

---

**K. NEDBÁLEK**<https://orcid.org/0000-0002-1010-2460>*Interregional Academy of Personnel Management, Kyiv*

---

**DETRIMENT — METHODS OF CALCULATION OF  
DAMAGE COMPENSATION IN THE CZECH REPUBLIC  
2018**

---

**Наукові праці МАУП. Серія Економічні науки, 2018, вип. 56(2), с. 103–121**<https://doi.org/10.32689/2523-4536-2018-02-103-121>

*The article deals with the issue of calculating detriment, damages, liability for damages, including determination of profit loss and hypothetical profit loss for the Czech Republic through practical methods. The article processes general valuation methods, such as the method of fair value, the method of yield value etc. The article also deals with lost profits determined by various methods — among the most significant are the lost profit from funds in the bank, the calculation of profitability using the EVA method, etc. The last analysis is the satisfaction of the non-pecuniary detriment using the abstract loss of profits.*

**1. Introduction — development of valuation in the EU**

The article is an introduction to practical methods of calculating non-pecuniary detriment, loss of profits, hypothetical profit, and abstract profits in the case of a pest effect for a long period of time in several years. Some case segments can not be documented and reconstructed by real procedures. For this case, it is possible to complement the segment of profit loss by hypothetical profit, eventually by abstract profit — the method where the statistic methods of profitability are not conclusive. After some simplifying assumptions, we can use the EVA method.

Adjusting the results according to the available statistical data adequately correlates the actual state of the business plan. The starting points of the researched question are solved using scientific methods, mainly synthesis and analysis.

Property valuation abroad is the most sophisticated. Determination of profit loss or hypothetical profit is at the edge of available studies and actual calculations differ widely or are completely absent in different countries. On one hand, there are countries where valuation is regulated by law. This includes, for example, the Federal Republic of Germany, where the Building Code, respectively the corresponding valuation decree defines the so-called standardized procedures, such as the factual, comparative and revenue-based method based on temporary rent. However, legislatively in contrast to the Czech Republic [1], only the framework of the basic method is adjusted. At the opposite end, we would find, for example,

Great Britain, where valuation is based not only on valid laws, but also on precedent cases and technical standards, the most prominent of which is the so-called Red Book, the RICS (Royal Institution of Chartered Surveyors) – Valuation manual. In connection with the development of globalization and internationalization of the market there has been a need for the individual market participants to understand each other, as they may be from different countries, respectively from different valuation cultures. In 1997, the European association of appraisers (TEGoVA – The European Group of Valuers Associations) was established to formulate pan-European standards for nomenclature and valuation methods, to extend these standards and promote valuation domain across Europe. The key document of TEGoVA is the so-called Blue Book of European Valuation Standards. European standards serve to unify property valuation methods, but these methods are not sophisticated about lost and hypothetical profits. Next, I will be dealing with this issue of profit loss and hypothetical profit loss, which is beginning to take on topicality. A pest that has been working for dozens of years creates a hardly defined damage. A pest may be a natural or legal person, but also a state [1, 16]. In any professional literature I have not found a way to proceed in calculating the hypothetical and abstract profit loss. Instead of hypothetical profit loss we sometimes use the term abstract profit loss. I try to specify these two concepts, when the abstract concept is based on a general theoretical point of view and can be quantified from the economic data of a given company for a longer period, and the hypothetical is based on a specific assumption closer to the practical use [2, 3]. I will try to indicate how to proceed in order to maintain the greatest degree of objectivity.

### **1.1. The Concept of Damage and its Compensation**

In case of material damage we recognize:

- actual damage (asset reduction);
- profit loss (non-increase of assets with real loss of provable profit loss);
- hypothetical profit loss (non-increase of assets if it is not possible to prove the specific profit loss);
- abstract profit loss (non-increase of assets when it is not possible to prove specific profit loss or hypothetical profit loss);
- non-pecuniary detriment (in particular by violation of personal rights, delays in proceedings, etc.) where a satisfaction is assumed [3, 31].

### **1.2. General valuation methods**

There are various methods for different types of valuation that are used to measure real estate, but we use them also in many cases analogously to calculate profit loss and hypothetical profit loss.

#### **1.2.1. Factual value method (cost, substance)**

Factual value method (cost, substance) – CN – the method is based on the factual value of the substance of the land, buildings. In the Czech Republic this valuation method is applied in valid valuation decrees. Of the Ministry of Finance of the

Czech Republic [4], for determination of administrative prices. The method is based on the discovery of the reproduction price, reduced by adequate wear and tear.

The principle of this method are the costs, that would have to be incurred to acquire the valued object at a given location or to replace it with a similar object with the same utility value at the valuation date. From these expenses we then deduct existing wear and tear on the object. In other words, this is a static approach to valuation.

The most common way to evaluate the company in this way is the “substantive method”. It is a summary of relatively independent valuations of individual company assets. The sum of the values of all assets equals the total gross substantive value. Net asset value is determined by subtracting the fair value of all the company’s liabilities from the gross sub-fund.

### **1.2.2. The yield value method**

The yield value method – Cv is based on the assertion that the value of the estate for its holder is determined by the expected utility yield of this property. This method is used for the valuation of assets for which, future profitability can be determined. The concept of this method is based on the “time value of money” in the future recalculated by inflation data. The most commonly used applications of this method are profit capitalization and discounted cash flow method (DCF).

In general, the discounted cash flow method (DCF), which is based on the discovery of the present value of expected cash flows from the company by discounting a certain discount rate, is generally considered the most optimal option.

This method is generally perceived to be the most optimal when assessing companies. However, it may be used only if it is possible to estimate future cash flows. If a reliable estimate is available for a sufficiently long time, then we can consider the outcome of this method as very objective. The method is very accurate when we know the development of the economy over a certain period and count the profit loss, or the hypothetical profit loss for a number of years.

The yield value of real estate is the sum of discounted future earnings per year. This value for real estate is found from attainable annual rent, decreased for the annual operating costs. These costs should include depreciation, average annual repairs and maintenance, real estate management, real estate tax, insurance, etc.

$$Cv = Z / p \times 100 \% \text{ (so-called eternal rent)}$$

Cv – yield value;

Z – net annual profit from property leases;

p – rate of capitalization in percent.

