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M&A EFFECTIVENESS ASSESSMENT: EMPIRICAL STUDY

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Importance: mergers and acquisitions became an efficient strategy for gaining competitive advantages in rapidly changing world. The process of M&A effectiveness assessment is noticeably challenging due to various factors, including non-financial factors, influence on the performance of merged companies. Thus, there is a necessity in development of financial analysis tools and its application to the ESG integration in the M&A effectiveness estimation. *Purpose*: article is devoted to problems regarding the estimation of the M&A effectiveness taking into account material ESG risks and provide the recommendations for M&A deal effectiveness assessment. *Research design*: the study critically discusses valuation methods that could be used in assessing the fair value of target and acquirer and identifies the most suitable method for considered industry and companies and provides the M&A deal effectiveness assessment. *Results*: the paper provides the recommendations regarding the M&A effectiveness estimation process. Performed results in the empirical research highlight the necessity of ESG risks integration in the process of M&A effectiveness assessment.

Keywords: mergers, M&A, ESG risks, M&A valuation, DCF valuation.

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Introduction

Competition is a driver for the development of any company. Mergers and acquisitions (M&A) became a beneficial strategy for companies to rapidly obtain competitive advantages.

Valuation plays a central part in acquisition analysis, as a process of the target's fair value estimation. M&A should be considered as complex investment project due to the nature of M&A from an economic perspective. This provides the opportunity to use investment analysis tools for M&A effectiveness estimation. Traditionally, takeover valuation considers two specific factors: the effect of synergy using the DCF valuation method and the impact on the value of changing management and restructuring the target [3]. These factors require not only quantitative but also qualitative analysis, which could create additional issues and uncertainties in valuation.

A huge body of literature is devoted to the valuation of M&A effectiveness. One of the most challenging questions is how to value the M&A effectiveness when the acquirer can pursue multiple motives and various factors influence the M&A effectiveness estimation. We discussed the evolution of knowledge regarding the M&A valuation process in the article [9] and concluded that we have to choose a valuation method based on available information about companies, use multi-method that combine market-based valuation and DCF valuation, and use artificial intelligence technologies, for instance, based on Bayesian approach, that could be used for valuation process optimization.

This empirical study considers one recently proposed M&A deal within the Food-Retail industry in the EU market. The purpose of the study is to provide the estimation of the M&A effectiveness and the recommendations for considered M&A deal. The study critically discusses valuation methods that could be used in assessing the fair value of target and acquirer and identifies the most suitable method for considered industry and companies. Data for this study were collected using the Bloomberg database (Bloomberg spreadsheets) and publicly available sources.

Methods and results of the study

Justification of valuation method

Three different approaches could be used for valuing a company: discounted cash flow valuation, relative valuation, and option pricing models. The discussion of the advantages and disadvantages of these approaches is presented in table 1.

Table 1

The comparison of valuation approaches used in acquisition analysis

Valuation approach	Advantages	Disadvantages
Discounted cash flow valuation	• Suitable for the companies that can generate cash flows (even negative cash flows) • Can be applied for unique business • Consider the long-time horizon (consider a firm as a going concern that is more suitable for acquisition analysis) • The various capital structure could be taken into account • Less exposed to market moods and perceptions	• Can not be used if the contingency occurs • Existence of uncertainty in the valuation of cash flows due to the number of assumptions
Relative valuation	• Suitable for the assets that do not generate the cash flows • Require fewer inputs compared to the DCF approach • Reflect market perceptions and moods (could be suitable for sell-side in M&A)	• Require the existence of an active market • Require the number of similar assets that are priced • Consider short-time horizon • May overvalue the firm

Valuation approach	Advantages	Disadvantages
Option pricing models	• Suitable for companies with future cash flows under certain conditions for which the probability could be estimated • Can be applied for unique business	• Many of the inputs for the option pricing model are difficult to obtain • Consider short-time horizon • Mistake opportunities for options • derive value from an underlying asset that has to be estimated first using another valuation approach

Source: created by the author based on observed literature [3]

Within each approach, the analyst has to choose between different models [3], considering the characteristics of a firm being valued. These characteristics can include the level of the company's earnings, the sources of earnings growth, growth potential, dividend policy and the stability of the leverage.

