Reporting expenses and revenues according to IFRS and Czech accounting legislation in the energy sector

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Abstract: Energy companies present a segment that is currently being watched very closely. The record energy prices created by the stock market generate multifold profits for these types of companies. Building on historical traditions, customs, and the economic and legislative environment, accounting regulation in different countries takes place in different forms and bodies. Currently, the primary accounting standards dominating not only the territory of the European Union are International Financial Reporting Standards (IFRS). The contribution will attempt to analyze the profit and loss statements in this industry for selected companies that report according to International Financial Reporting Standards and Czech accounting legislation.

Keywords: Profit/loss statement; Czech accounting legislation; International Financial Reporting Standards; Energy
JEL Classification: M41, K32, Q5

1 Introduction

The global increase in demand for energy with depleting natural resources forces us to plan an effective and sustainable energy policy that will ensure energy security in the future (Liaquat & Mahmood, 2017). Resource depletion and stricter environmental standards urgently require more sustainable revenues from limited resource demand (Piscicelli & Ludden, 2016). The energy sector is considered the most important for reducing gas emissions and promoting renewable energy sources (Wysokińska, 2013). The integration of this idea into national policies is necessary for the transition to a greener economy (Rakauskiene & Okuneviciute-Neverauskiene, 2015; Folcut & Grigore, 2016; Guillen-Royo et al., 2017).

In the Czech Republic, as in other EU countries, there are two parallel accounting frameworks, namely EU regulations and Czech accounting regulations (Jílek, 2018). By implementing EU accounting directives into our accounting legislation, our country is also becoming part of global harmonization, primarily through IFRS (Kellnerová, 2007).

The economic implications of the implementation of International Financial Reporting Standards (IFRS) have been the subject of extensive literature (e.g. Iatridis & Rouvolis, 2010; Brüggemann et al., 2013; Benkraiem et al., 2022). Studies confirmed that the use of IFRS improves the comparability and quality of accounting information, promotes investment growth and lower expenses of capital (Barth et al., 2008). However, the transition to IFRS also brings difficulties for companies in the form of increased expenses, lack of experience, technical differences, and time consuming (Brown & Tarca, 2005, Gassen & Sellhorn, 2006). The decision to provide voluntary disclosure based on IFRS is mainly influenced by the size and profitability of the company (Dumontier & Raffournier, 1998; Glaum, 2000; Tarca, 2004).

According to some studies, the impacts of IFRS implementation are not entirely clear (Ball, 2016; Uzma, 2016; García et al., 2017; André & Kalogirou, 2020) and its results and acceptance alone will not automatically bring the expected benefits (Albu & Albu, 2012; Christensen et al., 2013; Daske et al., 2013; Benkraiem, et al., 2022). Because of legal and other institutional obstacles, the process of harmonisation is different in each country and proceeds at a substantially different pace (Baker & Barbu, 2007, Nakao & Gray, 2018). For example, authors Silva et al. (2021) were motivated by ongoing debates about the obstacles and benefits of adopting IFRS and found that in both Portugal and Brazil, eight years after the formal adoption of IFRS, further efforts are still needed to achieve full international accounting convergence.

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The aim of the paper is to describe the differences between individual accounting systems – International Financial Reporting Standards (IFRS) and Czech Accounting Legislation (CZ) on a sample of companies in the energy sector with an impact on financial statements. The motivation for choosing these companies was mainly the fact that activity in the field of energy is currently the subject of great interest, and in addition, this sector is closely related to the circular economy.

2 Methods

The Amadeus database (https://amadeus.bvdinfo.com) was used in this work. A sample of companies operating in the given sector is determined and whose financial statements concern both accounting systems for 2015-2019. A more detailed classification was first made in the NACE - D section under the heading 351 - Electricity generation, transmission, and distribution when searching for companies. This group consists of activities related to the mass production of electricity, its transmission from generation facilities to substations, and distribution to end-users. The time series was then linked to the available data of individual companies listed in the database. The selection was made here so it was always the same companies (not just the field). The final sample for this analysis consisted of 20 companies, with half reporting according to IFRS and half reporting according to Czech accounting legislation. The group of ten companies reporting according to IFRS consists of the largest energy producers in the EU - 3 companies from Italy, as well as three companies from the United Kingdom, two companies from Germany and one company each are represented by Austria and Belgium. The group of companies reporting according to CZ consists of ten joint-stock companies based in the Czech Republic.

