

ANALYSING THE INFLUENCE OF MARKET RISK ON REAL ESTATE TRUST FUNDS (REITS) IN CHINA, THE MEDIATING ROLE OF MONETARY POLICY

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Abstract

Purpose: The present study aims to analyse the influence of market risk on Real Estate Trust Funds (REITs) in China, with particular emphasis on the role of monetary policy as an intermediary variable in this correlation. Market risk, which is directly impacted by a multitude of economic factors, affects the performance of real estate investment trusts (REITs) in the industry.

Design/methodology/approach: In the Chinese context, however, the role of monetary policy as a mediator between market risk and REITs remains an understudied topic. The research utilises an all-encompassing examination that integrates market risk indicators, including business cycle risk, interest rate risk and inflation risk, to evaluate the influence of these factors on the returns and valuation of China's REITs. The objective of this study is to determine, via econometric modelling, whether monetary policy, specifically interest rate fluctuations and central bank interventions, acts as a mediator between market risk and REIT performance.

Findings: The anticipated outcomes of this study are poised to enhance comprehension of the complex intricacies inherent in China's real estate sector. They will provide insights into the manner in which monetary policy moderates the impact of market risk on the conduct of REITs. The study's findings may offer valuable implications for policymakers, investors, and market participants who are interested in gaining a more informed understanding of the intricate Chinese real estate investment environment.

Research & Practical implications: The ultimate objective of this research is to make significant contributions to academic literature and facilitate informed decision-making in the field of China real estate investment and finance.

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 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; Business cycle risk, inflation risk, interest rate risk, monetary policy.

Introduction

The initial conceptualization of real estate investment trusts (REITs) entailed their characterization as unincorporated entities, overseen by a collective of trustees who assumed managerial responsibilities while simultaneously holding convertible income shares. Accordingly, it can be unequivocally stated that Real Estate Investment Trusts (REITs) are unambiguously classified as closed-end investment vehicles that exhibit a distinct specialisation in the acquisition and retention of real estate assets, mortgage-related assets, or a combination thereof (Luoa & Wareewani, 2023, Newell, et. al., 2023, Chu, Deng & Tsang, 2023). From a global standpoint, a real estate investment trust (REIT) can be characterised as a trust fund that aggregates capital from a specific majority of investors through the issuance of income certificates. These funds are then entrusted to specialised investment institutions that specialise in real estate investment management. The resulting comprehensive investment income is subsequently distributed to investors in proportion to their respective contributions (Newell, et. al., 2023, Chu, Deng & Tsang, 2023). In contrast to Chinese trust products, which are exclusively offered through private placement, international Real Estate Investment Trusts (REITs) can be likened to funds in their inherent nature. While a small portion of REITs may fall under the category of private placement, the majority of them are made available through public offerings. Real Estate Investment Trusts (REITs) possess the capacity to exist in two distinct forms, namely closed and traded, thereby bearing resemblance to China's open-end funds and closed-end funds (Zhou, 2023). The escalating trend of real estate loans in the new assets of financial institutions has been observed in China. Approximately 70% of the funds allocated for real estate development are sourced from bank loans, thereby establishing a notable reliance of the industry on the banking sector. The government has implemented a sequence of macroeconomic control measures and a series of policies aimed at tightening credit in the banking sector. Consequently, the limitations of relying solely on real estate as a financing channel have become apparent. Hence, the pressing matter at hand in the realm of real estate development in China pertains to the imperative resolution of constructing a real estate finance system that encompasses diversified channels, exhibits heightened efficiency, and fosters risk diversification (Liu et. al. 2023, Ma et. al., 2023). The emergence of China's real estate investment trust (REIT) can be attributed to the state's enhanced oversight and regulation of credit funds pertaining to real estate enterprises. In response to heightened policy pressures, real estate enterprises engage in collaborative endeavours with trust and investment firms to safeguard the integrity of the capital chain, thereby facilitating the advancement of real estate investment trusts (Ashta, 2023, Zhi, 2023).

Since its inception in August 2007, the domestic real estate fund trust has undergone over a decade of evolution, witnessing the emergence of prominent entities in the form of real estate trust fund companies such as Loyalty Investment, Everbright Anshi, and Dingxin Great Wall Fund. Nevertheless, it is imperative to acknowledge that the developmental trajectory of this

phenomenon in China has been marred by a prolonged period of stagnation (Hu, 2023, Liye, 2017). Consequently, it is evident that there remains a considerable distance to traverse in order to achieve substantial progress within the confines of this nation. In the month of June in the year 2017, the governing body released an official document with the intention of promoting the utilisation of real estate trusts in the realm of long-term rental properties. This document further signifies that such trusts possess the potential for extensive expansion within the nation in the forthcoming times (Liye, 2017). The advent of the real estate trust fund has engendered a paradigm of reciprocal advantage and mutually beneficial outcomes for both the populace and the societal fabric, thereby instilling fresh momentum into the financial market's growth trajectory and proffering a resolution to the quandary of inadequate capital resources. While the current utilisation of real estate trust funds in China remains limited, primarily confined to individual enterprises and specific projects, it is anticipated that this financing avenue will emerge as the most optimal choice for the real estate sector in the foreseeable future. In contrast to the United States, Japan, and other nations, China's real estate trust fund is currently in its nascent phase, characterised by an incomplete tax policy and a dearth of experience. Consequently, the associated risks necessitate the vigilant attention of both investors and society at large (Huang, 2023, Chen, 2022).

