"Methodological approaches to investment property valuation"

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METHODOLOGICAL APPROACHES TO INVESTMENT PROPERTY VALUATION

Abstract

Increase in number of the investment property items available in both domestic and international markets, present-day European integration processes, as well as existing differences in statutory provisions in force (controversial essentials of the investment property identification as an asset and ambiguity of implementation of the methodological approaches to the investment property valuation) have stipulated the need for improvement of the hierarchy of the investment property item fair value recognition and measurement criteria. Proposed identification methods will contribute into amplification of the synergy effect of the investment property item accounting and management due to improvement of quality and fairness of the information data on certain assets of the establishment. Methodology for the investment property valuation and changed value reporting format were worked out based upon critical analysis of the scientific professionals' main approaches to the investment property fair value measurement as provided for by statutory requirements to disclosure of the asset related information. Findings made and recommendations worked out on consideration of the harmonized indicator system implementation have thereafter found the practical use in the investment property item management efficiency assessment model.

Keywords real estate market, investment properties, recognition criteria, convergence of the international standards, fair value accounting, harmonized indicator system

JEL Classification M21, M40, M41

INTRODUCTION

Continuous development of the up-to-date technologies does stipulate the need for seeking opportunities for effective disposal of the real estate items in order to retain competitive market positions. Separation of items suitable for restoration, retrofitting and further use as the investment properties (administrative, retail, warehousing, etc.) is considered to be the one of the available tools for the above. Proper formation of the funding sources, fields of the investment property use, as well as scrupulous implementation of the methodological approaches to the item recognition and valuation will have positive effect on the recovering processes in the establishment and provide for additional gain in earnings, as well as enable improving of the informational support required for making the managerial decisions and contribute in competitive growth in domestic and international markets.

However, the controversial essentials of the investment property identification as an asset, as well as a lack of well structured and clear algorithm of the fair value measurement are considered to be the key challenges preventing from improvement and effective management of the investment property items. Therefore, tasks of working out the scientifically grounded approaches to interpretation of the investment property, singling out the criteria of identification thereof as set forth by the IFRS requirements, as well as improvement of the methodological approaches to the fair value measurement, have become of great importance now.

1. LITERATURE REVIEW

Global trends in the investment property markets were studied by a number of the leading scientific professionals, who in particular were dealing with: risk assessment impact on the real estate value management (Baum & Hartzell, 2012; Ball, Lizieri, & MacGregor, 2012), role of the governmental authorities in the investment property valuation process (T. Boyd & S. Boyd, 2012; Jackson & Watkins, 2011), taxation system and its influence on the commercial property valuation (Liapis, Kantianis, & Galanos, 2014).

The purpose of the authors' (Baum & Hartzell, 2012; Ball, Lizieri, & MacGregor, 2012) academic study was to disclose the conceptual framework of the immovable property as an investment item and identify risks, whereby real estate valuation is affected, thus providing for improvement of quality and fairness of the information required for making effective managerial decisions on potential asset management options. In consideration of the authors' significant contribution to development of the theoretical basis, it shall be noted about a lack of the practical guidelines for improvement of the real estate item valuation and management processes.

Tax authority and the national taxation system effect on the commercial property and land valuation was studied by T. Boyd and S. Boyd (2012), Liapis, Kantianis, and Galanos (2014). The authors used mathematical models, whereby they acknowledge the material effect that the national monetary and credit, as well as fiscal policy has on the net current cost of investment in the commercial property and land as the investment.

The process of planning within the system of making managerial decisions on the fields of the investment property use was reviewed by Jackson and Watkins (2011) through the example of assets held by the British companies. The authors developed six-level model of making managerial decisions, where the key element is the strategic planning of the further asset management, including assessment of the political environment and development of relations with the local governments.

Such authors as Vakhrushyna and Borodin (2012), Druzhylovska (2014), Ilysheva and Neverova (2010) and Mirzoian (2015) were engaged in studies of the theoretical and practical problems with regard to recognition and implementation of the investment property item valuation methods, assessment of the effect that financial crisis and institutional interrelationships have on formation of the investment property valuation policies. The authors investigated the first priority problems of the investment property valuation through the example of the international accounting, in particular of the Russian Federation. Consequently, a set of recommendations was worked out with regard to improvement of the investment property valuation and accounting procedures, in particular specification of the terms and definitions, measurement of the said assets initial value in consideration of the sources of origin thereof for establishments with whatever industry affiliation and ownership structure. The authors laid an emphasis on the key problems of the applicable Russian investment property valuation and accounting rules and standards:

- measurement of liabilities at the time of recognition thereof is not considered for valuation;

- no discounting is applied for valuation of the investment property taken on lease.

Scope of studies included working out of the real estate item market value measurement methodology (in consideration of quantitative adjustment methods implemented, expert appraisals and sales analysis) and proposals for improvement of the methodological approaches to property valuation in terms of the commodity-money relations.

However, authors' developments were mainly dedicated to application of the investment property valuation methods according to the national accounting standards with due consideration of implementation of the international standards into the Russian accounting system.