To evaluate the items of the financial statements in specific sessions and contexts, a vertical analysis will be used for profit and loss statement (income statement). The reporting of expenses and revenues is presented here in a unified statement - i.e., the economic result was constructed at the level of "ordinary income statement - standard expenses and revenues (i.e., operating + financial activity). Therefore, the comparability of this part of the statement should be treated by systematic processing of the database used. This work aims to identify how significant differences exist in both accounting systems by identifying significant differences between these sub-elements of the statements and using the Student's t-test at the level of significance $a = 0.05$. Evaluated quantities include revenues, expenses, profit/loss. The EBIT analysis will also include an evaluation of the return on assets (ROA). The analysis of the results will identify the causes and reasons for differences in financial statements using accounting information obtained from the annual reports of specific companies included in the sample.

3 Research results

The analysis of the profit and loss statement begins with an overview of the companies' development of expenses and revenues. Absolute values are now given here, from which a decrease (approx. 4%) in both quantities is evident in CZ (Table 1). Revenues are not in a good situation, but this is due to the overall development of electricity prices on international markets, production, and other factors, which are not the subject of this contribution. On the contrary, a positive trend can be found because CZ companies responded to the decline in revenues by saving expenses. IFRS saw higher revenue than expenses, which is again a positive trend.

Table 1 Development of revenues and expenses/expenses (Th. €), 2015-2019

Item	2015	2016	2017	2018	2019	Average	Growth rate
Total revenues							
- CZ	394 445	322 923	324 255	311 967	333 558	337 430	-4.10%
- IFRS	2 740 511	2 851 870	2 721 904	2 796 470	2 899 112	2 801 974	1.42%
Total expenses							
- CZ	377 106	308 460	304 911	290 049	314 916	319 089	-4.41%
- IFRS	2 684 134	2 337 957	2 439 441	2 449 309	2 733 695	2 528 907	0.46%

Source: own processing

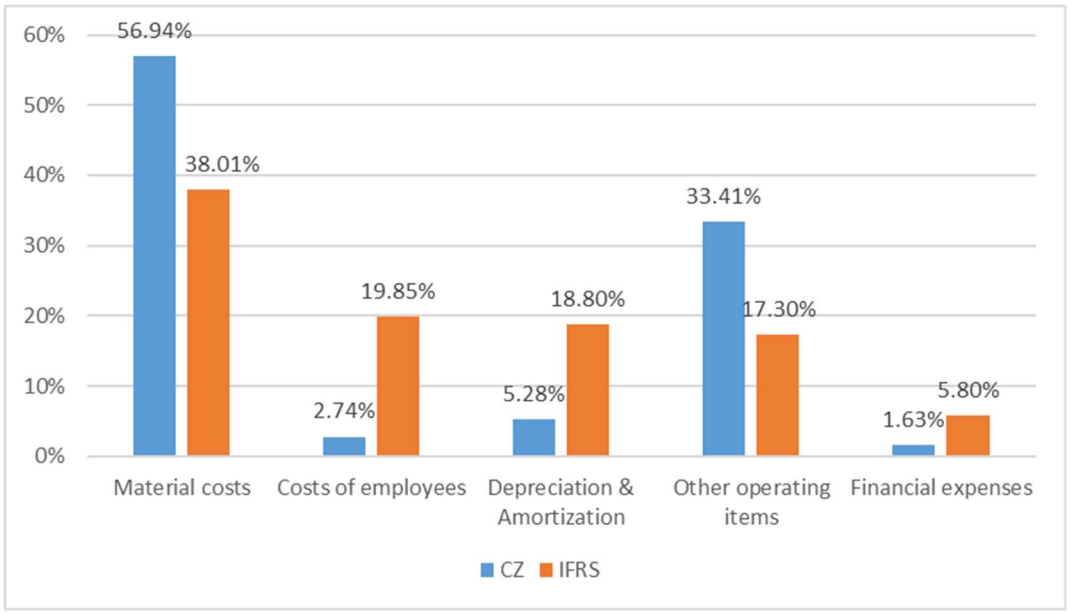
A more detailed vertical analysis of revenues showed that for the group of companies reporting according to CZ, the item operating revenues was mainly accounted for by sales (on average 92% of total revenues). Financial revenues were only around 2%, and the rest was concentrated in other operating revenue. These revenues represent, for example, sales of unnecessary assets, compensation from insurance companies, and possible subsidies (this, however, cannot be ascertained in detail in the database used). A slightly more different development is IFRS, where it accounts for about

