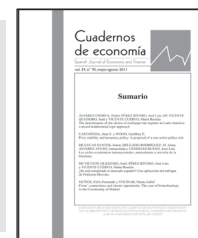




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ARTÍCULO

The Principle of Horizontal Separation in Banking Guarantee Practices in Indonesia

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Abstract: Indonesian banks are providing legal contract assurances to enterprises. The nature of market guarantees determines the disparity in banking sector performance. In Indonesia, banking guarantees are split horizontally, making it difficult for clients to choose the appropriate guarantee. This study aims to assess the effect of business type, application programming interface (API), and perceived economic risk on bank guarantees in Indonesia. The study's model is built on a novel and original concept previously mentioned in the literature. The findings of this study indicate that the impact of business type, API, and perceived economic risk on bank guarantees is substantial. This research contributes significantly to this unique framework of bank guarantee in the literature. This study has significant theoretical ramifications as it expands our understanding of banking guarantees in Indonesia. This study's conclusions apply to improving banking guarantees in Indonesia for the advancement of economic sustainability. The study is based on a research gap. Still, it also contains several limitations that necessitate the exploration of additional literature on banking guarantees by researchers in the future.

1. Introduction

The financial guarantees facilitate the enterprises' operations and contract sustainability (Haryanto et al., 2019). The contracts between consumers and businesses are based on financial guarantees provided by banks that appropriately assist businesses (Thalib et al., 2019). Access to bank financial guarantees is required because business-to-business and business-to-consumer relationships rely on them (Mashdurohaturun, 2021). These financial guarantees are optimal for market-based business operations (Fadhli et al., 2021). When firms fail to manage contracts following their genuine intentions, banks' financial guarantees allow them to continue operations (Suliyono et al., 2021). Due to the expansion of numerous market areas, business development in Indonesia is challenging (Kusuma et al., 2021). Supporting rising enterprises in Indonesia for transactions and contracts is deemed crucial to the expansion of the banking sector, which is not limited to the firm's performance (Yumna, 2019). Before granting a guarantee on any contract to assist commerce, the banks examine companies' financial circumstances (Christiani et al., 2022). In truth, the collaboration between Indonesian banks and the industrial sector contributes to Indonesia's economic expansion (Hasan et al., 2022; Pratami et al., 2022; C. W. Utami, Indrianto, et al., 2019). Collaboration between businesses and banks is also necessary for the sustainability of businesses, as both sectors are financially interdependent (Bany Mohammad et al., 2022; Hakimah et al., 2019; C. W. Utami, Sumaji, et al., 2019).

The business's nature is essential for any firm's issuance of a banking guarantee, as it helps the business's proper market development (Fratila, 2020; Hasrita Lubis et al., 2015). Banks make business sustainability and innovation possible through their financial backing (Altaf et al., 2019; Atrizka et al., 2020; H Lubis et al., 2019). Concerning the public and other financial institutions, the character of a company is crucial (Ren et al., 2022). Interactions between enterprises and financial institutions can enhance business performance to boost target market quality (Normalini et al., 2019). The bank guarantees to business contracts play a crucial part in the growth of the market's commercial sector (Mahalle et al., 2021). The bank's financial guarantees for any business transaction facilitate business performance contracts between multiple companies (Suzabar et al., 2020). The perceived economic risk is significant in the relationship between banks and market initiatives because economic decisions for market sustainability depend on the risk's nature (Corbet et al., 2022). The banks always perceive a risk associated with enhancing business performance and issuing guarantees to enterprises (Zhytar et al., 2022). A fair relationship between banks and the development of the financial industry is necessary for economic stability in every country (Kolmykova et al., 2022).

The corpus of knowledge is quiet regarding the implications directly related to the horizontal separation concept in banking guarantee procedures in Indonesia. Murodovich et al. (2022) revealed the impact of bank loans on business performance, which is essential to the business's viability. Djufri et al. (2021) highlighted that banking performance could enhance the functioning of banks and market growth by facilitating the expansion of commercial operations. Adhikari et al. (2021) concluded that there is a considerable association between the banking sector and business performance in the Indonesian market. Dahliah (2021) reported that Indonesian banks could improve their operational performance by innovating in their leadership of sustainable companies. Murage (2021) stated that the development of a firm is achievable with the assistance of banks, as the procurement of raw materials and other operational activities necessitate such assistance. A. F. Utami et al. (2021) highlighted that the sustainable performance of

the business is essential for market expansion and economic progress, and the involvement of the banking sector has facilitated the sustainable development of enterprises. Tang et al. (2022) noted that business performance is necessary for market development, but timely repayment of bank loans is essential for sustainable business growth. Syed et al. (2022) argued that banking guarantees are essential for business performance in every industry area. Al Zaidanin et al. (2021) also stated that businesses' expansion and growth depend on economic sustainability backed by business performance. Therefore, the literature review found a considerable knowledge gap regarding bank guarantees.