In case of Ukraine, the issues of the investment property valuation were reviewed by scientists only in the context of duplication of provisions of the Accounting Regulations (Standards) – AR(S) 32: Investment properties in consideration of the International Accounting Standards – IAS

40: Investment properties and International Financial Reporting Standards – IFRS 13: Fair value measurement requirements (Davydiuk & Mironova, 2015; Suprunova, 2010; Chyzhevska, 2011). The author's proposals were focused on the collision of the statutory regulation of the investment property valuation, accounting and management, necessity of harmonization of provisions of the national and international accounting and financial reporting standards. Some authors (Shevchenko, 2015) reviewed the organizational and methodological guidelines for the investment property valuation based upon subjective approach (where the investment property value measurement is done by the internal specialists (accounting valuation), qualified assessors (independent valuation) or as ordered by the court (expert valuation)) and objective approach (which is based upon division of items into balance, out-of balance and off-balance ones).

Bondar and Voinarenko (2009) reviewed the substantiation of options for application of the methodological approaches to the investment property item valuation in consideration of advantages and disadvantages of each method applied based upon formation of fair and relevant information to be reported as of the date of balance prepared with financial statements, as well as procedure for asset identification through following a concept of baseline and derived estimates.

At the same time, challenging issues of practical implementation of the investment property valuation and accounting systems by Ukrainian companies, in particular imposed with an obligation to prepare financial statements according to requirements of the international standards, however, with simultaneous meeting the imperative provisions of the applicable national laws and regulations still retain neglected.

1.1. Purpose of the study

The purpose of thus study is to substantiate the methodological approaches to working out of the practical guidelines for accounting measurement and management of the investment properties against a background of the convergence of the international financial reporting standards.

1.2. Study methods used

The following methods were applied for study of the theoretical basis and methodological approaches to the investment property valuation: theoretical generalization and comparative methods (applied for determination of the micro- and macroeconomic role of the investment property), computational and analytical and graphical methods (applied for making tables and plotting of pictures, performing computations and reporting of the study results), as well as analysis and synthesis methods (applied to reveal main weaknesses of disclosure of information on the investment properties and fair value thereof in financial reports of Ukrainian, Russian and European companies).

Special attention was paid in the article to harmonization of the investment property fair value measurement algorithm according to the IFRS and IAS requirements with due consideration of the economic and mathematical methods.

Appropriate system of comprehensive indicators and criteria of the investment property management efficiency assessment was developed due to generalization and systemization of the results obtained.

2. MAIN RESULTS OF THE STUDY

Notwithstanding the geopolitical uncertainty and slow-up of the global economic cycle, the recent analytical studies are indicative of unprecedented growth of real estate investments in 2017: by 18%, i.e. up to USD 1.62 billion (as compared with USD 1.43 billion in 2016). The said indicator has been still demonstrating the further growth in 2018 (USD 1.43 billion by the end of the 3rd quarter). The Asian investors have played the determinative role and become a sectoral driver as funds incoming from that region made up to over a half of all capital attracted and 46% of the international investments.

Despite the USA, China, Great Britain, Germany and Japan are still remaining among leading investment-attractive countries, intensification of the international investment activities has been
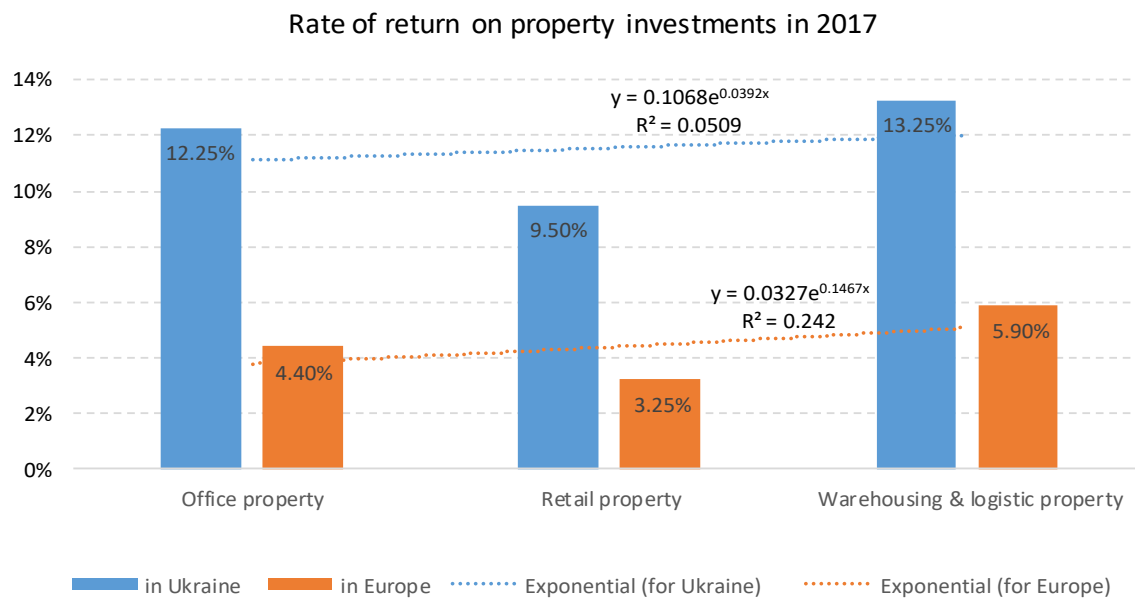
Figure 1. Rate of return on property investments

also noted for Ukrainian real estate market. They have been increased by 54% up to USD 280 million. At the same time the global rate of return on investments into domestic property made up to 12.25% of the office property (mean value for Europe 4.4%), 9.5% of retail property (mean value for Europe 3.25%) and 13.25% of warehousing and logistic property (mean value for Europe 5.9%).