### **1.2.3. The Comparative Method**

The Comparative Method – is the most widespread method used in developed economies. This method is based on a comparison of the subject properties with similar ones, the prices of which have been realized recently and are known. For calculations, we use the standard unit market price of the property (SJTC-Standardní jednotkové tržní ceny objektu) method or the direct comparison of the property as a whole.

## 2. Profit loss determined by different methods

### 2.1. Profit loss of the business plan

The business plan that is being processed is based on predicted data of potential revenue and revenue data, these economic data can be adjusted by correct qualified estimates to approximate possible true values. However, these figures only refer to the potential options of the business plan. We must compare these values with other data that we can later verify with time.

### 2.2. Capital funds profit loss

One of the methods to determine the profit loss that could be achieved with the available funds. It is based on the assumption that these funds were put into a business where the minimal revenue is 10–20 % per year. The return of such funds is assumed within 5 to 10 years. We need to discount partial annual profits by the expected rate of annual business profits and assumed or statistically proven inflation rate.

$$BK = SK \times q \times n$$

SK = current capital, principal

BK = final capital

The capital rate of profit should be between 10–20 %, otherwise the profit margin according to K. Marx [5].

- 3 % ill;
- 10 % healthy;
- 20 % predatory;
- 50 % predatory, dangerous;

u = e.g. annual interest = 10 % (i = 0,1);

q = interest payer = 1 + i = 1,1;

n = number of years.

### 2.3. Bank funds profit loss

One of the other methods of determining profit loss is the rate of what could be achieved with available funds if we put the initial capital into the bank. It is based on the assumption that these funds would be invested in a low-risk bank where the yield is expected to be between 5 % and 15 % per annum, to which the annual inflation is added. We therefore have to discount the partial annual profits by the expected rate of annual return on the yield of funds deposited in the bank and adjust the assumed or statistically documented rate of inflation, given that there is a devaluation of the funds.

$$BK = MK \times q \times n$$

MK = past entry capital, principal

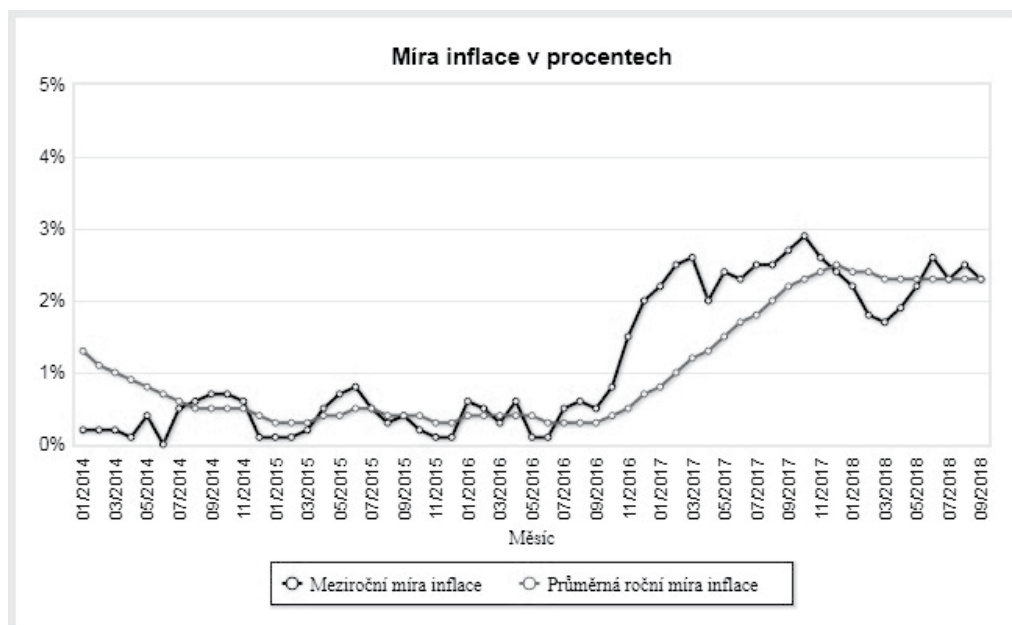
BK = final capital

q = interest payer = 1 + i + u = 1 + 0,03 + 0,05 = 1,08

i = e.g. annual inflation (i = 0,03)

u = e.g. annual interest = 5 % (u = 0,05)

n = number of years



**Graph 1. Historical Inflation in the Czech Republic [6]**

The discount rate is used by the central bank to raise the excess liquidity imposed on it by commercial banks. However, it also has a lasting impact on the calculation of interest in tax administration. The Discount Rate of the Czech National Bank (hereinafter referred to as the ČNB) is used to determine interest on late payments, interest on overpayments caused by the tax administrator and penalties for taxes. The rate that is valid at the beginning of the calendar quarter is decisive. For more details, see §§ 60, 63 and 64 of Act No. 337/1992 Coll., the Administration of Taxes and Fees [7]. In the past, the ČNB Discount Rate was also used by the Act on Income Tax Act No. 586/1992 Coll. [8] for the valuation of the usual interest on loans provided between related parties in Section 23, paragraph 7. In practically all cases, they used interest at the rate of 1.40 x the ČNB discount rate valid at the beginning of the calendar quarter. At present, interest on late payment and tax cuts is derived from repository.

### **Hypothetical profit loss calculated from the profitability of production funds**

Return on capital is an indicator of the use of capital, which belongs to the indicators of activity in the financial analysis of the company, characterizing the rate of capital turnover.

- Meaning the return on the invested capital;
- we express it as a share of the profit on the basis for which we will provide capital;
- indicates how many percent of profit a crown of the base will bring.

Profitability should be higher than the interest rate on bank deposits. The industry's recommended value is about 15%. In other words, modernization in this

area should be around six years. For accommodation and tourism, it should be between 7 % and 12 % per year. The reality is that top-of-the-range accommodation facilities are changing their interiors every five years, and after twenty years they have to be completely renovated.

The Return on Equity Indicator (ROE) measures net profit (EAT), which already belongs only to the owners (the creditors were satisfied by the payment of cost items and the state paid tax), with the size of the equity.

$$\text{ROE} = \text{EAT} / \text{VK}$$

ROE = Return On Equity

EAT = Earnings After Taxes

VK = Equity (in Czech: vlastní kapitál)

For the term profitability is sometimes used EBT Earnings Before Tax or EBIT Earnings Before Interest and Tax instead of EAT Earnings After Taxes.

