

IMPACT OF EMISSION ALLOWANCES ON CAPITAL STRUCTURE OF THE COMPANY

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Abstract

The article deals with a topical issue of emission allowances, and recording of accounting transactions connected with them in accordance with Czech accounting legislation. The main goal of the paper is to point out inconsistent methodology of recording these accounting transactions in the Czech accounting system and to make a proposal of a new method of recording accounting transactions connected with emission allowances in case of gift tax. Next goal is to point out influence of emission allowances on capital structure of the company. The European Union joined the Kyoto Protocol whose task is to reduce emissions of greenhouse gases and fight against the global warming. The Czech Republic as a member state of the European Union accepted the EU environmental legislation into national law system due to this obligation.

Introduction

The United Nations defined the Sustainable Development as "... development which meets the needs of the present without compromising the ability of future generations to meet their own needs". [5] Due to global warming many states such as Australia, Canada, the European Union (EU), Russia and lot of others accepted the Kyoto Protocol that is focused on reduction of greenhouse gases (GHGs). Unfortunately many world largest polluters such as China, India and the United States of America have not signed this protocol. The question remains whether this system that influences the amount of production, expenses of producers located in states that signed the Kyoto Protocol is efficient and does not harm the economies of these countries.

After the Czech Republic had joined the EU, it was important to implement the EU directives that are focused on reduction GHGs into the national law system. Obviously, it affected Czech accounting legislation. Usage and trading with emission allowances influence companies mainly in energy industry, chemical industry, metal processing etc. The European Emission Trading Scheme (ETS) is based on control and reduction of emissions of carbon dioxide (CO₂).

All accounting transactions connected with the emission allowances must be recorded in the accounting and they affect Statement of Financial Position (assets, liabilities), Profit and Loss Statement (expenses, revenues), Cash Flow Statement (cash received, cash paid) and other important outputs for users of accounting information. [3]

The paper contains description of problems of emission allowances and discusses problems and methods of recording accounting transactions in accountancy in present Czech law conditions.

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1 Implementation of EU environmental legislation into the Czech conditions

The process of implementation of environmental legislation connected with the emission allowances is divided into 3 basic phases that will take 15 years in total. The system is based on caps of allowances that are allocated to the EU member states and make the allowances scarce. [2], [4] The basic idea concerns the reduction of produced emissions or buying allowances from companies that reduce their production of carbon dioxide and save allowances for trading.

The first phase took place between 1st January 2005 to 31st December 2007 and it concerned preparing the system of emission allowances trading with the establishment of price of carbon. According to the EU environmental legislation 95% of allowances were given to producers for free. The rest of allowances were subject of trade.

The present second phase started on 1st January 2008 and it will finish on 31st December 2012. During this phase 90% of allowances are subject to grandfathering and the rest of allowances must be purchased in case of need by the producers. Table 1 presents five largest emission polluters by carbon dioxide in the Czech Republic that obtain emission allowances as grants.

Tab. 1: Five largest polluters of carbon dioxide in the Czech Republic

Order	Name of the Polluter	Amount of grandfathered emission allowances in second phase (pcs)
1.	ČEZ, a. s.	34,202,276
2.	ArcelorMittal Ostrava, a. s.	6,958,508
3.	Dalkia Česká republika, a. s.	4,590,438
4.	Sokolovská uhelná, a. s. - Vřesová	4,478,948
5.	Unipetrol RPA, s. r. o.	3,120,787

Source: own creation based on [11]

The last phase will last from 1st January 2013 till 31st December 2020. This time period will be important for all producers that need to use and buy emission allowances, because it will lead to the situation when there will be hard decrease of grandfathered emission allowances and companies will have duty to buy them or rapidly reduce emissions of GHGs in general. [1]

2 Discussion of problems connected with Czech accounting system versus evidence of emission allowances

Due to the implementation of the EU environmental legislation to the national system it was important to improve accounting legislation with grandfathering of emission allowances, evidence, their trading and consumption. All these transactions affect the financial statements which focus mainly on assets, liabilities and profit or loss of the companies and change stated and presented information for users of accounting information.