In light of the ongoing reform of China's financial system and the progressive evolution of the real estate market, an array of issues within the real estate sector are progressively intensifying. China's real estate market has undergone a transition from a shortage of total supply to a state of "structural oversupply" over the past decade. Despite this shift, there remains a significant number of individuals who maintain optimism regarding housing prices (Wang & Chen, 2023, Ansari & Youxing, 2023). Conversely, numerous housing enterprises frequently encounter challenges related to their capital chain, thereby impeding individuals from investing their funds into real estate projects due to a dearth of investment channels. Hence, the matter of fostering the robust growth of the real estate sector has garnered considerable scrutiny from governmental authorities, academics, and the general populace (Hu, 2023, Guo, 2023). REITs, as a pioneering financial instrument, possess the potential to address the financing challenges encountered by real estate enterprises while concurrently affording market investors the prospect of engaging in real estate investment (Feng et. al., 2023, Ma & Md Taib, 2023). The subject matter at hand holds considerable importance in fostering the advancement of China's real estate sector and the overall national economy. China's financial market is currently distant from the realm of development, resulting in a significant lag in the progress of real estate investment trust funds. Furthermore, even the trust and fund industry in our nation falls considerably behind that of developed countries. This discrepancy can be attributed to the absence of comprehensive laws and regulations, as well as the lack of clarity regarding regulatory bodies. Consequently, the prevailing conditions surrounding the development of real estate investment trust funds in China are unfavourable (Yang et. al, 2023, Zhi, 2023). The absence of a viable environmental status has resulted in the absence of authentic Real Estate Investment Trusts (REITs) products within our nation. Analogous offerings within our jurisdiction are referred to as "class REITs". The deficiency in our market's information disclosure

mechanism further exacerbates the challenge of collecting REITs-related data, thereby necessitating a greater reliance on qualitative analysis to assess the risks associated with REITs (Ma, 2023, Zhongyuan, 2023). Several esteemed scholars have undertaken research endeavours pertaining to the aforementioned risks inherent in REITs. This scholarly article undertakes an examination of the market risks associated with real estate investment trusts (REITs), specifically focusing on the risks stemming from the business cycle, interest rates, and inflation. The study further explores the influence of monetary policy as a mediating factor in order to ascertain its effect on the volatility of REITs within the Chinese context.

Literature review

Monthly return rate fluctuations

The implications of monetary policy, as established by a central bank or government entity, can have substantial effects on the domain of real estate investment trusts (REITs). The primary effects of monetary policy decisions are on interest rates, inflation, and the broader economic environment, all of which have the potential to impact the performance and investment landscape of Real Estate Investment Trusts (REITs) (Piao & Mei, 2023, Xu & Zhang, 2023). One of the most significant and consequential effects of monetary policy on Real Estate Investment Trusts (REITs) is the impact of interest rate fluctuations. When a central bank manipulates its benchmark interest rates, such as the federal funds rate in the United States, it is able to influence the financing costs of businesses, including those in the real estate industry (Dekle & Tsang, 2023, Zhang et. al., 2023). Real Estate Investment Trusts (REITs) could incur greater financing costs if interest rates rise, which could impact their profitability and the availability of real estate investments. Consideration should be given to the effect of monetary policy on the construction of inflation expectations. The adoption of policies by central banks that are perceived as inflationary, such as the reduction of interest rates and the implementation of quantitative easing, has the potential to influence future inflation expectations (Coën, Lecomte & Zaiter, 2023). Variations in inflation expectations can influence the real returns on investments in Real Estate Investment Trusts (REITs). 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 (Ashta, 2023). Real Estate Investment Trusts (REITs) operate within an economic environment shaped by monetary policy. In the domain of real estate investment trusts (REITs), administrators and investors must demonstrate an acute awareness of the dynamism of interest rates, inflation expectations, and the broader economic landscape (Ma et. al., 2023, Newell et. al., 2023). Their investment decisions and strategies must be informed by such keen discernment. By aligning their strategies with the shifting monetary policy landscape, Real Estate Investment Trusts (REITs) can enhance their ability to navigate the myriad challenges and potential opportunities deriving from changes in the monetary policy framework.

Monetary policy

Monetary policy, also known as financial policy, refers to the general term of various guidelines, policies and measures adopted by the central bank to control and regulate the money supply and credit quantity in order to achieve its specific economic objectives (Gupta & Kaur, 2023). The essence of monetary policy is that the country's money supply adopts different policy trends of "tight", "loose" or "moderate" according to the economic development in different periods. Various policies and measures that use various tools to adjust the money supply to adjust the market interest rate, affect the private capital investment through the change of the market interest rate, and affect the aggregate demand to affect the macroeconomic operation (Wang & Chen, 2023). The four major tools of monetary policy to regulate aggregate demand are the statutory reserve ratio, the open market operation and discount policy, and the benchmark interest rate. The nature of monetary policy (the way central banks control the money supply and the linkages between money, output, and inflation) is one of the most fascinating, important, and controversial areas of macroeconomics. In terms of monetary policy risk, they paper classifies the monetary policy as predictable and analyzes its influence on the REITs investment return (Raco, Sun & Brill, 2023). The results show that the unexpected part has more influence on the REITS investment return than the predictable part. Deflation will intensify the recession of real estate investment trusts and affect them to a greater extent (Ma et. al., 2023, Wang & Chen, 2023).

Monetary policy is taken as the intermediary variable, and the influence of REITs is studied one by one, providing a new theoretical perspective for the control of market risk of REITs. The actual level of money supply is the object of monetary policy adjustment. Forecasting the growth and change of money supply is the basis for a country to formulate monetary policy. Therefore, money supply is selected to measure monetary policy. Due to the different economic and financial development and reality of various countries, as well as the different interpretations of the definition of money by economists, the money supply indicators published by the central banks of various countries are also different. There is narrow money supply (the sum of cash in circulation and demand deposits in commercial banks) and broad money supply (the sum of narrow money supply plus time deposits in commercial banks). It includes all forms of money that can become real purchasing power, usually reflecting changes in social aggregate demand and future inflationary pressures. In recent years, many countries have taken M2 as the target of money supply regulation (Lin & Jing, 2023).