64% of sales, which is almost a third less. The group of other operating revenues can provide a partial explanation, where the percentage shift took place (reaches about 20%). It can only be assumed here that this may be caused, for example, by the sale of assets in foreign currencies, which thus form larger volumes and thus a share in total revenues.

A significant innovation in this area is the newly adopted IFRS 15 - Revenue from Contracts with Customers, with the validity of its application from 2018. At the same time, it is one of the results of the convergence process of IFRS and US GAAP. In contrast to the Czech accounting regulations, in which the moment of revenue reporting is only mentioned at the moment of the realization of the accounting event, IFRS attributes fundamental importance to revenue. Its main goals are fulfilled through the so-called 5-step model (Identification of contract, Performance obligations, Transaction price, Allocation of price to performance obligations, and Recognition of revenue). Due to its new acceptance, a suitable addition to that article in further research will be the monitoring of the application in the conditions of energy companies.

The expenses group consists of standard inputs for which there is no significant difference in terms of the methodology of accounting systems. A more detailed look at their structure is given in the graph 1. The resulting percentage differences between individual groups of companies could instead be attributed to differences due to territorial conditions, different management, size and efficiency of companies, and other factors, which, as stated for the revenues group, are not the subject of this work.

Figure 1 Share of expense items in total expenses, 2015-2019



Source: own processing

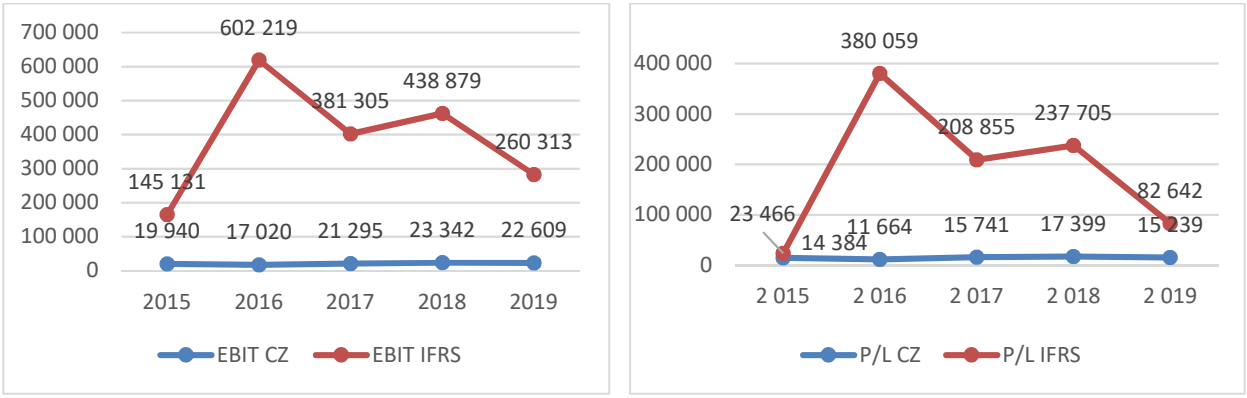
For the group of CZ companies, material expenses (almost 60%) and other operating items accounted for the largest share of total expenses, with about 34% (Figure 1). In the IFRS group of companies, the share of material expenses was also the highest (approximately 40%). In the case of CZ, this item decreased by approx. 5% during the period under review, while in IFRS, there was an increase of approx. 2%.

The other expense groups were relatively balanced up to 20% - the share of the expenses of the remaining items of employees, which would correspond, for example, to the expenses arising from the item employee benefits. The number of employees also plays a crucial role here, where the average value for the CZ group is less than 400, but for IFRS 6,700. The average growth rate for expenses of employees was the highest of all groups in this category for CZ (approx. 15%).