This study examines a neglected area of the literature to determine the horizontal separation principle in banking guarantee practices in Indonesia. This study aims to assess the impact of business type, application programming interface (API), and perceived economic risk on bank guarantees in Indonesia to contribute to the existing body of knowledge. The study's model is founded on a novel and original concept not previously mentioned in the literature. This research contributes significantly to this unique framework of bank guarantee in the literature. Additionally, this study has significant theoretical ramifications as it expands our understanding of banking guarantees in Indonesia. In addition, the findings of this study apply to improving the banking guarantees in Indonesia to promote economic sustainability. The study is based on a research gap. Still, it also contains several limitations that necessitate exploring additional literature on banking guarantees by researchers in the future.

2. Review of Literature

The nature of business refers to the various types of enterprises in a market that are quite useful for satisfying consumers' requirements (Haryanto et al., 2019). Over time, business expansion has risen, and new businesses have entered the market (Thalib et al., 2019). The agreement between the company and its suppliers is based on a legally binding contract that applies to any loss (Mashdurohaturun, 2021). Modern firms are also permitted to sell a service or product to consumers in the marketplace (Fadhli et al., 2021). As consumers want assurance when acquiring a product or service, it is impossible to disregard its moral worth (Suliyono et al., 2021). Financial transactions between clients and corporations are vital to the banking industry (Kusuma et al., 2021). Banks' financial assurances benefit firms that engage with consumers and suppliers (Yumna, 2019).

The banking industry provides these financial assurances to support the enterprise commercially and monetarily in implementing its sophisticated processes (Christiani et al., 2022). The banking sector's involvement in improving business performance plays a crucial part in the formation of business transactions required for business sector growth (Hasan et al., 2022). In addition, the banks in Indonesia provide financial guarantees for large transactions with businesses (Bany Mohammad et al., 2022). According to Fratila (2020), businesses and banks are particularly concerned about their financial relationships. According to Altaf et al. (2019), financial assurances are offered to the enterprises supporting the banks. Ren et al. (2022) noted that banks provide financial guarantees to extremely legal enterprises and that their prior experience with banks is positive. Normalini et al. (2019) emphasized that financial assurances assist enterprises in concluding profitable consumer transactions, with banks playing a crucial role. Mahalle et al. (2021) noted that banks' financial support is necessary for business development to be sustainable. Suzabar et al. (2020) indicated that banks do not develop financial support for every type of business because the nature and sector of the firm are crucial factors. Zhytar et

al. (2022) concluded that businesses with limited liability are less interactive in providing bank guarantees than other competitors because these businesses are less active on the market. Kolmykova et al. (2022) also concluded that financial support from banks is necessary for the growth of businesses and that modern businesses are increasingly reliant on financial guarantees for their growth. Djufri et al. (2021) added that business performance is possible when contracts and deals are supported financially by banks and other bank guarantees within the contract. Berger et al. (2021) emphasized that the cost of obtaining bank guarantees is high and that the pattern of obtaining bank guarantees is challenging for businesses. Adhikari et al. (2021) concluded that businesses in any industry could improve their performance when a bank guarantee is reasonable for consumers. In addition, Dahliah (2021) concluded that bank guarantees are required for a business contract with customers and suppliers. Based on the preceding study analysis, the following hypothesis is formulated:

Hypothesis 1: There is an influence of the nature of business on bank guarantees in Indonesia.

API refers to the method used by banks to grant clients access to their online accounts and the associated information and services (Suzabar et al., 2020). The contemporary banking system utilizes the API to give all account-related information to customers (Kolmykova et al., 2022). In the era of digitalization, the importance of API has grown as smart consumer access to brands has increased (Tang et al., 2022). The API plays a revolutionary role in the banking industry because all the necessary tools are offered to better the banks' operations for their long-term viability (Normalini et al., 2019). Indeed, business management is a crucial obstacle to developing business practices, but modern enterprises rely on bank guarantees to support customer transactions (Mahalle et al., 2021). A. F. Utami et al. (2021) concluded that the API system contributes to improving bank procedures and provides the required user interface services.

