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FAIR VALUE OF A COMPANY

Summary

The paper presents the particular assets and liabilities using the fair value concept, in connection with the implementation of the company value measurement. The above mentioned approach is based on the assumption of the true value approximation of the particular balance sheets elements. The key role in the analyzed approach is played by the company valuation in fair value, which improves the company estimation method in practice of company valuation.

1. Introduction

Diversity of valued enterprises due to their specific activities, financial situation, their market, location, as well as their size and social significance, accounts for popularity of various approaches to company valuation. Company valuation is one of key issues in the process of ownership transformation. Its importance should not be underestimated as social and economic consequences of the process are irreversible [Kamela-Sowińska 2006].

The aim of this paper is to present the methodology of company valuation using the method of fair value, which is used in practice to provide both managers and investors with the possibility of forecasting and comparing assets and liabilities of an enterprise.

2. Methodology of company valuation using the concept of fair value

Valuation as the process of estimating company value is a tool supporting decision making on strategic level and is used as an advanced management tool applied in real life by managers [Dobija 2005].

On the other hand, company value is a measurable decision criterion, which is the basis and stimulator of actions taken in order to adjust the

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management system to the needs resulting from a strategic choice made [Kapa-Kejna 2002]. It is always necessary to determine the subject of valuation to define the concept of value. Specific methods of measuring value are connected with parallel existence of various concepts of value [Zarzecki 1999].

The essence of fair value is an attempt at creating maximally fair conditions for all potential parties to the transaction. It also means that these transactions do not have to be made only in the open market. The transaction between the buyer and the seller is realized on the basis of a legally binding agreement which excludes other potential buyers and sellers.

In order to present the discussed transaction properly, we must determine the value which the purchasing company will obtain for the paid or unpaid remuneration. Therefore the assets and liabilities of a company are valued using the fair value method, which may definitely differ from book value, that is the value that can be found in the books of the purchased company.

Fair value is treated as a sort of common denominator for various prices coming from the market and influencing the valuation of assets. This fact is taken into account in article 44b section 4 of the Act on Accounting, which precisely determines the basis of fair valuation of particular elements of assets and liabilities – concerning the case of taking over another company. This situation is illustrated in Table 1 below.

Table 1. Method of determining fair value

Element of assets and liabilities	Method of determining fair value
Listed securities	Current quotation minus costs of sale
Unlisted securities	Assessed value taking into account such factor as: price-earnings ratio and dividend rate of comparable securities issued by companies of similar type
Liabilities	Current (discounted) value of due payments subtracted by allowance for risky and bad debts, and possible recovery costs; however, determining current (discounted) values with reference to short-term liabilities is not necessary if the difference between value of liabilities according to due payments and their discounted value is not significant
Inventories: a) Finished products and goods b) work in progress c) materials	<p>Net selling price reduced by profit margin discount resulting from costs of finding a purchaser for the inventories</p> <p>Net selling price of finished products reduced by costs of ending production and profit margin discount resulting from costs of finding a purchaser for the inventories</p> <p>Current purchasing price</p>

Element of assets and liabilities	Method of determining fair value
Fixed assets	Market value or their value established in independent valuation. If it is impossible to obtain independent valuation of fixed assets – current purchasing price or production cost, taking into account current wear and tear degree
Intangibles	Assessed value established on the basis of market prices of the same or similar intangibles, and with reference to company value or negative company value in the balance sheet of the taken over company – null value; in case assessed value cannot be established on the basis of market prices, the value which will not cause or increase negative value of the company after the takeover is adopted
Liabilities	Current (discounted) value of due payments, established at appropriate interest rates; establishing current values
Deferred tax liability	Value that can be realized by merger companies after taking into account tax effects caused by evaluation of net assets of the taken over company using fair value method

Source: own elaboration on the basis of the Act of 29th September 1994 on Accounting, with subsequent changes.