This study considers the one proposed M&A deal in the Food-Retail industry: Carrefour SA (EU market, France) acquires Casino Guichard-Perrachon SA (EU market, France) [1].

First, the nature of the cash flows of these companies should be considered. Based on the information in Financial Statements of given companies, cash flows are currently presented and expected in the near future; also, there are no cash flows under certain conditions. Thus, we could consider DCF or relative valuation approaches for acquisition analysis.

Second, we should contemplate the existence of comparable firms if we would like to use a relative valuation approach. This approach could be used in the step of choosing the potential target when companies have a list of targets. P/S or EV/S multiples could be applied for relative valuation, taking into account the industry-specific characteristics. However, in considered case where the acquirer proposed the M&A deal, and we examine the intrinsic value of the target, this approach is not applicable.

Thus, the DCF approach is the most suitable for considered case. Moreover, with the purpose of M&A and under the assumption of a going concern, the DCF approach is more appropriate compared to other approaches.

The previously done literature review of developments in valuation methods [9] showed that the application of DCF approach is a challenging task due to the quality of accounting information [11] and questionable judgements such as economically implausible ideas about risk-free interest rates or acceptable long-term economic rates of return [4]. These factors lead to uncertainty in the valuation of cash flows. The Bayesian framework was suggested [12] as an improvement of the valuation and understanding the degree of uncertainty. However, this study does not cover the application of the Bayesian approach.

Despite the issues in the application of DCF approach, this approach continues to be the most popular [7], and according to the carried-out justification of the valuation model, the DCF approach is most acceptable in the considered case.

DCF approach has several modifications in valuation models. The algorithm created by Damodaran [3] could be used for identification of the appropriate to our cases model.

As the cash flows of considered companies can be estimated, and we assume unstable leverage, the FCFF should be applied. The current earnings of the companies are positive and normal, so we use them as a base. We use the historical average growth rate for the forecast.

Key Food-Retail industry transformations significant for valuation

Many traditional grocery retailers in the United States and Western Europe experience their sales and margins fall [10]. Three significant transformations in Food-Retail industry directly influenced sales and margin growth: changes in consumers' habits and preferences, intensifying competition, and new technologies, should be considered.

Changes in consumers' habits and preferences are characterised by the expectation of obtaining anything, anywhere and in any time. One behavioural change common to every demographic group has posed an enormous challenge for the grocery industry: people are less inclined to cook. As a result, food service is growing faster than food-at-home consumption [10].

The competition in the Food-Retail industry intensifies due to the growth in e-commerce that empowers the development of ecosystems – for instance, the ecosystem «New Retail» (integration of online and offline channels) created by Alibaba in China. The analysis provided by McKinsey [10] shows the shift between $200 billion and $700 billion in revenues from traditional grocery retailers to other formats and channels by 2026 – further hurting sales productivity and aggravating space overcapacity.

The implementation of new technologies such as digital solutions, artificial intelligence, advanced analytics, the Internet of Things (IoT) and robotics – should be considered as a source of future growth from one side and as the high required current costs from another side. However, changes in the business model could increase profitability.

The revenue forecasting is one of the basic steps in DCF model creation as other characteristics of the model usually depend on the revenue (calculated as a percent of revenue). Understanding the business model, which means identifying the drivers for revenue growth, is the crucial requirement for DCF modelling. The Food-Retail industry specifics consider «Stores number», «Selling space», «Sales per sqm» and «Average Selling space of the store» as the key drivers for revenue growth. However, the current transformations of the given industry – focus on online sales and ecosystems development forced by the current global situation of COVID-19 and self-isolation – prevent the use of traditional revenue drivers. Thus, the analysis considers the historical average growth rate of return, taking into account the growth rate of the economy.