Business cycle risk

Business cycle risk, commonly referred to as economic or economic cycle risk, holds substantial sway over the operational outcomes of real estate investment trusts (REITs). The phenomenon of economic growth has the potential to exert an upward pressure on property values, owing to the inclination of investors to exploit the heightened demand that accompanies such growth (Xu & Zhang, 2023). The phenomenon described herein has the potential to engender capital appreciation for real estate investment trusts (REITs) that possess holdings in regions characterised by swift economic growth (Zhao, 2023). During periods of economic contraction, it is not uncommon for

property values to exhibit a state of stagnation or even experience a decline, particularly in markets that bear a significant brunt of the economic downturn (Yang, 2023). Real Estate Investment Trusts (REITs) that possess properties located in such regions may potentially experience a decline in the valuation of their fundamental assets. In summary, it is imperative for investors in real estate investment trusts to duly acknowledge the substantial importance of business cycle risk (Huang, 2023, Newell et. al., 2023). The inherent cyclicity of the real estate market necessitates that real estate investment trusts (REITs) encounter a spectrum of prospects and obstacles across various economic cycles. The comprehension of the various sectors within the realm of real estate and their corresponding reactions to economic circumstances, coupled with the implementation of risk mitigation tactics, can assist investors in effectively manoeuvring through the oscillations of the business cycle, particularly in relation to investments in Real Estate Investment Trusts (REITs) (Lin & Jing, 2023).

Interest rate risk

Interest rate reflects the level of capital cost and is the decisive factor to decide enterprise investment and financing. Interest rate risk refers to the possibility of loss caused by the uncertainty of interest rate changes. In the Principles of Interest Rate Risk Management promulgated by Basel Committee in 1997, interest rate risk is defined as: interest rate changes are the possibility of financial institutions being damaged when actual returns deviate from expected returns or actual costs deviate from expected costs (Li & Qian, 2023). The assessment of interest rate risk holds paramount importance for real estate investment trusts (REITs) due to its potential to exert substantial influence on their financial performance and the valuation of their investment portfolio (Ashta, 2023). The aforementioned risk emanates from the inherent susceptibility of Real Estate Investment Trusts (REITs) to fluctuations in interest rates. Such fluctuations can significantly impact the financing expenses, property appraisals, and investor interest associated with REITs. The valuation of properties exhibits a strong correlation with fluctuations in interest rates. As the prevailing interest rates experience an upward trajectory, it is plausible that property capitalization rates, which denote the rate at which net operating income is capitalised into property values, may also exhibit an upward trend. The aforementioned phenomenon has the potential to result in diminished property appraisals (Gupta & Kaur, 2023).

Real Estate Investment Trusts (REITs) possess the ability to address this particular risk by strategically directing their attention towards properties that exhibit lower sensitivity to interest rates. Alternatively, REITs can proactively engage in the active management of their property portfolios, with the aim of maximising overall value (Newell et. al., 2023, Zhang et. al., 2023). In addition, the implementation of a strategy that encompasses a diversified portfolio consisting of various property types and locations can effectively serve as a means to attenuate the potential consequences stemming from fluctuations in capitalization rates. The present discourse aims to delve into the intricate relationship between leverage and net interest margin (Gupta & Kaur, 2023). By examining the interplay between these two key financial metrics, we seek to shed light

on the potential implications for financial institutions and their stakeholders. Leveraging refers to the strategic utilisation Mortgage Real Estate Investment Trusts (REITs), characterised by their investment in mortgage-backed securities and utilisation of leverage, exhibit a heightened susceptibility to variations in interest rates (Ma et. al, 2023). The escalation of interest rates has the potential to augment the expenses associated with borrowing and constrict the net interest margins. Mortgage Real Estate Investment Trusts (REITs) have the potential to effectively address interest rate risk through the implementation of interest rate hedges, the diversification of their mortgage securities portfolio, and the meticulous management of their leverage ratios. In summary, it can be posited that interest rate risk constitutes a noteworthy determinant capable of exerting a discernible influence on the operational efficacy of real estate investment trusts. REITs may encounter obstacles in the event of interest rate escalation; however, they can also reap advantages from diminished rates under specific economic circumstances (Li & Qian, 2023, Ashta, 2023). Hence, it is imperative for Real Estate Investment Trusts (REITs) to exercise judicious risk management practises, encompassing the utilisation of diverse financial instruments and strategies. This is crucial in order to effectively navigate the volatilities associated with interest rate fluctuations, while simultaneously upholding their financial well-being and appeal to potential investors. Furthermore, it is imperative to uphold investor confidence through the establishment of transparent communication channels regarding the methodologies employed by financial entities in mitigating interest rate risk.

Inflation risk

The consideration of inflation risk in the context of real estate investment trusts (REITs) holds significant importance for investors, as it possesses the potential to exert an influence on the returns and overall performance of these particular investment instruments (Pivoňková, 2023). The concept of inflation risk pertains to the prospective diminishment of the ability to acquire goods and services with forthcoming income and capital derived from investments in real estate, as a consequence of escalating inflationary pressures (Zhao, 2023). The phenomenon of inflation possesses the capacity to gradually diminish the genuine value of rental income, duly adjusted for inflation. In the event that property rental rates fail to exhibit commensurate growth with inflationary trends, it is plausible that the purchasing power of rental income may experience a gradual decline over an extended period. The phenomenon of inflation has the potential to exert an influence on the valuation of properties as well. During periods characterised by elevated inflation rates, it is plausible for the replacement cost of properties to experience an upward trajectory, thereby potentially engendering a corresponding surge in property values (Ashta, 2023, Melnychenko et. al., 2023). Nevertheless, it is crucial to acknowledge that in the event of rental income failing to exhibit a commensurate increase, there exists the possibility for capitalization rates (discount rates) employed for property valuation to escalate, thereby potentially exerting an adverse influence on property values.

The phenomenon of inflation possesses the capacity to exert an influence upon interest rates, thereby engendering a consequential impact upon the cost of financing for Real Estate Investment Trusts (REITs) (Zhang et. al., 2023, Zhao, 2022). Elevated interest rates possess the capacity to engender augmented borrowing expenditures, thereby conceivably exerting an influence on profitability. In summary, it can be posited that the presence of inflation risk in the realm of real estate investments necessitates careful consideration. However, it is noteworthy that real estate investment trusts (REITs) present a multitude of tools and strategies that enable investors to effectively alleviate the adverse effects of inflation (Newell et. al., 2023, Zhao, 2023). Diversification, leases adjusted for inflation, investments in assets that hedge against inflation, and judicious financial planning are imperative for investors seeking to navigate the complexities presented by inflation in the realm of Real Estate Investment Trust (REIT) investments. Furthermore, it is imperative to possess a comprehensive comprehension of the precise methodologies implemented by distinct Real Estate Investment Trusts (REITs) in order to effectively mitigate the potential impact of inflationary pressures. This knowledge is of utmost importance when engaging in investment deliberations within the realm of this particular asset category (Chen & Sutunyarak, 2022).

