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Original Research Article

Feasibility of Forfaiting in Iran's Financial Markets

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As an innovative financial instrument in international trade, forfaiting enables the conversion of deferred receivables into immediate liquidity while fully transferring political, commercial, and credit risks to financial institutions. This method has played a significant role in facilitating transactions and enhancing the competitiveness of exporters, particularly in emerging economies. Despite its potential, Iran has yet to establish a clear institutional and legal framework for its implementation, and existing research has largely focused on theoretical and legal aspects. This gap highlights a critical research need that could inform financial and trade policy development in the country.

The present study aims to assess the feasibility of establishing a forfaiting institution in Iran's financial markets and to analyze its impact on investment risk reduction. The research is applied in nature and employs a descriptive survey methodology. The statistical population consists of 152 experts from the monetary and banking sectors, as well as investment professionals. Data were collected using a structured questionnaire. Its validity was assessed and confirmed by expert judgment as well as statistical measures, and its reliability was verified through both Cronbach's alpha and composite reliability coefficients, all of which exceeded the acceptable threshold of 0.70. Data analysis was conducted using SPSS (version 24) and SmartPLS software. Within this framework, four key dimensions risk reduction, risk coverage, operational mechanisms, and institutional framework were examined as determinants of forfaiting feasibility.

The findings indicate that implementing forfaiting in Iran can significantly reduce risks for investors and exporters, offering greater capacity to manage market volatility and uncertainty compared to traditional financing methods. While risk reduction and risk coverage emerged as the most influential factors in the adoption of this instrument, institutional and legal weaknesses remain the primary barriers to its

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development. Therefore, successful establishment of a forfaiting institution requires the formulation of transparent regulations, creation of appropriate institutional infrastructure, and enhancement of economic actors' awareness.

Keywords: forfaiting, export, financing, discounting
JEL Classification: F30, F34, F10

1 Introduction

Financing stands as one of the foundational pillars of international trade, playing a vital role in enhancing economic dynamism and facilitating cross-border exchanges. Statistics indicate that over 90% of global trade is in some way dependent on financial instruments(United Nations Conference on Trade and Development, 2025). Without modern financing mechanisms, economic enterprises, particularly in developing countries, face serious challenges in liquidity management, risk mitigation, and access to international financial resources. In this context, the adoption of innovative financing methods not only enables optimal risk management but also strengthens exporters' competitiveness and attracts foreign investment.

Among the most prominent of these methods is forfaiting, a mechanism through which an exporter sells its deferred receivables to a financial institution (the forfaiter) in exchange for immediate cash payment. What distinguishes this instrument is the complete transfer of political, commercial, and credit risks to the buyer of the receivables, setting it apart from other financing tools.

A review of international literature reveals that since the 1960s, forfaiting has gained recognition as an effective tool in international transactions. Various studies have explored its dimensions: for instance, Koehli and Zuleger (2006) identify forfaiting as a key instrument for providing rapid liquidity in international trade finance; Daube et al. (2008) emphasize its role in reducing financing costs in public–private partnership projects; and Velentzas et al. (2013) along with Karbowski (2021) highlight legal and institutional challenges, particularly the lack of transparent regulations. Gangadharan (2014), meanwhile, underscores the need for digitalization and standardization of forfaiting processes to enhance efficiency. Collectively, these studies suggest that forfaiting not only minimizes the risks of international trade but also improves countries' competitive standing in global markets by facilitating access to financial resources.

In Iran, several studies have addressed this topic, though most have focused on theoretical or legal aspects. For instance, Abdipour and Ghoochani (2017) examined the relationships among the main parties to a forfaiting contract under international uniform rules, stressing the need for

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specific domestic regulations. Tabaei and Haghighi (2017), in a comparative study, analyzed Iran's legal capacities relative to the United States, identifying the absence of dedicated regulations as a barrier to implementation. Rashvand et al. (2020), focusing on bills of exchange, demonstrated that although forfaiting offers greater speed and efficiency than traditional instruments, institutional weaknesses hinder its practical application. Similarly, Mahdavi-Sabet and Haghighi (2020) cited deficiencies in the legal framework as a major obstacle to its development. These findings reveal a significant gap in empirical research and operational feasibility studies regarding forfaiting in Iran's financial markets.

This study builds upon the existing literature but moves beyond it. For the first time, it employs field data and a structural equation modeling (SEM) approach to assess the feasibility of implementing forfaiting in Iran's financial markets. Four key dimensions are examined: risk reduction, risk coverage, operational mechanisms, and institutional framework. Accordingly, this research aims to fill the current empirical gap and provide valuable evidence for policymakers, banks, and economic stakeholders, thereby paving the way for the development of modern financial instruments in Iran's economy.

