









“Real estate investment trusts: Investment approaches and application prospects in the Ukrainian real estate market”

AUTHORS	Svitlana Naumenkova   Svitlana Mishchenko   Volodymyr Mishchenko   Ievgen Tishchenko 
ARTICLE INFO	Svitlana Naumenkova, Svitlana Mishchenko, Volodymyr Mishchenko and Ievgen Tishchenko (2026). Real estate investment trusts: Investment approaches and application prospects in the Ukrainian real estate market. <i>Investment Management and Financial Innovations</i> , 23(1), 374-394. doi: 10.21511/imfi.23(1).2026.28
DOI	http://dx.doi.org/10.21511/imfi.23(1).2026.28
RELEASED ON	Friday, 13 March 2026
RECEIVED ON	Thursday, 22 January 2026
ACCEPTED ON	Friday, 06 March 2026
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Investment Management and Financial Innovations"
ISSN PRINT	1810-4967
ISSN ONLINE	1812-9358
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

73



NUMBER OF FIGURES

7



NUMBER OF TABLES

8

© The author(s) 2026. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Type of the article: Research Article

Received on: 22nd of January, 2026

Accepted on: 6th of March, 2026

Published on: 13th of March, 2026

© Svitlana Naumenkova, Svitlana
Mishchenko, Volodymyr Mishchenko,
Ievgen Tishchenko, 2026

Svitlana Naumenkova, Doctor of
Economics, Professor, Department of
Finance, Taras Shevchenko National
University of Kyiv, Ukraine.

Svitlana Mishchenko, Doctor of
Economics, Professor, Department of
Finance, State University of Trade and
Economics, Ukraine.

Volodymyr Mishchenko, Doctor of
Economics, Professor, Head of the
Sector of Digital Economy, Institute for
Economics and Forecasting of the NAS
of Ukraine, Ukraine.

Ievgen Tishchenko, Ph.D., Postdoctoral
Fellow, Private Higher Education
Institution "European University",
Ukraine.



This is an Open Access article,
distributed under the terms of the
[Creative Commons Attribution 4.0
International license](https://creativecommons.org/licenses/by/4.0/), which permits
unrestricted re-use, distribution, and
reproduction in any medium, provided
the original work is properly cited.

Conflict of interest statement:

Author(s) reported no conflict of interest

Svitlana Naumenkova (Ukraine), Svitlana Mishchenko (Ukraine), Volodymyr Mishchenko (Ukraine), Ievgen Tishchenko (Ukraine)

REAL ESTATE INVESTMENT TRUSTS: INVESTMENT APPROACHES AND APPLICATION PROSPECTS IN THE UKRAINIAN REAL ESTATE MARKET

Abstract

In the context of macroeconomic instability, geopolitical challenges, and financial market transformation, real estate has gained increasing attention as an important asset class. The purpose of this paper is to conduct a comparative analysis of the financial efficiency of real estate investment trusts (REITs) that operate under income-driven and NAV-driven approaches in developed countries and to substantiate organizational schemes of investment funds for the development of Ukraine's REIT segment. The analysis shows that although REIT regimes differ across jurisdictions, they share common structural features that may be considered in adapting Ukrainian legislation to international standards. Based on a system of key financial indicators and data from international associations (INREV, EPRA, NAREIT), consulting reports, and stock market statistics, the study identifies two dominant approaches. The income-driven approach, typical of listed REITs in the United States, emphasizes stable cash income, liquidity, and market transparency. In contrast, the NAV-driven approach, characteristic of European non-listed real estate funds, focuses on long-term growth in net asset value. For Ukraine, the study identifies major barriers to REIT implementation, including underdeveloped stock exchange infrastructure, high entry thresholds for investors, and the absence of mandatory profit distribution requirements. Organizational schemes of non-listed investment funds based on the NAV-driven approach are proposed as a more feasible framework under current financial conditions, particularly in transitional economies with underdeveloped capital markets, and may serve as a foundation for the post war development of the Ukrainian REIT segment.

Keywords

investments, financial services, real estate market, real estate investment trusts (REITs), post-war economic recovery, investment funds

JEL Classification

G32, R30, R33, R38

INTRODUCTION

In the context of a changing economic environment and financial market instability, there is growing interest in investing in real estate, which is a crucial component of national wealth and serves as an investment asset with a long-term income profile. The Ukrainian real estate market is characterized by heightened risks and an imbalance between supply and demand, which underscores the relevance of adapting international real estate investment practices to national legislation.

International experience shows that real estate investment trusts (REITs) provide investors with access to real estate income without direct ownership of assets, enhance market liquidity, and facilitate portfolio diversification. In today's environment, REITs have become an important instrument for raising capital, particularly in the United States and European countries, where regulatory regimes differ to

some extent. Research on investment funds operating in the global financial market requires consideration of regulatory frameworks and identification of prevailing approaches to real estate investment, which enables the development of a system of indicators for assessing financial performance.

The development of a Ukrainian REIT segment is associated with the combination of international practices, flexible asset management policies, and clear regulatory requirements. Real estate investment trusts are viewed as a potentially important instrument for mobilizing capital to support Ukraine's economic recovery, transforming savings into productive investments, modernizing housing and industrial stock, and fostering investor cooperation. Since 2022, real estate prices and values have undergone significant adjustments, prompting a review of investment strategies and income-generating schemes, taking into account geographic diversification and asset types. In this context, the analysis of barriers hindering the implementation of REITs and the exploration of organizational schemes most adapted to the Ukrainian real estate market and existing risks constitute an important part of this study.

1. LITERATURE REVIEW

Research on national REIT markets demonstrates diverse development trajectories depending on economic conditions and regulatory priorities. Marzuki and Newell (2019), analyzing the Belgian REIT market – one of the largest in Europe by capitalization – concluded that its success was driven by strong regulatory support and institutional innovations that established an effective system favorable to financial participants and investors. Schacht and Wimschulte (2008) evaluated the development potential of the German G-REIT market, emphasizing the decisive role of regulatory changes. Similarly, regulatory transformations facilitated the growth of Spanish REITs as a key component of diversified investment portfolios (Marzuki & Newell, 2019). At the same time, Vives-Miró (2018) highlighted the financialization of rental housing in Spain, accompanied by the emergence of so-called “vulture funds” as new transnational owners of residential assets. Waldron (2018) analyzed the development of the Irish REIT market in the context of post-crisis deleveraging of the banking sector. These examples demonstrate that the development of REITs in Europe depends on a combination of regulatory support, macroeconomic conditions, and social consequences of housing market transformation.

Globally, REITs are increasingly popular, becoming an important segment of the international financial market. Tuluca et al. (2000) outlined the conceptual foundations of REIT functioning and identified growth prospects in India, while Chandrasekaran et al. (2025) showed that REITs facilitate additional

capital mobilization and broaden investor access to real estate markets. Mansley et al. (2020) examined Asian real estate funds, emphasizing differences in their investment strategies. The rapid expansion of China's rental housing sector has increased the attractiveness of REITs as a financial instrument, and Hong Kong REITs rank third in Asia by capitalization. Liu et al. (2023) found that the Hong Kong REIT market is constantly influenced by stock market returns and volatility, amplifying its sensitivity to financial shocks. The Asian experience thus illustrates that financial integration and rapid housing sector growth create new investment opportunities while simultaneously increasing systemic risks.

The increasing openness of real estate markets, combined with the globalization of financial flows, has generated multidimensional risk exposure. Domestic market downturns can propagate through investor expectations and sentiment channels, encouraging diversification and hedging strategies. In countries with developed financial infrastructures, REITs demonstrate growth, but they remain sensitive to international shocks. Wright and Schanz (2025) documented structural shifts in the European real estate market. Su et al. (2011) examined causal relationships between the stock and real estate markets in Belgium, Spain, and France. Wu and Wang (2024) identified a positive relationship between GDP and REIT returns, and a negative relationship between stock price indices and REIT returns. Ohikhuare and Oyewole (2025) demonstrated that bear markets exhibit stronger interdependencies, as investors react more sharply to losses. Muckenhaupt et al. (2025) confirmed the ability of real estate to hedge

inflation, particularly unexpected and energy-related inflation. Mensi et al. (2022) showed that oil markets can act as either transmitters or receivers of REIT return flows depending on market phases. Ozcelebi and Yoon (2025) found an asymmetric and nonlinear impact of U.S. financial crises on REIT volatility. Marfatia et al. (2017) highlighted the sensitivity of REITs to monetary policy, while Ismail et al. (2023) analyzed their interaction with oil markets under economic uncertainty. Coën and Desfleurs (2024) underscored the role of geopolitical risks in shaping REIT profitability. Collectively, these studies indicate that macro-financial factors influence REITs through channels of return transmission, volatility, and risk.

REIT regulatory regimes in Europe are highly heterogeneous. Gogineni et al. (2024) note that the U.S. model often serves as a reference for other countries, yet each state establishes its own regulatory framework. PwC (2021), Bilozubenko et al. (2025), and Capellán et al. (2021) confirm that common requirements include mandatory profit distribution and limitations on debt financing (EPRA, 2022). At the same time, the absence of a unified model generates regulatory uncertainty. For instance, Poland lacks a dedicated legal framework for REITs, although alternative real estate investment mechanisms exist (KPMG, 2025).

Investment strategies and corporate governance remain key determinants of REIT efficiency. Morri and Beretta (2008) demonstrated that funds follow the principles of the pecking-order theory of financing. Coën and Guardiola (2025) confirmed the significant impact of leverage on REIT pricing in the U.S. Zhou (2025) analyzed the effectiveness of risk-hedging strategies, while Hartzell et al. (2005) established the relationship between ownership structure and investment behavior. Therefore, financial structure, risk management, and corporate mechanisms form an interrelated system of competitiveness factors for REITs.

Contemporary markets are also being transformed by new investment mechanisms. Mishchenko et al. (2025) and Volosovich et al. (2024) emphasize the role of capital market innovations. Blockchain and decentralized finance (DeFi) technologies establish a new paradigm in which real estate ownership can be tokenized as digital assets, enhancing

liquidity, transparency, and global investment accessibility. Babatunde and Akinsomi (2024) highlighted potential benefits of incorporating Bitcoin into REIT portfolios, whereas Liu and Chen (2025) stressed regulatory and technological risks. Aharon et al. (2024) caution that the risk-diversification potential of tokens may be overestimated. Simultaneously, tokenization reduces investors' reliance on traditional REITs, exchange-traded funds, and mutual funds, increasing dependence on contractual conditions and associated costs.