### **Calculation of EBIT, EBT, EAT**

It is calculated from the company's Profit and Loss Statement for each tax period and from each row of the Profit and Loss Statement by adding:

EAT = The economic result for the accounting period (in the Czech Financial Income Statement line 60) + income tax on extraordinary activity (in the Czech Financial Income Statement line 55)

+ Income tax on ordinary activities (in the Czech Financial Income Statement line 48)

resulting in

EBT = Earnings Before Tax

+ interest expense (in the Czech Financial Income Statement line 42)

resulting in

EBIT = Earnings Before Interest and Tax.

We will only calculate with the profit from ordinary activities that we understand in the sense of “operating activity”, there will be no extra income and extra tax. In the practice of US companies, especially in the evaluation of investment projects, another profit category is used, namely EBDIT – Earnings Before Depreciation, Interest and Taxes, also EBITDA Earnings Before Interest, Taxes, Depreciation and Amortization [9].

ROE is one of the key indicators of the success of the business from the point of view of the owners. Their goal is to maximize net profit with a minimum of invested equity, so their goal is to maximize the value of this ratio indicator. The minimum ROE value of a particular business should exceed the implicit cost because only in that case net profit can cover the cost of equity. In order for an enterprise to be attractive for investors, ROE must achieve at least the same return rates as an alternative investment for which the investor would have the same risk.

The minimum ROE value is determined by a number of simpler and more sophisticated methods for different industries, e.g. as follows:

- expertly (estimate);
- based on the knowledge (or statistics) of average return on equity in the sector;

- based on the standard share of dividends per share in the sector;
- by EVA calculation.

The resulting ROE value is affected by the factors that affect the EAT (+ EAT = + ROE) in the numerator and the factors acting on the VK (+ VK = -ROE) in the denominator of this ratio indicator. In short, increasing EAT and decreasing VK leads to increasing ROE. Beyond maximizing revenue and minimizing costs to increase ROE, other factors influencing the return on equity:

- the depreciation method chosen (depreciation: straight, accelerated, performance);
- valuation methods of other inputs (FIFO, average price method);
- the cost of foreign capital (the rise in interest rate is due to the decrease of EAT);
- current indebtedness of the company.

Creation and dissolution of reserves (creation decreases EAT, dissolution increases EAT). For the sake of clarity, the following table lists the average ROE values in the various industries, which are listed on the web portal of the Ministry of Industry and Trade.

Profitability is a monetary indicator that tells us about the ratio between the funds that flow from our assets and the resources we have in some way allocated or monitored. We will only track return on equity in the world known as ROE. Simply we take into account that tangible and intangible fixed assets are the sum of the value of the production technology and the value of the real estate and thus equate to the production funds. Furthermore, we assume that it is the entire property of the company and at the same time represents the company's own assets, then the resulting profit from the profitability of the production funds or of their own assets.

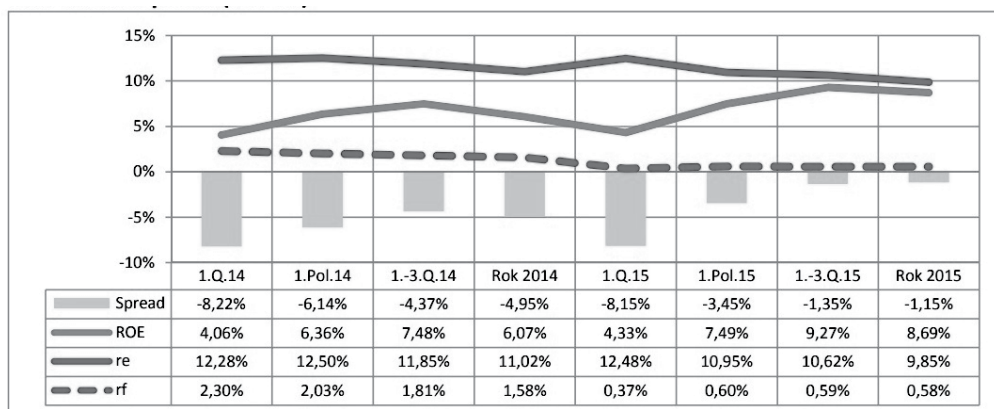
$$\text{ROE [\%]} = \text{ZR} / \text{VJ} \times 100$$

$$\Rightarrow \text{ZR} = \text{ROE} \times \text{VJ} / 100$$

ROE – Return Of Equity;

ZR – net profit after tax;

VJ – own reduced assets.



Pramen: propočít MPO z dat ČSÚ

**Table 1. ROE – Return on Capital in Construction in the Czech Republic [10]**

Calculating, we will get absolutely credible data about the hypothetical profit loss that a given device would produce per year. Profitability of production funds is based on the average data of the statistical office in similar industrial productions in the Czech Republic. This hypothetical profit loss represents the loss of the company in one year, in other words, how much the assets didn't increase in one year. We have to discount the total partial annual profit loss by the number of years for which the loss event occurred and by the rate of inflation.

$$BK = MK \times q^n,$$

$i$  – e.g. the annual rate of inflation (3 %,  $i = 0,03$ );

$q$  – interest payer =  $1 + i = 1,03$ ;

$n$  – number of years ;

$MK$  – past input capital;

$BK$  – capital at the end after discounting.

The resulting hypothetical profit loss from the profitability of the production funds will be obtained by adding together the individual annual lost profits after the previous discounting [11].

$$\sum_{i=n} = BK1 + BK2 + \dots + BK_n$$

$BK$  loss of profitability in the sum for each year.

## 2.4. EVA to calculate the profitability

EVA (Economic Value Added) is another indicator of profitability. With this indicator, we can calculate our own profitability under a certain assumption. EVA is part of the so-called value and index indicators.

In the case of EVA, it is a representation of the so-called economic profit, that is, the profit generated by the company after deducting the accounting costs, taxes, and costs for both foreign capital and equity. In particular, the cost of equity is important because it reminds us of the simple fact that the owners could have invested their money in a given year elsewhere, and could have also earned something.