Trends of economically conditioned growth and downfall of rate of return on property investments in terms of trend line plotting (geometric display of the mean value ($y = 0.1068e^{0.0392x}$; $y = 0.0327e^{0.1467x}$)) in consideration of the approximation validity (R^2) in the international context are shown in Figure 1 based upon changes in such rate of return in 2017 (see Figure 1).

Cushman and Wakefield's quarterly European Fair Value Index – which analyzes 123 European office, retail and logistics markets – continued its downward trend in Q4 2017 to reach a level last recorded in Q1 2006. This reflects both the advanced stage of the property cycle and the availability of fewer attractive prime (high quality) opportunities.

In Q4 2017, just 19% of the index was classified as 'underpriced'. Logistics remains the most attractive sector, with 39% of the markets classified as 'underpriced', and only two as 'fully priced'.

Moscow remains at the top of the underpriced European markets table, ranked first and third for its retail and office sectors, respectively. Budapest (retail market) was second with Budapest (logistics) and Dublin (logistics) completing the top five.

Top five 'fully priced' shortlisted markets include: Istanbul, Wien and Oslo (office property), Milano and Rome (retail trade). Ukrainian cities were not directly considered for the purpose of the study because of their insignificant cross section in terms of market trend formation. Ukrainian real estate market is classified by the general fair value index as 'underpriced'.

Such a situation existing in the domestic market is conditioned by a series of the destabilizing factors having adverse effect on the market performance and slowing sound structural transformations required for increase of profitability thereof.

Political turbulence against a background of the future presidential and parliamentary elections, battle actions in the East of the country, scheduled repayments of the government debt to the international creditors in 2019–2020, as well as consistent
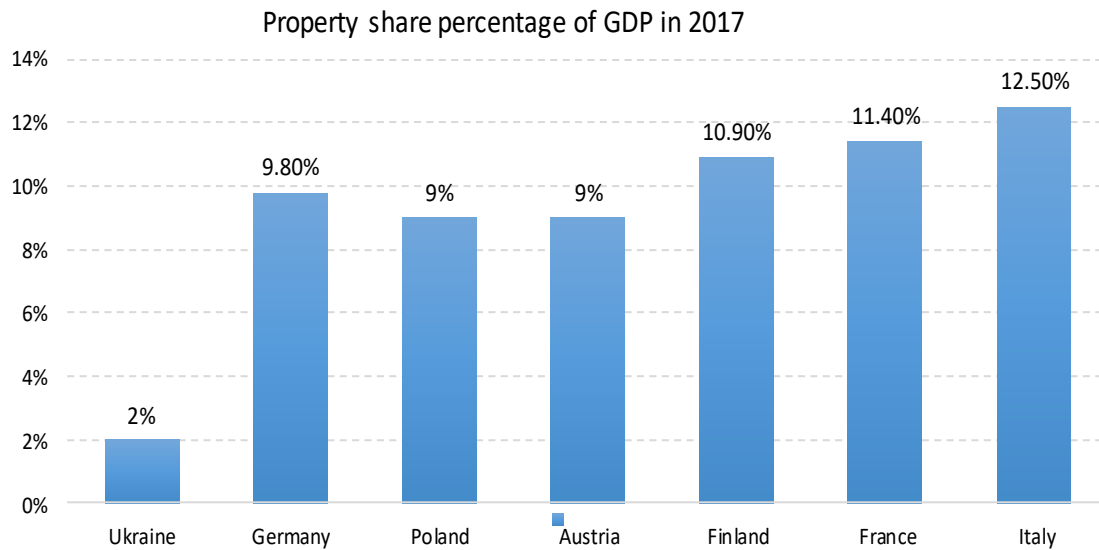
Figure 2. Property share percentage of GDP in European countries

high level of corruption are recognized to be the material risks for the further activating of the real estate market transactions.

Real estate market situation is one of the key indicators, whereby the level of social and economic development of Ukraine is defined based upon close relevant relationship with the other real sectors of economy. Average property share percentage of the Ukrainian GDP in 2017 made only up to 2% with money multiplier of UAH 6.76 (EUR 0.19). It shall be noted for reference that the average property share percentage of GDP in the key European markets makes up to: 9.8% (Germany), 9% (Poland and Austria), 10.9% (Finland), 11.4% (France) and 12.5% (Italy) (see Figure 2).

Due to reduction of the investment risks, relative stabilization of the national currency and economy, increase in number of companies investing in property for the purpose of accumulated capital investment and/or placement of own operating business, growth of the investors' interest in commercial properties was evidenced in 2017. Key property market players are privately held Ukrainian investment companies, national logistic companies, large-scale retailers, as well as local, foreign and international investors.

Secondary investment transactions in the Ukrainian property market volume up to USD 137 mil-

lion in 2017, which is 56% up compared with 2016. According to expert estimates of the transactions in commercial property market, anticipated investment volumes are in the range of USD 200-350 million. Therefore, commercial property remains the most attractive and profitable investment asset, especially with regard to the high quality items.

Specific functioning of the domestic investment property market is significantly influenced by its specific evolutionary development.

Process of privatization of the state owned properties begun in the 90's of the past century has laid the foundation for the formation of the modern investment property market. Reassignment of the rights to and in the state owned properties has triggered growth of the market. Taking into consideration rather short period of time during which the investment property market has been autonomously functioning since Ukraine become independent, the most part of properties is characterized by poor quality, incompliance with modern construction and building standards, high deterioration and obsolescence of the infrastructure, territorial disproportion, absence of the uniform approaches to property valuation and unavailability of the market information whatsoever.

