Analysis of Audit Companies that Audit Public Interest Entities

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Abstract

The goal of the research work is to analyze the relationship between the bonity score of the audit companies and the number of audited public-interest entities. We proceed research by detailed analysis of Transparency Reports focusing on the structure and requirements of the report of all auditors or audit companies that carry out audits in public interest entities in the Slovak Republic, together with the analysis of their financial reports. The result of this study is the implementation of this knowledge into a demonstration in which a number of audited public-interest entities correlate with bonity scores. For the purpose of this research we used Altman Z-score and score IN-95, in both cases the correlation was positive. Unfortunately, we must also conclude that the quality of Transparency Reports of audit companies in Slovakia is very low and a lot of information in these reports is missing and does not fulfill the legal accuracy of the content of the Transparency Report.

Key words

Statutory audit, public-interest entity, Transparency Report, bonity scores.

JEL Classification: M42

1. Introduction

There are currently many audit companies that are required to prepare a Transparency Report. The various parts of the legislation contain a lot of obligations which the auditor or audit company is obliged to include in the Transparency Report, as well as their mentioning the mandatory parts that such a report should contain.

All statutory auditors or audit companies carrying out audits in public interest entities are required to publish Transparency Reports on their own websites within a maximum period of four months from the end of each financial year. (Kareš, 2015) These reports shall, as a minimum, include a list of all public-interest entities in which audit companies have carried out a statutory audit in the previous financial year.

The term "public interest entity" refers to entities whose management is of increased interest to the public. Listed companies are entities which have securities traded on a stock exchange and other entities that are also considered to be in the public interest in the European Union member state under individual laws. (Pakšiová, Janhuba, 2012)

Public-interest entities are defined in the Slovak Republic in the Act on Accounting, in the Statutory Audit Act, and also in Directive 2014/56 / EU of the European Parliament and of the Council, which replaced Directive 2006/43 / EC of the European Parliament and of the

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Council. Slovak legislation characterizes public interest entities as listed companies to which other entities have been assigned according to individual legal standards, which are also considered to be public interest entities in the Slovak Republic.

International Financial Reporting Standards and International Auditing Standards also mention listed companies. They are directly defined by International Auditing Standards, while International Financial Reporting Standards merely describe them, and do not directly define them. (Parajka, 2015)

In general, under Slovak law, we can characterize as an entity of public interest any entity whose securities have been issued and admitted to trading in any Member State of the European Union.

Under Act No. 431/2002 Coll. on Accounting (hereinafter referred to as the "Act on Accounting") and Act no. 423/2015 Coll. on Statutory Audit and on amendment of Act No. 431/2002 Coll. on Accounting, as amended (hereinafter referred to as the "Statutory Audit Act"), we can see in the following table public interest entities, which are also characterized by these laws. However, each of these laws also has a list of public interest entities which vary from one law to another.

Table no. 1: Public interest entities according Accounting Act and also Statutory Audit Act

Listed companies
Banks and branches of foreign banks
Export Import bank of the Slovak Republic
Insurance and branches of foreign banks
Reinsurance and branches of foreign reinsurance
Health insurance
Asset management companies and branches of foreign asset management companies
Pension management companies
Supplementary pension management companies
Stock exchanges

Source: own processing according Accounting Act and Statutory Audit Act

As we can see in table no. 2 and 3, the Accounting Act and the Statutory Audit Act, do not consider the same entities as public interest entities. Nine entities are defined in both laws in the same way. However, for example, a payment institution, an investment company and a pension fund are subject to the public interest only under the Accounting Act. The Act on Statutory Audit defines, for example, railways in the Slovak Republic or cities, municipalities and neighborhoods that meet certain conditions that we can see in the table.

Table no. 2: Public interest entities according Accounting Act

Central securities depository
Brokers
Payment institutions
Electronic money institutions
Collective investment undertakings
Pension funds
Branches of foreign financial institutions
Accounting entities ty according §17a par.2

Source: own processing according Accounting Act

Table no. 3: Public interest entities according Statutory Audit Act

Railways of the Slovak Republic
Accounting entities preparing the consolidated financial statements of the central government
Higher territorial unit
An accounting entity that is a municipality, city, or city district under special regulations, from an accounting period preceded by at least two consecutive accounting periods in which it met the following conditions: the total amount of assets, where the amount of assets means the amount determined by the consolidated financial statements of the public administration entity >100 000 000 and the population >50 000

Source: own processing according Statutory Audit Act

When comparing Act No. 423/2015 Coll. to the statutory audit currently in force and Act No. 540/2007 Coll. on Auditors, Audit and Audit Oversight valid until 2015, we can see differences in the content of public interest entities. Until 2015, the following were considered to be public interest entities under this act: the National Bank of Slovakia, the Central Securities Depository, securities traders, entities that prepare consolidated financial statements under the Accounting Act and the branches of foreign securities brokers when they prepare financial statements in accordance with international financial reporting standards. On the contrary, until 2015 the following entities were not considered to be public interest entities: a higher territorial unanimity in the present Act if they meet certain criteria set out in this Act.

