CONVERGENCES AND DIVERGENCES IN THE SYSTEM OF VALUATION METHODS

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Abstract: *Company valuation describes a current field that includes economic and financial analysis, financial theory and business strategy. Our first objective is to present the main valuation methods and to establish the link between them. The second objective is the practical presentation of valuation based on concrete analysis. The third objective is to show how diverse methods lead to different results to the objectives of the valuation.*

Key words: *Valuation methods, convergence, divergence, goodwill*

1. INTRODUCTION

The theoretical investigation of the main groups of evaluation methods shows the purpose for they were developed, but there is a diversity of content of the ways to achieve the aim.

The diversity resulting from the use of some informational supports which are specifics of different methods groups (for example, the approach based on assets use only historical value obtained from the restated and adjusted patrimonial situations). While diversity is also given by the use of some mathematical algorithms, specific to each groups of methods.

From here result the first observation that place us in the intrinsic divergence sphere between the groups of evaluation methods generated by the informational support and the mathematical algorithms.

The second observation means the fact that we can talk about intrinsic convergence inside the groups of methods generated by the same couple, informational support–mathematic algorithms (Savu, 2009).

Based on these issues two questions arise:

- How are overcoming the intrinsic divergence in the effective plan of the application of these groups of methods?

- How the theoretical convergence, from inside of the groups of methods, will be transferred in their effective implementation plan?

Company	A	B	C
I. Total non-current assets	58,47%	9,05%	27,20%
II. Total current assets	38,35%	87,24%	70,73%
III. Total accruals and similar accounts	3,17%	3,70%	2,08%
Total assets	**100,00%**	**100,00%**	**100,00%**
I. Total shareholders' equity	87,87%	20,38%	54,74%
II. Provisions for risks and charges	0,00%	3,30%	0,00%
III. Total debt	12,13%	76,32%	45,26%
IV. Total accruals and similar accounts	0,00%	0,00%	0,01%
Total liabilities	**100,00%**	**100,00%**	**100,00%**

Tab. 1. The patrimonial assets and financial structure

	years	N-3	N-2	N-1	N
Turnover	A	13.689.124	16.852.844	46.789.570	143.932.812
	B	708.444	4.532.701	17.519.151	47.020.706
	C	2.345.476	15.483.662	40.047.151	131.199.289
Net income	A	386.002	1.481.879	6.300.104	4.274.502
	B	216.451	677.584	1.104.179	1.708.219
	C	414.969	6.182.421	16.546.514	35.611.441
Self-financing capacity	A	795.384	2.769.916	7.647.380	9.066.972

Tab. 2. Evolution of main indicators financial results

2. PROBLEM FORMULATION

Starting from the theoretical premise validated moreover by practice, namely that value represents an opinion, and the price paid is a tangible fact, comes into question the problem of identifying the causes that lead to a significant gap that usually occurs between a business value and the actual transaction price in Romania.

This problem could be solved in terms of incidence of the valuation methods chosen on the value seen in systemic perspective on the one hand, and in terms of convergence or divergence of results through the use of specific valuation methods, on the other hand (Stan, 2001).

Over 200 formulas and valuation methods used worldwide at this time are grouped into patrimonial or balance-sheet based methods, financial or income statement-based methods, mixed methods and market based methods (Anghel et al., 2001)

Our paper aims to analyze the convergence, respectively the divergence of some evaluation values that are determined on a sample of three companies in the medicine production field witch are having different patrimonial and financial structures (Table 1) and the financial results presented in their dynamics over the last four years (Table 2).

To support our approach we used the most common valuation methods of each class of methods, as follows: Based on balance-sheet methods – Adjusted Book Value method; Based on income methods - Discounted Cash Flow method (DCF), Capitalized Earnings Method and based on mixed methods – Indirect method, Goodwill method.

The approach aims to estimate the asset market value for the patrimony of the company starting from its financial statements, without considering the economic potential of the company. The book value, as a patrimonial value that can be determined for the company, is given by the accounting net assets which represent the surplus of all property and business claims on all its debt. This accounting net asset should be corrected, taking into account the tax and accountings practices.

