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INFORMATION SOLUTIONS FOR RISK MINIMIZATION IN INTERNATIONAL REAL ESTATE MARKET

The study examines the role of information-based solutions in minimizing risks and enhancing decision-making in the international real estate market, with a focus on Red Sun Real Estate Company. The analysis identifies key risks, such as interest rate volatility, repayment challenges, and market fluctuations, and proposes strategies tailored to cross-border operations. Recommendations include implementing fine management systems, adopting multi-form development models, optimizing capital structure, and enhancing fund management through information-based approaches. The study also explores the financial benefits of these strategies, such as increased revenues, cost savings, and risk mitigation. Using Red Sun Real Estate Company as a practical example, the research highlights the potential for leveraging advanced technologies to address global market challenges.

Key words: *information, international market, minimization, real estate, risk.*

Formulation of the problem. The international real estate market is characterized by high levels of uncertainty and diverse risks, including economic fluctuations, legal complexities, and cultural differences. These challenges necessitate the development and implementation of robust information solutions to identify, assess, and mitigate potential risks in cross-border transactions and operations. Leveraging data-driven tools and market intelligence can significantly enhance decision-making and reduce exposure to financial and operational uncertainties.

Analysis of recent research and publications. Existing research highlights diverse approaches to risk management in the real estate sector. Ciaramella G. and Celani A. emphasize industrial strategies for minimizing risks in real estate development [1], while Liu X., Han Y. and Li X. utilize the DEMATEL-ISM model to identify risk pathways in financial operations of small and medium-sized enterprises [3, p. 230]. Additionally, Zhong J., Huang T. and Cao J. focus on leveraging the Z-Score model for risk analysis, showcasing the growing reliance on data-driven tools and models to enhance financial stability and decision-making in the industry [6, p. 25]. Despite the substantial body of literature, the topic of information solutions for risk minimization in the international real estate market requires further exploration, particularly regarding the integration of advanced technologies and cross-border risk mitigation strategies.

Formulation of the purpose of the article. The purpose of this article is to analyze the role of information solutions in minimizing risks in the international real estate market, identify key challenges associated with cross-border operations, and propose strategies for leveraging data-driven tools to enhance decision-making and ensure sustainable business practices.

Presentation of the main research material. The international real estate market involves the buying, selling, and leasing of properties across national borders. It is characterized by diverse market conditions, legal frameworks, and economic factors that vary from country to country. Key features include opportunities for portfolio diversification, potential for high returns in emerging markets, and exposure to global economic trends.

The international real estate market presents several risks that investors must carefully consider before making decisions. These risks can be broadly categorized into the following areas:

1. Political Risks – political instability, government changes, social unrest, or conflicts can reduce demand, devalue assets, and make properties inaccessible to investors.

2. Economic Risks – currency fluctuations, economic downturns, and inflation can lower property demand, reduce returns, and erode purchasing power, increasing financial challenges.

3. Market-Specific Risks – real estate markets, especially in emerging economies, can be volatile, with risks of overvaluation, liquidity issues, and significant losses during market corrections.

4. Legal and Ownership Risks – unclear property rights, title issues, and weak enforcement increase the risk of disputes, fraud, and transaction delays.

5. Cultural and Operational Risks – language barriers, cultural differences, and reliance on local partners complicate negotiations and property management.

6. Environmental and Climate Risks – natural disasters and climate change impact property value and viability, increasing risks and insurance costs.

7. Reputational and Ethical Risks – corruption, lack of transparency, and controversial projects can harm investor reputation and lead to legal challenges [1, 2, 5].

Information solutions for risk minimization in the international real estate market involve leveraging data, analytics, and technology to identify, assess, and mitigate potential risks associated with investments. A practical study on the application of information solutions will be examined using the example of Nanning Red Sun Real Estate Company.

Nanning Red Sun Real Estate Company, established in 2009 as a privately-owned enterprise with a registered capital of 120 million Yuan, operates in strict compliance with national laws and regulations [4].

To support its expansion into the international real estate market, Nanning Red Sun Real Estate Company plans to raise $10 million by issuing bonds with a coupon rate of 6% and a maturity period of five years. However, this approach presents several risks that must be carefully considered to ensure the successful execution of the company's international growth strategy.

