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VALUATION OF INTANGIBLE ASSETS VIA APPLICATION OF THE WARA APPROACIN THE AGRICULTURAL SECTOR

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Abstract. The aim is to apply the principles of valuation of intangible assets - goodwill using the Weighted Average Return on Asset (WARA) method to enterprises in the agricultural sector in the Czech Republic in 2016-2020 agricultural sector and what is the value of goodwill of the average enterprise in the agricultural sector in the Czech Republic in the years 2016 - 2020 determined by the WARA method. The calculation is performed from data from the CRIBIS database of the company Crif - Czech Credit Bureau, s.r.o., specifically according to the classification of economic activities CZ NACE section A for the period 2016 - 2020, from which the analysis is subsequently performed. The average company in the industry is determined for the calculation. An average agricultural enterprise's goodwill is determined using the capitalised net income method and property valuation. Subsequently, the goodwill is further multiplied by the WARA percentage value, and the resulting goodwill value determined using the WARA method is determined.

Keywords: Agriculture; WARA; Weighted Average Return on Asset; intangible assets; enterprise, goodwill

1. Introduction

Nowadays, intangible assets form a considerable and inseparable part of the company and have become the most critical competitive advantage on a global scale. Because of its nature, it isn't easy to grasp. However, it can generate profit and increase the enterprise's value. In the balance sheet, we divide intangible assets into set-up expenses, intangible results of research and development, software, valuable rights and goodwill (Mařík, 2007), as well as emission allowances and preferential limits. But intangible assets are not just listed items; they also include, for example, product design, customer relationships or the path of goods to buyers, in other words, goodwill. Intangible goods are just as essential in business as their tangible counterpart goods. A large percentage of transactions with technical knowledge and knowledge are already represented in trade in products and services

(Svačina, 2010). Unfortunately, the methodologies do not solve the distribution of tangible and intangible assets worldwide. However, it is significant for the company's valuation as a whole or for investors' decision-making (Kulil, 2014).

According to Svačina (2010), we distinguish three basic approaches to the valuation of intangible assets: comparative, cost and income. The third yield approach is based on the principle of economic expectation. Yield valuation methods include licensing analogy, decree method, profit share, premium methods, net present value and excess profits (Svačina, 2010). Several auxiliary methods are used to calculate the usual value of goodwill profitably. One of the methods is the difference between the purchase price of the enterprise and the sum of individually revalued individual items of the company's assets in the concept of average weighted return on assets – WARA (Kulil, 2014). Kulil (2014) further states that this method is not suitable for a complex form of risk determination for ordinary assets and cannot be used in practice.

Therefore, this work will focus on the calculation of goodwill by this method to verify whether this method is suitable for the valuation of intangible assets. The company will deal with the valuation of intangible assets using the method of average weighted return on assets – WARA in the agricultural sector in the Czech Republic in the years 2016 – 2020.

The agricultural sector belongs to the traditional sector of the national economy and comprises plant and livestock production. This sector includes about 47,000 agricultural entities that cover an area of 3.5 million hectares, of which arable land accounts for 71% (Eagri, 2021). This sector is markedly different from the others, where the soil is an indispensable means of production that does not lose its value.

The thesis aims to apply the principles of valuation of intangible assets by using the approach to the average weighted return of assets - WARA in the agricultural sector in the Czech Republic in the years 2016 – 2020. This leads to the following research questions:

VO1: How can the WARA approach be applied in the agricultural sector in the Czech Republic in 2016-2020, and is this approach suitable for the agricultural sector?

VO2: What is the value of goodwill of an average holding determined by the WARA method in the agricultural sector in the Czech Republic in the years 2016 – 2020?

