ZESZYT NAUKOWY
Wyższa Szkoła Zarządzania i Bankowości w Krakowie

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VALUATION SUMMARY OF COMPANY SHARES

Introduction

Due to practical problems with the preparation of valuation summaries of company shares that are conducted using different methods, the article is an attempt to present conclusions and recommendations concerning this issue. On the basis of the analysis of professional and scientific literature and the experience gained during many years of providing advisory services that included valuations of company stocks and shares, the article presents a recommended basic scope of necessary valuation summaries as well as selected guidelines on preparing the summaries.

1. Basic valuation methods of company shares

In practice, the following approaches to company share valuation are used for the purposes of negotiations and share purchases[1]:

- ratio approach,
- assets approach,
- income approach,
- mixed approach.

Ratio (market comparison) **methods** consists in calculating the market value, i.e. the hypothetical transaction price that can be obtained by the share owner in the sale process based on the information about similar actual transactions.

The following ratios are used to compare companies in this approach:

- P/E - price earnings ratio,
- P/BV - price/book value,

[1] See, e.g. Redakcja naukowa M. Panfil, A. Szablewski, *Wycena spółek z WIG30 - Specyfika, metody, przykłady*, Poltext, 2014; Opracowanie zbiorowe, *Wycena przedsiębiorstwa – na co należy zwrócić szczególną uwagę*, Wiedza i Praktyka Sp. z o.o., Warszawa 2017; A. Damodaran, *Wycena firmy Storytelling i liczby*, Wydawnictwo Poltext, Warszawa 2017; M. Panfil, A. Szablewski, *Wycena przedsiębiorstw. Od teorii do praktyki*, Wydawnictwo Poltext Sp.z o.o., Warszawa 2016; K. Daszyńska-Żygadło, *Wycena przedsiębiorstwa. Podejście scenariuszowe*, PWN, Warszawa 2015; R. Machała, *Zarządzanie finansami i wycena firmy*, UNMEX, Wrocław 2011; T. Copeland, T. Koller, J. Murrin, *Wycena: mierzenie i kształtowanie wartości firm*, WIG-Press, Warszawa 1997.

- P/S - price/sales ratio,
- EV/EBIT (earnings before interest and taxes),
- EV/EBITDA (earnings before interest, taxes, depreciation and amortization.

Asset-based methods consist in the determination of the company value. The methods include:

- book value method (without net asset adjustment)
- adjusted net asset method (with the adjustment of assets and liabilities),
- liquidation value method (with the adjustment of company liquidation costs),
- replacement value method (with the consideration of the necessary outlays for establishing the business).

Income-based methods consist in determining the income value understood as the total earnings that can be obtained from the company stock (shares) in a given time.

The methods include mainly :

- discounted net cash flow analysis (most frequently applied),
- discounted income method (rarely applied),
- discounted dividend method (rarely applied).

Mixed methods consist in calculating the resultant value, either arithmetic or weighted average obtained, for example, from the asset, income or ratio method. They are usually used to calculate the weighted average of the results obtained from the application of the above methods to summarize the valuation of stock or shares.

The choice of the valuation method depends on:

- valuation objective,
- company’s range of activities,
- company’s statute and other partnership agreements,
- number of voting rights and shares under valuation,
- reasons and conditions of transactions,
- company’s legal situation,
- company’s financial results,
- marketing conditions,
- company’s asset structure,
- company’s plans.

According to the literature[2] on the subject *the method of discounted cash flow and the ratio method are used jointly, which is the most common practice.*

Share valuation is sometimes conducted using the so-called **fundamental analysis** which consists in the analysis of the economy and the condition of the securities issuer. It is believed that the better company financial condition, the higher its share price. The fundamental analysis uses the information about the economy and the financial information about companies. However, the purpose of the analysis is not to assess a short-term investment profitability. In the long run – as proved empirically – there is a strong correlation between the increase in company's profits and its market valuation. This is the reason why fundamental analysis is used for long-term investments in order to find companies whose share price will increase in comparison to current prizes[3].

The results based on the fundamental analysis (fundamental share values) differ usually from the current share prices of the listed companies[4]. This indicates that company capitalization (the number of shares multiplied by the market value) calculated on the basis of the market share price is different from value of the total number of shares calculated in the valuation process.