Firstly, interest rate risk is a significant concern. If market interest rates increase, the attractiveness of the company's bonds will decline. For example, if the market rate rises to 8%, the bond's value will decrease, potentially hindering the company's ability to raise the necessary funds. This issue is particularly critical in the context of the international real estate market, where interest rate volatility can vary across regions.

Secondly, the company faces repayment ability risk, requiring sufficient cash flow to meet both principal and interest payments. Any shortfall in cash reserves could force the company to seek deferrals or risk defaulting on its obligations to bondholders. Such outcomes could significantly damage investor confidence, a vital factor in securing funding within the competitive international real estate market.

Thirdly, market risk poses challenges, as future market fluctuations could affect the bonds' value and overall investor sentiment. These fluctuations may be influenced by global economic conditions, changes in foreign property markets, or unforeseen geopolitical events, all of which are integral to the international real estate sector. A decrease in bond prices or diminished confidence in the company's future performance could jeopardize the success of its fundraising and expansion objectives.

In conclusion, Nanning Red Sun Real Estate Company must comprehensively assess these risks and implement robust risk management strategies tailored to the complexities of the international real estate market. By doing so, the company can enhance its ability to raise the required capital and achieve its ambitious business expansion goals.

Red Sun Real Estate Company, a leading entity in China's real estate industry, has shown adaptability and resilience over the past two decades [4]. As the company expands into the international market, addressing financial risks becomes critical. The exploration focuses on financial risk control strategies, emphasizing the use of information-based solutions such as data analytics, digital tools, and predictive modeling to enhance management systems and strategies. These recommendations, tailored to the challenges of the global real estate market, are visually summarized in Figure 1 to provide a clear framework for strengthening the company's risk management processes.

1. Implementing a Fine Management System – Red Sun Real Estate Company recognizes that precise management can significantly improve operational efficiency, especially in addressing challenges like inventory backlogs caused by pandemic-related market disruptions. By integrating fine management practices across departments, supported by information systems, the company can enhance coordination and decision-making, boosting quality and efficiency.

2. Developing a Multi-Form Development Model – diversification remains critical for Red Sun Real Estate Company as it ventures into international markets. Expanding into emerging sectors such as elderly care real estate, which offers significant growth potential, could mitigate risks tied to business simplification. Leveraging data analytics for feasibility studies and return projections can support strategic diversification decisions.

3. Refining Investment Strategies – the company should adopt data-driven investment analysis to evaluate potential projects comprehensively. Feasibility studies enhanced with information tools can assess capital needs, profit margins, and risk provisions, enabling informed decision-making and efficient allocation of resources.

4. Optimizing the Capital Structure – addressing financial imbalances, such as low current and quick ratios, requires optimizing the debt structure by increasing long-term liabilities. Information-based modeling and visualization tools can aid in analyzing and planning adjustments to achieve financial stability in international operations.

5. Establishing Diversified Financing Channels – developing varied financing methods that comply with regulations, such as private equity and joint ventures, is crucial. Data-driven evaluations can identify optimal financing options, balancing risk and return.

6. Enhancing Fund Management – effective cash flow management is vital for sustainability in the competitive international real estate market. Implementing digital tools for budgeting, monitoring, and capital allocation can improve transparency and efficiency, aligning financial management with strategic goals.

