Issues in the Disclosure of Financial Information by Multinational Enterprises

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Abstract – **The aim of this paper is to explore issues of investment presentation, financial instruments, earnings disclosure indicators and software aspects of accounting for multinational enterprises. The study is based on the public financial statements of the Solvay Group. The main approach is using two viewpoints – accounting view of financial information and IT view of financial information. The results of this study are useful for other multinational enterprises that prepare their financial statements in accordance with International Financial Reporting Standards and use big data in accounting.**

Keywords – **investments, financial instruments, fraud detection, accounting information disclosure, ERP systems.**

1. Introduction

This paper attempts to address key issues related to the presentation and disclosure of information in the financial statements of multinational enterprises. The aim of this paper is to explore issues of investment presentation, financial instruments, earnings disclosure indicators and software aspects of accounting for multinational enterprises.

The study is based on the public financial statements of the Solvay Group, which has been present in Bulgaria since 1997, with about 500 employees working in four factories: Solvay Sodi, Provadsol, Devnya Varovik and Solvay Bulgaria.

Solvay Sodi is the largest soda ash production plant in Europe, with a capacity of around 1.6 million tons per year. Provadsol's main activity is related to the production of brine (aqueous solution of sodium chloride - NaCl). Devnya Varovik produces the raw materials necessary to produce soda ash, cement production and the production of quarry building materials. Solvay Bulgaria EAD, as part of the Solvay Group, is responsible for the marketing and sales of soda ash, bicarbonate of soda and calcium chloride.

2. Methods of Measuring and Presenting Investments in Financial Statements

In international practice, different methods of valuation and presentation of equity investments are used depending on the percentage of the issuer's equity held by the investor. The differences in the methods are determined by the relationship between the investor and the entity whose shares are acquired.

Where the investor acquires more than 50% of the voting shares of the undertaking whose shares are acquired, he may exercise control over that undertaking. In this case, the two undertakings are identified as parent and subsidiary undertakings. Such investments are presented in the financial statements by applying different methods of consolidation within the meaning of the IFRS 10 Consolidated Financial Statements. In this way, the financial statements of two or more legally separate entities acting jointly in economic and financial terms are consolidated. The purpose of such consolidation comes down to the need to obtain information about the financial position, financial performance and changes therein of the entities operating as an economic group.

In the practice of the developed countries, it is accepted that long-term investments in associates are a very significant part of the investment policy of the enterprises, and therefore these investments are

measured and presented in the consolidated accounts using the equity method and in the individual accounts of the investing enterprise using the cost method. Currently, the presentation and disclosure of investments in associates and joint ventures is regulated by the IAS 28 Investments in Associates and Joint Ventures.

In the individual financial statements of the investor, investments in subsidiaries, associates and joint ventures are presented using the following methods:

▪ cost method.
▪ fair value method within the meaning of IFRS 9.

The cost method of measuring and reporting investments in associates is characterized by the following features:

▪ Acquired investments are measured at cost. The cost of the investment is not adjusted for changes in the investor's equity interest and the current financial performance of the associate. Only the dividend received is recognized as income in the investor's income statement; any impairment in the value of the investment and also the gain (loss) on disposal (sale) of that investment. Any other income is treated as a return of the investment and results in a reduction in its cost. Distribution income (dividends) received is reflected in the financial income statement accounts in the period to which it relates, but only to the extent that the investor receives a share of the accumulated profits of the investee.

For the purposes of the IAS 28, the income received by way of distribution from the investee reduces the carrying amount of the investment. Therefore, income from the investment in an associate is recognized as current income for the investor and presented separately in the Profit and Loss Statement. Certain amounts paid by the associate to the investor are not income but a reduction of the cost of the investment. These payments are as follows:

▪ Amounts received more than the investor's share of the associate's profits,
▪ Amounts received because of distributions of profits of the associate before the reporting date of the investment.

The fair value method is a method of accounting in which the carrying amount of an investment is remeasured at fair value. It is applied when the investment is classified as a financial asset within the meaning of the IFRS 9 Financial Instruments at initial acquisition. Under this standard, two categories of financial assets may be remeasured at fair value.

