

# THE IMPACT OF MONETARY POLICY ON THE CONNECTION BETWEEN MARKET RISK AND REAL ESTATE INVESTMENT TRUSTS (REITS) IN THE CHINESE CONTEXT

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#### **Abstract**

**Purpose**: This study examines the influence of market risk on China's Real Estate Trust Funds (REITs), specifically exploring the role of monetary policy as an intermediate variable in this association. The performance of REITs in the real estate industry is directly affected by market risk, which is impacted by a range of economic variables.

**Design/methodology/approach**: Nevertheless, the impact of monetary policy on the connection between market risk and Real Estate Investment Trusts (REITs) in the Chinese context has not been thoroughly examined. The research utilises a thorough examination that integrates metrics of market risk, such as security price risk and real estate price risk, and evaluates their influence on the returns and value of China's REITs. The study uses econometric modelling to analyse the mediating impact of monetary policy, namely changes in interest rates and interventions by central banks, on the correlation between market risk and the performance of Real Estate Investment Trusts (REITs).

**Findings**: The results of this study are anticipated to enhance our comprehension of the complex dynamics inside China's real estate market, elucidating the impact of market risk on the behaviour of REITs and the function of monetary policy in mitigating these impacts. The findings of this research may provide valuable guidance for investors, policymakers, and market players who are looking for a better understanding of the intricacies of the Chinese real estate investment market.

**Research & Practical implications**: The primary objective of the study is to make significant contributions to academic literature and practical decision-making in the field of real estate financing and investment in China.

**Originality/value**: As a summary of essential characteristics, this paper provides researchers with a useful reference guide to previous studies. The research utilises an all-encompassing examination that integrates market risk indicators, including business cycle risk, interest rate risk and inflation

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risk, to evaluate the influence of these factors on the returns and valuation of China's REITs. Based on the results, the potential avenues for future investigation are provided.

**Keywords**; security price risk, monetary policy, real estate price risk.

## Introduction

Managing real estate hazards has become a pressing global concern (Luoa & Wareewani, 2023, Newell, et. al., 2023, Chu, Deng & Tsang, 2023). As the largest developing economy in the world, China's real estate market has witnessed unprecedented growth over the past three decades and has become a pillar of economic development (Zhou, 2023). However, the Chinese real estate market has experienced a significant decline in recent years. In 2022, commercial housing transactions in China totaled CNY 13,33 trillion, a 26.7% decrease from the previous year. This downturn presents a substantial challenge to the Chinese economy. At present, REITs have received a lot of attention, the market expectation is generally high, China's real estate investment trust is still in the exploration stage, the capital market is not mature, there are problems such as imperfect market system, immature traders, regulatory system is not adapted to the market, and so on, which may lead to large market fluctuations, so it is very necessary to carry out risk research (Newell, et. al., 2023, Ashta, 2023, Zhi, 2023).

In the next few years, the financing environment of housing enterprises will no longer be as loose as in the past, the total amount of funds entering the real estate will be reduced, housing enterprises will seek more diversified financing channels, and will no longer be based on the development of new projects in the operation, but will pay more attention to the operation of the stock of real estate (Newell, et. al., 2023, Chu, Deng & Tsang, 2023). In the capital market of developed countries, REITs have been skillfully used by real estate enterprises, and have reflected its advantages in optimizing statements and reducing financial leverage. In combination with the current situation of domestic real estate enterprises, REITs will also become the mainstream tool of real estate finance in China. Therefore, for real estate developers, as one of the financing channels, REITs risk research can help manage the overall risk of real estate projects and companies (Ashta, 2023, Zhi, 2023).