7. Strengthening Budget Management – comprehensive and integrated budget management across all operations is essential for mitigating risks and
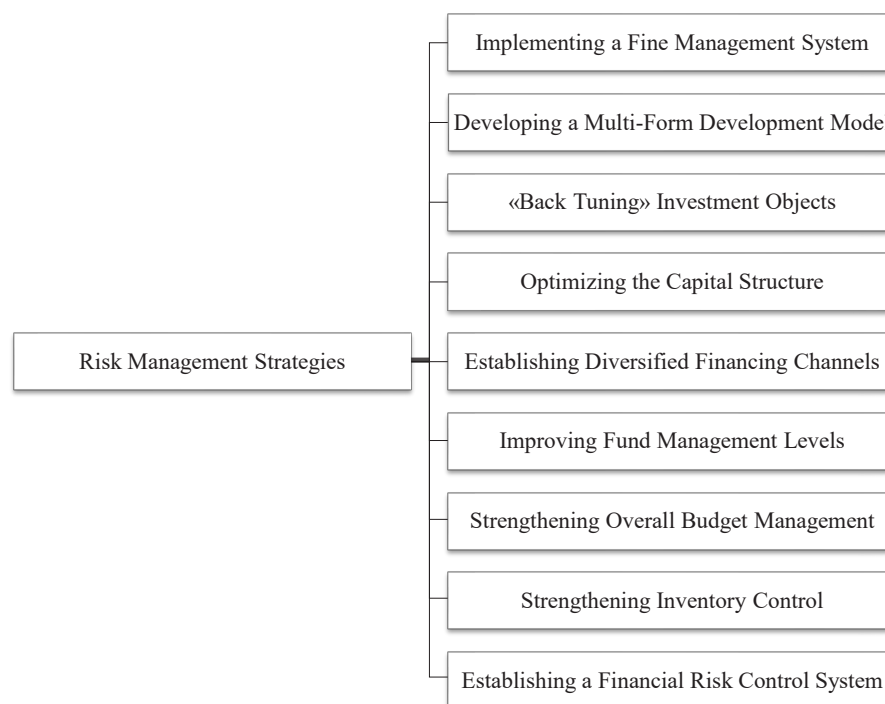
Figure 1. Risk Management Strategies for Red Sun Real Estate Company

Source: Author's own research

supporting strategic objectives. Utilizing predictive analytics and digital dashboards for performance evaluation can enhance alignment with financial and operational goals.

8. Improving Inventory Control – robust inventory management systems are crucial for handling growing inventory in international markets. Adopting digital tools for inventory tracking and sales forecasting can streamline the destocking process and improve operational efficiency.

9. Establishing a Financial Risk Control System – creating a dedicated Financial Risk Management Department equipped with information-based risk assessment tools will strengthen the company's ability to manage financial uncertainties. Clear role definitions and continuous professional development will ensure effective implementation and adaptation to international market challenges.

In international business management, the success of strategies depends on effective implementation and stakeholder perception. In the global real estate market, information-based solutions are crucial for aligning strategies with the priorities of management, employees, investors, and customers. Figure 2 illustrates a scoring matrix evaluating stakeholder perceptions of these strategies.

The Fine Management System scores 8 from management for enhancing efficiency, 7 from investors for optimizing returns, 6 from employees with oversight concerns, and 5 from customers for indirect service benefits. The Multi-Form Development Model scores 7 from management, 8 from investors for diversification benefits, 6 from employees for cautious

optimism, and 6 from customers for innovation potential. The "Back Tuning" Investment strategy scores 7 from management, 8 from investors for return potential, 5 from employees for uncertainty, and 4 from customers for limited impact. Optimizing Capital Structure scores 9 from both management and investors for improving stability, 6 from employees for moderate acceptance, and 5 from customers for indirect benefits. Diversified Financing Channels scores 8 from management and investors for flexibility, 6 from employees for neutral views, and 5 from customers for stability benefits. Improving Fund Management scores 9 from management and investors for efficiency, 6 from employees for moderate recognition, and 5 from customers for indirect benefits. Strengthening Budget Management scores 9 from management, 8 from investors, 7 from employees, and 6 from customers for strategic alignment and stability. Strengthening Inventory Control scores 8 from management, 7 from employees and investors for cost efficiency, and 5 from customers for indirect satisfaction. The Financial Risk Control System scores 9 from management and investors for stability, 6 from employees for compliance concerns, and 5 from customers for long-term benefits.

These information-driven strategies are highly rated by management and investors for their efficiency and risk management benefits in international markets. Employees show moderate support, while customers note indirect advantages in service quality and stability.

Table 1 provides an in-depth analysis of the potential for implementing the proposed strategy for Red Sun Real Estate Company, with a focus on leveraging information-based solutions in the international real estate market.

The table evaluates critical factors such as global market dynamics, internal resource allocation, and the competitive landscape.