2 Theoretical Foundations and Literature Review

2.1 Theoretical Literature

The role of financing systems in the dynamism of international trade is such that, in the absence of efficient mechanisms, a substantial portion of global transactions would face disruption. Research indicates that the majority of global trade relies heavily on financial instruments, and without them, the expansion of exports and competitive participation in international markets would not be feasible (Contessi & De Nicola, 2012). In particular, the development and innovation of financial tools especially in the post-World War II era have led to the emergence of mechanisms that reduce transaction risks and facilitate access to financial resources.

One of the most significant innovations in this domain is forfaiting, first introduced by European banks in the 1960s, primarily used in the export of industrial equipment to Eastern Bloc countries. The term "forfaiting" is derived from the French word forfeit, meaning "to relinquish a right," aptly reflecting the nature of this instrument: the exporter sells its deferred receivables to a financial institution (the forfaiter), waiving the right of recourse to the buyer and gaining immediate liquidity (Guild and Harris,

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1985). In this process, all risks associated with default, political instability, and interest or exchange rate fluctuations are transferred to the buyer, allowing the exporter to continue its commercial activities with greater confidence.

A comparison between forfaiting and other financing instruments highlights its distinctive features. Unlike letters of credit, which require lengthy and complex procedures, forfaiting provides rapid liquidity to exporters. Compared to factoring, forfaiting is more commonly used in large-scale, medium-term international transactions, and its non-recourse nature significantly reduces the exporter's risk. Moreover, relative to instruments such as leasing or traditional bill discounting, forfaiting offers greater flexibility in covering political and credit risks (Whittaker, 2000; Velentzas et al., 2013).

From a theoretical perspective, the core dimensions of forfaiting can be analyzed across four interrelated yet distinct domains:

1) **Risk Reduction**: The primary function of forfaiting is the transfer of risk from the exporter to the forfaiter. These risks include buyer default, destination country risk, political instability, and commercial risks arising from market fluctuations. Numerous studies have shown that the use of this instrument significantly reduces the likelihood of losses for exporters (Velentzas et al., 2013).
2) **Risk Coverage**: In addition to eliminating default risk, forfaiting enables coverage against interest rate and currency fluctuations. By selling receivables, the exporter becomes insulated from potential volatility in financial markets and can plan cash flows more accurately. This feature aligns with theoretical concepts in financial hedging and risk management (Gangadharan, 2014).
3) **Operational Mechanism**: Successful implementation of forfaiting requires valid and transferable commercial documents (such as bills of exchange and promissory notes guaranteed by banks), a discount rate aligned with risk levels, and specialized financial institutions to execute the transaction. Daube et al. (2008) demonstrated that standardizing operational procedures and ensuring contract transparency can reduce transaction costs and enhance trust between parties.
4) **Institutional Framework**: The development of forfaiting is not feasible without a clear institutional and legal foundation. The International Chamber of Commerce (ICC), through the issuance of the Uniform Rules for Forfaiting (URF 800) in 2013, established a standardized international framework governing forfaiting transaction. Karbowski's

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(2021) research emphasizes that countries actively reforming their legal systems and establishing supportive institutions have successfully employed forfaiting as an effective tool for export development and foreign investment attraction.

According to the financial theory of risk transfer, firms naturally seek to shift commercial uncertainties to specialized institutions (Froot et al., 1993). Simultaneously, institutional theory posits that the success of financial innovations depends on the legal and institutional structures within which they operate (North, 1990; Scott, 2008). The integration of these two theoretical frameworks suggests that the effectiveness of forfaiting in Iran, beyond its technical and financial attributes, is highly contingent upon institutional reforms and the establishment of transparent regulations.

2.2 International Studies

The international literature on forfaiting can be categorized into three main thematic areas:

a) Legal and Regulatory Studies: Koehli and Zuleger (2006), in their examination of the legal dimensions of energy projects in Germany, demonstrated that compliance with European Union regulations plays a pivotal role in the successful application of forfaiting. Similarly, Velentzas et al. (2013) analyzed factoring and forfaiting contracts within the framework of Greek law, concluding that the absence of comprehensive legislation constitutes a major barrier to the development of innovative financial instruments.

b) Economic and Financial Studies Daube et al. (2008), through a comparative analysis of forfaiting and project finance in public–private partnerships, showed that forfaiting can reduce financing costs and improve risk distribution among stakeholders. Whittaker (2000), in his seminal work, emphasized that forfaiting is particularly vital for small and medium-sized enterprises, offering rapid access to liquidity and enhancing competitiveness in global markets.

c) Applied and Innovative Studies Gangadharan (2014) focused on emerging trends, highlighting the necessity of digitizing the forfaiting process and establishing new international standards. Karbowski (2021) provided a comprehensive classification of various forms of forfaiting, elucidating their differences in terms of risk exposure, operational mechanisms, and contractual structures.