Results of the analysis

The proposed M&A deal details are presented in table 2.

Table 2

Summary of M&A deal

Acquirer	Carrefour SA (France)
Target	Casino Guichard Perrachon SA (France)
M&A strategy	Save the market share of the grocery market that would create France’s biggest grocer and a new market leader in Brazil.
Nature of bid	Friendly
Transaction value	EUR 14,990 million
Payment type	Cash

Source: Bloomberg, 2020

Key insights of the acquirer – Carrefour SA (France)

Table 3

Basic information about the acquirer

Description	Carrefour operates supermarkets, hypermarkets, cash and carry stores, and e-commerce websites. The Company offers consumer goods, food and non-food products, household supplies, textiles, electronics, home appliances, and local products. Carrefour serves customers worldwide.
Operations	Carrefour’s store network consists of around 1,375 hypermarkets (averaging 7,345 sq. m.), 3,300 supermarkets (1,320 sq. m), 7,000 convenience stores (60-900 sq. m.), and nearly 400 cash and carry outlets (4,120 sq. m). Carrefour’s distribution network consists of around 120 warehouses across its territories.
The strategy of the company	Carrefour has been slow to adapt to changes in the grocery retail landscape, particularly online delivery, and had to endure deep erosions to profits while it adjusts. The company’s “Carrefour 2022” strategy is wide-ranging and touches most, if not all, parts of its business. Carrefour is investing €2.8 billion in e-commerce to generate €5 billion from online by 2022. It has extended home delivery to 26 French cities, including 15 with one-hour express delivery. To enhance operating efficiency and increase responsiveness, Carrefour is streamlining its head offices across all countries. The company is making a lot of operational changes, too. It will revamp its product offering by offering a +10% reduced assortment size and pooling purchasing to reach lower purchasing costs.
M&A back-ground	In 2018 Carrefour’s Brazilian subsidiary acquired e-Mídia, a food website company that hosts recipe website Cyber Cook and lifestyle websites Vila Mulher and Mais Equilíbrio. In 2018 Carrefour acquire Quitoque, a meal-kit delivery service. The company is based in France and emphasises local and seasonal produce. The acquisition expands Carrefour's online presence. It also acquired a stake in Showroomprivé, Europe's second-largest online private sales operator.

Source: Bloomberg, 2020

Valuation of the acquirer

The FCFF model with stable growth was chosen for the valuation of considered companies, and the calculation of FCFF based on historical data is presented in table 4. DCF modelling indicates the intrinsic value of the acquirer of €19 billion (table 5).

Table 4

FCFF based on historical data (€ million)

