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EVALUATION OF THE INTELLECTUAL CAPITAL OF AN INTERNATIONAL COMPANY

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ОЦЕНКА ИНТЕЛЛЕКТУАЛЬНОГО КАПИТАЛА МЕЖДУНАРОДНОЙ КОМПАНИИ

The subject of the study are the assets of the company that are not recognized under the traditional accounting statement (intellectual capital, IC), including those related to the company using the results of research (R&D) which make a significant contribution to its value. The aim of this paper is to analyze the contribution of intangible assets in the performance and value of the company. The object of the study is an international company in the sector of e-commerce. The company's intellectual capital was estimated using Tobin's q ratio, VAIC and the cost capitalization method. Tobin's q of the company was higher than one (3.59), which indicates the presence of a significant intellectual capital. Research with the VAIC method showed that the largest contribution to the overall index is made by the component associated with human capital (HCE). The growth rate of HCE showed that each year the company gets an almost two-fold return on investment in such capital. Using the method of capitalization of R & D expenditures, we performed a recalculation of the key performance indicators, taking into account the impact on them of intangible assets, such as return on equity and total capital profitability of activity, asset turnover. Capitalisation of research has a positive effect on the basic parameters, although only slightly. It was found that current accounting standards do not identify many of the key components of IC. There is a large percentage of those costs in the structure of the intellectual capital of the company, which make up a large share of the company's investments, but cannot be capitalized in connection with the requirements of the existing accounting standards. This complicates the task of managing these assets, and of adequately assessing the company for investors.

INTELLECTUAL CAPITAL; INTAGIBLE ASSETS; MARKET CAPITALIZATION; TOBIN'S Q; COMPANY PERFORMANCE; COSTS CAPITALIZATION.

Предметом исследования являются не признаваемые в учете активы (интеллектуальный капитал) компании, в том числе связанные с использованием компанией результатов научных исследований (НИОКР), вносящие существенный вклад в ее стоимость. Целью работы является исследование вклада ценности нематериальных активов компании в показатели деятельности и стоимость компании. Объектом исследования является международная компания из отрасли электронной коммерции. Проведена оценка интеллектуального капитала компании методами коэффициента q Тобина, VAIC, метода капитализации затрат. Коэффициент Тобина исследованной компании оказался выше единицы (3,59), что указывает на наличие значительного интеллектуального капитала. Исследования методом VAIC показали, что наибольший вклад в суммарный показатель вносит компонента, связанная с человеческим капиталом (HCE). Темпы роста HCE показали, что год от года компания получает практически двукратную отдачу от инвестиций в такой капитал. С использованием метода капитализации затрат на НИОКР проведен перерасчет ключевых показателей деятельности с учетом влияния на них нематериальных активов – таких, как рентабельность собственного и совокупного капитала, рентабельность деятельности, оборачиваемость активов. Капитализация затрат на исследования положительно влияет на основные показатели, хотя и незначительно. Установлено, что современные стандарты бухгалтерской отчетности не идентифицируют многие важнейшие компоненты ИК. В структуре интеллектуального капитала предприятия существует большой процент тех затрат, которые составляют большую долю инвестиций предприятия, но не могут быть капитализированы в связи с требованиями существующих стандартов учета. Это затрудняет задачу менеджменту по управлению этими активами, а инвесторам – адекватной оценке компании.

ИНТЕЛЛЕКТУАЛЬНЫЙ КАПИТАЛ; НЕМАТЕРИАЛЬНЫЕ АКТИВЫ; РЫНОЧНАЯ КАПИТАЛИЗАЦИЯ; Q ТОБИНА; ПОКАЗАТЕЛИ ДЕЯТЕЛЬНОСТИ КОМПАНИИ; КАПИТАЛИЗАЦИЯ ЗАТРАТ.

Material, tangible resources which made the largest contribution in forming the value of an organization in the last century cannot provide the company with the necessary competitive advantages nowadays [1, 2]. Business in the 21st century comprises data, IT technologies, the Internet, e-commerce, brands, etc., which is to say, the features directly or indirectly connected with knowledge. The new features of the modern economy require new rules, new resources and aims for doing business, new strategies and new measures for achieving these strategies. Intellectual Capital, intangible resources and Intangible Assets are becoming the key drivers of operational success for modern companies, while material resources become factors that do not form a competitive advantage anymore.

