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CURRENT GLOBAL THEORIES, TRENDS AND DEVELOPMENTS IN THE ANALYSIS AND VALUATION OF A TARGET COMPANY

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Purpose: the aim of this paper is to perform a thorough, in-depth and current literature review on Mergers & Acquisitions. The emphasis is on the current global theories, global trends and developments within the last 10 years and so in the valuation of a potential takeover of a target company. *Discussion*: mergers and acquisitions are considered as one of the tools for improving business efficiency. At the same time, a merger and acquisition transaction is justified if there is a synergistic effect. However, recent studies have shown that the most common reasons for an inefficient acquisition are the overestimation of the target company and the synergy effect associated with this acquisition. Thus, the valuation of the target company is the most important aspect at the planning stage of the mergers and acquisitions process. *Results*: the paper provides a critical review of the literature examining the synergy theory and the development of Tobin's Q-theory, current global trends in mergers and acquisitions, discounted cash flow analysis, and market multipliers in order to improve the valuation of the acquired company.

Keywords: mergers and acquisitions, economic valuation, financial analysis, global theories and trends, valuation of the target company.

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Introduction

The primary motivation for the M&A is the maximisation of shareholder value. Companies should pursue an acquisition only if it creates value, which could be justified by the presence of a synergy effect. However, recent studies [8, 23] have indicated that the most frequent reasons for an acquisition's failure are overestimation of the target's value and the synergy effect associated with the acquisition. Thus, the valuation of a target company is a critical aspect in the planning stage of the mergers and acquisitions process.

In this paper, we consider synergy theory and development of Tobin's Q theory, the current global trend in M&A, discounted cash flow analysis and market-based multiples as improvement of target's valuation.

Current global theories

Recent studies [19; 21] conclude that the acquirer can pursue multiple merger motives. The research [21] shows that seeking operating synergy (motives relating to economies of scale and innovation) is riskier than financial synergy (motives relating to the diversification of cash flows, debt misvaluation [17]). Operating synergy is most difficult to value and implement, that could be supported by the coexistence of value-increasing and value-decreasing causes [19], that increases the uncertainty in M&A.

The Q-theory model [13] was revised under the consideration of the target's intangible assets, that increase cost of capital making Q lower; however, they provide access to new investment opportunities and growth [15]. These results supported by the evidence [12] that the specific source of synergy – corporate innovation activity - has a positive impact on merger outcome because large firms buy R&D intensive small firms and conduct fewer innovation activities themselves [20].

The description of current global theories is presented in table 1.

Table 1

Description of the discussed M&A theories

Models	Operating and Financial Synergy	Q-theory model
Description	Synergy in M&A occurs when the value of target and acquirer is higher if they operate as a single entity than separates ones.	M&A is the source of better projects and management Q = market value/replacement cost of capital High Q-firm buys low Q-firm

Source: Summarised by the author based on stipulated literature

Thus, operating synergy enhances revenue and reduces costs and financial synergy allows reducing financial cost. However, operating synergy is challenging to value and implement and value-decreasing motives could be hidden under synergy. The advantage of the Q-theory model is the simple calculation and interpretation of Q. However, recent research indicates that this model does not consider hidden opportunities of intangible assets.

Global trends

After the financial crisis of 2008 that interrupted the sixth merger wave, the international interconnectedness within the stock market showed the increasing role of the emerging markets (EM) [24]. In 2010, EM took one-third of overall activities in the total market of global M&A [1]. Considering the enter-timing perspective [9; 10], emerging markets firms (EMFs) have to acquire knowledge and assets in developed economies to catch-up with multinational companies [1, 22]. This trend could create a new merger wave mostly placed within EM, as the US economy and other developed countries have a high probability of recession (Table 2).

Table 2

Probability of recession

Country	Probability of recession (24.11.2019)	Probability of recession (27.02.2020)
Japan	40%	40%
United States	33%	25%
Canada	25%	20%
China	17,5%	20%
Germany	40%	20%
Italy	25%	20%
United Kingdom	25%	17,5%
Switzerland	20%	15%
Russia	10%	10%
India	0%	0%

Source: Bloomberg Database as of 24.11.2019, 27.02.2020 – ECFC function

Developments in the valuation of a target company

Development in the valuation of a target company is focused on the quality of the valuation, which is determined by the degree of uncertainty caused by the availability and quality of accounting information about the target [18], unconditional accounting conservatism [14] and its market value [16]. The valuation of a target company could be considered from the intrinsic or market-based valuation perspective [5].