Syed et al. (2022) highlighted that modern banks use API systems to improve banking procedures because the facilities are vital to include for the benefit of customers. Online banking capabilities with API have elevated the bank's standing in the marketplace, and these improved procedures are essential for improving business performance (Mohsin et al., 2022). Business management aims to get insight into the banking sector's performance and promote corporate sustainability through innovative means. Ahmed et al. (2021) noted that API is advantageous for firms that provide consumers with financial guarantees in the form of bank guarantees while concluding a deal. Because API online access to services and banking information about economic assurances has altered the corporate landscape, these facilities save time and money (Mujabi et al., 2022). In addition, Karim et al. (2022) stated that firms in the current world can obtain financial assurances by providing information about a linked bank account and that updated information can enhance innovative business performance.

Candello et al. (2021) reported that business sustainability is conceivable with business development and its access to the new API-based financial assurances of banks. The rational control of banking services using API represents a reevaluation of the banking guarantees management system that is logically robust to financially support enterprises (Sinaga et al., 2022). Mavlutova et al. (2021) noted that API services benefit enterprises and other bank clients because all client information is accessible via an online interface, and an artificial intelligence system assists in providing associated

services. Hidayati et al. (2021) concluded that bank guarantees are necessary for business growth but that these guarantees must be tailored to the terms and conditions of the business and its performance. Islam et al. (2021) added that business management should have access to the API system of banks to generate bank guarantees that are beneficial for business transactions. Haykal et al. (2021) added that the financial support of banks to businesses using modern and sophisticated digital banking tools is being reevaluated in this decade. Based on the preceding study analysis, the following hypothesis is formulated:

Hypothesis 2: There is an influence of application programming interface (API) on bank guarantees in Indonesia.

Perceived economic risk refers to the possibility of financial instability and loss that can reduce a company's market performance (Christiani et al., 2022). Due to political volatility, modern firms are more concerned about perceived economic risk (Ren et al., 2022). This perceived risk is useful when interacting with various firms since it enables optimal interactions by focusing on all parameters (Berger et al., 2021). When a business engages in market transactions, the perceived economic risk may emanate from either consumers or suppliers (Mohsin et al., 2022). Innovative ideas and the originality of business management make business sustainability possible, but the perception of economic risk is the primary element inhibiting innovative performance (Sinaga et al., 2022). Mavlutova et al. (2021) noted that the economic condition of a company has a significant impact on its marketability and stability. Hidayati et al. (2021) emphasized that the economic situation of a company increases its market equity, which is essential for business operations.

Yi et al. (2022) observed that enterprises unable to obtain bank guarantees for customer transactions are innovating to improve their business performance. In addition, Bhatti et al. (2022) indicated that banks examine a business's type and economic value before giving financial loans to these businesses. ElDeeb et al. (2021) concluded that bank guarantees are required for business transactions since they support contract confidence. According to Chinttha et al. (2021), modern market banks issue financial assurances to enterprises engaging in business-to-business or business-to-consumer transactions. However, Fatih et al. (2021) noted that the development of businesses based on these guarantees is possible. Still, banks always perceive an economic risk before issuing a business a financial guarantee. Adarov (2021) found that the business's viability is attainable with the appropriate financial guarantees for market growth. According to Nazarali et al. (2022), the perception of economic risk plays a significant role in commercial transactions.

It is similarly important when offering financial guarantees to the market for the growth of products and services. Cudris-Torres et al. (2021) observed that business and bank relationships are impacted by perceived risk because it substantially correlates with business success and client relationships. Duramany-Lakkoh (2021) demonstrated that economic risk is crucial to the development of businesses. Still, banks are evaluating business performance using information about economic sustainability to improve business performance innovatively. Ahmed et al. (2021) concluded that businesses in the modern market deal with legal contracts necessary for consumer confidence, and bank guarantees are required for transactions to foster this confidence. Based on the preceding study analysis, the following hypothesis is formulated:

Hypothesis 3: There is an influence of perceived economic risk on bank guarantees in Indonesia.