In microeconomics, consideration is given to the cost of opportunities. So EVA tells us how much extra money the company has earned, compared to the minimum requirements of its owners. The term Economic Value Added is then used because of the value generated above those requirements, the firm can invest in its further development and hence increase its value [12].

The difference in economic profit versus profit is that economic profit is the difference between revenue and economic costs, i.e. costs that include not only profits but also the so-called opportunity costs. Opportunity costs (cost of missed opportunities) are “money amounts that have been lost because the resources (capital) haven't been spent on best alternative use”. In practice, the opportunity costs are mainly interest on the entrepreneur's capital, including the remuneration for risk [13, 1].

If we analyse this modified formula a bit more in detail, it tells us that EVA is actually a net operating profit from which we deduct interest paid out of foreign capital (Article  $(1 - t)$  expresses only that the interest is put at the expense of the



company, so they do not actually have to pay 100 %, but for example in the Czech conditions where the corporation tax rate is 21 % they pay 79 % and the income demanded by the owners. EVA also tells us, in other words, how much money will remain for the company itself to invest in its further development, and that's exactly the Economic Value Added. If you do not have the money to develop, the value of the investment is hard to increase. For calculating the profit loss we assume that  $EVA = 0$ , that means that the unit will not generate any extra resources for potential development, but will have resources from depreciation of the fixed assets, or, in other words, the minimum amount the firm must earn to satisfy the obligations to creditors, that is to the bank and other creditors for interest on late payments and to the owners. EVA is calculated according to the formula:

$$EVA = NOPAT - C \times WACC,$$

NOPAT – Net Operating Profit After Taxes;

WACC – Weighted Average Cost of Capital.

After inserting  $EVA = 0$  this represents only the simple reproduction. In the case of profit, which would correspond to modernization, there would have to remain an amount to the means for modernization corresponding to at least a ten-year cycle of the renewal of the production fund [14, 436].

$$EVA = 0;$$

$$0 = NOPAT - C \times WACC, \Rightarrow NOPAT = C \times WACC;$$

$$WACC = Re * (E / C) + Rd * (1-t) * (D / C);$$

$$ROEC [\%] = NOPAT / C \times 100;$$

=> annual profit

$$ZR = ROEC \times C / 100,$$

ROEC – profitability of the whole capital;

t – tax rate, is the rate of personal income tax (i.e. currently 0,19);

C is the total capital;

D are foreign sources from which the company pays interest;

E – equity from which the owners demand a return.

#### 2.4.1. Weighted Average Cost of Capital

Weighted Average Cost of Capital (WACC) in the sense of after tax cost. In their current, not historical, size associated with the involvement of long-term own and foreign sources in company financing. The cost of capital is the company's cost of acquiring the individual components of the company's capital. They represent the minimum required rate of yield (yield percentage) of capital. Capital costs are used as a discount rate to calculate the present value of financial investment flows [15; 16].

In general, the average cost of capital can be calculated:

$$WACC = Re * (E / C) + Rd * (1-t) * (D / C),$$

WACC – Weighted Average Cost of Capital;

Re – Cost of equity (e.g. 10% = 0.1);

Rd – Cost of foreign capital, (e.g. 10% = 0.1);

C – total invested capital (D+E);

E – Equity;

D – foreign interest-bearing (charged) capital (Debt);  
 t – rate of tax on profits. (e.g. 21 % = 0.21).

**The Cost of equity:**

The cost of equity reflects the expected rate of investors revenue, taking into consideration the level of risk associated with this investment. This model generally defines the cost of equity in the form of:

$$Re = ro + \text{coef. beta} * RP + SRP,$$

ro – the return on government bonds (such as risk-free investment);

RP is a risk premium;

SRP is a specific risk margin.

A specific feature of this model is that it sets the risk premium as the sum of two components, the size of which is determined on the basis of a rating. The components of the risk premium are:

Basic risk premium for shareholders – this premium for AAA rating is 5.5%.

Additional risk premium – Expresses an increased risk on the market (the Czech Republic’s rating is equivalent to an additional risk premium of 1.7%).

Beta coefficient – Expresses the sensitivity of the return of the shares of the rated company to changes in the entire market:

Beta = 1 ... the return on shares of the company changes as well as the profitability of the entire market,

Beta > 1 ... the stock risk is greater than the average market risk.

Beta < 1 ... the stock risk is lower than the average market risk.

The Beta coefficient displays only one component of the overall risk – the so-called systematic risk that affects all companies equally. In addition, however, the economic results of a particular company affect factors that are unique to the company. This risk component is referred to as a specific risk and is determined by a subjective expert estimate. The lack of this estimation is the relative complexity and many indicators based on the subjective human factor.

**Interest rates on deposit accounts**

<b>Due date</b>	<b>17.05. 2018</b>	<b>2.02. 2018</b>	<b>1.02. 2018</b>	<b>3.11. 2017</b>	<b>2.11. 2017</b>	<b>4.08. 2017</b>	<b>3.08. 2017</b>
1 day	0,75	0,74	0,5	0,45	0,28	0,25	0,12
7 days	0,77	0,77	0,67	0,52	0,44	0,29	0,13
14 days	0,8	0,8	0,72	0,55	0,48	0,31	0,15
1 month	0,82	0,83	0,76	0,59	0,51	0,35	0,2
2 months	0,86	0,86	0,79	0,64	0,55	0,38	0,25
3 months	0,9	0,91	0,83	0,69	0,61	0,43	0,31
6 months	0,99	0,99	0,91	0,76	0,68	0,47	0,39
9 months	1,06	1,05	0,98	0,81	0,74	0,51	0,44
1 year	1,12	1,11	1,03	0,87	0,79	0,56	0,49

*Table 2: Development of inter-bank priory rates (in %) [17].*

PRIBOR (PRague InterBank Offered Rate) is the estimate of the interest rate at which the reference bank would be willing to provide a deposit to another bank on the interbank market. PRIBOR calculates each working day. For calculating the average in the given year and a more accurate calculation we appoint the weighted average. The bank's margins are credited to this result.

