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SYNTHETIC ANALYSIS OF THE BALANCE SHEET IN ACCORDANCE WITH POLISH ACCOUNTANCY ACT AS THE TOOL OF ASSESSING RISK OF OPERATION OF THE ENTERPRISE

Розглянуто можливість попередньої оцінки ризику діяльності підприємства на основі балансу, складеного згідно з польським законом про бухоблік. Аналіз процесу складається з трьох основних етапів: аналіз динаміки і структури активів, аналіз структури капіталу й аналіз співвідношення між капіталом і майном фірми. Особливо важливим питанням оцінки ризику є взаємозв'язок між стратегією фінансування оборотних засобів і ризиком, що виникає відповідно до зовнішніх обставин функціонування підприємства.

The article of methodological character introduces a framework of preliminary assessment of risk on the basis of balance sheet data in accordance with Polish Accountancy Act. The process of analysis was divided in three basic stages: analysis of dynamics and structure of assets, analysis of capital structure and analysis of capital-property relations. The essential problem recognized in assessing the financial risk was the analysis of the connection between current assets financing strategy and market risk.

Carrying out every business activity is bound inseparably with risk. In general it is possible to define risk as odds of deviation of results from expected returns or the odds of deviation of future returns (or profits) from expected returns (or profits)[1]. Risk is often associated with onset of undesirable results which can lead a company to worsening of financial standing and financial results or to the loss of property and capital and shutting down it activities for economic reasons or declaring bankruptcy on grounds of binding legal regulations[2].

In theory and economic practice there are several dozen risks connected with business activity of the enterprise and threatening the continuation of its operation[3]. Risk is most often divided into systematic (outside) which is to a large extent independent of the enterprise and unsystematic (in-company) the board of directors of an economic unit has the essential impact. In accounting however, a division into operating and financial risk is appropriate. While operating risk reflects the current market situation and the level of production capacities utilization and depends, among others, on effectiveness of company's assets, financial risk is bound to the structure of capital of the company, determining the stability of financing sources and their cost which is indeed influencing the profitability and the financial liquidity of the enterprise. Accumulation of operating risk and financial risk create a general risk of activity of the enterprise which if unaccounted for may lead to bankruptcy.

Managing risk is an important factor in integrated financial management of the company and is embracing among others: determining areas of risk, its identification, assessment and guidance and control over adequacy and efficiency of resources, including fair and accurate reporting[4].

In assessing risk both inside sources and surrounding sources of information are being exploited. The most comprehensive database for analysis of the unsystematic risk is used by boards of directors of enterprises, utilizing information from the synthetic and analytical accounts and diverse non-accounting data. Businesses surrounding the enterprise, sales partners in particular are trying to assess the real odds of

[1] Analiza ekonomiczna przedsiębiorstwa,red. Jerzemowska M., PWE, Warszawa 2004, s.171.

[22] According to Polish statistical data from the last few years some 250-350 thousand businesses have cancelled thier business from the registry and some 700 undergoes buncrupcy procedure. Zmiany strukturalne grup podmiotów gospodarki narodowej wpisanych do rejestru Regon 2010 r., GUS, Warszawa 2011, s.4; Raport Coface n.t. upadłości firm w Polsce w 2010,GUS, Warszawa 4.01.2011.

[3] Ryzyko w rachunkowości, red. Karmańska A., Difin, Warszawa 2008,s. 63-80.

[4] Skoczylas W., Sprawozdanie finansowe jako podstawa oceny ryzyka działalności przedsiębiorstwa. [W:] Czas na pieniądz. Zarządzanie finansami – klasyczne zasady – praktyczne narzędzia, red. Zarzecki D., Uniwersytet Szczeciński, Szczecin, 2002, s.208.

payments of the due amounts. Banks and financial institutions are paying much attention to the current and future ability of the company to repay on agreed terms, with due interest. These institutions are assessing financial situation of the enterprise and risk connected with it mostly on the basis of interim financial reports to which all economic units keeping books are obliged.

Bookkeeping Act[5] determines the scope of financial reporting which includes balance sheet, profit and loss statement and additional information. Moreover, joint-stock companies and businesses impacting economic environment, financial reports of which are subject to an examination and publication, are obliged to record any changes to own capital accounts and cash flows. Additional element to the financial report of some economic subjects (capital companies, state-owned enterprises and cooperatives) are required to report their business activity. However, elements of the report contain little direct details about the risk activities of the enterprise.