Evaluation and measurement of these new business assets, such as elements of Intellectual Capital, is currently a problem for both company managers interested in internal and external assessment, and for investors monitoring markets and companies for allocating their capital. Such an assessment can be significantly different from the assessment of traditional financial performance indicators, which is performed in accordance with local and international financial and accounting standards. This makes it necessary to take into account some specific features of modern resources and assets, and the company might need to evaluate and reflect this in its reports.

The objective of this paper is to examine the effect that Intellectual Capital has on Key Performance Indicators of the modern company. The object of this study is the international e-commerce company, Zalando SE.

The subjects of the paper are the assets not recognized under traditional accounting standards and represented by Intellectual Capital connected with the company's implementation of R&D which make up a big share of the modern company investments and, in our opinion, create the value for the organization in the future.

1. The concept of Intangible assets and Intellectual Capital. One of the major limitations in the measurement of IC within the organization is the uncertainty of its concept as well as the uncertainty in the relationship between Intellectual Capital, Intangible Assets and Intellectual property: can they be considered equal? And if not, what is the nature of the interaction between them?

B. Lev points out in his book dedicated to Intangible Assets that these assets and IC are essentially interchangeable concepts with the only difference in the field of application: IAs are used by accounting specialists in a balance sheet, while IC is a concept that takes place in the calculation of financial indicators by the financial management of the company [3]. In their book «Weightless Wealth: Find Your Real Value in a Future», Andriessen and Tissen understand IAs as not only a balance sheet term, but an overall measure of intangible wealth creating the value for an organization [4]. In this regard, we should also distinguish the IAs as assets within accounting from those IAs which are unidentifiable under the balance sheet, sometimes called the Intangibles. Within the framework of this study we are going to accept that IC and IAs are equivalent concepts, assuming, however, that IA is somewhat broader than an accounting term, and identify them as Intangibles (here we talk about a broad understanding of IAs as the summation of «identifiable and unidentifiable IAs»). As for Intellectual Property, we argue that nowadays this term is far more narrow and is used mostly in legal practice. Taking into consideration the definition of IAs as a broad measure of intangible wealth of the company, we also agree that not all components of this wealth are legally a part of the organizational property. That allows us to state that Intellectual Property cannot be equated to the above definitions but represents only a part of the IAs of the organization.

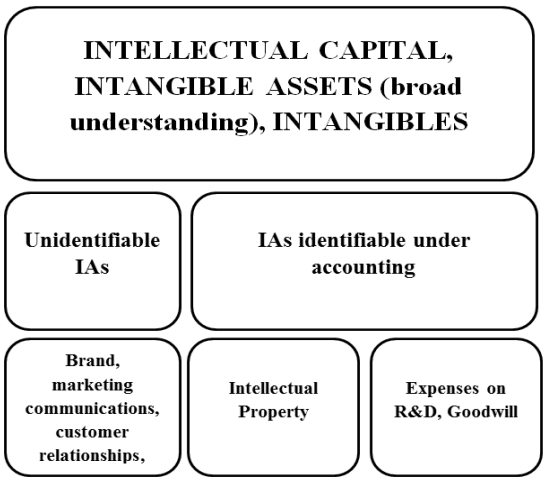

Fig. 1. Classification of the basic concepts covered in the study

Now, when we agreed on the basic concepts and definitions, we will examine the structure and the evaluation of the IC, which currently presents the main problem in discussions concerning the intellectual capital.

2. The structure of Intangible Assets (IC). The structure of IC is particularly important in terms of measuring its value. This is due to the fact that the structure displays information on where and in which way the intellectual assets are located within the company. In today's practice it is very common to use the IC model of Hubert Saint–Onge [4], which divides all the elements of Intellectual Capital into three groups: human, structural and client capital. This approach is also in accordance with the IC classification of the International Federation of Accountants [5].

Human capital is connected with knowledge, skills and experience of employees, as well as with the organizational capabilities to monetize these knowledge, skills and experience.

Structural (or organizational) capital represents everything that is always a part of the company, even if employees with their knowledge and expertise left it. This is the most diversified element of IC, which includes Intellectual Property rights, IT resources, guidance for working processes, unique organizational structure and more of the unique techniques that might be economically sufficient for the company.

Client (or relationship) capital consists of the external relations of the organization with its clients, suppliers, partners, investors and other stakeholders and the capability of the company to monetize these relations in an efficient way. This might include trademarks; reputation of the company among its stakeholders; insiders of the company within partner or supplier organizations or among clients; repetitive purchases; long-term relationships with key partners and so on [6].

