VALUATION OF INTANGIBLE ASSETS DEPOSIT INTO CAPITAL COMPANY IN CASE OF SPECIFIC TRANSACTION

^aVOJTĚCH STEHEL, ^bZUZANA ROWLAND, ^cJAN MAREČEK

Institute of Technology and Business in České Budějovice, School of Expertness and Valuation, Okružní 517/10, 37001 České Budějovice, Czech Republic

email: astehel@mail.vstecb.cz, browland@mail.vstecb.cz, marec ek@mail.vstecb.cz

Abstract: In the case of the deposit of assets into a successor in the form of a limited company, it is possible to use the assets of the Association which has preceded the new formation. The need for the valuation of the Association's assets is necessary under such circumstances. The contribution focuses on the method of valuating intangible assets of the Association of two natural persons. The method of the difference of Association's assets value and yield value was used. The specific items forming the company's asset are valued by various procedures based on their characteristics. It has been proved that it is possible to set quickly and accurately the book value of intangible assets in case it has not been previously included in the Association's accounts. The value of intangible assets is set on the basis of the difference of asset and yield values.

Keywords: valuation of assets, intangible assets, association, yield method, equity method

1 Introduction

Provided an Association of two or more persons which is not a legal subject intends to change their status into a capital company, it has to be established first. The Association's asset subsequently becomes the company's asset by depositing it into the newly established company. In our case the asset of the modelled Association of two natural persons is transferred into the newly established limited company (Ltd.). Accountancy Act No. 563/1991 Coll. requires setting the value of the deposit. The asset can be valued using acquisition method, at own production expenses, reproductive price, etc. It is necessary to set the value of the Association's asset for this purpose in order to gain an accurate monetary calculation of the deposit. The valuation of company's asset is made by several methods. Since the asset is classified according to its type we specifically deal with the setting of the value of intangible assets. An Association is defined in the Civil Code, Act No. 89/2012, \$27160-\$2717 (Czech Republic, 2012a). The rights and obligations of Association's members and the members of a limited company are defined in Trade Company and Syndicate Act No. 90/2012 Coll., i.e. Trade Corporation Act (Czech Republic, 2012b).

The valuation of Association's asset is addressed by both the Accountancy Act No. 563/1997 Col. & the Asset Valuation Act No. 151/1997 Col., which deals with the valuation of asset and the adjustment of certain acts of law.

2 Literary research

An association is formed by the contractual obligation of two or more natural persons. The number of Association's members is not enclosed or limited; other natural persons can enter the Association in the course of its existence as well as they can quit the Association. The formation of Association does not require a written contract. The oral agreement of the Association's members bears the same gravity. In case of the association of the asset the list of the items must be made (Bezouška, Piechiczová, 2013).

The association is not eligible to legal subjectivity and therefore it is not eligible to the rights and obligations, moreover, it cannot possess, sell or donate anything. The asset acquired in the course of the activities of Association's members becomes a shared asset of the members. There is no obligation for Association's registration (Nývltová, Marinič, 2010).

If two or more natural persons take on contractual obligations in the Association, if they associate and make a mutual effort to

achieve a common purpose by their activities or their investment of asset, they are obliged to meet the commitment. The share of asset of Association's individual members should be included in the contractual obligation. If it is not addressed in such a manner, the shares of all the Association's members are equal (Horáková, 2014).

Act No. 89/2012 Col. §2727 prohibits every Association's member from acting in a competitive manner in relation to their common purpose. If such action is committed, the Association's members may require its termination (Czech Republic, 2012a).

If an Association's member begins to do book-keeping, all the other members must do so as well (Nývltová, Marinič, 2010). If an Association's membership is terminated, the issue of a member's asset rights must be settled (Doležal et al., 2018).

The Association's members provide the third parties with the guarantee jointly and severally. In contrast, all the members of a general partnership (G.p.) provide a guarantee in an unlimited manner with the whole commercial and personal asset. In the case of capital companies, such as a limited company (Ltd.), such type of legal person is liable to provide unlimited guarantee. However, the individual members of a limited company provide a guarantee with up to the limit of the amount of the difference between the paid deposit obligation and the amount recorded in the Commercial Register at the moment of a call for the fulfilment to the creditor. In a public limited company (PLC) the shareholders are not obliged to provide a guarantee with any liabilities; they are only liable to payment obligation (Hobza et al., 2015).

