Furthermore, this phenomenon has not been observed in certain emerging economies like Latin America and China (Deku, Kara, and Zhou 2019b).

In a separate study, the performance of bonds in the European market was analyzed by considering the reputation of the issuing bank. The findings indicate that the value of bonds is significantly influenced by the creditworthiness of the bank. Specifically, during periods of economic growth, which often coincide with relaxed credit standards, banks with lower credit ratings tend to have less valuable bonds (Deku, Kara, and Marques-Ibanez 2022). Agarwal's research article, on the other hand, focuses on the impact of the risk retention law on commercial real estate lending. This law mandates that issuers of commercial mortgage-backed securities must retain 5 percent of the underlying credit risk. The results demonstrate that this legislation leads to a decrease in bond issuance and an increase in borrowing costs for commercial real estate loans. It is important to note that the effect of the law can vary depending on the specific characteristics of the loan and the issuer (Agarwal et al. 2021).

Prananingtias' research aims to address the housing backlog issue in Indonesia by analyzing mortgage bonds. The research investigates why intermediary institutions, responsible for issuing mortgage bonds from 1998 to 2015, have not been effective. The findings reveal that while the legal aspects of bond issuance in Indonesia are comprehensive, the housing

industry's lack of interest in utilizing bonds is a concern. Mortgage-backed securities are not appealing to the financial industry due to their limited recognition. Additionally, doubts persist regarding the financial benefits of mortgage-backed securities for both the industry and investors. Consequently, the lack of attractiveness and complexities in the transaction process are the primary reasons for their underutilization (Paramatia Prananing 2023). The research also examines the characteristics of these bonds, highlighting the significant impact of collateral on their value (Deku, Kara, and Marques-Ibanez 2022). Furthermore, de Hong provides a comparison of mortgage bond evaluation models, emphasizing the importance of bond characteristics, such as prepayment rates, in their utilization and valuation (Kuong and Zeng 2021). Through the examination of various studies, it becomes evident that numerous factors influence the success of the secondary mortgage market. These factors encompass all market components and bonds, necessitating thorough examination within the context of environmental conditions.

Research Methodology

This study falls under the category of applied research and utilizes qualitative data collection methods. The research focuses on the financial market of Iran. To gather data, the questionnaire method was employed. Initially, targeted interviews were conducted until the saturation of concepts and identification of categories. The initial questionnaire was then refined and validated through further studies. The questionnaire measures the respondents' level of agreement with the factors influencing the issuance of mortgage bonds.

The test data that were gathered have undergone categorization and evaluation. The influence of the factor in the issuance of mortgage bonds has been examined using T-test. Given the diverse nature of the factors involved in diffusion, factor analysis has been employed to classify and enhance inferences. By reducing dimensions, factor analysis retains ample information for analysis. Finally, the rank logit regression model has been utilized to estimate the weight of each factor in the publication. This approach allows for the estimation of the impact of each factor in the sustainable release of mortgage bonds while simultaneously identifying and categorizing them.

Analysis

The survey consists of two sections. The first section gathers basic information about the respondents, while the second section comprises 23 questions that assess the impact of various factors using a 5-level Likert scale. Additionally, there is a question regarding agreement on issuing mortgage bonds, which utilizes a 3-level Likert scale. Prior to distribution, the questionnaire underwent validity and reliability evaluations. After distribution, the final Cronbach's alpha coefficient was determined to be 0.718. The statistical population for this research includes 130 individuals who are actively involved in financial institutions, regulatory bodies, and university professors. Out of the total, 77 questionnaires from qualified respondents, primarily representing financial institutions, were deemed suitable for evaluation.

The t-test was conducted for each question in the questionnaire, specifically to examine whether the mentioned category has any influence on the non-publication of bonds. It is important to note that this hypothesis was tested for all 23 questions. The alternative assumption suggests that the mentioned factor has a significant effect. The results of these tests are presented in Table 1. Consequently, questions 8, 15, 16, 19, 20, 22, and 23 are considered insignificant based on the P_Value statistic. In simpler terms, the mentioned factor does not have any impact on non-distribution. As for the remaining questions, there is insufficient evidence to support the null hypothesis based on the t statistic and P_Value. Therefore, it can be concluded that the aforementioned factors strongly influence the formation of the secondary mortgage market.