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 0.947 to 0.967 and 0.960 to 0.974 as presented in Table 1. The AVE value of each dimension is greater than 0.5, indicating good convergent validity with the range 0.626 to 0.682. 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 0.809 to 0.843. Detected by heterotrait–monotrait analysis, Table 3 shows that all values are less than 0.9, indicating good discriminant validity with the range from 0.839 to 0.882 (Henseler, Ringle & Sarstedt, 2015).

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

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
BCR	0.947	0.948	0.960	0.626
IR	0.957	0.958	0.967	0.652
IRR	0.963	0.963	0.971	0.670
MP	0.966	0.966	0.974	0.682
REIT	0.967	0.957	0.966	0.652

Source: Developed by the Author

Table 2 ; Discriminative validity

	BCR	IR	IRR	MP	REIT
BCR	0.809				
IR	0.893	0.843			
IRR	0.879	0.944	0.833		
MP	0.843	0.924	0.903	0.839	
REIT	0.962	0.869	0.904	0.832	0.823

Source: Developed by the Author

Table 3; HTMT

	BCR	IR	IRR	MP	REIT
BCR					
IR	0.839				
IRR	0.820	0.882			
MP	0.881	0.861	0.836		
REIT	1.010	0.907	0.943	0.864	

Source: Developed by the Author

Table 4; Direct relationship

	Original (O)	Sample	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
BCR -> MP	0.041		0.045	0.045	0.919	0.359
IR -> MP	0.634		0.637	0.081	7.801	0.000
IRR -> MP	0.269		0.260	0.082	3.290	0.001
MP -> REIT	0.832		0.830	0.029	28.266	0.000

Source: Developed by the Author

Hypothesis 1 proposed there is a significant relationship between Business cycle risk with monetary policy. From table 4, the result shows a insignificant relationship with the score score ($\beta = 0.041$, $t = 0.919$, $p > 0.05$). Hypothesis 2 show significant relationship between inflation rate with monetary policy with the score score ($\beta = 0.634$, $t = 7.801$, $p > 0.05$) which indicate that proposed hypothesis is supported where there is a significant relationship between inflation rate risk with monetary policy. Hypothesis 3 proposed that there is a significant relationship between interest rate risk with monetary policy, which the result as presented is table 5 show a significant relationship with the score ($\beta = 0.269$, $t = 3.290$, $p > 0.05$). Finally for direct relationship, hypothesis 4 proposed that tthere has a significant relationship between monetary policy with Real estate investment trusts. The result shows a significant relationship with the score ($\beta = 0.832$, $t = 28.266$, $p > 0.05$).

Table 5; Indirect relationship

	Original (O)	Sample	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
BCR -> MP -> REIT	0.034		0.038	0.038	0.895	0.371
IR -> MP -> REIT	0.527		0.528	0.063	8.321	0.000
IRR -> MP -> REIT	0.224		0.216	0.070	3.219	0.001

Source: Developed by the Author

For medication relationship, hypothesis 5 proposed that there has a mediation effect of monetary policy in the relationship between business cycle risk and real estate investment trust. As presented in Table , the result show insignificant effect of mediation with the score ($\beta = 0.034$, $t = 0.895$, $p > 0.05$).this indicate that hypothesis 6 is not supported. Hypothesis 6 proposed a mediation effect of monetary policy in the relationship between inflation risk and real estate investment trust. The result shows a significant mediation effect with the score ($\beta = 0.832$, $t = 28.266$, $p > 0.05$). hypothesis 7 proposed a significant mediation effect in the relationship between inflation risk and real estate investment trust. The result show there is a mediation effect of monetary policy in the relationship between inflation risk with the score ($\beta = 0.224$, $t = 3.219$, $p > 0.05$). This indicate hypothesis 7 is supported.

Discussion

It would be inaccurate to claim that business cycle risk is unrelated to monetary policy, since monetary policy is a crucial instrument that policymakers use to control and impact the business cycle (Bauer, Bernanke & Milstein, 2023). Nevertheless, the efficacy of monetary policy in mitigating changes in the economic cycle may be impacted by several circumstances, and there may be occasions when its influence is constrained or less substantial. There are many factors that might contribute to a perception of a weaker link between business cycle risk and monetary policy. The effects of modifications in monetary policy, such as alterations in interest rates, may need a significant amount of time to influence the overall economy (Carattini, Heutel & Melkadze, 2023). There may be a delay between the implementation of a monetary policy move and the full realisation of its impact on economic activity (Coglianese, Olsson & Patterson, 2023; Spits, Grossman & Martinez-Garcia, 2023). During this period of delay, the dynamics of the economic cycle may be impacted by other variables. In addition, under some economic circumstances, interest rates may already be at or close to zero, therefore restricting the central bank's capacity to use conventional interest rate instruments (McKay & Wolf, 2023; Ge, Liu, & Zhuang, 2023). The zero lower limit, sometimes referred to as this condition, might provide greater difficulties for monetary policy in effectively encouraging economic growth. Moreover, under times of significant economic strain, such as a financial crisis or a worldwide recession, the ability of monetary policy to be successful may be hindered. Unorthodox monetary policy measures, like quantitative easing, may be used, but their effects might be unpredictable and change in various economic circumstances (Martínez-García, Grossman, & Spits, 2023).