The valuation of asset is defined in the Asset Valuation Act No. 151/1997 Col., which deals with the valuation of asset and the adjustment of certain acts of law. Act No. 151/1997 Coll. §2 Article 1 states that the asset and the service are valued in the usual manner provided the law does not provide an alternative way of valuation (Czech Republic, 1997). The usual price is a price which is usual on the sale of identical or similar asset or in case of the provision of an identical or similar service in commerce in the country on the day of valuation. It includes the consideration of all the circumstances which influence the price without being affected by the influences of extraordinary circumstances in the market, personal situation of the seller or the purchaser, or the influence of particular delight.

Svačina (2010) claims an intellectual asset belongs to intangible assets. It includes copyrights, related works, software and databases. In case of the valuation of intangible assets, it is possible to use several ways of valuation. For instance, the first way is a valuation on the basis of purchase price, i.e. the value of intangible asset is equal to the value of purchase price (Falson, 2019). Next, the other way of valuation is a valuation on the basis of replacement cost, i.e. the price of asset at the moment of its purchase and record in the books. Last but not least it is a valuation based on own costs, i.e. the self-made intangible assets the costs of which are the costs of their production (Sandner, 2010)

The majority of the company's intangible assets generate premium revenues. The intangible assets are sources which provide competitive advantages (Reimsbach, 2013).

Chung et al (2014) demonstrates and describes eight models of the valuation of intangible assets. They are income-based model, cost-based model, market-based model, excess operating profits model, premium pricing model, cost savings model, royalty savings model and option model.

Pastor et al. (2017) deals with the list of the most frequently used methods of the valuation of intangible assets. However, he adds that the international bookkeeping standards only deal with an

identification of intangible assets, not with its valuation. Moreover, he claims that the interest of academics and experts ought to be more focused on the valuation of the obligations related to intangible assets as they are usually overlooked on the valuation of intangible assets.

It is necessary to realize that the valuation of intangible assets is important in several aspects. Not only is it possible to value the intangible assets in parallel with the tangible assets but there is a link to the value of the certain type of tangible assets which is influenced by the intangible assets which are directly connected to this particular type of tangible assets (Sequeira, Fernandez, 2010).

Corrado et al. (2009) maintains that there has been an incorrect determination of the value of the GDP in the USA. The reason was the ignorance of the value of intangible assets. The intangible assets worth \$800 billion were excluded in 2003. Although this type of asset is gradually recognized, there is a value of more than \$3 billion which is excluded from the determination of the US GDP.

Hanafizadeh and Hosseinioun (2015) add an interesting point. The authors focus on a valuation of company's business plan which employs scientific economic theories for the purpose of its operation. The theories are regarded as intangible assets. The valuation of the business plan is interesting for investors as the value of the business plan may fill the gap between the book and the market value of the company. It provides an additional instrument for the enhancement of negotiating power in terms of the fusions and acquisitions of companies.

Sanchez-Segura et al. (2014) note intellectual asset is company's intangible assets. The capital can be divided into human capital, i.e. the employee's knowledge, structural capital, i.e. the expertise in terms of the organization of company and the use of technologies, and relational capital, i.e. the expertise in terms of business relations with clients and related subjects.

The neglected intangible assets of every company are a brand. The current book standards rather deal with tangible assets. Rarely is the brand included into its financial statement. If it is included, its quantified value is not based on a universally respected economic and market foundation. A significant number of companies are currently attempting to change the trend (Antic et al., 2008).

A number of international experts agree on the fact that yield methods are the most popular valuation methods on a global scale. Above all, it is a discounted cash flow method. The yield methods of valuation view a company as a 'black box' of investment. It ought to bring the investor an advantage either in terms of financial or in terms of non-financial nature. Therefore, it is supposed to reflect the belief in the future revenues flowing from the company to the owner, i.e. investor (Kislingerová, 2001).

Act No. 151/1997 Col. §24 Article 3 permits to employ the method of discounted cash flows (DCF) for the purpose of the valuation of company (Czech Republic, 1997). The DCF method can be in three variants in practice: DCF entity, DCF equity, DCF APV, i.e. adjusted present value (Kislingerová, 2001).

The methods of asset valuation are employed for the purpose of valuating of individual items. These items can be valued on the basis of historic prices, on the basis of the reacquisition of such items, on the basis of spared costs and on the basis of market values (Mařík et al., 2018).