The equity method is the primary method of measuring and presenting investments in the consolidated financial statements. It is a method in which the investment is initially recorded at cost (acquisition cost) and subsequently restated for changes in the investor's share of the investee's net assets (equity). In the income statement, the investor records its share of the profit (loss) realized by the associate for the period. A restatement (increase or decrease) in the carrying amount of the investment may also result from:

▪ a change in the investor's percentage interest in the associate because of a change in the associate's share capital.
▪ changes in the equity of the associate because of revaluations of tangible fixed assets and investments, restatements of the operations of its overseas operations and companies, restatements related to business combinations, etc.

Given the foregoing, it can be summarized that the original cost of the investment is increased to reflect the increased investment interest in the entity whose shares are acquired or is decreased because of dividends received or on recognition of an interest in the losses of the issuing entity. Hence the features of the equity method can be derived:

▪ The investor accounts for acquired investments at cost.
▪ The investor records an increase in the carrying amount of the investment when the investee reports a positive financial result and a decrease when the investee reports a negative financial result. The equity method is therefore based on the assumption that the investor has received income from the investment in an amount proportionate to its ownership interest in the entity.

Dividends received are recorded as an increase in the investor's cash balances and as a decrease in the carrying amount of the investment.

It is also necessary to account for changes in the investor's equity interest in the issuer due to revaluations of fixed assets, investments, business combinations, etc.

▪ On acquisition of the investment, the difference (positive or negative) between the cost of the investment and the investor's share of the fair value of the net identifiable assets of the associate is accounted for as goodwill within the meaning of the IFRS 3 Business Combinations, as:

  ➢ goodwill attributable to the associate is included in the cost of the investment. Goodwill is not allowed to be amortized and

therefore is not considered in determining the investor's share of the associate's profits or loss.

➢ the excess of the investor's share of the net fair value of the net identifiable assets over the cost of the investment (in the case of negative goodwill) increases the carrying amount of the investment and, accordingly, income is recognized, thereby determining the investor's share of the profit or loss of the associate for the period of acquisition of the investment.

The net equity method is applied from the point at which the investee meets the criteria for an associate, i.e., from the point at which the investor can exercise significant influence.

The Company holds shares in subsidiaries and associates. The latter are classified as long-term financial investments and are presented in the Statement of Financial Position at cost. In the individual financial statements of Solvay Sodi AD, these investments are presented using the cost method. As at 31.12.2021 the Company holds long-term financial investments in the form of equity interests in the following entities (Table 1.).

Table 1. Long-term financial investments of the company

No.	Company name	31.12.2019		31.12.2018	
		BGN thsd	% of shares	BGN thsd	% of shares
1	Provadsol EAD Provadiya	8,118	100	8,118	100
2	Devnya Finance AD Devnya	-	-	2,500	50
3	Devnya Varovik AD Chernevo	2,500	50	-	-
4	Other	46		46	
	Total	10,664		10,664	

The change in the structure of long-term equity investments is due to the 2019 merger of Devnya Finance AD into Devnya Varovik AD.

According to the explanatory notes regarding the merger presented in the company's individual financial statements for the financial year 2019, until 2019 the company was the controlling shareholder of Devnya Finance AD, which held 100% of the capital of Devnya Varovik AD. The latter is a major supplier of raw materials to produce soda ash and cement. In 2018, a procedure was undertaken to merge Devnya Finance AD into Devnya Varovik AD. In 2019, the merger procedure was finalized, with the assets of the transforming company being transferred to the receiving company Devnya Varovik AD. The converting company is dissolved without liquidation.

At the end of each reporting period, the management of the company assesses the need to reassess the long-term equity investments held. As at the end of the financial year 2019, it was assessed that there were no indicators predetermining the need to reassess these investments, therefore, no such reassessment was performed.

The Company's financial instruments are measured on initial recognition at fair value plus direct transaction costs in accordance with the IFRS 9 Financial Instruments.

Financial instruments presented and measured at fair value through profit or loss are measured on initial recognition at fair value, which excludes incremental transaction costs. In practice, these assets are measured on a transaction basis, at the amount stated in the commercial invoice, in accordance with the IFRS 15 Revenue from Contracts with Customers.

The classification of financial assets depends on the business model applied by the company. The business model includes the way the company derives economic benefits from its financial instruments. For financial instruments classified as short-term assets, the entity may manage the cash flows generated by its instruments by applying a business model oriented towards deriving economic benefits from short-term fluctuations in the market prices of its assets; a business model oriented towards deriving economic benefits through the generation of financial income (dividends, interest); or a combination of the two.