Moreover, there is uneven development of the certain property segments what is typical of the

former USSR countries. In particular, the most active segment today is retail investment property, which key economic indicators are demonstrated in Kyiv, Odesa, Lviv, Dnipro and Kharkiv.

High rate of return on both individual segments and of the entire investment property market of Ukraine is accompanied with major risks connected with not only economic and political factors, but first and utmost of conflict legislative provisions regulating market rules; lack of harmonized methodology for accounting, measurement and management of the investment property items according to the international economical environment, existing and potential investors requirements to improvement of the companies' financial reporting transparency for alignment of asymmetry in information available in the global property markets that grew up after global crisis in 2007–2009.

The purpose of global convergence of the accounting systems is to provide transparent accounting and reporting of the actual economic situation by the companies, thus assisting in making effective managerial decisions based upon sound and true information.

Considering the modern trends and potential growth of the Ukrainian investment property market, its attractiveness for the foreign investors and global convergence of currently prevailing occupational standard systems against a background of the need for improvement of the national legislative environment, the key issues arise that assume identifying the investment property as individual item, recognition, measurement, accounting and strategic management of the investment property items.

High rate of return on property investments does provide for increasing of capital investment volumes and number of investment entities as establishments count not only on earning profit from lease, but also increase in market value of the investment properties. This is just a reason for interesting in segregation of the investment property within the asset account for the purpose of determination of the effective alternative options for management of real estate items. At the same time, some issues regarding specific identification and recognition of the investment property as accounting item still remain unsolved and debating.

An ambiguity of the identification essentials is one of the key challenges preventing from improvement and development of the investment property accounting system, as well as providing for efficient asset use (allocation). Therefore, the critical tasks arise, whereby it is assumed to work out scientifically grounded approaches to interpretation of the investment property and building hierarchy of its identification criteria in consideration of recommendations provided for in the international standards.

Rules of the investment property recognition and valuation, as well as its reporting in accounts in terms of the international accounting system are regulated by requirements of the IAS 40: Investment properties.

Since development and adoption in 2003 of the International Accounting Standard – IAS 40, different countries have been implementing appropriate national investment property accounting standards, either directly or through introduction of specific IAS 40 requirements into their national standards (Table 1).

The most part of different investment property accounting standards simply repeat, either in whole or partially, the IAS 40 text with due consideration of the national accounting practice, traditions and institutional factors in the context of global standardized accounting mode (Fearnley & Gray, 2015).

However, there are key weaknesses of the IAS 40 that aggravate implementation of the standard, i.e. because of extremely loose adaptation and application of the accounting principles, as well as insufficient description of the certain accounting approaches.

This applies especially to countries, where the accounting system is currently being subject to the process of liberalization, retreating from command and administrative management system and reformation in line with market relationship requirements.

Table 1. Investment property accounting regulations of different world countries

Country	Accounting regulations
Japan	ASBJ Statement No.20 Accounting Standard for Disclosures about Fair Value of Investment and Rental Property ASBJ Guidance No.23 Guidance on Accounting Standard for Disclosures about Fair Value of Investment and Rental Property
Great Britain	SSAP 19 Property investment accounting standard
China and Hong Kong	HKAS 40 Investment Properties
India	Ind AS 40 Investment Properties
Singapore	FRS 40 Investment Properties
Australia	AASB 140 Investment Properties
Israel	AC 16 Investment Property Financial Accounting
Latvia	LAIS 9 Investment Properties
Azerbaijan	NAISKA 27 Investment properties
Switzerland	Swiss GAAP FER 18 Fixed (tangible) assets
USA	ASC 360 Property plant and equipment ASC 845 Nonmonetary Transactions ASC 970 Real Estate – General ASC 976 Real Estate – Retail Land
Russian Federation	Accounting regulations 6/01 – Fixed asset accounting
Germany	HGB Fixed assets
France	CNC 2004-15 Identification, recognition and valuation of assets

In order to avoid adverse effect of the subjective professional opinions with regard to recognition and valuation of the investment properties in the accounting systems of the developing countries, it shall be necessary to provide details and specify formalization component of property accounting.

According to the IAS 40: Investment Properties, the investment property is a property (land plot or building or any part or combination thereof) held (by owner or tenant under the contract of financial lease) with the purpose of getting paid rental fees or increasing cost of capital or both of them (para. 5).

The key identification criteria defined according to the IAS 40 include:

- probability of getting economic benefits in the form of rental fees and/or increase of own capital;

- fairness of asset recognition.

At this stage of identification it shall be reasonable to define the hierarchical subordination of the aforesaid criteria. Implementation of the accounting principle based upon common monetary measurement requires preliminary measurement of any item value for the purpose of the further gen-

eralization of transactions therewith in the financial statements of the company. Therefore, it shall be reasonable to determine probability and ways of getting economical benefits from its use only after measurement of value thereof (para. 16).

At the same time, the new IFRS 16: Leases to be effective as of January 1, 2019 will supplement criteria of the investment property transactions recognition as lease or those containing lease component, in particular:

- asset identification;

- getting economic benefits;

- right to resolve on way, in which the asset to be used.

Identification of the asset is done through its specifying in the contract of lease. Moreover, any part of the asset may be identified, should it be possible to determine its physical parameters or 'cross section' as a part of the property item (IFRS 16, Section B20-13).

Getting of economic benefits doses assume the right for getting pretty much economic benefits from use of the identified asset during the entire period of use thereof (IFRS 16, Section B21-23).