The correlation between the inflation rate and monetary policy is a fundamental element of macroeconomic governance. The implementation of monetary policy by central banks is essential in exerting influence on the inflationary level within an economy. the crucial factors to contemplate while analysing the substantial correlation between inflation and monetary policy is because inflation targeting refers to a monetary policy strategy where a central bank sets a specific target for the rate of inflation and uses various tools to achieve and maintain that target. In addition, a significant number of central banks globally, particularly in advanced countries, function under

an inflation-targeting framework (D'Aguanno, 2023). They establish a specific objective for the inflation rate and use monetary policy instruments to attain and sustain that objective. The objective is often articulated as a precise percentage over a period of time in the medium term (Bauer & Swanson, 2023; Kashyap & Stein, 2023). Central banks mostly use interest rates as a mechanism to execute monetary policy. Central banks seek to manipulate borrowing costs, expenditure, and investment by modifying the policy interest rate, such as the federal funds rate in the United States or the policy rate in other nations. Fluctuations in interest rates may directly influence the overall demand for goods and services, and as a result, affect the rate of inflation. Moreover, inflation is determined by several variables, such as the demand for goods and services, the capacity for production, wage levels, and the global economic circumstances (Yiu, 2023; Byrne et. al., 2023). Monetary policy impacts inflation by manipulating the amount of aggregate demand in the economy. When inflation reaches excessive levels, central banks may implement a contractionary or tightening monetary policy by increasing interest rates in order to dampen economic activity. In contrast, in times of low inflation or deflationary pressures, central banks may implement expansionary or accommodating measures by reducing interest rates (Huber, 2023; Ioannou et.al., 2023).

The connection between interest rate risk and monetary policy is vital for investors, financial institutions, and policymakers to comprehend. Interest rate risk pertains to the possible influence of fluctuations in interest rates on the valuation of financial instruments, such as bonds, loans, and other fixed-income assets (Bats, JGiuliodori & Houben, 2023). Central banks, such as the Federal Reserve in the United States or the European Central Bank, possess direct authority over short-term interest rates (Bekaert, Hoerova & Xu, 2023; McKay & Wolf, 2023). Policy instruments, such as the federal funds rate or the policy rate, are used to exert control over borrowing costs in the economy. Fluctuations in these immediate-term rates have a direct impact on the interest earnings and costs of financial instruments with briefer durations (Wan & Lee, 2023; Kappes, 2023). The bond market is the arena where the most immediate and straightforward consequences of interest rate fluctuations are seen. Bond prices and interest rates exhibit an inverse correlation; as interest rates increase, bond prices decrease, and vice versa. Adjusting short-term rates by central banks has a significant impact on the whole yield curve, influencing both short-term and long-term interest rates (Malovaná et. al., 2023). Moreover, investors and financial institutions must carefully monitor the configuration and fluctuations of the yield curve (Gerardi et al., 2023). The yield curve is a visual depiction of the relationship between interest rates and the time it takes for an investment to reach maturity. The measures taken by central banks may result in either a decrease or increase in the slope of the yield curve, depending on whether there is a rise or fall in short-term interest rates (Bauer & Swanson, 2023).

The correlation between monetary policy and Real Estate Investment Trusts (REITs) is substantial and complex. The performance of Real Estate Investment Trusts (REITs) may be directly influenced by monetary policy choices, namely those pertaining to interest rates and the general

state of the economy (Bekaert, Hoerova & Xu, 2023; McKay & Wolf, 2023). Changes in interest rates have a direct and immediate influence on REITs, making it one of the most significant effects of monetary policy. REITs often depend on debt to fund the purchase and development of properties (Dua, 2023; Lu, 2023). Modifications made by central banks to interest rates have a direct impact on the borrowing expenses incurred by Real Estate Investment Trusts (REITs) (Fasanya & Oyewole, 2023). Elevated interest rates have the potential to escalate the expenses associated with borrowing, which might diminish profitability and have an impact on property appraisals. In addition, REITs are often regarded as income-generating assets since they provide dividends (Wan & Lee, 2023; Kappes, 2023). As interest rates increase, the return on other fixed-income assets may become more appealing compared to the returns on Real Estate Investment Trusts (REITs). Investors could adjust their investment portfolios due to fluctuations in interest rates, which can affect the market for Real Estate Investment Trusts (REITs) (Bats, JGiuliodori & Houben, 2023). Moreover, fluctuations in interest rates may impact capitalization rates, which are used to ascertain property values. When interest rates rise, investors may want greater capitalization rates, which might result in decreased property prices. In contrast, decreased loan rates might potentially lead to increased property values (Hodula & Libich, 2023).

Since there is no mediation effect of monetary policy in the link between business cycle risk and Real Estate Investment Trusts (REITs), it implies that monetary policy does not have a major influence or modify the impact of business cycle risk on REIT performance. If there is no mediation effect, it means that business cycle risk directly and independently affects REITs. Fluctuations in the economy, such as growth or decline, which are linked to changes in the risk of the business cycle, would immediately impact the real estate market and thus affect the performance of Real Estate Investment Trusts (REITs) without any intervention or adjustment by monetary policy (Aalbers et. al., 2023; Öztürk, 2023). If monetary policy does not play a mediating role, it implies that the interest rate aspect of monetary policy may not have a major impact on the performance of REITs in reaction to swings in the economic cycle. REITs are often responsive to changes in interest rates since they heavily depend on borrowing money for their real estate assets) (Hodula & Libich, 2023; Wan & Lee, 2023. Nevertheless, in this particular situation, other variables may take precedence, such as the interplay between supply and demand, the underlying characteristics of the property, or the overall mood of investors. REITs are often seen as being relatively unaffected by short-term changes in monetary policy, hence possessing a certain degree of independence (Coglianese, Olsson & Patterson, 2023).. Their performance is likely to be more susceptible to long-term trends, property management tactics, and the general vitality of the real estate market rather than quick fluctuations in interest rates (Fasanya & Oyewole, 2023).