For ordinary investors, REITs effectively resolve some shortcomings of traditional real estate investment. Judging from the preference of individual investors for real estate in China, it is likely to cause a wave of investment boom. REITs, like stock and bond funds, can be allocated freely. To understand the risk characteristics of REITs that are different from other financial assets as soon as possible, we can maintain a rational understanding in this wave of enthusiasm (Liu et. al. 2023, Ma et. al., 2023. Existing research has demonstrated the significance of land in China's real estate market and highlighted the impact of land finance on local economic development, real estate bubbles, and official promotion (Hu, 2023, Liye, 2017). However, investigations into the role of land finance in the real estate market in relation to local government debt are still uncommon. Due to the burden of economic development assessments, this study will analyses the

business cycle risk, interest rate risk and inflation risk with the mediation of monetary policy on the volatility of REITs.

# Literature review

## **REIT** fluctuation

The phenomenon of fluctuation within the realm of real estate investment trusts (REITs) pertains to the inherent variability exhibited by the prices associated with REIT shares or units as they evolve through the passage of time. The aforementioned fluctuations are propelled by a multitude of factors and possess noteworthy ramifications for investors. It is commonly observed that real estate investment trust (REIT) prices exhibit an inverse correlation with interest rates (Piao & Mei, 2023, Xu & Zhang, 2023). When there is an increase in interest rates, the allure of fixed-income investments intensifies, thereby prompting investors to potentially divert their attention from Real Estate Investment Trusts (REITs), consequently resulting in a decline in their prices. In contrast, in the event of a decline in interest rates, real estate investment trusts (REITs) may exhibit enhanced appeal owing to their comparatively higher dividend yields. The volatility of real estate investment trust (REIT) prices can be influenced by the prevailing investor sentiment towards the real estate market (Dekle & Tsang, 2023, Zhang et. al., 2023). A favourable sentiment regarding the prospective trajectory of the real estate sector has the potential to augment the demand for Real Estate Investment Trusts (REITs), whereas an unfavourable sentiment can engender a propensity to divest from such assets. The financial performance of real estate investment trusts (REITs) can be influenced by various factors pertaining to the local and regional real estate market. These factors encompass alterations in property supply and demand, fluctuations in rental rates, and variations in occupancy rates (Coën, Lecomte & Zaiter, 2023). It is imperative to recognise that these market conditions possess the potential to significantly impact the underlying properties held by REITs, thereby influencing their financial outcomes. These aforementioned factors have the potential to exert an influence on the prices of Real Estate Investment Trusts (REITs). The price volatility of a Real Estate Investment Trust (REIT) can be influenced by the composition of its underlying portfolio. Real Estate Investment Trusts (REITs) that possess a diversified portfolio encompassing various property types, such as residential, commercial, and industrial, as well as spanning multiple geographic regions, have the potential to exhibit greater price stability when contrasted with their counterparts that possess concentrated exposures. It is imperative for investors in Real Estate Investment Trusts (REITs) to possess a comprehensive understanding of the following factors and acknowledge that price fluctuations constitute an inherent component of investing in this particular asset class (Ashta, 2023). While it is true that certain situations can offer potential advantages, it is important to acknowledge that they also entail inherent hazards. The utilisation of diversification, a protracted investment horizon, and a clearly delineated investment strategy are indispensable methodologies for effectively managing the ramifications of price fluctuations in real estate investment trust (REIT) investments. In addition, it is imperative for investors to duly contemplate their unique investment objectives, risk tolerance, and time horizon

whilst deliberating upon investment choices within the realm of real estate investment trusts (REITs) (Ma et. al., 2023, Newell et. al., 2023).