2. Literary research

With the change in the economy, globalisation and the development of technology, tangibility is no longer an essential feature. Intellectual capital is an important component of corporate assets and a source of competitive advantage, including all of the company's measurable and immeasurable intangible assets (Mrazkova, 2019; Derindag et al., 2021; Belas et al., 2019). Nowadays, the economy is based mainly on knowledge, i.e., on intangible assets, which are essential for the development of the enterprise, especially from a long-term perspective (Li et al., 2019; Přívara & Rievajová, 2021) and forms a significant part of the benefit to society (Osinski et al., 2017; Přívara, 2021). Ključnikov, Mura and Sklenár (2019) point out that for SMEs, a substantial source of success is the transfer of tangible assets into intangible assets, particularly information that increases the value of the enterprise. Jiang and Zhou (2019) further elaborate that for measuring the total value of a business, the criterion is intangible assets, which the enterprise must take care of efficiently and systematically to succeed in the competition of other enterprises.

Seo and Kim (2020) found that investments in intangible assets in SMEs were mostly low and considered inefficient, and more investments were made in tangible assets. Binh, Ha and Trang (2020) also confirmed the

positive impact of intangible assets on improving the company's performance and the significance of investing in them, such as research and development, technology, advertising and human resources, to increase the company's value in the future. These elements of intangible assets positively affect the profit and value of the company, where advertising has the greatest impact on the company's appreciation (Seo & Kim, 2020; Přívara, 2019b, 2022b). A similar perspective is also taken on this issue by Vochozka et al. (2021).

In the past, the most important source of a company was tangible assets, but today the success of a company is determined by intangible resources that are difficult to define, measure and appreciate (Petković, et al., 2020; Grumstrup et al., 2021; Gavurova et al., 2020). A similar problem the perspective of the digital transformation of the enterprise was addressed by Sun et al. (2022). Nowadays, intangible assets dominate over tangible assets and play an essential role in today's economy (Azin & Alias, 2019; Štefančík et al., 2021; Ganji & Metzker, 2021). With the contribution of the digital revolution and international entrepreneurship, it has become an intangible asset and one of the important assets for creating added value for a capital market enterprise (Fedorko et al., 2018; Cosmulese et al., 2021; Olah et al., 2021).

Gazimova et al. (2019) propose tools to increase the efficiency of using intangible assets that can be applied to business entities. Companies are aware that their performance, competitive advantage and sustainability are built on intangible assets, which is why more and more businesses are investing in them to create new products and services (Milala et al., 2021; Vorobeva & Dana, 2021; Bilan et al. 2017). Nunes et al. (2018) point out that in the 21st century, the most valuable strategic resources will no longer be physical assets but knowledge, patents and intellectual property rights – intangible assets. Glova, Dancak and Suleimenova (2018) found that a firm with higher intangible investments tends to have higher market capitalisations and investments in intangible assets are rewarded in the form of higher intangible capital. Glova, Andrejovska and Vegsoova (2022) confirmed four years later that spending on research and development and intangible fixed assets causes an increase in market capitalisation. Quirama and Sepúlveda (2018) focused on finding the appropriate value of intangible assets. Intangible assets, especially knowledge, are nowadays a competitive advantage in organisations and their growth engine. Zecca and Rastorgueva (2017) confirm that the current knowledge of the economies requires the global use of information in all aspects of modern society. A similar perspective is also taken on this issue by Vochozka et al. (2020). This is particularly important for the agricultural context, which needs modern practices for improvement and development (Zecca & Rastorgueva, 2017; Kabir, 2021).

