ACCOUNTING INFORMATION IN CONDITIONS OF RISK REGARDING DERIVATIVE FINANCIAL INSTRUMENTS

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Abstract
The fast pace of business and the frequent changes in transactions make it impossible to eliminate risks from the financial market. An entity that transacts with financial instruments may be exposed to certain specific risk categories. Under these conditions, the entity is obliged to provide sufficient information to investors in order to determine the degree of risk related to financial instruments. The main objective of the paper is to identify the aspects that characterize the risk hedging operations and to ascertain their influence on the financial position and performance of a company. The orientation towards principles and not towards precise rules allows the improvement of the professional reasoning in the presentation of the information related to the derivative financial instruments.

Key words: risk, the derivative financial, financial-accounting information, hedging operations.

JEL Classification: G1, M41.

I. INTRODUCTION

In a globalized market, extended to the entire business environment, the need for comparability of the financial information of different corporations was imposed. Globalization in the field of international financial relations is reflected by the increase in international capital flows and by profound changes in the structure of mechanisms in financial markets. The removal of the boundaries between the activities of commercial banks and those of investment banks has led to the universalization of banking and financial operations. The evolutions registered on the global financial markets in the last decades have required the elaboration of some international accounting standards that would mediate the economic-financial communication and that would offer transparency in creating a healthy and credible business environment (Căruntu, 2011, p.86). Accounting standards for the recognition and measurement of financial instruments have a strong influence on how they are accounted for.

It is known that a large part of the existing information in the economic environment is represented by accounting information. Any accounting information is financial information, but not all financial information is accounting information (Dinga, 2009, p.463). Financial-accounting information can affect the investment, productivity and added value of a company, through three channels (Bushman and Smith, 2003, p.65) which must: allow the identification of investment opportunities; channel the attention of managers in directing resources to the most viable projects; reduce information asymmetry among investors.

International financial markets are organized and operate on stock exchanges or in the form of over-the-counter markets (Over The Counter), outside the stock exchanges. Stock exchanges represent "bodies that have a space in which securities transactions are carried out, namely the sale and purchase, based on legislation and regulations." (Voinea, 2004, p.119). The main components of international financial markets are the international equity market, the international bond market and the euro securities market. (Allegret, 1997, p.162). The international financial market is individualized by the fact that (Siac, 1993, p.149): has structures that cover all types of titles; the operators ensure the activity on the financial markets; the authorities are committed to ensuring the transparency, liquidity and proper functioning of the markets.

As a result of financial innovation, on the financial markets, along with the primary financial instruments, derivative financial instruments have appeared and developed. Derivatives comprise three main types of contracts: futures contracts, forward contracts, swap options (Ungureanu, 2007, p.41). In Romania, the first transactions with derivative instruments were made in July 1997, within the Sibiu S.A. Commodity Exchange. Since August 1997, the Sibiu Stock Exchange becomes the Monetary-Financial and Commodity Exchange Sibiu, adapting its name to the new activity objective, namely the monetary-financial intermediation. Globalization and increased capital mobility have determined, at the end of the twentieth century and the beginning of the twenty-first century, the phenomena of normalization, harmonization and convergence. If harmonization is the process of developing and applying accounting rules at the national level, harmonization "is a process of increasing the comparability of accounting practices, by reducing their degree of variation." (Nobel and Parker, 2008). Accounting convergence is the purpose of the harmonization process, seen both as a new benchmark in
the evolution of accounting at the international level, and as a result of eliminating the differences that exist between accounting standards. (Choi and Meek, 2005)

II. THE IMPORTANCE OF INTERNATIONAL FINANCIAL REPORTING STANDARDS IN THE RECOGNITION OF DERIVATIVE FINANCIAL INSTRUMENTS

Stock exchanges are barometers of developments in national economies due to the fact that they process a large volume of financial information. This information is accessible to all persons in order to ensure the transparency and correctness of the operations performed. Thus, stock exchanges have the role of offering alternatives for investments. “Valuation of derivative financial instruments differs depending upon whether the fair value of these instruments is recognized or disclosed”. (Anwer S. Ahmed, Emre Kilic et al, 2005)