Income Statement	FY 2009 27.06.2009	FY 2010 03.07.2010	FY 2011 02.07.2011	FY 2012 30.06.2012	FY 2013 29.06.2013	FY 2014 28.06.2014	FY 2015 27.06.2015	FY 2016 02.07.2016	FY 2017 01.07.2017	FY 2018 30.06.2018	FY 2019 29.06.2019
Revenue	**85 366,0**	**80 511,0**	**76 067,0**	**75 673,0**	**74 888,0**	**74 706,0**	**76 945,0**	**76 645,0**	**78 315,0**	**76 000,0**	**72 397,0**
Revenue growth	-	*-6%*	*-6%*	*-1%*	*-1%*	*0%*	*3%*	*0%*	*2%*	*-3%*	*-5%*
Cost Of Goods Sold	67 626,0	63 969,0	60 673,0	60 659,0	59 828,0	59 270,0	60 838,0	60 789,0	62 311,0	60 850,0	58 054,0
% out of revenue	*79%*	*79%*	*80%*	*80%*	*80%*	*79%*	*79%*	*79%*	*80%*	*80%*	*80%*
Gross Profit	**19 730,0**	**18 645,0**	**17 618,0**	**17 323,0**	**17 435,0**	**17 657,0**	**18 571,0**	**18 576,0**	**18 723,0**	**17 806,0**	**16 834,0**
Gross margin	*23%*	*23%*	*23%*	*23%*	*23%*	*24%*	*24%*	*24%*	*24%*	*23%*	*23%*
Operating Expense	18 073,0	16 942,0	17 758,0	15 858,0	15 053,0	15 122,0	16 383,0	16 597,0	15 052,0	17 063,0	15 776,0
Operating Income (EBIT)	**1 657,0**	**1 703,0**	**(140,0)**	**1 465,0**	**2 382,0**	**2 535,0**	**2 188,0**	**1 979,0**	**3 671,0**	**743,0**	**1 058,0**
Operating margin	*2%*	*2%*	*0%*	*2%*	*3%*	*3%*	*3%*	*3%*	*5%*	*1%*	*1%*
Effective Tax Rate %	60,4%	57,8%	0,0%	65,4%	37,3%	35,3%	34,8%	34,6%	115,9%	108,9%	69,7%
Net Property, Plant & Equipment	15 487,0	15 833,0	14 278,0	12 022,0	11 422,0	12 568,0	12 454,0	13 720,0	13 097,0	12 637,0	15 759,0
Depreciation & Amort.	1 965,0	1 740,0	1 644,0	1 580,0	1 483,0	1 451,0	1 574,0	1 547,0	1 601,0	1 536,0	2 328,0
% out of PPE	*13%*	*11%*	*12%*	*13%*	*13%*	*12%*	*13%*	*11%*	*12%*	*12%*	*15%*
Capital Expenditure	2 074,0	1 832,0	2 119,0	1 504,0	2 159,0	2 411,0	2 378,0	2 749,0	-	1 611,0	1 725,0
% out of revenue	*2%*	*2%*	*3%*	*2%*	*3%*	*3%*	*3%*	*4%*	*0%*	*2%*	*2%*
Change in Net Working Capital	295,0	(729,0)	(240,0)	(30,0)	(285,0)	19,0	275,0	454,0	156,0	115,0	56,0
% out of revenue	*0,35%*	*-0,91%*	*-0,32%*	*-0,04%*	*-0,38%*	*0,03%*	*0,36%*	*0,59%*	*0,20%*	*0,15%*	*0,08%*
Free cash flow to firm (FCFF)	**251,9**	**1 355,3**	**- 375,0**	**612,8**	**1 101,6**	**661,8**	**348,2**	**- 361,6**	**859,6**	**- 255,9**	**867,9**

Source: created by the author based on Bloomberg data, 2020

Table 5

The value of Carrefour (€ million)

Income Statement	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E
Revenue	**71 244,7**	**70 402,6**	**69 875,8**	**69 336,8**	**68 820,5**
Revenue growth	*-2%*	*-1%*	*-1%*	*-1%*	*-1%*
Cost Of Goods Sold	56 738,0	56 094,2	55 688,6	55 254,9	54 814,1
% out of revenue	*80%*	*80%*	*80%*	*80%*	*80%*
Gross Profit	**14 506,7**	**14 308,4**	**14 187,2**	**14 081,9**	**14 006,4**
Gross margin	*20%*	*20%*	*20%*	*20%*	*20%*
Operating Expense	12 891,8	12 691,7	12 571,1	12 320,9	12 220,7
Operating Income (EBIT)	**1 614,9**	**1 616,7**	**1 616,1**	**1 761,0**	**1 785,7**
Operating margin	*2%*	*2%*	*2%*	*3%*	*3%*
Effective Tax Rate %	56.4%	56.0%	55.8%	60.9%	60.5%
Net Property, Plant & Equipment	13 570,6	13 396,4	13 174,9	13 074,6	13 170,3
Depreciation & Amort.	1 771,0	1 785,2	1 807,1	1 747,3	1 773,9
% out of PPE	*13%*	*13%*	*14%*	*13%*	*13%*
Capital Expenditure	1 733,7	1 713,5	1 710,7	1 676,2	1 690,7
% out of revenue	*2%*	*2%*	*2%*	*2%*	*2%*
Change in Net Working Capital	7,0	(14,6)	41,7	65,0	72,9
% out of revenue	*0,01%*	*-0,02%*	*0,06%*	*0,09%*	*0,11%*
Free cash flow to firm (FCFF)	**734,9**	**797,6**	**768,4**	**694,3**	**715,5**
Terminal growth rate	1,5%				
WACC	5,2%	5,2%	5,1%	5,1%	5,1%
PV of FCFF (EUR)	698,6	721,0	661,0	569,0	558,8
PV of FCFF (2020E-2024E) EUR	**3 208,3**				
PV of terminal value (EUR)	**15 884,7**				
Value of the company (EUR)	**19 093,0**				