Emission allowances present the right to produce and pollute the environment by one ton of carbon dioxide and it is subject of evidence in accounting of the company. In the Czech accounting system the emission allowances are recognized as intangible fixed assets.

Here comes the question whether the emission allowances are really intangible fixed assets. In the Czech accounting system, there is no definition of assets as it is in the case of

International Financial Reporting Standards (IFRS). We can see the next problem in useful lifetime of the allowances, because in the Czech conditions the useful lifetime must exceed minimally one year. However, the consumption of emission allowances is expressed mainly in months from the time of grandfathering or purchase. This situation leads to the controversial discussion if the items could be recognized as current assets. However, unfortunately, it is not possible due to present valid accounting legislation in the Czech Republic.

Purchase of emission allowances is valued by acquisition cost that includes costs incurred in connection with its acquisition. This transaction is recorded as increase of intangible fixed assets (emission allowances) and increase of debt or decrease of bank account due to type of the accounting transaction.

If the emission allowances are grandfathered to the company for free, the item is valued by replacement value and in the Czech accounting it is recorded as government grants and the increase of intangible fixed assets valued to the time of subvention. This grandfathering of emission allowances is subject to gift tax in case of producers of electricity. The gift tax is recorded as an increase of expenses and increase of debts to the financial authority. Actual tax rate of gift tax for emission allowances is 32% in year 2012.

2.1 Case study – Recording of transactions connected with emission allowances in accordance with Czech accounting legislation

The content of this article is one of the outputs of the research project “Trend analysis of sources of financing in business companies in the CZ”. The transactions that are mentioned bellow are fictitious and serve as explanatory means. Figure 1 presents a current method of recording accounting transactions connected with emission allowances that is in accordance with accounting legislation. The following example is based on a situation when a company obtains emission allowances in the amount of CZK 20,000,000,- for free as grants as it is presented by transaction no. 1. This transaction presents an increase of fixed assets (Emission allowances) and current liabilities (Grants). Transaction no. 2 shows gift tax in the amount of 32 % from grandfathered allowances. This transaction affected expenditures of the entity (Other taxes and fees) and current liabilities (Other direct taxes). The company consumed emission allowances in the amount of CZK 19,000,000,- and this situation can be seen in transaction no. 3. The operation affected expenditures of the entity (Other operating income) and current liabilities (Grants). The fourth transaction presents decrease of current liabilities (Grants) and increase of revenues (Other operating revenues) at the same amount as it was in the case of consumption.

Balance Sheet based on recording of emission allowances in accordance with Czech accounting legislation as of 31st December 201X is presented in Table 2.

Tab. 2: Balance Sheet as of 31st December

Balance Sheet as of 31st December, 20XX (in CZK)			
ASSETS		LIABILITIES	
FIXED ASSETS		EQUITIES	
019 – Emission allowances	1,000,000	Loss	-6,400,000
		OTHER/CURRENT LIABILITIES	
CURRENT ASSETS		347 – Grants	1,000,000
		345 – Other direct taxes	6,400,000
∑ ASSETS	1,000,000	∑ LIABILITIES	1,000,000

Source: own calculation

Total amount of assets and liabilities are CZK 1,000,000. The company is in loss which makes CZK 6,400,000 and other/current liabilities make CZK 7,400,000.

D 019 - Emission allowances		C	D 347 - Grants		C
1)	20,000,000,-	3)	19,000,000,-	4)	19,000,000,-
				1)	20,000,000,-
D 345 - Other direct taxes		C	D 538 - Other taxes and fees		C
		2)	6,400,000,-	2)	6,400,000,-
D 548 - Other operating income		C	D 648 - Other operating revenues		C
3)	19,000,000,-			4)	19,000,000,-

Source: own creation according to valid Czech accounting legislation based on [6,7,8]

Fig. 1: Recording of emission allowances in accordance with Czech accounting legislation

2.2 Case study – Proposed possibility of recording of emission allowances

Nevertheless, here comes a question whether the presented situation in Figure 1 is correct with the idea on the principle of “true and fair view” and if the goal of this subchapter is to outline an idea of better presentation of gift tax within this concept. It is important to point out that the following transactions are not in accordance with Czech accounting legislation, it is a proposal of new methodology. At the end there is comparison of transactions influence on capital structure of the company.