Methods of assessing fair value of assets and liabilities of a taken over company, as well as fair value of objects with which payment is made, which are the basis of determining the takeover price, require subjective judgments and choices [Kamiński 2003]. This is visible in fixed assets valuation. Determining their fair value is difficult due to the fact that some objects do not exist independently, as they are integrally tied to the company or its department infrastructure. Another challenge is posed by lack of catalogue prices of taken over goods. It happens that the property elements which are subject of price calculation are traded extremely rarely or do not appear in a given area. Taking the above into consideration, the final assessment of fair value of these assets may differ depending on assumptions made.

The concept of fair value in company valuation is one of the most reliable methods of valuating companies. However, we should emphasize that even such a precise and detailed assessment of the value of complex set of elements constituting an enterprise will never fully reflect the price obtained in the unit purchase transaction. Economic conditions in which an entity functions can distort the final result and sometimes lead to wrong conclusions [Jędrzejczyk 2003]. It happens, for example, in times of high inflation which changes the value of all elements owned by the company. On the other hand, the accounting and finance theory has not come up with a better decision supporting tool in mergers, takeovers or generally understood acquisitions of enterprises.

We should mention here differences in definitions of company value and company price. The value, treated as the figure being the result of valuation, is not an identical term with price [Flazgić 2002].

The value of a unit depends on:

- value of expenditure on its creation – depending on the reference point of this expenditure,
- use value and resulting benefits for the owner,
- demand and supply, that is the resultant of exchange value and use value [Dobija 2005].

Therefore the value from valuation establishes the boundaries of the zone of price negotiations conducted by interested parties to the purchase transaction.

The subject of our analysis is the value of an economic entity expressed according to the concept of fair value, therefore we must meet all requirements resulting from the definition of fair value. Fair value is the amount for which a particular element of assets could be exchanged and liability settled on market transaction terms, between interested parties which are well-informed and not related to each other. Only such value may be the basis of the whole company valuation. The most important stage is to determine fair value, which will constitute the so-called “price range” for the economic entity which is sold.

Price range is determined by the sums of fair value of particular elements of assets and liabilities. According to the core balance sheet equation known from the accounting theory, total assets must equal total equity and liabilities. Of course, from the point of view of financial reporting, a different situation leads to the conclusion that the balance sheet contains an accounting mistake or some other mistake which may lead to under- or over-valuation of some analyzed category [Jędrzejczyk 2003].

An opposite situation can be observed in the process of estimating the value of sums of assets and liabilities. The difference between the value of property and capital is a natural thing, being the result of many factors, such as: choice of alternative valuation methods using the fair value concept, accepted by International Accounting Standards, varied simulation of market conditions and related different assessment of risk level and current discount rate, choice of different reference points when considering hypothetical purchasing transactions of similar elements of balance sheet, other factors influencing fair value of balance sheet elements. Therefore in reality we do not observe situations in which we have equal values after assessing the sum of property and capital of an enterprise [Jędrzejczyk 2003].

In line with the above, according to the assumed concept, fair value of an assessed company is an arithmetic average of balance sums. Therefore the most probable price being the result of the transaction will be:

$$E(FV_b) = \frac{FV_a + FV_c}{2} = \frac{\sum_{i=1}^n a_i + \sum_{i=1}^m c_i}{2} \quad (1)$$

where:

$E(FV_b)$ – estimated fair value of a business,

FV_a – assets fair value

a_i – fair value of the i -th asset

n – number of all elements of a business property

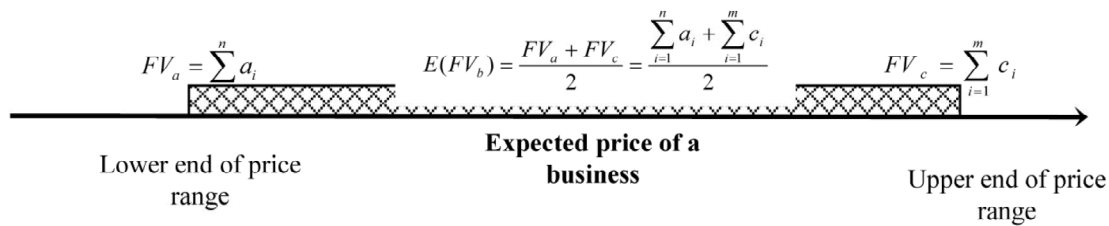
FV_c – capital fair value,

c_i – fair value of the i -th capital,

m – number of all elements of a business equity and liabilities.