The significant mediation effect of monetary policy in the relationship between interest rates and Real Estate Investment Trusts (REITs) entails comprehending how central bank policies, specifically those pertaining to interest rates, can serve as an intermediary or mediator, influencing the influence of interest rates on the performance of REITs (Aalbers et. al., 2023). REITs are

significantly affected by interest rates due to their dependence on debt for funding real estate ventures (Belotti, 2023; Hudaya & Firmansyah, 2023). When there is an increase in interest rates, the costs of borrowing also rise, which might possibly decrease the profitability of Real Estate Investment Trusts (REITs). In contrast, when interest rates decrease, the costs of borrowing decrease as well, which has a beneficial impact on the profitability of Real Estate Investment Trusts (REITs) (Coglianese, Olsson & Patterson, 2023). The implementation of monetary policy by central banks is vital in influencing the prevailing interest rate conditions (Wan & Lee, 2023; Ringo, 2023). The mediation effect posits that monetary policy has an influence on the manner in which fluctuations in interest rates affect Real Estate Investment Trusts (REITs) (Dua, 2023). Central banks use interest rate mechanisms to attain many macroeconomic goals, including maintaining price stability and fostering economic development (Malovaná et. al., 2023; Benchimol & Bounader, 2023). Various categories of Real Estate Investment Trusts (REITs) may demonstrate different degrees of responsiveness to fluctuations in interest rates. Interest rate-sensitive sectors, such as mortgage REITs, are likely to see a more pronounced impact from interest rate swings in comparison to sectors like healthcare or data centre REITs (Hodula & Libich, 2023; Fasanya & Oyewole, 2023).

Finally, the significant mediation effect of monetary policy on the link between the inflation rate and Real Estate Investment Trusts (REITs) entails comprehending how monetary policy functions as an intermediate or mediator, impacting the influence of inflation on REIT performance. Inflation may directly impact Real Estate Investment Trusts (REITs) (Nazaruddin & Kamaralzaman, 2023). Real estate is often seen as a safeguard against inflation, since the worth of properties and the revenue generated from rentals may increase in reaction to rising prices (Huber, 2023). Nevertheless, the correlation between inflation and the success of Real Estate Investment Trusts (REITs) may vary in different industries and regions (Aalbers et. al., 2023; Dua, 2023). The monetary policy, by affecting interest rates and the general economic situation, might moderate the connection between inflation and Real Estate Investment Trusts (REITs). Central banks may modify interest rates in reaction to inflationary pressures in order to sustain price stability (Lau & Yip, 2023). The fluctuations in interest rates may have a direct influence on the success of Real Estate Investment Trusts (REITs) (Okoro & Ayaba, 2023). Monetary policy influences the relationship by affecting interest rates. If there is an increase in inflation, central banks may choose to raise interest rates in order to mitigate the impact on the economy. Raising interest rates may elevate the cost of money for real estate projects, thus influencing the profitability of REITs (Lau & Yip, 2023).

Conclusion

To summarise, while monetary policy may affect the dynamics of the economic cycle, its efficacy can be impacted by several variables, and its consequences may not always be quick or clear. The correlation between business cycle risk and monetary policy is intricate, and a thorough comprehension necessitates the examination of several economic elements and policy instruments.

Central banks use interest rates and other instruments to regulate inflation, with the goal of attaining their inflation targets while considering wider economic goals. The efficacy of monetary policy in managing inflation is contingent upon many elements, such as the particular economic circumstances, anticipations, and the capacity of central banks to balance competing objectives in attaining macroeconomic stability. The real estate markets and real estate investment trusts (REITs) are highly responsive to shifts in monetary policy. Investors in these assets diligently track the choices made by central banks and meticulously analyse economic data to get valuable insights into the possible effects on their investment portfolios. Monetary policy plays a role in mediating the connection between business cycle risk, interest rate, inflation rate risk, and REIT performance by impacting the costs of borrowing, the availability of funds, investor confidence, and the general state of the economy. The central bank's actions in reaction to business cycle circumstances may either magnify or alleviate the influence of business cycle risk on the real estate industry and, subsequently, on REITs. Investors and stakeholders in the real estate industry carefully observe monetary policy moves to get insights into the possible effects on REIT performance. This encompasses the intrinsic attributes of the real estate market, as well as the structural elements and worldwide economic circumstances. When investing in REITs, it is important for investors to pay close attention to central bank statements, economic indicators, and global economic trends in order to navigate the intricate real estate investment environment. The significance of the mediation impact of monetary policy highlights the need to consider both market dynamics and the wider economic and policy context when making investment choices in the real estate industry.

References.

- Ashta, A. (2023). Using Recent News and Mapping to Teach Real Estate Finance.
- Ansari, A. R., & Youxing, L. (2023). The Importance of Voting Trust for Securing Shareholders Protection in Chinese Corporations. *JL Pol'y & Globalization*, 131, 60.
- Aalbers, M. B., Taylor, Z. J., Klinge, T. J., & Fernandez, R. (2023). In real estate investment we trust: State de-risking and the ownership of listed uS and German residential real estate investment trusts. *Economic Geography*, 99(3), 312-335.
- Bauer, M. D., Bernanke, B. S., & Milstein, E. (2023). Risk appetite and the risk-taking channel of monetary policy. *Journal of Economic Perspectives*, 37(1), 77-100.
- Bauer, M. D., & Swanson, E. T. (2023). A reassessment of monetary policy surprises and high-frequency identification. *NBER Macroeconomics Annual*, 37(1), 87-155.
- Byrne, D., Goodhead, R., McMahon, M., & Parle, C. (2023). *The central bank crystal ball: Temporal information in monetary policy communication* (No. 1/RT/23). Central Bank of Ireland.
- Bats, J. V., Giuliadori, M., & Houben, A. C. (2023). Monetary policy effects in times of negative interest rates: What do bank stock prices tell us?. *Journal of Financial Intermediation*, 53, 101003.
- Bauer, M. D., & Swanson, E. T. (2023). A reassessment of monetary policy surprises and high-frequency identification. *NBER Macroeconomics Annual*, 37(1), 87-155.