International Financial Reporting Standards and International Auditing Standards do not list public-interest entities, instead listing listed companies. According to International Auditing Standards, listed companies are those whose shares, bonds or shares are listed or traded in accordance with the rules of this recognized exchange or other similar organizations. (Kontsyvaya et al., 2019)

International Financial Reporting Standards in IFRS 33 - Earnings per share, although not explicitly described, describe listed companies in terms of the preparation of separate or consolidated financial statements as entities that have publicly traded ordinary shares (domestic or foreign stock exchange) or entities that submit their financial statements to organizations for the purpose of issuing ordinary shares (Akbas, Zeytinoglu, 2017). This standard is only for listed companies.

According to IFRS 10, (Antoniuk, Chizevska, Semenyshena, 2019) the obligation to present consolidated financial statements applies to all parent companies except those that meet all the conditions to this standard, including, for example, that an entity does not trade equity instruments, or public debt instruments and also that it does not present financial statements of organizations for the purpose of issuing ordinary shares.

Auditors carrying out audits in public interest entities may provide other non-audit services that comply with the conditions set out in the Statutory Audit Act. A statutory auditor who carries out a statutory audit in a public interest entity shall enter into an audit contract for a minimum of two years and a maximum of three years if the auditor has entered into a contract with that entity for the first time. Any subsequent contract may be concluded for a maximum of three years if the auditor is approved by a general meeting, or another body of the audited entity, who also recalls it.

If all renewed engagements at the audited entity, including the initial engagement, exceed ten years, then the engagement may be extended by a maximum of 10 years if a statutory auditor is tendered under the Statutory Audit Act, or by 14 years if at least two statutory auditors are appointed at the same time and have submitted an auditor's report pursuant to the

Statutory Audit Act, Section 27, Par. 4, which stipulates that if more than one statutory auditor is auditing an entity, they must agree on the results and prepare a joint auditor's report with an opinion. If the opinion of these auditors differs, each auditor shall state his or her own opinion in a separate paragraph of this report, together with a statement of their reasons.

The statutory auditor responsible for audits in public-interest entities may audit the same entity for a maximum of five consecutive years from the date of the appointment of that auditor. It may re-audit the same entity up to at least three years after the last statutory audit has been performed.

The statutory auditor is obliged to communicate to the Supervisory Authority, from the end of the accounting period, a maximum of four months, a list of public interest entities in which the statutory audit was performed. (Krišková, Užík, 2016)

Shareholders holding at least 5% of the entity's capital or 5% of the voting rights, the supervisory or management body of the audited entity and the supervisory authority may also submit a reasoned application to the audit performance.

2. Literature review

An Australian study analyzed (Fu Y., Carson E., Simnett R., 2015) the information disclosed by leading Australian audit companies in their first-time audit companies' transparency reports (Australia has mandated the preparation and release of transparency reports by audit companies in 2013). The authors found that minimum transparency report disclosure requirements are met by audit companies and they have different approaches to governance in the areas which may impact audit quality.

Similar research was done by Spanish authors (Zorio-Grima, Ana; Antonia Garcia-also Benau, Maria; Grau-Grau, Alfredo J., 2018), their analyses Transparency reports were published in Spain in 2010 and 2013. They declare that it is a pioneering research in this field. According to their results there is a growing level in the quality of these reports from 2010 to 2013, however, there is a decrease in voluntary information in 2013. Our study reveals that bigger audit companies and companies less dependent on fees from consultancy services are the ones with higher transparency levels in their Annual Transparency Reports.

Another study (Zorio-Grima, A. and Carmona, P., 2019) examines whether audit companies use transparency reports as a tool to standardize their brand image or whether the semantic and content analysis in these reports indicates a higher importance of country effects. Their research sample included 28 transparency reports published in English by the Big-4 audit companies in the UK, Ireland, Luxemburg, Hungary, Malta, USA and Australia. This research found that there is different language used in transparency reports across audit companies, jurisdictions and countries.

Transparency report disclosure was also the topic of research in Croatia (Cular, 2017). Croatian listed companies were analyzed as well as audit companies which audited Croatian listed companies in 2015. As a method a multiple regression model was used and results indicate that only 32% of audit companies were transparent.