The accounting communication process is very important for all participants in capital market transactions. Accounting information should be useful to investors, financial analysts and brokers. If we refer to investors, as active participants in the capital market, we notice the main role of financial statements in providing them with the information needed to make decisions. Such a conception of the role of accounting “emerged in the United States before World War II, with the development of large enterprises with large and dispersed shareholders. Predominant in the Anglo-Saxon countries, where companies are largely financed by public capital calls, it is spreading after fifty years in Europe, under the pressure of growing capital markets. ” (Esnault and Hoarau, 1994, p.21)

Currently, most listed entities apply International Financial Reporting Standards, developed by the International Accounting Standards Board (IASB). International standards are constantly evolving as accounting has become a language of business. The revised version of the General Conceptual Financial Reporting Framework, published by the IASB in March 2018 and applicable from 1 January 2020, states that prudence, defined as the need to exercise caution when making decisions in conditions of uncertainty, supports fidelity in financial reporting, without leading to inaccuracies resulting from an asymmetric treatment between assets and liabilities. Relevance and accuracy are the fundamental qualitative characteristics that accounting information must meet in order to be useful to investors in the capital market. At the same time, the accounting information must be comparable, verifiable, timely and intelligible.

Derivative financial instruments are stock exchange products that assign to the beneficiary rights over some assets of the issuer, at a future maturity, according to the provisions of the contract. Unlike primary financial securities, derivative financial instruments do not refer exclusively to monetary income, but take into account various assets of the issuer. "Derivative financial instruments will always be a challenge for the professional accountant" (Vilicu, 2019, p.37). Until the appearance of IAS 39 “Financial Instruments: Recognition and Measurement”, most derivatives were considered off-balance sheet items. The consequence of this was that the risks associated with derivatives could be easily masked and hidden from shareholders or investors. Due to the lack of rigorous control, they caused huge losses or even the bankruptcy of companies that used them inappropriately. This situation has led accounting standardization bodies to introduce rules on derivative financial instruments and their use for risk management. The most important changes were those related to the recognition of derivatives in the balance sheet, as assets or liabilities and to their valuation at fair value and not at historical cost. The use of fair value has led to high volatility in the income statement. The solution found by the accounting normalizers was to introduce the accounting of hedging operations, through which it is desired to neutralize the artificial volatility of the results.

On January 1, 2018, IAS 39 was replaced by IFRS 9 “Financial Instruments”. According to this standard, a company must recognize a financial asset or a financial liability in the statement of its financial position only when it becomes part of the contractual provisions of the instrument. As a consequence, it recognizes in the statement of its financial position all contractual rights and obligations related to derivative financial instruments, as assets and liabilities. Another standard applicable to financial instruments is IFRS 7 “Financial Instruments: Disclosures”. IFRS 7 entered into force on January 1, 2007, and the consolidated version of the standard has been in effect since December 2014. This standard includes requirements for the description of financial assets and liabilities designated under the fair value option.

Some experts (Escaffre, 2001, quoted by Huian, 2008, p.328) believe that the imposition of fair value as a valuation convention has important consequences that call into question the usefulness of the income statement. The determination of the result in the context of using fair value is no longer based only on transactions, but largely comes from changes in the value of balance sheet items between the start and end of the financial year, and the change in equity.

In order to be recognized, derivative financial instruments have as a reference element a variable price whose evolution is determined by factors, such as: interest rate level, exchange rate evolution, price index variations, securities price fluctuations. At the same time, derivative financial instruments require a lower initial investment compared to other financial instruments. Derivative financial instruments are settled on a set date.
The International Financial Reporting Standard IFRS 9 “Financial Instruments” proposes the separate recognition of derivative financial instruments, but also their recognition in the basic contract. Separate recognition requires a delimitation of the instrument derived from the basic contract. Under these conditions, the derivative financial instrument has a distinct state, and the related economic characteristics and risks are not closely related to the basic contract. Where it is not possible to separately assess the derivative instrument incorporated in the basic contract, recourse shall be made to the recognition of the derivative instrument in the basic contract.

In the case of the forward contract, the uncertainty in recognition and valuation is generated by the virtual liquidation value, given the fact that the price of the underlying asset fluctuates continuously. The risks specific to such a contract are the risk of unfavourable fluctuation of the price of the underlying asset (commodity, currency or security) and the risk of insolvency of any of the parties involved. One of the parties assumes the "long" position, namely it agrees to buy the underlying asset at a specified future date and at a certain price. The other party assumes the "short" position, alienating the underlying asset under the same conditions. This contract is characterized by symmetry because what one party loses is the gain of the other and vice versa. Assets and liabilities are recognized on the date of the commitment and not on the date of the transaction.