Table 1: Mean Test

Question	Mean	Std. dev.	T	Pr(|T| > |t|)	Question	mean	Std. dev.	T	Pr(|T| > |t|)
1	1.83	0.44	-23.24	0.00	12	٩٤4.	0.50	26.04	0.00
2	1.58	0.57	-21.79	0.00	13	2.08	0.27	-29.99	0.00
3	1.48	0.58	-23.15	0.00	14	٢٨4.	0.50	26.04	0.00
4	3.27	0.45	5.34	0.00	15	2.99	0.61	-0.14	0.89
5	1.38	0.51	-27.71	0.00	16	3.04	0.80	0.43	0.67
6	1.56	0.53	-24.07	0.00	17	1.66	0.68	-18.31	0.00
7	4.36	0.48	24.71	0.00	18	3.49	0.50	8.61	0.00
8	2.97	0.83	-0.28	0.78	19	2.86	0.68	-1.84	0.07
9	٩٣4.	0.50	26.04	0.00	20	2.88	0.63	-1.63	0.11
10	٩١4.	0.50	26.04	0.00	21	4.42	0.50	25.04	0.00
11	4.34	0.50	24.66	0.00	22	2.96	0.75	-0.46	0.65
					23	2.88	0.89	-1.15	0.25

The estimation of the impact intensity relies on the average of observations. Based on the estimated averages, the factors that have had the least influence on the issuance of mortgage bonds include the failure to contribute to the prosperity of the housing market, Sharia obstacles in the issuance process, failure to contribute to the development of the capital market, existing regulations and guidelines, and civil laws. Conversely, the absence of assistance in providing affordable sources, the substantial share of mortgage facilities granted by the state bank, the interest rate, the interest rate of other financial instruments, the periodic payment rate, the inability to repay loans from this particular source, and the long-term inflation rate significantly affect the decision to issue or not to issue mortgage bonds.

Factor analysis has been utilized to enhance inference from the findings and enable the categorization and addressing of more specific inquiries. Consequently, preliminary measures, factor estimation, and assessment of the appropriateness of the outcomes have been conducted. The preliminary phase involved the execution of Bartlett's sphericity test and KMO. Bartlett's test is employed to examine the assumption of internal correlation among the data, specifically testing the null hypothesis of equal variance-covariance matrix of the observations. The chi-square statistic value is recorded as 506.442 with a P-value of 0, indicating insufficient evidence to support the null hypothesis. In other words, the observations are not independent. Another test, the KMO test, is conducted to assess the adequacy of observations in utilizing factor analysis. With an estimated value of 73, it can be inferred that the number of observations is appropriate for factor analysis (Watkins 2021).

At first the factor analysis estimation, an initial estimation of the number of factors has been determined. Based on the information presented in Figure 1, it is evident that the number of factors is constrained to a range of 3 to 4 factors. This limitation is attributed to the significant decrease in the slope of the graph up to these values, indicating a high amount of information contained within these two indicators. Additionally, the eigenvalues surpass a value of one, further supporting this observation.

The findings pertaining to the calculation of the three-factor model, following the inversion process, are displayed in Table 2. This table comprises two sections. The initial section entails the estimation of the correlation between each variable and the respective factor. During the estimation of the correlation between variables and factors, any values below 3 have been excluded. This exclusion signifies that the variables' contribution in elucidating the given factor is deemed insignificant. In simpler terms, out of the 23 questionnaire questions, only 12 questions effectively explicate the three factors.