ESG factors constitute a distinct research direction. NAREIT (2019) proposed standards for evaluating real estate from environmental, social, and governance perspectives. Hayar et al. (2025) confirmed that companies integrating ESG principles exhibit higher market performance and operational efficiency through lower capital costs and improved risk management. Erol et al. (2023) used panel data models to demonstrate a causal relationship between social and financial performance in REITs. Meanwhile, Kakinuma (2025), studying firms listed on the Singapore Exchange, found that ESG obligations exerted negative or statistically insignificant effects on firm valuation and operational outcomes, particularly the environmental component. Lee and Chow (2025) confirmed a nonlinear effect of ESG: moderate investment levels improve efficiency, while excessive expenditure yields no additional benefits. Leutner et al. (2024) identified a "green" discount in European commercial real estate lending, whereby certified green buildings obtain lower credit spreads. Initiatives for building energy modernization, supported by the Council of the European Union (2023), further highlight the growing importance of environmental standards in enhancing the investment attractiveness of residential real estate (Naumenkova et al., 2024). Consequently, the ESG approach is gradually reshaping the performance assessment criteria of REITs.

In Ukraine, mechanisms for real estate investment through collective investment schemes are gradually developing due to improvements in the legal framework and clarification of regulatory requirements (Dziubanovskyi, 2025; NSSMC, 2025a; Verkhovna Rada of Ukraine, 2003). At the same time, a full-fledged REIT segment has not yet emerged, and institutional conditions only par-

tially align with international standards. This creates significant potential for capital mobilization via REITs, provided that organizational structures and regulatory mechanisms are adapted to national circumstances.

Despite the extensive international literature on REIT efficiency, macrofinancial sensitivity, regulatory diversity, corporate governance, and ESG transformation, insufficient attention has been paid to the comparative analysis of the institutional logic of different REIT approaches. In particular, there is a lack of systematic differentiation between the income-driven approach, which relies on stable cash flows, and the NAV-driven approach, which focuses on long-term growth in net asset value, within a unified analytical framework. The adaptation of income-driven and NAV-driven approaches to transitional economies with underdeveloped capital markets remains underexplored. This study, therefore, provides a comparative analysis of REIT financial efficiency in developed countries and proposes organizational schemes for the development of Ukraine's REIT segment.

This study aims to conduct a comparative analysis of the financial efficiency of real estate investment trusts (REITs) that operate under income-driven and NAV-driven approaches in developed countries and to substantiate organizational schemes of investment funds for advancing the development of Ukraine's REIT segment.

2. METHODS

This study employed economic and statistical methods, SWOT analysis, institutional analysis, and trend analysis based on stock exchange statistics and individual real estate sectors. The source base for the analysis of summary indicators, as well as the dynamics of individual sectors of the real estate market, included data from international industry associations (INREV, EPRA, NAREIT), consulting companies (MSCI, JLL, PwC), stock exchange statistics, and official statistics of Ukraine for the period 2000–2025.

The analysis of current regulatory regimes in the real estate market is based on a study of official EU documents, INREV professional standards,

and the regulations of the National Securities and Stock Market Commission of Ukraine (NSSMC). Institutional analysis and content analysis were used to identify institutional gaps in legislation and assess the possibilities of implementing European regulations in the real estate sector.

The research methodology is based on distinguishing between two dominant investment approaches in the real estate sector: the *NAV-driven approach*, characteristic of public non-listed real estate funds (PNLRs), typical of European practice, and the *income-driven approach*, inherent in listed REITs, which have become widespread in the United States. The analysis used a set of financial indicators, the analytical focus of which is determined by the direction of the specified approaches (see Table 1).

The income-driven approach is associated with greater cash flow stability due to the predictable rental income and the mandatory profit distribution in the form of dividends based on FFO indicators.

One of the key indicators for analyzing the structure of real estate investments is Loan-to-Value (LTV, %), which reflects the level of debt burden relative to the market value of assets. Unlike profitability metrics, the LTV metric is methodologically comparable for both public REITs and non-listed real estate funds, making it a versatile tool for direct comparisons across these market segments.

Change in Real Estate Investment Supply is an additional indicator used to analyze structural shifts in the supply of real estate that investors may consider as an accessible investment asset. It complements traditional performance measures in both income-oriented approaches and those focused on net asset value growth.

Distributed Income Return reflects the actual cash income paid to investors, while dividend yield is a relative market measure of income generation used primarily to compare investment performance.

Capitalization Rate (cap rate) characterizes the ratio of the net operating income generated by a property (FFO) to its price, allowing for a com-

Table 1. Analytical focus of financial indicators depending on the dominant real estate investment approach

Source: Author's elaboration.

Indicator group	Indicator name	Analytical focus of the indicator	
		NAV-driven approach (Public Non-listed REITs)	Income-driven approach (Listed REITs)
1. Asset-based indicators	Net asset value (NAV)	key	auxiliary
	NAV growth	key	auxiliary
	Gross asset value (GAV)	key	auxiliary
	Loan-to-value (LTV)*	key	key
2. Income and cash flow indicators	Total return	key	key
	Distributed Income Return	key	auxiliary
	Dividend yield	auxiliary	key
	Funds from operations (FFO)	auxiliary	key
	Cash flow stability	auxiliary	key
	Capitalization rate (cap rate)	key	auxiliary
3. Capital market indicators	Market capitalization	auxiliary	key
	Listing status (listed / non-listed)	auxiliary	key
4. Risk indicators	Mature market equity risk premium	auxiliary	key
	Country risk premium	key	auxiliary
	Total Equity Risk Premium (TERP)	key	auxiliary
5. Market structure indicators	Change in real estate investment supply	key	key

Note: * risk-sensitive.

parison of the attractiveness of different real estate investments, regardless of the scale of the assets or their location. At the same time, FFO does not take into account capital investment needs, which limits its use as a universal indicator of value, unlike the cap rate.

Loan-to-Value (LTV) is classified as an asset-based indicator, but due to its sensitivity to leverage, it also serves as a key risk measure for REITs.

To calculate risk premium indicators for real estate transactions, a methodology based on data from a country's sovereign credit rating, credit spread indicators, and relative stock market volatility was used (Damodaran, 2022). The total equity risk premium is calculated as the sum of the country risk premium and the mature market equity risk premium.

The study's limitations include the limited availability of statistical data on the Ukrainian real estate market amid uncertainty caused by the aftermath of the war, as well as the absence of comprehensive statistics for all 14 real estate sectors used in the FTSE Nareit indices.

3. RESULTS AND DISCUSSION

3.1. Global practice of REITs

In recent years, significant changes have occurred in the global real estate market, influencing the choice of investment schemes for a wide range of investors – from institutional to households – and defining new conditions for the functioning of real estate investment trusts (REITs).

The total value of global real estate increased from USD 379.7 trillion in 2022 to USD 393.3 trillion in 2025 (Table 2).

Global real estate investment is projected to grow 15% in 2026 compared to 2025, exceeding USD 1 trillion, with USD 530 trillion of that in the United States. The EMEA region is expected to experience the highest growth rate of 22%, with investment volumes projected to reach USD 300 billion. Around a quarter of global investment volume will be concentrated in the office sector, as well as in the premium residential and logistics real estate segments (Savills, 2025).

Table 2. Global real estate value and structure in 2022 and 2025

Source: Based on data from Global Real Estate 2025–2026 (2025).

Type of real estate	2022		2025	
	trillion US dollars	% of the total cost	trillion US dollars	% of the total cost
Residential real estate	287.6	75.74	286.9	72.95
Commercial real estate	50.8	13.38	58.5	14.87
Agricultural lands	41.3	10.88	47.9	12.18
Total	379.7	100.00	393.3	100.00

Residential real estate remains the dominant segment, but its share decreased from 76% to 73% between 2022 and 2025, in particular due to the weakness of individual markets (China). Commercial real estate saw modest growth, while farmland valuations have risen to nearly USD 47.9 trillion, driven by rising demand and limited supply.

The key changes influencing investor behavior and preferences, as well as the nature of income generation in the real estate market, are as follows.

1. Assessing the value of real estate and its structure is an important component of assessing national wealth, but *to analyze real estate as an investment object, it is important to identify that part of it that investors can consider as an affordable investment asset.* In view of this, important information for investors is the forecast investment supply data for various types of real estate, taking into account the projected volumes of work completion. Forecast data indicate a limitation in the supply of new investment in 2026 compared to peak levels in 2021–2025 (Table 3).
2. *The activities of powerful financial intermediaries, mobilizing investment resources for transactions in the real estate market, continue.* Thus, the total market capitalization of the 10 largest companies operating in the real estate sector at the end of 2025 exceeds USD 711 billion, which accounts for 44.13% of the total market capitalization of companies in this sector (Table 4).
3. Demand for new types of assets, such as data centers and new infrastructure to provide energy services and serve digital communications channels, is blurring the lines between traditional commercial real estate and infrastructure. The growing demand for data centers amid the rapid development of AI technologies is confirmed by the conclusion of one

Geopolitical and economic instability, coupled with rising costs of new construction and competition for land, are holding back the completion of construction work. Low construction activity

Table 3. Forecasted change in real estate investment supply in 2026 compared to peak values in 2021–2025, %

Source: Authors' calculations based on JLL (2026).

Property type	Projected volumes of work completed in 2026 compared to peak values in 2021–2025, %		
	North America	Europe	Asia-Pacific region
Office	–92.3	–26.7	–24.2
Industrial and logistics	–57.5	–53.4	–52.6
Commercial	–35.8	–16.6	–8.5
Hotels	–35.3	–22.0	–16.4
Residential	–19.6	–21.7	n/a
Data centers	+20.0	+17.1	+16.4

Table 4. Top-10 real estate companies by market capitalization, end of 2025

Source: Yahoo Finance (n.d.).