The agri-food system in the European Union and worldwide depends on human educational, thinking and behavioural capacity, particularly on intangible assets such as market knowledge or information (Manyise & Dentoni, 2021; Přívara, 2019a). Zelisko et al. (2020) further state that the development of agricultural holdings depends on the segmentation of the ravine, the location of agricultural farm production, the creation of an effective assortment policy, the creation and implementation of the marketing of new products, the development of an effective communication policy so that marketing tools and intangible assets would have an impact on the potential of farms. Intangible assets in agriculture also include the welfare of livestock (Hoag & Lemme, 2018; Sahoo & Pradhan, 2021). Similar issues were also dealt with Rowland et al. (2021). Overall agricultural productivity growth in the EU has slowed in recent years, lagging behind the world's leading competitors. Technical inefficiency is an important phenomenon in Czech agriculture and its individual sectors. The development of agriculture should be based on scientific foundations (Stehel et al., 2019). In a knowledge-based economy, knowledge is seen as a strategic resource that helps entities become market leaders in various sectors of the economy. However, the exception is agriculture, which has been considered a low-knowledge sector for years. However, the Research of Kozera-Kowalska (2020) confirmed that farms have both sources of intellectual capital and high efficiency in their use. However, it calls for farmers to change how they see their resources.

Tahat, Ahmed and Alhadab (2018) also confirmed evidence of the role of intangible assets in improving the performance of firms, which are a major driver of wealth creation in the long term (Pan et al., 2022; Yu et al.,

2022; Privara, 2022a; Al-Omoush et al., 2022). Goodwill and research and development impact measuring companies' financial performance and increasing their profits (Tahat et al., 2018). Pechlivanidis, Ginoglou and Barmpoutis (2022) confirmed that goodwill and intangible assets are valuable assets that give companies a competitive advantage to increase profitability and shareholder returns. In the world, the meaning of goodwill is not perceived in the same way; it is generally considered an integral part of the value of the company and its assets, especially intangible. The main question is the quantification of the current value of goodwill (Dohnal et al., 2019). Podhorska et al. (2019) also researched the identification of individual goodwill indicators, as knowledge of the critical indicators of goodwill value can contribute to its effective management and growth of the enterprise's market value. The possibilities of valuation and verification of corporate goodwill are also dealt with by Podhorska et al. (2019). A similar topic was also addressed by Novakova et al. (2022). The value of corporate goodwill is still a topical issue for the scientific community. Nowadays, there are many approaches to its valuation. There are several approaches to determining the value of intangible assets. The revenue method considers goodwill as a generator of the company's future revenue, which allows the user to orient itself to the company's future results. The use of the cost method makes it possible to consider the costs that make up the asset's value. The last approach is a substitution-based market approach (Zadorozhnyi et al., 2022). However, accounting does not reveal all the information essential for the company to make decisions, especially the intangible capital that the company creates during its activities (Atehortúa & Agudelo, 2019). To provide the fair value of intangibles, there was a need to substantiate and defend cost estimates of the capital used in the valuation of assets, including intangible assets. Pratt and Grabowski (2014) focus on intangible assets and look at the rate of return on unidentified intangible assets or goodwill by which an implied rate of return can be derived, including weighted average return on assets (WARA) (Patt & Grabowski, 2014).

Schüler (2020) deals with the valuation of intangible assets by a revenue approach. When using data from comparable companies, comparability must be reported with respect to investment risk and an estimate of the cost of equity without asset-specific leverage. Other solutions, such as WACC or the WARA approach, are critically evaluated with regard to the implied capital structure, value allocation, and adherence to the principle of market value added (Schüler, 2020). Atalay et al. (2018) will focus on the main methods used in measuring and evaluating the value of intellectual capital by considering its impact on the company's value. They demonstrate the need to develop new and innovative methods to measure and report intangible assets. In conclusion, intangible assets make the company more efficient, profitable and competitive (Streimkiene et al., 2021; Privara et al., 2018; Škare and Riberio Soriano, 2021; Škare & Porada-Rochon, 2022). All the articles of the authors agree that intangible assets are nowadays one of the main assets that generate profit; therefore it is necessary to be able to appreciate it.

3. Materials and methods

Input data for answering the research question will be taken from the CRIBIS database of Crif – Czech Credit Bureau, s.r.o., specifically according to the classification of economic activities CZ NACE Section A – agriculture, forestry, fisheries, subgroup 01 Plant and livestock production, hunting and related activities, 02 Forestry and logging, 03 Fisheries and aquaculture for the period 2016 – 2020, from which an analysis will subsequently be carried out. This set contains data on farms doing business in the Czech Republic in 2016 – 2020 and 42 620 items. These items represent individual enterprises, their primary and financial data from the balance sheet and profit and loss accounts.