For our calculation of the cost of equity, we choose for simplification the calculation of the annual interest rate of funds deposited with financial institutions and multiplied by the constant  $K_r$ , which is set at 1,2.

$$Re = Rd * Kr$$

$Re$  – equity costs;

$K_r$  – risk constant = 1,2 ;

$Rd$  – interest from funds in the bank.

The cost of foreign capital is calculated in a simple way, from individual annual interest rates on loans from banks or the private sector. In the past, it was easily calculated as 1.4 times the discount rate of the ČNB.

For the calculation of foreign capital, the annual interest on the credit from financial institutions will be appointed and multiplied by the constant  $K_r$ , which is set at 1.4% of the yield, i.e. the constant is calculated as

$$Rd = ru * Kr,$$

$Rd$  – costs of foreign capital;

$K_r$  – risk constant = 1,4;

$ru$  – interest on the loan.

	2005	2006	2007	2008	2009
Cost of foreign capital	4,00 %	5,00%	5,00 %	5,00 %	5,00 %

Table 3: Example when calculating 1.4 times the discount rate ČNB



Pramen: data ČNB, graf MPO

Graph 3: Interest rates of commercial banks for loans in the Czech Republic [18]

## 2.5. Present value of hypothetical profit

If we want to determine the present value of hypothetical profit, we need to adjust the calculation for inflationary effects after repayment, we can use this conversion. This is especially true for companies when choosing the most efficient investment opportunity. Companies first calculate the costs associated with purchasing the necessary capital goods, then estimate the annual net income and deduct the calculated cost of capital formation. After we choose the investment option that has the highest yield [19, 173; 20, 717].

$$SK = (BK1 / (1 + ur)) + (BK2 / (1 + ur)^2) + \dots + (BK_n / (1 + ur)^n),$$

SK – the present value of the capital of the entire flow of expected future earnings from sub-funds;

BK<sub>n</sub> – net annual return on capital in the *n*th year;

ur – the relevant annual interest rate;

n = number of years.

## 2.6. Abstract Profit Loss

Theoretically, it is possible to determine the abstract profit loss, but the above-mentioned conditions of the law make this practically very difficult, as they basically prevent the reliable calculation of the abstract lost profits, which must be documented by the injured party. The problem isn't that there will be no evidence of a causal link between the act of the pest and the harm suffered by the victim, but the determination and quantification of the abstract profit. By deeper analysis of this profit loss we come to the conclusion that we have two types of abstract profits.

The first, so-called gray, describes as if there wasn't even any profit, it is just a contour of some kind of damage, sometimes it evokes a gray economy that is also hard to detect and measure. That is why we will name it the abstract gray profit loss.

The second type describes that it's shadowing something that exists in reality. This real form only occurs sometimes, in connection with the determination of the value of human life and the appreciation of the company's goodwill. In determining the damage, neither of these elements has to be present on the grounds that there was no loss of life or the lack of added value of the company's goodwill. This profit is called abstract shadowed profit loss.

Our law does not, in principle, exclude so-called "loss of business opportunity" damages if this loss is in the form of actual damage or profit loss. However, the crucial problem is the burden of proof on the injured party, who has to prove the conditions laid down by law, which are made more difficult in the case of the so-called abstract profit loss [21, 2].

Abstract profit loss appears to be an abstract term based on a general theoretical point of view, and perhaps more distant from the hypothetical profit loss, which is more based on a specific assumption closer to practical use. In my original works, I tended to the theoretical abstract profit loss, which forms a coherent basis for determining non-material damage even if I did not develop it more [11]. Substitution of material damage in practice will be transferred to the institute of

loss of real chances, respectively opportunities, in connection with the expected or hypothetical profit that would occur.

However, the abstract profit loss will be more specific if we stand on the same starting level of the value of human life and appreciation of the goodwill of the company.

Typically, it involves an interference with the person's health, honour or privacy. As an abstract element of the damage, non-pecuniary damage occurs, in the expression of money resulting non-property damage.

The imaginary value of frustrated human life was set at 400 times the average gross monthly nominal wage in the national economy for the calendar year preceding the year in which the human life was defeated. In 2014 was this value amounted to CZK 10,051,200 [22]. This regulation was only applied for a short period of time, but there was a certain procedure to deal with this issue. In my opinion, the determination of the value of human life should also be dependent on active work and older age should be partially corrected.

year	Ø gross wage	400 times Ø gross wage
2013	25 128 CZK	10 051 200 CZK
2014	25 686 CZK	10 274 400 CZK
2015	26 467 CZK	10 586 800 CZK
2016	27 589 CZK	11 035 600 CZK

*Table 4: Nominal average gross wage for 2016–2016 [23].*

Goodwill is the difference between the book value of the plant, i.e. the sum of the individually valued components of the asset reduced by the debts, and its final value, e.g. the purchase price.

Goodwill can include branding, company image, product market interest, ability of product sales, customer and supplier relationships, market position, employee relationship, and many other intangible attributes. International accounting standards, such as IFRS [24], are considered to be decisive for the recognition of goodwill by the fact that goodwill meets three general characteristics, namely:

- a) it brings future property benefits; or determination of the loss of the company;
- b) is the result of a past event; the profit period prior to the damage event;
- c) in a differential way is ratable.

The economic quantification of ex-post goodwill is therefore quite understandable. However, its quantification of the analysis for the future period is more complex [25]. In the course of the pest's activities, the company was unable to participate in public procurement, suffering from harassment attacks by insolvency, and so on. We can find out the mathematical results when we have the profitability of the production funds and profits for the previous periods that preceded the damage events.

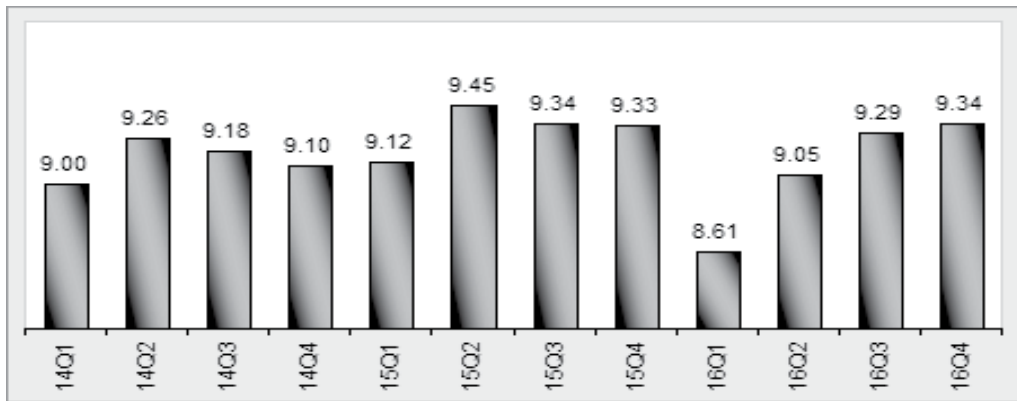
The very content of the concept of goodwill is very difficult to identify. This is to a large extent a subjective variable. In determining goodwill detriment, ma-

agement's reputation as well as the duration of the pest and the impact on family and other life must be recognized in the goodwill of the company.