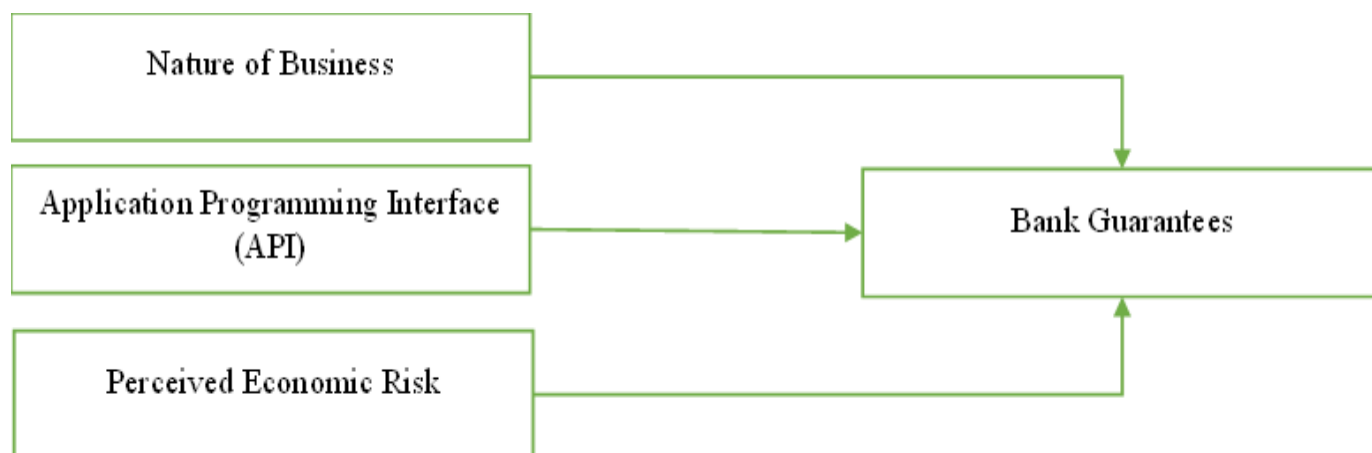


Figure 1. Theoretical Framework of Bank Guarantees

3. Methodology

This study is founded on a cluster-selected sample. Respondents to this study were workers of various Indonesian banks. The bank's personnel are divided into two groups: female and male. Physically targeting these employees to collect their responses for the survey. The empirical evidence for a study in the "social sciences" field is derived from primary data.

Consequently, this research is based on the primary data acquired via a questionnaire with a five-point Likert scale that will be used to determine additional conclusions. This study utilizes survey-based data collecting since it reduces the "time and cost" of research. In addition, the research outcomes are established by measuring items modified from other studies. A brief explanation of the research is included with the questionnaire for the respondents' benefit. Each cluster of respondents comprised 200 employees, and 400 questionnaires were collected. 371 questionnaires were returned, making 371 the sample size for this study. The respondents were rewarded for their participation and contribution to the study. The studies in the literature are based on sample sizes between 300 and 400, validating the sample size of this study for data analysis. In addition, "Smart PLS 3.0" is used to analyze the results of this investigation.

The perceived economic risk scale items were adapted from Brachinger et al. (1997) after confirming their validity and reliability. Using "factor loadings" and "Cronbach's alpha," the reliability and validity were determined. Using factor loadings and Cronbach's alpha, it was determined that the scale items were significant. In addition, these questions were included in the study's final questionnaire to examine the effect of perceived economic risk on bank guarantees. In addition, the items for the API scale were adapted from Arayesh et al. (2022) after confirming their validity and reliability. Using "factor loadings" and "Cronbach's alpha," the reliability and validity were determined. The scale elements with factor loadings > 0.60 and Cronbach's alpha > 0.70 were deemed significant. Joseph F. Hair et al. (2007). These factors were included in the study's final questionnaire to measure the impact of API on bank guarantees. Thirdly, the scale items for the nature of the business were adopted from Ong (2012) after confirming their validity and dependability. Using "factor loadings" and "Cronbach's alpha," the reliability and validity were determined. Using factor loadings and Cronbach's alpha, it was determined that the scale items were significant. Also, these items were included in the study's final questionnaire to determine the impact of business type on bank guarantees. Finally, the scale items for bank guarantees were adapted from

Hampshire (2017) after validating the items' validity and dependability. Using "factor loadings" and "Cronbach's alpha," the reliability and validity were determined. Using factor loadings and Cronbach's alpha, it was determined that the scale items were significant. In addition, these questions were included in the final survey to determine the relationship between bank guarantees and other study variables.