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2.3 Domestic Studies

In Iran, existing studies have predominantly adopted theoretical and legal perspectives, with limited attention to empirical dimensions. Ghoochani (2019) compared forfaiting with other financing methods, underscoring its advantages in risk mitigation and facilitating trade. Abdipour and Ghoochani (2017) examined the relationships among key parties in forfaiting contracts based on uniform rules, stressing the need for specific legislation in Iran. Tabaei and Haghighi (2017), in a comparative legal study, analyzed the nature of forfaiting contracts under Iranian and U.S. law, concluding that while legal capacities exist in Iran, the absence of dedicated regulations impedes implementation. Mahdavi-Sabet and Haghighi (2020) echoed this concern, identifying the lack of a robust legal framework as a major obstacle to the development of forfaiting in Iran. Rashvand et al. (2020), focusing on promissory notes, demonstrated that forfaiting offers greater speed and efficiency compared to traditional instruments, although institutional constraints hinder its practical application.

A review of the above literature reveals that most studies on forfaiting either explore the legal nature of contracts or compare it with other financing methods across different legal systems. Some merely introduce European experiences and international regulations. In Iran, research has largely remained theoretical or legal in nature, with limited empirical investigation into the practical feasibility of forfaiting within the country's financial markets and institutional structures. Consequently, a significant research gap persists; namely, the lack of empirical evidence regarding the operational viability of forfaiting in Iran.

The innovation of the present study lies in its empirical approach: for the first time, using questionnaire-based data and structural equation modeling (SEM), it assesses the feasibility of forfaiting across four key dimensions: risk reduction, risk coverage, operational mechanisms, and institutional framework thus moving beyond theoretical analysis to provide actionable insights for policymakers and market participants.

3 Research Methodology

This study is applied in nature and employs a descriptive–survey method. The statistical population comprises experts in the monetary and banking sectors, as well as individuals directly or indirectly involved in financial market investments. Given the nature of the research, data were collected via a structured questionnaire. The questionnaire's validity was confirmed

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through prior studies and expert review, while its reliability was established with a Cronbach's alpha exceeding 0.70.

Data analysis was conducted using SPSS (version 24) and SmartPLS software. Initially, descriptive statistics and normality tests were performed. Subsequently, the measurement model was evaluated for reliability and validity, followed by structural equation modeling to examine the relationships among variables and the impact of key dimensions (risk reduction, risk coverage, operational mechanisms, and institutional framework) on the adoption of forfaiting.

3.1 Research Hypotheses

The central hypothesis of this study is as follows: It is feasible to establish a forfaiting institution in Iran with the objective of risk reduction.

To test this hypothesis, the feasibility of forfaiting is examined across four critical dimensions:

1) **Risk Reduction**: Evaluating the extent to which forfaiting can mitigate political, commercial, and credit risks faced by Iranian exporters.
2) **Risk Coverage**: Assessing the instrument's capacity to hedge against exchange rate and interest rate fluctuations.
3) **Operational Mechanisms**: Analyzing the practical conditions and requirements for implementing forfaiting within Iran's financial system.
4) **Institutional Framework**: Measuring the adequacy of existing laws and regulations and identifying the need for institutional reforms to support forfaiting.

Accordingly, the research questionnaire was designed around these four dimensions to enable a comprehensive and systematic feasibility assessment.

4 Research Findings

4.1 Descriptive Statistics of Research Variables

Descriptive statistics play a crucial role in empirical research, as hypothesis testing relies on the characteristics and distribution of the data. In this study, data were collected using interval scales, which allow for precise quantitative analysis despite lacking an absolute zero point.

Two categories of statistical indicators were employed:

– **Measures of Central Tendency**: Including mean, median, and mode, which reflect the concentration of data around central values.

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- **Measures of Dispersion**: Including standard deviation, variance, range, and coefficient of variation, which indicate the spread and variability of data around the central values.

The simultaneous use of these indicators provides a comprehensive picture of the variables and forms a solid basis for interpreting their relationships in subsequent analyses.

Table 1
Descriptive Indicators of Research Variables

Variable	Items	Mean	Std. Dev.	Min	Max
Risk Reduction	7	3.485	0.850	1.00	5.00
Risk Coverage	7	3.774	0.692	1.71	5.00
Operational Mechanism	13	3.488	0.726	1.15	5.00
Institutional Framework	10	3.497	0.687	1.70	5.00

Source: Research Findings

The analysis of central tendency and dispersion indicators suggests that the data are well-distributed, with variable means ranging between 3 and 4. This indicates a general tendency among respondents to select positive options, reflecting a favorable perception of the studied dimensions. Theoretically, this finding implies a latent potential for adopting forfaiting in Iran's financial markets.

4.2 Data Normality

To assess the normality of data distribution, skewness and kurtosis statistics were examined. As shown in Table 2, the skewness and kurtosis values for all variables fall within the acceptable range (±2), indicating that the data are normally or approximately normally distributed. Accordingly, the assumptions for applying parametric tests and structural equation modeling are satisfied. The hypotheses for this test are defined as follows:

- Null Hypothesis (H_0): The variable follows a normal distribution.
- Alternative Hypothesis (H_1): The variable does not follow a normal distribution.