Taking account of the above considerations, we can present the expected value of the price of a business being sold (obtained in a hypothetical purchasing transaction) as the “zone of price negotiations” [Jędrzejczyk 2003].

Diagram 1: Expected price of a business being sold



Source: [Jędrzejczyk 2003]

The zone of price negotiations in case of stating lower value of total assets than the value of total equity and liabilities belongs to the closed range:

$$E(FV_b) \in \langle FV_a, FV_c \rangle \Leftrightarrow E(FV_b) \in \left\langle \sum_{i=1}^n a_i, \sum_{i=1}^m c_i \right\rangle \quad (2)$$

On the other hand, when the value of total assets is higher than the value of total equity and liabilities, the range depicting the span of the zone of price negotiations can be expressed as follows:

$$E(FV_b) \in \langle FV_c, FV_a \rangle \Leftrightarrow E(FV_b) \in \left\langle \sum_{i=1}^m c_i, \sum_{i=1}^n a_i \right\rangle \quad (3)$$

3. Assessment of fair value on the example of an enterprise

The value of an enterprise as an economic entity assessed in line with the concept of fair value must take into account valuation of all elements of assets and equity and liabilities of the assessed enterprise. Therefore it is vital to assess credibly the value of all balance sheet elements according to fair value guidelines.

Therefore the price of an enterprise may be treated as a result of a compromise between values proposed by both parties of the purchasing transaction. The company value in this case is the basis for determining its price. On the other hand, price in our considerations may be treated in two different ways:

- as a result of the process of valuation of an economic entity,
- as a parameter expressing expenditure and effects in order to compare them and to calculate net effects of the analyzed enterprise [Dobija 2005].

Table 2. Fixed assets value (in thousand zlotys)

ITEM	
FIXED ASSETS	102169.00
Intangible fixed assets	181.00
Development costs	
Goodwill	
Other intangibles	181.00
Payments on account of intangible fixed assets	
Goodwill of subsidiary units	
Tangible fixed assets	101 847.00
Fixed assets	53 169.00
land (including the right of hereditary tenure)	2 765.00
buildings, premises and structures of land and water engineering	28 359.00
machinery and technical equipment	19 333.00
transportation means	301.00
other fixed assets	2 411.00
Fixed assets under construction	48 425.00
Payments on account of fixed assets under construction	253.00
Long-term receivables	0.00
From related parties	
From other entities	

ITEM	
Long-term investments	141.00
Real estate	
Intangibles	
Long-term financial assets	141.00
in related parties	0.00
• shares and stocks	
• other securities	
• loans receivable	
• other long-term financial assets	
in other entities	141.00
• shares and stocks	141.00
• other securities	
• loans receivable	
• other long-term financial assets	
Other long-term investments	
Long-term prepayments	

Source: own calculations on the basis of [Jędrzejczyk 2003].

Table 3. Data from the period following the analyzed period (in thousand zlotys)

ITEM		Change in %
FIXED ASSETS	144 828.00	41.75%
Intangible fixed assets	17.00	-90.61%
Development costs		
Goodwill		
Other intangibles	17.00	-90.61%
Payments on account of intangible fixed assets		
Goodwill of subsidiary units		
Tangible fixed assets	144 670.00	42.05%
Fixed assets	87 652.00	64.85%
land (including the right of hereditary tenure)	2 765.00	0.00%
buildings, premises and structures of land and water engineering	31 234.00	10.14%
machinery and technical equipment	52 184.00	169.92%
transportation means	581.00	93.02%
other fixed assets	888.00	-63.17%
Fixed assets under construction	57 016.00	17.74%

ITEM		Change in %
Payments on account of fixed assets under construction	2.00	-99.21%
Long-term receivables	0.00	
From related parties		
From other entities		
Long-term investments	141.00	0.00%
Real estate		
Intangibles		
Long-term financial assets	141.00	0.00%
in related parties		
- shares and stocks		
- other securities		
- loans receivable		
- other long-term financial assets		
in other entities	141.00	0.00%
- shares and stocks	141.00	0.00%
- other securities		
- loans receivable		
- other long-term financial assets		
Other long-term investments		
Long-term prepayments		

Source: own calculations on the basis of [Jędrzejczyk 2003].