In accordance with the act information on risk contained in the report include:

– in lead-in into the financial report whether risk aren't negatively influencing continuing the business activity and whether any circumstances exist posing a considerable risk to continuing its activity

– in the report of activity (some businesses) the company should point out factors of risk for activity carried out and describe existing risks, in it particularly relating to financial instruments[6].

Moreover pursuant the Directive of Minister of Finance, report of activity of securities issuers should contain, among others, description of crucial factors of risk for issuers with the scope of odds of risk occurrence.

In MSRF 315 attention is drawn to the fact it is unlikely that in smaller businesses a process of assessment of risk occurs , whereas in Polish business environment bigger firms don't try to define the risk either, disregarding its meaning and consequences[7]. In this situation significant role is assigned to financial analysts and proficient auditors who are responsible for diagnosing and estimating risk of given business activity and for fair and accurate presentation of data contained in universally available financial reports.

Out of annual financial report elements the biggest value for risk assessment lies in balance sheet. It presents assets, equity and liabilities at a specific point in time called balance day. It reflects financial effects of all economic transactions taking place in the enterprise in the reporting period, including, among others, transactions to financial means presented in cash flow statement and net income, presented in detail in profit and loss statement. Although balance sheet has static character, comparing data from day one and at the end of the period and the possibility of comparing data from different years, permits dynamic presentation of activity of the enterprise, its financial situation and risk.

The risk in balance sheet can be identified in three stages:

– analysis of dynamics and the structure of assets,
– analysis of the capital structure,
– analysis of capital-property relations.

Changes in assets in relation to changes in revenues and net profit after tax permit to assess the *effectiveness of enterprise performance* in terms of productivity and profitability determining to a large extent current and future financial standing. The concept is easy to express with the help of the the following model arrangement:

$$\Delta A < \Delta R < \Delta P$$

ΔA, ΔR, ΔP – ratios of growth of assets, revenue and profit, respectively.

Every change in direction of the above arrangement is signalling appearing of extensive forms of economic activity the growing risk as a result of the decline of the financial effectiveness. It is all the more essential that included in assets are both rotational assets, in the majority of spontaneous character, dependant on changes in the economic activity, as well as long-lasting immobile assets which aren't changing together with changes in revenues and financial result.

The structure of assets is mostly depicting *operating risk* the scale of which depends on share of fixed costs in total costs of the enterprise. A well-known phenomenon appearing in the market economy universally known as crash barrier of the demand results in not-used capacities generating so-called idle which are having an adverse influence on the profitability especially in the case of fall in gross sales of the enterprise. The measure of risk in this situation is the degree of sensitivity of changes in the operational

[5] Ustawa o rachunkowości z 29 września 1994 r., tekst jednolity Dz.U. 2009, Nr 152, poz.1223, art.49.

[6] Ibidem.

[7] Garstka M., Rola biegłego rewidenta i jednostki przy identyfikacji ryzyka gospodarczego, w tym kontynuacji działalności, "Rachunkowość" Nr 3/8, 2011.

profit to shifts in gross sales. It is determined with the use of the operating leverage (OL) what in the dynamic presentation is possible to introduce as follows:

$$\mathbf{OL} = \frac{\Delta \mathbf{OP}}{\Delta \mathbf{S}}$$

ΔOP – change in operational profit; ΔS – change in sales revenues.

High fixed costs (costs of depreciation in particular) and thus high operating risk is bound with a large stake of fixed assets in the assets structure of the enterprise. Assessing this risk it is possible to compare this stake with averages in the business, characteristic of enterprises with the similar kind of activity. Excessively high share of fixed assets is indicative of great risk of loss of liquidity resulting from limited possibilities of their liquidation for the repayment of short term liabilities.

Analysing the risk of the enterprise on the basis of the structure of assets one should point to certain essential signals resulting from the internal structure of fixed and current assets. For example, too high a share of fixed assets of unsecured financial instruments, characterized by high volatility owing to critical situation on financial markets permits high risk. In turn, too low a share of monetary assets in current assets can in the essential way influence the limitation of current payment ability of the enterprise.

In assessing risk on own assets also a detailed information, additional notes and commentaries to balance can be essential. Data concerning the internal structure of inventory, amounts due and of short-term investments, the essential liquidity risk is rendered among others by:

– high share of inventory hard to cash, including inventory being in an initial phase of the rotational cycle (materials, products in the course) and of excess inventory (unnecessary and exaggerated),

– large stake of short-term amounts due about relatively long cycle of the debt collection (e.g. above 6 months, above 1 year), in it of overdue amounts due according to times of delays in the repayment, for which updating deductions were created,

– high share of short-term financial assets with longer maturity dates and of limited selling potential.