3. The value of IAs and its measurement. Kendrick states [7], that in today's economy the proportion of material resources to immaterial, intangible ones is 30:70 percent, while in the beginning of the 20th century, this proportion was 63:37 percent. At the same time, a number of researchers from the MMU University (Malaysia) argue that the market value of some organizations is almost 6 times greater than their book value [8]. Thus, we suppose that traditional accounting methods are able to display around 15 % of total value of the overall intangible assets. Therefore, a lot of attention nowadays is paid to the problem of correctly reflecting the new resources in the knowledge economy. Simultaneously, the main aim of every business, i. e., increasing the company's profit, still remains the same as it used to a century ago. This creates a dissonance in how the value of the organization is formally measured by current accounting standards and what its measure is in terms of knowledge economy.

This is particularly visible in high-tech industries, where the highest share of intangible assets among all the industries is concentrated. This creates the need in more adequate assessment of such assets in these organizations by restructuring and improving the traditional methods of IC measurement and recognition.

Currently there is a great number of methods for measuring IC. These methods are different by their nature and, therefore, all of them might be divided into four groups [9]:

1) Direct Intellectual Capital methods (DIC) require quantitative assessment of different components of Intellectual Capital after their identification.

2) Market Capitalization Methods (MCM), an approach, based on market capitalization evaluation. Such methods presuppose calculating the difference between the company's market value and the equity of its shareholders, with the obtained values then considered to be the IC.

3) Return on Assets Methods (ROA), which show the intellectual resource potential of an organization, a measure distinguishing this approach from MCM approach significantly. This is possible due to the ability to compare measurement results with the industry's average. The comparable values are defined as the proportion between average pre-tax earnings numbers and the average material assets numbers.

4) Scorecard Methods (SC) approach can be considered as quantitative as it does not imply dollar evaluation. These methods are comparable with the DIC methods, but the defined IC components are assorted then by scorecards or graphs.

Apparently, not every method can be used by every organization. For instance, MCM methods, which require the stock market data, can be very problematic to calculate for small

and medium enterprises (SME). Nevertheless, the existence of more than 30 methods [9] in the current IC measurement practice allows each company to choose which set of different approaches to apply while trying to measure the organizational value unidentifiable by traditional assessment.

Thus, the complex and profound examination of organizational Intellectual Capital might be provided through different combinations of the available traditional and alternative methods, which can be implemented in several steps (Tab. 1). In our opinion, the set of such methods is individual for every company and should be defined according to the nature of the company's business processes.

Table 1

The process of complex IC measurement in the international organization

Step	Purpose	Method
IC Identification	Can we prove the existence of the IC in the company?	Initial assessment: The ratio between booking and market value; «Tobin's q»
IC Diagnosis	What are the elements of the IC and where are they located in the company?	Navigators of Intellectual Capital
Quantitative or qualitative measurement	Is qualitative measurement possible? How to optimize the usage of the IC?	DIC, MCM, ROA and SC methods
IAs accounting	Which IC can we recognize within the traditional accounting standards?	Accounting standards application
Recognition of unidentifiable IC	Which unidentifiable IC do we consider important to disclose?	Alternative additional reporting methods

The market value of the company is one of the most indicative criteria determining the role of intangibles in the international organization. The amounts of enterprises where intangible assets create a high value steadily grow nowadays [1, 10]. However, intangible resources create some peculiarities, which should be taken into account while implementing the diagnosis and assessment of organizational IC.

For instance, the intangibles disclosed in accounting balance sheets and methods of profit calculation, capital expenses and assets are more relevant for traditional manufacturing corporations, where IC is not creating such a significant value as it is in, for example, high-tech enterprises. On the other hand, applying these standard methods to traditional accounting leads to undervaluing their financial indicators [11, 12].

4. Assessment of Immaterial Assets of Zalando SE

4.1. Company's profile. Zalando SE was chosen as an object of this study as an international fastly growing company of the e-commerce sector [13, 14].

The object of study was selected due to the fact that e-commerce is a fast-growing segment of the economy, including in Russia. A comprehensive study of the experience of the leaders of this industry is overdue and is of interest both from scientific and practical points of view. Our study was aimed primarily at educating the management of Russian companies operating in sectors with a high proportion of intangible assets in the management of their intellectual capital. During this study, mainly open sources and public company information were taken into consideration. Nonetheless, authors express their deep gratitude to Zalando management for support and enhancement of this study.

A relatively young business founded in 2008 in Germany, Zalando nevertheless shows strong financial results today. In 2014 the company announced an IPO with the intention to list on the Frankfurt Stock Exchange and gained revenue of 2.2 billion euro, which was a 26 % increase compared to the last year. Share price dynamics is shown in Fig.2, where «N»-quotes represent the announcement dates of the annual and quarterly results and changes in the company's strategic moves.