No.	Name	Ticker	Capitalization, USD billion	Market share, %	Sector
1	Welltower Inc.	WELL	128.247	7.92	Housing for the elderly
2	Prologis, Ink	PLD	118.681	7.32	Logistics real estate
3	American Tower Corporation	AMT	81.715	5.04	Digital communication infrastructure
4	Equinix, Inc.	EQIX	74.634	4.61	Digital infrastructure
5	Simon Property Group, Inc	SPG	70.764	4.37	Shopping malls and restaurants
6	Digital Realty Trust, Inc.	DLR	53.813	3.32	Data centers
7	Realty Income Corporation	O	51.455	3.18	Commercial real estate
8	CBRE Group, Inc.	CBRE	48.761	3.01	Commercial real estate (consulting services)
9	Public Storage	PSA	45.52	3.01	Warehouse facilities
10	Crown Castle Inc.	CCI	38.07	2.35	Digital communications infrastructure

of the largest transactions of 2024, which was Blackstone Inc.'s acquisition of pan-regional data center operator AirTrunk for USD 16 billion (MSCI, 2025). Among the top 10 real estate companies, four specialize in the digital infrastructure and data center sectors (Table 4).

4. Changing market conditions lead to adjustments to investment strategies and profit-making schemes in real estate transactions, taking into account exposure across geographic regions and property types. Real estate prices and values have undergone significant adjustments since mid-2022. This is because the *market value of many properties in investors' portfolios is lower than the purchase price during periods of low interest rates and high asset valuations*.
5. In response to new challenges and rising construction costs, property owners are increasingly *repurposing and modernizing their existing buildings*. Thus, in the 10 largest office real estate centers (Paris, London, New York, Boston, Chicago, etc.), over 130 million square meters of space remain unused and require repurposing and functional transformation. Furthermore, there is a shortage of high-quality space in attractive business areas.
6. Fundraising for investment in certain real estate sectors may be slowed by low transaction activity. At the same time, the *development of the secondary market for direct investments and the emergence of continuation funds* allow general partners (GPs) to retain control over promising assets in a situation where asset
7. A separate long-term trend is the *growing role of ESG factors*, particularly requirements for energy efficiency and carbon neutrality. A significant portion of CO₂ emissions comes from residential and public buildings, primarily due to energy consumption for heating and cooling. In 2023, 15.5% of the EU population lived in homes with leaks, dampness, and rot (18% in the Eurozone). The European Green Deal's Renovation Wave initiative, aimed at renovating private and public buildings, contains positive experience in expanding energy modernization programs for the housing stock in Ukraine (Naumenkova et al., 2025).

The INREV (2025) standards focus on Environmental KPIs, in particular, energy efficiency and CO₂ emissions (Scope 1–2), which determine the long-term investment attractiveness and risk profile of real estate properties. Establishing the energy efficiency class of buildings not only corresponds to the European focus on NZEB (Nearly ZeroEnergy Buildings) standards, but also becomes a factor in determining the market value of real estate. The focus on climate sustainability has led to the development of the FTSE EPRA NAREIT series of green indices, which have become the world's leading benchmarks for listed real estate.

It should be noted that there are various types of financial intermediaries operating in the financial market, specializing in real estate transactions. REITs (Real Estate Investment Trusts) deserve special attention. Their emergence and expansion influence the investment market, the regulatory environment, and the structure and direction of investors' financial flows.

A REIT can be either a single entity or a group of companies that owns and manages commercial or residential real estate on behalf of shareholders, providing the opportunity to earn income without directly owning the assets. For example, in the USA, REITs provide households with the opportunity to invest between USD 1,000 and USD 25,000.

In the US, REITs are considered an international gold standard and have a clearly defined regulatory and tax status, enshrined in the Internal Revenue Code (Bloomberg, n.d.). The main requirements include:

- asset structure: $\geq 75\%$ in real estate, money, or government securities;
- income structure: $\geq 75\%$ qualified income from real estate;
- income distribution: $\geq 90\%$ of taxable income goes to shareholders;
- number and concentration of shareholders: ≥ 100 ; with $\leq 50\%$ of shares owned by five or fewer persons;
- corporate form: management by a board of directors or trustees.

The history of REIT development began in the United States in 1960–1961. The emergence of the first companies, such as Bradley Real Estate Investors, Continental Mortgage Investors, First Mortgage Investors, and First Union Real Estate, among others, was driven by the need to expand access for small investors to income from real estate. In 1965, the first REIT, Continental Mortgage Investors, began trading on the New York Stock Exchange (NAREIT, n.d.).

In October 2001, Standard & Poor's introduced indices for REITs; that same year, NAREIT, EPRA, and Euronext launched the EPRA/NAREIT Global Real Estate Index. In June 2016, the market capitalization of publicly listed real estate investment trusts surpassed the USD 1 trillion mark.

As of the end of 2025, the total assets of REITs of all types (private, public, listed, and unlisted) were estimated at USD 4.5 trillion, with public REITs accounting for USD 2.5 trillion of these assets. Approximately 50 million US households invest in REITs directly or indirectly through mutual funds, pension funds, or exchange-traded funds. REITs accounted for USD 1.47 trillion in US stock market capitalization, with 159 companies listed on the NYSE.

The US REIT model has spread to approximately 40 countries worldwide, including 14 European countries. In 2019, the first REIT began operating in India, and in 2020, REIT legislation was introduced in China. There is no unified model in Europe, so investors face different national regimes, in particular SIIC in France, G-REIT in Germany, G-REIT in Spain, and UK-REIT in the UK. They differ in terms of asset structure, income distribution, leverage, taxation, and development activities. REITs typically enjoy a neutral tax regime: REIT profits are not taxed at the corporate level; instead, income is taxed at the investor level. This means that REIT investors are not at a tax disadvantage compared to those who invest directly in real estate (EPRA, 2022).

Consequently, the specific regulatory regimes applicable to REITs vary by country, but generally share common features across jurisdictions (Table 5).

It should be noted that development activities involve significant improvements to real estate assets, carried out by the fund independently or through contractors and associated with active participation in creating new or modernizing existing assets (Table 5).

Based on international practice, the main types of REITs, REIT structures, and real estate funds can be divided according to the following criteria:

Table 5. Regulatory regimes for listed REITs and REIT-equivalents in the United States and Europe

Source: Based on EPRA (2023).

Country	USA	Belgium	France	Germany	Spain	United Kingdom
Abbreviation	REIT	SIR/GVV	SIIC	G-REIT	SOCIMI	UK-REIT
Year of introduction	1960	1995	2003	2007	2009 (rev. in 2012)	2007
Listing Requirement	No	Yes	Yes	Yes	Yes (within 2 years)	Yes
Asset Rules	≥75% assets in real estate, cash, gov. securities	Real estate only; ≤25% in REIT shares	≥80% rental income; ≤20% other activities	≥75% assets in real estate; housing built before 2007 excluded	≥80% assets in land and rental property	≥75% income from rent; ≥3 properties; no single property >40% assets
Development Activity	≤20% assets in TRS subsidiaries	Allowed if held ≥5 years	Allowed, ≤20% of assets	Allowed if held ≥5 years	None	Allowed; taxed if sold within 3 years
Leverage Limits	None	LTV ≤65%	None	≤66.25%	None	Debt service coverage >125%
Governance	Internal/External	Internal	Internal	Internal/External	Internal/External	Internal/External
Distribution requirements	≥90% of taxable income	≥80% of rental income	≥85% rental income; ≥70% capital gains	90%; foreign ownership ≤50% over rolling 5 years	≥80% rental income; ≥50% reinvestment allowed	90% (100% dividend income);
Minimum shareholder requirements	≥100 shareholders; top 5 ≤50% shares	≥30% of shares free float	≥15% capital held by small investors	No shareholder >10%; ≥15% free float	≥25% of shares free float	No shareholder >10%; ≥35% held by minority investors

Note: * No shareholder can own more than 10% of the shares.

1. *Publicity and accessibility for investors:*

- Publicly Traded REITs are registered with the U.S. Securities and Exchange Commission (SEC), are subject to regular disclosure requirements, are listed on national stock exchanges, and have adequate liquidity;
- Public Non-Listed REITs (PNLRs) are registered with the SEC but are not traded on national stock exchanges. Liquidity for investors is limited and typically realized through share repurchase programs or secondary market transactions.
- Private Real Estate Funds are exempt from SEC registration; their shares are not publicly traded and may be offered exclusively to qualified or institutional investors. These funds typically belong to the private equity real estate segment and do not have REIT status.

2. *The nature of the underlying assets and sources of income generation (primarily for the US and European countries with similar regulatory REIT regimes):*

- Equity REITs own or manage income-producing real estate (office, retail, residential, and logistics) and generate their primary income through rental payments and operating activities;
- Mortgage REITs (mREITs) provide real estate financing by investing in mortgages and mortgage-backed securities, earning income primarily in the form of interest;
- Hybrid REITs combine the characteristics of equity and mortgage REITs and generate income from both operating real estate and financial instruments.

In EU countries, REIT structures predominate, the legal regime of which is determined by the specifics of the national legislation of the respective countries. Key principles and governance recommendations for European unlisted real estate funds are reflected in the Professional Standards INREV – The European Association for Investors in Non-Listed Real Estate (INREV, 2025). Table 6 shows the geographical and sectoral structure of European unlisted real estate funds.

Source: Constructed by the authors using NAREIT.

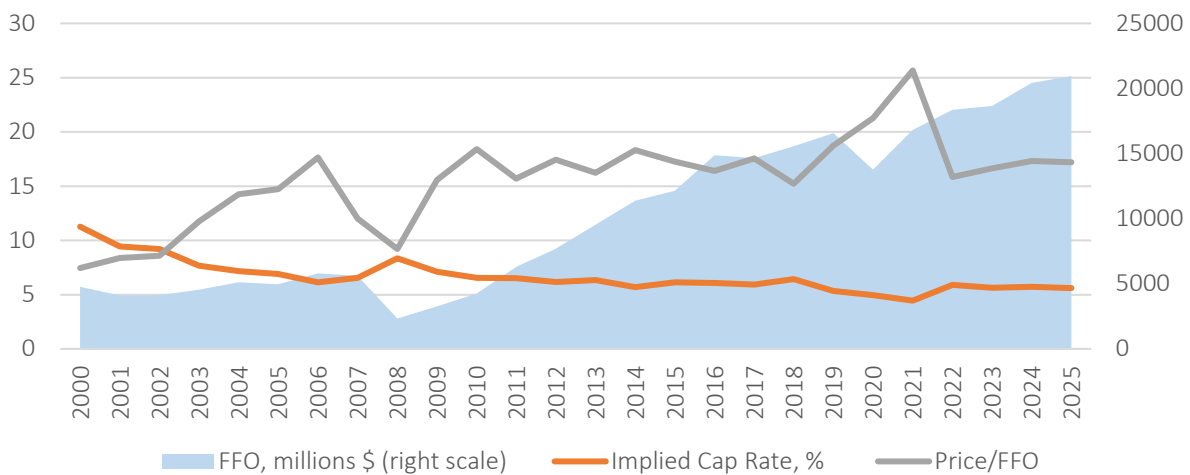


Figure 1. FFO, Cap Rate, and Price/FFO for Equity REITs in 2000–2025

Table 6. Geographical and sectoral structure of non-listed European real estate funds in 2025

Source: Compiled using INREV data.