Table 1 highlights the financial benefits of adopting information-based strategies at Red Sun Real Estate Company, particularly within the international real estate market. Implementing a fine management system could save approximately 5 million CNY annually by enhancing operational efficiency. Diversifying into innovative models like elderly care real estate offers a potential revenue increase of 75 million CNY annually,

demonstrating significant growth opportunities. Refining investment strategies with data-driven ROI analysis could yield an additional 8 million CNY annually. Optimizing the capital structure and diversifying financing channels through digital tools could collectively save 6.2 million CNY in financing and interest costs. Enhancing fund management with advanced monitoring systems and comprehensive budgeting tools could save 750K and 10 million CNY, respectively. Improved inventory control through digital solutions could reduce excess costs by 3 million CNY annually, while a financial risk
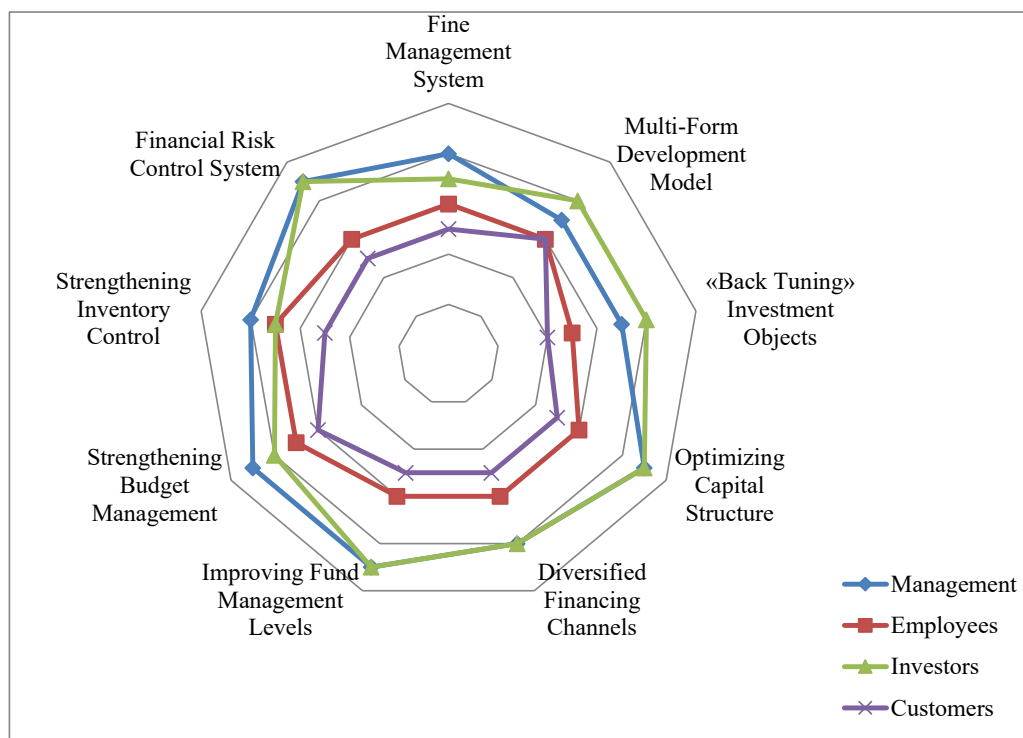

Figure 2. Perception Scoring Matrix for Proposed Strategies for Red Sun Real Estate Company

Source: Author's own research

Table 1

Analysis of Strategy Implementation Potential for Red Sun Real Estate Company in the International Market

Strategy	Assumption for Improvement	Baseline Figures	Improvement Impact	Annual Financial Benefit (CNY)
Fine Management System	Reduces operational costs by 5%	100M operational costs	5% cost reduction	5M
Multi-Form Development Model	Increases revenues by 15%	500M revenue	15% revenue increase	75M
"Back Tuning" Investment Objects	Improves ROI from 5% to 7%	200M invested	ROI increase 2%	8M (from 10M to 14M)
Optimizing Capital Structure	Reduces interest expenses by 1%	20M interest expenses	1% cost reduction	200K
Diversified Financing Channels	Reduces financing costs by 20%	30M financing costs	20% cost reduction	6M
Improving Fund Management Levels	Reduces cash holding costs by 15%	5M cash management costs	15% cost reduction	750K
Strengthening Budget Management	Reduces cost overruns by 25%	40M cost overruns	25% cost reduction	10M
Strengthening Inventory Control	Reduces excess inventory by 30%	10M inventory costs	30% reduction	3M
Financial Risk Control System	Prevents losses amounting to 5% of revenue	500M revenue	Loss prevention	25M

Source: Author's own research

control system using predictive analytics could prevent potential losses, safeguarding 25 million CNY annually.