The right to resolve on way, in which the asset to be used, does assume the company's (tenant's) right to set forth ways and purpose of use of the asset during the entire period of operation thereof; tenant shall be also entitled to manage and dispose of the asset during the entire period of use, however no right to amend item operation rules set forth in advance shall be vested in the tenant (IFRS 16, Section B24-27).

Therefore, the right of use, but not the right of possession or financial lease, is laid as foundation for recognition of the property item as an asset (IFRS 16, Section B9).

New IFRS 16 requirements are of great importance for companies making investments into property on a leasehold basis. Such a practice is of particular prevalence in Great Britain and Hong Kong. If the company was previously entitled to resolve independently whether to recognize or not recognize properties got on an operating leasehold basis as a part of the investment property, now it is obliged to report it as the investment property, provided it does comply with the other recognition criteria.

Following publication of draft version of the IFRS 16 a number of scientific professionals began to investigate effect of the operating lease capitalization upon financial performance of companies of whatever industry affiliation existing in the international and local markets.

Significant estimates of the authors are as follows:

- operating lease capitalization will have moderate effect on companies financial performance (Czajor & Michalak, 2017);

- retailers, hotel operators and airline companies will be mostly affected (Liviu-Alexandru, 2018);

- companies have to make a range of decisions required to decline the IFRS 16 influence upon leverage level (Morales-Díaz & Zamora-Ramírez, 2018);

- no relevant relation was discovered between the operating lease capitalization and company performance profitability ratios (Morales-Díaz & Zamora-Ramírez, 2017);

- implementation of the new operating lease accounting model will enhance the quality of the tenant's financial liabilities and financial strength measurement, as well as have effect upon ROA and EBIDTA figures (Pavić, Dečman, & Sačer, 2017).

Line of reasoning for implementation of the new rules of lease is based upon active use of the off-balance financing model today. Therefore, investors and bond rating agencies have to make allowances for the operating lease liabilities (mean ratio 8 shall be applied to the lease costs). According to the study performed by the IASB, such allowances are recognized to be of rather general character and therefore lead to undervaluation or overvaluation of different companies debts. However, recognition of the total leases on the balance sheet will improve the accuracy and enable simplifying of the measurement.

According to the IASB data, the total amount of not recognized liabilities under contracts of operating lease makes up today to USD 2.2 billion. Adoption of the IFRS 16 will have significant effect upon reported financial indicators. The tenant will have gain in assets, however at the same time his debt liabilities will grow as well; the total costs of lease will be higher at the initial lease period, even if the rental fees are regularly paid. Apart from increase of EBIDTA, implementation of the IFRS 16 will also lead to increase of the net debt accordingly (Table 2).

In order to make lease related provisions of the IAS 40 and IFRS 16 brought into conformity in so far as it regards identification and recognition of the investment property, criterion of holding property on operating lease shall be removed.

Implementation of the IFRS 16 has made it possible to choose the basis for valuation. When making a decision on recognition of investment property held on operating lease as an asset, the company previously had to apply the fair value measurement model to all investment property items.

Now the company may independently choose either fair value or initial value measurement model depending on approved accounting policy.

Table 2. IFRS 16 effect on the company main financial indicators

Financial indicator reported	Effect (+/–)
Noncurrent assets	+
Total assets	+
Net debt	–
Capital/net equity (for initial years)	–
Asset turnover	–
Debt-equity ratio (financial leverage)	–
Operating revenues	+
Earnings per share	–
Financial expenses	–
EBITDA	+
ROA	+
Operating cash flow	+

It shall be noted that the fair value measurement methods still remains under discussion today. Modern foreign authors pay the utmost attention just to issues of substance and grounds for application of fair value measurement method, genesis of such method evolution in accounting systems of different world countries, new aspects of fair value based accounting as provided for in the IFRS 13, as well as critical analysis of the key provisions of the said standard.

Among other things the most authors report about the need for application of the fair value measurement of the company's assets and liabilities in order to provide for developing of proper and fair information on their actual financial health and resources available. However, it must be said about low reliability of obtained data, which is conditioned by a lack of common generally accepted approaches to the fair value measurement and measurement method (Nellessen & Zuelch, 2011).

Having followed up the evolutionary effect that the financial capital has upon on the commercial property valuation in the UK through preparing a historiography of the investment cost measurement beginning from 1960, thus supporting views of Crosby and Henneberry (2016), it has been found that in consideration of fair value measurement weaknesses the traditional valuation method still prevails for measurement of the market value (Crosby & Henneberry, 2016).

Unsound market conditions, strict restrictions imposed by standards and accounting policies of listed companies constitute a problem of the fair value accounting method outspread (Xie, Dai & Liao, 2010), while potential management manipulations, in particular with Level 3 data, prevent from its due performing (Y. Lin, S. Lin, Fornaro, & Huang, 2017).

By reasoning the need for the fair value measurement method application, the authors, inter alia, bring forward the arguments of high concern of company directors and investors about getting fair information on actual value of the item, which does comply with the existing market indicators. Appointment of the qualified assessors will provide for avoiding misrepresentation of information on the actual value of the item (Yamamoto, 2014; Taplin, Yuan, & Brown, 2014), while conservative accounting system, if being still used, will make possible for the companies to have more accurate estimates of the future cash flows (Bandyopadhyay, Chen, & Wolfe, 2017).