Liabilities in balance sheet inform of financial risk, risk of loss of the financial liquidity resulting from the level and the structure of debt. Using borrowed capitals comes at high financial cost and curbs profitability of the enterprise making it dependant on fluctuations in current economic situation. Resulting from action of the so-called financial lever. Addressing Financial leverage (FL) in the dynamic presentation we can introduce the following formula:

$$\mathbf{FL} = \frac{\Delta \mathbf{ROE}}{\Delta \mathbf{OP}}$$

Δ ROE – growth of the profitability of own capital; Δ OP – relative growth of the operational profit.

The financial leverage is propping up action of operating lever described earlier what is indicative of the accumulation of risk and is reflected in a so-called effect of the combined leverage (CL) of operating and financial leverage. The following formula is depicting CL:

From this closing formula we can assume that enterprises with a high share of fixed costs, exploiting borrowed capital as basic means of financing are all the more exposed to the risk of economic fluctuations.

Assessing risk resulting from the capital structure, debt ratio is essential. Excessive share of borrowed capital can be an important signal of risk resulting from a higher cost of raising capital and in times of low sales such companies may experience potential negative effect of the financial lever as well as considerable limitation to the decision-making. For debt references data from last years, but also averages in the business as well as universally accepted standard benchmarks can be used[8]. When analysing liabilities, structure of own and borrowed capital is essential. Low participation of profit in own capital is signalling problems with profitability limiting future possibilities of self-financing enterprises, conversely short-term character of borrowed capital is pointing at high financial risk resulting from the necessity of fast repayment of debts.

Much as in the case of assets additional notes and commentaries to balance sheet concerning characterizations of liabilities can contain essential signals of risk including:

[8] In Poland for long it has been assumed that great financial risk occured when equity is financing more than 50% of assets. At presentsince the transition to market economy a share amounting to debts is considered safe from 57 to67% what meets the participation of equity within the limits of 33-43 %. Cf. among others, Nowak E., Analiza sprawozdań finansowych,PWE, Warszawa 2005, s.223; Waśniewski T., Analiza finansowa w przedsiębiorstwie, Fundacja Rozwoju Rachunkowości w Polsce, Warszawa 1997, s. 291.

– high amount and ratio of liabilities of issued debt whose settlement (with interest) is due in nearest reporting periods,

– high amount and ratio of credit (with interest), particularly short-term and denominated in foreign currencies exposed to volatility in interest rates,

– high share of short-term liabilities with short times of maturity and overdue, considerable sums resulting from conditional liabilities such as guaranteed loans.

Indices calculated as part of vertical analysis of the structure of assets and liabilities are isolated indicators of different kinds of risk, in particular unsystematic and their assessment isn't often synonymous. Perhaps, a good example of achieving high profitability at big risk of of loss of financial liquidity fluidity reflecting high share of profit in own capital but at the same time low liquidity and high debt ratio. Therefore horizontal analysis of balance sheet is more important which assesses relations and the structure of assets and liabilities. Golden rule of finance has it that employment of assets and capital must go in step. This principle undergoes detailed verification which consists in calculating and interpretation of different indices of the capital-property structure:

– fundamental balance rule, so-called golden rule talking about the need to cover assets of fixed assets with own capital and the silver balance principle pointing to the need to finance all fixed assets long-term sources of own capital and borrowed long-term capital,

– based on balance sheet financial liquidity indices depicting relations between rotational assets or their more or less liquid elements to short-term liabilities[9],

– ratio of working capital to rotational assets of the enterprise.

When assessing risk it essential to analyse working capital and its structure. Working capital is reflecting stable capital involved in financing rotational assets and is a guarantor of holding the financial liquidity of the enterprise. Its deficits with respect to actual demand[10] are usually signalling solvency problem in firms. In turn excessive capital stock involves a potential risk of worsening the profitability of the enterprise. So the optimization of the level of working capital is essential condition of preserving financial balance in the enterprise.

Described basic structural relations in balance sheet (concerning assets, liabilities and the capital-property relation), enterprises let assess different aspects of risk. In synthetic way they permit to analyse rotational assets strategy realized by the enterprise, to which they can use almost exclusively constant capitals, appropriate proportion of long-term and short-term capital or exclusively short-term capital[11].