As shown on the graph (Fig. 2), despite being volatile, the share price had been increasing significantly for the period up to May 2015 when this study took place. We can assume that today the company remains attractive for investors and effective for the key stakeholders, which comes partly from growing opportunities of the e-commerce industry, and partly from an outstanding business strategy undertaken by Zalando management.

Fig. 2. Zalando share price dynamics for the period from October 20, 2014 to May 12, 2015, Euro
S o u r c e : corporate.zalando.com

The effectiveness of the company's business activities, from our point of view, is also enhanced by heavy investments into intellectual assets, such as marketing activities (13.6 % of profit in 2014); R&D activities; personnel recruiting and development; logistic activities (23.4 % of profit in 2014). These investments ought to add further value to the business in the near future.

Talking about the company's development so far, it is necessary to mention Zalando's history. Started as a German shoe online retailer in 2008, Zalando rather quickly extended its business to Austria (2009), Netherlands and France (2010). Today the company is represented in 15 European countries, where Zalando diversified its business from shoe retail to brand apparel retail. DACH region countries, i. e., Germany, Austria and Switzerland, remain among the key directions that Zalando operates in, having brought 56 % of all revenues generated by the company in 2014.

While the 2008–2014 period can be considered the time of Zalando's geographical expansion, the diversification of the company started from 2014. In 2014, the company launched an online fashion recommendation project aimed at strengthening the core company's business, i. e., apparel retail.

4.2. Aggregated IC assessment – Tobin's q. First of all, it is necessary to detect whether the IC exists within a company to be able to then compare its effect with the effect among other industry players. Afterwards we will be able to outline the opportunities of its internal and external assessment.

To make it possible, we would use the Tobin's q method, which involves market capitalization calculation, thus being a part of the MCM group of methods discussed earlier in this study. Tobin's q is a ratio between the market value of the invested capital to the replacement cost of capital and can be also interpreted with the following formulas:

$$q = \frac{Market\ value\ of\ installed\ capital}{Replacement\ cost\ of\ capital} =$$

$$= \frac{Market\ value\ of\ the\ company}{Replacement\ cost\ of\ capital} =$$

$$= (Cap + D) / (Equity + D).$$

As we can see from the formulas above, the market value of the company can be calculated as a sum of the company's capitalization (Cap) and the total of the company's liabilities (D).

The price of Zalando's shares by the end of 2014 was €25.50, the number of basic shares totaled 226.5 million. Thus, Zalando capitalization

is: Cap = EUR $25.5 \cdot 226.5$ million = = EUR 5775.75 million. As shown in the company annual report, the amount of total liabilities was EUR 627.9 million [13].

To calculate the replacement cost of capital, we need to summarize the amount of total equity and the company's liabilities. After calculations we get EUR 1785.5 million as the replacement cost of capital, which allows us to calculate Tobin's q:

$$q = \frac{(5775.75 + 627.9)\text{million}}{1785.5 \text{ million}} \approx 3.59.$$

As the value of q is greater than 1, we can assume the existence of unidentifiable assets or Intellectual Capital within Zalando. At the same time we cannot state that the difference between the company's market value and thereplacement cost of the capital, i. e., EUR 4618.15 million, is itself the value of the Intellectual Capital. A lot of other effects influence the share price dynamics. Nevertheless, we still can estimate the influence that the IC can have by benchmarking the company's q against that of its biggest competitors. The results are shown in Tab. 2.

Table 2

Tobin's q of the biggest ecommerce players

Company name	q
Asos Plc	9.58
Amazon	2.65
Boohoo Plc	6.55
Yoox Group	3.13
Zalando SE	3.59
q *avg*	5.05

Source: companies' annual reports 2014.

As Tab. 2 shows, Zalando's q is above average, which might be caused by several reasons, such as having newly entered the stock market, market sentiment at the end of day, or other external and internal circumstances. Simultaneously, we can assume that competitors with a higher q own a higher amount of intellectual resources which accelerate the companies' growth. Here we can see the opportunity for Zalando to own such resources in the future

4.3. Differentiated IC assessment – VAIC method. To estimate which components of the organizational IC accelerate more growth of Zalando's market capitalization, it is useful to calculate the so called Value Added Intellectual Coefficient (VAIC) [8]. This method is based on the assessment of two main components of IC (Fig. 3):

$$VAIC = CEE + HCE + SCE,$$

where CEE is the Capital Employed Efficiency;

HCE or the Human Capital Efficiency calculated as the value added divided by the personnel expenses;

SCE or the Structural Capital Efficiency calculated as the value added share in the difference between human capital and value added.