Not diminishing the importance of the authors' contribution into investigation of the range of valuation related problems, as well as its effect upon financial results of the companies from allover the world, it shall be said about absence of the common harmonized methodology for the investment property valuation and clear regulations for step-by-step implementation of methods and approaches thereto. The issue of practical implementation of the said method in the countries, where no active investment property markets exist, still remains pending.

It should be stressed within the given context that the fair value often serves as a tool for spec-

ulations and fraudulent actions, especially in countries with evidenced high level of corruption (Transparency International, 2017). This is particularly so with the public sector in the time of valuation and sale of the state-owned properties at a bargain price. The history of corruption stories in Ukraine includes sales of Kryvorizhstal, Ukrtelecom and Ukrrudprom, as well as stock of shares of energy supply companies (Odesaoblenerho, Donetskoblenerho, Donbasenerho, Sumyoblenerho and Kyivenerho). Commercial companies are also engaged in price manipulations in order to evade taxes and duties.

Use of the fair value as independent valuation tool was translated into practice only in March 1995, i.e. after adoption of the IAS 32: Financial Instruments: Disclosure and Presentation, while definition of the fair value was firstly given in the IAS 39: Financial Instruments: Recognition and Measurement in 1998. For the purpose of the further convergence of two occupational standard systems, i.e. IFRS and GAAP, harmonization of approaches and development of the common algorithm for fair value measurement, the International Accounting Standard Board adopted in 2011 the IFRS 13: Fair Value Measurement, where the conceptual basis of the fair value measurement method is given. IFRS 13 states that the fair value is a market-based, rather than entity-specific, measurement. The objective of fair value measurement is to estimate the price at which an orderly transaction to sell an asset or to transfer a liability would take place between market participants at the measurement date under current market conditions (i.e. an exit price that market participant holding assets or having liability considers to be fair at the measurement date).

The international standards, whereby accounting approach to the company assets is set forth, state the fair value as an amount, for which an asset would be exchanged between knowledgeable, willing and independent parties in an arms length transaction (IAS 2, para. 6; IAS 16, para. 6; IAS 38, para. 8; IAS 40, para. 5; and IAS 41, para. 8).

With reference to the guidelines provided in the IFRS 13, as well as specific features of the invest-

ment property as accountable item, we hereby propose to apply the following steps for investment property fair value measurement (see Figure 3).

Following the study of financial statements of the Ukrainian companies it has been found that no information on the investment property and fair value thereof was disclosed in the Notes to financial statements as set forth by requirements of the IFRS 40 (para. 75, para. 78, and para. 79). Such a situation is typical of the most companies in the ex-USSR countries with the appropriate level of accounting system development (Aletkin, Samitova, & Kulikova, 2014). Consequently, financial statements of the said companies may not be classified as made in compliance with the IFRS requirements.

In consideration of no IFRS recommended standard form of the notes to financial statements available, it is advisable to develop the common form for informational reporting of changes in the investment property value during the accounting period (Table 3).

Proposed form will provide for harmonized reporting of the narrative and financial information on the carrying value of the investment property as of the opening and closing day of the accounting period measured with alternative methods.

Obtained information on value, income earned from lease and/or changes in value, as well as operating expenses borne makes it possible to work out a system of harmonized indicators of investment property management with setting key flags for efficiency assessment of each group of indicators with due consideration of their effect upon reduction of expenses, growth in income and change of the investment property item value.

It is advisable to divide a system of harmonized indicators, which is determinative for development of the company strategy of the further management of the investment property items, into four groups:

- financial results (key criteria: growth in income from property use and reduction of the operating costs);

STEP 1 - INVESTMENT PROPERTY ITEM IDENTIFICATION

Item condition → Location → Area → Ownership → Intended social and economic purpose

STEP 2 - REASONING THE GROUNDS FOR MEASUREMENT

Legally permitted → Physically feasible use → Financially feasible

STEP 3 – MARKET PARTICIPANTS SINGULARITY

Having intent to hold transaction · Independent, unrelated · Having opportunity · Acknowledged, aware of the item

Step 4 – Market determination, fair value hierarchy

Activity in the major market	Activity in the most favorable market	No activities
Investment properties, which active (major) market details are available.	Investment properties, which market details are based upon other market (the most favorable) data or determined indirectly.	Investment properties, which main and/or the most favorable market details are not available.

Hierarchical data level assignment

→ **Level 1** Prices for similar items in the active markets

→ **Level 2** Initial data established either indirectly or based upon actual market details

→ **Level 3** Restricted initial data and company assumptions

Data collection and processing

Management accounting data обліку ← → Market data

STEP 5 – CHOOSING THE INVESTMENT PROPERTY VALUATION APPROACH

Income-based approach	**Comparative (market) approach**	**Cost-based approach**
• Direct capitalization method • Discounting methods	• Direct sale analysis method • Price-to-income method	• Value substitution method