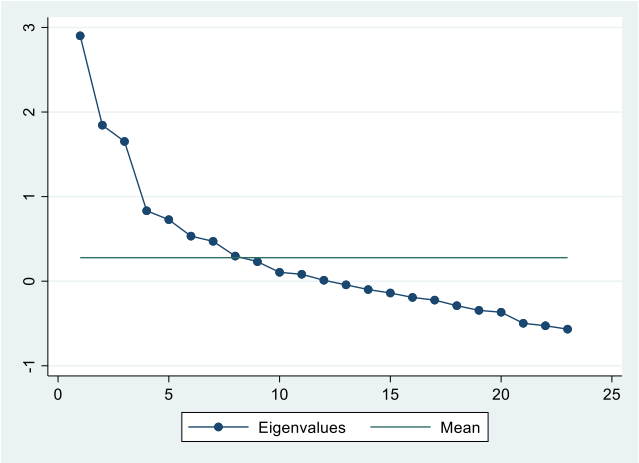

Figure 1

Table 2: estimation of factor analysis and correlation

	Factor loading			Factor scoring		
	Factor 1	**Factor 2**	**Factor 3**	**Factor 1**	**Factor 2**	**Factor 3**
Interpretation of civil laws, including articles 292 and 293			0.7162			0.6402
Shariah issues related to the issuance of bonds			0.5229			0.29843
Existing regulations and executive instructions			0.8167			0.48177
Bond interest rate		0.7832			0.46545	
The interest rate of other bonds in the capital market		0.5652			0.18461	
Bond coupon rate		0.5988			0.2097	
Not being able to afford loans		0.5926			0.21192	
Long-term inflation rate		0.7459			0.38335	
Failure to help create cheap resources		0.6276			0.20449	
Institutions involved in publishing	0.6759			0.54734		
The main contribution of the state bank in providing housing loans	0.6317			0.20849		
Duration of bonds (short term)	0.573			0.18301		

The three factors that have been estimated can be categorized as follows: the law factor, the bond characteristic-economic status factor, and the management factor. The law factor encompasses questions regarding the interpretation of civil laws, specifically articles 292 and 293, as well as Shari'a issues related to bond issuance. It also includes regulations and existing executive instructions. The bond characteristic-economic status factor focuses on aspects such as the interest rate of bonds, the interest rate of other bonds in the capital market, the coupon rate of bonds, the ability to afford loans, the long-term inflation rate, and the lack of assistance in creating affordable funding sources. Lastly, the management factor includes the institutions involved in issuing bonds, the significant contribution of state banks in providing mortgage facilities, and the duration of bonds. The factor model has been evaluated using the information criterion, and it has been found that the

model with three factors has the lowest values of AIC and BIC (Table 3).

Hence, it can be stated that the success of the secondary mortgage market and the potential for its establishment rely on three key factors, each of which encompasses multiple scenarios. In the course of the investigations, the Legit model was employed to examine the impact of these three factors on the growth of the secondary mortgage market. Consequently, the factor that is most likely to contribute to the issuance of mortgage bonds can be identified by analyzing the changes in these factors. To achieve this, the coefficients of the three factors were determined using Bartlett's method (as shown on the right side of Table 3). Subsequently, the values of these factors were computed based on the observations. The outcomes of the estimated Logit model are presented in Table 4.

Table 3: Analysis of the Model

factors	loglik	df_m	df_r	AIC	BIC
1	-226.696	23	230	499.3911	553.2986
2	-153.343	45	208	396.686	502.1572
3	-117.13	66	187	366.2605	520.9516
4	-100.382	86	167	372.7642	574.3314
5	-83.7991	105	148	377.5982	623.6978
6	-67.0908	123	130	380.1815	668.4696
7	-53.7196	140	113	387.4393	715.572
8	-42.381	156	97	396.7619	762.3956
9	-33.6954	171	82	409.3908	810.1815
10	-25.49	185	68	420.9801	854.5841
11	-18.166	198	55	432.332	896.4055
12	-14.0623	210	43	448.1246	940.3237
13	-9.42568	221	32	460.8514	978.8324
14	-7.10272	231	22	476.2054	1017.624
15	-4.82743	240	13	489.6549	1052.168
16	-2.21439	248	5	500.4288	1081.693

Table 4: Result of Legit Model

Factor	Odds Ratio	Std.Err.	z	P>z	[95% Conf.	Interval]
Rules and Regulations	1.013412	0.024223	0.55	0.58	0.966422	1.062686
Characteristics of bonds - economic situation	3.660257	0.293759	4.417	0	2.058064	6.50975
Management	1.907098	0.368694	1.751	0.008	0.925837	3.928362