Indicators	Company	Book value	Corrections	Adjusted Book Value
Book value	A	136.560.717	81.635.040	218.195.757
	B	3.332.519	3.969.127	7.301.646
	C	51.617.413	16.536.651	68.154.064

Tab. 3. Adjusted Book Value determination

Indicators	Company	N+1	N+2	N+3	N+4	N+5	The

						A		nonexplicit extent
Turnover	A	208.702	260.878	313.053	375.664	450.7977		
	B		68.180	85.225	102.270	122.724	147.268	
	C	190.238	237.798	285.358	342.430	410.916		
Beneficiary capacity	A	20.870	26.087	31.305	37.566	45.079		225.398
	B	10.227	12.783	15.340	18.408	22.090		110.451
	C	47.559	59.449	71.339	85.607	102.729		513.645
Self-financing capacity	A	25.870	31.387	36.805	43.266	51.079		
	B	11.227	13.983	16.640	19.708	23.390		
	C	48.559	64.449	86.339	100.607	117.729		
Renewal investments	A		3.000	2.000	2.000	3.000		
	B	1.000	2.000	1.000				
	C		200.000	500.000				
Depreciation	A	5.000	5.300	5.500	5.700	6.000		
	B	1.000	1.200	1.300	1.300	1.300		
	C	1.000	5.000	15.000	15.000	15.000		

Tab. 4. The forecasting extent

For determining the values by Adjusted Book Value method we have proceed to the net asset accounting correction, based on data from year n, by discounting the historical costs of non-current assets taking as a basis for discounting exchange ratio ROL / USD, obtaining the results from Table 3.

To evaluate through the profitableness of the company, three elements are necessary for the calculation:
- The financial performance indicator (net profit, dividend) ;
- The capitalization rate;
- Reference period expressed in number of years.

Of the many methods of evaluation based on the firm performance, we use the Discounted Cash Flow method (DCF). Under this method, the evaluation formula is (Toma, 2009):

$$DCF = \frac{CF - Ir}{(1 + t)^n} + \frac{Vr}{(1 + t)^n} \qquad (1)$$

To determine values through income statement-based methods we have established an explicit forecasting five years extent, we calculated a discount rate of 20% (taking as benchmark the medium profitability of the industry), a risk premium sector of 50%, the turnover prediction being made by applying a linear growth rate of 10% for company A, 15% for company B and 25% for company C (growth rates took into account the sales figure trend in the period (n -3, n)).

Renewal investments have been derived from the investment plans of the three companies. The non explicit extent is estimated to five years yet (Table 4).

The calculations made in the forecasting extent, lead to the following capitalized income and values (Table 5).

Capitalized income values	Company	
Discounted Cash Flow value	A	191.220.091
	B	89.188.394
	C	479.440.870
Capitalized income values	A	160.909.687
	B	78.850.197
	C	366.685.613
Mixed values	**Company**	
Indirect method	A	189.552.722
	B	43.075.922
	C	217.419.838
	B	50.345.119
	C	296.074.488

Tab 5. Title of table, left justified, subsequent text indented

	Determined values		A	B
1	Adjusted Book Value	ABV	218.195.757	7.301.646
2	Discounted cash - flow	DCF	191.220.091	89.188.394

3	Capitalized income value	ABV	160.909.687	78.850.197
4	Indirect method	IM	189.552.722	43.075.922
5	Goodwill method	GWM	152.793.364	50.345.119

Tab 6. Results centralization obtained by the three methods

The combined methods involving to take into consideration of both patrimonial and qualitative indicators related to the company financial performance.

$$Vg = \frac{ANC + \dfrac{CB}{i}}{2} \qquad (3)$$

By this method can be determining, indirectly, the goodwill of the company, as follow:

$$GW = \frac{\dfrac{CB}{i} - ANC}{2} \qquad (4)$$

The goodwill method is based on the following mathematical method (Toma, 2007):

$$GW = \frac{CB - ANC * i}{t} \qquad (5)$$

7. CONCLUSION

To draw conclusion about the proposed theme, we present the following grouped results (Table 6), continued with graphic representations of each company values for supporting more eloquent our approach regarding the convergence or divergence elements in the valuation methods system witch we have chosen.

Analysis reveals a trend of convergence between the valuation methods system for companies that have a patrimonial and financial structure similar to company A and a rate of return that circumscribes the sectorial medium rate of return.

It can be noticed an obvious divergence between the patrimonial and financial methods for structures where the current assets and the and short-term debt have the main share, such as the case of companies B and C. The size of spread as a measure of divergences between systems can be amplified by a different level of profitability.

Transferring the issue within the field of using a set of valuation methods, due to the existence of some controversy in the decision plan to choose an optimal method system, our view is that this stage of research shows for the moment that the eligibility of the methods currently poses no particular problems in the case of obvious convergence system methods (as type A companies). Instead the evaluator professional reasoning and flair step in for choosing the most appropriate methods, for some obvious divergences of the system (as is the case of companies B and C).

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