However, the value obtained in the fundamental valuation may be the basis for forecasting the future share prices of the company under analysis.

A valuation result that is significantly higher from the current market price is an indication that buying the shares of a given company is worthwhile. The opposite result suggests selling the shares as a decrease in the share price may be expected. According to K. Borowski[5], *such comparison results in one of the three recommendations: buy, sell or keep.*

2. Basic conditions resulting from company share sale process

It is necessary in a summary share valuation to consider legal and organizational conditions regarding share sale.

First of all, a share pricing mechanism to be accepted in the share sale agreement must be considered. Practically, there are two main pricing mechanisms:

[2] M. Panfil, A. Szablewski, *Wycena spółek z WIG30. Specyfika, metody, przykłady*, Wydawnictwo Poltext, Warszawa 2014, p. 108.
[3] https://www.edukacjagieldowa.pl/gieldowe-abc/analiza-fundamentalna/ (accessed: 25.08.2021).
[4] See M. Panfil, A. Szablewski, *Wycena spółek z WIG30. Specyfika, metody, przykłady*, Wydawnictwo Poltext, Warszawa 2014, pp. 28-29.
[5] K. Borowski, *Analiza fundamentalna. Metody wyceny przedsiębiorstw*, Difin, Warszawa 2014, p. 30.

- **Locked box** – i.e. a mechanism used on the completion of the transaction when the share purchase price is determined in advance and is not subject to change – in such cases the **Equity Value** price is immediately used.
- **Completion accounts,** i.e. a mechanism used on the completion of the transaction when the final deal price is determined in the agreement on the basis of the company financial data on the day of signing the final agreement – in this case the Enterprise Value price is considered in the agreement first and only before the payment for the shares the Enterprise Value price is calculated to Equity Value price by adjusting the net debt.

The application of various share pricing mechanisms results from the course of the share sale process, also referred to as the Mergers and Acquisitions process(M&A), which consists of numerous steps[6]. The process from the decision to start it till the moment when it is finalized may take years. The examples of M&A steps are as follows:

- **Develop an M&A strategy** – the M&A strategy consists in precise determination of the reasons (objectives) and the expected benefits resulting from the process.
- **Set M&A criteria** – The step involves the identification, determination and selection of company parameters that the target company should meet.
- **Search for potential target companies** – Companies that meet M&A criteria are chosen and each company is parameterized.
- **Begin acquisition planning** – Business contacts are initiated with M&A target companies. The objective of introductory contacts is to acquire information about the expectations of target companies.
- **Perform analyses** – A preliminary selection of M&A target companies is based in commonly available information. On the basis of the data information officially presented by the target company, the acquiring company conducts financial, marketing, organizational, sale and CSR analyses.
- **Indicate interest in acquisition** – When the target company meets the criteria, the acquiring company presents an indication of interest in acquisition.
- **Due diligence** -Before starting the negotiations concerning acquisition negotiations, the party interested in purchasing the shares investigates in detail the target company. The objective of due diligence is to precisely analyze the conditions and to assess the

[6] Zob. np. www.fuzje.pl; https://fuzje.eu/baza-wiedzy-m-a/m-a-co-to-jest (accessed: 25.08.2021).

value of the company to be acquired. Due diligence involves every aspect of the company: its finance, accounting, HR, marketing, sales, management, production, etc.

- **Develop and negotiate share sales and purchase agreement** -In the subsequent steps of negotiations, several versions of extensive agreement are usually developed. The share price depends (among other factors) on the agreement content, including the range of responsibility for the company's condition that the selling party is ready to accept).
- **Acquisition and purchase agreements** – When due diligence meets the expectations of the acquiring company, the acquisition agreement is signed.
- **Fulfilment of conditions precedent** – In practice, before the payment is completed, both agreement parties are obliged to perform various legal activities, including – in the case of high-value transactions – the notification of the intention of concentration of undertakings to the President of the Office of Competition and Consumer Protection (UOKiK); appropriate administrative decision on the consent to the concentration has to be obtained.
- **Closure of M&A deal** – The payment for the share is completed and the ownership of the shares is transferred to the buyer.

It can be concluded from the above that a long time may pass between the day of the company valuation and the day of the payment. Thus, when the completion accounts mechanism is implemented in the acquisition agreement, the valuation process includes the calculation of the estimated Enterprise Value and the initial Equity Value and at the moment of payment, the equity value is updated on the basis of the updated net debt value.