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Table 2
Normality Test Results

	Skewness	Std. Error	Kurtosis	Std. Error
Risk Reduction	-0.596	0.197	0.170	0.391
Risk Coverage	-0.388	0.197	0.210	0.391
Operational Mechanism	-0.331	0.197	-0.182	0.391
Institutional Framework	0.096	0.197	0.422	0.391

Note: All variables exhibit acceptable skewness and kurtosis values.
Source: Research Findings

The results indicate that skewness and kurtosis values for all variables fall within the acceptable range (±2). The Kolmogorov–Smirnov test confirms that the data distribution is normal or approximately normal, which is statistically significant as it permits the use of parametric tests for further analysis. Thus, the data are suitable for structural equation modeling.

4.3 Pearson Correlation Analysis

Pearson's correlation coefficient is a key statistical measure used to assess the strength and direction of linear relationships between two quantitative variables. The coefficient ranges from -1 to +1, with values near +1 indicating a strong positive relationship, values near -1 indicating a strong negative relationship, and values near 0 suggesting no meaningful linear relationship.

The test is based on the following hypotheses:

- Null Hypothesis (H_0): The correlation coefficient equals zero, indicating no significant linear relationship.
- Alternative Hypothesis (H_1): The correlation coefficient differs from zero, indicating a statistically significant relationship.

Table 3
Pearson Correlation Coefficients

Variables	Risk Reduction	Risk Coverage	Mechanism	Framework
Risk Reduction	1			
Risk Coverage	0.520	1		
Operational Mechanism	0.594	0.558	1	
Institutional Framework	0.237	0.423	0.245	1

Source: Research Findings

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As observed in the Table 3, all correlation coefficients between the variables are confirmed at the significance level of 0.05. This indicates a positive and significant relationship among the main dimensions of the study. For example, the correlation between the "risk reduction" dimension and "forfaiting adoption" suggests that the more exporters believe in the capability of this instrument to reduce risk, the greater their inclination to use it will be. This finding aligns with the results of international research (Whittaker, 2000; Velentzas et al., 2013) and highlights the importance of risk management in financial decision-making.

4.4 Examination of the Theoretical Model Using Structural Equation Modeling (SEM)

To test the validity of the theoretical framework and estimate path coefficients, this study employed Structural Equation Modeling (SEM) using Partial Least Squares (PLS) software. Generally, SEM is utilized to determine the structure of interrelationships among variables through a set of equations analogous to multiple regression. In line with the research questions posed in this study, the SEM approach was implemented via PLS to explore the underlying causal relationships.

4.4.1 Measurement Model Analysis

The measurement model constitutes a foundational component of SEM, providing a framework for assessing the degree of alignment between observed indicators and latent constructs. In this model, latent variables, those not directly observable are represented and explained through a set of manifest variables. Validating the measurement model is a critical step in ensuring the adequacy of the data collection instrument and its consistency with the theoretical framework, serving as a prerequisite for analyzing causal relationships within the structural model.

In the present study, the measurement model was evaluated using standard indicators within the PLS approach. Construct reliability was assessed through Cronbach's alpha and Composite Reliability (CR). Convergent validity was examined using multiple criteria, including the significance of factor loadings, indicator homogeneity, Average Variance Extracted (AVE), and the comparison of CR and AVE values. Additionally, discriminant validity was tested using the Fornell–Larcker criterion (1981) to confirm the conceptual distinctiveness of the constructs under investigation.

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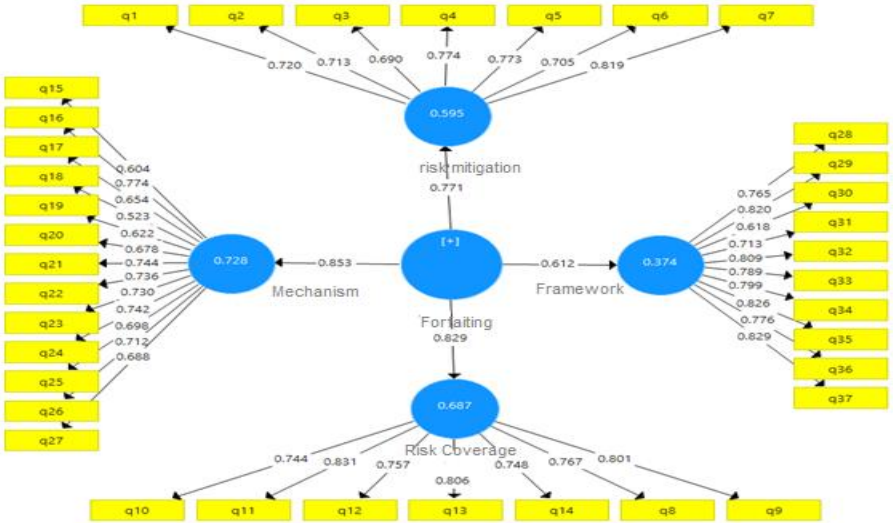