We can easily get a company's goodwill if the company publishes a ROEsp that we averaged over a period of time. We compare the ROEsp thus obtained with data published by authorized institutions such as the Czech Statistical Office or some ministries. When ROEsp is smaller than ROEst in the company, the company has no added value resulting from goodwill, so we do not count this value. The opposite situation occurs when the company's ROEsp is larger than the statistical data. Then the abstract shadow profit loss from the goodwill company will be determined.

$$ASUZ = (ROEsp - ROEst) \times VK,$$

ASUZ – abstract shadowed profits;  
 ROEsp – average ROE for several periods;  
 ROEst – ROE obtained from statistical data;  
 VK – equity.



Graph No. 4: ROE USA bank [26].

Above the value of ROEst of US banks, we can calculate, when comparing with ROEsp of our banks, the goodwill of a bank in the Czech Republic in the form of abstract shadow profit loss.

	2011	2012	2013	2014	2015
Equity mil. CZK	79 810	93 190	100 660	107 809	119 986
ROE	18,20 %	19,30 %	16,20 %	14,50 %	13,00 %
			average ROEsp		16,24 %

Table 5: ROEsp Česká spořitelna [27].

$$ASUZ = (ROEsp - ROEst) \times VK,$$

$$ASUZ = (16,24 - 9,33) \times 119\,986\,000\,000 = 8\,291\,032\,600,$$

$$ASUZ = 8,3 \text{ billion CZK.}$$

Goodwill of Česká spořitelna a. s. in 2015 is in an abstract shadowed profit of about 8.3 billion CZK compared to US banks, or it can be compared to other banks, depending on where the pest is.

### 3. Complaint for non-pecuniary damage

Let's look, however, on how the accountable economist should act in case we apply damages. A fairly simple situation occurs when dealing with the property diminishing problem, this can easily be determined from the accounting records, such as the difference between the value of the assets before the damage event and the value of the assets after the loss event. A much more complex case occurs when we address the damage by a presumption in the form of profit loss. Sometimes it is described as a frustrated opportunity, a faltered chance, an institute known in international law for the protection of basic human rights. In violation of these rights, they are admitted to the ones whose rights and freedoms protected by the European Convention for the Protection of Human Rights and Fundamental Freedoms [28] have been violated, certain fair claims and satisfaction. Reconciliation has three basic components:

- compensation for material damage;
- compensation for non-material damage;
- compensation for costs.

Substitution of material damage in practice goes to the institute of loss of real chances (or opportunities) in connection with the expected or hypothetical profit that would occur. In French "perte de chance" [29] (lost chances) or in English "loss of opportunity" [30] (loss of opportunity). In the area of Czech law, the compensation for the so-called defeated opportunity or the loss of a realistic chance can be invoked through damages in the form of profit loss, through the indemnity institute [11, 294].

Claims for compensation of profit loss and actual damages have been dealt with in Czech and Slovak law in accordance with Section 442 (1) of Act 40/1964 Coll., Civil Code [31]. Newly in the Czech Republic [32] for satisfaction for non-pecuniary damage, these are separate claims, independent of each other, both of which can arise from the same damage event. The existence of actual damage is not a prerequisite for profit loss, and vice versa. From the practice of courts and state institutions, these two components are not accepted in many cases. If we acknowledge that damages have certain social functions in particular preventive and restitutive, we can compare its legal clearance respectively its interpretation, by how it contributes to, the fulfilment or weakening of these functions. We can also rate the competitive relationship between these legal policy goals and their balancing. As in contract law we can observe the eternal dispute between liberalism and protectionism in favour of the weaker party, it is also in the reliquary right of responsibility for detriment, the boundary of consensus and the idea of the right proportions between freedom and equality is variable [21, 3].

According to a special law, the right to compensation for non-pecuniary damage, is obtained regardless of whether or not it was caused by unlawful decision or maladministration. Appropriate satisfaction for non-pecuniary damage, in my opinion, should be a certain percentage; the ideal figure is 0.25% of the total damage when the damage, the injury can be ascertained, or the flat-rate average earnings from the area where the beneficiary works for each month of the pest activity.

#### 4. Conclusion of damage assessment and hypothetical profit loss

The business plan has certainly served to compare the possible, showing a certain level of profit loss, and taking into consideration the duration of the pest. The business plan usually does not work with actual inflation data. Businessmen are required to rely not only on their average earnings, (income) in the period prior to the event of damage, in determining compensation for loss of hypothetical profit. We need to take into account the trajectory of potential returns, either from the business project or the average profitability of the value of the means of production, and we must discount them on the present value of the capital. In the search for the relation between justice and responsibility, we must state that today's society is also trying to measure non-pecuniary damage such as honour, health, life, financial expression. This satisfaction, in addition to excuse, also requires money from non-pecuniary damage, and the injured person perceives it as a fair compensation for damage arising from liability. The person also understands as fair that the pest should be appropriately punished by economic burdens. However, we have to assess the damage from all the required criteria:

1. the size of the damage, and whether the property has been reduced;
2. the amount of profit loss and the hypothetical profit loss, how much the property did not increase;
3. non-material damage.

In the **first** case, we need to reduce this value to the amounts that the injured person did not have to pay, even though this may happen in the future, but on the contrary, I think that there is a loss of property value that has lost value because of the pest, because there was a provable loss of property. In addition, this considers also a payment for real estate transfer tax. A direct link must be established between the behaviour of the pest and the occurrence of the damage. Damage involves the reduction of assets or direct payments that have contributed to it.