- Bekaert, G., Hoerova, M., & Xu, N. R. (2023). Risk, monetary policy and asset prices in a global world. *Available at SSRN 3599583*.
- Belotti, E. (2023). The invisible hand of the shareholding state: the financialization of Italian real-estate investment funds for social housing. *Housing Studies*, 38(7), 1260-1283.
- Coglianesi, J. M., Olsson, M., & Patterson, C. (2023). Monetary policy and the labor market: a quasi-experiment in sweden. *University of Chicago, Becker Friedman Institute for Economics Working Paper*, (2023-123).
- Benchimol, J., & Bounader, L. (2023). Optimal monetary policy under bounded rationality. *Journal of Financial Stability*, 67, 101151.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the academy of marketing science*, 16, 74-94.
- Chu, X., Deng, Y., & Tsang, D. (2023). Firm Leverage and Stock Price Crash Risk: The Chinese Real Estate Market and Three-Red-Lines Policy. *The Journal of Real Estate Finance and Economics*, 1-39.
- Chen, Y. (2022). Research on Financial Risk Analysis and Early Warnings in the Chinese Real Estate Industry-Evergrande Real Estate as an Example. *Financial Engineering and Risk Management*, 5(5), 106-119.
- Coën, A., Lecomte, P., & Zaiter, S. (2023). Macroeconomic risk factors and Chinese FDIs in real estate: evidence from the Asia-Pacific public real estate markets. *Journal of Property Investment & Finance*, 41(2), 127-154.
- Chen, M., & Sutunyarak, C. (2022). Financial Factors Toward on Pension Real Estate in Greater Bay Area, Chian. *Proceedings of IAC 2022 in Prague*, 1, 18.
- Coglianesi, J. M., Olsson, M., & Patterson, C. (2023). Monetary policy and the labor market: a quasi-experiment in sweden. *University of Chicago, Becker Friedman Institute for Economics Working Paper*, (2023-123).
- Carattini, S., Heutel, G., & Melkadze, G. (2023). Climate policy, financial frictions, and transition risk. *Review of Economic Dynamics*.
- D'Aguanno, L. (2023). Monetary policy and welfare in a currency union. *Macroeconomic Dynamics*, 27(4), 1089-1114.
- Dekle, R., & Tsang, A. (2023). Monetary Policy Shocks and Resource Misallocations in the Periphery: Evidence from Chinese Provincial Bond Yields. *Journal of International Money and Finance*, 102891.
- Dua, P. (2023). Monetary policy framework in India. In *Macroeconometric Methods: Applications to the Indian Economy* (pp. 39-72). Singapore: Springer Nature Singapore.
- Feng, X., An, X., An, Y., & Xiao, Y. (2023). Shadow Funding and Economic Growth: Evidence from China. *Journal of Money, Credit and Banking*.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- Fasanya, I. O., & Oyewole, O. J. (2023). On the connection between international REITs and oil markets: The role of economic policy uncertainty. *Resources Policy*, 81, 103335.

- Guo, L. (2023). Research on the Spillover Effects of Systemic Risk in China's Financial Market on The Securities Industry. *Frontiers in Business, Economics and Management*, 9(2), 112-118.
- Ge, X., Liu, Y., & Zhuang, J. (2023). Monetary policy uncertainty, market structure and bank risk-taking: Evidence from China. *Finance Research Letters*, 52, 103599.
- Gupta, R., & Kaur, G. (2023). Relationship between Shadow Banking and Real Estate Bubble in China. In *BUSINESSES: RESILIENCE AND SUSTAINABILITY: Evidence from Emerging Market Developing Economies* (pp. 89-103).
- Gerardi, K., Willen, P. S., & Zhang, D. H. (2023). Mortgage prepayment, race, and monetary policy. *Journal of Financial Economics*, 147(3), 498-524.
- Gorodnichenko, Y., Pham, T., & Talavera, O. (2023). The voice of monetary policy. *American Economic Review*, 113(2), 548-584.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). Multivariate data analysis. Uppersaddle River. *Multivariate Data Analysis (5th ed) Upper Saddle River*, 5(3), 207-219.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43, 115-135.
- Hu, J. (2023). *A Study on the Impact of Horizontal Mergers and Acquisitions on the Performance of Listed Real Estate Developers Based on Panel Data from China* (Doctoral dissertation, Temple University).
- Hodula, M., & Libich, J. (2023). Has monetary policy fueled the rise in shadow banking?. *Economic Modelling*, 123, 106278.
- Huber, J. (2023). Central banks and monetary policy under conditions of CBDC. In *The Monetary Turning Point: From Bank Money to Central Bank Digital Currency (CBDC)* (pp. 151-188). Cham: Springer Nature Switzerland.
- Huang, T. (2023). Why China's housing policies have failed. *Peterson Institute for International Economics Working Paper*, (23-5).
- Hudaya, A., & Firmansyah, F. (2023). Financial stability in the Indonesian monetary policy analysis. *Cogent Economics & Finance*, 11(1), 2174637.
- Ioannou, D., Pérez, J. J., Geeroms, H., Vansteenkiste, I., Weber, P. F., Almeida, A. M., ... & Tylko-Tylczynska, K. P. (2023). The EU's Open Strategic Autonomy from a Central Banking Perspective. Challenges to the Monetary Policy Landscape from a Changing Geopolitical Environment.
- Kashyap, A. K., & Stein, J. C. (2023). Monetary Policy When the Central Bank Shapes Financial-Market Sentiment. *Journal of Economic Perspectives*, 37(1), 53-75.
- Kappes, S. A. (2023). Monetary policy and personal income distribution: A survey of the empirical literature. *Review of political Economy*, 35(1), 211-230.
- Luo, M., & Wareewani, T. (2023). Analysis on Marketing Environment of Medium-Sized Real Estate Enterprises in China. *Proceedings of VIAC 2023*, 73.