Figure 1. Research Model Utilizing Standardized Factor Loading Coefficients (Measurement Model Assessment)

Source: Research Findings

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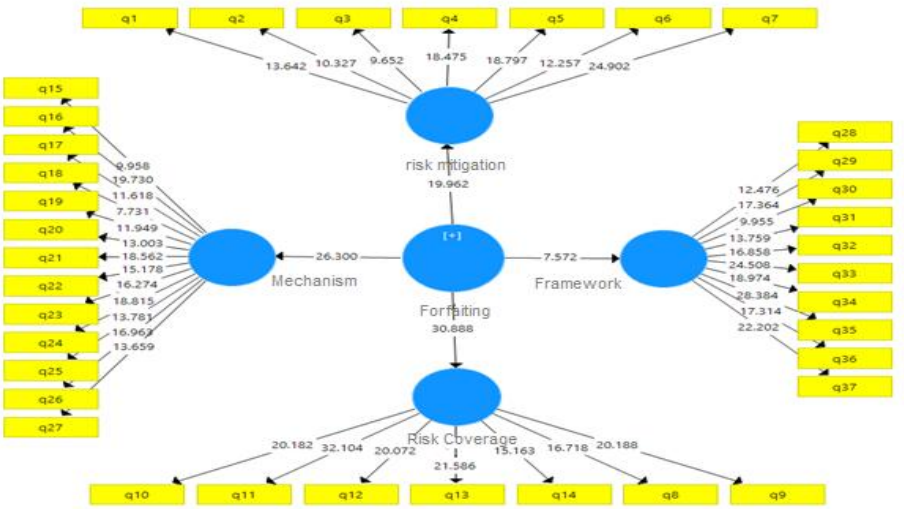

Figure 2. Research Model Based on t-Values (Measurement Model Evaluation)
Source: Research Findings

Reliability Tests: Cronbach's Alpha and Composite Reliability

Within the framework of the Partial Least Squares (PLS) algorithm, following the evaluation of factor loadings, construct reliability was assessed using Cronbach's alpha and Composite Reliability (CR). Cronbach's alpha is a traditional metric for measuring internal consistency, reflecting the degree of correlation among items within a construct. Values approaching 1 indicate high homogeneity and coherence of the measurement instrument. However, due to the conservative nature of this index, many empirical studies now favor Composite Reliability (CR) as a more robust criterion within variance-based structural equation modeling.

Composite Reliability incorporates the factor loadings of each indicator, offering a more precise estimate of internal consistency. In exploratory

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research, CR values between 0.60 and 0.70 are considered minimally acceptable, while in confirmatory studies, values above 0.70 indicate satisfactory reliability. In the present study, the results of both Cronbach's alpha and CR calculations for all constructs exceeded the recommended thresholds, thereby confirming the reliability of the measurement model.

Table 4
Cronbach's Alpha and Composite Reliability Results

Construct	**Cronbach's Alpha (α > 0.70)**	**Composite Reliability (CR > 0.70)**
Risk Reduction	0.865	0.896
Risk Coverage	0.892	0.915
Operational Mechanism	0.906	0.921
Institutional Framework	0.927	0.938

Source: Research Findings

As shown in Table 4, all constructs exhibit acceptable reliability, with both Cronbach's alpha and CR values exceeding 0.70. This indicates strong internal consistency among questionnaire items and confirms that the data collection instrument is sufficiently reliable for subsequent analysis. Accordingly, the constructs representing risk reduction, risk coverage, operational mechanism, and institutional framework demonstrate both theoretical and statistical coherence, qualifying them for inclusion in the structural model.

4.4.2 Validity Assessment of the Measurement Model

Validation of the measurement model an essential prerequisite for structural analysis, was conducted using a set of reliability and validity indicators. In the first step, convergent validity was assessed through factor loadings and related metrics. All factor loadings exceeded 0.40, and their t-values surpassed the critical thresholds of 1.96 and 2.58 at the 95% and 99% confidence levels, respectively. This confirms that all indicators reliably represent their corresponding latent constructs.

Additionally, the Average Variance Extracted (AVE) values for all constructs were above 0.50, and CR values exceeded AVE in every case. According to the criteria proposed by Fornell and Larcker (1981), this pattern indicates satisfactory convergent validity.

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Table 5
Convergent Validity Assessment Using AVE

Construct	AVE	CR	CR > AVE	Result
Risk Reduction	0.552	0.896	Yes	Confirmed
Risk Coverage	0.608	0.915	Yes	Confirmed
Operational Mechanism	0.574	0.921	Yes	Confirmed
Institutional Framework	0.604	0.938	Yes	Confirmed

Source: Research Findings

As shown in Table 5, all constructs have AVE values greater than 0.50, indicating that the indicators effectively capture the variance of their respective latent variables. Thus, the dimensions of the study risk reduction, risk coverage, operational mechanism, and institutional framework demonstrate strong convergent validity.