The VAIC method helps the company to identify how much contribution material and intellectual assets make into the company's value added. The higher VAIC is, the more effectively the company utilizes its physical assets, which is happening due to a greater amount of intellectual capital.

When calculating VAIC, we are going to interpret the sum of HCE and SCE as the contribution of IC into the value added, while CEE characterizes the material side of creating the value added.

Numbers from financial reports for the last three years will be needed to calculate the Value Added Intellectual Coefficient. All such information is freely available for Zalando SE. Using annual reports, we calculate the Value Added, VA, which is represented by the difference between the company's revenue and personnel expenses (which we further consider as Human Capital, HC). The Capital Employed, CE, will be calculated as the difference between the balance sheet total and the accounts payable. The results are shown in Tab. 3. For drawing up the forecast values of the coefficients, we used the Excel prediction function.

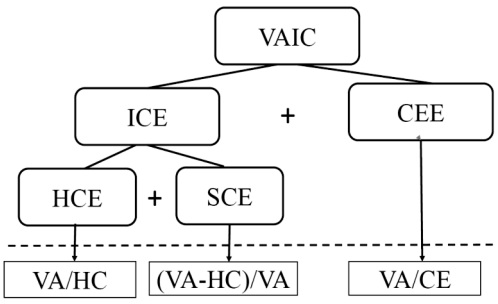

Fig. 3. VAIC coefficient structure

Source: http://www.hse.ru/

Table 3

VAIC and its components with forecast (*)

VAIC components	2012	2013	2014	2015*	2016*
CEE	0.095	0.197	0.284	0.381	0.4755
HCE	0.383	0.525	1.323	1.6837	2.1537
SCE	−1.609	−0.903	0.244	1.0973	2.024
ICE	−1.226	−0.378	1.567	2.7807	4.1772
VAIC	**−1.131**	**−0.181**	**1.851**	**3.1617**	**4.6527**

Source: Annual reports of Zalando SE, 2012−2014.

CEE, HCE, SCE in the Tab. 3 represent the effectiveness of respectively the capital employed, the human capital and the structural capital, andICE the effectiveness of the aggregated IC.

It can be seen from analyzing the results obtained that the effectiveness of the Capital Employed increased rapidly in 2013 compared to the previous year. This increase continued a year later, i. e., while the value added totaled EUR 197 for every EUR 1000 of capital invested in 2013, it became then EUR 284 for every EUR 1000 invested in 2014. SCE improved in 2014, when it started to bring positive contribution by yielding EUR 244 for every EUR 1000 invested.

The most interesting in terms of interpretation is HCE, whose growth rate shows that Zalando receives an almost double contribution from the Human Capital into the value added each year. It allows forecasting almost a four times greater return on investments into personnel in 2016.

A retrospective change in all VAIC components is shown in Fig. 4.

4.4. Interpreting the assessment data. Normally, VAIC coefficient values lie in the 1.5−15 range and the greater the value is, the higher the effectiveness of IC utilization. Zalando's VAIC is still minimal, which might be a result of low IC usage within the company, as other factors are still driving its growth. Nevertheless, the share of the IC creating the value added is increasing almost twice each year and is forecasted to reach the average among the industry players by 2016.

Thus, the IC is easily identified within Zalando SE by the significant difference between the company's market value and the booking value of its assets (q > 1). This difference is represented by more than EUR 3990 million, an amount which might be partly interpreted as the unidentifiable assets hidden within Zalando.

For the company, it is necessary to identify which part of the intangible assets lies within the framework of accounting standards.

Currently, Zalando SE manages its Intellectual Capital by capitalizing expenses that occur due to IC emergence. This is made in accordance with the IFRS-38 (International Finance Reporting Standards) standard, which in fact allows recognizing only the expenses incurred during the R&D process after the implementation of the development phase. Due to this peculiarity, e-commerce companies applying the standard disclose primarily these expenses appearing after acquisition or development of IT technologies as their greatest intellectual assets. For Zalando, expenses on IT development totaled EUR 29 million in 2014, which represented an increase by 26.6 % compared to the previous year.