# Monetary policy

The ramifications of monetary policy, as established by a central bank or governmental entity, can bear substantial consequences for the realm of real estate investment trusts (REITs). The primary ramifications of monetary policy decisions pertain to interest rates, inflation, and the broader economic milieu, all of which possess the potential to exert influence on the performance and investment terrain for Real Estate Investment Trusts (REITs). One of the foremost and consequential ramifications of monetary policy on Real Estate Investment Trusts (REITs) manifests itself via alterations in interest rates (Gupta & Kaur, 2023). When a central bank engages in the manipulation of its benchmark interest rates, such as the federal funds rate in the United States, it possesses the capacity to exert an impact on the borrowing expenses incurred by businesses, including those operating within the real estate sector. Elevated interest rates have the potential to engender augmented financing expenditures for Real Estate Investment Trusts (REITs), thereby exerting an influence on their profitability and the accessibility of real estate ventures. The influence of monetary policy on the formation of inflation expectations is a significant aspect to consider (Ma et. al., 2023, Wang & Chen, 2023). The adoption of policies by central banks that are perceived as inflationary, such as the lowering of interest rates and the implementation of quantitative easing, has the potential to exert an influence on the expectations held regarding future inflation (Wang & Chen, 2023). The real returns on investments in Real Estate Investment Trusts (REITs) can be influenced by fluctuations in inflation expectations. This is due to the fact that rental income and property values may require adjustments in order to preserve their purchasing power in the face of inflationary pressures. In summary, it can be posited that the implementation of monetary policy assumes a fundamental and influential position in moulding the economic landscape within which Real Estate Investment Trusts (REITs) function. In the realm of real estate investment trusts (REITs), it is imperative for both managers and investors to demonstrate a keen awareness of the dynamic nature of interest rates, inflation expectations, and the broader economic landscape (Raco, Sun & Brill, 2023). Such astute discernment is essential in informing their investment choices and strategies. By effectively aligning their strategies with the dynamic monetary policy landscape, Real Estate Investment Trusts (REITs) can enhance their ability to adeptly navigate the multifaceted challenges and potential advantages arising from shifts in the monetary policy framework.

## Security price risk

The phenomenon of security price risk within the realm of real estate investment trusts (REITs) pertains to the inherent possibility for the market valuations of REIT shares or units to experience oscillations as a result of diverse determinants. The oscillations observed in the prices of securities have the potential to exert an influence on the returns and investment performance of Real Estate Investment Trusts (REITs) (Chu, Deng & Tsang, 2023, Wang & Chen,v2023). Interest rate

sensitivity is a paramount determinant of security price risk within the realm of Real Estate Investment Trusts (REITs). Real Estate Investment Trusts (REITs) frequently allocate a substantial proportion of their earnings to shareholders through the disbursement of dividends. The phenomenon of rising interest rates has been observed to exert a discernible impact on the investment landscape, particularly with regards to fixed-income instruments (Allen et.al., 2023, Huang, 2023). In light of this, it is plausible to posit that the allure of fixed-income investments tends to heighten in such circumstances (Wang & Chen, 2023). Consequently, this heightened appeal may engender a concomitant reduction in the demand for Real Estate Investment Trusts (REITs). The presence of heightened competition arising from fixed-income securities has the potential to exert a downward influence on the prices of Real Estate Investment Trust (REIT) shares. Real Estate Investment Trusts (REITs) exhibit a direct correlation with fluctuations in the real estate market (Ashta, 2023, Chu, Deng & Tsang, (2023). The occupancy rates and rental income of properties, as well as the overall financial performance of the underlying assets, can be influenced by market conditions, specifically the presence of an oversupply in particular property types or regions. This phenomenon, in its reciprocal nature, has the potential to exert an impact on the valuation of Real Estate Investment Trust (REIT) shares (Feng et. al., 2023). In summary, it can be posited that the presence of security price risk is an inherent characteristic that is inexorably intertwined with the act of investing in Real Estate Investment Trusts (REITs). The potential benefits of diversification and income generation offered by Real Estate Investment Trusts (REITs) should be duly acknowledged by investors (Huang, 2023). However, it is imperative for investors to remain cognizant of the various factors that can exert influence on the prices of REIT shares (Gupta & Kaur, 2023, Ouyang & Zhou, 2023). The effective navigation of security price risk associated with Real Estate Investment Trusts (REITs) necessitates the implementation of risk management strategies, the diversification of investments, and the maintenance of up-to-date knowledge regarding market conditions (Li et. al., 2023).