For further calculations, we first determine the average holding from each year from the farm data. The data in the set will be adjusted for companies in liquidation or with a closed business and for data with a negative value in the balance sheet items for assets and liabilities and sales from the profit and loss account. The remaining data will be averaged, and a balance sheet and a profit and loss account will be compiled. This will be followed by

calculations for determining the valuation of goodwill using the WARA method, for which it is necessary to know the yield and assets value of the enterprise from the difference of which goodwill is calculated.

The yield value of the enterprise is calculated as the ratio of permanently removable net income to the estimated interest rate. The calculated interest rate, i.e. the cost of equity, is the sum of the risk-free rate, the risk premium for business risk, the risk premium for financial hundreds and the risk premium for size. The risk-free rate will be taken from the yield of the ten-year government bond of the Czech Republic from the average for the period 2016 – 2020, which was 1.55% and was traced and from the website of the Czech National Bank (cnb, 2022). Furthermore, data will be used for risk surcharges for the agricultural sector recommended by the Ministry of Industry and Trade of the Czech Republic for 1. – 4. Q 2019 T and this data has not yet been updated by the new financial analysis of the corporate sphere. Therefore l would use the year 2019. From this analysis, a business risk premium rBELOW of 7,82 %, a financial stability risk premium rFINSTAB of 0,44 % and a risk premium for the size of the sector rLA of 0,57 % were selected (mpo, 2022). To calculate the calculated interest rate, a modular method will be used, which will be calculated:

Cost of equity (r_e) =risk-free rate (r_f) + risk premium for business risk (r_{POD}) + risk premium for financial stability ($r_{FINSATB}$) + risk premium for size (r_{LA})

According to the Ministry of Finance of the Czech Republic, the predicted long-term inflation is set

at 3.2% (mfcr, 2022).

The permanently removable net revenue shall be calculated in accordance with Table 1.

Table 1. Calculation of permanently removable net revenue

Profit or loss before tax
+ write-offs
– financial income
– revenues from the sale of fixed assets
+ residual price of sold fixed assets
+ extraordinary personnel costs
– extraordinary income
+ extra costs
Adjusted profit or loss (UVH) before depreciation and tax
Chain price index
Price index basic relative to 2020
Inflation-adjusted UVH (UVH/base price index)
Libra
UVH adjusted for inflation x weights
Sum
Permanently removable net income before depreciation
Permanently removable net income before tax
Tax base (with depreciation of the last year)
Tax (19%)
Permanently removable net income after tax before correction

Source: Mařík, 2007 (own processing)

A yield valuation of the enterprise is carried out using the capitalised net income method, considering the long-term inflation level. The income valuation of the enterprise is calculated as the ratio of permanently removable net income to the calculated interstate.

The property valuation of the enterprise will be calculated from the balance sheet from the data from the average enterprise for the period 2016 - 2020 by summing the tangible fixed assets, short-term tangible assets, inventories and financial assets. From this sum, the item liabilities will be deducted.

After the calculation of the return value of the enterprise and the property valuation, it is possible to proceed to the calculation of the value of goodwill using the WARA method.

The return on equity ROE shall be calculated:

$$ROE = \frac{profit\ after\ tax}{equity} \tag{1}$$

The required return on foreign capital will be calculated as a ratio of bank loans to interest expenses.

The calculation of intangible assets by the WARA method is carried out according to the formula:

$$WARA = r_{VK} \times \frac{VK}{K} + r_{ck} \times (1 - d) \times \frac{CK}{K} \tag{2}$$

Explanation of the formula:

r_{VK} – the required return on equity,
VK - Equity,
K – total market value of the invested capital (gross, i.e., VK + CK),
r_{ck} – the required return on foreign capital,
CK – foreign capital,
CK/K – debt ratio,
d – income tax rate.