Geographical structure		Sectoral structure	
Country	Share in total portfolio, %	Property type	Share in total portfolio, %
Germany	26.4	Industrial/logistics	25.3
Netherlands	21.7	Residential	24.3
Great Britain	14.3	Office	20.2
France	8.4	Commercial	11.9
Others	27.8	Others	17.0
Not reported	1.4	Not reported	1.4
Total	100.0	Total	100.0

REIT returns had a relatively low correlation with bond and publicly traded stock returns, reflecting the diversification benefits of real estate as an asset class. Thus, 64% of the largest institutional investors in the US and globally use REITs in their portfolios.

One of the key indicators for assessing the profitability of real estate investments is the capitalization rate (cap rate), which showed a significant drop for Equity REITs, from 11.67% in 2000 to 5.62% in 2025. This negative trend occurred with a significant increase in FFO, almost 4.4 times, which is largely due to a significant increase in real estate prices, since in 2025, the Price/FFO ratio rose to 17.21 compared to 7.45 in 2000 (Figure 1).

An analysis of returns for different types of US REITs shows a decline caused by the stress of the COVID-19 pandemic in 2020–2021 (Figure 2).

The dividend yield of many REITs in the US is typically 3.5-5%, which is higher than the dividend yield of stable companies (e.g., the S&P 500 ~1.3-1.5%), making REITs attractive to income-oriented investors. It is noteworthy that the mortgage REIT segment has a higher dividend yield than equity REITs. This is due to the specific nature of their business model, which is based on investing in mortgage-backed securities and using financial leverage. This enhances cash flows but also increases sensitivity to interest rate risk and market volatility. Higher dividend payouts thus reflect compensation to investors for the increased risk inherent in this segment.

The European real estate sector is not purely REIT-oriented and includes a mix of companies, typically with moderate dividend yields compared to the US, in the range of approximately 3-5% (JustETF, 2025). This is explained, in particular, by the difference in the rates of return

Source: Constructed by the authors based on NAREIT data (2025, 2026).

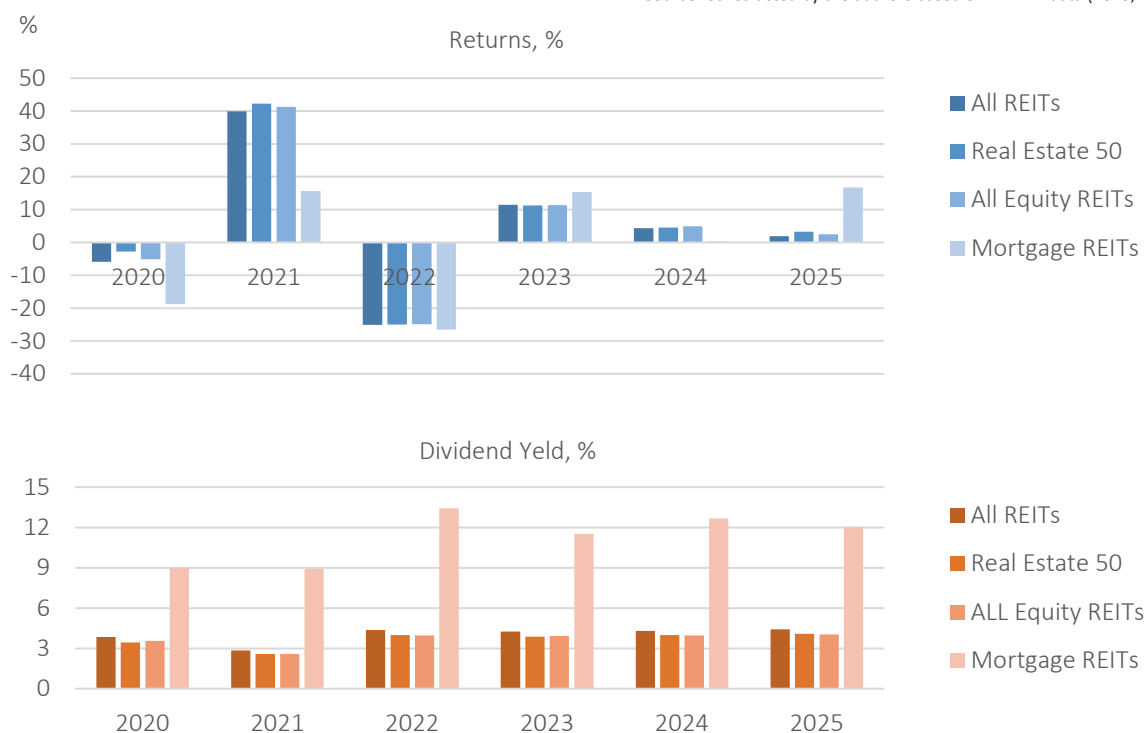


Figure 2. Value of profitability and dividend yield indicators for different types of REITs in 2020–2025, %

on investment property (cap rate), as well as regulatory requirements to pay out at least 90% of taxable income to shareholders. European funds often choose UK real estate to provide higher dividend yields due to the developed segment of office and logistics real estate and certain specific sectors.

The cautiously optimistic outlook for the European real estate market is supported by the dynamics of the Total Return (%) and Capital Growth (%) measures, indicating that the real estate market has begun to enter a phase of gradual, uneven recovery in 2024 (Figure 3).

Overall returns on European off-market real estate transactions in Q3 2025 were 1.38%. Finland-focused funds were the only region to record negative returns (-0.3%). The highest returns were achieved by non-listed real estate trusts targeting the Netherlands and Italy, with returns of 2.22% and 1.76%, respectively, in December 2025.

Distributed Income Return values for INREV are low (0.5–0.7%), reflecting the reinvestment nature of non-listed real estate funds and distinguishing

them from the REIT model with regular cash payments (Figure 3).

Overall, the emergence of REIT equivalents in Europe has had a positive impact on the financial market, including the non-listed REIT segment. The combination of real estate investment trust (REIT) regimes with the advantages of capital markets expands the potential for additional investment inflows (GovUK, 2023). For example, in the UK, following the introduction of REIT rules in 2006, a number of large listed property companies became UK REITs, and many UK-REIT startups were created, giving investors greater access to an important alternative asset class.

It should be emphasized that the activities of most non-listed European real estate funds are focused on a value creation model, where the investor’s income is generated primarily from net asset value (NAV) growth and asset sales, whereas listed REITs are focused on generating regular cash income.

According to INREV, growth in net asset value (NAV) and gross asset value (GAV) of real estate funds in Europe was observed between 2010 and

Source: Constructed by the authors based on INREV data.

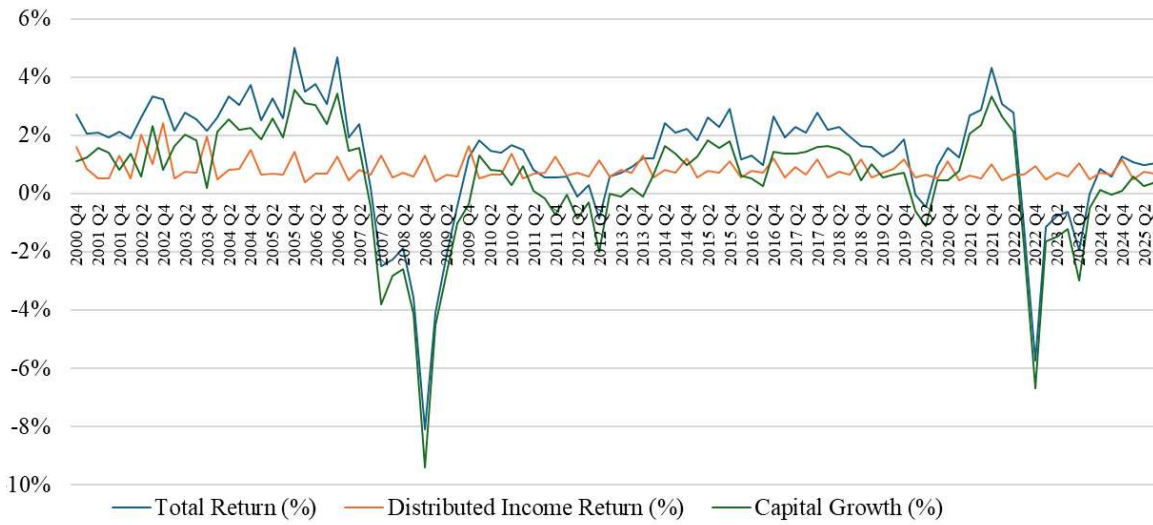


Figure 3. Quarterly total returns and returns on equity of unlisted real estate investment trusts in Europe, 2000–2025, %

2022. In Q3 2025, the NAV and GAV values were USD 216.0 billion and USD 298.7 billion, respectively. In 2000–2025, the annual weighted average growth rates of European real estate company asset value were 15.49% and 17.38% (Figure 4), which provides a positive benchmark for institutional market participants when formulating their long-term investment strategies.

Over the past decade, the LTVs of public REITs have significantly exceeded those of private INREV funds. The value of this indicator is usually within 30–50%, ensuring a conservative balance

between the use of borrowed capital and maintaining financial stability. LTV values for REITs in the European real estate sector fluctuated between 38–39% during 2015–2025 (EPRA, 2025). Office and retail REITs typically have higher LTVs due to the additional capital required.

The expansion of the REIT segment in Europe is gradually changing the investment landscape, offering alternative mechanisms for raising capital for real estate investments compared to bank borrowing, which is generally aimed at maintaining the stability of the European financial market.

Source: Constructed by the authors based on INREV data.