## Real estate price risk

The concept of real estate price risk within the context of real estate investment trusts (REITs) pertains to the inherent possibility for the valuation of the underlying real estate assets held by the REIT to experience oscillations, thereby exerting an influence on the overall performance and financial gains of said REIT (Wang & Chen, 2023, Ashta, 2023). The fluctuations in real estate prices are intricately intertwined with the prevailing market conditions at both the local and regional levels (Ashta, 2023). Property values can be influenced by various factors, including but not limited to the interplay between supply and demand, patterns of economic growth, and shifts in population demographics. In the context of a market experiencing a downward trajectory, it is plausible for property valuations to undergo a reduction, thereby exerting an adverse influence on the net asset value (NAV) of a real estate investment trust (REIT). The price risk of individual properties within a Real Estate Investment Trust's (REIT) portfolio can be significantly influenced by their condition and location (Newell et. al., 2023, Ashta,2023). Properties that are older or have not been adequately maintained may exhibit a greater vulnerability to experiencing a decline in

their market values. Conversely, properties situated in highly desirable locations that are characterised by a robust demand may exhibit a tendency to retain or even appreciate in value (Yang, 2023, Wang & Chen, 2023). The fluctuation of interest rates has the potential to exert a significant impact on the dynamics of real estate prices. When there is an increase in interest rates, it leads to a corresponding rise in the cost of borrowing, which has the potential to diminish property demand and subsequently impact property prices. In summary, it can be posited that the assessment of real estate price risk assumes a paramount role in the decision-making process of investors engaging in real estate investment trusts (REITs). In light of the diversification advantages and real estate market accessibility that Real Estate Investment Trusts (REITs) offer, it is imperative for investors to possess an understanding of the various factors that can exert influence on property valuations within the REIT's portfolio (Liu et. al., 2023, Chu, Tsang & Wong, 2023). The implementation of active management, diversification, and a comprehensive comprehension of local and regional market conditions emerges as pivotal strategies in the endeavour to alleviate real estate price risk within REIT investments.

## **Finding**

Reliability refers to the consistency of scale tools. The measurement indicators include individual item reliability and internal consistency (Hair et al., 1998). Among them, the individual item reliability is tested by factor loading. The internal consistency is tested by latent variable composition reliability (CR) and Cronbach's alpha. The recommended value needs to be greater than 0.7. The validity refers to the correctness of the scale tool, and the measurement indicators include convergent validity and discriminant validity. The convergent validity is mainly to measure the correlation between items with the same dimension, and to detect the average variance extraction (AVE). The recommended value needs to be greater than 0.5 (Bagozzi & Yi, 1988). The discriminant validity is to measure the correlation between items with different facets, using the square root value of AVE to test. If the square root value of the diagonal AVE is greater than the correlation coefficient value of the horizontal or vertical column, it represents discriminative validity (Fornell & Larcker, 1981). The Cronbach's alpha and Composite reliability values of all dimensions are also greater than 0.7, indicating good reliability and internal consistency with the range from 0.951 to 0.974. The AVE value of each dimension is greater than 0.5, indicating good convergent validity with the range 0.642 to 0.695. Table 2 shows that the square root value of the diagonal AVE is greater than other correlation coefficient values in the matrix with the range 0.823 to 0.871. Detected by heterotrait-monotrait analysis, Table 3 shows that all values are less than 0.9, indicating good discriminant validity with the range from 0.807 to 0.864 (Henseler, Ringle & Sarstedt, 2015).