For estimation of intrinsic value, several models could be used (table 3), depending on the company characteristics such as amount and frequency of dividends, predictability of cash flows [3, 4].

Table 3

Description of equity asset valuation models

Model	Description
THE DIVIDEND DISCOUNT MODEL (D.D.M.)	Dividends and share price when we sell shares are considered as cash flows for a shareholder. The present value of the expected dividend to be received plus the present value of the expected selling price in one year present the value of that share of stock today.
FREE CASH FLOW VALUATION	The intrinsic value of a company is determined by the present value of its expected cash flows, according to the discounted cash flow method (DCF). Free cash flows are cash flows available for distribution to shareholders. FCFF is used to estimate the company's value, and FCFE is used to evaluate the common equity.
RESIDUAL INCOME VALUATION	The concept of residual income is represented by the economic value added (EVA). EVA is created in a situation where the generated revenue is greater than the cost of obtaining capital. If the cost of obtaining capital exceeds the generated revenue, the company's value is destroyed.

Source: Bloomberg, 2020

Thus, the DDM approach is most suitable for companies in which the investor has minority ownership, and the company has a clear dividend policy that is directly related to the company's profitability. However, there is a problem of forecasting dividends that can be considered from the perspective of the following approaches:

1. The flow of expected future dividends can be associated with one of several stylised growth models

2. The final number of dividends can be predicted up to the terminal point; then the remaining dividends can be estimated by assigning them to a stylised growth model or by predicting the share price as of the terminal point of the dividend forecasts.

An economically sound basis for valuation can be provided by Free cash flows. Usage of FCFF or FCFE is acceptable if the investor has majority ownership, the company does not pay dividends, and free cash flows are consistent with profit. Also, free cash flows method allows taking into account more complex capital structures. However, an analyst must carefully interpret the corporate financial statements and have sufficient information to make reasonable assumptions for the construction of FCFF and FCFE. Moreover, some components (net income, EBIT, EBITDA, and CFO) of profit ignore or double-take into account the portion of the cash flow.

The residual income model provides several advantages. For instance, it can be used to evaluate Executive compensation or to measure internal corporate performance. Also, terminal values do not make up a large part of the value relative to other models. Moreover, the model uses easily accessible account information. Finally, the model can be used when there are no dividends, short-term positive free cash flows, and when they are unpredictable. However, we can indicate some disadvantages of the residual income model. For example, accounting information may be manipulated by management and may require significant adjustments. Also, an analyst must make appropriate adjustments when the net excess ratio is not maintained.

Although the DCF(FCFF) model is the fundamentals of intrinsic valuation, errors and questionable judgements[1] [11] arise in DCF construction and executions. There are also problems when firms use partially active debt management, which makes it challenging to use traditional formulas. However, the study [7] presented a combined approach by Modigliani, Miles, and Ezzell that can be used to evaluate a company.

Price and enterprise value multiples could be used for the improvement of valuation accuracy [26]. Enterprise multiples are considered as a robust predictor of expected returns; however, their effect is primarily attributable to mispricing [6].

Thus, DCF models and market-based multiples could yield discrepant

[1] Examples of errors and questionable judgements: economically implausible ideas about risk-free interest rates or acceptable long-term economic rates of return

valuation estimates. However, the Bayesian framework can be used to obtain a comprehensive assessment of a target [25]. Also, the price and enterprise value multiples combined in screening could be used for the identification of the possible targets. For instance, Price-to-earnings (PE), Price-to-sales (PS), Price-to-book (PB), Price-to-cash-flow (PCF) and dividend yield (DY) ratios are used to eliminate highly overpriced companies, according to Bloomberg scoring analysis (XPFS spreadsheet).