4.5 Discriminant Validity Assessment

Discriminant validity is a critical aspect of measurement model validation, assessing the extent to which constructs are conceptually distinct from one another. In other words, it ensures that each construct measures a unique dimension of the phenomenon under investigation. Discriminant validity complements convergent validity and is essential for confirming that constructs do not overlap conceptually and each represents a distinct theoretical domain.

In this study, discriminant validity was evaluated using the Fornell–Larcker criterion. According to this method, the square root of AVE for each construct must exceed its correlations with other constructs. This condition ensures that the variance explained by the indicators of a construct is greater than the shared variance with other constructs.

The results of the Fornell–Larcker test confirm that, for all constructs, the square root of AVE is greater than the inter-construct correlations. This strongly supports the presence of discriminant validity and indicates that the constructs represent distinct conceptual domains.

Table 6
Discriminant Validity Assessment (Fornell–Larcker Criterion)

Construct	Risk Reduction	Risk Coverage	Mechanism	Framework
Risk Reduction	0.743			
Risk Coverage	0.542	0.780		
Operational Mechanism	0.626	0.586	0.688	
Institutional Framework	0.256	0.447	0.275	0.777

Source: Research Findings

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As shown in Table 6, the square root of AVE for each construct exceeds its correlations with other constructs. This confirms that each construct is sufficiently distinct from the others and that the conceptual dimensions under investigation have been measured independently. Therefore, the model does not suffer from conceptual overlap, and each construct contributes uniquely to explaining the phenomenon of forfaiting adoption.

From a theoretical standpoint, this finding reinforces the robustness of the conceptual framework and affirms the validity of the measurement model as a reliable foundation for structural model testing.

4.6 Structural Model Analysis

4.6.1 Path Coefficients (β) and Their Significance (t-values)

The first step in evaluating the goodness-of-fit of the structural model involves assessing the statistical significance of path coefficients using the t-statistic. This metric determines whether the estimated relationships between constructs are statistically reliable. Decision-making is based on comparing the obtained t-values with critical thresholds at various confidence levels typically 1.64, 1.96, and 2.58 for 90%, 95%, and 99% confidence, respectively. If the t-value of a path coefficient exceeds the minimum critical value at the selected confidence level, the null hypothesis (no significant relationship) is rejected, and the research hypothesis is confirmed.

Thus, the t-test for path coefficients serves as a key tool for validating conceptual relationships within the structural model and provides the basis for inferring the robustness of the proposed hypotheses.

Table 7
Path Coefficients and t-values

Independent Construct	Dependent Construct	Path Coefficient (β)	t-value	Rank
Forfaiting	Risk Reduction	0.771	19.962	3
	Risk Coverage	0.829	30.888	2
	Operational Mechanism	0.853	26.300	1
	Institutional Framework	0.612	7.572	4

Source: Research Findings

As shown in Table 7, the construct Risk Reduction has a statistically significant and positive path coefficient (β = 0.771, t = 19.962), confirming the corresponding hypothesis. This result indicates that the more exporters and financial market participants perceive forfaiting as a tool for mitigating political and commercial risks, the more inclined they are to adopt it. This

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finding aligns with the results of Velentzas et al. (2013) and, in the context of Iran's economy, suggests that under conditions of sanctions and political uncertainty, the adoption of innovative financial instruments focused on risk management becomes increasingly critical.

4.6.2 Coefficient of Determination (R^2) for Endogenous Latent Variables

The second key indicator in assessing the structural model's fit is the coefficient of determination (R^2) for endogenous latent variables. R^2 reflects the proportion of variance in the dependent constructs explained by the exogenous constructs, serving as a measure of the model's explanatory power. Thresholds of 0.19, 0.33, and 0.67 are commonly used to denote weak, moderate, and strong explanatory power, respectively (Henseler et al., 2009).

However, interpretation of R^2 should also consider the number of exogenous variables influencing each endogenous construct. When one or two exogenous constructs affect an endogenous variable, R^2 values above 0.33 are generally sufficient to confirm model validity. In contrast, higher R^2 values are expected when multiple exogenous constructs are involved.

Table 8
R^2 Values for Key Constructs

Construct	R^2
Risk Reduction	0.595
Risk Coverage	0.687
Operational Mechanism	0.728
Institutional Framework	0.374

Source: Research Findings

As shown in Table 8 and Figure 2, the R^2 values for the endogenous constructs Risk Reduction, Risk Coverage, Operational Mechanism, and Institutional Framework are within acceptable ranges, indicating that the model demonstrates satisfactory explanatory power.

4.6.3 Predictive Relevance (Q^2)

The Q^2 statistic, first introduced by Stone (1974) and later extended by Geisser (1975), is used to assess the predictive relevance of the model. Q^2 assesses the model's ability to predict the values of endogenous constructs not included in the estimation process, thereby serving as an indicator of predictive validity.