- Liu, X. X., Liu, H. H., Yang, G. L., & Pan, J. F. (2023). Productivity assessment of the real estate industry in China: a DEA-Malmquist index. *Engineering, Construction and Architectural Management*, 30(3), 1243-1270.
- Lin, S., & Jing, H. (2023). Registration of Chinese Trusts: Lessons from English Trust Law.
- Li, N., & Qian, M. (2023). Alternative Financial Institutions in China. *Forthcoming in the Research Handbook of Alternative Finance*.
- Lu, T. (2023). Comparison of Real Estate Bubbles in China and Japan. In *SHS Web of Conferences* (Vol. 163). EDP Sciences.
- Lau, W. Y., & Yip, T. M. (2023). The effect of different periods of unconventional monetary policies on Japanese financial markets. *Journal of Financial Economic Policy*, 15(3), 263-279.
- Ma, Y., Md Taib, F., & Ojuolape Gold, N. (2023). An Islamic principle-based integrated solution for China's housing affordability issues. *International Journal of Housing Markets and Analysis*.
- Ma, D., Lv, B., Li, X., Li, X., & Liu, S. (2023). Heterogeneous Impacts of Policy Sentiment with Different Themes on Real Estate Market: Evidence from China. *Sustainability*, 15(2), 1690.
- McKay, A., & Wolf, C. K. (2023). Monetary policy and inequality. *Journal of Economic Perspectives*, 37(1), 121-144.
- Malovaná, S., Bajžík, J., Ehrenbergerová, D., & Janků, J. (2023). A prolonged period of low interest rates in Europe: Unintended consequences. *Journal of Economic Surveys*, 37(2), 526-572.
- Ma, W. (2023). Research on the causes and governance of the "thunderstorm" problem of real estate enterprises. *Journal of Innovation and Development*, 2(2), 9-13.
- Melnychenko, O., Osadcha, T., Kovalyov, A., & Matskul, V. (2022). Dependence of Housing Real Estate Prices on Inflation as One of the Most Important Factors: Poland's Case. *Real Estate Management and Valuation*, 30(4), 25-41.
- Ma, D., Lv, B., Li, X., Li, X., & Liu, S. (2023). Heterogeneous Impacts of Policy Sentiment with Different Themes on Real Estate Market: Evidence from China. *Sustainability*, 15(2), 1690.
- Martínez-García, E., Grossman, V., & Spits, L. (2023). On the Nexus of Monetary Policy and Financial Stability: Novel Asset Market Monitoring Tools for Building Economic Resilience and Mitigating Financial Risks.
- McKay, A., & Wolf, C. K. (2023). Monetary policy and inequality. *Journal of Economic Perspectives*, 37(1), 121-144.
- Nazaruddin, S., & Kamaralzaman, S. (2023). The Cointegration of Macroeconomic Variables Towards Distribution Yield of Real Estate Investment Trusts (Reits) in Malaysia and Singapore: The Investor Perspectives. *Global Business and Management Research*, 15(1), 65-73.
- Newell, G., Marzuki, M. J., Hoesli, M., & Lai, R. N. (2023). The performance of non-listed opportunity real estate funds in China. *Journal of Property Investment & Finance*.

- Öztürk, Ö. (2023). *Monetary policy with firm heterogeneity* (Doctoral dissertation, European University Institute).
- Okoro, C., & Ayaba, M. M. (2023). Research trends and directions on real estate investment trusts' performance risks. *Sustainability*, 15(6), 5436.
- Piao, X., & Mei, B. (2023). The Financial Performance of Newly Launched Chinese Infrastructure REITs. *Journal of Real Estate Portfolio Management*, 1-21.
- Pivoňková, A. (2023). Real Estate as a Hedge against Inflation.
- Raco, M., Sun, Y., & Brill, F. (2023). Relational regulation and Chinese real estate investment in London: moving beyond the territorial trap. *Territory, Politics, Governance*, 11(2), 354-376.
- Ringo, D. (2023). Monetary Policy and Home Buying Inequality.
- Spits, L., Grossman, V., & Martinez-Garcia, E. (2023). On the Nexus of Monetary Policy and Financial Stability: Novel Asset Market Monitoring Tools for Building Economic Resilience and Mitigating Financial Risks. *Globalization Institute Working Paper*, (421).
- Wang, X., & Chen, C. (2023, June). Bibliometric Analysis of Real Estate Investment Trusts Research. In *Proceedings of the 3rd International Conference on Big Data Economy and Information Management, BDEIM 2022, December 2-3, 2022, Zhengzhou, China*.
- Wan, J., & Lee, C. C. (2023). Corporate investment and the dilemma of the monetary policy: Evidence from China. *Economic Analysis and Policy*, 78, 106-121.
- Xu, X., & Zhang, Y. (2023). Cointegration between housing prices: evidence from one hundred Chinese cities. *Journal of Property Research*, 40(1), 53-75.
- Yang, H., Chen, C., & Li, Y. (2023, February). An Empirical Study on the Relationship between Real Estate Investment and National Economic Growth in China-based on Granger Causality Test and Error Correction Model. In *Proceedings of the 4th International Conference on Economic Management and Model Engineering, ICEMME 2022, November 18-20, 2022, Nanjing, China*.
- Yang, J. (2023). Analysis of the loan suspension fiasco from an economic perspective. *Highlights in Business, Economics and Management*, 8, 362-368.
- Yiu, C. Y. (2023). Are central banks' monetary policies the future of housing affordability solutions. *Urban Science*, 7(1), 18.
- Zhou, Z. (2023). The Current Situation and Differences of the Real Estate Bubble between China and the United States. In *SHS Web of Conferences* (Vol. 154, p. 01023). EDP Sciences.
- Zhao, Y. (2023). Study on the Impact of Stock Market Performance on REITs Market in China. *Financial Engineering and Risk Management*, 6(1), 71-78.
- Zhao, Z. (2022, May). Research on the risks of real estate investment trusts in the post-epidemic era. In *Proceedings of the 5th International Conference on Economic Management and Green Development* (pp. 718-728). Singapore: Springer Nature Singapore.
- Zhang, X., Wei, C., Lee, C. C., & Tian, Y. (2023). Systemic risk of Chinese financial institutions and asset price bubbles. *The North American Journal of Economics and Finance*, 64, 101880.
- Zhi, Z. (2023). Exploring Financial Strategy under Vanke's Asset-light Operation Model. *Accounting and Corporate Management*, 5(5), 1-10.

Zhongyuan, N. (2023). Cost control and strategy of engineering projects of real estate enterprises. *Academic Journal of Business & Management*, 5(3), 28-32. g