3 Material and methods

The objective of the contribution is to determine the value of the Association's intangible assets. All intangible assets will be valued as of 31 December 2017. Specifically, it the association of natural persons engaged in hairdressing (hereinafter referred to as Association XYZ) established on 1 January 2008 by the

Association Agreement. For the purposes of the research, Association XYZ provided all necessary data for five consecutive years (between 2013 and 2017). According to CZ NACE, by the type of its activity, Association XYZ belongs the group G. Since the largest share of its business is the hair cosmetics, the Association depends on the development of customers' demand according to the classification CZ NACE, group S. For the historical development of sales in the category CZ NACE S in the CR, see Graph 1.

Graph 1. Sales development in category CZ NACE – S (96.02, 96.09, 93.13) between 2006 and 2016, basic index (mean in the year 2010) – common prices

Hairdressing and cosmetic services

120

100

80

60

40

2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

Source: Czech Statistical Office (2016).

Graph 1 shows that the sales in this sector did not change much year on year. Although after 2008 there was a slight decrease by several percent compared to the basic year, in the following year the situation did not change much. Before 2008, the sector showed a relatively fast growth of sales, but between 2008 and 2010, there has been a slight decrease.

As a new limited company will be established and subsequently the Association, whose assets will be the initial contribution in the newly established limited company, will cease to exist, another basis will also be legislation. Specifically, it will be Act No. 151/1997 Coll. on valuation of asset and on the amendment of some other Acts, Act No. 90/2012 Coll. On Commercial companies and cooperatives (Act on Business Corporations), and Act No. 89/2012 Coll. (Civil Code).

For our calculation, it will be necessary to determine the revenue and asset value of Association XYZ. Company revenue value represents the company's capability of generating revenues in the future. It is a sum of all items able to generate these revenues, including all tangible and intangible assets of the company. Therefore, it if is necessary to determine the intangible assets value, it is possible to calculate is as a difference between the assets and revenue value of the Association XYZ. For this reason, the issue of determining of these values will be addressed

In terms of determining the assets value of individual tangible and intangible assets, first the Association XYZ inventory will be valued. The valuation of the inventories will be based on their purchase value. Furthermore, the fixed tangible assets will be valued. Fixed tangible assets include a special tablet. This asset will be valued analogously to low-value assets using the assumed linear decline. The fixed assets also include motor vehicles. Association XYZ owns a total of 11 vehicles, out of which 7 vehicles are a direct asset of the Association XYZ, 3 have been acquired through loans that have not been fully repaid yet, and one vehicle is used on the basis of the operating lease contract. This vehicle is thus not included in the valuation due to the specificity of the loan. The remaining vehicles will be valued using Cebia, s.r.o.'s CabiCAT GT software, which enables to determine fast and precisely the current market value of a concrete vehicle in the CR. In terms of valuation, this software works on the principle of a comparative method. Subsequently, low-value fixed tangible assets will be included in the valuation. This kind of assets can be valued by means of amortization scale. Amortization scale represents the residual percentage value of assets by the time of their purchase.

The last item that constitutes the asset value of the Association XYZ is its financial assets together with its receivables and liabilities. Due to the fact that the chances of acquiring overdue receivables decrease with the increasing period of time, while the costs of recovery grow, the valuation will not include the receivables with a maturity longer than 1 year. Such receivables usually become irrecoverable.

Yield value perceives a valued company as a system, a set of all tangible and intangible items necessary for doing business and achieving the economic results that are and will be achieved. Yield method will be performed using the discounted cash flow method (DCF) in a two-phase variant. The newly established limited company requires the adaptation of the existing economic results of the Association XYZ, which can be appropriately incorporate in the DCF method using a financial plan.

The discount rate in using the DCF equity method corresponds to the alternative cost of equity (r_e). For valuation, complex build-up model will be used that will draw on the data on the Czech market released by the Ministry of Industry and Trade of the Czech Republic that react to the specifics of the Czech market. The calculation is based on the identification of possible risks, and the subsequent sum of several partial risk margins and risk-free long-term state bonds rate. The calculation of the cost of equity is shown in the formula (1). The individual items for calculating cost of equity will be obtained from the Czech National Bank and Ministry of Industry and Trade data for the 1^{st} - 4^{th} quarter of the year 2016 (since no data from a period closer to the valuation date is available) according to the code CZ NACE, group "G" (Wholesale and retail).

$$r_e = r_f + r_{pod} + r_{finstab} + r_{la} \tag{1}$$

Where: r_e cost of equity, r_f risk-free yield,

 r_f risk-free yield, r_{pod} risk margin for business risk, $r_{finstab}$ risk margin for financial stability, r_{la} risk margin for company size.