Table 1; Cronbach's Alpha, Composite Reliability and Average Variance Extracted

Cronbach's	rho_A	Composite	Average
Alpha		Reliability	Variance

				Extracted (AVE)
REIT	0.957	0.958	0.967	0.652
MP	0.957	0.957	0.966	0.642
SPR	0.966	0.966	0.974	0.662
REPR	0.936	0.942	0.951	0.695

Source: Developed by the Author

Table 2; Discriminative validity

	REITS	MP	SPR	REPR
REIT	0.823			
MP	0.869	0.843		
SPR	0.924	0.832	0.839	
REPR	0.914	0.786	0.910	0.871

Source: Developed by the Author

Table 3; HTMT

	REITS	MP	SPR	REPR
REIT				
MP	0.807			
SPR	0.961	0.864		
REPR	0.959	0.822	0.851	

Source: Developed by the Author

Table 4; Direct relationship

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	
SPR-> MP	0.467	0.461	0.060	7.791	0.000

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REPR-> MP	0.562	0.555	0.066	8.547	0.000
MP -> REIT	0.832	0.830	0.029	28.475	0.000

Source: Developed by the Author

Hypothesis 1 proposed there has a significant relationship between security price risk with monetary policy. Based on the result presented in Table 4, there has a significant relationship between security price risk and monetary policy with the score ( $\beta$  = 0.467, t = 7.791, p > 0.05). Hypothesis 2 show a significant relationship between real estate price risk with monetary policy with the score ( $\beta$  = 0.562, t = 8.547, p > 0.05) which indicated hypothesis 2 is supported. Finally, hypothesis 3 is supported with the score ( $\beta$  = 0.832, t = 28.475, p > 0.05) which indicate that there has a significant relationship between monetary policy with real estate investment trust.

**Table 5; Indirect relationship** 

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	
SPR -> MP -> REIT	0.467	0.461	0.060	7.791	0.000
REPR -> MP -> REIT	0.330	0.335	0.052	6.307	0.000

Source: Developed by the Author

Hypothesis 4 ad 5 show there has a significant mediation effect of monetary policy in the relationship between security price risk and real estate price risk with real estate investment trust. Both hypothesis is supported with the score ( $\beta = 0.467$ , t = 7.791, p > 0.05) and ( $\beta = 0.303$ , t = 6.307, p > 0.05)

## **Discussion**

The correlation between the risk of security prices and monetary policy is both substantial and intricate. Security prices in stock markets, bond markets, and other financial instruments are impacted by several variables, with monetary policy playing a pivotal role in creating the entire financial landscape (Dursun-de Neef, Ongena & Schandlbauer, 2023). Interest rates have a significant and immediate effect on security prices, making it one of the primary ways in which monetary policy influences them. Central banks use interest rate mechanisms to execute monetary policy (Dua, 2023). Fluctuations in interest rates may significantly impact the value of bonds. An increase in interest rates causes a reduction in the present value of future cash flows generated by current bonds, resulting in a fall in bond prices. In contrast, a decrease in interest rates may lead to

an increase in bond prices (Macaire & Naef, 2023; Ammer et.al., 2023). The policy interest rate, when altered, directly impacts the discount rates used in stock valuation models. The needed rate of return for equity investments is changed in response to fluctuations in interest rates. Raising interest rates may result in a rise in the discount rate, which in turn can cause a decrease in the present values of future cash flows and perhaps lead to lower prices of equities. In contrast, decreased interest rates might provide the other outcome (Lewis, 2023; Diamond, Jiang & Ma, 2023). Monetary policy has an impact on the availability of funds in financial markets. Monetary policy that accommodates involves reducing interest rates and increasing the availability of money, which might boost the willingness of investors to take on more risk. This might result in increased values and reduced perceived risk in financial markets. In contrast, implementing a more restrictive monetary policy might decrease the availability of liquid assets and heighten the tendency to avoid risky investments, which can possibly have an effect on the values of securities (Guo, Ottonello & Perez, 2023; Lukonga, 2023).