The tax rate is 19% for legal entities pursuant to § 21 para. 2 and 3 of the Income Tax Act.

The final calculation will determine the value of the intangible asset – goodwill using the WARA coefficient, which is calculated:

Goodwill value = the value of goodwill determined on the basis of accounting data + (the value of goodwill determined on the basis of accounting data x WARA).

4. Calculations

After cleaning the data from the Cribis database for the agricultural sector, a calculation was made for the average holding, and a balance sheet and profit and loss account were compiled. From these data, the items necessary for further calculations to determine goodwill using the WARA method of average weighted return on assets were selected.

Yield value of the enterprise

We calculate the yield value of the enterprise. The calculation of the permanently removable net yields is shown in Table 2.

Table 2. Permanently removable net income and value of the enterprise in CZK

	2016	2017	2018	2019	2020
Profit or loss before tax	**4 295 614**	**6 293 198**	**6 361 739**	**7 832 281**	**12 447 191**
(+) write-offs	519 319	353 894	92 206	159 409	63 333
(-) financial income	0	0	0	0	0
(-) revenues from the sale of fixed assets	-204 252	-155 217	-57 000	-76 864	0
(+) the residual price of the sold dl. property	865 652	649 138	743 546	840 484	2 149 462
(+) extraordinary personnel costs	0	0	0	2 000	0
(-) extraordinary income	-4 880 261	-4 119 220	-4 484 404	-5 025 006	-13 407 182
(+) extraordinary costs	1 228 739	1 052 274	1 049 407	1 328 243	2 660 957
Adjusted profit or loss before depreciation and tax	**1 824 813**	**4 074 066**	**3 705 493**	**5 060 548**	**3 913 761**
Chain price index	1,033	1,014	1,004	1,003	1,005
Price index basic as of 2020	0,974	0,988	0,992	0,995	1,000
Adjusted VH for inflation (UVH/basic price index)	**1 872 651**	**4 123 147**	**3 735 193**	**5 085 850**	**3 913 761**
Libra	1	2	3	4	5
Adjusted VH for inflation x weights	1 872 651	8 246 294	11 205 579	20 343 401	19 568 807
Sum	**61 236 733**				
Permanently removable net income before depreciation	4 082 449				
Depreciation from replacement prices	52 500 CZK				
Permanently removable net income before tax	**4 029 949**				
Tax base (with depreciation from the last year)	4 019 116				
Tax 19 %	763 632				
Permanently removable net income after tax before correction	**3 266 317**				

Source: Custom processing

The permanently removable net income after tax before the correction was set at **CZK 3,266,317**.

Calculated interest rate

Calculate the calculated interest rate (Table 3). As a risk-free yield, I used the yield of the ten-year government bond of the Czech Republic, which is in the average amount for the period 2016 – 2020 of 1.55%, and the predicted level of inflation is 3.2%. Data from the Ministry of Industry and Trade of the Czech Republic revealed a risk premium for business risk rPOD of 7.82%, a risk premium for financial stability rFINSTAB of 0.44% and a risk premium for the size of the sector rLA of 0.57%.

Table 3. Calculation of the calculated interest rate

risk-free rate r_f	1,55 %
risk premium for business risk r_{POD}	7,82 %
risk premium for financial stability $r_{FINSTAB}$	0,44 %
risk premium for the size of the sector r_{LA}	0,57 %
calculated interest rate	**10,38 %**

Source: Custom processing

The calculated interest rate (equity costs) was set at 10,38 %.