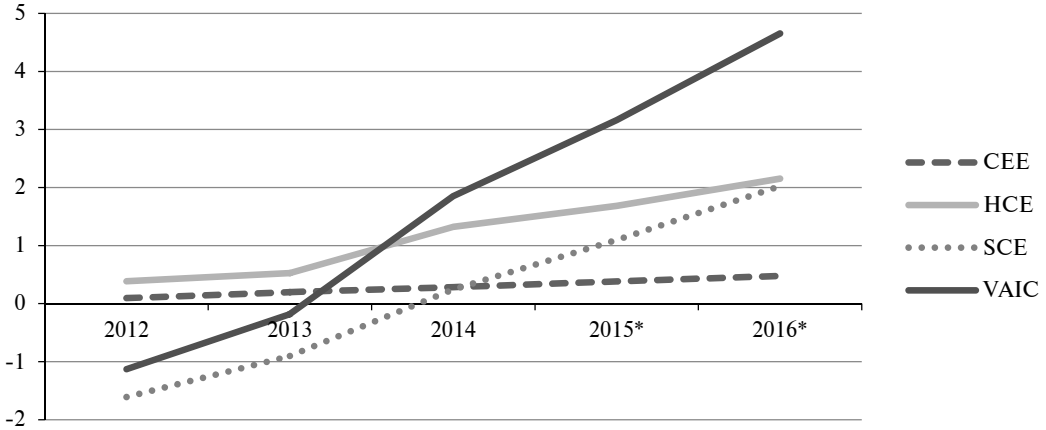

Fig. 4. VAIC components development, 2012−2016 (with forecast, *)

Therefore, we assume that the share of all intellectual assets of Zalando disclosed by accounting balance sheets now totals: (29/3990) 100 % = 0.73 %. Thus, less than 1 % (!) of the overall IC is measured. The remaining undisclosed capital lies in goodwill, human knowledge, client's potential and external relations of the organization, and therefore cannot be assessed by traditional methods.

To make this assessment more adequate for companies with a greater share of IC, it is necessary to improve traditional capitalization and accounting methods to then revaluate fundamental financial indicators.

4.5. Assessment of the R&D effect on financial performance indicators by R&D expenses capitalization. For adequate examination of the company where intangible resources have a great impact on the whole business, it is necessary to rearrange accounts of capital and current expenditures to be able then to correct financial information, e. g., Financial Position Statement and Income Statement/Profit and Loss Statement. This might be done by capitalizing expenses, a method broadly used while assessing the intangible assets unidentifiable under accounting terms [11, 15].

The main difficulty here lies in identifying the capital expenses, which are those bringing the long-term value into the organizational performance and ensuring the company's growth in the future: advertising, training [12], etc. In case of R&D, for instance, research expenses are sometimes hard to measure in money terms, which is why all R&D expenses are, as a rule, decucted as current expenses. As a result, the assets created by R&D are not reflected in the balance sheet as assets of the organization, which affects the company's cost of capital and profits. However, R&D expenses, however undefined they may seem, should within this approach be regarded as capital ones. Let us demonstrate how such a redistribution affect R&D expenses capitalization might have on Zalando SE financial performance indicators.

Information on the financial performance indicators, calculated using the data from Zalando's annual reports, is shown in Tab. 4.

To measure the assets that might appear from the research phase in the company's R&D process by applying the IFRS-38 standard, we firstly need to define the amortization period of these assets. At Zalando it is common to depreciate intangible assets in the 3 years after their acquisition. We assume that the same time passes from the beginning of the research to the moment when the results of the study can yield long-term results.

The next step is to collect the data about expenses that arise during the whole period of amortization. These numbers are displayed in Tab. 5 [16].

The linear method is commonly used to calculate amortization in German companies, which is also described by the IFRS-38 standard. With this method the amortization sum is equally distributed throughout the whole period and equal amounts of assets are depreciated every single period. For Zalando the current research amortization totals EUR 1649.31 thousand. If we then calculate unamortized costs amounts, we will get EUR 4335330, as shown in Tab. 5.

Table 4

Zalando SE Financial Performance Indicators

Indicator		2012	2013	2014
Return on Assets (ROA)	ROA = P/A	−0.101	−0.106	0.036
Return on Equity (ROE)	ROE = NI/E	−0.186	−0.213	0.041
Profitability index	Pi = P/C	−0.134	−0.109	0.029
Asset Turnover Ratio	ATR = Q/A	1.404	1.644	1.267
Costs Turnover Ratio	CTR = Q/C	1.857	1.685	1.029

Source: corporate.zalando.de.

Note. P – the profit; A – the assets; NI – the net income; E – the equity; C – the expenses; Q – the production volume.