Source: created by the author based on Bloomberg data, 2020

Key insights of the target – Casino Guichard Perrachon SA (France)

Table 6

Basic information about the target

Description	One of the world's leading food retailers, Casino Group, owns and operates more than 15,300 stores, including hypermarkets (mostly Géant), supermarkets (Casino and Monoprix, to name a few), restaurants (Casino Cafétéria), and discount stores (Leader Price). It is the third-largest food retailer (behind Carrefour and Auchan) and the #1 convenience store operator in France (primarily as Petit Casino, but other banners include Franprix, Vival, and Spar). Most of its stores are in France, but it has outlets in 8 countries in Asia and South America, including Brazil, Colombia, and Thailand.
Operations	Its retail operations bring in the bulk of revenue, at around 73%, but it also earns significant revenue from electronics, and through e-commerce. Of its 10,627 stores, 6,917 are convenience stores, 867 Franprix, 810 Leader Price, 698 Monoprix, 441 Casino supermarkets, 146 Indian Ocean, and 128 Casino hypermarkets. It also operates 621 stores in other activities.
The strategy of the company	Casino Group is pursuing a strategy of geographic diversification, with a particular focus on Latin America. It combined its Latam operations into a single structure under the Éxito subsidiary. In Asia, the Group continued to expand across all formats during the year, supporting the development of modern retailing in the region. Casino is working hard to ramp up its digitalisation capabilities. In late 2017 it signed a deal with UK online grocer Ocado to use its technology platform to expand its online offering. Ocado's sophisticated robotics, online technology, and delivery software make it arguably the world leader.

Source: Bloomberg, 2020

Valuation of the target

DCF modelling indicates the intrinsic value of the target of €4,5 billion (table 7).

Table 7

The value of Casino Guichard-Perrachon (€ million)

Income Statement	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E
Revenue	**38 057,5**	**39 764,7**	**41 381,9**	**42 481,4**	**42 782,0**
Revenue growth	*4%*	*4%*	*4%*	*3%*	*1%*
Cost Of Goods Sold	28 533,2	29 846,5	31 095,1	31 934,1	32 208,0
% out of revenue	*75%*	*75%*	*75%*	*75%*	*75%*
Gross Profit	**9 524,3**	**9 918,2**	**10 286,8**	**10 547,2**	**10 574,0**
Gross margin	*25%*	*25%*	*25%*	*25%*	*25%*
Operating Expense	8 168,0	8 532,8	8 878,9	9 143,0	9 188,7
Operating Income (EBIT)	**1 356,3**	**1 385,4**	**1 407,9**	**1 404,3**	**1 385,3**
Operating margin	*4%*	*3%*	*3%*	*3%*	*3%*
Effective Tax Rate %	29,5%	29,7%	30,2%	30,8%	31,5%
Net Property, Plant & Equipment	7 492,6	7 629,4	7 793,3	7 933,8	8 042,8
Depreciation & Amort.	718,3	767,7	800,4	791,2	812,5
% out of PPE	*10%*	*10%*	*10%*	*10%*	*10%*
Capital Expenditure	1 279,9	1 296,8	1 359,4	1 398,0	1 406,9
% out of revenue	*3%*	*3%*	*3%*	*3%*	*3%*
Change in Net Working Capital	199,8	234,1	235,1	248,2	266,6
% out of revenue	*0,53%*	*0,59%*	*0,57%*	*0,58%*	*0,62%*
Free cash flow to firm (FCFF)	**195,2**	**211,1**	**189,0**	**116,3**	**87,3**
Terminal growth rate	1,5%				
WACC	3,5%	3,5%	3,5%	3,5%	3,4%
PV of FCFF (EUR)	188,6	197,1	170,6	101,5	73,7
PV of FCFF (2020E-2024E) EUR	731,6				
PV of terminal value (EUR)	3 844,1				
Value of the company (EUR)	**4 575,7**				