Yield value of the Association will be calculated as a sum of the value of phase 1 and phase 2. The individual calculation steps can be seen in Formulas 2 and 3. Yield value in phase 1 will be calculated according to Formula 2:

$$H = \sum_{t=1}^{T} \frac{FCFE_t}{(1 + n_{VK(z)i})^t}$$
 (2)

Where: *H* company value,

 $FCFE_t$ Free cash flow to equity in the year t, $N_{VK(z)i}$ cost of equity at specific debt in the year i.

Subsequently, phase 2 will be calculated using the Formula 3.

$$PH = \frac{FCFE_{T+1}}{n_{VK(z)T+i} - g} * \frac{1}{(1 + n_{VK(z)i})^T}$$
 (3)

Where: T number of year in phase 1, growth rate in phase 2.

4 Intangible assets

Intangible asset is one of the essential components of business. It can consist e.g. of licenses, copyright, software, brand, knowhow or goodwill. During its existence, Association XYZ has not made any reference to intangible assets in its accounts, but it is clear that the intangible assets created by own activity in the form of know-how and goodwill is of key importance for the incoming legal person. Due to taking over the existing customer

base, business relations, experience, and employees, the incoming legal person can to a large extent reduce the initial introductory and growth phase, thus building on the existing activity and development of the Association XYZ, which is already in the maturity phase. The maturity phase is characterized by a more stable customer base, stabilization of relations with suppliers as well as building the internal processes and management systems of the whole company and achieving adequate profitability. In the maturity phase, the development of the company is slower, and the business policy focuses more on retaining the customers than on gaining new ones; most changes are evolutionary in nature and conceptually planned in the long run.

To identify and measure the advantage that the newly established limited company will have from taking over the intangible components of the business, there are two possible different approaches. The first approach consists in determining the intangible asset value as a difference between the revenue and asset value of the Association XYZ. This approach assumes the dissolution of the Association XYZ and taking over all the intangible components of the business by the newly established limited company, which corresponds with the expected development of the Association XYZ. The second approach is so-called licensing analogy, which is based on quantification of the difference between the expected economic results of the newly established limited company when using or not using the relevant intangible components of the business. This method requires preparation of the company financial plans when using or not using the intangible components of the business until they are equal to each other or at least close to the expected economic result. It can be stated that in the long term, the value of intangible components of the business gradually decreases, e.g. as the customers accept the person in the business, the share of taken know-how decreases to the new know-how created by the own activity, etc.

In the case of the Association XYZ, the first approach will be used, that is, first the return value of the Association XYZ will be determined on the basis of the financial plan, subsequently, the asset value will be calculated based on the market.

5 Results

Overall, according to the historical financial indicators, it can be said that the Association XYZ appears to be a financially sound company without any significant hidden threats. As of the valuation date, that is 12 December 2017, the current inventory was determined (based on their inventory and the purchase price) at the value of CZK 2,522,172.

The fixed tangible assets of the Association consist of automobiles and one special tablet. The automobiles were valued using the CebiCAT GT software, and the value was determined at CZK 2,285,922 CZK, while there was still a debt on three automobiles purchased on credit at the total amount of CZK 309,130.01 CZK (specifically, CZK 40,448.98, CZK 84,830.09, and CZK 183,850.94). The above mentioned tables (purchase price CZK 53,722.38) was, taking into account the purchase date (15 September 2014) and its lifetime (5 years), valued at the total residual price of CZK 21,488.95 CZK. By adding these two valued, the fixed tangible asset was valued at CZK 2,307,411 CZK.

Fixed tangible low-value assets were valued based on the amortization scale. Since these assets are of different age, which was determined according to the date of purchase based on the invoices available, the value of these assets was calculated at CZK 52,578.79. It was a total of 16 items (electronic and computer technology) that was purchased in the period between February 2010 and the valuation data, and was still used by the Association XYZ. The purchase prices ranged between CZK 269.7 and CZK 7,484.

The value of the financial assets was set at CZK 543,095 after adding the cash balance, bank account, and two fuel cards. The liabilities of the Association XYZ including vehicles loans,

wages of employees, trade payables, and other flat-rate payments necessary for operation total CZK 2,604,181. The resulting value of the asset value of the Association XYZ is shown in Table 1.

Tab. 1. Asset value of Association XYZ as of 31 December 2017

Assets	Value	
Inventories	CZK 2,522,172	
Fixed tangible assets	CZK 2,307,411	
Short-term tangible assets (low-value)	CZK 52,579	
Financial assets	CZK 543,095	
Gross value	CZK 5,425,257	
Liabilities (-)	CZK 2,604,181	
Net value	CZK 2,821,076	

Source: Own processing.