As it is clear that the grandfathered emission allowances are reduced by gift tax and recorded grants could be reduced in case of true and fair view of presented accounting information by the company. This method of accounting of emission allowances is widely solved and discussed by many auditors and experts focused on accounting.

Figure 2 presents a proposed method of recording accounting transactions that could express them more in accordance with the principle of a true and fair view. The example is based on the same situation that a company obtains emission allowances in the amount of CZK 20,000,000,- for free as grants as it is presented by transaction no. 1. The transaction influenced increase of fixed assets (Emission allowances) and current liabilities (Grants and Other direct taxes). However, this transaction is divided into 2 parts where the account no. 019 – Emission allowances increases in the amount of CZK 20,000,000,-, the grants are decreased by gift tax and it is totally CZK 13,600,000,- and gift tax is calculated as the increase of debt on the account no. 345 - Other direct taxes - CZK 6,400,000,-.

The company consumed emission allowances in the amount of CZK 19,000,000,- and this situation can be seen in transaction no. 2 that influenced expenditures (Other operating income) and fixed assets (Emission allowances). The third transaction presents the decrease of grants (current liabilities) and the increase of Other operating revenues (revenues) in the amount of real grants CZK 12,920,000,-.

D 019 - Emission allowances C		D 347 - Grants C	
1) 20,000,000,-	2) 19,000,000,-	3) 12,920,000,-	1) 13,600,000,-
D 345 - Other direct taxes C		D 648 - Other operating revenues C	
	1) 6,400,000,-		3) 12,920,000,-
D 548 - Other operating income C			
2) 19,000,000,-			

Source: own creation based on [10]

Fig. 2: Proposed possibility of recording of emission allowances

The basic idea of this proposed possibility of recording of emission allowances is based on the fact that the grants that are taxed by the state in the amount of 32% mean real decrease of grants. Emission allowances that were given as grants for free to the producers of electricity are subject of gift tax. The assets are increased by emission allowances and, on the other hand, there must be recorded gift tax as the increase of expenses too due to the method that is valid in the Czech Republic. There may be a scientific discussion about the valid and proposed method of recording transactions connected with emission allowances due to the principle of a true and fair view as it is clear from both methods.

Balance Sheet based on proposed possibility of recording of emission allowances as of 31st December 201X is presented in Table 3.

Tab. 3: Balance Sheet as of 31st December

Balance Sheet as of 31st December, 20XX (in CZK)			
ASSETS		LIABILITIES	
FIXED ASSETS		EQUITIES	
019 – Emission allowances	1,000,000	Loss	-6,080,000
		OTHER/CURRENT LIABILITIES	
CURRENT ASSETS		347 – Grants	680,000
		345 – Other direct taxes	6,400,000
∑ ASSETS	1,000,000	∑ LIABILITIES	1,000,000

Source: own calculation

Total amount of assets and liabilities is CZK 1,000,000. The company is in loss which makes CZK 6,080,000 and other/current liabilities make CZK 7,080,000.

When comparing Table 2 and Table 3, we can see the difference between liabilities. Both parts of liabilities (equity and current liabilities) are different. Total amount is the same but the loss and account no. 347 - Grants are different. This difference is caused by different methods of recording transactions connected with gift tax. The structure of assets is not affected by described methods of presentation of the accounting operations. It is therefore clear that the results of selected indicators of financial analysis will be different.

Conclusion

It is a good idea to reduce emissions of GHGs due to global warming and force producers to buy new technologies that are more efficient and environmentally friendly. On the other hand, it is clear that the states that are the largest polluters in the world have not signed the Kyoto Protocol. Here comes a question if this treaty makes sense and does not only harm economies of states that committed themselves to reduce emissions of GHGs. From the accounting legislation point of view, it is important to record all transactions connected with emission allowances with their impact on assets and liabilities. As could be seen from the above examples, these transactions widely influence capital structure and the expenses of the accounting entity. The importance of trading with emission allowances during the third period will grow and these transactions will influence expenses and revenues of companies in two ways. If companies were able to reduce emissions, the revenues would rise from saved and sold emission allowances. Were the technology not more environmentally friendly, there would be seen a large impact on expenditures of producers.