4. Findings

The study's conclusions were determined using the "PLS measurement and structural model." The measurement model is described by Joseph F. Hair et al. (2007): "the measurement model determines the reliability and validity of any study's findings." Moreover, Ringle et al. (2015) revealed: "the structural model is employed to establish the research model's path coefficient." This study's reliability and validity were determined using Cronbach's alpha, composite reliability (CR), factor loadings, and average variance extracted (AVE). This study meets the recommended thresholds for Cronbach's alpha, factor loadings, CR, and AVE. > 0.70 (F. Hair Jr et al., 2014), factor loadings > 0.60 (Henseler et al., 2009), CR > 0.70 (Henseler et al., 2014), and AVE > 0.50 are the suggested values for validity and reliability (Ringle et al., 2015). Thus, the results demonstrate that the research's scale items are valid and reliable. The results are presented in Figure 2 and Table 1.

The "discriminant validity" test examines the distinction between scale item and result. This study employs the "Heteritrait-Monotrait (HTMT)" proposed by Gold et al. (2001) for discriminant validity findings. Gold et al. (2001) also advocate an HTMT threshold of "HTMT < 0.90". The results of this test indicate that the study has discriminant validity. The results of discriminant validity are provided in Table 2.

The structural model results are determined with "PLS Bootstrapping" calculations. The threshold for t and p is " $t > 1.96$ and $p < 0.05$ " (Joseph F Hair et al., 2012). The results reveal that the impact of the nature of business on bank guarantees in Indonesia is significant " $B = 0$, $t = 0$ and $p = 0$," and the first hypothesis is accepted. Also, the results reveal that the impact of API on bank guarantees in Indonesia is significant " $B = 0$, $t = 0$ and $p = 0$," and hypothesis two is accepted. Finally, the results reveal that the impact of perceived economic risk on bank guarantees in Indonesia is significant " $B = 0$, $t = 0$ and $p = 0$," and the final hypothesis is accepted. Thus, all the study hypotheses are significant, and the structural model findings are available in Figure 3 and Table 3.