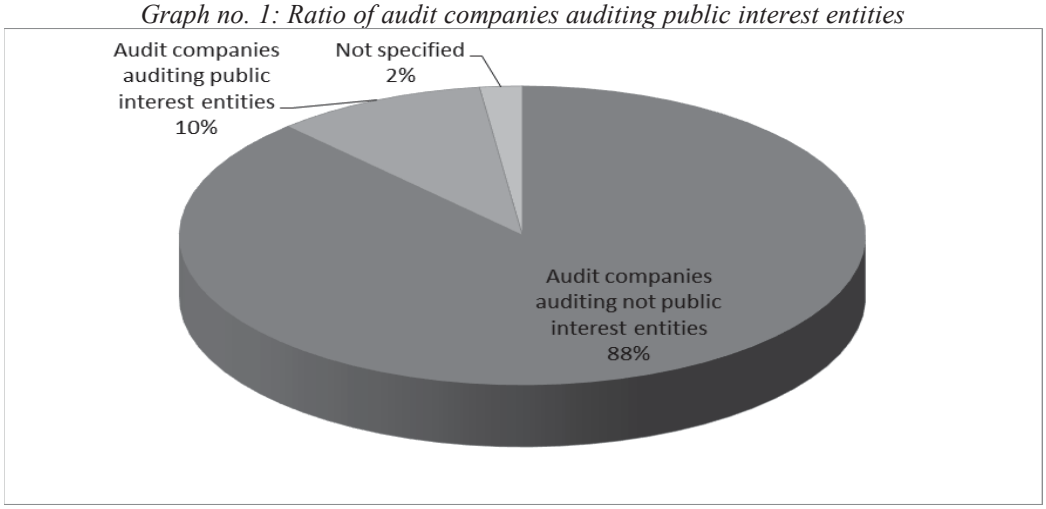
Another study (La Rosa, F., Caserio, C., Bernini, F., 2019) examines corporate governance disclosure in audit companies' transparency reports and whether more disclosure is associated with the audit position in the country. On the basis of content analysis, different measures of a corporate governance disclosure index were calculated for a sample of 122 auditing companies. The study provides an analysis of audit companies transparency based on the information disclosed in mandatory transparency reports.

3. Methodology and Data

In this paper, we examined the relationship between the number of public-interest entities audited and the creditworthiness of these audit companies by analyzing Transparency Reports. From the publicly available data on the website of the Audit Oversight Office, we obtained a list of all audit companies (total number of audit companies in the Slovak Republic is 236), from which we chose those which compiled the Transparency Report for 2018 (25 audit companies) and we analyzed these reports in detail.

The following chart shows how many audit companies in the Slovak Republic were audited in public interest entities in 2018. It also shows how many audit companies do not know whether they are auditing in public interest entities because this information was missing in the transparency report or the transparency report was not published at all.

Graph no. 1: Ratio of audit companies auditing public interest entities



Source: Own processing

Based on the database we have worked with, which includes 236 audit companies in the Slovak Republic, only 10% of audit companies were auditing public interest entities. In 2% of the audit companies we were unable to determine whether they had audited public interest entities in 2018 or not.

Table no. 2: List of analysed audit companies

1.	KLT Audit, spol. s r. o.	**13.**	A P X, k. s.
2.	D. E. A. Consult Trenčín, s. r. o.	**14.**	Deloitte Audit, s. r. o.
3.	AGV audit, spol. s r. o.	**15.**	INTERAUDIT Group, s. r. o.
4.	AUDITCON SLOVAKIA, s. r. o.	**16.**	RENTABIL BRATISLAVA, spol. s r. o.
5.	BDR, spol. s r. o.	**17.**	TPA AUDIT, s. r. o.
6.	INTERAUDIT Zvolen, spol. s r. o.	**18.**	Ernst & Young Slovakia, spol. s r. o.
7.	RVC Senica, s. r. o.	**19.**	AUDIT – EXPERT, s. r. o.
8.	BDO Audit, spol. s r. o.	**20.**	KPMG Slovensko, s. r. o.
9.	Mazars Slovensko, s. r. o.	**21.**	PricewaterhouseCoopers Slovensko, s. r. o.
10.	Boržík & partners, s. r. o.	**22.**	VGD SLOVAKIA, s. r. o.
11.	INTERAUDIT INTERNATIONAL, s. r. o.	**23.**	ACCEPT AUDIT & CONSULTING, s. r. o.
12.	Grant Thornton Audit, s. r. o.		

Source: Own processing

For the purposes of calculating the correlation, we used two models - Altman Z score and credit score IN05.

Table no. 3: Selected data from financial statements

	Assets	Profit / loss	Revenues	Altman Z-score	Score IN 05
BDR, spol. s r.o.	879091	293843	1811273	4.68	6.09
INTERAUDIT BENETIP s.r.o.	69401	1336	215500	4.02	1.19
INTERAUDIT Zvolen, spol. s r.o.	109304	1339	203657	5.35	1.63
Deloitte Audit s.r.o.	4933538	240618	13811437	3.45	5.73
KPMG Slovensko spol. s r.o.	6453524	3286115	21543170	6.26	6.64
Grant Thornton Audit, s. r. o.	239019	87239	771180	5.79	3.04
INTERAUDIT INTERNATIONAL, s.r.o.	369818	55927	349601	2.89	2.87
RENTABIL BRATISLAVA spol. s r.o.	90967	449	157969	1.77	0.64
ACCEPT AUDIT & CONSULTING, s.r.o.	195899	42985	677783	4.94	4.25
AGV audit spol. s r.o.	436937	50202	243072	4.72	2.14
D.E.A. Consult Trenčín, s.r.o.	55684	2156	292383	6.48	1.81
ACCONT AUDIT, s.r.o.	253216	23676	198168	1.48	3.08
PricewaterhouseCoopers Slovensko	24135761	5758367	30956918	5.32	7.81
Mazars Slovensko, s.r.o.	1134394	-125736	2153404	1.75	-0.04
Ernst & Young Slovakia, spol. s r.o.	3676180	1880574	9076302	5.68	3.71
A P X, k.s.	173964	8309	274406	2.62	0.95
KLT AUDIT, spol. s r.o.	211645	14098	344963	5.19	2.06
VGD SLOVAKIA s. r. o.	2251605	734400	5791215	4.25	9.06
RVC Senica s.r.o.	61874	36410	176289	6.39	4.18
AUDIT - EXPERT, s.r.o.	4682	-7486	34083	3.36	-4.42
TPA AUDIT, s.r.o.	826157	451383	868621	4.48	9.29
BDO Audit, spol. s r. o.	252052	16778	822870	3.55	1.27
AV Audit, s. r. o.	16308	34045	55454	12.3	12.23
Boržík & partners, s. r. o.	476319	138194	495963	3.80	2.39