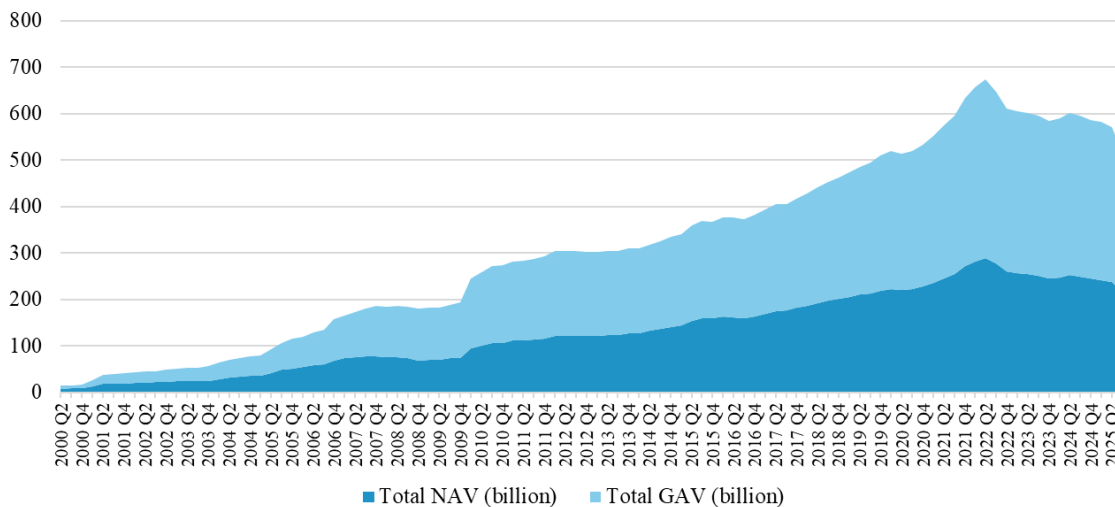


Figure 4. Net and total asset value of real estate funds in Europe for the period 2000–2025

3.2. Prospects for the development of the REIT segment in Ukraine

According to Ukrainian legislation, real estate (immovable property) includes land plots, as well as objects located on a land plot and inseparably connected with it (buildings, structures, their parts, other property), the movement of which is impossible without their depreciation and change of purpose (Cabinet of Ministers of Ukraine, 2003; Verkhovna Rada of Ukraine, 2003). The material form of real estate determines the specifics of interaction between market participants and the features of the formation of cash flows and income.

In Ukraine, the real estate sector demonstrated gradual adaptation and recovery in 2024–2025. The decline in purchasing power, population decline due to emigration and military conflict, rising costs of building materials, disruption of transport routes and logistics, and a shortage of qualified personnel are forcing a rethinking of approaches to managing real estate investments and choosing the most reliable financing schemes.

Active transformation took place in the area of restoring destroyed housing and infrastructure; large-scale state programs for the construction of shelters, security facilities, and other civil infrastructure facilities were implemented, as evidenced by the increase in the area of non-residential buildings commissioned (Table 7).

The development of a war risk insurance system will make the industry more profitable for investors. The real estate market is closely linked to economic and demographic shifts in various regions of Ukraine, migration processes, and the conditions for the development of industry, logistics, and commercial infrastructure.

An analysis of the structure of non-residential buildings indicates a limited supply of high-income real estate, such as hotels and office buildings (Table 8).

However, construction of affordable housing is underway in major cities, as well as industrial and logistics facilities (logistics hubs, warehouses, and

Table 7. Area of residential and non-residential buildings commissioned in Ukraine in 2018–2024.

Source: State Statistics Service of Ukraine (n.d.).

Indicator	2018	2019	2020	2021	2022	2023	2024
Area of residential buildings commissioned							
total, thousand m ²	8689.36	11029.33	8451.22	11433.79	7110.22	7380.75	9758.88
by terrain type:							
urban, %	65.05	61.71	60.93	69.45	66.84	57.95	52.05
rural, %	34.95	38.29	39.07	30.55	33.16	42.05	47.95
Area of non-residential buildings commissioned							
total, thousand m ²	2908.38	3962.27	3444.19	4948.87	2493.07	2340.35	2690.95
by terrain type:							
urban, %	n/a	56.42	57.33	64.40	63.17	54.01	37.10
rural, %	n/a	43.58	42.67	35.60	36.83	45.99	62.90

Table 8. Structure of non-residential buildings commissioned by type of area in 2018–2025, %

Source: Constructed by the authors based on data from the State Statistics Service of Ukraine.

Types of buildings	2018	2019	2020	2021	2022	2023	2024	2025 (Q3)
Wholesale and retail buildings	19.58	22.58	19.52	36.02	20.50	22.42	18.60	20.43
Transport and communication buildings	4.04	2.86	5.44	5.64	6.12	2.79	2.83	3.42
Hotel buildings and similar buildings	6.33	3.95	3.58	3.58	5.77	7.46	9.00	3.96
Buildings for public leisure, education, health care, and social protection	10.89	5.50	9.34	6.51	13.82	3.56	3.84	2.66
Other non-residential buildings	35.32	32.65	35.41	18.65	15.68	21.54	21.99	27.55
Office buildings	2.78	5.80	6.35	6.97	10.60	5.88	7.04	4.46
Industrial and warehouse buildings	21.06	26.67	20.36	22.63	27.51	36.34	36.70	37.51
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

production facilities). In 2024, 987,000 m² of industrial buildings were commissioned, which is 16% more than in 2023.

There is no definition of REIT in Ukrainian law, but the Ukrainian real estate market has the potential to introduce REITs. The first REIT-like structures to emerge in Ukraine are real estate investment funds, all of whose assets are owned jointly by investors. The operating schemes of such funds are based on generating income from long-term leases of commercial real estate (buildings that house wholesale and retail businesses of famous Ukrainian brands, fast-food restaurants, food courts, supermarkets, and shopping centers), including land plots under these properties (INZUR, 2025; Minfin, 2025).

Real estate mutual investment trusts form the basis for developing the REIT segment in Ukraine and contain certain characteristics inherent in European structures with REIT regimes (Minfin, 2025; NSSMC, 2025a; Verkhovna Rada of Ukraine, 2003), namely:

- the funds raised through the issue of investment certificates are used to finance the construction of a construction project in full or in part;
- a management company invests funds raised from the sale of securities (investment certificates) in real estate transactions and receives and distributes the resulting income among certificate holders (fund participants).
- a management company has the right to carry out the following operations with real estate objects acquired into ownership: transfer for paid use to third parties; sale; other operations not prohibited by law.

Upon the fund's expiration, investment certificates must be redeemed at the settlement price.

Key factors hindering the implementation of the classic REIT model in Ukraine:

- High security risks continue to constrain residential property purchases, particularly for investment purposes (NBU, 2025).

Furthermore, the lack of personnel limits the number of construction projects suitable for investment.

- Lack of stock exchange listing of investment certificates of REIT-like funds. Unlike countries where there is a market for trade in REIT shares/certificates, in Ukraine, the purchase of investment certificates is provided by the fund manager company (NSSMC, 2025a);
- Restricting the application to most Ukrainian real estate funds of the mandatory requirement to allocate more than 90% of net profit to dividend payments, which reduces the attractiveness of REITs in Ukraine for investors.

A high level of the National Bank's key rate of 15.5% in 2025 (NBU, n.d) affects the growth of the cost of capital and limits the mobilization of funds from domestic sources. When attracting funds from non-residents, the discount rate for country risk increases, taking into account the complex geopolitical situation and economic uncertainty (Naumenkova et al., 2020). While risk premiums for transactions in developed stock markets did not exceed 5-6% during 2014–2025, the risk premium for doing business in Ukraine in this period ranged from 5.5% to 18.2%. In 2022–2025, under war conditions, the total equity risk premium for Ukraine rose to 22-23% (Figure 5). Such macro-financial parameters significantly increase the cost of capital and amplify earnings volatility, thereby reducing the sustainability of dividend-oriented REIT structures under conditions of elevated systemic risk.

Tightening energy efficiency and safety requirements for buildings (European Union, 2018) increases the cost of new construction and necessitates adjustments to investment strategies in the real estate sector. Amendments to Ukrainian legislation that came into force in 2022–2023 provide for the mandatory installation of protective structures (bomb shelters) in new residential and commercial buildings. On the one hand, this increases the level of safety, but on the other hand, it can increase construction costs by up to 7%. The impact of these factors is slowing the adoption of REITs focused on large-scale investment in new construction.

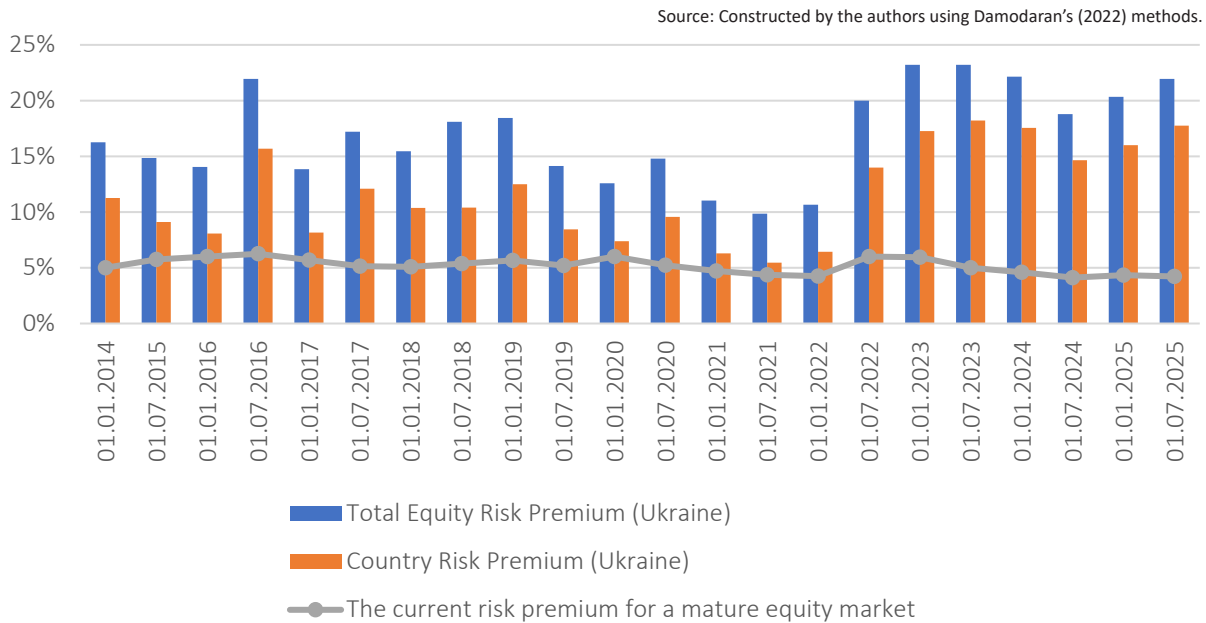


Figure 5. Developed equity market risk premiums, country risk premiums, and total equity risk premiums in Ukraine in 2014–2025, %

Given the underdeveloped financial market in Ukraine, REIT structures can be created in the form of unlisted real estate funds, whose activities are regulated by law and provide more comprehensive protection for the interests of institutional investors (Verkhovna Rada of Ukraine, 2003; NSSMC, 2025a). These are Construction Financing Funds (CFFs) and Real Estate Operation Funds (REOFs).