The adoption of these strategies is essential for strengthening Red Sun Real Estate Company's financial stability and global competitiveness. By leveraging information-based solutions, the company can optimize efficiency, mitigate risks, and ensure proactive decision-making. These initiatives enhance resilience and position the company for sustainable growth in the dynamic international real estate market.

Conclusions. The analysis underscores the critical importance of integrating innovative, information-driven strategies to address the complexities of the international real estate market. By focusing on data analytics, digital tools, and predictive modeling, Red Sun Real Estate Company can enhance its decision-making and adaptability in a competitive global environment. Overall, the findings highlight a forward-looking strategy that aligns with global market dynamics and positions the company for long-term success.

References:
1. Ciaramella, G., & Celani, A. (2023). Perspective Chapter: Minimizing Risk in Real Estate Development: An Industrial Approach. *Business, Management and Economics. IntechOpen.* DOI: https://doi.org/10.5772/intechopen.112980
2. Internal control in the real estate industry and its financial risk management. (2022). *Academic Journal of Business & Management,* 4(18). DOI: https://doi.org/10.25236/ajbm.2022.041810
3. Liu, X., Han, Y., & Li, X. (2022). Risk path identification and factor analysis of project capital operation of small and medium-sized real estate enterprises based on the DEMATEL-ISM model. *BCP Business & Management, 30,* 228–237.
4. Official Web-Site of Nanning Red Sun Real Estate Company. Accepted at: https://www.rsun.com/
5. Wanxin, X., & Lyshenko, M. (2023). Modern concepts, principles and perspectives of business process management in real estate enterprises. *Economy and Society,* (52). DOI: https://doi.org/10.32782/2524-0072/2023-52-22
6. Zhong, J., Huang, T., & Cao, J. (2024). Risk Analysis of Real Estate Enterprises Based on the Z-Score Model. *Highlights in Business, Economics and Management,* 38, 24–36.

ІНФОРМАЦІЙНІ РІШЕННЯ ДЛЯ МІНІМІЗАЦІЇ РИЗИКІВ НА МІЖНАРОДНОМУ РИНКУ НЕРУХОМОСТІ

Стаття присвячена ролі інформаційних рішень у мінімізації ризиків та підвищенні ефективності прийняття рішень на міжнародному ринку нерухомості, з акцентом на компанії Nanning Red Sun Real Estate Company. Між-народний ринок нерухомості характеризується значною невизначеністю та численними ризиками, включаючи економічні коливання, політичну нестабільність, правові складнощі та культурні відмінності. У таких умовах використання аналітики даних, цифрових інструментів і прогнозного моделювання є ключовим для управління ризиками, оптимізації операцій та покращення фінансових результатів. У роботі виділено основні категорії ризиків: політичні, економічні, специфічні для ринку, правові, культурні, екологічні та репутаційні. Для кожної категорії запропоновано конкретні стратегії мінімізації за допомогою інформаційних технологій. Практичне дослідження проводилося на прикладі компанії Nanning Red Sun Real Estate Company, яка планує залучити 10 мільйонів доларів США для міжнародного розширення шляхом випуску облігацій. У роботі аналізуються ризики цього підходу, зокрема ризики процентної ставки, здатності до погашення боргу та ринкові ризики. Визначено, що управління цими ризиками за допомогою інформаційних рішень дозволяє покращити довіру інвесторів та забезпечити успішну реалізацію стратегічних планів. Дослідження також акцентує увагу на важливості дивер-сифікації фінансування, оптимізації капітальної структури та інтеграції сучасних систем управління даними. Результати дослідження демонструють, що інформаційно-орієнтовані рішення є ключем до ефективного управління ризиками на міжнародному ринку нерухомості. Висновки акцентують увагу на необхідності страте-гічного планування, адаптації до глобальних ринкових динамік та впровадження інновацій, що забезпечує дов-гострокову стійкість та конкурентоспроможність компанії в умовах глобалізації. Також підкреслено, що сис-темне впровадження інформаційних технологій у процес управління дозволяє оптимізувати ресурсні витрати та підтримувати стабільний розвиток на різних етапах реалізації міжнародних проектів.

Ключові слова: інформація, міжнародний ринок, мінімізація, нерухомість, ризик.