Source: Own processing according www.registeruz.sk

Altman's model is the most used bonity score but it was developed by statistical research by American companies, it can be concluded that its testimony in Slovak conditions is not the same as in the American environment. Similarly, changes in the Slovak economy, from the existence of a large number of insolvent companies, through rapid economic growth to the financial crisis, certainly had an impact on the model's predicative ability. (Andrejovská, 2012) That's why we also included the IN05 score.

Z-score: (net working capital / total assets) x 0.717 + (retained earnings / total assets) x 0.847 + (EBIT / total assets) x 3.107 + (equity / liabilities) x 0.420 + (sales / total assets) x 0.998

where:

Z> 2,9 - the current and expected future financial situation will be good,

1,2 ≤ Z ≤ 2,9 - gray zone,

Z <1.2 - the financial situation is bad, high probability of bankruptcy .

Altman attaches the greatest weight to the return on assets. According to Altman, return on assets affects the financial health of the company most significantly

The Neumaier family in 2005 created the fourth model, which was tested on a group of Czech companies. They re-incorporated the EBIT / interest indicator into the model (Ondrušová, 2011) and, based on the results of the discriminatory analysis, attributed the following weights to the indicators:

0.13 x total capital / liabilities + 0.04 x EBIT / interest expense + 3.97 x EBIT / total capital + 0.21 x income / total capital + 0.09 x current assets / current liabilities

IN05> 1,6 = enterprise generates value

IN05 0.9 ≤ and ≤ 1.6 = gray zone

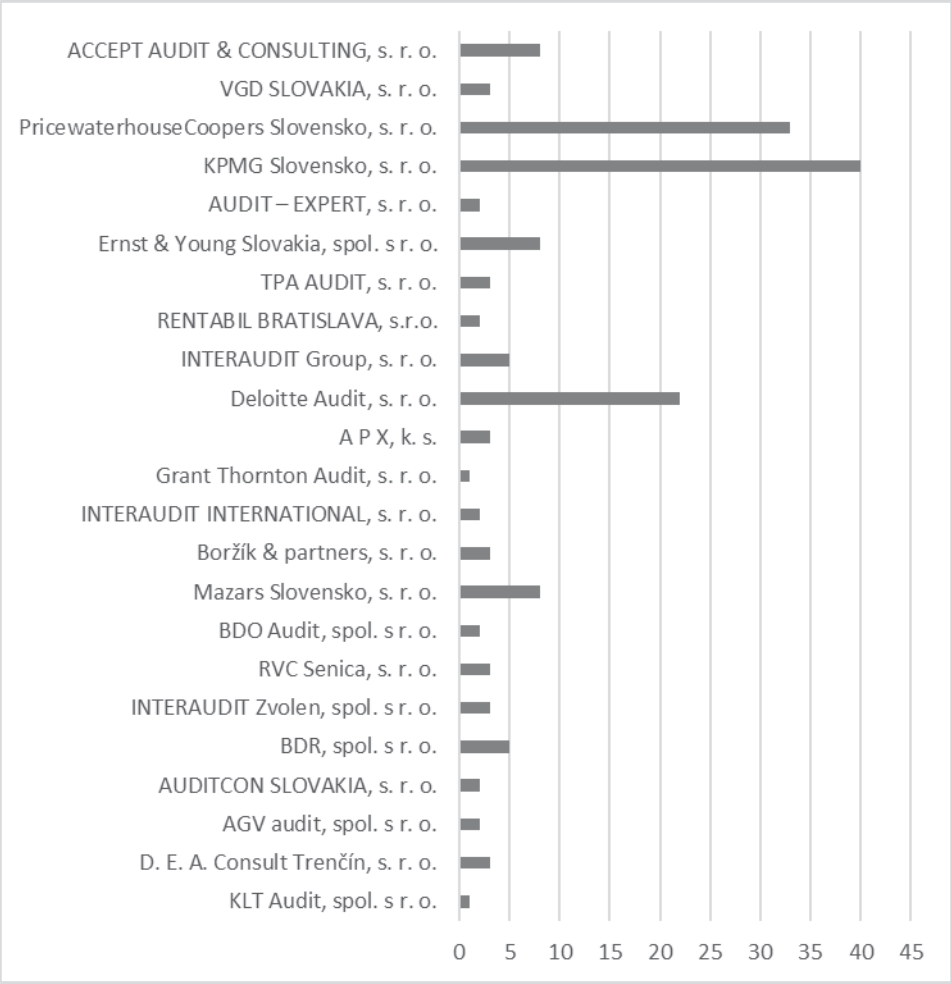
IN05 <0.9 = the company is going to bankrupt

Czech index IN05 copies results Altman Z-score. Together with Altman's model, it is one of the most accurate models that can be applied in our conditions.