In the **second** case, it is very difficult to prove a profit increase, about which we do not know how it could evolve. We will make use of the profitability of production funds and compare it with business plans, lost profit from funds in the bank and the calculation of the hypothetical EVA profit. When we get a profit by computing through different methods, and some significantly deviate from other values, we do not take them into account and do not include them in calculating the average value and thus give the values more credibility.

In the **third** case, the amount of non-pecuniary damage seems to me to be very small if the company's goodwill is taken into account and the fact that the company was unable to participate in public procurement. When compared to a lost hypothetical profit, damage and time of pest management, the non-cash satisfaction expressed in money should be the average of the previous damages as the basis of the calculation in this section. This takes into account the duration of the pest, for example, 0.25 % for each calendar year that was caused by the pest of the above amount.

For these reasons, we can give the results in the calculations according to the above methods a high credibility and probability of correlation with the actual data that could have occurred without the pest management behaviour.



This article is the result and summary of my previous academic works on this subject. Methods in the study could help both the professional public and a wide range of people interested in this issue. I am pleased that I will always engage in another discussion.

## References:

---

1. The Act of the Czech Republic No. 151/1997 Coll., (občanský zákoník – civil code) on Property Valuation and on Amendments to Certain Acts.
2. *Nedbálek, K.*, Abstraktní ušlý zisk při škodě v daňovém řízení // Business Law. 2010. № 1. Prague: 2010. ISSN 1210-8278.
3. *Nedbálek, Karel*: Újma, škoda v ČR a SR, Praktický nástin výpočtu [monograph]. Slušovice: Miroslav Tomšů – Publisher Monument, 2018. 183 s. ISBN 978-80-88143-14-7.
4. Vyhláška ministerstva financí České republiky č. 3/2008 Sb. Implements the provisions of the law no. 151/1997 Sb., on property valuation and on the amendment of some laws.
5. *Marx, K.* Přeměna nadhodnoty v zisk a míry nadhodnoty v míru zisku. Chapter One Capital, III. Part, Section One, Cost and Profit [Електронний ресурс] // Marxists Internet Archive: website. (cit. 2018-07-07). URL: <https://www.marxists.org/cestina/marx-engels/1894/kapital3/ch01.htm>
6. Míra inflace : Český statistický úřad [Електронний ресурс] // Czech Statistical Office: website. URL: [https://www.czso.cz/csu/czso/mira\\_inflace\\_animovany\\_graf](https://www.czso.cz/csu/czso/mira_inflace_animovany_graf). (cit. 2018-10-22).
7. Zákon České republiky č. 337/1992 Sb. About the administration of taxes and fees.
8. Zákon České národní rady č. 586/1992 Sb. On Income Taxes.
9. *Synek, M.* Ekonomická analýza. First Edition. Praha: Oeconomica, 2003, 79 s. ISBN 80-245-0603-3.
10. Finanční analýza podnikové sféry za 1. – 4. Čtvrtletí 2015 (aktualizovaná verze): Ministerstvo průmyslu a obchodu České republiky. Sekce průmyslu. Odbor ekonomických analýz. Květen 2017 [Електронний ресурс] // Ministerstvo průmyslu a obchodu : website. 2017. May. URL: [https://www.mpo.cz/assets/cz/rozcestnik/analyticke-materialy-a-statistiky/analyticke-materialy/2017/5/FA4Q15\\_akt.pdf](https://www.mpo.cz/assets/cz/rozcestnik/analyticke-materialy-a-statistiky/analyticke-materialy/2017/5/FA4Q15_akt.pdf)
11. *Nedbálek, K.* Výpočet abstraktního ušlého zisku z rentability při škodě v daňovém řízení // Theoretical Journal for State and Law Issues. 2011. No. 3. page 294. Prague: Institute of State and Law AV ČR, 2011. ISSN 0231-6625.
12. *Scholleová, H.* Ekonomické a finanční řízení pro neekonomy. 1st edition. Prague: Grada, 2008, 256 s. ISBN 978-80-247-2424-9.
13. *Matyášová, Š.* Ukazatel ekonomické přidané hodnoty [Електронний ресурс] // 5 professional conference of doctoral studies with international participation. Brno, 2003. Brno: VUT in Brno, 2003. Fakulta Stavební : website. URL: <http://www.fce.vutbr.cz/veda/dk2003texty/pdf/5-2/rp/matyasova.pdf>
14. *Nedbálek K. J.* Použití metody EVA při nedostatku relevantních údajů u výpočtu škody // Journal of Legal Science and Practice. Masaryk University, Brno. 2015. No. 4. Volume XXIII. ISSN 1210-9126, MK ČR E 6667, page 428
15. Managerial finance / E. Kislingerová and coll.: Prague: C.H.Beck, 2007. 745 s. ISBN 978-80-7179-903-0.
16. *Kislingerová, E.* Oceňování podniku 2. přepracované a doplněné vydání. Prague: C. H. Beck, 2001. 367 s. ISBN 80-7179-529-1.
17. Sazby PRIBOR – měsíční a roční průměry [Електронний ресурс] // Česká národní banka : website. (cit. 2018-10-23). URL: [http://www.cnb.cz/cs/financni\\_trhy/penezni\\_trh/pribor/prumerne.jsp?year=2018&show=Spustit+sestavu](http://www.cnb.cz/cs/financni_trhy/penezni_trh/pribor/prumerne.jsp?year=2018&show=Spustit+sestavu)