On this basis, for subsequent measurement and presentation in the financial statements, the Company classifies financial assets into four categories:

- Debt instruments presented and measured at amortized cost;
- Debt instruments presented and measured at fair value;
- Equity instruments presented and measured at fair value;
- Financial assets presented and measured at fair value through profit or loss.

Financial assets presented and measured at amortized cost in the statement of financial position account for the largest relative proportion of total financial assets held by the company. Financial instruments from which the economic benefits are derived by collecting contractual cash flows at predetermined payment dates are classified and presented as such. This category of financial assets includes trade receivables; cash and cash equivalents and loans to related parties.

The Company measures and presents financial (debt) instruments at fair value when it applies a mixed business model where economic fluctuations in the market prices of the assets held and from the receipt of financial income (interest) at pre-agreed payment dates. For the financial year 2019, the Company does not hold any debt investments in the form of government and corporate bonds, therefore such investments are not presented in the financial statements.

Long-term equity investments held, that are nonmarketable and tested annually for impairment, are presented as equity investments and measured at fair value.

The Company classifies as financial assets measured and presented at fair value all the financial instruments that are held for trading and cannot be allocated to the other three categories. The Company's 2019 individual financial statements classify and present as such a financial asset the factoring agreement with a related party, pursuant to which the Company transfers all receivables arising from sales of goods and services and the right to repay all trade payables.

3. Software Aspects of Accounting

Contemporary accounting at multinational companies needs to be organized using well-known IT and new IT. Accounting processes are determined by governmental legislation. But the information provision of the accounting processes using IT gives many opportunities and possibilities. In this sense several aspects must be taken in mind.

Accounting itself generates data which are stored in databases. Historical accounting data are stored in data warehouses for reporting purposes. New technologies offer new possibilities such as big data (e.g., in [1], [2], [3] and [4]). The question nowadays is the following. Since accounting data (records) are stored in databases, do we need big data to store accounting data? Streaming technologies generate large amounts of data. But real accounting with its chronological and systematical journals usually generates comparatively small amounts of data. Big data are generated when using additional information for operational planning purposes. In these cases, accounting data are directly associated with manufacturing data, for example. Sensors in manufacturing or sensors measuring (counting) produced products may generate large amounts of data which have to be stored in big data. If the enterprise managers decide to use big data, new hardware, new software must be bought. Or the alternative – hardware as a service, software as a service. In both cases extra education of the personnel must be made. In all cases new expenses must be made without counting the ROI.

Another software aspect of accounting is the use of mathematical models (e.g., in [5], [6], [7], [8], [9] and [10]). Accounting data usually are used for strict reports. The adaption of mathematical models in accounting means that the personnel must be well acquainted with dome. In most cases, accounting specialist are qualified and personally focused on current accounting. That is why their attention is on accounting records. They usually skip mathematical models and do not remember them from their academic studies. Even though appropriate mathematical models may help managers in resource planning, logistics and supply chain management.

The methods for disclosure of accounting information have some software aspects (e.g., in [11] and [12]). The software aspects concern the use of web technologies to provide accounting information to public. Most of the accounting information is strictly confidential. That is why before providing part of the accounting information to web, accounting specialists must decide whether and which info is not confidential. Reaching the software aspects of sharing, some approaches must be marked. Web technologies, intranet and extranet technologies are the most appropriate.

Fraud detection is another software aspect of accounting (e.g., in [13], [14] and [15]). Many publications focus on this problem. Many researchers have tried to show and describe the application of artificial intelligence (AI) methods for fraud detection. Using AI methods frauds may be found. Software with implemented AI methods is the best choice. Usually, it is recommended that researchers may make a replication of previous research in fraud detection with a free dataset. In this case, the new researcher has the possibility to test and validate the AI methods and software results from his/her colleagues. Afterwards these tested AI methods may be applied by the researchers or practitioners with their corporate dataset. This approach is rather easy to apply and with positive results in detecting frauds in accounting records. Fraud detection in corporate accounting is just one aspect. National Revenue Agencies usually use fraud detection software for cross checking declared incomes by employees and declared paid wages by employers. Other similar examples may be given concerning honorariums.

The organization of the accounting dataset – using hierarchical or relational database is open. Even though databases are usually hidden for accounting specialists, they are used. Database licenses sometimes cost more expenses than the licenses for the accounting software. Database problems reflect in the accounting software (e.g., in [16], [17], [18], [19] and [20]). The accountant may see an error, but

he/she does not know if the error is bug in the software, problem with the database or hardware or network problem. In all cases, accounting specialist usually address the problem to the provider of the accounting software. Solving such problems needs the support of highly qualified IT specialists, which costs lots of money.