For depreciation & amortization, there is a clear link to a higher share of fixed assets. However, the difference in growth rates is interesting, which is 7% for CZ and -7% for IFRS. Although the financial expenses were almost threefold for the IFRS group, they did not exceed 6% and were essentially expected due to the larger structure of total liabilities for IFRS. Within this statement, a shortcoming of the Amadeus database was identified: the lack of data on the other comprehensive income item in the statement of other comprehensive income, including operations related to the revaluation of fixed assets items.

Comparisons of the main elements of the operating area of the profit and loss statement of the CZ and IFRS companies performed using the Student's t-test, with the calculated reliability values P, confirmed the existence of significant differences at the significance level α 0.05.

Figure 2 Degrees of the economic result (Th. €), 2015-2019



Source: own processing (with Rosendorfová, 2021)

The types of economic results are shown in Figure 2 - EBIT and P/L. This display shows the different sizes of CZ and IFRS in order values, and the development itself is also different. P/L for the group of companies CZ slightly decreased in 2016. In contrast, IFRS in 2016 recorded an extreme increase for the group of companies. Since 2017, on the other hand, the P/L item of groups of companies has been moving at the same pace, which included a slight increase followed by a slight decrease. However, regarding the time horizon between 2015 and 2019, it can be stated that the P/L of the CZ and IFRS groups of companies increased.

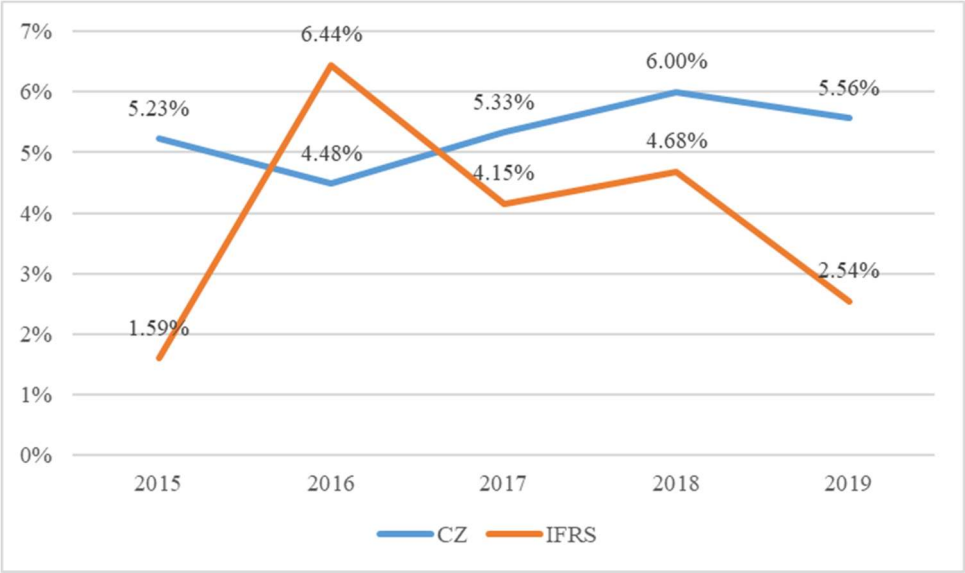
A possible explanation for the decrease in profit in IFRS groups from 2016 is a change in the structure of energy production. Eurostat data shows EU energy production by source in Mtoe from 1990 to 2018. In the last ten years (2008-2018), the trend in energy production was generally negative for solid fossil fuels, oil, natural gas, and nuclear energy. Energy production in the EU has changed significantly in favour of renewables over the last decade, with a positive trend of 49.2% (Eurostat, 2020).

The highest share of energy production in the EU in 2018 was accounted for by renewable energy sources (34.2%), followed by nuclear energy (30.8%), solid fossil fuels (18.3%), and natural gas (9.3%). Crude oil and petroleum products (3.9%) and non-renewable waste (2.1%). The structure of energy sources and their share of consumption in different countries depends on the natural resources available, the structure of their economies, and individual energy decisions.