As of December 31, 2024, 30 CFF managers were involved in property management activities for financing construction projects and/or real estate transactions. By the end of 2024, the number of construction projects amounted to 311, which is 25% less than in 2020, but the total cost of projects increased by 29.12%. The number of investment objects in these facilities amounted to 76,602. The total amount of contributions to CFFs was UAH 44.93 billion (NSSMC, 2025b).

The main advantage of participating in such funds is the legislatively established distribution of functions among participants: construction organizations carry out the construction of facilities; fund managers (banks, financial institutions) manage cash flows.

The CFF scheme acts as an open and secure form of relationship between construction companies and investors (Figure 6).

Benefits of participating in CFFs with a bank as the trustee:

- Reliability of all entities participating in the system: before becoming a participant in the fund, the developer undergoes a thorough check by bank specialists;
- Mandatory regular monitoring of the developer's performance of construction work and verification of the targeted use of funds upon the achievement of a certain result in accordance with the construction schedule and financing schedule;
- Full bank support for servicing clients – concluding contracts, correspondence, and informing about the progress of construction;
- Real estate financing – if the full amount of funds is not available, the bank provides a mortgage loan to both the individual and the developer. Lending is carried out against the security of property rights to real estate under construction;
- Guaranteed protection of the interests of investors (principals) at the legislative level.

Bank participation in the fund has additional advantages in Ukraine based on the use of ad-

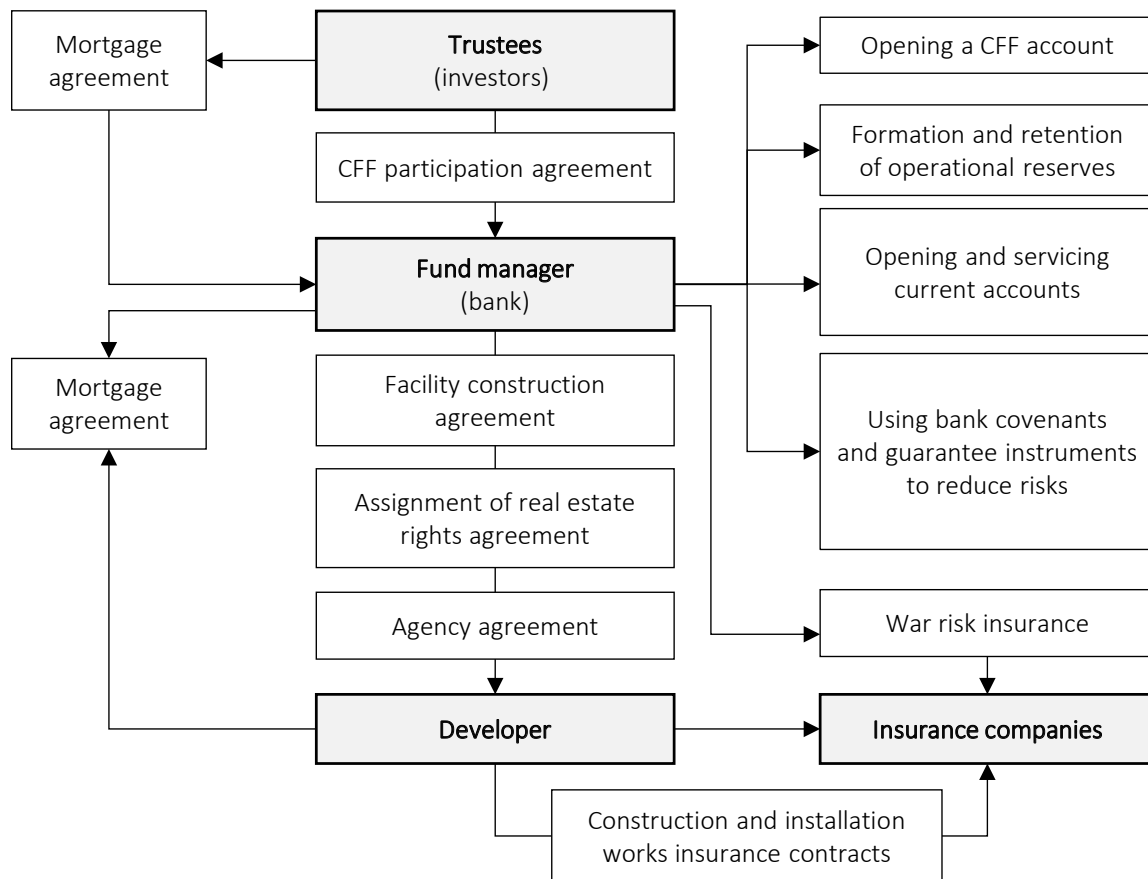


Figure 6. CFF scheme in Ukraine with a bank as the trustee

ditional financial risk management instruments (guarantees, escrow accounts, covenants, etc.) (Naumenkova et al., 2020).

REOF funds can also be managed by a financial company that has the appropriate license (Figure 7).

However, compared to a bank, a financial company is limited in its risk management capabilities in Ukraine's underdeveloped financial market. The characteristics of an REOF are closer to those of a PNL R – a publicly traded, unlisted REIT.

Since January 1, 2026, a mechanism for insuring property against war risks has been introduced in Ukraine (Cabinet of Ministers of Ukraine, 2025), which will help attract investors for the restoration of Ukraine. A unified pool of existing war risk insurance programs (MIGA, DFC, Export Credit Agency, etc.) is being created. This comprehensive national war risk insurance system will cover the risks of damage to collateral

and housing construction projects. We propose expanding coverage to a wider range of assets managed by REOF through the development of standardized financial and insurance products.

The implementation of EU requirements in the updated national building codes in the field of energy efficiency of buildings (Verkhovna Rada of Ukraine, 2020) significantly improves the quality and performance standards of real estate. In this regard, the introduction of rental caps differentiated by the energy efficiency class of buildings will stimulate the transition toward the implementation of Nearly Zero-Energy Building (NZEB) standards in property management.

Therefore, Construction Financing Funds (CFFs) and Real Estate Operation Funds (REOFs) are structurally aligned with the NAV-driven approach, as they emphasize capital appreciation and asset value growth rather than mandatory dividend distribution.

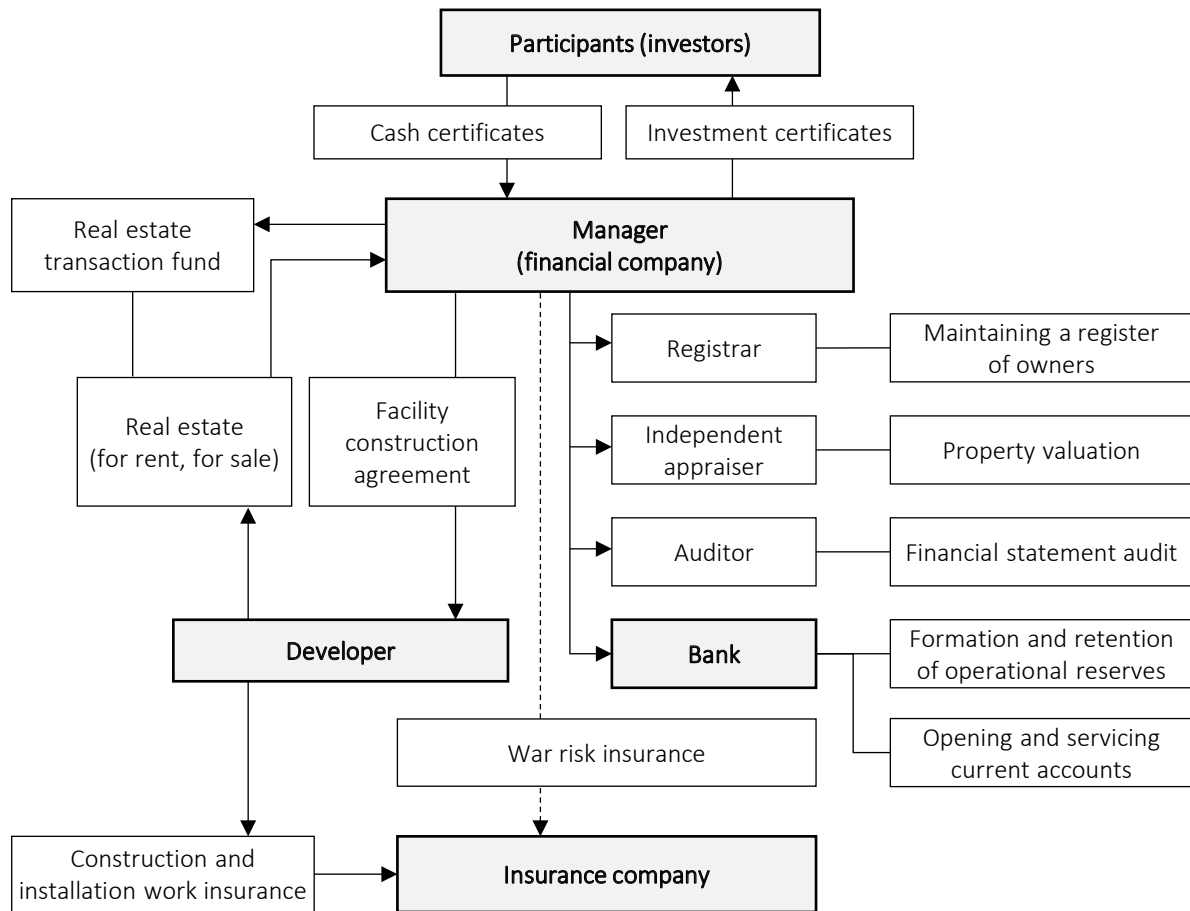


Figure 7. REOF operating scheme in Ukraine

CONCLUSION

The purpose of this paper was to conduct a comparative analysis of the financial efficiency of real estate investment trusts (REITs) applying income-driven and NAV-driven approaches in developed countries, and to substantiate organizational schemes of investment funds for the development of Ukraine's REIT segment.