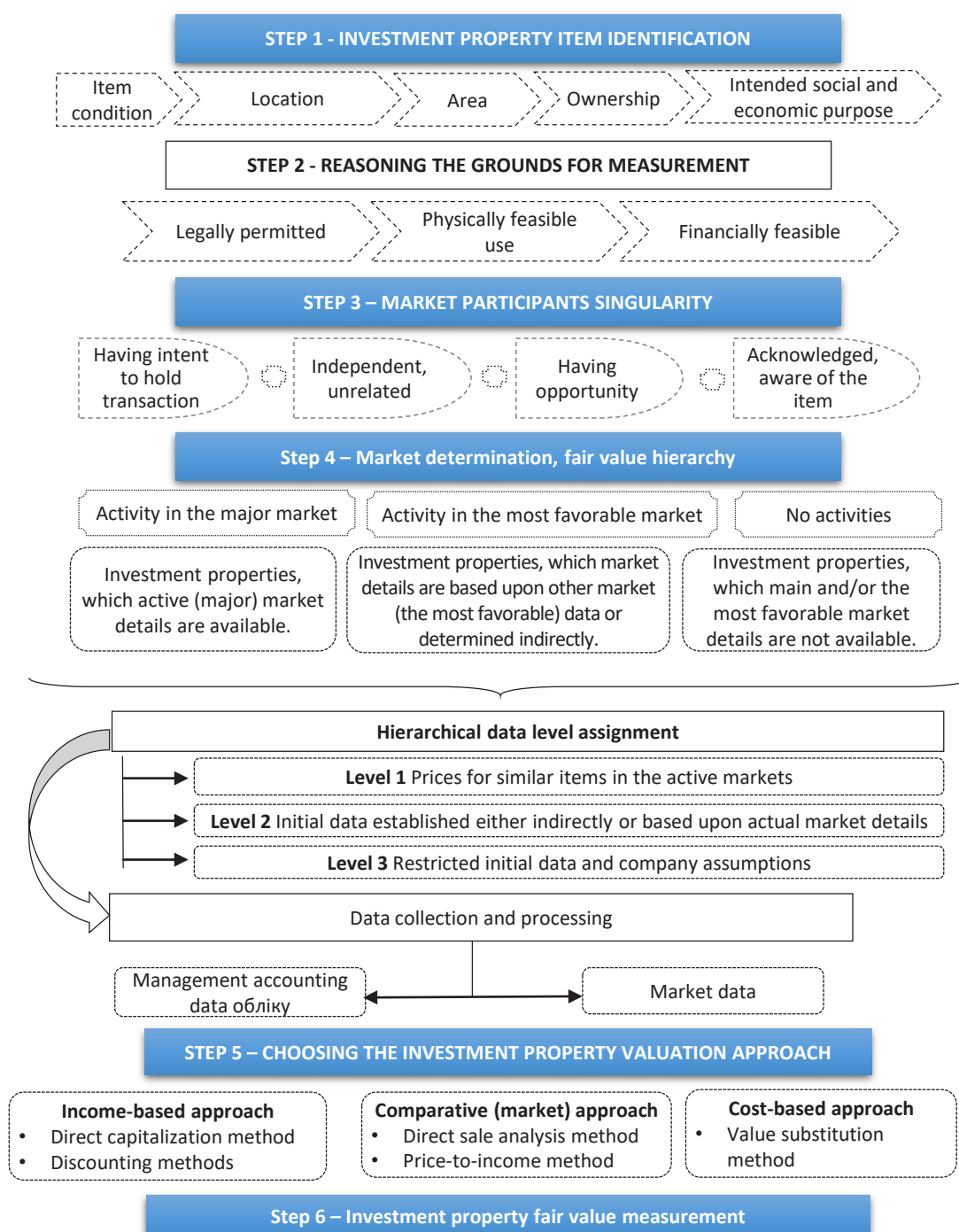**Step 6 – Investment property fair value measurement**

Figure 3. Investment property fair value measurement methodology

- client portfolio (key criteria: strengthening of the reputational component of the company, including the level of reliability and significance for the national economy, widening a range and quality of additional services, as well as customer support);

- upgrades and innovations (key criteria: improvement of the management accounting instruments, investment property use and disposal intensification and diversification, prompt implementation of the innovative developments);

Table 3. Standard form for reporting of changes in the investment property value, UAH thousand

Pos.	Item	Accounting period	Previous period
1	Measurement methods and approaches	Income-based approach	Income-based approach
2	Measurement date	January 1, 2018	January 1, 2017
3	Measurement target	Subsidiary company Milkiland Ukraine	Subsidiary company Milkiland Ukraine
4	Investment property value as of the opening day of the period	2,248.51	1,545.14
5	Value increase due to	124.25	983.51
	• acquirement	124.25	941.41
	• capitalization of the further expenditures	–	42.10
6	Value decrease due to	(124.78)	(280.14)
	• transfer or withdrawal	–	(157.00)
	• property reclassification	(124.78)	(123.14)
	• depreciation and usability impairment	–	–
7	Adjustments for	–	–
	• net profit (losses)	–	–
	• net differential exchange rates	–	–
8	Other changes	–	–
9	Investment property value as of the closing day of the period	2,247.98	2,248.51

- training and growth (key criteria: granting an access to the information sources for the purpose of getting and systematization of required information, working out of the performance efficiency motivation system, as well as employee training of the of modern management approaches) (see Figure 4).

Proposed are not static, but variable indicators that vary because of either external or internal factors. The authors propose to assess their efficiency through determination of indicators effect on the investment value of the property based upon the formula below:

$$PV_n = \sum_{i=1}^{t} \frac{\left(VW_c \cdot VW_i \cdot \sum_{j=1}^{n} LR_j \cdot NA_j \cdot \Delta OR \right) \cdot k - \sum_{j=1}^{n} E_j}{1+r}, \quad (1)$$

where PV_n – the investment value of the property; VW_c – weight of implemented criteria of the investment property management in profits gained from the investment property use; VW_i – weight of the i-th investment property item in the total value of the investment asset; LR_j – a new lease rate after the j-th criterion implementation; NA_j – the space rented for implementation of the j-th criterion of the investment property management; OR – the occupancy rate of the item during the period under review; k – the net profit ratio as a part of the total earnings from lease; E_j – costs of implementation of the j-th criterion of the investment property management; r – discount cash flow rate; t – number of a year, whereby the projection period is covered.