4. Results

In total 25 audit companies had to prepare Transparency Reports, but only 23 did so and reported the number of audited public-interest entities. In the following chart, there are individual audit companies and the number of public interest entities audited by them. As we can see the lowest value is 1, while the highest value is 40. On average, there are approximately 6 public interest entities per audit company. Examining this data, we see that only the big four has the highest number of audited entities so KPMG Slovensko, then PricewaterhouseCoopers Slovakia, Deloitte Audit and Ernst & Young Slovakia had the lowest number of audited public interest entities within the Big Four.

Graph no. 3: Number of audited public interest entities



Source: Own processing

Then the correlation between the results of bonity models (Altman's Z-score and score IN05) were examined. A positive correlation was found in both models. In the case of Altman's Z-score was 0,525 higher in comparison to score IN05 with a value 0,409.

Table no. 4 Correlation of the number of public interest entities audited and bonity models

	Altman Z-score	Score IN05
Correlation	0,525	0,409

Source: Own processing

The results can be attributed to the fact that companies that audit public interest entities are more financially stable, or that they also charge higher amounts for their services if they charge public interest entities. Also, the payment discipline of public interest entities is probably higher. The results are limited in that it was not possible to determine the extent to which audit companies audit public interest entities and other entities, which may be the subject of further research.

Based on the analysis of the transparency reports we can conclude that some audit companies have published transparency reports in detail, while some, especially large audit companies that have extensive transparency reports, report information that we believe is not

so important, they make the report confusing and difficult to read, because within so much information it is harder to find the most relevant. For example, information about the no. of employees and the percentage of women and men and many other similar statistics are considered unnecessary for this type of report and this information should be included in the annual report.

For some audit companies, on the basis of the transparency report, we considered that those audit companies that audited the public-interest entities probably do not put much emphasis on the accuracy of the data in the transparency report because the 2018 transparency report probably copied data from transparency reports from previous years.

We also found audit companies that did not audit the public interest entities in 2018, nevertheless prepared a Transparency Report. They made it beyond their obligations and could have different reasons for doing so, for example, they were unsure whether they were obliged to do so under the legislation and therefore made it for sure or audited the public interest entities in the previous year.

5. Conclusion

The goal of the research was to analyze relationships between bonity scores of the audit companies and the number of audited public-interest entities. We worked with a database of all the auditors and audit companies performing audits in the Slovak Republic. We have obtained this database from a publicly available source, on the website of the Audit Oversight Board. Based on this database, we have set up audit companies that carry out audits in public interest entities. We have found a positive correlation between the number of audited public entities and Altman Z-score. A similar correlation was also found with score IN05. We must state that the reports on the transparency of audit companies in the Slovak Republic are not prepared with due attention and greater pressure should be exerted by the control authorities to increase the quality of these reports.

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Municipalities and fiscal rule: post-COVID-19 period

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Abstract

Act Number 23/2017 Coll. stipulates the so-called fiscal rule vis-à-vis the regulation of indebtedness. Should a municipality fail to adhere to the rule and not reduce the debt, it faces the risk that the transfer of taxes from the state budget will be suspended, i.e. having its revenue significantly reduced. The period following economic stagnation (spring of 2020) will bring specific risks for the economic performance and indebtedness of municipalities. This article deals with the identification and analysis of these risks. The said analysis is conducted using qualitative methods; the level of risks is determined by qualified estimates. The most relevant risks on the part of municipalities are economic, political and legislative. A new risk is moral risk: disintegration of the current rules and fiscal (and ultimately decision-making) centralisation.

Key words

Fiscal rule, budget, budget responsibility, municipality, post-COVID-19 period

JEL Classification: H63, H72

1. Introduction

The status, rights and obligations of municipalities are governed by Act Number 128/2000 Coll., on municipalities (establishment of municipalities), while the fundamental framework of their economic performance is governed by Act Number 250/2000 Coll., on budgetary rules. Municipalities in the Czech Republic operate within the framework of their budget under the conditions stipulated by the applicable legislation, and they are fully responsible for their activities; the Ministry of Finance is not authorised to intervene directly in their economic performance and possible indebtedness.

The first real milestone in terms of regulating the indebtedness of municipalities (or more precisely, all regional self-governing units, not just municipalities) was the adoption of Act Number 23/2017 Coll., on budget responsibility rules, and the enforcement of the so-called fiscal rule. However, the period of time following the freezing of the economy in the spring of 2020 (which, for lack of a better term, shall be referred to here as the "post-COVID-19 period") will be very tough on municipalities and their economic performance; the strict application of fiscal rule may force tough decisions by assemblies on the future development of municipalities, as well as changes extending far beyond matters municipalities' economic performance.