18. Analýza vývoje ekonomiky ČR září 2018 : Ministerstvo průmyslu a obchodu. Odbor ekonomických analýz. [Електронний ресурс] // Ministerstvo průmyslu a obchodu: website. (cit. 2018-10-23). URL: <https://www.mpo.cz/assets/cz/rozcestnik/analyticke-materialy-a-statistiky/analyticke-materialy/2018/10/Analyza-20182Q.pdf>
19. *Macáková, L.* Microeconomics, basic course, Slaný: Melandrium, 2009, str. 275s. ISBN: 978-80-86175-70.
20. *Nordhaus, W. D., Samuelson, P. A.* Economy. Prague: Svoboda, 1991. 1011 s. ISBN 8020501924.
21. *Bejček, J.* Note on the relationship of lost profits and so-called defeated opportunities (Poznámka ke vztahu ušlého zisku a tzv. zmařené příležitosti). In Business Law. Prague: Prospektrum, 2005. No. 4, ISSN 1211-8278.
22. *Mališ, D.* Nová metodika Nejvyššího soudu k náhradě nemajetkové újmy na zdraví – zatím zčásti nehotová, ale velmi užitečná [Електронний ресурс] // epravo.cz : website. 2014. May. (cit. 2017-01-26). URL: <http://www.epravo.cz/top/clanky/nova-metodika-nejvyssiho-soudu-k-nahrade-nemajetkove-ujmy-na-zdravi-zatim-zcasti-nehotova-ale-velmi-uzitecna-94311.html>
23. Product catalog, average wages [Електронний ресурс] // Czech Statistical Office : website (cit. 2017-03-02). URL: <https://www.czso.cz/csu/czso/cri/prumerne-mzdy-4-ctvrtleti-2016,next-on-4-ctvrtleti-2013,4-ctvrtleti-2014,4-ctvrtleti-2015>
24. International Financial Reporting Standards, were confirmed in 2002 by the European Parliament as the only European system of financial reporting in the Czech Republic, this issue is determined in accordance with § 19 paragraph 9 and § 23a of Act No. 563/1991 Coll., on accounting.
25. *Novák, J., Barbaričová M.* Ocenění goodwillu při koupi závodu a odpovědnost statutárních orgánů akciové společnosti [Електронний ресурс] // epravo.cz : website. 2014. May. (cit. 2017-03-26). URL: <https://www.epravo.cz/top/clanky/oceneni-goodwillu-pri-koupi-zavodu-a-odpovednost-statutarnich-organu-akciové-společnosti-94312.html>
26. Return on Equity: ROE Past 12 Qvartal [Електронний ресурс] // All U.S. Bank : website. (cit. 2017-02-18). URL: <http://www.bankregdata.com/allIEmet.asp?met=ROE>
27. Sběrka listin. Česká spořitelna, a.s. : Veřejný rejstřík a Sběrka listin [Електронний ресурс] // Ministerstvo spravedlnosti České republiky. eJustice : website. (cit. 2017-02-15). URL: <https://or.justice.cz/ias/ui/vypis-sl-firma?subjektId=711786>
28. European Convention for the Protection of Human Rights and Fundamental Freedoms, article 41.
29. Farange S. A, versus France: Judgment of the European Court of Human Rights on a Complaint No. 77575/01, § 49, dated 13.7. 2006.
30. Young against the United Kingdom: Judgment of the European Court of Human Rights on a Complaint No. 60682/00, § 48, dated 16. 1. 2007.
31. Law of the Czech Republic No. 40/1964 Coll., Civil Code, canceled.
32. Law of the Czech Republic No. 89/2012 Sb., Civil Code.

***Недбáлек К. Методика розрахунку відповідальності з компенсації збитку в Чехії у 2018 році.***

*Бізнес-план, безумовно, слугує для порівняння можливостей, показуючи певний рівень втрат прибутку, і з урахуванням тривалості шкоди. Бізнес-план зазвичай не працює з фактичними даними про інфляцію. Підприємці зобов'язані покладатися не тільки на свій середній заробіток (дохід) у період, що передував події, у визначенні компенсації за втрату гіпотетичного прибутку. Потрібно враховувати траєкторію потенційних прибутків*

як від бізнес-проекту, так і від середньої рентабельності вартості засобів виробництва, їх треба знижувати на поточну вартість капіталу. У пошуках співвідношення справедливості та відповідальності слід констатувати, що сьогоденіше суспільство також намагається виміряти моральну шкоду, як-то: честь, здоров'я, життя, фінансове вираження. Таке задоволення, крім виправдання, вимагає грошей від нематеріальної шкоди, а потерпіла людина сприймає це, як справедливу компенсацію за шкоду, що виникає з відповідальності. Людина також розуміє, що шкідник повинен бути належним чином покараний економічним тягарем. Однак ми повинні оцінити збиток від усіх необхідних критеріїв:

- 1) розмір збитку і чи зменшено майно;
- 2) розмір втрати прибутку та гіпотетичні втрати прибутку, на скільки не збільшилося майно;
- 3) нематеріальну шкоду.

У першому випадку нам необхідно зменшити цю величину до суми, яку потерпіла людина не повинна була сплачувати, навіть якщо це може статися в майбутньому. Однак ми вважаємо, що є втрата вартості майна, яка має втрачену цінність через шкідників, тому що відбулася доказова втрата власності. Крім того, розглядається плата за податок на передачу нерухомості. Необхідно встановити прямий зв'язок між поведінкою шкідника та виникненням пошкодження. Збиток передбачає скорочення активів або прямих платежів, які сприяли цьому.

У другому випадку дуже важко довести збільшення прибутку, про яке ми не знаємо, як він може розвиватися. Ми скористаємося прибутковістю виробничих фондів і порівняємо його з бізнес-планами, втраченим прибутком від коштів у банку і розрахунком гіпотетичного прибутку від ЄВА. Коли прибуток отримується шляхом обчислення за допомогою різних методів, а деякі істотно відхиляються від інших оцінок, то до уваги вони не беруться і не включаються у розрахунок середнього значення, тим самим значенням надається більше довіри.

У третьому випадку сума нематеріальної шкоди, як мені здається, дуже мала, якщо врахувати гудвіл компанії і той факт, що компанія не змогла брати участь у державних закупівлях. Порівняно з втраченим гіпотетичним прибутком, збитком і часом боротьби зі шкідниками, безготівкова компенсація, виражена в грошах, повинна бути середньою величиною попередніх збитків як основи розрахунку в цьому розділі. При цьому до уваги береться тривалість шкідника, наприклад, 0,25 % для кожного календарного року, що було викликано шкідниками зазначеної вище кількості.

Із цих причин ми можемо дати результати в розрахунках відповідно до зазначених методів з високою довірою і ймовірністю кореляції з фактичними даними, які могли б відбутися без поведінки боротьби зі шкідниками.

<https://doi.org/10.32689/2523-4536-2018-02-103-121>

Надійшла 16 жовтня 2018 р.