The value of equity according to capitalised net income (KPC) was calculated as follows:
Calculated interest rate: 10.38 %
Projected inflation: 3.2%
Calculated interest rate excluding inflation: 7.18%
Operating value of equity = CZK 3,266,317/0.0,718   45,491,880
Valuation of non-operating assets CZK: 247,128
Value of equity according to KČV: 45 244 752 CZK

Property valuation

The asset valuation of the average holding, shown in Table 4, will be applied to the average balance sheet data for the agricultural sectors from 2016 to 2020. The property valuation will be determined according to the asset value of the book prices.

Table 4. Property valuation of an average enterprise

Item	Value
(+) tangible fixed assets	36 640 388 CZK
(+) Tangible assets of short duration	9 281 712 CZK
(+) Stocks	9 913 624 CZK
(+) Financial assets	921 281 CZK
(-) Accounts payable	11 688 759 CZK
Assets of the enterprise (DHM + KHM + Z + FM) - Payables	**45 068 246 CZK**

Source: Custom processing

The average enterprise in the agricultural sector in 2016 – 2020 has an asset value of **CZK 45,068,246.**

Determination of the goodwill value of an average holding in the agricultural sector

The value of goodwill is calculated as the difference between the income and assets of the enterprise.

Value of goodwill of the average holding in the agricultural sector = 45 244 752 - 45 068 246
= **176 506 CZK**

The average enterprise in the agricultural sector for the period 2016 – 2020 has **a goodwill** value
of CZK 176,506.

Determination of goodwill for the use of the WARA method

Calculation of the cost of equity:

Profit after tax   CZK 7,419,197

Equity   CZK 38,860,446

Cost of equity (profit after tax/equity)   **0,191**

Calculation of the cost of foreign capital

Bank loans   CZK 5,917,558

Interest expenses   CZK 716,241

Cost of external capital (bank loans/interest expense)   **8,262**

Calculation REAR

To calculate the WARA coefficient, table 5 was compiled, from which the values necessary for insertion into the formula are visible.

Table 5. WARA calculation

Pointer		Value
K	Total value of invested capital (VK + TA)	57 400 553 CZK
r vk	Required return on equity	0,191
Ic	Equity	38 860 446 CZK
VK/K	Equity/total market value of invested capital	0,677
r ck	Required return on foreign capital	8,262
d	Income tax rate	0,19
(1-d)	1 – Income tax rate	0,81
CK	Value of foreign capital	18 540 107 CZK
CK/K	Debt ratio	0,323

Source: Custom processing

The calculation was made as follows:

$$WARA = r_{VK} \times \frac{VK}{K} + r_{ck} \times (1 - d) \times \frac{CK}{K} \tag{3}$$

REAR = 0,191 x 0,677 + 8,262 x 0,81 x 0,323 = 0,129 + 2,162 = 2,291

The WARA value is 2.291% for the average holding in the agricultural sector between **2016 and 2020.**

This value represents the average weighted return on assets, which we will use next to calculate goodwill in the WARA concept:

Value of goodwill   176 506 CZK

Value of goodwill x WARA   4 044 CZK

Resulting goodwill value CZK 180,550

The resulting value of goodwill using the WARA-weighted return on assets method for an average enterprise in the agricultural sector in the period 2016 – 2020 is CZK 180,550.

5. The results and discussion

In this work, two research questions were set. The first question was: *How can the WARA approach be applied in the agricultural sector in the Czech Republic in 2016-2020, and is this approach suitable for the agricultural sector?*

The calculations found that the WARA approach can also be applied to the agricultural sector in the Czech Republic, and this approach is also suitable for the agricultural sector. Data from the CRIBIS database of Crif – Czech Credit Bureau, s.r.o., however, it is necessary to adjust and purify from half-discs that are not desirable for further calculations of the average weighted return on assets. For this reason, the question arises as to how relevant these data are and whether there is a distortion of the research results.

Another research question dealt with the amount of goodwill and was determined as follows: What is the goodwill value of the average enterprise determined by the WARA method in the agricultural sector in the Czech Republic in the years 2016 – 2020?