Unlike the forward contract, which is executed at maturity, in the futures contract, the parties have two possibilities, either to finalize the contract by handing over - receiving the underlying asset that represents its object, or to liquidate the position held on the futures market by a meaningful operation in the opposite direction, namely a compensation. The holder of a long position can liquidate it, making a futures sale of the contract. Instead, if his position is a short one, he can liquidate it by buying futures of the same contract. Futures contracts do not require a recognition of assets and liabilities at the date of the commitment, as the entity is not yet a contractual party. The influence on the financial position can be observed only when the owner or seller becomes a contractual party.

Swap options are a derivative financial instrument that obliges one of the contracting parties to exchange a set of payments in its possession with another belonging to the other party. Both sides gain advantages that, if they did not operate in capital markets, would be impossible for them. Interest rate swaps are some of the most widely used swap tools. Under an interest rate swap agreement, the two parties to the contract undertake to exchange interest rates on a fixed date. Usually, the payments are calculated in such a way that only the difference is paid to one or the other of the parties.

### III. ACCOUNTING FOR HEDGING OPERATIONS AND THE IMPACT OF HEDGING OPERATIONS ON THE FINANCIAL POSITION AND PERFORMANCE OF AN ECONOMIC ENTITY

Quoted prices or rates are used to determine the fair value of derivatives traded on the financial markets. If the derivatives are purchased at market price, their initial fair value is zero. Otherwise, it is necessary to take into account any rates or prices existing outside the market, in order to establish the initial fair value. For derivative financial instruments that take the form of assets, in order to determine fair values, the purchase price is used. In the case of debt instruments, the sale price is used.

The purpose of hedging operations is to "protect unrecognized assets, liabilities, unrecognized firm commitments or part of them against the risk of changes in fair value due to fluctuations in interest rates, exchange rates or commodity prices." (Huian, 2008, p. 260) The professional reasoning practiced in the accounting of hedging operations is guided by the international standard IFRS 7 “Financial instruments: information to be provided”. The main purpose of the requirements of this standard is to improve the descriptions in the statement of financial position, income statement and notes. The standard requires the provision of qualitative and quantitative information on exposure to risks arising from the use of financial instruments.

In order to highlight the impact of accounting for hedging operations on the financial position and performance of an economic entity, we will analyze three distinct situations that have in common the use of the financial derivative swap.

In the first situation, the acquisition of a swap instrument for hedging purposes without being designated as a hedging instrument is analyzed. It is considered a three-year swap contract, in which the economic entity pays a variable interest rate of 5% in the first year, 3% in the second year and 7% in the third year. The same entity receives a fixed interest rate of 5%. The notional amount, represented by a certain amount of units in a given asset that is the subject of the transaction, is $ 200 000. Based on the data presented, the net cash flows related to the swap contract can be determined, flows presented in table no. 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Variable interest rate</th>
<th>Fixed interest rate</th>
<th>Estimated cash outflows</th>
<th>Cash flows entered</th>
<th>Net cash flows</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>5%</td>
<td>5%</td>
<td>(10 000)</td>
<td>10 000</td>
<td>0</td>
</tr>
<tr>
<td>N+1</td>
<td>3%</td>
<td>5%</td>
<td>(6 000)</td>
<td>10 000</td>
<td>4 000</td>
</tr>
<tr>
<td>N+2</td>
<td>7%</td>
<td>5%</td>
<td>(14 000)</td>
<td>10 000</td>
<td>(4 000)</td>
</tr>
</tbody>
</table>
We assume that the economic entity initiates the swap contract to hedge, from an economic point of view, against the interest rate risk generated by holding bonds with a maturity of 3 years, the nominal value of $200,000 and a variable interest rate of 5% in the first year, 3% in the second year and 7% in the third year. The bond loan issued has the same value, the same maturity and carries a fixed interest rate of 5% per annum.