Subsequently, in accordance with the methodology, the cost of equity was determined. It was determined using the build-up model described in the methodology. The individual values from the Czech National Bank (2019) data (the value of the ten-year state bond yield was available only for the period of 10/2017 at the time of the survey) and the Ministry of Industry and Trade (2017) of the CR are given in Table 2.

Tab. 2. Items for calculating risk-free yield (r_e) according to Ministry of Industry and Trade

Item	CZ NACE 55
Risk-free yield	1.45%
Business risk margin	2.65%
Financial stability margin	1.87%
Company size margin	1.09%

Source: Czech National Bank (2019) and Ministry of Industry and Trade (2017), own interpretation.

On the basis of the Czech National Bank (2019) and the Ministry of Industry and Trade (2017) of the CR data, cost of equity (r_e) was determined at 7.06% (using Formula (1)). This was followed by the calculation of phase 1 and phase 2 of the yield value using the DCF method. Considering the current development of the Association XYZ, only a short time can be expected to be required for the stabilization of all components of business which results in a rather short duration of the 1st valuation phase. The length of phase 1 was thus set at 3 years.

For calculating phase 1 of the yield value, Table 3 was compiled, which contains the input calculation values for the whole duration of this phase.

Tab. 3. Current value of phase 1 cash flow

1ab. 5. Current value of phase 1 cash flow				
	2018	2019	2020	
Free cash flow after tax [CZK]	198,049.35	202,010.34	206,050.55	
Discount rate [%]	7.06	7.06	7.06	
Current value of cash flow [CZK]	184,989.12	176,245.94	167,915.99	

Source: Own processing.

On the basis of the input values, the value of phase 1 was calculated at CZK 529,151.06 in accordance with Formula (2). For the calculation of phase 2, it was necessary to use the values for the year following the end of phase 1. In this case, it was the year 2021. Free cash flow after tax was determined at CZK 210,171.56 with the same discount rate (7.06%). The value of phase 2 was calculated using Formula (3) (CZK 3,384,867.82). After adding up the values of phases 1 and 2, the yield value of the Association XYZ was set at CZK 3,914,019.

At this point, the value of the Association XYZ's intangible assets could be determined in accordance with our methodology.

3,914,019 *CZK* – 2,821,076 *CZK* = **1**, **092**, **943** *CZK*In words: one million ninety-two thousand nine hundred and forty-two Czech crowns

6 Conclusion

After analysing the assessed Association XYZ, for the purposes of its tangible assets valuation, asset-based approach was chosen; based on its character, it was direct comparison approach, flat-rate method, or valuating the assets in nominal amount. Using the two-phase alternative of the DCF method, the yield value of the Association XYZ was determined. Subsequently, intangible components of the Association's assets were calculated as a difference between the yield and asset value. Using this method, the intangible and tangible components of the overall Association's value were separated. Considering the fact that there is a certain yield potential in the Association XYZ, its value equals to the sum of the tangible and intangible components of business at the total amount of CZK 3,914,019 as of the valuation date (31 December 2017). All these assets will be transferred to the newly established successor's organization (public limited company).

Based on the methodology used, the value of intangible business components was determined at CZK 1,092,943 CZK. It is the value of the company that was not in the Association's accounts, as was already mentioned above. This value will be transferred in the newly established limited company as an intangible assets item. This will cause that the newly established limited company will not "start from scratch" and will achieve the stabile phase in its life cycle much faster. However, the value of the company's intangible assets will decrease and thus additional intangible assets (e.g. in the form of new customers) will have to be generated by its own activity so that the expected decrease is compensated.

It can be stated that the method of determining the intangible component of the model Association's asset appears to be applicable. The objective of this contribution was thus achieved with a positive result and at the required extent. It shall also be stated that it is a relatively simple calculation method, and its applicability can be assumed even in other fields of entrepreneurship for valuation of intangible components of other companies' business. This is considered to be the greatest contribution of this article.

A given valuation of an intangible asset can be used in a "business transformation" situation, whether it is a right transformation (by law) or false transformation, as in this case, in a situation where the previous business ceases or completely ceases business in the industry/area and the subject matter of the valuation are the intangible components of the business, where the successor entity follows the past business (the word successor is meant in a broader context).

There are other applicable methods that shall be tested on other suitable companies. In this field, there are many opportunities for doing so and it shall be a subject of further research.

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