3. The scope of valuation summary

When summarizing a company share valuation, which is usually performed with the use of **two methods** (the income and ratio method), it is necessary to present:

- Valuation results obtained with the income method,
- Valuation results obtained with the ratio method,
- Weights assigned to the results obtained with a given method,
- Weighted average of the results obtained with the two methods.

Valuation authors differentiate the **weights** for the results from individual methods even in the proportion of 80 % to 20 %[7]. As a result, the weights significantly influence the final valuation result in the form of the weighted average from the valuation results obtained from subsequent methods. It is also necessary to present justifications for the accepted weights in valuation summaries. The justifications include **conclusions** concerning, for example:

- the resource structure of the valuated company,
- the financial situation of the valuated company,
- the comparability level of the ratios of the valuated company to the ratio of companies indicated as comparable for the purposes of the ratio valuation method,
- the trends in the area of the planned revenues and margins of the valuated company,
- the factors influencing the reliability of the cost forecasts of the valuated company and other companies in the same sector, etc.

The structure of resources may be significant when, for example, a substantial part of them is difficult to sell or valuate as there is no market for them.

Financial situation may have an impact on the weights if, for example, the results of the valuated company have been comparatively low in recent years and the reliable forecasts used in the income valuation predict significantly better results or if the company is developing dynamically. Obviously, a situation is also possible where deterioration of the results of the valuated company is predicted in comparison to the current results of companies in this sector due to a substantial change in formal or marketing conditions.

The comparability level of ratios used in the ratio method may differ significantly between companies when, for example, the valuated company has a unique marketing situation or when there are no companies on the stock exchange with substantially similar revenues or markets.

The trends regarding planned revenues and margins of the valuated company may have an impact on the weights used to calculate the weighted average of the valuation results as new conditions of business activities in a given sector make it difficult sometimes to rely on the parameters that were previously used in particular valuation methods.

The **factors that have an impact on the reliability of the valuated company's cost forecast** include changes in:

- legal regulations,

[7] See e.g. M. Panfil, A. Szablewski, *Wycena spółek z WIG 30 - Specyfika, metody, przykłady*, Wydawnictwo Poltext, Warszawa 2014, p. 198.

- technologies,
- preferences of buyers,
- business model,
- labor market,
- supplier environment,
- financing sources,
- investment programs,
- structure of shareholders, etc.

Financial data in the summary of valuations with the income method are given in an exemplary structure presented in Table 1 below[8].

Table 1. Exemplary structure of financial data that are a part of the summary of share valuation with the income method

Specification
EBIT (operating result)
Income tax rate
Income tax
NOPLAT (EBIT less income tax)
(+) Amortization
(-) Investment outlays
(-) Change in NWC
FCFF
Residual value (final)
WACC
Discount ratio
Discounted FCFF
Change in FCFF after the forecast period
Total discounted FCFF
Discounted residual value
Enterprise Value
(+) Cash and cash equivalents
(-) Amount of interest debt
(+) Other non-operating assets
(-) Capital of minority shareholders
(-) Liabilities to employees
Equity Value
Number of shares
Estimated value of one share

Source: M. Panfil, A. Szablewski, *Wycena spółek z WIG 30 - Specyfika, metody, przykłady*, Wydawnictwo Poltext, Warszawa 2014, pp. 326-327.

[8] Ibidem, pp. 326-327.

During the fundamental valuation it is also necessary to compare valuation results with the company's current share prices on the stock exchange and to make appropriate conclusions.

Practical experience shows that share valuation results are significantly influenced by **residual value**[9]. For example, in the share valuation of the TAURON company, the residual value amounted to 91.7% company equity and as much as 141% equity capital[10]. Thus, it is necessary in the share valuation summary to justify in detail the assumptions made to calculate the residual value. Therefore, it is useful to present a factual and logical reasoning that contains the history and description of the forecast concerning the valuated company. According to A.Damodaran, a story will change the figures and the final valuation of the company. Good narrative can have a major impact on your company's success. You should tell your story to investors (to acquire the equity), to customers (to make them buy) and to employees (to encourage them to work in your company)[11].