2. The fiscal rule and the budget responsibility indicator

Act Number 23/2017 Coll. implements Council directive 2011/85/EU of 8 November 2011 on requirements for budgetary frameworks of the Member States, and refers to other EU

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legislation (in particular Regulation 1466/1997, Regulation 1467/1997 and Regulation 479/2009). It introduces new or stricter obligations for self-governing territorial units in order to regulate their over-indebtedness.

A novelty introduced by the act is the obligation on the part of municipalities to adhere to the so-called fiscal rule (Section 17 of Act Number 23/2017 Coll.). Pursuant to this rule, the budget responsibility indicator is calculated as follows:

$$BR = \frac{D}{R} \tag{1}$$

where:
BR – budget responsibility indicator (in %),
D – debt of the municipality,
R – average revenue of the municipality over the last four years.

Where the value of the budget responsibility indicator exceeds 60 % (fiscal rule), the municipality is obliged to reduce the debt at least by 5 % of the difference between the current amount of debt and the value corresponding to 60 % of the average revenue over the last four years. Should the municipality fail to reduce the debt by the mandatory minimum, the state shall suspend, temporarily, the transfer of tax revenue in the amount corresponding to said minimum. In other words, municipalities may exceed the value of the indicator, but they are motivated by financial sanctions to repay debts, not accumulate them.

In describing the budget responsibility indicator, its questionability becomes evident. The numerator is represented by the total sum of debt as the total of all liabilities (short-term and long-term loans, discounted short-term bonds and notes, long-term bonds issued, notes payable and long-term notes payable, short-term and long-term financial assistance repayable, short-term and long-term liabilities arising from security and other short-term loans), but they are not distinguished in any way. All liabilities included here have the same weight, be they short-term or long-term liabilities or liabilities towards banks as well as non-banking institutions. In reality, each category of liability constitutes a different level of risk, and the structure of debt is a key factor vis-à-vis the overall indebtedness of a municipality (in terms of time and subject-matter).

Sanctions imposed on municipalities in the case of a breach of the fiscal rule may be very painful: even though the state suspends the transfer of tax revenue only temporarily (i.e. the sanctioned municipality does not lose this amount permanently), if the municipality were to breach the fiscal rule several years in a row, the suspended sum could bring about swingeing budget cuts. Tax revenue transfers are a key source of income for all municipal budgets; even temporary partial loss could be very painful for many municipalities – especially where the municipality already has major debts and is obliged to repay the principal amount along with interest. Therefore the sanction *de facto* multiplies.

There are many risks municipalities have to face with respect to budgets and controlling indebtedness in the form of the fiscal rule: these risks can be referred to as “conventional”, but some new risks may transpire as well. During the period when the economy struggles to recover from the COVID-19 pandemic (spring of 2020), the risks will take a new form and changes may affect not only the economic performance of municipalities as such, but also decision-making processes vis-à-vis indebtedness as well as fiscal, political and legislative processes across the entire country.

3. Indebtedness in the related literature

Public indebtedness becomes an important issue during economic crises; we can therefore expect that much attention will be paid to it in the upcoming months (although experts' responses to the period after the spring of 2020 have been understandably limited). In the first place, authors have been examining the indebtedness of countries (Baldi & Staehr, 2016; Greiner, 2012; Tamborini, 2014), before quickly moving on to analyse the indebtedness of regions and municipalities. This is understandable: the indebtedness of regions and municipalities contributes to the public debt of the country and, at the same time, their economic performance directly affects the ordinary lives of all citizens.

Generally speaking, indebtedness (be it state, regional or municipal) is accepted within the framework of the public economics theory (Buchanan, 1998; Musgrave & Musgraveová, 1994); that being said, indebtedness (be it in the form of a loan or bonds) is only acceptable during recession or with respect to asset acquisition and investment (Holtz-Eakin, 1991; Cropf & Wendel, 1998).

Factors affecting the indebtedness of regions and municipalities are addressed by several authors, both internationally (Kiewiet & Szakaty, 1996; Rivers & Yates, 1997; Veiga & Veiga, 2007; Guillamón *et al.*, 2011; Guillamón *et al.*, 2013; Fisher & Wassmer, 2014; Balaguer-Coll *et al.*, 2016; Vera, 2018) and in the Czech context (Hájek & Hájková, 2009). Generally speaking, they agree that indebtedness can be affected by a variety of factors – especially demographic (population, in some countries with migration as a contributing factor), economic (unemployment, economic development level of the region, personal income of the local population), political, and others.

The significance of regulating the indebtedness of municipalities or regions by higher government authorities is emphasised by Rodden (2002) or Bröthaler *et al.* (2015). Monacelli *et al.* (2016) warn that while the enforcement of fiscal rules can control indebtedness at the local level, it may result in reduced investment in local infrastructure. Outside control and regulation are to some extent counterbalanced by examinations into the influence of municipalities' internal controls on the level of indebtedness (Gras *et al.*, 2014).