Table 4. Current assets value (in thousand zlotys)

ITEM	
CURRENT ASSETS	47 515.00
Inventories	17 767.00
Materials	117 76.00
Semi-finished products and work in progress	3 597.00
Finished products	1 130.00
Trade goods	164.00
Payments on account of deliveries	1 100.00
Short-term receivables	27 798.00
Related parties receivables	4 668.00
trade receivables, falling due:	4 668.00
• within 12 months	4 668.00

ITEM	
• after more than 12 months	
other receivables	
Receivables from other entities	23 130.00
trade receivables, falling due:	16 057.00
• within 12 months	16 057.00
• after more than 12 months	
receivables from the State budget	6 593.00
other receivables	
receivables in litigation	480.00
Short-term investments	1 950.00
Short-term financial assets	1 950.00
in related parties	0.00
• shares and stocks	
• other securities	
• loans	
• other short-term financial assets	
in other entities	0.00
• shares and stocks	
• other securities	
• loans	
• other short-term financial assets	
cash and other monetary assets	1 950.00
• cash in hand and at bank	1 950.00
• other cash assets	
• other monetary assets	
Other short-term investments	

Source: own calculations on the basis of [Jędrzejczyk 2003].

Table 5. Data from the period following the analyzed period (in thousand zlotys)

ITEM		Change in %
CURRENT ASSETS	137 299.00	188.96%
Inventories	33 996.00	91.34%
Materials	20 929.00	77.73%
Semi-finished products and work in progress	8 327.00	131.50%

ITEM		Change in %
Finished products	4 196.00	271.33%
Trade goods	85.00	-48.17%
Payments on account of deliveries	459.00	-58.27%
Short-term receivables	10 3118.00	270.95%
Related parties receivables	81 108.00	1637.53%
trade receivables, falling due:	81 108.00	1637.53%
• within 12 months	81 108.00	1637.53%
• after more than 12 months		
other receivables		
Receivables from other entities	22 010.00	-4.84%
trade receivables, falling due:	18 199.00	13.34%
• within 12 months	18 199.00	13.34%
• after more than 12 months		
receivables from the State budget	3 128.00	-52.56%
other receivables	683.00	
receivables in litigation		-100.00%
Short-term investments	185.00	-90.51%
Short-term financial assets	185.00	-90.51%
in related parties	0.00	
• shares and stocks		
• other securities		
• loans		
• other short-term financial assets		
in other entities	0.00	
• shares and stocks		
• other securities		
• loans		
• other short-term financial assets		
cash and other monetary assets	185.00	-90.51%
• cash in hand and at bank	185.00	-90.51%
• other cash assets		
• other monetary assets		
Other short-term investments		

Source: own calculations on the basis of [Jędrzejczyk 2003].

Table 6. Borrowed capital value (in thousand zlotys)

ITEM	
LIABILITIES AND PROVISIONS FOR LIABILITIES	109 890.07
Provisions for liabilities	5 906.00
Deferred tax liability	
Provision for pensions and similar obligations	5 860.00
• long-term	1 079.00
• short-term	4 781.00
Other provisions	46.00
• long-term	46.00
• short-term	
Long-term liabilities	7 157.00
Amounts owed to related parties	
Amounts owed to other entities	7 157.00
credits and loans	7 157.00
debt securities	
other financial liabilities	
other liabilities	
Short-term liabilities	88 408.00
Amounts owed to related parties	20 885.00
trade payables, falling due:	20 885.00
• within 12 months	20 885.00
• after more than 12 months	
other	
Amounts owed to other entities	66 591.00
credit and loans	23 393.00
debt securities	
other financial liabilities	
trade payables, falling due:	28 769.00
• within 12 months	28 769.00
• after more than 12 months	
payments received on account of deliveries	10 661.00
bills of exchange payable	
taxes, customs, social security liabilities	2 300.00
salary payables	1 215.00
other	253.00
Special funds	932.00

ITEM	
Accruals and deferred income	8 426.00
Negative goodwill	
Other accruals and deferrals	8 426.00
• long-term	7 810.00
• short-term	616.00

Source: own calculations on the basis of [Jędrzejczyk 2003].