Gap identification

The above-described research emphasises the importance of understanding the merger motives and enter-timing, the business process of a target company, also the importance of an information base for a sound valuation.

However, most research is based on the US market, and there are few pieces of research regarding EM. The development and verifiability of ideas presented in this research should be considered based on examples of emerging countries M&A activities, given the high probability of a recession in the US and EU markets. Nevertheless, the researcher could face with lack of information analysing EM, as there has not efficiency developed legislation about disclosure of M&A activities [1]. Exploring how governance mechanisms facilitate the realisation of synergetic gains will be necessary for further development of the target's valuation.

DCF modelling is a challenging task due to uncertainty in the valuation of cash flows, that results in analysts' mistakes, and there is no standard approach for discounts analysts' DCF models and price targets [11]. Also, artificial intelligence (AI) technologies could be used in measuring the uncertainty of cash flows; however, this issue was not covered in the research mentioned above. The development of valuation formulas [7] could be applied to the target's valuation, and then the impact on bidding price could be considered.

Most of the studies covered the target's valuation issue, considering the DCF method. A further contribution to the literature could consider the mixed-method approach, trying to create a balanced scorecard with the implementation of the DCF method and price and enterprise value multiples, and further assessment of the effectiveness of such system, considering benefits against time-consuming.

Conclusion

The conducted literature review was primarily focused on the current global theories and trends in M&A, developments of controversial issues arising in a target's valuation process through the DCF (FCFF) method.

The research shows that multiple motives could be a driver for current mergers and acquisitions. Operational synergy could provide more benefits for the acquire comparing with financial synergy; however, the implementation and valuation of operational synergy is still disputable. Also, the research revised the Q-theory with the focus on intangible assets that could provide company opportunities for future growth. Thus, as M&A occur within multi-motives, there is necessary to have a clear understanding of each motive and how their combination can influence the value of the merged company.

The current global trend in M&A activities is focused on the development of emerging markets given the high probability of a recession in some developed countries. The influence of emerging markets increases worldwide, and they demonstrate new opportunities for both targets and acquirers. Therefore, emerging markets should be better examined from the perspective of M&A opportunities (legislation, prospects for optimising costs and increasing revenues).

The valuation process of a target company is complicated and involved the consideration of cash flow in uncertainty. An appropriate method should be chosen based on the available company's information and its characteristics. The choice of valuation method should be made under available data about the company and the company's dividend policy that allows making reasonable assumptions about the estimated cash flows. Also, we should consider the multi-method that combine market-based valuation that could be used for the selection of the appropriate targets for further analysis using the DCF (FCFF) model. Moreover, artificial intelligence, based on the Basian approach, could be used for valuation process optimisation.

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ГЛОБАЛЬНЫЕ ТЕОРИИ, ТЕНДЕНЦИИ И РАЗВИТИЕ ИНСТРУМЕНТАРИЯ АНАЛИЗА И ОЦЕНКИ КОМПАНИИ В СДЕЛКАХ СЛИЯНИЯ И ПОГЛОЩЕНИЯ

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Цель: проведение тщательного анализа актуальной литературы по вопросам оценки сделок слияния и поглощения. В работе делается акцент на текущей глобальной ситуации, глобальных тенденциях и событиях за последние 10 лет, а также на оценке потенциального поглощения компании. *Обсуждение*: слияния и поглощения рассматриваются как один из инструментов повышения эффективности бизнеса. В то же время сделка слияния и поглощения оправдана при наличии синергетического эффекта. Однако недавние исследования показали, что наиболее распространенными причинами неэффективного приобретения являются переоценка приобретаемой компании и синергетический эффект, связанный с этим приобретением. Таким образом, оценка целевой компании является наиболее важным аспектом на этапе планирования процесса слияний и поглощений. *Результаты*: в статье представлен критический обзор литературы, изучающей теорию синергии и развитие Q-теории Тобина, современные мировые тенденции слияний и поглощений, анализ дисконтированных денежных потоков и рыночные мультипликаторы с целью повышения оценки приобретаемой компании.

Ключевые слова: слияния и поглощения, экономическая оценка, финансовый анализ, глобальные теории и тенденции, оценка целевой компании.

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