Table 5

Zalando SE Research expenses amortization

Year	Research expenses,	Unamortized costs		Current year amortization,
	€, thousands	%	€, thousands	€, thousands
Current	2460	100	2460	
2014	2000	66.7	1333.33	666.66
2013	1626.02	33.4	542.00	542.00
2012	1321.96	0	0	440.65
Σ			4335.33	1649.31

Source: Zalando SE internal data.

Now let us adjust the carrying value of the assets by adding the obtained value of the research capital:

$$\textit{Adjusted value of CA} = \textit{Initial value of CA} + \textit{Research capital} = \textit{EUR 1126700 K*} + \textit{EUR 4335 K} = \textit{EUR 1131035 K},$$

where **K – thousands.*

Key financial indicators also need to be adjusted to include the capitalization of research costs:

$$\textit{Adjusted operating profit} = \textit{Operating profit} + \textit{Research costs} - \textit{Amortization} = \textit{EUR 62100 K} + \textit{EUR 2460 K} - \textit{EUR 1649 K} = \textit{EUR 62911 K};$$

$$\textit{Adjusted Net Profit} = \textit{Net Profit} + \textit{Research costs} - \textit{Amortization} = \textit{EUR 47100 K} + \textit{EUR 2460 K} - \textit{EUR 1649 K} = \textit{EUR 47911 K}.$$

The key performance indicators from Tab. 4 might be recalculated using the new adjusted financial data. For that purpose, let us adjust in a similar way the data necessary for the calculations; the new data is listed in Tab. 6.

Table 6

Zalando SE adjusted Financial Performance Indicators

Indicator	2014	Adjusted numbers
ROA	0.0355	0.0359
ROE	0.0410	0.0424
Profitability index	0.0289	0.0293
Asset Turnover Ratio	1.267	1.263
Costs Turnover Ratio	1.029	1.031

Source: corporate.zaland.de.

It is evident that the capitalization of the research expenses has a positive effect on performance indicators, even though this effect is not significant. At the same time, sincelarge amounts of unidentifiable assets are hidden and cannot be recognized under the balance sheet, we can assume that the effect of capitalization of expenses they cause might be much more perceptible. This includes expenses on marketing, personnel development [12], strategic development and others.

Conclusions. Thus, the proposed course of action provides a comprehensive assessment of the company's intellectual capital (see Tab. 1). In the initial stages it is necessary to establish the presence of IC and its localization using the methods of calculating Tobin's coefficient, VAIC and other. The method of capitalization of costs is proposed for a more accurate assessment of the individual components of IC. This method yields a monetary estimate of, for example, the IR related to scientific research, human capital, etc.

The novelty of the results is that the use of capitalization of costs allows to obtain a new, real value and performance indicators of a modern enterprise with a significant share of intangible assets unidentifiable in accounting records. This will enable investors and creditors to gain a better understanding of the structure of the assets of the company and make more informed decisions. For managers of the firm the comparison of the traditional and the proposed method allows to draw conclusions about the effectiveness of certain expenses in accordance with their capitalization and more soundly shape the budgets of both investment projects and operating costs.

In view of the above-described problems that arise during the process of IC evaluation, the need of revaluation of traditional accounting standards or development of additional IC reporting becomes, in our view, crucial. The new measures must provide an adequate assessment of the real value of a modern company.

The method for estimating IR by capitalization of costs proposed in this paper with a specific example (Section 4.5) is recommended primarily to Russian companies doing business in the field of e-commerce and other industries widely using the results of research and development in their activities.

REFERENCES

1. **Tomas A.S.** Intellektual'nyi kapital. Novyi istochnik bogatstva organizatsii. M.: Pokolenie, 2007. 368 s. (rus)

2. **Ruus I., Paik S., Fernstrem L.** Intellektual'nyi kapital: praktika upravleniia. SPb.: Vysshaia Shkola Menedzhmenta, 2008. 436 c.

3. **Lev B.** Nematerial'nye aktivy: upravlenie, izmerenie, otchetnost'. M.: Kvinto-Konsalting, 2003. 274 s. (rus)

4. **Andrissen D., Tissen R.** Nevesomoe bogatstvo: Opredelite stoimost' vashei kompanii v ekonomike nematerial'nykh aktivov. M.: Olimp-Biznes, 2004. 304 s. (rus)

5. IFAC. Measurement and Management of Intellectual Capital, 1998.

6. **Brooking A.** Intellectual Capital. International Thomson Business Press. London, 1996.

7. **Kendrick J.** Informatics for industry − 2. Statistical bridges. Chemistry in Britain, UK, 1999, p. 34.