Using the Blindfolding procedure, Q^2 values are calculated for each endogenous construct. Positive Q^2 values indicate the presence of predictive

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relevance, while zero or negative values suggest a lack thereof. Reference thresholds of 0.02, 0.15, and 0.35 denote weak, moderate, and strong predictive power, respectively (Hair et al., 2019). However, interpretation should account for model complexity and the nature of inter-construct relationships, as an increase in the number of exogenous variables may inflate Q^2 without necessarily enhancing conceptual validity.

Thus, Q^2 complements R^2 in evaluating the structural model and serves as a metric for external validity and generalizability. Achieving positive and meaningful Q^2 values provides empirical support for the model's predictive capabilities and reinforces its theoretical and practical robustness.

In the proposed structural model, the constructs were specified as endogenous variables in separate structural equations .Specifically , Institutional Framework ,Operational Mechanism ,Risk Coverage ,and Risk Reduction each act as dependent variables with at least one incoming structural path. Therefore, the Stone–Geisser Q^2 statistic was calculated for all four constructs to assess their predictive relevance. As shown in Table 9, all Q^2 values are positive, indicating adequate predictive relevance of the model for each endogenous construct.

Table 9
Q^2 Values for Key Constructs

Construct	**Q^2**
Risk Reduction	0.299
Risk Coverage	0.384
Operational Mechanism	0.317
Institutional Framework	0.194

Source: Research Findings

As shown in Table 9, all Q^2 values are positive and fall within acceptable ranges, indicating that the model possesses adequate predictive relevance for the studied constructs.

4.6.4 Overall Model Evaluation

To assess the overall fit of structural equation models which encompass both the measurement and structural components a unified metric known as the Goodness-of-Fit (GOF) index is employed. First introduced by Tenenhaus et al. (2005) the GOF index provides a comprehensive measure of the model's alignment with empirical data. It is calculated based on a combination of

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convergent validity indicators and explanatory power (R^2), offering a holistic view of model quality.

Interpretation thresholds for GOF are as follows: 0.01 (weak fit), 0.25 (moderate fit), and 0.36 (strong fit). Values exceeding these thresholds indicate that the model not only possesses adequate reliability and validity in its measurement component but also accurately and robustly represents structural relationships among constructs.

Confirmation of the GOF index marks the completion of the model evaluation process, as this comprehensive metric simultaneously assesses the theoretical coherence and empirical strength of the conceptual framework. Positive GOF results provide empirical evidence supporting the adequacy and effectiveness of the research model.

4.6.5 Overall Model Fit Using the GOF Index

Table 10
Global Model Fit Based on GOF Criterion

Mean Communality	Mean R^2	GOF
0.399	0.596	0.487

The GOF index is calculated as follows: $\sqrt{Communalities * R^2} = 0.487$
Source: Research Findings

As shown in Table 10, the GOF value is reported at a high level, indicating a satisfactory overall fit of the research model. This result suggests that the proposed model effectively explains the relationships among the study's constructs. From a theoretical perspective, this finding confirms the robustness of the conceptual framework. From a practical standpoint, it implies that the proposed model can serve as a reliable basis for decision-making regarding the development of forfaiting instruments in Iran's financial markets.

4.5 One-Sample t-Test for Evaluating Variable Status

To assess the status of the research variables, a one-sample t-test was conducted. This inferential statistical method enables comparison between the observed sample mean and a theoretical or benchmark value, thereby allowing for judgment on whether the empirical values significantly deviate from the expected level.

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In this study, the value of 3 was selected as the benchmark, representing the midpoint of the five-point Likert scale (ranging from 1 to 5), and indicating an average level for the variables.

The hypotheses for the test were defined as follows:

- **H_0: $\mu = 3$** (The mean equals the benchmark value)
- **H_1: $\mu \neq 3$** (The mean differs from the benchmark value)

Accordingly:

- A mean greater than 3 indicates a status above average.
- A mean less than 3 reflects a below-average status.
- A mean equal to 3 suggests a neutral or average condition.

Given the results of skewness and kurtosis analyses and confirmation of data normality, the use of the one-sample t-test was deemed appropriate for this study. The implementation of this test provided an empirical basis for evaluating respondents' perceptions regarding the feasibility of establishing a forfaiting institution in Iran's financial markets. It served as a statistical foundation for analyzing potential deviations of the variables from the theoretical benchmark.

4.6 One-Sample t-Test Analysis of Key Variables

4.6.1 Impact of Forfaiting on Risk Reduction in Iran's Financial Markets

Table 11

One-Sample t-Test Results for Risk Reduction

Variable	Mean	t-value	Significance	Mean Difference	95% Confidence Interval
Risk Reduction	3.485	7.036	0.000	0.484	0.348 – 0.621

Source: Research Findings

The results of the one-sample t-test for the "Risk Reduction" variable indicate a significance level of 0.000, which is below the 0.05 threshold. Therefore, the null hypothesis ($\mu = 3$) is rejected, and the alternative hypothesis is accepted. The observed mean of 3.485 is significantly higher than the theoretical benchmark of 3, with a t-value of 7.036.