The correlation between the risk of real estate prices and monetary policy is substantial and complex, since monetary policy plays a pivotal role in influencing the behaviour of real estate markets (Bekaert, Hoerova & Xu, 2023).. The policy interest rate, a key component of monetary policy, has a direct impact on interest rates across the whole economy. Real estate purchases often include borrowing, and variations in interest rates may have a substantial effect on mortgage expenses. Increasing interest rates by central banks results in higher borrowing costs, which may reduce the demand for real estate and thus impact property values. Monetary policy impacts the affordability of real estate for prospective purchasers (Ehrenbergerova, Bajzik & Havranek, 2023; Bauer, Bernanke & Milstein, 2023). Decreased interest rates enhance the affordability of homeownership by reducing the expenses associated with borrowing. This may enhance demand and lead to an increasing influence on real estate prices. In contrast, elevated interest rates might limit affordability, resulting in reduced demand and possible negative influence on pricing (Zhang et. Al., 2023; Lamas & Romaniega, 2022). The aggregate liquidity in financial markets, which is controlled by monetary policy choices, impacts the accessibility of funding for real estate transactions (Corsetti, Dedola & Leduc, 2023). An accommodative monetary policy, characterised by reduced interest rates, may bolster liquidity and facilitate access to finance for people and enterprises. Implementing a more restrictive monetary policy might possibly lead to a decrease in available funds and have an adverse influence on real estate transactions (Ngoc, 2023).

Financial markets inherently include security price risk, whereas the real estate industry inherently involves real estate price risk. Factors such as market volatility, economic circumstances, and investor attitude may have effect on security prices, including stocks and bonds. The risk of real estate prices is linked to the volatility of property values, which are impacted by variables such as economic trends, interest rates, and local market dynamics. Central banks have the ability to serve as intermediaries in the connection between the risk of securities prices, the risk of real estate prices, and the performance of Real Estate Investment Trusts (REITs) (Dua, 2023; Gerardi, Willen & Zhang, 2023). Central banks use monetary policy instruments, such as interest rate

modifications and non-traditional methods, to regulate economic circumstances and ensure financial stability. Modifications in interest rates, a key element of monetary policy, have the potential to affect both the values of securities and real estate. The adjustment of interest rates by central banks has a direct impact on the cost of capital, which in turn influences the value of financial instruments and the desirability of investing in real estate. Increased interest rates may heighten the danger of security prices by influencing discount rates, whilst decreased rates can influence the risk of real estate prices (McKay & Wolf, 2023). REITs are susceptible to fluctuations in interest rates because of their organisational structure and obligations to distribute revenue. Elevated interest rates have the potential to augment borrowing expenses for Real Estate Investment Trusts (REITs), which might have an effect on their profitability and value (Ikeda, 2023). In contrast, decreased interest rates might potentially increase the attractiveness of REITs as investments that generate income. Monetary policy choices have an impact on the behaviour of investors. Effective communication from central banks expressing their position on interest rates and economic circumstances may influence market expectations and perceptions of risk (Ngoc, 2023). Investors may modify their investment portfolios in reaction to fluctuations in interest rates, which may have an effect on both the pricing of securities and the real estate market. The global integration of financial markets implies that monetary policy choices made in one nation might have repercussions that extend beyond its borders (Zhang, Leonard & Bitzan, 2023; Gorodnichenko, Pham & Talavera, 2023). Fluctuations in interest rates and risk perceptions may have an effect on the movement of money across borders, which in turn can affect the values of securities and the global real estate market, including investments in Real Estate Investment Trusts (REITs).

#### **Conclusion**

To summarise, the connection between the risk of security prices and monetary policy is complex and has many different aspects. Investors and market players diligently observe central bank activities, interest rate decisions, and policy communication to get insights into possible alterations in risk conditions and their influence on asset prices. The efficacy of monetary policy in mitigating security price risk is contingent upon several elements, such as the current economic climate and market anticipations. The significance of monetary authorities in affecting market conditions is highlighted by the mediation impact of monetary policy on the link between securities price risk, real estate price risk, and REITs. Monetary policy choices may greatly impact the performance of financial instruments and real estate assets, including those owned by REITs. Factors such as changes in interest rates, global capital flows, and investor sentiment, influenced by these decisions, can have substantial repercussions. REIT investors should carefully observe central bank activities and adjust their strategies to handle the changing risk landscape influenced by monetary policy.

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