The most widely used method for making grounded conclusion on expediency of investments under current conditions is the cash flow discounting method, which concept is based upon considering changes in value of used money through exposure to the factors enlisted.

There are no harmonized methods for discount rate based measurement of the investment value of property available today, which would satisfy demands of the financial analysts and would not come under criticism. Ukraine is known for rather troublesome application of the discount rate with a glance to statutory discontinuities, economical and political turbulence, as well as inflation fluctuations.

Determination of the projected period is considered to be of critical importance as it has effect upon fairness of the obtained data. Considering permanent inflation and exchange fluctuations, legislative modifications and changing of the state fiscal policies typical of the emerging countries, it
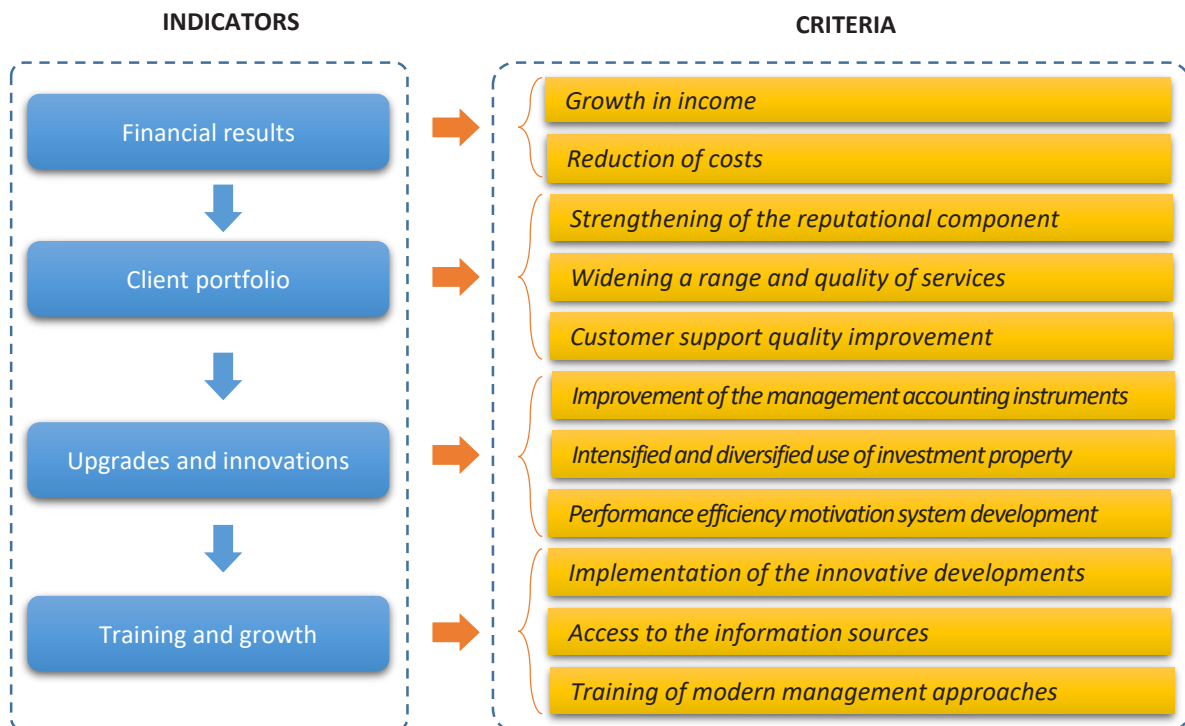
Figure 4. Investment property management harmonized indicator system

is advisable to use four-year projection period in order to provide for fairness of estimates and reduce uncertainties in the time of the general risk impact assessment.

Ultimate calculation results will enable determination of effect from each implemented criterion on formation of the investment value of property due to growth in income from lease conditioned by lease rate increase and change of the vacancy rate of each individual property item net of costs for implementation of the entire harmonized indicator system during the projected period.

CONCLUSION

Global business and capital integration provide for more strict requirements to quality, completeness, fairness, timeliness and correlation of the information sources, thus contributing into the need for rejection of traditional measurement of assets at the initial value thereof taking into account their usability impairment and therefore development of the methodological approaches to the investment property measurement just at fair value. Following modifications in the investment property value measurement principles (changing for fair value measurement method), the authors have built the hierarchy of the investment property recognition criteria, which makes it possible to identify it properly as the accounting item and civil law relation matter, as well as to improve quality and fairness of the information data used for reporting noncurrent assets in the financial statements.

Analysis of the conceptual approaches to the investment property fair value measurement and due systematization thereof have enabled the authors to develop appropriate methodology for measurement of the fair value of properties, thus providing for making estimates of trends in changing of market value of such properties and cash flows from transactions therewith, as well as building approximation for their curves in the international context with a view to the investment property market stagnation.

Implementation of the strategy of investment property development and determination of changes in its value based upon introduced harmonized system of management indicators will provide for due preparation, making and monitor of compliance with managerial decisions on economically feasible use of the investment property items.

Worked out theoretical and methodological approaches to the investment property value measurement will contribute into proper choice of rational and effective strategy, as well as tactics of the company management in consideration of the business risk reduction.

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