Analyzing the given situation, in the first year the economic entity collects interests related to the bonds held and pays interests related to the bond loan. We note that, in the first year, the variable interest rate related to the bonds held is equal to the fixed interest rate related to the bond loan. Consequently, the amount of interest received is equal to the amount of interest paid, and from an accounting point of view, a financial expense and a financial income are recognized.

At the end of the first year, the fair value of the swap is determined by discounting the estimated net cash flows for year N + 1 using the 3% interest rate: \[ \frac{4000}{(1+0.03)} + \frac{4000}{(1+0.03)^2} = 7654 \]. As a result, the change in the fair value of the derivative instrument takes the form of an unfulfilled gain of $7654. From an accounting point of view, this amount constitutes a financial receivable related to the swap contract.

In year N + 1, the entity records the collection of a financial income from interest related to the bonds held. The value of the income is $6,000. In the same year, the entity pays an interest for the bond loan, amounting to $10,000.

Also in year N + 1, the entity must record, from an economic point of view, the net settlement of the swap as a result of which it receives the amount of $4,000. This amount has, from an accounting point of view, two components: interest income related to the financial receivable recognized in the previous year $7654 x 3% = $230 and the actual financial claim, amounting to $3,770.

In year N + 2, net cash flows of $4,000 are discounted at an interest rate of 7%. Based on the discount calculations, a discounted cash flow value of $3,748 is reached. At this point, the swap from financial receivable to financial debt is transformed and an unrealized loss arises from the change in fair value.

As can be seen in table no. 1, the entity collects in the year N + 1 an interest of $14,000 and pays an interest of $10,000.

Subsequently, the entity records the settlement of the swap, respectively the payment of the $4,000 distributed between: the expense with the interest related to the financial debt represented by the swap and recognized in the previous year $3,738 x 7% = $262 and financial debt balance $3,738.

At the end of N + 2, the economic entity reports the collection of the investment in bonds and the payment of the bond loan. Both are worth $200,000 and have matured.

In situation 1, the entity initiates the swap contract to hedge, economically, but not also in accounting terms, against the interest rate risk generated by the holding of bonds.

In the second situation, the entity applies the accounting methodology specific to hedging against interest rate risk. The accounting treatment recommended by international standards is presented below, taking into account the net cash flows related to the swap instrument and presented in table no. 1. Interest rates and discount calculations do not differ from situation 1.

In year N, the bond loan amounting to $200,000 is recorded. The interest paid and recognized on financial expenses for year N is $10,000. In the same year, the variation of the fair value of the derivative instrument is recorded, which takes the form of an unfulfilled gain of $7,654.

| Swap (Financial receivable) | Unfulfilled gain from hedging operations | 7,654 | 7,654 |

For cash flows represented by the interest rate on the bond loan and the repayment amount of the loan, the present value is: \[ \frac{10000}{(1+0.03)} + \frac{210000}{(1+0.03)^2} = 207,654 \]

The change in the fair value of debt, calculated by discounting future flows, takes the form of a loss in the income statement: \[ 207,654 - 200,000 = 7,654 \].

| Unfulfilled loss from hedging operations | Bond loans | 7,654 | 7,654 |

The interest paid in financial year N is recorded as follows:

| Interest expenses | Bank accounts | 10,000 | 10,000 |

In year N + 1, the entity highlights the net settlement of the swap as a result of which it receives $4,000, which it distributes between the interest income related to the previously recognized financial receivable ($7,654 x 3% = $230) and the receivable itself.

| Bank accounts | Interest income | 4,000 |
| Swap (Financial receivable) | 230 |

The estimated cash flows for the year N + 2, amounting to $4,000 are discounted through the 7% interest rate: \[ \frac{4000}{1 + 0.07} = 3738 \]. Thus, the swap is transformed from the receivable financial debt and, at the same time, an unfulfilled loss arises from the variation in fair value.

| Unfulfilled loss from hedging operations | % | 7,622 |
| Swap (Financial receivable) | 7,378 |
| Swap (Financial debt) | 3,884 |

The interest expense recorded by the bond issuer is $207,654 x 3% = $6,230. The payment of cash flows in the amount of $6,230 involves the following accounting item:

| % | Bank accounts | 10,000 |
The present value of the debt in year N + 1 is $200,000 / (1 + 0.07) = $196,262. Reducing debt from $207,654 to $196,262 generates an unfulfilled gain of $11,392.