Source: created by the author based on Bloomberg data, 2020

Synergy effect

The valuation of the merged company is presented in table 9. The combination of the companies does not generate the synergy effect. The acquirer has a negative trend in revenue with the high percent of COGS that can not be over by the performance potential of the target. Thus, the merged company has averaged performance potential that is not enough for generating a synergy effect.

Table 8

The summary of the M&A deal

	Acquirer	Target
Market capitalisation	€ 11,660.9 million	€ 3,656.1 million
Intrinsic value (under DCF analysis)	€ 19,093 million	€ 4,575.7 million
Transaction value	€ 14,990 million financed by cash	
Synergy effect	–	
Summary of the M&A deal	The considered deal does not propose the synergy. The merger motive is the market share of the grocery market and creation France's biggest grocer. The intrinsic value demonstrates the slight underestimation of the target. However, the transaction value is deemed to be overestimating. Transaction financing by cash may result in high liquidity risks.	

Source: created by the author

Table 9

The valuation of the merged company

Income Statement	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E
Revenue	**112 271,0**	**115 639,2**	**119 108,3**	**122 681,6**	**126 362,0**
Revenue growth	*3%*	*3%*	*3%*	*3%*	*3%*
Cost Of Goods Sold	86 448,7	89 042,2	91 713,4	94 464,8	97 298,8
% out of revenue	*77%*	*77%*	*77%*	*77%*	*77%*
Gross Profit	**25 822,3**	**26 597,0**	**27 394,9**	**28 216,8**	**29 063,3**
Gross margin	*23%*	*23%*	*23%*	*23%*	*23%*
Operating Expense	22 454,2	23 127,8	23 821,7	24 536,3	25 272,4
Operating Income (EBIT)	**3 368,1**	**3 469,2**	**3 573,3**	**3 680,4**	**3 790,9**
Operating margin	*3%*	*3%*	*3%*	*3%*	*3%*
Effective Tax Rate %	29,5%	29,7%	30,2%	30,8%	31,5%
Net Property, Plant & Equipment	21 063,3	21 025,8	20 968,2	21 008,4	21 213,2
Depreciation & Amort.	2 527,6	2 523,1	2 516,2	2 521,0	2 545,6
% out of PPE	*12%*	*12%*	*12%*	*12%*	*12%*
Capital Expenditure	3 368,1	3 469,2	3 573,3	3 680,4	3 790,9
% out of revenue	*3%*	*3%*	*3%*	*3%*	*3%*
Change in Net Working Capital	600,5	656,7	747,7	832,0	921,3
% out of revenue	*0,53%*	*0,57%*	*0,63%*	*0,68%*	*0,73%*
Free cash flow to firm (FCFF)	**934,5**	**836,8**	**690,5**	**554,2**	**428,7**
Terminal growth rate	1,5%				
WACC	5,5%	5,5%	5,5%	5,5%	5,5%
PV of FCFF (EUR)	885,9	752,0	588,1	447,3	327,8
PV of FCFF (2020E-2024E) EUR	**3 001,2**				
PV of terminal value (EUR)	**8 290,2**				
Value of the company (EUR)	**11 291,4**				