Table 7. Data from the period following the analyzed period (in thousand zlotys)

ITEM		Change in %
LIABILITIES AND PROVISIONS FOR LIABILITIES	19 4351.00	76.85%
Provisions for liabilities	2 597.00	-56.03%
Deferred tax liability		
Provision for pensions and similar obligations	2 230.00	-61.95%
• long-term	1 566.00	45.13%
• short-term	664.00	-86.11%
Other provisions	367.00	697.83%
• long-term	367.00	697.83%
• short-term		
Long-term liabilities	3 500.00	-51.10%
Amounts owed to related parties		
Amounts owed to other entities	3 500.00	-51.10%
credit and loans	3 500.00	-51.10%
debt securities		
other financial liabilities		
Short-term liabilities	172 417.00	95.02%
Amounts owed to related parties	103 533.00	395.73%
trade payables, falling due:	103 533.00	395.73%
• within 12 months	103 533.00	395.73%
• after more than 12 months		
other		
Amounts owed to other entities	67 915.00	1.99%
credit and loans	29 205.00	24.85%
debt securities		
other financial liabilities		

ITEM		Change in %
trade payables, falling due:	33 086.00	15.01%
• within 12 months	33 086.00	15.01%
• after more than 12 months		
payments received on account of deliveries	87.00	-99.18%
bills of exchange payable		
taxes, customs, social security liabilities	3 793.00	64.91%
salary payables	1 442.00	18.68%
other	302.00	19.37%
Special funds	969.00	3.97%
Accruals and deferred income	15 837.00	87.95%
Negative goodwill		
Other accruals and deferrals	15 837.00	87.95%
• long-term	11 264.00	44.23%
• short-term	4 573.00	642.37%

Source: own calculations on the basis of [Jędrzejczyk 2003].

Table 8. Results (in thousand zlotys)

Category	Result 1	Result 2	Change in %
Fixed assets	102 169.00	144828.00	41.75%
Current assets	47 515.00	137299.00	188.96%
Equity capital	39807.00	45201.00	13.55%
Borrowed capital	109 897.00	19 4351.00	76.85%
Assessed total assets	149 684.00	282 127.00	88.48%
Assessed total equity and liabilities	149 704.00	239 552.00	60.02%

Source: own calculations on the basis of [Jędrzejczyk 2003].

Table 9. Results of company valuation

	Result 1	Result 2	Change in %
RESULTS OF COMPANY VALUATION	PLN 299 388.00	PLN 521 679.00	74.25%

Source: own calculations on the basis of [Jędrzejczyk 2003].

The above example aimed at presenting the practical application of fair value in company valuation.

As a result of conducted research we obtained the price of an economic entity in a hypothetical transaction of company acquisition, contained in the range of the so-called area of price negotiation 299 388.00 PLN - 521 679.00 PLN.

International Accounting Standards played an important role in creating a theory of valuation based on fair value. They were used to update the methods and to conform them to international regulations.

The key stage of conducted research on the role of fair value in estimating company value is such formulation of the algorithm leading to the most reliable result which will determine the future purchasing price of the entity. It should be emphasized though, that the issue of result objectivity is still open, especially in light of the elements which are not recorded or omitted in financial reports, such as the issue of intellectual capital and its reliable measuring [Jędrzejczyk 2011].

4. Conclusions

Many years of measuring company value have brought us various techniques and procedures of estimating the value of economic entities. One of alternative valuation models is the method based on fair value, which was introduced into Polish legislature by the amended Act of 23rd August 2001 on Accounting.

The validity of this approach is unquestionable due to the fact that the elements are valued with help of discounted procedure, which is one of the most precise and reliable methods of valuation taking into account problems of perception and frequent changes of the value of assessed objects in time.

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