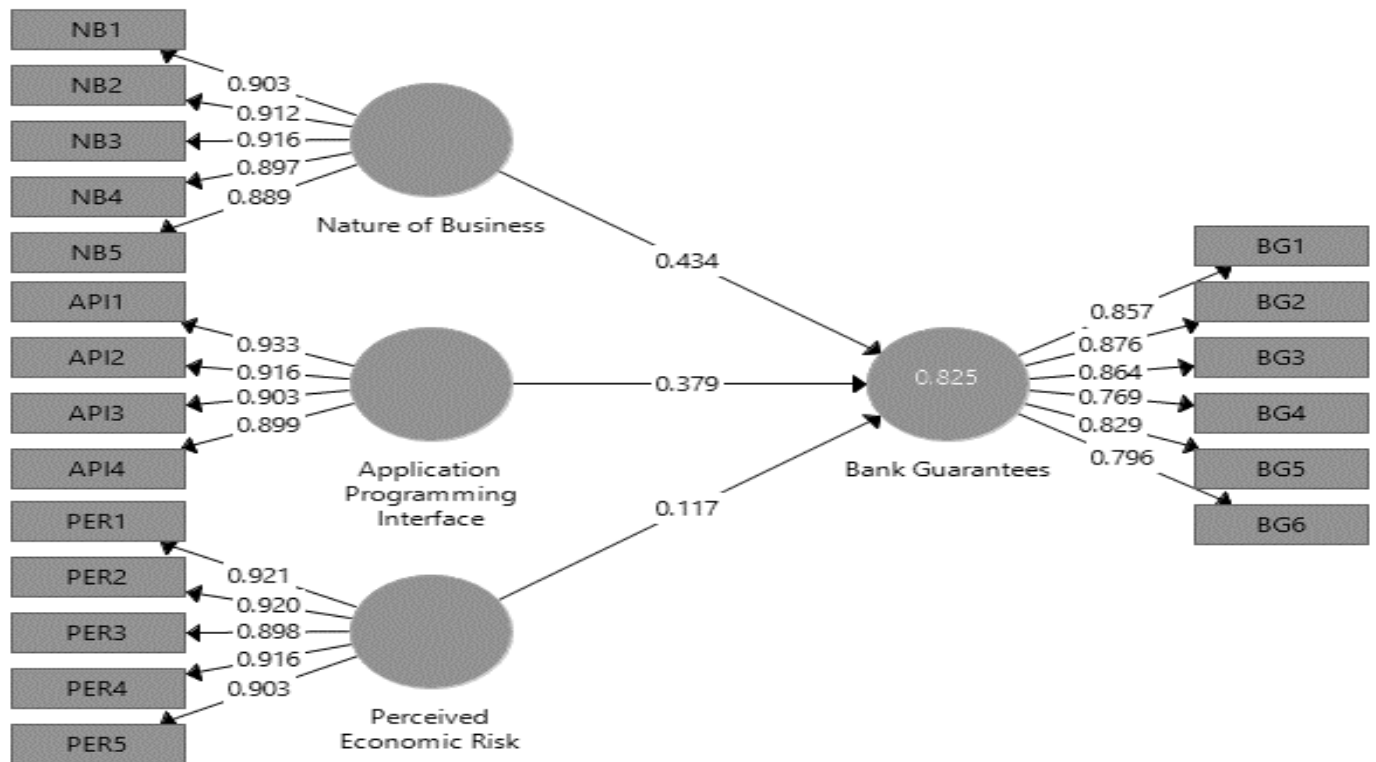


Figure 2. Measurement Model for Reliability and Validity

Table 1. Convergent Validity (Cronbach's alpha, CR and AVE)

Constructs	Items	Factor Loadings	α	CR	AVE
Application Programming Interface	API1	0.933	0.933	0.952	0.833
	API2	0.916			
	API3	0.903			
	API4	0.899			
	PER1	0.921			
Bank Guarantees	BG1	0.857	0.913	0.931	0.693
	BG2	0.876			
	BG3	0.864			
	BG4	0.769			
	BG5	0.829			
	BG6	0.796			
Nature of Business	NB1	0.903	0.944	0.957	0.817
	NB2	0.912			
	NB3	0.916			
	NB4	0.897			
	NB5	0.889			
Perceived Economic Risk	PER1	0.921	0.949	0.961	0.831
	PER2	0.920			
	PER3	0.898			
	PER4	0.916			
	PER5	0.903			

Table 2. Discriminant Validity - HTMT

	Application Programming Interface	Bank Guarantees	Nature of Business	Perceived Economic Risk
Application Programming Interface				
Bank Guarantees	0.741			
Nature of Business	0.686	0.643		
Perceived Economic Risk	0.676	0.606	0.572	