The maturity of the derivative coincides with that of the bond loan. The initial fair value of the bond loans is $200,000 for which it pays a fixed rate of 5%. The company would prefer to receive a fixed interest rate for the financial debt of $200,000 and an unfulfilled loss from the variation in fair value that affects the reserve established for the variation in fair value.

Table no. 2 Changes in the income statement

Table no. 3: Effects of hedging operations on the financial position

From the analysis of the three presented situations we notice that, in the first two, the gains and losses are registered in the income statement, influencing the performance of the entity. In the first situation, the volatility of the income statement increases due to unrealized gains and losses related to the swap instrument. In the third situation, the derivative is designated as a hedging instrument in a hedging operation of cash flows against risks. As in the other two situations, the entity holds bonds, maturing in three years, at a nominal value of $200,000, with a variable interest rate, paid annually. In addition, the company has a financial debt of $200,000 for which it pays a fixed rate of 5%. The company would prefer to receive a fixed interest rate for the bond loans. For this reason, it enters into a notional interest rate swap of $200,000, for which it pays a fixed rate of 5% and receives a variable rate which is as follows: 5% for the first year, 3% for the second year, and 7% for the third year. The maturity of the derivative coincides with that of the bond loan. The initial fair value of the swap is zero, which is why its contracting does not generate any accounting records.

It is observed that in this situation the cash flows have the opposite meaning to those of the previous variants. The accounting treatment applied in situation three is different because, although from an economic point of view there are unrealized gains and losses from hedging operations, they are not recognized in the income statement. They are accounted for in a reserve account for changes in fair value. The update in year N + 2 of the estimated cash flows determines a transformation of the swap from financial receivable to financial debt and an unfulfilled loss from the variation in fair value that affects the reserve established for the variation in fair value.

Table no. 3 presents a comparative situation of the changes that influence the financial position of the entity, for the three years.
second situation, no fluctuations in the income statement are reported if the hedging activity remains high. In the third situation, gains and losses are recognized in a reserve account within equity. The consequence of this is to reduce the volatility of the income statement, but to increase the volatility of equity. It is noted that the analysis of the effects of using financial instruments on the performance of the enterprise involves studying the income statement, but also the situation of changes in equity.

The impact of hedging operations on the financial position is obvious. In the first situation, the current result and the carried forward result influence the balance sheet values. In situations 2 and 3, in the last year of the analysis, no balance sheet item is affected. The choice of one of the three variants is influenced by the managerial policy. Managers who prefer to take risks related to future events or transactions, will choose the first option. The other two options will be chosen by managers who apply a long-term financial policy, do not focus on risks and assume more effective strategic planning.

IV. CONCLUSION

The managers of different entities are aware of the seriousness that the risks can have on the economic activity. They are increasingly concerned with initiating increasingly complex procedures to prevent risks and reduce their consequences. Hedging is the most used technique by those who show aversion to risk and want to transfer it to another party. It is achieved through derivative financial instruments whose fluctuations in value offset those of financial assets and liabilities held by companies and is a technique widely addressed in accounting standards.

Derivative financial instruments are measured at fair value and their changes are recognized in the income statement, influencing the entity's performance. Derivatives, which involve an external third party, are the main elements used to hedge risks. The key requirement for accepting a derivative as a hedged instrument is that it must expose the entity to a separately identifiable risk that can be assessed during the hedging operation. Such risks are interest rate risk, currency risk, commodity price risk or credit risk. A derivative cannot be a hedging instrument if it has to be settled by delivering an unhedged equity instrument, the fair value of which cannot be reliably measured.

The main objective of the accounting of risk hedging operations is the neutrality of the artificial volatility of the results generated by the fluctuations of the fair value on the financial market. This special accounting treatment, applicable to derivatives involved in hedging operations, allows, in the case of efficient hedges, the compensation of losses recorded in the profit and loss account through gains related to derivatives, as well as the deferral of gains by including them directly in equity and not in the account of results. The influence of hedging transactions on the financial position is obvious because the entity recognizes in the balance sheet all contractual rights and obligations related to derivative financial instruments, as assets or liabilities.

The accounting of financial instruments, the presentation and description of the related information in the financial statements and the analysis of their use on the performances and financial position of the entities are subjects that require compliance with international standards and the application of adequate professional judgment.

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