These findings suggest that the implementation of forfaiting mechanisms in Iran's financial markets can play a meaningful role in mitigating existing risks. In other words, respondents perceive that this financial instrument enhances the ability of firms and investors to manage uncertainty, thereby

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improving the level of risk reduction beyond the average. Consequently, the establishment of a forfaiting institution in Iran could significantly contribute to financial security and the reduction of commercial and credit risks.

4.6.2 Impact of Forfaiting on Risk Coverage

Table 12
One-Sample t-Test Results for Risk Coverage

Variable	Mean	t-value	Significance	Mean Difference	95% Confidence Interval
Risk Coverage	3.773	13.785	$p < 0.001$	0.773	0.662 – 0.884

Source: Research Findings

The one-sample t-test results for "Risk Coverage" show a significance level of 0.000, confirming the rejection of the null hypothesis and acceptance of the alternative. The observed mean of 3.773 is significantly above the benchmark, with a t-value of 13.785.

Analytically, this indicates that forfaiting can effectively enhance risk coverage in Iran's financial markets. Respondents believe that the establishment of a forfaiting institution significantly strengthens the capacity of firms and investors to manage uncertainty and respond to commercial and financial risks. Thus, this financial instrument not only contributes to risk mitigation but also improves the efficiency of financial risk management mechanisms.

4.6.3 Impact of Forfaiting on Operational Mechanisms

Table 13
One-Sample t-Test Results for Operational Mechanism

Variable	Mean	t-value	Significance	Mean Difference	95% Confidence Interval
Operational Mechanism	3.488	8.298	$p < 0.001$	0.488	0.372 – 0.604

Source: Research Findings

The one-sample t-test for the Operational Mechanism variable yields a significance level of 0.000, indicating a statistically significant deviation from the benchmark. The observed mean of 3.488 and a t-value of 8.298 confirm that the variable is significantly above the average level.

These results suggest that the implementation of forfaiting can positively influence operational mechanism in Iran's financial markets. Respondents believe that this financial tool enhances procedural efficiency and strengthens the effectiveness of operational frameworks. Therefore,

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forfaiting holds the potential to improve the practical and administrative capabilities of the financial system.

4.6.4 Impact of Forfaiting on Institutional Framework

Table 14
One-Sample t-Test Results for Institutional Framework

Variable	Mean	t-value	Significance	Mean Difference	95% Confidence Interval
Institutional Framework	3.496	8.915	$p < 0.001$	0.496	0.386 – 0.606

Source: Research Findings

The one-sample t-test results for the "Institutional Framework" variable show a significance level of 0.000, confirming the rejection of the null hypothesis. The observed mean of 3.496 and a t-value of 8.915 indicate a statistically significant improvement above the average level.

These findings demonstrate that the establishment of a forfaiting institution can enhance the institutional framework of Iran's financial markets. Respondents believe that this financial instrument provides the necessary capacity to improve regulatory infrastructure, strengthen oversight systems, and increase transparency. Thus, the development of forfaiting contributes not only to operational efficiency but also to institutional reliability and effectiveness.

5 Discussion and Conclusion

The findings of this study reveal that the implementation of forfaiting in Iran's financial markets can be explained through four key dimensions: risk reduction, risk coverage, operational mechanisms, and institutional framework. Structural equation modeling results indicate that the components of risk reduction and risk coverage exert the strongest influence on the adoption of this instrument, while weaknesses in the institutional framework represent the most significant barrier to its development.

This implies that although forfaiting possesses strong theoretical and technical potential for export financing and credit risk mitigation, the absence of clear regulations and supporting institutions remains the primary obstacle to its practical application in Iran.

From the perspective of Iran's economic context, the implications of these findings are multifaceted:

1) **Reduction of Commercial and Political Risk for Exporters**: Given the high-risk nature of regional markets, forfaiting can serve as an

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effective tool for ensuring the recovery of export revenues and enhancing trust among Iranian traders.

2) **Enhancement of SME Competitiveness**: By providing immediate liquidity, forfaiting enables Iranian small and medium-sized enterprises to participate more actively in international markets.
3) **Need for Institutional and Legal Reform**: The results highlight that institutional weakness is the greatest barrier. Therefore, the Central Bank, Ministry of Economic Affairs, and the banking system must develop clear regulations and standardized guidelines for the use of forfaiting.
4) **Impact on Foreign Investment Attraction**: Clarifying the legal framework surrounding forfaiting can increase investor confidence and facilitate access to foreign currency financing.

Based on these findings, the following recommendations are proposed:

- Financial policymakers should draft legal frameworks to establish a specialized forfaiting institution.
- Banks and financial institutions should create dedicated units for risk management and innovative financial instruments to support the operational implementation of forfaiting contracts.
- The Iran Chamber of Commerce, as the representative of the private sector, should play an active role in promoting and educating exporters about this financial tool.

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