8. **Seetharaman A., Sooria H.H.B.Z., Saravanan A.S.** Intellectual capital accounting and reporting in the knowledge economy. *Journal of Intellectual capital*, 2002, vol. 3(2), pp. 128−148.

9. **Karl-Erik Sveiby.** Methods for Measuring Intangible Assets. URL: http://www.sveiby.com/articles/IntangibleMethods.htm (data obrashcheniia: 18.06.2015).

10. **Karl-Erik Sveiby.** Market Value of Intangible Assets. URL: http://www.sveiby.com/articles/MarketValue.html (data obrashcheniia: 18.06.2015).

11. **Damodaran A.** Investitsionnaia otsenka: Instrumenty i metody otsenki liubykh aktivov: per. s angl. 7-e izd. M.: Al'pina publisher, 2011. 1324 s.

12. **Tikhomirov A.F., Vertsimak V.D.** Appraisal features of Intangible Assets contribution to performance of International company. *St. Petersburg State Polytechnical University Journal. Economics*, 2014, no. 5(204), pp. 106−114.

13. **Reuters.** Zalando will 2015 gut 2000 neue Mitarbeiter einstellen, 05.03.2015. URL: http://de.reuters.com/article/topNews/idDEKBN0M111U20150305 (data obrashcheniia: 15.04.2015).

14. Forbes. The Best Retail Companies To Work For. URL: http://www.forbes.com/sites/jacquelynsmith/2012/11/20/the-best-retail-companies-to-work-for/ (data obrashcheniia: 28.04.2015).

15. **Damodaran A.** Otsenka stoimosti aktivov: per. s angl. Minsk: Popurri, 2012. 272 s. (rus)

16. Forbes. The World's Most Valuable Brands. URL: http://www.forbes.com/powerful-brands/ (data obrashcheniia: 28.04.2015).

СПИСОК ЛИТЕРАТУРЫ

1. **Томас А.С**. Интеллектуальный капитал. Новый источник богатства организаций. М.: Поколение, 2007. 368 с.

2. **Руус Й., Пайк С., Фернстрем Л.** Интеллектуальный капитал: практика управления. СПб.: Высшая Школа Менеджмента, 2008. 436 с.

3. **Лев Б.** Нематериальные активы: управление, измерение, отчетность. М.: Квинто-Консалтинг, 2003. 274 с.

4. **Андриссен Д., Тиссен Р.** Невесомое богатство: Определите стоимость вашей компании в экономике нематериальных активов. М.: Олимп-Бизнес, 2004. 304 с.

5. IFAC. Measurement and Management of Intellectual Capital, 1998.

6. **Brooking A.** Intellectual Capital. International Thomson Business Press. London, 1996.

7. **Kendrick J.** Informatics for industry − 2. Statistical bridges // Chemistry in Britain, UK, 1999, p. 34.

8. **Seetharaman A., Sooria H.H.B.Z., Saravanan A.S.** Intellectual capital accounting and reporting in the knowledge economy // Journal of Intellectual capital, 2002, vol. 3(2), pp. 128−148.

9. **Karl-Erik Sveiby.** Methods for Measuring Intangible Assets. URL: http://www.sveiby.com/articles/IntangibleMethods.htm (дата обращения: 18.06.2015).

10. **Karl-Erik Sveiby.** Market Value of Intangible Assets. URL: http://www.sveiby.com/articles/MarketValue.html (дата обращения: 18.06.2015).

11. **Дамодаран А.** Инвестиционная оценка: Инструменты и методы оценки любых активов: пер. с англ. 7-е изд. М.: Альпина паблишер, 2011. 1324 с.

12. **Тихомиров А.Ф., Верцимак В.Д.** Особенности оценки вклада нематериальных активов в показатели деятельности международной компании // Научно-технические ведомости Санкт-Петербургского государственного политехнического университета. Экономические науки. 2014. № 5(204). С. 106−114.

13. **Reuters.** Zalando will 2015 gut 2000 neue Mitarbeiter einstellen, 05.03.2015. URL: http://de.reuters.com/article/topNews/idDEKBN0M111U20150305 (дата обращения: 15.04.2015).

14. Forbes. The Best Retail Companies To Work

For. URL: http://www.forbes.com/sites/jacquelynsmith/2012/11/20/the-best-retail-companies-to-work-for/ (дата обращения: 28.04.2015).

15. **Дамодаран А.** Оценка стоимости активов: пер. с англ. Минск: Попурри, 2012. 272 с.

16. Forbes. The World's Most Valuable Brands. URL: http://www.forbes.com/powerful-brands/ (дата обращения: 28.04.2015).

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