Source: created by the author

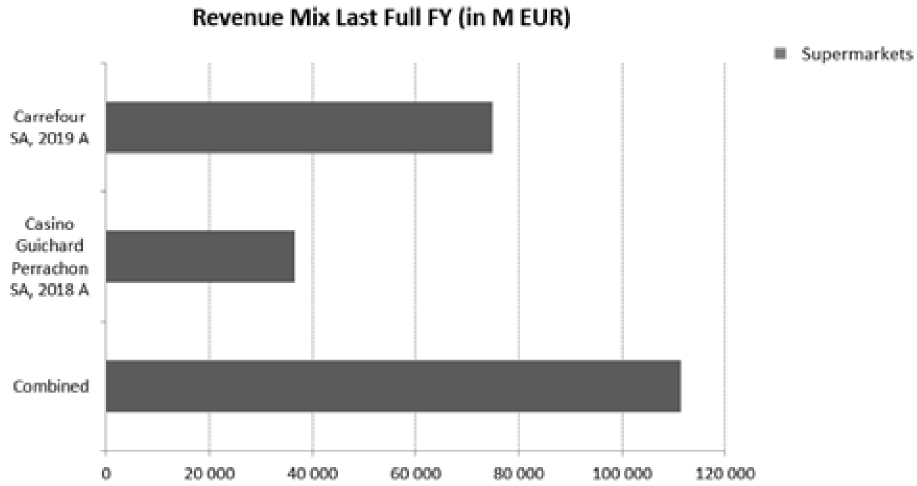

Fig. 1. Revenue of the merged company

Source: created by the author

Recommendations

The valuation of the considered case was a challenging task due to various issues. In the process of evaluating companies, the author formulated the following recommendations for mitigation of these issues (Table 10).

Table 10

Recommendation for the valuation process

Valuation issue	Recommendations
Understanding the business model of the company	The company's annual reports could be considered as sources of information. In the case of a friendly takeover, the target could provide additional information about its business.
Identification of key drivers	Financial fundamental analysis and market researches could be used as sources of identification key drivers.
Accounting issues: Various accounting issues could occur started from a difference in accounting policies that makes the comparability of the companies more challenging. (for instance, depreciation and amortisation) Also, the representation of accounting information issues creates the inaccuracies in valuation.	The corresponding adjustments should be made to neutralise the differences in accounting principles. However, sometimes we should consider the trade-off between the quality of the valuation and the time spent.
Taxation	The differences and complicatedness of the taxation rules could be mitigated by the application of effective interest rate, calculated based on historical data.
Currency (in cross-border M&A)	The uncovered interest rate parity theory should be applied for currency conversion.

Source: created by the author

The considered deal does not propose the synergy. The merger motive is the market share of the grocery market and creation France's biggest grocer.

The considered deal does not create lots of valuation issues, as this is domestic merger, using the same currency, same accounting and taxation principles.

The intrinsic value demonstrates the slight underestimation of the target. However, the transaction value may be deemed to be highly overestimating. Transaction financing by cash may result in high liquidity risks.

Thus, this acquisition should not proceed. However, if there is a threat of market capture from competitors, perhaps this transaction will be the only way to maintain market share.

In provided deal analysis we did not consider nonfinancial factors of both companies. For the first glance this M&A deal should have proposed the synergy by increasing market share. However, financial data shows the opposite effect. Thus, the analyst should consider other factors that could influence on the effectiveness of the M&A deal. For example, nonfinancial factors which cause risks and opportunities for the merged company can be presented by ESG parameters. These parameters could be integrated in financial modeling process for the valuation of the effectiveness of a M&A (figure 2).