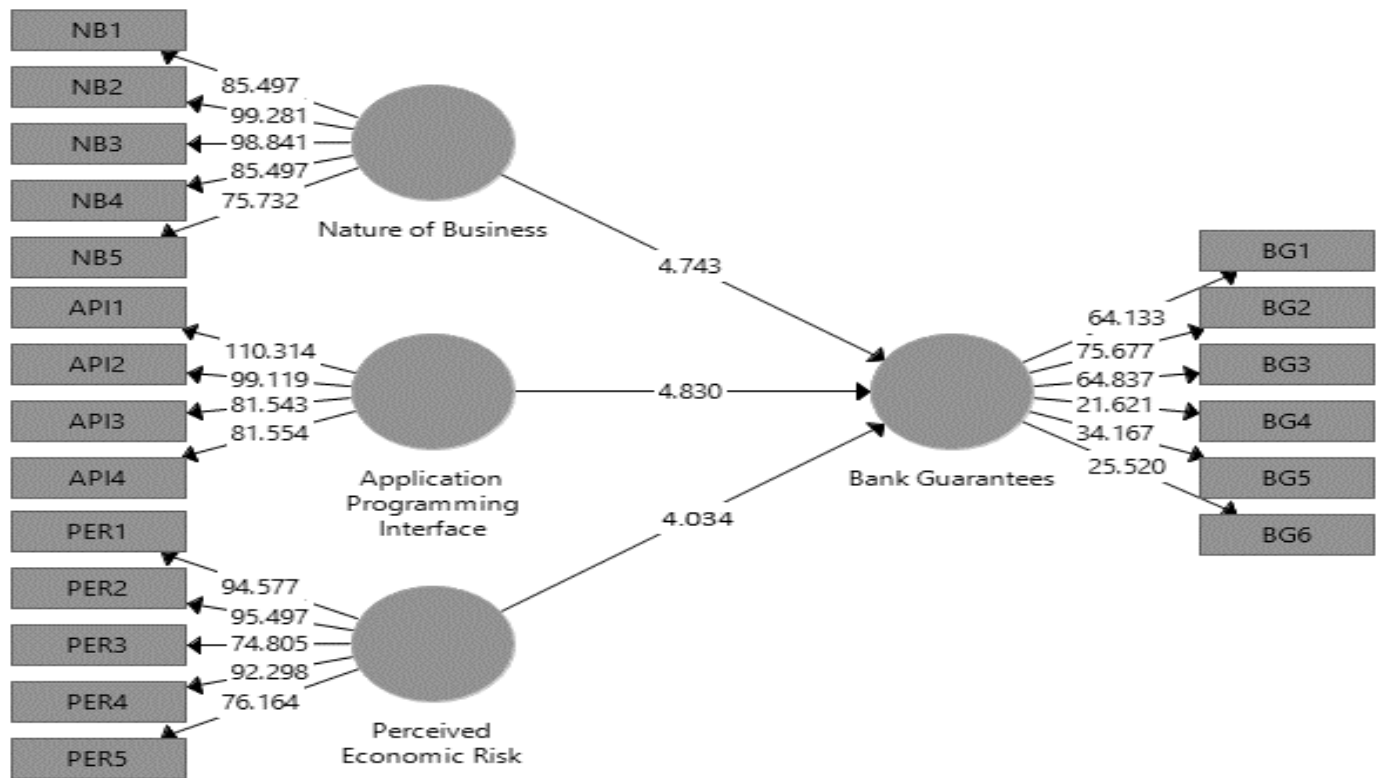


Figure 3. Structural Model for Path Coefficient

Table 3. Path Coefficient for Hypotheses Results

Path Coefficient	B	SD	t	p	Results
Nature of Business -> Bank Guarantees	0.434	0.091	4.743	0	Accepted
API -> Bank Guarantees	0.379	0.078	4.830	0	Accepted
Perceived Economic Risk -> Bank Guarantees	0.117	0.029	4.034	0	Accepted

Note: API = Application Programming Interface

5. Discussion

This study is based on the original concept of addressing a gap in the literature that was not covered by previous research. According to the results of this study, all hypotheses are significant and approved, as determined by the investigation. The first hypothesis is accepted, and the impact of business type on bank guarantees in Indonesia is significant. Similarly, these findings are novel because this association was not addressed in previous research. However, similar findings in the available literature confirm this link. Before interacting with any firm, according to [Duramany-Lakkoh \(2021\)](#), bank management identifies the business's category. [Yi et al. \(2022\)](#) also stated that financial institutions are issuing insurance to enterprises with a sterling reputation and extraordinary economic stability in the marketplace. [Bhatti et al. \(2022\)](#) argued that banks offer guarantees to support contracts between firms that are essential for the market viability of the businesses. [ElDeeb et al. \(2021\)](#) also proved that consumers accept banking assurances to boost business practices and validate transactions. [Chintha et al. \(2021\)](#) said that banks are not collaborating with institutions that engage in malpractices to expand the commercial economy and validate shady practices. [Fatih et al. \(2021\)](#) emphasized that the business's viability is dependent on the banking sector's viability since both organizations are interdependent and collaborate to promote economic growth and the market viability of the business.

The second hypothesis is accepted, as API considerably affects Indonesian bank guarantees. Similarly, these findings are novel in the literature because previous investigations did not consider this association. However, similar findings in the available literature confirm this link. [Cho et al. \(2022\)](#) noted that the API system could be utilized in the banking industry to provide services to businesses and individual clients. [Nazarali et al. \(2022\)](#) underlined that banks provide financial aid to various organizations through a newly built system of artificial intelligence that enables digital banking service access. [Cudris-Torres et al. \(2021\)](#) concluded that banking sector services are suitable for the development of businesses, but these services must be broadly accepted to increase the creative performance of enterprises. According to [Chakraborty et al. \(2021\)](#), sustainability in banking is feasible when the staff of financial institutions strives diligently to improve services by delivering accurate information to customers. [Fieve et al. \(2022\)](#) contributed to the body of knowledge by analyzing how financial institutions assist the viability of firms via financial guarantees. [Mohamad Anwar et al. \(2021\)](#) emphasized that the banking sector's provision of API services is crucial to the company's development.