In finance management theory three classic strategies of financing rotational assets are being favoured: aggressive, moderate and conservative. It is possible to identify these strategies on the basis of relations described earlier in assets, liabilities and mutual capital-property connections. Thus aggressive strategy, usually associated with great risk can be characterized as follows:

– high ratio of of immobilizing assets and their low liquidity indicating among others a high level of operating leverage

– large ratio of foreign capital, in it short-term, in total capital of the enterprise, that is indicative of high level of financial leverage,

– negative working capital or its considerable deficit with respect to the amount demanded what is reflected in a non-observance of elementary balance principles of financing assets confirming lower than standard signs of the financial liquidity.

Conservative strategy is opposite of aggressive strategy and is associated with the humble risk. In turn, moderate strategy is indicative of average risk and results in moderate behaviour of structural relations described earlier in balance sheet.

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[9] Among others current ratios are being calculated as relations of current assets for current liabilities and fast liquidity ratios in the form of the relationship of current assets about the increased fluidity for current liabilities. In the literature on the subject optimum sizes of the current ratio are often given taking out from 1.5 to 2.0 and of fast liquidity ratio from 1.0 to 1.3. Cf. among others, Nowak E., Analiza sprawozdań finansowych, PWE, Warszawa 2005, s.195-196. The specificity of some kinds of activity can however influence considerable deviations of indicators of enterprises from given standards (e.g. in the trade as a result of the great scope of financing by merchan credit these indicators can be much lower).

[10] Demand for working capital is often approximated as ratio of working capital in current assets of limited liquidiryy, i.e. inventories and amounts due, orratio of participation of this capital in the sales revenue. Demand for working capital estimated with detailed method as a difference between current assets and current liabilities of operating character. Cf. among others, Wawryszuk-Misztal A., Strategie zarządzania kapitałem obrotowym netto w przedsiębiorstwach – studium empiryczno-teoretyczne, Wydawnictwo UMCS, Lublin 2007, s. 50-51.

[11] Bień W., Zarządzanie finansami przedsiębiorstwa , Difin, Warszawa 2005, s. 194.

Choice of one of these three strategies is an attempt to seek the optimal relation amongst risk and profit, and in more detail amongst financial liquidity and profitability. The choice is depending to a large extent on conditioning of outside activities of the enterprise, determining the so-called systematic risk (market risk). The outside accompanying risk of activity of an economic unit lies in general macroeconomic situation (e.g. state of the economy, inflation rate, monetary policy, tax system, balance of payments and the like), but also from the institutional neighbourhood and the competition in the business, in which he is doing business[12].

Assessment of the realized funding strategy of current assets in terms of its adapting to the level of market risk is one of the most important areas of assessing risk. Financing current assets and the level of the market risk is presented in table 1. Optimal strategies of financing, offering satisfying profit and by the acceptable level of risk are found on the diagonal of table pointing at the legitimacy of choice:

– of aggressive strategy at humble market risk,
– of strategy moderate in conditions typical (average) market risk,
– of conservative strategy, at high market risk.

In remainder of cases great danger of loss of financial liquidity or profitability are present which in long term can be a cause of bankruptcy of the enterprise. For particularly dangerous one should recognize situation when the enterprise adopts aggressive strategy of financing assets in conditions of high market risk or adopting conservative strategy in conditions of humble market risk.

Relation between current assets financing strategy and market risk

Current assets financing strategy	Market risk		
	High	Medium	Low
Aggressive	C	B	A
Moderate	B	A	B
Conservative	A	B	C

Source: Own study.

A – optimal relation between current assets financing strategy and market risk – minimal threat to financial standing; B – inappropriate current assets financing strategy, medium threat to financial standing; C – inappropriate current assets financing strategy, high threat to financial standing.

One should emphasize that the described methodology of assessing risk of activity of the enterprise based on limited framework has very synthetic character. Moreover, the effectiveness of using it is depending to a large extent on quality of data contained in balance sheet. Binding legal bookkeeping provisions in many cases allow enterprises to act according to will in preparing and presenting balance sheet which significantly affects the presentation of financial result, assets, liabilities and different sources of financing. Practice proves that boards of directors of some enterprises are using this freedom for manipulating accounts data in realizing particularistic purposes what is often refereed to creative accounting[13]. Therefore the role of proficient auditors who examine financial report not only in terms of legal adequacy and conformity but also from a point of view of the credibility and the reliability of the presentation of different aspects of risk accompanying activities of the enterprise and threatening the state of continuation of its activities.