The calculations determined the value of goodwill in application to the average enterprise in the agricultural sector in the Czech Republic in the years 2016 – 2020 in the amount of CZK 176,506. This value was determined by the yield valuation method by applying capitalised net income and asset valuation. In addition, the VALUE OF WARA was calculated and this percentage of WARA of 2,291 % multiplied by the value of the above-calculated goodwill. The WARA method of average weighted return on assets was used to set goodwill of CZK 180,550.

This value is not very high and would confirm the claims of Stehela, Horák and Vochozka (2019) that technical inefficiency is an important phenomenon of Czech agriculture, which should and be based on scientific foundations. In her research, Kozera-Kowalska (2020) highlights that the economy is based on knowledge, considered a strategic resource. It notes that the exception is agriculture, considered a low-knowledge sector, although farms have intellectual capital resources and high-use efficiency. However, this presupposes that farmers will change how they see their resources. Zecca and Rastorgueva (2017) also confirm the importance of using information knowledge, especially in agriculture, where modern practices need to be used for improvement and development.

According to Zelisko et al. (2020), the development of agricultural products depends on the location of agricultural production, market segmentation, the creation and introduction of new products to the market, and the focus on effective communication policy and marketing tools. All intangible assets impact farms' potential, and farms should learn to use this potential more.

The benefit of the work can be considered the application of the method of average weighted return of assets – WARA to the agricultural sector, finding that this method is suitable for quantifying the value of goodwill by the WARA method in this sector. The benefit of the work is also the quantification of goodwill using the WARA method of the average agricultural holding in the Czech Republic for the period 2016 - 2020.

The benefit of the work is also the method of application of the WARA method because the research to calculate goodwill by this method is not sufficient, and few available resources could be more compared with other works and find out the advantages or disadvantages of applying this method.

Another proposal for research on goodwill in a given sector would be appropriate to ascertain whether the value of goodwill is equal in the division of farms in terms of size, location or legal form of business. Whether farm

goodwill is dependent on these criteria because, for example, the location of a farm is particular, and the farm is dependent on territorial and natural conditions beyond its control

6. Conclusion

The work focused on quantifying the total value of goodwill for an average holding in the agricultural sector from 2016 to 2020 using the WARA weighted average return on assets method and assessing whether this method is suitable for the agricultural sector.

The calculations determined the value of goodwill in application to the average enterprise in the agricultural sector in the Czech Republic in the years 2016 – 2020 in the amount of CZK 180,550 using the WARA method. Therefore this approach of average weighted return on assets can also be applied to the examined sector. The data for this calculation was taken from the CRIBIS database of Crif – Czech Credit Bureau, s.r.o., which, however, had to be adjusted and cleaned of undesirable items. That is why the idea was raised whether these data are suitable for further research and whether these escapes do not distort the research results.

It should be noted that the agricultural sector is significantly different from the others, as its means of production is arable land, which counts 2.5 million hectares, is dependent on natural conditions and the determination of risks is very complex according to Kulil (2014). However, the work has shown that it is possible to calculate and determine its goodwill using the WARA asset-weighted average return method. However, for a more precise determination of goodwill, I have to agree with the author, since there are many risks to the sector that are not influenced by the undertaking, such as its geographical location and, in particular, natural conditions. For further research, it would be interesting to assess agricultural holdings according to their location and influence of climatic conditions, e.g., by region or altitude, or in terms of the legal form of the entity (joint-stock company, cooperative, firm).

In response to the above, it can be noted that the objective of the work has been met. The total goodwill value of the average holding in the agricultural sector from 2016 to 2020 has been calculated using the WARA weighted average return on assets method and assessed whether this method is appropriate for the agricultural sector. Material assets nowadays are becoming an essential competitive advantage; even though they are challenging to grasp, they can generate profit and increase the value of the enterprise. It is as important in business as it is in material goods. Farms should take advantage of this advantage for intangible assets to increase their goodwill.

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