The odds ratio in the logit model is equivalent to the null hypothesis (Fagerland and Hosmer 2017). This implies that if there is a change in the factor, does the ratio of fortunes also change significantly? Based on the P_value of the rules and regulations factor, it does not have a significant impact on the odds ratio. Enhancing this aspect does not lead to the creation of a suitable secondary mortgage market. As for the characteristic factor of bonds-economic status, the P_value suggests that there is no compelling evidence to support the null hypothesis. In simpler terms, as the economic situation improves and better conditions for mortgage bonds are established, the likelihood of the secondary mortgage market recovering increases by up to 3.5 times. In relation to the management factor, the P_value indicates that the null hypothesis is accepted at the 5% level but rejected at the 10% level. In other words, as management conditions improve, the

probability of establishing the mortgage bond market increases by up to 9%.

6. Conclusion

Mortgage bonds serve as a link between the money and capital markets as they rely on multiple mortgage loans to cover both principal and interest payments. Another way to understand these bonds is through the concept of disintermediation, which involves providing liquidity by converting stagnant assets. Additionally, securitization of assets can enhance the legal obligations and capital structure of banks, while also increasing financial leverage. Mortgage bonds come in various forms, such as those supported by governmental or non-governmental organizations, individual mortgages, or commercial real estate mortgages.

Similar to other financial instruments, the utilization of mortgage bonds relies on risk management and the provision of suitable mechanisms. Various countries have distinct strategies for employing these bonds based on their objectives and socio-economic framework. The United States, for instance, stands as a frontrunner in this domain, while the European Union focuses on regulating market volume to achieve specific targets. In certain Asian nations like Saudi Arabia, a written program is currently being implemented for mortgage bonds, whereas in Indonesia, efforts are underway to identify the obstacles hindering the establishment of this market, particularly in terms of legal and executive infrastructure.

The origins of mortgage bonds in Iran can be traced back to the 1910s and 1970s, with subject laws highlighting their importance as a financial tool. Despite the existence of a dual release experience, the capital market lacks a specific symbol for it, and the secondary mortgage market has yet to be established. This research aims to identify the factors contributing to the non-formation of the secondary mortgage market through the utilization of expert methods.

To achieve the desired objective, the initial step involved the identification of effective categories within the secondary mortgage market through the expertise of professionals. Utilizing the qualitative research method, the opinions of experts were examined regarding the various factors influencing the creation of mortgage bonds in Iran. Through the utilization of a questionnaire, the viewpoints of individuals involved in the capital market, as well as university professors, were gathered in relation to the effectiveness of each category. The findings indicate that certain categories, such as bond risk, number of interest payments, volume of issuance, lack of capital adequacy improvement, underwriter incentive system, previous experience, and market depth, do not impact the formation or non-formation of the secondary mortgage market. In contrast, within the component-oriented approach, 16 categories are identified as either contributing to or hindering the establishment of the secondary mortgage market. Notably, the least influential factor in stimulating the housing market boom is the absence of assistance, while the inability to afford the resulting resources has the greatest impact on the development of the mortgage bond market.

Factor analysis is a valuable tool for organizing and addressing intricate inquiries. It enables the reduction of dimensions and identification of the most informative ones. The extracted factors encompass various aspects such as rules and regulations, characteristics of papers-economic situation, and management. These factors collectively comprise twelve categories, which are effectively presented through factor analysis.

Ordinal Logit analysis was employed to assess the impact of the aforementioned factors on the development and stability of mortgage bonds. The findings indicate that alterations in laws and regulations do not influence the success of the mortgage market. Conversely, enhancing economic conditions and refining bond design amplify the likelihood of a market upswing by a factor of 3.5. Additionally, modifications in execution and management only result in a marginal 9% change in market conditions. Consequently, this study concludes that the primary reasons for the absence of a secondary mortgage market are the initial bond design and the prevailing economic conditions.

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