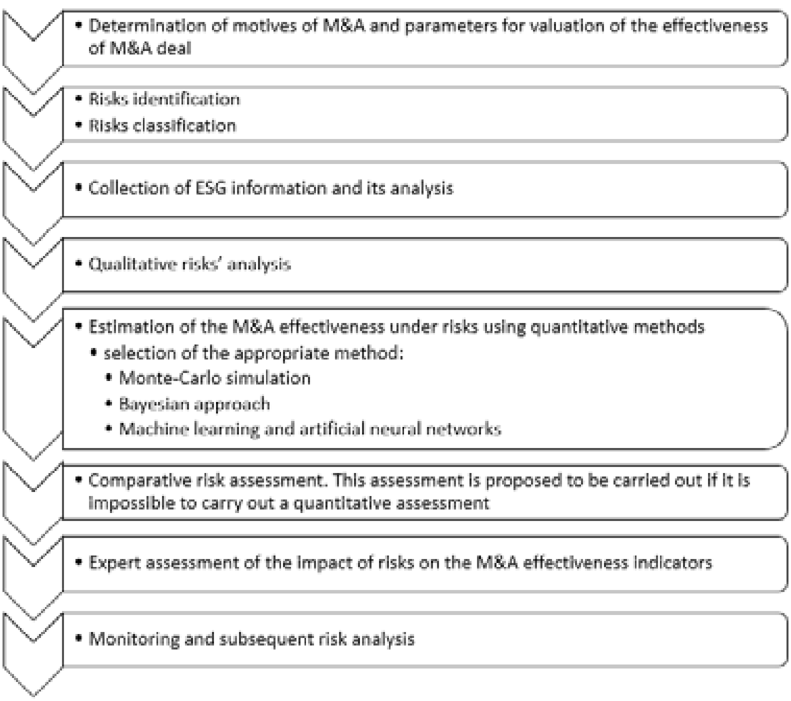

Fig. 2. The mechanism of integration ESG risks in M&A effectiveness valuation

Source: created by the author

The proposed mechanism is presented by adaptative algorithm including risk management techniques and developments of financial analysis tools. This algorithm will help to an analyst with the integration of non-financial risks in the valuation of M&A effectiveness.

Conclusion

This study set out to provide the estimation of targets' fair value and the recommendations for considered M&A deals. Also, the study justifies the valuation method that should be used in assessing the fair value of the target in the considered industry.

This study has identified that the DCF approach (FCFF stable growth model) is the most suitable method for valuation of considered companies. Also, the industry analysis was done to identify key drivers of future growth and development for considered companies, and the main consequence of industry transformation influenced on valuation is the revenue forecast base change due to online shopping (from the store floor area to the average growth percentage). Moreover, financial analysis of the considered companies provides key insights for understanding the drivers and business models.

The results of the case show that M&A does not create a synergy effect. However, this deal could be vital for both companies due to the substantial level of competition and the necessity to save the market share.

As a result of this empirical study, several recommendations were presented considering the main valuation issues: understanding the business model of the company, identification of key drivers, accounting issues, taxation and currency issues. Also, ethe ESG integration mechanisms was discussed for improvement of the M&A effectiveness estimation.

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ОЦЕНКА ЭФФЕКТИВНОСТИ СЛИЯНИЯ И ПОГЛОЩЕНИЯ: ЭМПИРИЧЕСКОЕ ИССЛЕДОВАНИЕ

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Предмет: слияния и поглощения стали эффективной стратегией получения конкурентных преимуществ в быстро меняющемся мире. Процесс оценки эффективности сделок слияния и поглощения является достаточно сложным из-за различных факторов, в том числе нефинансовых, влияющих на результаты деятельности объединяемых компаний. Таким образом, существует необходимость в развитии инструментов финансового анализа и их применении для интеграции ESG-рисков при оценке эффективности слияний и поглощений. *Цель*: статья посвящена проблемам оценки эффективности сделок слияний и поглощений и содержит рекомендации по проведению такой оценки. *Дизайн исследования*: в исследовании критически обсуждаются методы оценки, которые могли бы быть использованы при оценке справедливой стоимости объекта и покупателя, и определяется наиболее подходящий метод для рассматриваемой отрасли и компаний, а также приводится оценка эффективности сделки слияния и поглощения. *Результаты*: автором предложены рекомендации относительно процесса оценки эффективности сделок слияний и поглощений. Результаты эмпирического исследования подчеркивают необходимость интеграции ESG-рисков в процессе оценки эффективности слияний и поглощений.

Ключевые слова: сделки слияния и поглощения, ESG-риски, оценка эффективности M&A, DCF оценка.

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