The third hypothesis is accepted, and the influence of perceived economic risk on bank guarantees in Indonesia is significant. Similarly, these findings are novel in the scientific literature because this association was not previously considered. Indeed, similar findings in the existing literature corroborate this link. [Hladika \(2021\)](#) underlined that banks form relationships with other entities depending on their risk

perception. Dubyna et al. (2021) concluded that economic value plays a significant role in developing banks' relationships because this strategic importance has altered the conventional notions of work. Chakraborty et al. (2021) noted that the financial institutions of the corporate sector support business performance, but corporations must improve their practices with the development of business relationships. According to reports, the economic value of businesses is crucial for banks to conduct business with companies in the modern market. Moreover, Cudris-Torres et al. (2021) concluded that economically sustainable businesses could improve their market performance with advanced banking sector relationships.

6. Conclusion

This study aims to determine how business type, API, and perceived economic risk influence bank guarantees in Indonesia. The study's model is based on a novel and unexplored concept not previously discussed in the literature. The study's findings demonstrated the significance of business type, API, and perceived economic risk to bank guarantees. This study contributes significantly to the body of knowledge with its innovative bank guarantee system. This research has significant theoretical ramifications because it has increased our knowledge of Indonesian banking guarantees. This research has practical implications for bolstering Indonesia's banking guarantees and promoting economic sustainability. Although the study is premised on a research gap, it has significant limitations that point the way forward for scholars who wish to investigate the literature on banking guarantees further because it has been understudied. This study examines the horizontal separation principle concerning banking guarantee practices in Indonesia. This study's findings addressed all significant aspects of banking guarantees in Indonesia.

7. Implications

Theoretically, the findings of this study added additional variables to the existing body of research that was not addressed in earlier investigations. This study's substantial implications contribute to the corpus of knowledge concerning bank guarantees. First, the study introduced a significant association between business characteristics and bank guarantees that had not before been examined in the literature. The actual outcomes of this research corroborate the theoretical significance of this link. Before this study, the literature did not address the relationship between business nature and bank guarantees.

Consequently, the research implications are significant. In addition, the analysis uncovered a strong link between API and bank guarantees that had not before been mentioned in the literature. This relationship is theoretically significant since the empirical findings of this study support it. The previous literature did not examine the relationship between API and bank guarantees. Therefore, the research implications are extraordinary. In addition, the study revealed a strong association between perceived economic risk and bank guarantees that had not been mentioned in the literature before.

Consequently, this path has theoretical significance, as the actual findings of our study confirm this link. The literature does not explore the relationship between perceived economic risk and bank guarantees. Consequently, it has significant significance for research. This work contributed a novel model to the literature that explains the relationship between various significant variables.

Practically speaking, the significance of the current research is substantial, as it has presented new ways to enhance the operations of banking guarantees in Indonesia. The study

demonstrated that businesses must be economically viable to qualify for bank guarantees in financial transactions, as banks widely accept only economically robust companies. Second, the study revealed that banks are always concerned about the perceived risk of the transaction and financial guarantees; however, businesses with sustainable development can improve their practices to improve the sustainable business environment. In addition, the study revealed that banking guarantees are separated horizontally based on API services that play a significant role in service provision. In this regard, the API system must be innovatively designed following the needs of businesses to facilitate the design of bank guarantees based on the nature of the agreement with suppliers and retailers. These types of strategies are useful for the development of organizations' best work practices.

8. Limitations and Future Directions

However, the study has addressed a critical gap in the literature that was overlooked by earlier research. However, this study's findings contain limitations that must be addressed in future research. The study has analyzed the impact of business nature on bank guarantees in Indonesia. Still, it has not addressed the criteria that must be discovered to analyze business nature. Therefore, future research should investigate the components (business assets, business liquidity, and business liabilities) to determine their influence on the nature of the company. Second, the study has addressed the influence of API on bank guarantees in Indonesia but not the elements that must be discovered to examine API. Therefore, future researchers should investigate elements like perceived utility and service quality to determine their impact on the API. The paper concludes with a discussion of the effect of perceived economic risk on bank guarantees in Indonesia. Still, it does not address the components that must be discovered to examine perceived economic risk. Thus, scientists should investigate the aspects that help determine the perceived economic risk, including economic growth and sustainability. This way, the body of literature would be broadened, and knowledge would grow.

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