Literature

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VLIV EMISNÍCH POVOLENEK NA KAPITÁLOVOU STRUKTURU SPOLEČNOSTI

Príspevek se zabývá aktuální problematikou emisních povolenek, jejich zaznamenáváním v účetnictví v souladu s českou účetní legislativou. Vzhledem k tomu, že se Evropská unie zavázala dodržovat Kyotský protokol, jehož cílem je boj proti globálnímu oteplování prostřednictvím redukce množství skleníkových plynů v atmosféře, došlo k implementaci evropských směrnic i do české legislativy. S povinným používáním emisních povolenek u vybraných podniků se objevila potřeba správného účetního zaznamenávání jednotlivých transakcí. Hlavním cílem článku je poukázat na diskutabilní zaznamenávání účetních operací spojených s emisními povolenkami v českém účetnictví. Príspevek obsahuje polemiku nad účtováním darovací daně v případě emisních povolenek, které jsou přidělovány zdarma podnikům prostřednictvím dotací.

DER EINFLUSS VON EMISSIONSERLAUBNISERTEILUNGEN AUF DIE KAPITALSTRUKTUR EINER FIRMA

Dieser Beitrag befasst sich mit der aktuellen Problematik der Emissionserlaubniserteilungen sowie deren Aufzeichnung in der Buchhaltung in Übereinstimmung mit der tschechischen Buchhaltungslegislative. Im Hinblick auf die Tatsache, dass sich die Europäische Union verpflichtet hat, das Kyoto-Protokoll einzuhalten, deren Ziel im Kampf gegen die globale Erwärmung durch Reduktion des Ausstoßes von Treibhausgasen in die Atmosphäre besteht, wurden europäische Richtlinien auch in die tschechische Legislative implementiert. Mit der obligatorischen Verwendung von Emissionserlaubniserteilungen bei ausgewählten Unternehmen ergab sich die Notwendigkeit einer richtigen buchhalterischen Aufzeichnung einzelner Transaktionen. Das Hauptziel dieses Artikels besteht darin, auf eine diskutabile Aufzeichnung buchhalterischer Operationen, die mit Emissionserlaubniserteilungen in Zusammenhang stehen, im tschechischen Rechnungswesen hinzuweisen. Dieser Beitrag enthält eine Polemik über die Berechnung von Schenkungssteuern im Falle der Emissionserlaubniserteilungen, welche den Unternehmen kostenlos in Form einer Dotation zugeteilt werden.

WPŁYW POZWOLEŃ EMISYJNYCH NA KAPITAŁOWĄ STRUKTURĘ SPÓŁKI

Artykuł poświęcony jest aktualnemu zagadnieniu związanemu z pozwoleniami emisyjnymi i ich ujmowaniem w księgowości zgodnie z czeskimi przepisami z zakresu rachunkowości. Ze względu na to, że Unia Europejska zobowiązała się do przestrzegania Protokołu z Kioto, którego celem jest walka z globalnym ociepleniem poprzez redukcję ilości gazów cieplarnianych w atmosferze, również w czeskim ustawodawstwie uwzględniono dyrektywy unijne. W wyniku obowiązkowego stosowania pozwoleń emisyjnych w przypadku niektórych przedsiębiorstw pojawiła się konieczność właściwego księgowego ewidencjonowania poszczególnych transakcji. Głównym celem artykułu jest pokazanie dyskusyjnego ewidencjonowania operacji księgowych związanych z pozwoleniami emisyjnymi w czeskiej rachunkowości. W artykule przedstawiono polemikę dotyczącą księgowania podatku od darowizn w przypadku pozwoleń emisyjnych, które są przyznawane przedsiębiorstwom bezpłatnie za pośrednictwem dotacji.