The construction of the P/L indicator is based on EBIT, which is further reduced by the financial loss (realized in both groups of companies) - and that in CZ drew on average around 15%, but in IFRS more than twice as much (about 32%). Another correction of EBIT to P/L was the tax liability - for CZ, 17% and IFRS about 25%.

An illustrative example of the impact of differences between the two accounting systems will be demonstrated in the Return on Assets - ROA. EBIT is a category of profit or loss, which is included in the return on assets (ROA) to assess the total return on capital, regardless of the sources from which business activities were financed (Figure 3).

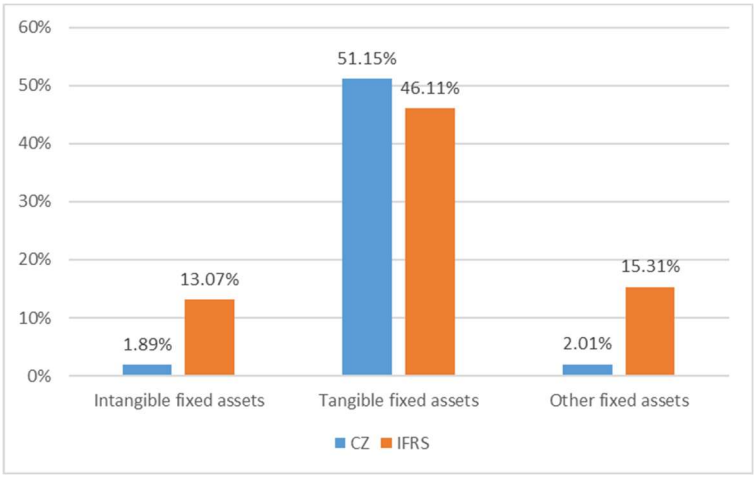
Figure 3 ROA (%), 2015-2019



Source: own processing

Given the higher values of the EBIT item of the IFRS group of companies (entering the ROA numerator), it was evident to assume that the values of the ROA indicator would also be higher in the case of the IFRS group of companies. However, from the values given in the graph, higher values are clear on the contrary for the CZ group of companies, whose average ROA for the observed period was even closer to the industry average in energy (5,36 %) (Rosendorfová, 2021). The lower values of the ROA indicator in the IFRS group of companies can be found in the second item entering the denominator of its calculation, namely total assets. The growth rate of the indicator is thus up to double in CZ conditions. For a better understanding of the mentioned development, it is also appropriate to add the structure of assets. The CZ group of companies had an average value of fixed assets in total assets by about 20% lower in the observed period. Both groups of companies were dominated by fixed assets, which corresponds to the types of companies engaged in energy production. This type of activity can be more demanding on property security. A detailed view of the structure of fixed assets is presented in the Figure 4.

Figure 4: Share of fixed assets items on total assets, 2015-2019



Source: own processing

According to IFRS legislation, the group of intangible assets reaches about 13% of total assets (compared to CZ with only about 2%). An unambiguous explanation is hidden in the item goodwill. Goodwill arises from business combinations from which consolidation units are formed. In addition, compared to other intangible fixed assets (and CZ conditions), goodwill is not amortized but only tested for impairment.

There is a not very significant difference (on average about 5%) tangible assets, including the primary means of electricity generation. However, it is necessary to mention here significant differences in the reporting of both systems. The first important issue is the issue of valuation. The IFRS conceptual framework recognizes four fundamental valuation

bases: historical cost, replacement cost, fair value, and present value. For example, A2A, s.p.a. in its annual report, states the following valuation methods. Tangible assets are valued at acquisition cost, including any additional costs directly related to bringing the asset to working condition (e.g., transport, customs, installation, etc.). Acquisition costs are increased by the present value of the estimated costs of dismantling the property or restoring the location from environmental protection. Borrowing costs directly attributable to the purchase or construction of a qualifying asset are capitalized as part of the cost (see IAS 23 - Borrowing Costs). The second significant difference is in the so-called investment property (Standard IAS - 40 Investment Property, IAS 40 Investment Property) and leases (IFRS 16 - Leases). Investment property includes real estate (land or buildings) held not for business purposes but rent or capital appreciation. Investment property is recorded at cost, including ancillary costs net of related accumulated depreciation and any impairment losses. The item leases or right of use include rights to use the assets of other entities, which are reported as leased assets and depreciated over the life of the contracts. These procedures are not known in the CZ version. Furthermore, even assets used based on leasing are reported only in off-balance sheet records (not in the balance sheet). This significantly distorts the reported assets that are used for economic activity. However, changes are being prepared in this area, which must first go through the legislative procedure (Rosendorfová, 2021).