Choosing the appropriate vendor of accounting software is an open task with no fixed recipe (e.g. in [21], [22] and [23]). There are many criteria – functionality, reliability, support, user interface, stability, scalability, operability, integration with other software products, fast adaptivity to legal changes. Software licenses must be taken in mind. Creative common licenses are valid not only for literature, but for software. The price of the accounting software may be analyzed in two aspects – initial price and annual price. The price often depends on the number of licenses. Some accounting software products use desktop interface. Some – web-based interface. The interface is not the most important issue, but most users or managers focus on user interface, user interaction, rather than functionality.

Scalability is another issue, taken in mind. Increasing the number of records in the database should not affect the speed of reporting. Accounting reports must be visualized within 3 seconds.

Sharing accounting information with vendors and customers is usual practice (e.g., in [24], [25] and [26]). But these processes are step-by-step digitalized. B2B communication between the used accounting software in the supply chains appears. Sometimes the initiative is in the vendor, sometimes – the customer, sometimes – the enterprise (e.g., a manufacturing enterprise). Sharing information (e.g., received and issued invoices) has legal and IT aspects. This part of the article is focused on the IT aspects. Sharing accounting information means that standards for accounting information and technologies for data transfer must be used. EDIFACT is a standard which describes several documents in electronic format, including invoices. EDI is a well-known and widely adapted technology for electronic data interchange (e.g., in [27], [28] and [29]). The adaption of using structured messages (EDIFACT invoices) needs changes in ERP systems (e.g., in [30], [31], [32]). The ERP systems must be upgraded to newer versions, which allow the export and import of EDIFACT invoices. These software changes cost money, but time is saved and errors concerning manual invoice entry in the ERP systems or manual entry in accounting software.

Consolidating accounting information is another issue which must be discussed in this section. The consolidation processes have some sub issues. One of them is the data organization in each accounting

software. Second topic is the methods for data transfers. Third topic is the interpretation of the aggregated results. These three dimensions may be discussed in detail in another article.

4. Earnings Before Interest, Taxes, Depreciation (EBITDA) as an Indicator for the Disclosure of Earnings of Multinational Enterprises

The purpose of the financial statements is to provide information about the financial position and performance that is useful to investors, counterparties and other stakeholders in making decisions. An entity's profit is a key indicator for this purpose. The International Accounting Standards, in particular the IAS 1 Presentation of Financial Statements, require disclosure of information about companies' profits in the income statement and other comprehensive income [33]. Information is required on gross profit/loss and separately on profit or loss before and after tax. Alongside their audited financial statements prepared based on IAS/IFRS, entities disclose additional information about their operations and development.

In recent years, there has been an increasing trend for international companies, especially listed companies, to focus stakeholders' attention on selected key financial and non-financial indicators to disclose their earnings and other performance. Typically, the objective is to attract investor interest and new customers to the business, so it is entirely expected to select those indicators that present the company in the best light. The multinational enterprises operating in Bulgaria, in various newsletters, integrated reports, presentations, etc., also focus on a few summary metrics that represent their performance. For example, in the integrated financial report of the Belgian company Solvay [34] operating in over 50 countries, which is published on the official website of the company, the four most important key indicators for 2020 are presented on the second page in two groups: financial indicators and social and environmental indicators. The two financial indicators are: net sales and the EBITDA. The second group of indicators includes greenhouse gas emissions and sustainable solutions. For the financial indicators, the EBITDA is listed first, with data on the value of the indicator and the change compared to the previous financial year. The EBITDA is followed by data on Free cash flow to Solvay shareholders after payment of net interests, coupons of perpetual hybrid bonds and dividends to non-controlling interests. This represents the cash flow available to Solvay shareholders, to pay their dividend and/or to reduce the net financial debt; Return on Capital employed and dividend per share.

The presentation for the investors of another multinational company operating in Bulgaria - Shishedzham, available on the official website of the company [35] presents 2020 Year-end Financial Results, namely: Revenue; Gross Profit; earnings before interest, income taxes, depreciation and amortization (EBITDA); Net Income After Minority Interest. Next, the presentation compares data for the last 5 years (2016 - 2020) on two indicators: Revenue and Adjusted EBITDA, as well as presents comparative information on the EBITDA Margin by operating segments: Flat Glass, Glassware, Glass Packaging, Chemicals. It is disclosed that all EBITDA margin figures are adjusted to one-off items.