The impact of budgetary responsibility rules adopted in Europe (in response to the financial crisis) on lower levels of government is studied, among others, by Bröthaler *et al.* (2015) or Vera (2018). They agree that these rules may indeed have a positive effect on the level of indebtedness of municipalities or regions; however, these lower tiers of government always have reduced opportunities for loans and indebtedness than the state.

4. Aim, methodology, identification and analysis of risks

The primary aim of this article is to identify and classify the risks associated with implementation of the fiscal rule after the COVID-19 pandemic in the spring of 2020. The risks are identified in relation to indebtedness of the municipalities, but also to political and legislative space.

The risk analysis employs qualitative methods (Smejkal & Rais, 2003: 85). The level of risks is estimated using qualified empirical estimates: taking into account a certain level of subjectivity associated with this approach (comp. Tichý, 2006: 147–151).

There are many risks associated with calculating the budget responsibility indicator and the implementation of the fiscal rule, and municipalities are able to influence only some. Many risks which municipalities are about to face in the near future, while not new, will entail different aspects and different levels. Many risks overlap, from effects on the budgeting of municipalities

to the general status of municipalities as fundamental units of self-governance. Other risks are appearing for the very first time.

In particular, the following risks are acknowledged (the given order does not reflect importance):

Economic risk: The fiscal authority of Czech municipalities is limited – they can only decide on real estate tax and local fees. Their revenue largely depends on transfers from the state budget, especially on shared tax revenue, as the nationwide revenue from these taxes is redistributed among the state, regions and municipalities. However, the collection of shared taxes (VAT, personal income tax, corporate tax) highly depends on the economic cycle, i.e. in the event of economic recession or even crisis (which can be expected after the events of the spring of 2020), the nationwide level of the collection of these taxes will see a major reduction (see Table 1). This means a significant loss of revenue for municipalities which is hard to compensate from other sources. This fact would have direct impact on compliance with the fiscal rule: the denominator of budget responsibility indicator would gradually fall and, with indebtedness remaining the same, the risk of breach of the mandatory limit would increase.

Table 1. Tax revenues (state budget, January – May) – bil. CZK

Tax	**2018**	**2019**	**2020**
VAT	209.24	113.23	105.38
Personal income tax	48.41	56.19	46.85
Corporate tax	29.21	31.07	27.61

Source: Ministry of Finance of the Czech Republic

Political risk: This risk stems from electoral results, and can manifest itself on the national level (we shall ignore this aspect as the influence would be indirect) or the municipal level. Not all elected assembly members will pursue solely public goals and the public interest. The political cycle is four years, but decisions affecting investments resulting in the indebtedness of municipalities are longer than this period. This also carries future risk: should the economic situation (including a failure to adhere to the fiscal rule) have a harsh impact, resulting among other things in reduced revenue and the worsening quality of local assets and services, some elections at the local level could see the success of candidates who will not pursue the public interest (comp. Wasil *et al*., 2018).

Managerial risk: In their decision-making processes, assemblies must adhere to legal regulations (e.g. Act Number 250/2000 Coll.), but they also base these decisions on fundamental managerial principles and procedures. That being said, not all assembly members are properly educated or have the requisite managerial experience. Therefore, although their decision-making might have good intentions (or not), it can frequently err – causing high indebtedness that does not correspond to potential revenues, the economic outlook or reality.

Structural risk: This risk is closely related to the managerial risk. Due to decisions of an assembly the debt of their municipality may be too high, or its structure may be less than ideal. More advantageous options for municipalities include various forms of repayable financial assistance granted by other budgetary sector institutions; on the other hand, the issue of municipal bonds is permissible by law, but very costly for smaller municipalities.

Legislative risk: A significant legislative risk for the upcoming period may concern amendments to legal regulations with an impact on budgetary revenue: especially Act Number 243/2000 Coll., on the budgetary allocation of tax revenue, resulting in a reduced share for municipalities from shared taxes. This risk is higher during serious economic crisis, when the government needs tax revenue to protect the economy (public revenues must be centralised), and municipalities may be neglected as a result.

Moral risk: Even though all economic, legal and social processes in society always have their moral and ethical aspect, this aspect plays a more important role in "tough times". This is a novel risk and is directly related to the aforementioned risks. Significant economic decline may cause attempts on the part of government to re-allocate economic resources (or centralise them), or attempts to shift power (or centralise it). References to the "critical situation" may herald attempts to curtail local self-governing units and suppress democratic decision-making processes at local levels, to the detriment of municipalities or regions.

Natural and health ("black swan") risks: Even though these risks may at first appear unrelated, they have a similarly unexpected onset and significant consequences: an immediate increase of expenditures. Municipalities own assets which they must take care of while exercising due diligence. Natural disasters (typically in recent years floods or storms) cause damage to public property whose repair or reconstruction requires unplanned public investment. The situation is similar when it comes to health risks (being a novel risk): the events occurring over the past few months show that municipalities must respond to the consequences of epidemic in the form of increased public expenditures. Since not all municipalities budget for such contingencies, this may result in indebtedness.