Similar shares as intangible assets can be found in the group of other fixed assets. These are related to larger companies holding more shares than other companies (IFRS approx. 15%, CZ approx. 2%). In addition to equity investments, other fixed assets would also include financial assets (financial instruments: IFRS 9 - Financial Instruments, IFRS 9 Financial Instruments). Financial instruments are measured at fair value when the asset is recognized (fair value, which includes the effect of current market conditions). The result is that the reported value of assets at fair value will be higher than assets at historical prices, which is the principle of valuing most components of assets in the conditions of CZ. In addition, for IFRSs, tangible and intangible assets are tested for impairment. For example, Acea, s.p.a. annually performs an impairment test using the discounted cash flow method to determine the recoverable amount.

Another possible difference affects the volume of expenses under IAS 37 - Provisions, Contingent Liabilities, and Contingent Assets. Their display also includes differences between IFRS and CZ. According to the CZ, some types of reserves do not meet the above conditions and must therefore be reversed for IFRS purposes (e.g., a reserve for general repairs of tangible fixed assets when the company has no current obligation, as there is no contractual or non-contractual obligation to carry out planned asset repairs; this is dealt with in IFRS using component depreciation). Furthermore, some items reported as a reserve under CZ represent a different type of liability under IFRS (e.g., the tax reserve, reserve for untaken vacation, reserve for a loyalty program). Another significant difference, already mentioned above, is that under IAS 16 - Property, Plant, and Equipment, the account for restoring the site to its original state is included in the purchase price of long-term tangible assets.

The terminology of the names of individual items - the use of both expressions cost or expense is prevalent in the practice of the listed companies. However, the term expense should be used according to the meaning. In the same way, the name of the reports itself sometimes differs in practice. Often companies use the designation Income statement or Profit/loss statement. However, it is understandable that this is only a formal view, not a substantive one, which would disrupt the reporting of individual items. A widely used form is the reporting of objects according to purpose breakdown. Similarly, when reporting assets, equity, and liabilities, the terminological terms used are both Balance sheet and Statement of financial position.

4 Conclusions

The paper tried to describe the fundamental differences between the CZ and IFRS systems in a sample of companies in the energy field, leading to the display of assets and resources and revenues and expenses. Accounting (financial) statements are the main outputs of accounting systems that inform users about the financial structure and performance. However, they are affected by methodological rules for reporting, valuation, and other sub-procedures. Efforts to unify the various financial reporting principles have been going on for almost a hundred years, and a unified consensus is often challenging. Probably the largest applied initiative in the form of IFRS is generally accepted, but its binding use depends on the incorporation into the country's legislation. That is a political agreement. It is therefore understandable that this incorporation into national accounts is often problematic, if at all impossible. However, it is valid for the EU (as well as many other modern Western countries) that if companies are traded on public markets, they should apply IFRS rules when preparing their financial statements.

Evaluation of economic results shows the different sizes of both groups (in terms of order values, structure, and the development itself is also different). However, in terms of the time horizon, it can be stated that the economic result of both groups increased. The negative development in the IFRS group since 2016 can be explained by the change in the production structure towards renewable sources. CZ companies have a relatively stable profit development. The lower values of the ROA (at an average value of about 5%) indicator in the IFRS group can be found in the second item entering

the denominator of its calculation, namely total assets. The mentioned methods of valuing assets and liabilities result in one of the main differences between CZ and IFRS: the broader possibilities of applying fair value in valuation or revaluation and determining total input costs for tangible assets.

Unfortunately, developments in the field of energy do not currently provide possible relevant predictions, which will understandably impact the financial results of energy companies. Current developments suggest that these companies will be more profitable, even excessively profitable. And according to the reports of individual national governments and the entire EU, it is possible to expect additional taxation in the form of a "windfall tax."

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