The study demonstrates that listed REITs in the United States operate predominantly under an income-driven approach characterized by mandatory profit distribution, high dividend yields, market liquidity, and sensitivity to capital market conditions. In contrast, most European non-listed real estate funds follow an NAV-driven approach emphasizing long-term growth of net asset value, moderate leverage, and capital appreciation rather than regular income distribution. These differences reflect distinct mechanisms of value creation and varying levels of capital market maturity.

The findings indicate that the classical income-driven REIT model requires developed stock exchange infrastructure, stable investor demand for dividend income, and transparent regulatory enforcement. Under conditions of high equity risk premiums, elevated interest rates, limited exchange liquidity, and the absence of mandatory profit distribution rules, the direct replication of this model in Ukraine would be institutionally and financially constrained.

Given the current structure of the Ukrainian financial market, non-listed real estate investment funds operating under an NAV-driven approach represent a more feasible organizational framework. Instruments such as Construction Financing Funds and Real Estate Operation Funds may serve as

adaptive institutional mechanisms aligned with European practice. Their development, combined with gradual capital market deepening, war-risk insurance implementation, and regulatory harmonization with European standards, may form the foundation for the post-war evolution of the Ukrainian REIT segment.

AUTHOR CONTRIBUTIONS

Conceptualization: Svitlana Naumenkova, Svitlana Mishchenko, Volodymyr Mishchenko, Ievgen Tishchenko.

Formal analysis: Svitlana Mishchenko, Ievgen Tishchenko.

Investigation: Svitlana Naumenkova, Svitlana Mishchenko, Volodymyr Mishchenko, Ievgen Tishchenko.

Methodology: Svitlana Naumenkova, Svitlana Mishchenko, Volodymyr Mishchenko, Ievgen Tishchenko.

Project administration: Svitlana Naumenkova.

Supervision: Svitlana Naumenkova, Volodymyr Mishchenko.

Visualization: Svitlana Naumenkova, Ievgen Tishchenko.

Writing – original draft: Svitlana Naumenkova, Svitlana Mishchenko, Volodymyr Mishchenko, Ievgen Tishchenko.

Writing – review & editing: Svitlana Naumenkova, Svitlana Mishchenko.

REFERENCES

- Aharon, D., Ali, A., & Brahim, M. (2024). Connectedness at extremes between real estate tokens and real estate stocks. *International Review of Financial Analysis*, 95(B), 103425. <https://doi.org/10.1016/j.irfa.2024.103425>
- Babatunde, O., & Akinsomi, O. (2024). Diversifying and hedging REIT portfolios with cryptocurrencies: Evidence from global and regional REIT indices. *International Review of Financial Analysis*, 94, 103329. <https://doi.org/10.1016/j.irfa.2024.103329>
- Bilozubenko, V., Yehorova, Y., Taranenko, V., Petrusenko, Y., Yakovenko, T., Nebaba, N., & Zhuravka, F. (2025). Assessment of key parameters for clustering EU countries by socio-economic development components. *Problems and Perspectives in Management*, 23(3), 205-217. [http://dx.doi.org/10.21511/ppm.23\(3\).2025.15](http://dx.doi.org/10.21511/ppm.23(3).2025.15)
- Bloomberg (n.d). *Bloomberg Tax. Sec. 856. Definition of Real Estate Investment Trust*. Retrieved from https://irc.bloombergtax.com/public/uscode/doc/irc/section_856
- Cabinet of Ministers of Ukraine. (2025). *Proekt Zakonu pro systemu strakhuvannia voiennykh ryzykiv [Draft Law on the System of War Risk Insurance]*. (In Ukrainian). Retrieved from <https://www.kmu.gov.ua/bills/proekt-zakonu-pro-systemu-strakhuvannia-voyen-nykh-ryzykiv>
- Cabinet of Ministers of Ukraine. (2003). *Zahalni zasady otsinky maina i mainovykh prav: Natsionalnyi standart No. 1 [General Principles of Property and Property Rights Valuation: National Standard No. 1]*. (In Ukrainian). Retrieved from <https://zakon.rada.gov.ua/laws/show/1440-2003-%D0%BF#Text>
- Capellán, R., Ollero, J., & Pozo, A. (2021). The influence of the real estate investment trust in the real estate sector on the Costa del Sol. *European Research on Management and Business Economics*, 27(1), 100133. <https://doi.org/10.1016/j.iemeen.2020.10.003>
- Chandrasekaran, B., Yogashree, C., Kalli, R., Rajath, B.S. (2025). Exploring REITs in Indian Context: A Modern Avenue for Real Estate Investment. In Kashyap, A., Kulkarni, S. S., Li, R. Y. M., Mahesh, G., Deepak, M. D. (Eds) *Recent Trends and Advances in Construction, Real Estate, Infrastructure and Project Management (CRIP) Sector*. Springer. https://doi.org/10.1007/978-981-95-1946-0_19
- Coën, A., & Desfleurs, A. (2024). Geopolitical risk and the dynamics of REITs returns. *Finance Research Letters*, 64, 105437. <https://doi.org/10.1016/j.frl.2024.105437>
- Coën, A., & Guardiola, P. (2025). Leverage risk and REIT returns. *Finance Research Letters*, 78, 107133. <https://doi.org/10.1016/j.frl.2025.107133>
- Council of the European Union. (2023). *Proposal for a Directive of the European Parliament and of the Council on Energy Efficiency (recast)*. Retrieved from <https://data.consilium.europa.eu/doc/document/ST-7446-2023-INIT/en/pdf>
- Damodaran, A. (2022). *Country Risk: Determinants, Measures and Implications*. <http://dx.doi.org/10.2139/ssrn.4161010>
- Dziubanovskiy, H. (2025). FFB, ISI chy oblihotsii: shcho obraty

- investory u budivnytstvi [FFB, ISI or Bonds: What Should an Investor Choose in Construction]. *Yurydychna hazeta*, 6(694). (In Ukrainian). Retrieved from <https://yur-gazeta.com/dumka-eksperta/-investiciyi-v-neruhomist-pid-zabudovu-yak-oformiti-vhid-investora.html>
14. EPRA. (2022). *Structural Overview of the Real Estate Investment Industry*. Retrieved from https://www.epra.com/application/files/5316/5157/1494/EPRA_Publication_-_April_2022.pdf
 15. EPRA. (2023). *The Impact of European REITs. The Role of Real Estate Investment Trusts in the European Economy*. Retrieved from https://www.epra.com/application/files/7117/0264/0510/EPRA_Report_-_Impact_of_European_REITs_-_FINAL.pdf
 16. EPRA. (2025). *Monthly Reports*. Retrieved from https://www.epra.com/indexes/monthly-reports?utm_source=chatgpt.com
 17. Erol, I., Unal, U., & Coskun, Y. (2023). ESG investing and the financial performance: a panel data analysis of developed REIT markets. *Environmental Science and Pollution Research*, 30, 85154-85169. <https://doi.org/10.1007/s11356-023-28376-1>
 18. European Union. (2018). *Directive (EU) 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency*. Retrieved from <https://eur-lex.europa.eu/eli/dir/2018/844/oj>
 19. Gogineni, S., Jain, P., & Upadhyay, F. (2024). Global REIT regulations and valuation. *International Review of Economics & Finance*, 93(B), 152-166. <https://doi.org/10.1016/j.iref.2024.04.022>
 20. GovUK. (2023, November 22). *HM Revenue & Customs. Real Estate Investment Trust regime amendments*. Retrieved from <https://www.gov.uk/government/publications/amendments-to-the-real-estate-investment-trust-regime/real-estate-investment-trust-regime-amendments>
 21. Hartzell, J., Sun, L., & Titman, S. (2005). *The Effect of Corporate Governance on Investment: Evidence from Real Estate Investment Trusts (Reits)*. <http://dx.doi.org/10.2139/ssrn.516563>
 22. Hayar, B., Muckenaupt, J., & Zhu, B. (2025). The impact of ESG factors on performance of real estate equities. *Journal of Property Research*, 42(3), 201-226. <https://doi.org/10.1080/09599916.2025.2455166>
 23. INREV. (2025). *INREV Guidelines: Custom Build. Professional Standards*. Retrieved from <https://www.inrev.org/guidelines/module/governance#inrev-guidelines>
 24. INZUR. (2025). *Fond Inzhur REIT [Inzhur REIT Fund]*. (In Ukrainian). Retrieved from <https://www.inzhur.reit/offer/inzhur-reit>
 25. Ismail, O., Fasanya, I., & Oye-wole, O. (2023). On the connection between international REITs and oil markets: The role of economic policy uncertainty. *Resources Policy*, 81, 103335, <https://doi.org/10.1016/j.resourpol.2023.103335>
 26. JLL. (2026). *Global Real Estate Outlook: Six Forces Reshaping Commercial Real Estate*. Retrieved from <https://www.jll.com/en-us/insights/market-outlook/global-real-estate>
 27. JustETF. (2025). *Top Real Estate ETFs with the Highest Dividend Yield*. Retrieved from https://www.justetf.com/en/market-overview/top-real-estate-etfs-with-the-highest-dividend-yield-in-eur.html?utm_source=chatgpt.com
 28. Kakinuma, Y. (2025). ESG in real estate: sustainability for financial gains or overinvestment by REITs? *Journal of Property Investment & Finance*, 43(6), 631-648. <https://doi.org/10.1108/JPIF-05-2025-0058>
 29. KPMG (2025). *Real Estate Investment Trusts in Poland*. Retrieved from <https://kpmg.com/pl/en/insights/law/real-estate-investment-trusts-in-poland.html#:~:text=REITs%20are%20not%20regulated%20in,cannot%20be%20established%20in%20Poland>
 30. Lee, Y. L., & Chow, Y. P. (2025). Nonlinear effects of ESG on operational efficiency and operational performance of REITs. *Property Management*, 43(5), 717-746. <https://doi.org/10.1108/PM-09-2024-0105>
 31. Leutner, S., Gloria, B., & Bienert, S. (2024). Is there a green discount in commercial real estate lending? *Journal of Property Investment & Finance*, 42(5), 411-434. <https://doi.org/10.1108/JPIF-11-2023-0102>
 32. LinkedIn. (2025). *Global Real Estate 2025-2026: Framework of Value and Transformation*. Retrieved from <https://www.linkedin.com/pulse/global-real-estate-20252026-framework-value-transformation-bsd6e/>
 33. Liu, A., & Chen, C. (2025). From real estate financialization to decentralization: A comparative review of REITs and blockchain-based tokenization. *Geoforum*, 159, 104193. <https://doi.org/10.1016/j.geoforum.2024.104193>
 34. Liu, J., Chen, Y., Liao, S., Cheng, C., & Fu, Y. (2023). Information spillovers in Hong Kong REITs and related asset markets. *The Quarterly Review of Economics and Finance*, 92, 215-229. <https://doi.org/10.1016/j.qref.2023.10.006>
 35. Mansley, N., Tse, T., & Wang, Z. (2020). Risk classification of Asian real estate funds and their performance. *Pacific-Basin Finance Journal*, 63, 101400. <https://doi.org/10.1016/j.pacfin.2020.101400>
 36. Marfatia, H., Gupta, R., & Cakan, E. (2017). The international REIT's time-varying response to the U.S. monetary policy and macroeconomic surprises. *The North American Journal of Economics and Finance*, 42, 640-653. <https://doi.org/10.1016/j.najef.2017.09.007>
 37. Marzuki, M., & Newell, G. (2019). The evolution of Belgium REITs. *Journal of Property Investment & Finance*, 37(4), 345-362. <https://doi.org/10.1108/JPIF-03-2019-0029>