1. Analiza ekonomiczna przedsiębiorstwa,red. Jerzemowska M., PWE, Warszawa, 2004. 2. Bień W., Zarządzanie finansami przedsiębiorstwa , Difin, Warszawa, 2005. 3. Czas na pieniądz. Zarządzanie finansami – klasyczne zasady – praktyczne narzędzia, red. Zarzecki D., Uniwersytet Szczeciński, Szczecin, 2002. 4. Garstka M., Rola biegłego rewidenta i jednostki przy identyfikacji ryzyka gospodarczego, w tym kontynuacji działalności, "Rachunkowość" Nr 3/8, 2011. 5. Kowalczyk K. : Rachunkowość twórcza, „Prawo Przedsiębiorcy" Nr 50, 2001. 6. Nowak E., Analiza sprawozdań finansowych,PWE, Warszawa, 2005. 7. Porter M.E., Strategia konkurencji. Metody analizy sektorów i konkurentów, PWE, Waszawa,

[12]It is possible to estimate the level of this risk e.g. with statistical methods describing the changeability of the sales revenue and operating profits in the given industry. It is possible also to use models of the strategic analysis of the enterprise, like e.g. enabling the model of five strengths of Porter evaluation of the current position of the enterprise, including the possibility and threats which are accompanying his functioning on institutional surroundings. Cf. Porter M.E., Strategia konkurencji. Metody analizy sektorów i konkurentów, PWE, Warszawa 1992, s. 21-60.

[13] Kowalczyk K. : Rachunkowość twórcza, „Prawo Przedsiębiorcy" Nr 50, 2001.

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ESSENCE OF HEDGING ACTIVITIES IN THE LIGHT OF POLISH BALANCE LAW AND IAS/IFRS

Сутність проблеми ризику в діяльності підприємства підвищує зацікавленість до інструментарію, який слугує його зниженню. Одним з таких засобів є похідні фінансові інструменти, які у відповідних умовах можуть бути ефективним інструментом зниження ризику (хеджування). Метою статті є представлення і порівняння основних принципів обліку хеджування відповідно до польського облікового законодавства та МСФЗ, використовуваних в Україні.

Growing risk of business activity of enterprises triggered interest in tools helping limit risk. In conditions of uncertainty derivative instruments can serve as effective instrument of limiting risks (hedging instrument). The purpose of this article is to present and compare basic bookkeeping rules of hedging instrument according to Polish balance law and IAS/IFRS also practised in the Ukraine.

Understanding derivatives and their role in protection against risk. The risk is perceived as one of most important theoretical notions in finance. It is also present in the course of life of man and the business activity carried on by them.

The risk can be defined and classified in numerous ways[1]. In business financial risk is present and affects financial standing of enterprises. Financial risk may refer to changes in prices in financial markets and other markets connected with them (e.g. goods). Market risk manifests itself in many ways including risk rooted in changes of exchange rates, interest rates, share prices or prices of commodities[2].

Among tools that serve limitation of risk we find derivative securities or derivatives in short. In the broadest sense, it is possible to define derivatives as agreements, value of which is depending on value of different so-called base instruments[3]. Base instruments can be physically existing financial instruments (e.g. shares, debentures, currencies), but also interest rates or share indices. Futures, forwards as well as options and swap contracts are all considered derivatives.

Although derivatives are being used for numerous purposes e.g. speculation or arbitration, the basic aim they are serving is hedging i.e. protecting against financial risk. In economic sense hedging transactions (securing) allow subjects demonstrating aversion to risk to transfer it to companies inclined to accept such risk and make a profit[4.]

Derivative instrument is constructed to hedge against risk. If only unfavourable changes in value of basic instrument (secured title) are compensated with favourable changes in value of derivative instrument

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[1] For further reference see: A. Żebruń, Instrumenty pochodne zabezpieczające w rachunkowości, Difin, Warsaw
2010, p. 18-19.

[2] Zarządzanie ryzykiem, K. Jajuga (scientific ed.), Wydawnictwo Naukowe PWN, Warsaw 2008, p. 18-19

[3] P. Czajor, Rachunkowość instrumentów finansowych. MSSF, polskie prawo bilansowe, regulacje podatkowe,,
Ośrodek Doradztwa i Doskonalenia Kadr, Gdańsk 2010, p. 109.

[4] W. Tarczyński, M. Zwolankowski, Inżynieria finansowa. Instrumentarium, strategie, zarządzanie ryzykiem. Strategie inwestowania, ryzyko inwestowania, Agencja Wydawnicza Placet, Warszawa 1999, p. 186.