Currency risk: Currency-related (foreign exchange) risks are not typical for municipalities: where a municipality has a loan or has issued bonds, they are in Czech crowns.

Bank risk: Due to the fact that most long-term liabilities of municipalities consist in loans from banks, an increase in interest rates (increase in debt service payments) is a risk. Recent events and the lowering of interest rates by the Czech National Bank have significantly reduced this risk.

Individual risk levels, the opportunity to influence them, and their impact on debt and revenue are all listed in Table 2.

Table 2. Risk levels and municipalities' ability to influence them

Risk	Level	Influence by municipality	Impact on debt (D) or revenue (R)
Economic	9	no	R
Political	5	yes	D, R
Managerial	5	yes	D, R
Structural	5	yes	D
Legislative	4	no	R
Moral	7	no	
Natural and health	7	no	D
Currency	1	no	D
Bank	2	no	D

Note: The level is evaluated on the 1–10 scale: 1 being very low and 10 being extremely high.
Source: own work

5. Discussion

Table 2 shows that municipalities have limited options in their ability to influence most of these risks (see Act No. 128/2000 Coll, Act No. 250/2000 Coll and Act No. 243/2000 Coll.); and where they can, the risks are "medium". It should also be noted that risks are not isolated, and often act in combination with one another.

The most significant risk which can have fatal consequences for the economic performance and indebtedness of municipalities is the overall economic situation of the country. During an economic crisis the revenue of municipalities from shared taxes is reduced significantly (due to reduced national tax revenues – see Table 1); hence even if indebtedness were to remain the

same or was even reduced, the reduction in revenue will be much faster, causing municipalities to fail to adhere to the fiscal rule. It is fair to describe this as a "debt trap" at the municipal level. Of course, if the recession were to be serious and prolonged, it is legitimate to ask whether compliance with the fiscal rule would be enforced in the first place. If the state can soften its own limits to indebtedness (spring 2020, amendment to the Act on the State Budget for 2020), municipalities and regions have the right to ask why they should still be tied by the fiscal rule. If municipalities are unable to influence much of their revenue and, at the same time, their expenditures are now even higher, even a municipality exercising due diligence and employing sound management is not able to ensure a balanced budget. It is therefore legitimate to discuss how to improve the revenue side of municipalities and regions, as their dependency on transfers of taxes from the state budget may prove to be a risk and disadvantage in tougher times (comp. Rodden, 2002).

There are only three risks which can be influenced at the municipal level: these risks stem from the structure of the assembly and its actions (i.e. political, managerial and structural risks). All these risks are classified as "medium" and can be reduced only by active participation on the part of voters and public control. Active participation in local elections, interest in candidates and parties, as well as public oversight (formally, e.g. by attending assembly sessions and the regular reading of minutes of meetings of the city council or assembly, as well as informally, e.g. via social networks) – that is the only way to ensure real transparency in the economic performance of municipalities and make it literally a matter "public concern". Similarly, this is the way to reduce the risk of electing assembly members unpersuaded by the public interest: only public oversight and active public involvement at the municipal level can prevent these outcomes (comp. Wasil *et al.*, 2018).

Even though legislative risk is deemed to be "medium", it is substantive for a prolonged period of time, and may even increase. The ease with which the amendment to the Act on the State Budget for 2020 was adopted, which resulted in a reduced obligation of the state to adhere to the fiscal rule, gives municipalities little comfort that a similarly far-reaching amendment to the Act on the Budgetary Allocation of Tax Revenue would not occur. Should the government decide that protecting the economy is going to require more financial resources at the expense of the needs of municipalities or regions, it has enough votes in the Chamber of Deputies to pass such amendment. This scenario could be disastrous for many municipalities, and could result in a substantial worsening in the quality (and quantity) of local public services (comp. Bröthaler *et al.*, 2015 or Monacelli *et al.*, 2016).

Even though economic risks are of key importance vis-à-vis compliance with the fiscal rule, we cannot ignore moral risks in the post-COVID-19 period. The relaxation of rules so that the state is not obliged to adhere to strict regulations while other public entitles (municipalities and regions) are, would lead to moral hazard. Decentralisation of decision-making processes may be compromised and centralised decisions – justified by the "need to govern during a crisis" – would force municipalities/regions to act as enforcers of orders adopted on a centralised basis, and the role of municipalities as the basic unit of self-governance would be eliminated. The risk of the centralisation of power is evident.

The risks which we have decided to call "black swan" (natural and health) cannot be influenced by the affected municipalities; unfortunately, such risks can be very strong and they are becoming increasingly dangerous. Sudden budget expenditure to compensate damage after natural disasters is not uncommon in recent years, and typically results in increased debts. Just a few months ago, health risks would not have even be considered: they are a brand new risk. The COVID-19 pandemic has made this risk a primary one: considering budgetary measures alone, the purchase of PPE and disinfection etc. may increase the indebtedness of many municipalities simply by being an unexpected and unplanned expenditure.