In order to prepare an accurate forecast, the so-called **Black Swans**, i.e. unpredictable events have to be taken into account. A Black Swan has three attributes. Firstly, it is atypical; it is beyond the realm of our usual expectations because none of the elements from the past indicates the possibility of its occurrence. Secondly, it carries an extreme impact on reality. Thirdly, despite its atypicality, human nature insists on justifying its occurrence to make it explicable and predictable[12]. Good examples of this type of events that have a crucial impact on economic forecasts are the pandemic or the macroeconomic financial crisis.

Conclusions

The following conclusions and recommendations concerning the content of company valuation summaries can be presented on the basis of the above information and practical experience.

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[9] „The total of free cash flows discounted at the end of the forecast period that were generated in the periods after a detailed forecast"; R. Machała, *Zarządzanie finansami i wycena firmy*, Oficyna Wydawnicza Unimex, Wrocław 2011, pp. 473-474. See also: R. Tuzimek, *Stopa wzrostu w wartości rezydualnej– poprawność sporządzanych kalkulacji w wycenie akcji spółek notowanych na Giełdzie Papierów Wartościowych w Warszawie*, Studia i prace Kolegium Zarządzania i Finansów, Zeszyt Naukowy 109, Szkoła Główna Handlowa w Warszawie, Warszawa 2011, p. 164.

[10] M. Panfil, A. Szablewski, *Wycena spółek z WIG 30 - Specyfika, metody, przykłady*, Wydawnictwo Poltext, Warszawa 2014, pp. 195-196.

[11] A. Damodaran, *Wycena firmy. Storytelling i liczby*, Wydawnictwo Poltext, Warszawa 2017, pp. 12 - 14.

[12] N. Taleb, *Czarny Łabędź. Jak nieprzewidywalne zdarzenia rządzą naszym życiem*, Wydawnictwo Zysk i S-ka, Poznań 2020, p. 16.

- Due to the fact that practically at least the income (discounted net cash flow) and the ration method are used, it is necessary to present, inter alia, the **average weighted value of shares under valuation** in the company valuation summary. Consequently, it is necessary to justify the weights used for the results of particular valuation methods.
- In the case of the fundamental valuation method it is necessary to **compare the results with the current share price** on the stock market and to formulate conclusions on the forecasts regarding the future share prices of the company under analysis. If the valuation results are higher than the current share price, it can be concluded that the share process may go up in the future and vice versa: if they are lower, a decrease in the share price can be expected.
- The summary of company share valuation should consider **legal and organizational conditions** of the share acquisition process including, inter alia, frequently a long period between share valuation, the date of signing the acquisition agreement and the date of payment.
- Moreover, a **share pricing mechanism** should be considered that is going to be used is the share sale agreement. Thus, if completion accounts method is used, an estimated Enterprise Value and an initial Equity Value should be presented, while at the moment of payment for the shares, the Equity Value should be updated on the basis of the updated net debt value.
- The **factors that influence the credibility of cost forecasts** for the valuated company are for example changes in legal regulations, technologies, the preferences of buyers, business model, labor market, supplier environment, financing sources, investment programs, the structure of shareholders.
- The results of share valuation are significantly influenced by **residual value**. As a result, it is necessary in the share valuation summary to present a detailed justification of the assumptions used to calculate it. What is more, it is helpful to present in the summary a factual and logical reasoning that contains the history and description of the forecast concerning the valuated company.
- Negative and unpredictable events, the so-called **Black Swans** have to be considered in the development of accurate forecasts.

The complexity of the above issues indicates the need for further research on the impact of the summaries of company share valuation on stock transactions between buying and selling parties.

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[11] https://www.edukacjagieldowa.pl/gieldowe-abc/analiza-fundamentalna
[12] www.fuzje.pl; https://fuzje.eu/baza-wiedzy-m-a/m-a-co-to-jest

Abstract

The article presents conclusions and recommendations concerning the scope of necessary company share valuation summaries. The presented guidelines concern the need to use appropriate weights for the calculation results obtained from particular valuation methods, to consider conclusions from the comparison of the results of fundamental analysis with the current share price of listed securities, to consider legal and organizational conditions, pricing mechanisms, elements of cost forecasting, ways of residual value calculation as well as unpredictable events.

Key words

Share valuation, share pricing mechanisms, residual value, share sale process.