38. Mensi, W, Nekhili, R., & Kang, S. (2022). Quantile connectedness and spillovers analysis between oil and international REIT markets. *Finance Research Letters*, 48, 102895. <https://doi.org/10.1016/j.frl.2022.102895>
39. Minfin (2025). *REIT-fondy: investytsii v nerukhomist bez operatsiinoho klopotu. [REIT Funds: Investing in Real Estate Without Operational Hassles]*. Retrieved from <https://minfin.com.ua/ua/2025/11/11/162181366/>
40. Mishchenko, V., Naumenkova, S., Mishchenko, S., & Tishchenko, I. (2025). Formation and functioning of financial metaverse platforms. *Financial and Credit Activity Problems of Theory and Practice*, 1(60), 111-122. <https://doi.org/10.55643/fcaptive.1.60.2025.4689>
41. Moonfare. (2025). *Continuation Fund*. Retrieved from <https://www.moonfare.com/glossary/continuation-fund>
42. Morri, G., & Beretta, C. (2008). The capital structure determinants of REITs. Is it a peculiar industry? *Journal of European Real Estate Research*, 1(1), 6-57. <https://doi.org/10.1108/17539260810891488>
43. MSCI. (2025). *Real Estate in Focus: 2025 Trends to Watch*. Retrieved from <https://www.msci.com/research-and-insights/blog-post/real-estate-in-focus-2025-trends-to-watch>
44. Muckenhaupt, J., Hoesli, M., & Zhu, B. (2025). Real estate as an inflation hedge: new evidence from an international analysis. *The North American Journal of Economics and Finance*, 80, 102488. <https://doi.org/10.1016/j.najef.2025.102488>
45. NAREIT (n.d.). *The History of REITs*. Retrieved from <https://www.reit.com/what-reit/history-reits>
46. NAREIT (2026). *FTSE NAREIT U.S. Real Estate Index Series Daily Returns* Retrieved from <https://www.reit.com/data-research>
47. NAREIT (2025) *Daily Returns (U.S. & Global)*. Retrieved from <https://www.reit.com/data-research/reit-indexes/daily-returns-us-global>
48. NAREIT (2019) *NAREIT guide to ESG reporting frameworks*. Retrieved from https://www.reit.com/sites/default/files/media/PDFs/Research/Nareit_Guide_to%20ESG_Reporting_2_21_19.pdf
49. NBU. (n.d). *NBU Key Policy Rate*. Retrieved from <https://bank.gov.ua/en/monetary/archive-rish>
50. NBU. (2025). *Financial Stability Report. December 2025*. Retrieved from https://bank.gov.ua/admin_uploads/article/FSR_2025-H2.pdf?v=16
51. NSSMC. (2025a). *Polozhennia pro poriadok zdiisnennia emisii seryifikativ fondu operatsii z nerukhomistiu ta yih obigu: Rishennia No. 28/21/3185/K03. [Regulation on the Procedure for Issuing and Circulating Real Estate Fund Certificates: Decision No. 28/21/3185/K03]*. (In Ukrainian). Retrieved from <https://zakon.rada.gov.ua/laws/show/z1784-25#n7>
52. NSSMC. (2025b). *Zvit pro robotu Komisii u 2024 rotsi [Report on the Commission's Activities in 2024]*. (In Ukrainian). Retrieved from <https://www.nssmc.gov.ua/wp-content/uploads/2025/06/zvit-nktsppfr-2024-rik-1-1.pdf>
53. Naumenkova, S., Mishchenko, S., I., Tishchenko, I., & Mishchenko, V. (2025). Government support for addressing energy poverty in the context of low-carbon transition. *Public and Municipal Finance*, 14(2), 64-82. [http://dx.doi.org/10.21511/pmf.14\(2\).2025.07](http://dx.doi.org/10.21511/pmf.14(2).2025.07)
54. Naumenkova, S., Tishchenko, I., Mishchenko, V., & Mishchenko, S. (2024). Rethinking energy poverty alleviation through energy efficiency: Evidence from Ukraine. *Environmental Economics*, 15(2), 198-214. [http://dx.doi.org/10.21511/ee.15\(2\).2024.14](http://dx.doi.org/10.21511/ee.15(2).2024.14)
55. Naumenkova, S., Tishchenko, I., Mishchenko, S., Mishchenko, V., & Ivanov, V. (2020). Assessment and mitigation of credit risks in project financing. *Banks and Bank Systems*, 15(1), 72-84. [http://dx.doi.org/10.21511/bbs.15\(1\).2020.08](http://dx.doi.org/10.21511/bbs.15(1).2020.08)
56. Ohikhuare, O., & Oyewole, O. (2025). Asymmetric connectedness among the G7 REITs market: How important are oil returns, climate policy uncertainty, and geopolitical risks? *Research in Economics*, 79(2), 101043. <https://doi.org/10.1016/j.rie.2025.101043>
57. Ozcelebi, G., & Yoon, S-Min. (2025). Impact of financial stress on the REIT market stability. *International Review of Economics & Finance*, 100, 104114. <https://doi.org/10.1016/j.iref.2025.104114>
58. PwC. (2021). *Worldwide Real Estate Investment Trust (REIT) Regimes*. Retrieved from <https://www.pwc.com/gx/en/asset-management/assets/pdf/worldwide-reit-regimes-june-2021.pdf>
59. Savills. (2025). *Savills News. December 23*. Retrieved from <https://www.savills.com/insight-and-opinion/savills-news/385282/savills-predicts-that-global-real-estate-investment-will-exceed-one-trillion-dollars-in-2026.#>
60. Schacht, U., & Wimschulte, J. (2008). German property investment vehicles and the introduction of G-REITs: an analysis. *Journal of Property Investment & Finance*, 26(3), 232-246. <https://doi.org/10.1108/14635780810871614>
61. State Statistics Service of Ukraine. (n.d). *Bank Danykh [Dataset]*. (In Ukrainian). Retrieved from <https://stat.gov.ua/uk/explorer>
62. Su, C., Chang, H., & Zhu, M. (2011). A non-linear model of causality between the stock and real estate markets of European countries. *Romanian Journal of Economic Forecasting*, 1, 41-52. Retrieved from <https://ideas.repec.org/a/rjr/romjef/vy2011i1p41-53.html>
63. Tuluca, S., Myer, F., & Webb, J. (2000). Dynamics of private and public real estate markets. *Journal of Real Estate Finance and Economics*, 21(3), 279-96. Retrieved from <https://link.springer.com/article/10.1023/A%3A1012055920332>
64. Verkhovna Rada of Ukraine. (2003). *Pro ipoteku: Zakon Ukrainy No. 898-IV [On Mortgage: Law of Ukraine No. 898-IV]*.

- Retrieved from <https://zakon.rada.gov.ua/laws/show/898-15#Text>
65. Verkhovna Rada of Ukraine. (2003). *Pro finansovo-kredytni mekhanizmy i upravlinnia mainom pry budivnytstvi zhytla ta operatsiakh z nerukhomistiu: Zakon Ukrainy No.978-IV [On Financial and Credit Mechanisms and Property Management in Housing Construction and Real Estate Transactions: Law of Ukraine No. 978-IV]*. (In Ukrainian). Retrieved from <https://zakon.rada.gov.ua/laws/show/978-15#Text>
66. Verkhovna Rada of Ukraine. (2020). *Pro nadannia budivlnoi produktsii na rynku Zakon Ukrainy No 850-IX [Provision of Construction Products on the Market: Law of Ukraine No. 850-IX]*. (In Ukrainian). Retrieved from <https://zakon.rada.gov.ua/laws/show/850-20#Text>
67. Vives-Miró, S. (2018). New rent seeking strategies in housing in Spain after the bubble burst. *European Planning Studies*, 26(10), 1920-1938. <https://doi.org/10.1080/09654313.2018.1515180>
68. Volosovych, S., Nezhyva, M., Sirenko, N., & Mykytiuk, I. (2024). Financial services in the development of the Big-Tech ecosystem. *Financial and Credit Activity Problems of Theory and Practice*, 4(57), 55-66. <https://doi.org/10.55643/fcactp.4.57.2024.4454>
69. Waldron, R. (2018). Capitalizing on the State: The political economy of Real Estate Investment Trusts and the 'Resolution' of the crisis. *Geoforum*, 90, 206-218. <https://doi.org/10.1016/j.geoforum.2018.02.014>
70. Wright, C., & Schanz, S. (2025). *European Real Estate Market Outlook Q4 2025*. Retrieved from <https://www.aberdeeninvestments.com/en-ae/institutional/insights-and-research/european-real-estate-market-outlook-q4-2025>
71. Wu, M-C., & Wang, C-M. (2024). Revisiting the nexus of REITs returns and macroeconomic variables. *Finance Research Letters*, 59, 104837. <https://doi.org/10.1016/j.frl.2023.104837>
72. Yahoo Finance. (n.d.). *Real Estate Sector*. Retrieved from <https://finance.yahoo.com/sectors/real-estate/>
73. Zhou, J. (2025). Hedging downside risk for REITs. *The North American Journal of Economics and Finance*, 79, 102463. <https://doi.org/10.1016/j.najef.2025.102463>