Noteworthy is the approach to derive EBITDA as a key performance disclosure for both companies. Bouwensetal et al. [36] find that EBITDA disclosures increase over time. They have examined 15,895 annual reports and 51,758 earnings announcements from companies published between 2005 and 2016 and found that 14.8% of the sample companies disclosed and highlighted EBITDA. They also found that EBITDA disclosures increased from 6.6% in 2005 to 23.5% in 2016.

The EBITDA is calculated by adding interest, tax and depreciation expenses to net income for the period. The metric is an appropriate measure of an entity's operating profit and of high information value to investors. The reasons for this are:

- Ignoring the impact of interest costs on borrowed capital increases comparability between enterprises that finance their activities differently.
- Eliminating the impact of tax costs is a prerequisite for achieving better comparability between businesses that are taxed at different rates.
- The elimination of depreciation expense is appropriate because of the strong subjectivity regarding the entity's choice of depreciation policy as well as the judgement as to the extent of depreciation of its assets.

Some authors [36] define EBITDA as a hybrid indicator between operating profit and operating cash flow. It is used to calculate the profitability and efficiency of the enterprise's operations, studying its creditworthiness [37].

On the other hand, EBIT and EBITDA are the typical representatives of the so-called non-IFRS or non-GAAP measures. These are adjusted earnings to eliminate some non-recurring income or expenses of enterprises, thus considered to give a clearer picture of the results of operating activities. For example, additional (separate from IAS or GAAP) disclosures are made of earnings that eliminate the impact of costs and income from one-off transactions such as restructurings and acquisitions, and profits or losses on disposals of assets. In the US, non-GAAP earnings disclosures have been increasing over time [38], and according to Black et al. [39], this increase amounted to 35% over the period 2009-2014 and affected 71% of companies in 2014. The same trend is observed in various European countries such as the UK and France. PwC also reviewed that nearly 60% of the IPOs reviewed included at least one non-GAAP measures [40]. The most common non-GAAP measures are based on earnings before interest, income taxes, depreciation and amortization (EBITDA), having been included in 65% of filings.

There is no statutory restriction that prohibits management from selecting and disclosing other earnings in addition to the presentation of the required information in the income statement and other comprehensive income beyond those regulated in the IAS/IFRS (or the USGAAP). Such a decision may be explained by the fact that financial statements are difficult to understand and, to assist investors, many companies are increasingly resorting to some form of clearer disclosure of operating results [41]. Another motive is the benefit of distinguishing operating profits (sales to customers less the cost of those sales) from non-operating profits (interest income or interest expense) and distinguishing those profit factors that are likely to recur from those that are unlikely to recur. Finally, the view that investors would benefit from information on the impact of costs that reflect the application of certain accounting rules without being associated with a cash outflow for the venture.

To the extent that the presentation of such adjusted earnings is not regulated by accounting standards, and the fact that these indicators are unaudited, they should be approached with some caution.

5. Conclusion

This paper has addressed issues related to the presentation and disclosure in financial statements of financial instruments and earnings disclosure indicators of multinational enterprises, and software aspects of accounting. Although the study is based on the public financial statements of the Solvay Group, the results can be related to other multinational enterprises that prepare their financial statements in accordance with the International Financial Reporting Standards.

The classification of financial instruments is made in accordance with the IFRS 9 Financial Instruments, namely depending on the business model applied. The Company's long-term investments are classified as non-current financial assets and are presented in the individual financial statements using the cost method. Short-term financial instruments held enable the company to derive economic benefit from short-term fluctuations in the market prices of these assets and are presented in the financial statements at fair value.

The purpose of the financial statements is to present information about the financial position and financial performance of the entity for the reporting period. Profit is a key indicator for these purposes. In this context, the indicator EBITDA (Earnings Before Interest, Tax, Depreciation, and Amortization) is seen as an appropriate measure of the operating profit of an entity with high informational benefits for investors. In recent years, it has been the leading indicator for calculating a company's profitability and operating efficiency, as well as its creditworthiness.

Due to the limited length of this paper, not all issues related to the presentation and disclosure of information by multinational enterprises can be addressed. The subject of future research that provokes the authors' interest are the issues of presentation and disclosure of segment reporting, integrated financial reporting, management accounting and transfer pricing, social and environmental responsibility, etc.

Acknowledgements

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